

# Reference Form

## 2023

(A free translation of the original in Portuguese)

## Contents

<b>1. Activities of the issuer</b> .....	<b>1</b>
1.1. Issuer's history .....	1
1.2. Description of the main activities carried out by the issuer and its subsidiaries .....	4
1.3. Information related to operational segments .....	5
1.4. Production/Commercialization/Markets .....	7
1.5. Main customers .....	36
1.6. Relevant effects of state regulation .....	37
1.7. Relevant incomes from headquarter country and abroad .....	47
1.8. Relevant impacts from state regulation .....	48
1.9. Environmental, social and corporate governance ("ESG") information .....	49
1.10. Information on a mixed capital company .....	52
1.11. Purchase or disposal of relevant asset .....	53
1.12. Corporate operations / capital increase or decrease .....	54
1.13 Shareholders' agreements .....	55
1.14. Significant changes on how the business is conducted .....	56
1.15. Relevant agreements signed by the issuer and its subsidiaries .....	57
1.16. Other relevant information .....	58
<b>2. Directors comments</b> .....	<b>63</b>
2.1. Financial and equity conditions .....	63
2.2. The directors must comment .....	73
2.3. Changes in accounting practices / modified opinions and emphases .....	77
2.4. Relevant impact on the financial statements .....	78
2.5. Non-gaap measures .....	81
2.6. Subsequent event of the last financial statements .....	83
2.7. Income destination .....	84
2.8. Relevant items not disclosed in the financial statements .....	85
2.9. Comments regarding not disclosed items .....	86
2.10. Business plan .....	87
2.11. Other factors that have relevant influenced on operating performance .....	92
<b>3. Projections</b> .....	<b>93</b>
3.1. Disclosed projections and premises .....	93
3.2. Projections follow-up .....	99
<b>4. Risk factors</b> .....	<b>100</b>
4.1. Description of risk factors .....	100
4.2. Indicate the 5 (five) main risk factors .....	113
4.3. Description of main market risks .....	114
4.4. Relevant non-confidential processes .....	116
4.5. Total amount provisioned of non-confidential processes .....	177
4.6. Relevant confidential process .....	178
4.7. Other relevant contingencies .....	180
<b>5. Risk Management Policy and Internal Controls</b> .....	<b>223</b>
5.1. Description of risk management and market risks .....	223
5.2. Internal control description .....	231
5.3. Integrity program .....	233
5.4. Significant changes .....	236
5.5. Other relevant information .....	237
<b>6. Control and economic group</b> .....	<b>241</b>
6.1./6.2. Shareholding position .....	241
6.3. Capital distribution .....	242
6.4. Investments in subsidiaries, associates, and joint ventures .....	243
6.5. Organizational chart of shareholders and economic group .....	244
6.6. Other relevant information .....	246
<b>7. Shareholders' meeting and management</b> .....	<b>247</b>
7.1. Main characteristics of the issuer's management bodies and fiscal council .....	247
7.2. Information regarding the board of directors .....	254
7.3. Composition and professional experience of each director and member of the fiscal council .....	256
7.4. Committees composition .....	264
7.5. Family relation .....	283
7.6. Relationship of subordination, service provision or control .....	284

7.7. Administrator agreements/insurance .....	286
7.8. Other relevant information.....	288
<b>8. Management Compensation .....</b>	<b>291</b>
8.1. Compensation policy or practice .....	291
8.2. Total compensation per body .....	303
8.3. Variable compensation .....	308
8.4. Share-based compensation .....	311
8.5. Share-based compensation (stock options) .....	315
8.6. Granting of stock options .....	316
8.7. Open stock options .....	317
8.8. Options exercised and shares obtained .....	318
8.9. Potential dilution by granting shares .....	319
8.10. Grant of shares.....	320
8.11. Shares yielded .....	321
8.12. Stock and option pricing methods.....	323
8.13. Shares, quotas and other securities convertible in shares or quotas, held by members of the board of directors, the statutory board of executive officers or the fiscal council.....	324
8.14. Pension plans.....	325
8.15. Minimum, average and maximum remuneration .....	326
8.16. Mechanisms for compensation/indemnification.....	327
8.17. Percentage related parties in compensation .....	328
8.18. Compensation - Other functions .....	329
8.19. Recognized remuneration of the controlling shareholder .....	330
8.20. Other relevant information .....	331
<b>9. Auditors .....</b>	<b>332</b>
9.1/9.2. Identification and compensation .....	332
9.3. Auditors independence and conflict of interest .....	333
9.4. Other relevant information .....	334
<b>10. Human Resources .....</b>	<b>335</b>
10.1. Describe the human resources .....	335
10.2. Relevant changes .....	337
10.3. Employees compensation policies and practices .....	338
10.4. Relations between the issuer and unions .....	340
10.5. Other relevant information .....	341
<b>11. Related-party transactions .....</b>	<b>342</b>
11.1. Rules, policies and practices.....	342
11.2. Related party transactions.....	345
11.3. Other relevant information.....	359
<b>12. Share capital and securities .....</b>	<b>360</b>
12.1. Information on share capital .....	360
12.2. Foreign issuers - Rights and rules.....	361
12.3. Other securities issued in Brazil.....	362
12.4. Number of holders of each type of security .....	369
12.5. Brazilian trading markets.....	370
12.6. Trading in foreign markets .....	371
12.7. Securities issued abroad .....	376
12.8. Allocation of resources from public offerings .....	377
12.9. Other relevant information .....	378
<b>13. Identification.....</b>	<b>379</b>
13.1. Statement by the President and Executive Vice President of Finance and Investor Relations .....	379
13.2. Statement of the new Chief Executive Officer or Investor Relations Officer .....	382

## 1.1. Issuer's history

### 1. Activities of the issuer

#### 1.1. Issuer's history

Vale S.A. ("Vale" or "Company") is a public company, that was constituted on January 11, 1943, under the laws of the Federative Republic of Brazil for an unlimited period of time. Its head office is located at Praia de Botafogo 186, Rio de Janeiro, RJ, Brazil, and its securities are traded on the São Paulo Stock Exchange – B3 S.A. (VALE3), New York – NYSE (VALE), and Madrid – LATIBEX (XVALO).

#### Operational history

Vale's trajectory begins before its official birth. In the beginning of the XX century, more precisely in 1904. When the operation of Estrada de Ferro Vitória a Minas ("EFVM") began, this railway transported iron ore and agricultures products and even today is one of the few Brazilian railways that transports passengers.

In 1908, the extension of the Itabira iron ore deposits was reported: two English engineers consulted EFVM to about the possibility of transporting ore through it. With a favorable opinion, they organized the Brazilian Hematite Syndicate ("BHS"). The company also gained a monopoly on operations in the region, with the condition that it will build a steel plant there.

In order to replace BHS, in 1911 the Itabira Iron Ore Company ("IIOC") is organized, which received authorization from the Brazilian government to operate. IIOC was headquartered in London and maintained a representative in Brazil. Its objective was to explore, commercialize, transport and export iron ore from the ore deposits in Itabira/MG and explore EFVM's cargo and passenger transport through the Rio Doce Valley, in the Southeast region of Brazil, to the port of Vitória/ES.

During the Vargas Government, the president emphasized the need to nationalize mineral reserves. In 1939, the IIOC lost the concessions that it held, but according to the Mines Code it still owns the lands and iron mines in Itabira. In 1942, the British government was obligated to acquire and transfer to the Brazilian government the iron ore deposits belonging to IIOC.

In June 1942, the decree-law nº 4.352 sets the basis for how Companhia Vale do Rio Doce ("CVRD", Vale's original name) would be organized, which would take over Companhia Brasileira de Mineração e Siderurgia and Companhia Itabira de Mineração. On January 11, 1943, the Definite Meeting for the Brazilian Constitution of Corporation CVRD was held, in the form of a government-controlled company, with the purpose of exploiting, trading, transporting and exporting iron ore from Itabira mines, and exploring the traffic of the EFVM, to the port of Vitória/ES.

CVRD prioritized exports. The United States were the main market for Brazil's iron ore exports. In 1950, more than 80% of the iron sold by the country was absorbed by the North American market. However, committed to the development of the Rio Doce Valley, in 1947 CVRD began selling ore to small private steel companies that were beginning to be set up along the Vitória-Minas railroad.

Starting in 1956, with the commencement of pellet production, the pelletizing plants became integrated into the mine-railway-port structure, and from that point onwards, the production and export of pellets took on a prominent role in the Company's outcomes, being as significant as iron ore.

CVRD intensified its market diversification policy in 1954, increasing its sales to Western Europe and starting exports to Eastern European. That same year, Japan purchased for the first time iron ore from the Company. In 1955, CVRD's production was consumed by 63 steel mills located in ten different countries.

For the company to advance on the world stage, it was necessary to expand its export capacity. To allow the docking of larger vessels, in 1966 the port of Tubarão in Vitória/ES was inaugurated, built by CVRD in partnership with companies from the Japanese steel industry. The entry into operation of Tubarão port was decisive for the signing, in 1967, of a new long-term contract with the Japanese steel companies involving the export of large quantities of iron ore. The signing of long-term contracts with steel companies in Japan and Germany made these two countries, in a short time, CVRD's main markets. In 1967, the Germans consumed around 30% of CVRD's iron exports and the Japanese, 21%.

CVRD continued expanding its international business and in 1973 it took the first step to start exporting ore to China, today the main destination for the Company's products.



## 1.1. Issuer's history

In the 70's decade, when the existence of iron ore was found in Carajás, Decree no. 77,608/76 granted CVRD a concession for the construction, use and exploration of the railroad between Carajás and São Luís, in the States of Pará and Maranhão, respectively. In 1979, the implementation of the Estrada de Ferro Carajás ("EFC") and the Ferro Carajás Project were inaugurated, and the Company production stated to be classified in two distinct logistic system (North and South).

In 2004, Vale opened the Sossego Mine, the Company's first copper operation, located in Canaã dos Carajás/PA. In 2006, the Brucutu mine, located in São Gonçalo do Rio Baixo/MG, started operating. At the time of opening, the mine/plant complex was considered the largest in terms of initial production capacity in the world. The unit is the largest iron mine in Minas Gerais in terms of production.

It was also in 2006 that the Company, within the scope of its operations internationalization strategy, acquired the Canadian mining company Inco Limited, today Vale Canada Limited. This moment was decisive for the diversification of its product portfolio, expanding its presence in the Energy Transition Metals segment.

In 2007, with the consolidation of the Company as a global company, CVRD adopted Vale as its new denomination and brand. The decision took into account the strength, simplicity and sound of the name Vale, which is used in several languages.

In 2009, Vale signed an open letter to Brazil on climate change, presenting its voluntary commitments to reduce greenhouse gas ("GHG") emissions. The letter constituted a milestone, because, for the first time, companies in the country's productive sector formally presented initiatives to combat global warming.

In 2015, one of Samarco Mineração S.A.'s iron ore tailings dams collapsed, company in which Vale holds a 50% stake, located in the Germano Mining Complex, in Mariana/MG, which caused extensive social, environmental and material impacts in the region.

In 2016, Vale inaugurated the S11D Eliezer Batista Complex, located in Canaã dos Carajás/PA, the largest mining project in the Company's history. The operation combines state-of-the-art technology, low cost and high productivity.

In 2019, the collapse of Dam I of the Córrego do Feijão Mine, in Brumadinho/MG, caused extensive social, environmental and material damage in the region.

Currently, a change in the profile of iron ore demand is underway, with greater opportunities for segmentation and growth in demand for high quality. The Company is facing a unique transformation in the steel market to deliver the decarbonization solutions that the steel industry needs.

To strengthen the strategy for the Vale of the future, new strategic guidelines were defined: promoting sustainable mining, fostering low-carbon solutions and maintaining discipline in capital allocation with the objective of becoming a leader in sustainable mining.

For more information on the acquisition or disposal of relevant assets, see item 1.11 of this Reference Form.

### Stock and trading history

In 1997, with the privatization auction, the Company began to be managed by Valepar S.A. ("Valepar"), holding company, that acquired control of the Company. Subsequently, the Brazilian Government sold a portion of its remaining shareholding of common and class A preferred shares, through an offer restricted to Vale's employees.

In 2000, the American Depositary Receipts ("ADRs"), representing preferred shares issued by the Company, began to be traded on the New York Stock Exchange ("NYSE") and, in 2002, the ADRs representing the Company's common shares started to be traded on the NYSE, whose program had been launched in 1994. In 2000, Vale was also listed on the Madrid Stock Exchange – Latibex. Securities representing the shares issued by the Company have also been listed on the Paris Stock Exchange – Euronext (2008–2019) and Hong Kong – HKEx (2010–2016).

In 2002, the Brazilian Government sold the common shares issued by Vale that it held directly and maintained only special class preferred shares ("golden shares") issued by Vale.

## 1.1. Issuer's history

In 2017, Valepar's shareholders (Litel Participações S.A., Litela Participações S.A., Bradespar S.A., Mitsui & Co, Ltd. and BNDES Participações S.A. – BNDESPAR) presented a proposal to restructure the Company's corporate governance, with the aim of transforming Vale in a company with no defined control and enable its listing in the special segment of Novo Mercado of B3 ("Novo Mercado"), through: (i) the voluntary conversion of class "A" preferred shares into common shares issued by Vale; (ii) amendment of the Bylaws, including adapting it to the Novo Mercado rules; and (iii) incorporation of Valepar by Vale.

In 2017, the conversion of all class "A" preferred shares into common shares, the incorporation of Valepar by Vale and the migration of the Company to the Novo Mercado, the B3 segment with the highest level of corporate governance, were approved.

Since 2017, there are no Vale shareholders' agreement in force, and the Company no longer has a controlling shareholder.

## **1.2. Description of the main activities carried out by the issuer and its subsidiaries**

Vale is one of the largest metals and mining companies in the world, based on market capitalization. The Company is one of the world's largest producers of iron ore and nickel. Vale also produces iron ore and copper pellets. Nickel and copper concentrates contain by-products of platinum group metals ("PGM"), gold, silver and cobalt. The Company participates in greenfield mineral exploration in six countries and operates large logistics systems in Brazil and in other regions of the world, including railroads, maritime terminals and ports, integrated with mining operations. In addition, the Company has distribution centers to support the delivery of iron ore around the world. Vale also holds investments in energy businesses through affiliates and joint ventures.

For more information on the activities carried out by the Company and its subsidiaries and the markets in which they operate, see items 1.3, 1.4 and 1.7 of this Reference Form.

### 1.3. Information related to operational segments

#### a. products and services commercialized

**Iron ore solutions** – Consists in the extraction of iron ore and pellet production, as well as the northern, southern and southeastern transport corridors, including railroad, ports, terminals and vessels, linked to mining operations.

- **Iron ore.** Vale operates three systems in Brazil for the production and distribution of iron ore: North, Southeast and South systems. The Northern System is fully integrated and consists of three mining complexes and a maritime terminal. The Southeast System is fully integrated, consisting of three mining complexes, a railroad, a maritime terminal and a port. The Southern System consists of two mining complexes and two maritime terminals. In July 2022, the Company concluded the sale of the Midwest System. For more information on the sale of operations in the Midwest System, see item 1.11 of this Reference Form.
- **Iron ore pellets.** The Company currently has eight operational pellet plants in Brazil, and two in Oman.
- **Manganese.** In January 2022, the Company concluded the sale of the ferroalloys operations, no longer operating in this sector. For more information, see item 1.11 of this Reference Form.

**Energy transition metals** – Consists of the production of non-ferrous minerals, including nickel operations (co-products and by-products) and copper.

- **Nickel.** Vale’s principal nickel operations are conducted through its wholly owned subsidiary Vale Canada Limited (“Vale Canada”), which has mines and processing plants in Canada and Indonesia, and controls and operates nickel refining facilities in the United Kingdom and Japan. Vale also has nickel operations at Onça Puma, located in the Brazilian state of Pará.
- **Copper.** In Brazil, the Company produces copper concentrates at Sossego and Salobo operations, in Carajás, in the state of Pará. In Canada, Vale produces copper concentrates and copper cathodes in conjunction with its nickel mining operations at Sudbury (Ontario), Voisey’s Bay (Labrador) and Thompson (Manitoba) through Vale Canada.
- **Cobalt, PGMs and other precious metals.** Ore mined at Sudbury nickel operations yields cobalt, PGMs, silver and gold as by-products, processed at the refining facilities in Port Colborne, Ontario. In Canada, the Company also produce refined cobalt at its Long Harbour facilities in Newfoundland and Labrador. Vale received silver and gold as by-product credits from its copper operations at Salobo in Brazil.

**Discontinued (Coal)** – In April 2022, the Company completed the sale of its thermal and metallurgical coal operations. For more information, see item 1.11 of this Reference Form.

#### b. revenue from the segment and its share in the issuer's net revenue

Net operating income from continuing operations	2022 <sup>(4)</sup>		Year ended December 31, 2021	
	R\$ million	% of total	R\$ million	% of total
<i>Iron Solutions <sup>(1)</sup></i>				
Iron ore	145,714	64.3	206,218	70.3
Iron ore pellets	32,251	14.3	37,951	12.9
Other ferrous products and services	2,425	1.1	2,950	1.0
	<b>180,390</b>	<b>79.7</b>	<b>247,119</b>	<b>84.2</b>
<i>Energy Transition Metals <sup>(1)</sup></i>				
Nickel and other products <sup>(2)</sup>	34,226	15.1	29,148	9.9
Copper <sup>(3)</sup>	9,235	4.1	13,977	4.8
	<b>43,461</b>	<b>19.2</b>	<b>43,125</b>	<b>14.7</b>
Others	2,657	1.2	3,280	1.1
	<b>226,508</b>	<b>100.0</b>	<b>293,524</b>	<b>100.0</b>

(1) In 2022, the Company renamed its main operating segments. The segment formerly known as “Ferrous Minerals” was renamed “Iron Solutions”, while the “Base Metals” segment was renamed “Energy Transition Metals”. There was no change



in the allocation criteria of these operating segments and, therefore, there were no adjustments to the comparative balances presented in this Reference Form.

(2) Includes nickel co-products (copper) and nickel by-products (cobalt, PGMs and other precious metals).

(3) Does not include copper produced in nickel operations.

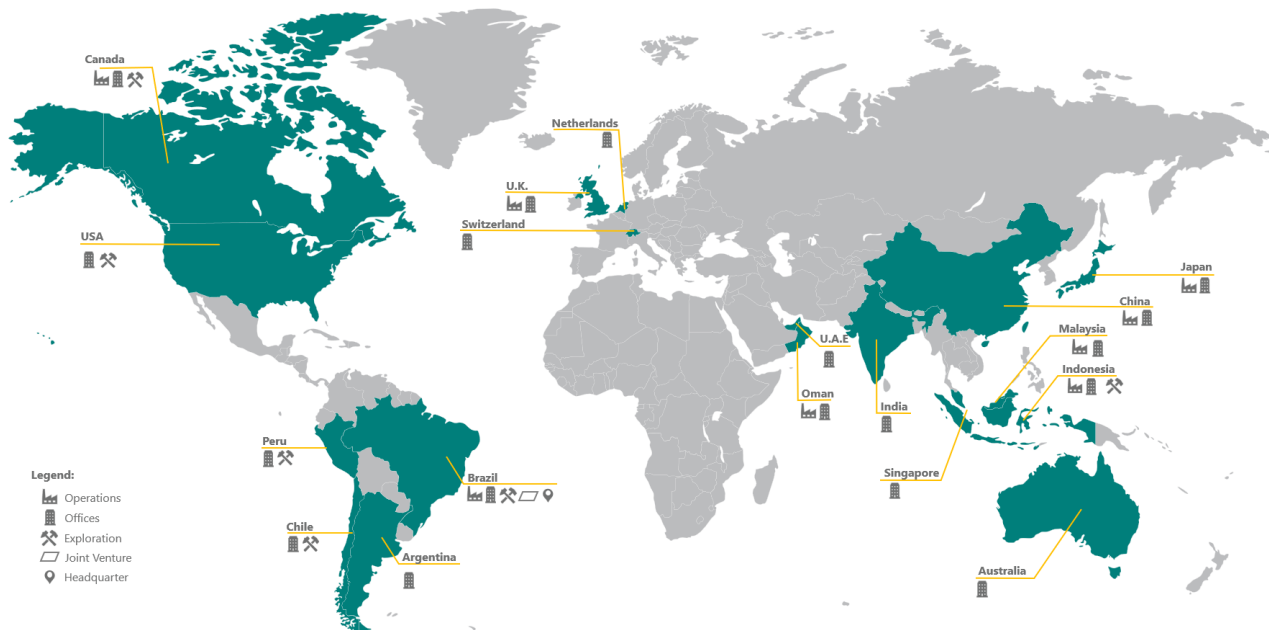
(4) Includes manganese ferroalloys operations sold in January 2022.

### c. profit or loss resulting from the segment and its participation in the issuer's net earnings.

The Company does not present profit or loss by segment. The bodies responsible for making operational, resource allocation and performance evaluation decisions, including the Executive Committee and the Board of Directors, use adjusted EBITDA as a performance measure. Adjusted EBITDA was reconciled with the Company's net earnings in item 2.5 of this Reference Form.

	Year ended December 31,	
	2022	2021
	<i>(R\$ million)</i>	
Iron Solutions	100,464	169,194
Energy Transition Metals	12,866	17,381
Other	(11,273)	(18,519)
<b>Adjusted EBITDA from continuing operations</b>	<b>102,057</b>	<b>168,056</b>

## 1.4. Production/Commercialization/Markets



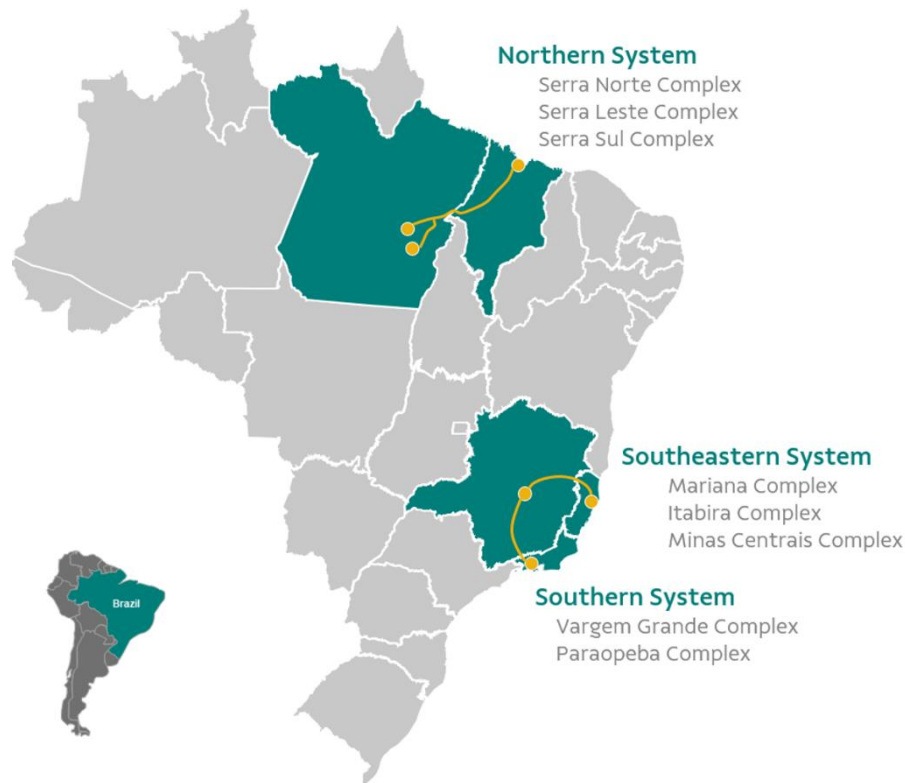
### A. IRON SOLUTIONS

The Company’s iron solutions business includes iron ore mining and iron ore pellet production. Each of these operations is described below. Until July 2022, Vale was engaged in manganese ore mining activities (ferroalloy operations), which were fully divested. For more information see the section 1.11 of this form.

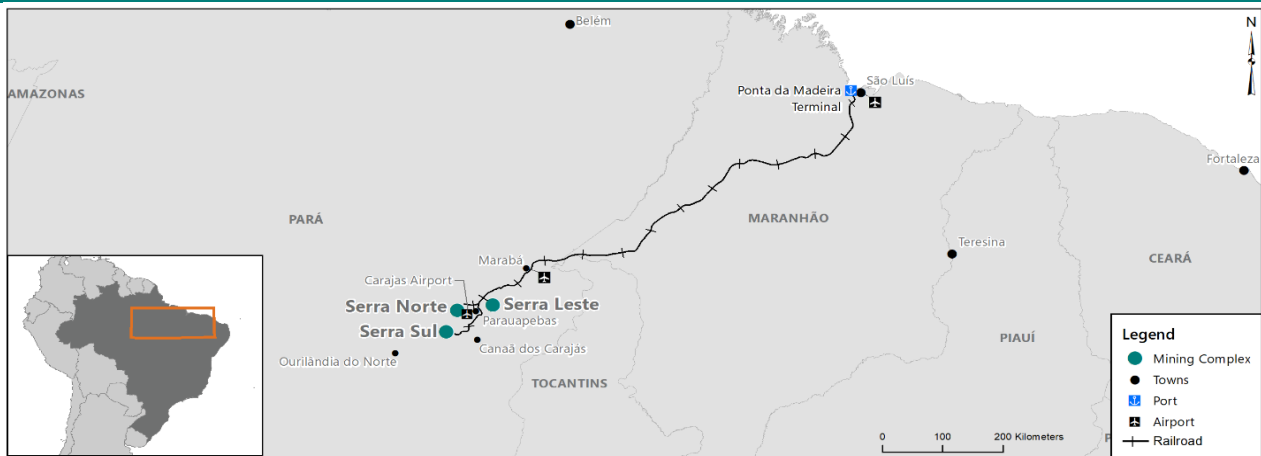
#### A.1. Iron ore and iron ore pellets

Vale conducts its iron ore business in Brazil primarily at the parent company level. The Company’s mines, all of which are open pit, and their related operations are mainly concentrated in three systems: the Southeastern, Southern and Northern Systems, each with its own transportation and shipping capabilities. Until July 2022, the Company also held operations in the Midwestern System, through its subsidiary Mineração Corumbaense Reunida S.A. (“MCR”), which has been fully divested. In addition to the properties described below, Vale has other exploration activities and non-operational properties, mostly in the surroundings of the Company’s operations described in this section.

### 1.4. Production/Commercialization/Markets



#### IRON ORE OPERATIONS NORTHERN SYSTEM



<b>Ownership interest</b>	100%
<b>Location</b>	Carajás, State of Pará, Brazil
<b>Operator</b>	Vale S.A.
<b>Mining complexes</b>	Three mining complexes: - Serra Norte (three main mining areas and three beneficiation plants). - Serra Sul (one main mining area and one beneficiation plant). - Serra Leste (one main mining area and one beneficiation plant).
<b>Mineral titles<sup>(1)</sup></b>	Mining concession with no expiration date. Area: Serra Norte: 30,000 ha, Serra Sul: 98,910 ha and Serra Leste: 9,915 ha.
<b>Stage/ Operations</b>	All the complexes are in production stage. Serra Norte has been operating since 1984, Serra Sul since 2016 and Serra Leste since 2014.

### 1.4. Production/Commercialization/Markets

Key permit conditions	The Company already obtained or expect to obtain in a timely manner the necessary permits for operations. Vale is in the process of obtaining or renewing (i) certain environmental permits, including permits relating to protective buffer approvals for caves and lakes and (ii) mining land zoning approval for areas with provision for environmental management plan. The Company’s expectation as to future licenses is reviewed on a regular basis, and in 2023 will complete a detailed review of all processes for Serra Sul, which may result in changes that may adversely impact its mineral reserves. For information see item 1.6 of this Reference Form.
Mine types and mineralization styles	Open pit mining operations with high grade hematite ore type (iron grade around 65%) for Serra Norte, Serra Sul and Serra Leste. In Serra Leste there is also a minor amount of Itabirite material (iron grade of 35–60%).
Associated facilities and infrastructure	<p><b>Processing plants:</b> In Serra Norte, two of the beneficiation plants apply natural moisture beneficiation process, consisting of crushing and screening, and the one of the plants applies both natural moisture and wet beneficiation process in distinct lines. Wet beneficiation process consists simply of sizing operations, including screening, hydrocycloning, crushing and filtration. Output from this site consists of sinter feed, pellet feed and lump ore. Serra Leste and Serra Sul natural moisture beneficiation process consists of crushing and screening. Serra Sul and Serra Leste produce only sinter feed.</p> <p><b>Other facilities:</b> Waste and tailings disposal structures in Serra Norte and Serra Leste and waste disposal structures in Serra Sul.</p> <p><b>Logistics:</b> Carajás railroad (“EFC”) transports the iron ore to the Ponta da Madeira maritime terminal in the Brazilian state of Maranhão. Serra Leste iron ore is transported by trucks from the mine site to EFC railroad. The Serra Sul ore is shipped via a 101-kilometer-long railroad spur to the EFC railroad.</p> <p><b>Energy:</b> Supplied through the national electricity grid. Produced directly by Vale’s power plants or acquired through power purchase agreements.</p>

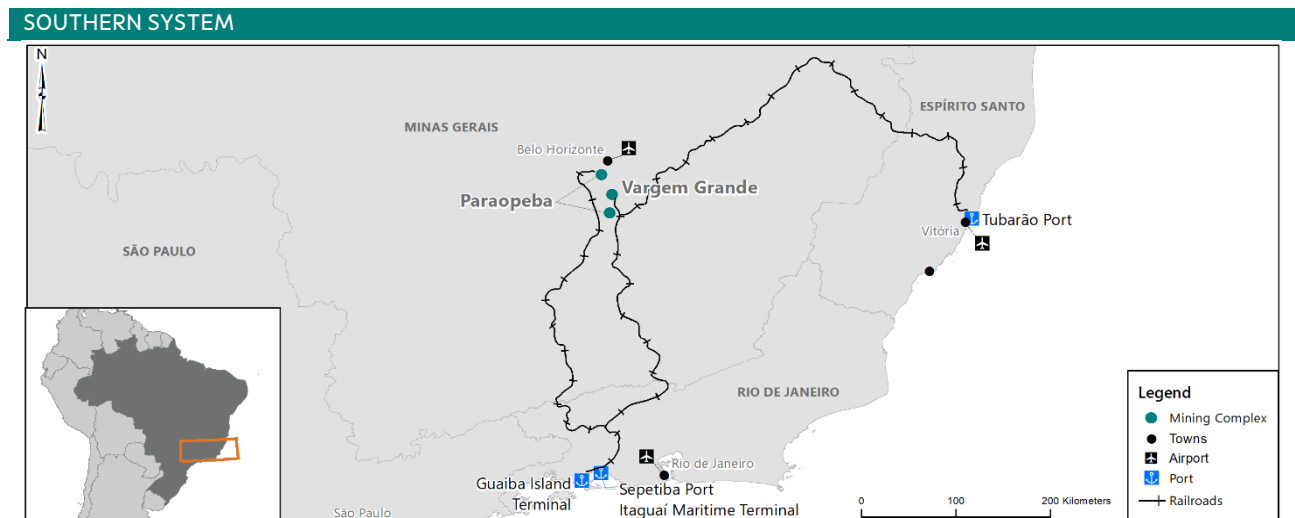
(1) Area with reserves and resources associated.

SOUTHEASTERN SYSTEM	
Ownership interest	100% of Itabira and Mariana. 98.6% of Minas Centrais (China Baowu Steel Group Corporation Limited indirectly holds 1.4% of Minas Centrais through a 50% ownership of the Morro Agudo mine).
Location	Iron Quadrangle, State of Minas Gerais, Brazil.
Operator	Vale S.A.
Mining complexes	Three mining complexes: – Itabira (two mines, with three major beneficiation plants). – Minas Centrais (two mines, with two major beneficiation plants and one secondary plant). – Mariana (three mines, with three major beneficiation plants).
Mineral titles <sup>(1)</sup>	Mostly mining concessions with no expiration date. Area involved: Itabira: 8,404 ha, Minas Centrais: 4,973 ha and Mariana: 7,192 ha.
Stage/ Operations	All the complexes are in production stage. Itabira has been operating since 1957, Minas Centrais since 1994 and Mariana since 1976.
Key permit conditions	The Company has or expect to obtain in a timely manner the necessary permits for operations. Vale is in the process of obtaining or renewing (i) certain environmental permits, including influence area study for caves and dams and (ii) waste and tailings storage facilities permits. For information see item 1.6 of this Reference Form.

### 1.4. Production/Commercialization/Markets

Mine types and mineralization styles	Open pit mining operations with high ratios of itabirite ore relative to hematite ore type. Itabirite ore type has iron grade of 35–60%. Part of the ore is concentrated to achieve shipping grade and part is shipped and blended in Asia with the high-grade ore from the Company's Northern System.
Associated facilities and infrastructure	<b>Processing plants:</b> Vale generally process the run of mine by means of standard crushing, classification, and concentration steps, producing sinter feed, lump ore and pellet feed in the beneficiation plants located at the mining complexes. <b>Other facilities:</b> Waste and tailings disposal structures in all complexes. <b>Logistics:</b> EFVM railroad connects these mines to the Tubarão port. <b>Energy:</b> Supplied through the national electricity grid. Produced directly by Vale's power plants or acquired through power purchase agreements.

(1) Area with reserves and resources associated.



Ownership interest	100%
Location	Iron Quadrangle, State of Minas Gerais, Brazil.
Operator	Vale S.A.
Mining complexes	Two mining complexes: - Vargem Grande (five mines and five major beneficiation plants). - Paraopeba (five mines and three major beneficiation plants).
Mineral titles <sup>(1)</sup>	Mostly mining concessions with no expiration date.
Stage/ Operations	Area involved: Vargem Grande: 8,940 ha, Paraopeba: 5,826 ha.
Key permit conditions	The Company has or expect to obtain in a timely manner the necessary permits for operations. Vale is in the process of obtaining or renewing (i) certain environmental permits, including influence area study for caves and dams and (ii) waste and tailings storage facilities permit. For information see item 1.6 of this Reference Form.
Mine types and mineralization styles	Open pit mining operations with high ratios of itabirite ore relative to hematite ore type. Itabirite ore type has iron grade of 35–60%. Part of the ore is concentrated to achieve shipping grade and part is shipped and blended in Asia with the high-grade ore from the Company's Northern System.
Associated facilities and infrastructure	<b>Processing plants:</b> The Company generally processes the run of mine by means of standard crushing, classification and concentration steps, producing sinter feed, lump ore and pellet feed in the beneficiation plants located at the mining complexes. <b>Other facilities:</b> Waste and tailings disposal structures in all complexes. <b>Logistics:</b> MRS transports iron ore products from the mines to Guaíba Island and Itaguaí maritime terminals in the Brazilian state of Rio de Janeiro. EFVM railroad connects certain mines to the Tubarão port in the state of Espírito Santo. <b>Energy:</b> Supplied through the national electricity grid. Produced directly by Vale's power plants or acquired through power purchase agreements.

(1) Area with reserves and resources associated.

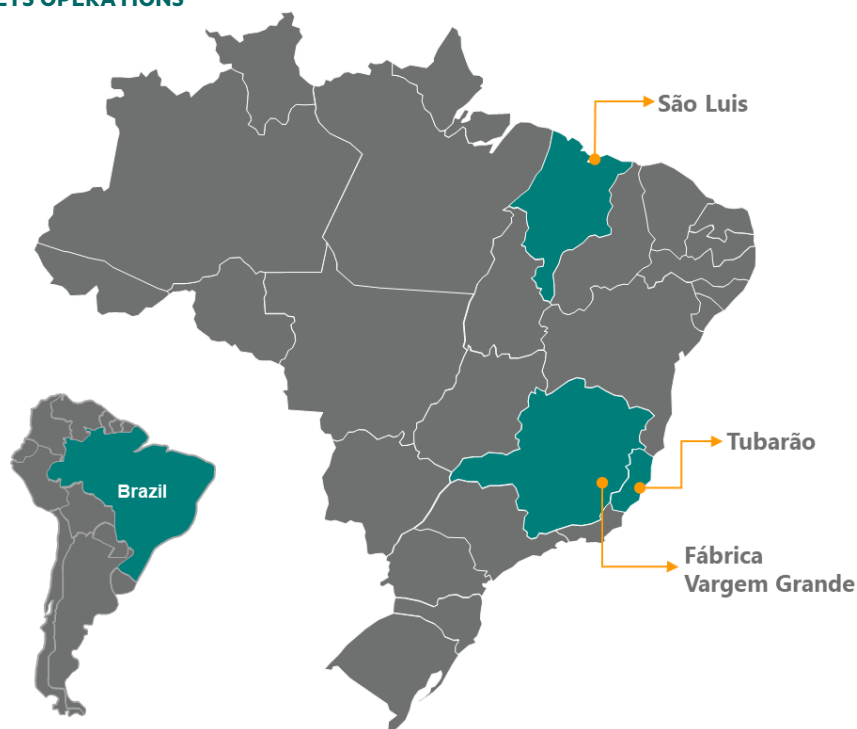
#### A.1.1. Iron ore pellet operations

The Company produces iron ore pellets in Brazil and Oman, directly and through joint ventures, as set forth in the table below. Vale's total estimated nominal capacity is 57.7 Mtpy, including the full capacity of its

## 1.4. Production/Commercialization/Markets

pelletizing plants in Oman, the Company’s joint ventures and Tubarão, but not including the capacity of plants owned by the joint venture Samarco.

### IRON ORE PELLETS OPERATIONS



	TUBARÃO	FÁBRICA	VARGEM GRANDE	SÃO LUIS
Ownership interest <sup>(1)</sup>	<ul style="list-style-type: none"> <li>- Tubarão VIII (100% Vale)</li> <li>- Itabrasco (50.89% Vale)</li> <li>- Hispanobrás (50.89% Vale)</li> <li>- Kobrasco (50% Vale)</li> <li>- Two Nibrasco plants (51% Vale)</li> </ul>	100% owned by Vale	100% owned by Vale	100% owned by Vale
Location	State of Espírito Santo, Brazil	State of Minas Gerais, Brazil	State of Minas Gerais, Brazil	State of Maranhão, Brazil
Operator	Vale S.A.	Vale S.A.	Vale S.A.	Vale S.A.
Capacity (Mtpy)	31.3 <sup>(2)</sup>	4.5	7.0	7.5
Operations	One wholly owned pellet plant (Tubarão VIII) and five leased plants (Itabrasco, Hispanobrás, Kobrasco and two Nibrasco plants). These plants receive iron ore primarily from our Southeastern System mines.	Part of the Southern System. Receives iron ore from the Paraopeba complex and purchases from third parties. Since February 2019, Fábrica operations are suspended.	Part of the Southern System. Receives iron ore from the Vargem Grande complex.	Part of the Northern System. Receives iron ore from the Carajás mines.
Energy	Supplied through the national electricity grid. Produced directly by our power plants or acquired through power purchase agreements	Supplied through the national electricity grid. Produced directly by our power plants or acquired through power purchase agreements.	Supplied through the national electricity grid. Produced directly by our power plants or acquired through power purchase agreements.	Supplied through the national electricity grid. Produced directly by our power plants or acquired through power purchase agreements.



## 1.4. Production/Commercialization/Markets

Logistics	Production is shipped to customers through Tubarão maritime terminal.	Production is mostly transported by MRS and EFVM.	Production is mostly transported by MRS.	Production is shipped to customers through Ponta da Madeira maritime terminal.
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- (1) The operating lease for the Hispanobras pellet plant expires in December 2023, for the Itabasco pellet plant in June 2024, for the Nibrasco pellet plant in December 2025, and for the Kobrasco pellet plants in 2033.
- (2) The environmental operating licenses for the Tubarão pellet plants provide for a capacity of 36.2 Mtpy.



OMAN	
VALE OMAN PELLETIZING COMPANY LLC (“VOPC”)	
Ownership interest	100%
Location	Sohar, Oman
Operator	Vale S.A.
Capacity (Mtpy)	9.0
Operations	Vale’s industrial complex. Two pellet plants with total nominal capacity of 9.0 Mtpy. The pelletizing plant is integrated with the Company’s distribution center that has a nominal capacity of 40.0 Mtpy. The Oman plant is supplied by iron ore from the Iron Quadrangle state of Minas Gerais through the Tubarão port and by iron ore from Carajás through the Ponta da Madeira maritime terminal.
Energy	Supplied through the national electricity grid.

### A.1.2. Clients, sales and commercialization

Vale supplies all of its iron ore and iron ore pellets to the steel industry. Prevailing and expected levels of demand for steel products affect demand for the Company’s iron ore and iron ore pellets. Demand for steel products is influenced by several factors, such as global industrial production, civil construction and infrastructure spending. For more information on prices and demands, see item 2.2 of this Reference Form.

In 2022, China accounted for 62.9% of the Company’s iron ore and pellet shipments, and Asia, as a whole, accounted for 77%, Brazil for 11.8%, Europe for 5.7% , followed by the Middle East and Africa with 4.3%, and others with 1.2%. Vale’s ten largest customers jointly purchased 130 Mtpy of iron ore and pellets from its production, representing 43% of Vale’s iron ore and pellets sales volume in 2022 and 43% of total iron ore revenue and pellets from Vale. In 2022, no customer accounted for more than 10% of the Company’s iron ore and pellet shipments.

Of the pellet production in 2022, 52% were blast furnace pellets and 49% were direct reduction pellets. The blast furnace and direct reduction are different technologies employed by steel mills to produce steels, each using different types of pellets. In 2022, the Brazilian and Asian markets (mainly China and Japan) were the main markets for Vale’s blast furnace pellets, while the Middle East and North America were the main markets for the Company’s direct reduction pellets.

Vale invests in customer service in order to improve its competitiveness. Vale works closely with its customers to understand their objectives and provide them with steel solutions that meet their specific needs. Through its experience in mining, agglomeration and iron manufacturing processes, Vale seeks technical solutions that enable a balance between the best use of its world-class mining assets and the satisfaction of its customers.

## 1.4. Production/Commercialization/Markets

Vale believes that its ability to offer customers a complete solution for the steel industry, as well as the quality of its products, are very important advantages that contribute to improving its competitiveness in relation to competitors who may be in a more convenient geographic location. In addition to providing technical assistance to its customers, Vale has offices in St. Prex (Switzerland), Tokyo (Japan), Singapore, Dubai (United Arab Emirates), Shanghai, Beijing and Qingdao (China), which support the global sales of Vale International (“VISA”). The offices also allow Vale to maintain closer contact with its customers, monitor their needs and the performance of their contracts, in addition to ensuring that their customers receive products in a timely manner.

Vale sells iron ore and pellets through different agreements, including long-term contracts with customers, and on a spot basis, through public offerings and trading platforms. Vale's pricing is generally linked to market price indices and uses a variety of mechanisms, including current spot prices and average prices during specific periods. In cases where, at the time of delivery, the products are priced before the final price is determinable, Vale recognizes the sale based on a provisional price with a subsequent adjustment that reflects the final price.

In 2022, Vale hedged part of its total exposure to bunker oil prices, arising from its international and domestic Free on Board (“FOB”) and Cost and Freight (“CFR”) sales.

### A.1.3. Competition

The global market for iron ore and pellets is extremely competitive. The main factors that affect competition are price, quality and variety of products offered, as well as reliability, operating costs and transportation costs.

**Asia.** Vale's main competitors in the Asian market are located in Australia and include subsidiaries and affiliates of BHP Group Limited (“BHP”), Rio Tinto Ltd. (“Rio Tinto”) and Fortescue Metals Group Ltd.

- Vale is competitive in the Asian market for two main reasons. First, steel companies generally seek to obtain the types (or blends) of iron ore and iron ore pellets that will allow them to produce their intended end product in the most cost-effective and efficient manner. The Company's iron ore has low impurity levels and other properties that generally lead to lower processing costs. For example, in addition to its high purity content, the alumina content of the Company's iron ore is very low compared to Australian ores, reducing coke consumption and increasing productivity in the blast furnaces, which is particularly important in periods of high demand and environmental constraints. When market demand is strong, the Company's quality differential generally stands out among customers. Second, steel companies often develop sales relationships based on reliable supply of a specific blend of iron ore and iron ore pellets. Owning and operating logistics facilities in the North and Southeast Systems help ensure that products are delivered on time and at relatively low cost.
- The Company relies on long-term charter agreements to guarantee transport capacity and increase its ability to offer products in the Asian market at competitive prices under the CFR regime, despite higher freight costs compared to Australian producers.
- To support the iron ore business strategy, Vale operates two distribution centers, one in Malaysia and the other in Oman, and has long-term agreements with nineteen ports in China, which also serve as distribution centers.
- In 2015, Vale launched Brazilian Blend Fines (“BRBF”), a high-quality product resulting from the blending of fines from Carajás, which contain a higher concentration of iron and a lower concentration of silica in the ore, with fines from the Southern and Southeast Systems, which contain a lower concentration of iron in the ore. In August 2018, Metal Bulletin released a new index, the 62% Fe Low Alumina Index, which is based on the Company's BRBF. During 2022, the 62% Fe low alumina index traded at a premium of US\$2.8/dmt over the 62% Fe index. The resulting blend offers robust performance in any type of sintering operation and is produced at Teluk Rubiah Marine Terminal (“TRMT”) in Malaysia and seventeen distribution centers in China, which reduces time to reach Asian markets and increases distribution capillarity of the Company through smaller vessels.

**Europe.** Vale's main competitors in the European market are Luossavaara Kiirunavaara AB (“LKAB”), ArcelorMittal Mines Canada Inc., Iron Ore Company of Canada, a subsidiary of Rio Tinto, Kumba Iron Ore Limited and Société Nationale Industrielle et Minière. Vale is competitive in the European market for the same reasons as in Asia and because of the proximity of its port facilities to European customers.

**Brazil.** The Brazilian iron ore market is also competitive and includes many small iron ore producers. Some steel companies, including Gerdau S.A., Companhia Siderúrgica Nacional, Vallourec Tubos do Brasil S.A., Usiminas and

## 1.4. Production/Commercialization/Markets

ArcelorMittal also have iron ore mining operations. While price is relevant, quality and reliability are also important competitive factors. Vale believes that its integrated transportation systems, high quality ore and technical services make it a strong competitor in the Brazilian market. With regard to pellets, Vale's main competitors are LKAB, Iron Ore Company of Canada, Ferrexpo Plc, ArcelorMittal Mines Canada, Samarco and Bahrain Steel.

### A.2. Manganese ore

#### A.2.1. Manganese ore property

The Company have a manganese mining operation in Brazil, operated by its parent company Vale S.A. under concessions from the federal government granted for an indefinite period, subject to the life of mines. This operation produces metallurgical ore, used primarily to produce manganese ferroalloys, a raw material used to produce carbon and stainless steel. Vale have suspended its manganese ore operations since 2020 for strategic review.



MANGANESE ORE OPERATIONS	
AZUL	
Ownership interest	100%
Location	Carajás, State of Pará, Brazil.
Operator	Vale S.A.
Mining title	Mining concession for indefinite period. Acreage: 4,650 ha.
Stage/ Operations	Open pit mining operations and on-site beneficiation plant. Crushing, scrubbing and classification steps, producing lumps and fines. Azul mine operations have been suspended since March 2020 for strategic review.
Key permit conditions	The Company has or expects to obtain in a timely manner the necessary permits for operations.
Mine types and mineralization styles	Oxidized ores with high and medium grade (24 and 46% manganese content)
Associated facilities and infrastructure	<i>Processing plant:</i> Crushing, scrubbing and classification steps, producing lumps and fines. <i>Other facilities:</i> Waste and tailings disposal structures. <i>Logistics:</i> Manganese ore is transported by truck and EFC railroad to the Ponta da Madeira maritime terminal. <i>Energy:</i> Supplied through the national electricity grid. Produced directly by the Company's power plants or acquired through power purchase agreements.

## 1.4. Production/Commercialization/Markets

Also, the Company no longer produces manganese ferroalloys. In January 2022, Vale sold its ferroalloys operations in Barbacena and Ouro Preto, in the state of Minas Gerais, to VDL. In 2020, the Company shut down its operations in Simões Filho, state of Bahia. In 2021, Vale produced 71 thousand metric tons at the Barbacena and Ouro Preto operations, and in 2020 the Company produced 73 thousand metric tons at the Barbacena, Ouro Preto and Simões Filho operations.

### A.3. Logistics and energy assets to support Iron Solutions operations

#### A.3.1. Railroads

**Estrada de Ferro Vitória a Minas (“EFVM”).** The EFVM railroad links the Company’s Southeastern System mines in the Iron Quadrangle region in the Brazilian state of Minas Gerais to the Tubarão port, in Vitória, in the Brazilian state of Espírito Santo.

- Vale operates this 905-kilometer railroad under a concession agreement, which was recently renewed and will expire in 2057.
- The EFVM railroad consists of two lines of track extending for 584 kilometers to permit continuous railroad travel in opposite directions, and single-track branches of 304 kilometers. Industrial manufacturers are in this area and major agricultural regions are also accessible to it.
- VLI S.A. (“VLI”) has rights to purchase railroad transportation capacity on the Company’s EFVM railroad.
- In 2022, the EFVM railroad transported 76.85 thousand metric tons of iron ore and 19.20 thousand metric tons of other cargo. The EFVM railroad also carried 529 thousand passengers in 2022. In 2022, Vale had a fleet of 319 locomotives and 12,138 wagons at EFVM, which were operated by Vale and third parties.

**Estrada de Ferro de Carajás (“EFC”).** The EFC railroad links Vale’s Northern System mines in the Carajás region in the Brazilian state of Pará to the Ponta da Madeira maritime terminal, in São Luis, in the Brazilian state of Maranhão.

- Vale operates the EFC railroad under a concession agreement, which was recently renewed and will expire in 2057. EFC extends for 892 kilometers from the Company’s Carajás mines to the Company’s Ponta da Madeira maritime terminal complex facilities. Its main cargo is iron ore, principally carried for the Company.
- VLI has rights to purchase railroad transportation capacity on Vale’s EFC railroad.
- In 2022, the EFC railroad transported 173,167 thousand metric tons of iron ore and 16,018 thousand metric tons of other cargo. EFC also carried 329 thousand passengers in 2022. EFC supports the largest train, in terms of capacity, in Latin America, which measures approximately 3.4 kilometers, weighs approximately 41.5 thousand gross metric tons when loaded and has 333 cars. In 2022, EFC had a fleet of 298 locomotives and 20,941 wagons, which were operated by us and third parties.

The principal items of cargo of the EFVM and EFC railroads are:

- Iron ore and iron ore pellets and manganese ore, carried for the Company and customers;
- Steel, coal, pig iron, limestone and other raw materials carried for customers with steel mills located along the railroad;
- Agricultural products, such as soybeans, soybean meal and fertilizers; and
- Other general cargo, such as pulp, fuel and chemical products.

Vale charges market prices for customer freight, including iron ore pellets originating from joint ventures and other enterprises in which we do not have a 100% equity interest. Market prices vary based on the distance traveled, the type of product transported and other criteria, subject to price caps set forth in the relevant concession agreements and are regulated by the Brazilian transportation regulatory agency (Agência Nacional de Transportes Terrestres – “ANTT”).

#### A.3.2 Ports and maritime terminals

##### Brazil

## 1.4. Production/Commercialization/Markets

Vale operates ports and maritime terminals principally to complete the delivery of our iron ore and iron ore pellets to bulk carrier vessels serving the seaborne market. The Company also use our ports and terminals to handle customers' cargo.

**Tubarão e Praia Mole Ports.** The Tubarão port, which covers an area of 18 km<sup>2</sup>, is in the Brazilian state of Espírito Santo and contains the iron ore maritime terminal and the general cargo terminals (Terminal de Granéis Líquidos and the Terminal de Produtos Diversos).

- The iron ore maritime terminal has two piers. From this terminal in the Tubarão port, Vale exports mostly iron ore produced from its Southeastern System. The iron ore maritime terminal has a storage yard with a capacity of 2.9 million metric tons. In 2022, 61.5 million metric tons of iron ore and iron ore pellets were shipped through the terminal for the Company.
- Pier I can accommodate two vessels at a time, one of up to 170,000 deadweight tonnage ("DWT") on the southern side and one of up to 210,000 DWT on the northern side. In Pier I there are two ship loaders, which can load up to 13,500 metric tons per hour each.
- Pier II can accommodate one vessel of up to 405,000 DWT at a time, limited at 23 meters draft. In Pier II there are two ship loaders that work alternately and can each load up to 16,000 metric tons per hour continuously.
- The Terminal de Produtos Diversos handled 5.54 million metric tons of grains and fertilizers in 2022. VLI has the right to purchase capacity of the Terminal de Produtos Diversos, upon agreement with the Company on volume.
- The Terminal de Granéis Líquidos handled 0.71 million metric tons of fuel in 2022. VLI has the right to purchase capacity of the Terminal de Granéis Líquidos, upon agreement with the Company on volume.
- The Praia Mole port is also located in the Brazilian state of Espírito Santo. The Praia Mole terminal is principally a coal terminal and handled 11 million metric tons of coal and other related cargo in 2022. VLI has the right to purchase capacity of the Praia Mole terminal, upon agreement with the Company on volume.

**Ponta da Madeira Maritime terminal.** Ponta da Madeira maritime terminal is in the Brazilian state of Maranhão.

- Pier I can accommodate vessels of up to 420,000 DWT and has a maximum loading rate of 16,000 metric tons per hour. Pier III, which has two berths and three ship loaders, can accommodate vessels of up to 210,000 DWT at the south berth and 180,000 DWT at the north berth (or two vessels of 180,000 DWT simultaneously), subject to tide conditions, and has a maximum loading rate of 8,000 metric tons per hour in each ship loader.
- Pier IV (south berth) can accommodate vessels of up to 420,000 DWT and have two ship loaders that work alternately with a maximum loading rate of 16,000 metric tons per hour.
- In 2018, Vale received from the Brazilian tax authorities, the customs authorization for the operations of Pier IV (north berth). Cargo shipped through the Company's Ponta da Madeira maritime terminal consists of the Northern System production of iron ore, pellets and manganese. Pier IV (north berth) is able to accommodate vessels of up to 420,000 DWT and have two ship loaders that work alternately with a maximum loading rate of 16,000 metric tons per hour.
- In 2022, 167.9 million metric tons of iron ore and pellets were shipped through the terminal. The Ponta da Madeira maritime terminal has a storage yard with a static capacity of 7.2 million metric tons.

**Itaguaí Maritime Terminal – Cia. Portuária Baía de Sepetiba ("CPBS").** From this terminal the Company mostly export iron ore from its Southern system. CPBS is a wholly owned subsidiary that operates the Itaguaí terminal, at the Itaguaí Port, in Sepetiba in the Brazilian state of Rio de Janeiro, which is leased from Companhia Docas do Rio de Janeiro ("CDRJ") until 2026, with a proposal for an extension for more 25 years, currently under analysis by the Ministry of Ports and Airports, federal regulatory agency and Port Authority. The Itaguaí port terminal has a pier with one berth that allows the loading of ships up to 17.8 meters of draft and approximately 200,000 DWT of capacity. In 2021, the terminal loaded 16.3 million metric tons of iron ore.

**Guaíba Island Maritime terminal.** From this terminal the Company export mostly iron ore from its Southern system. Vale operates a maritime terminal on Guaíba Island in the Sepetiba Bay, in the Brazilian state of Rio de Janeiro. The iron ore terminal has a pier with two berths that allows the loading of ships of up to 350,000 DWT. In 2022, the terminal loaded 27.9 million metric tons of iron ore.

### Oman



## 1.4. Production/Commercialization/Markets

Vale Oman Distribution Center LLC is part of the Oman Industrial Complex and operates a blending and distribution center in Liwa, Sultanate of Oman. The maritime terminal has a large deep-water jetty, a 600 meter long platform connected to the shore by means of a 700 meter long trestle and is integrated with a storage yard that has throughput capacity to handle 40 Mtpy of iron ore and iron ore pellets per year. The loading nominal capacity is 10,000 metric tons per hour and the nominal unloading capacity is 9,000 metric tons per hour.

### Malaysia

Teluk Rubiah Maritime Terminal is in the Malaysian state of Perak and has a pier with two berths that allows the unloading of vessels of approximately 400,000 DWT of capacity and the loading of vessels up to 220,000 DWT of capacity. In 2022, the terminal unloaded 18.7 million metric tons of iron ore and loaded 18.3 million metric tons of iron ore.

**Shipping – Maritime shipping of iron ore and pellets.** In 2022, the Company shipped approximately 256 million metric tons of iron ore and pellets in transactions in which Vale were responsible for transportation. The Company ship a large amount of its iron ore products from Brazil to Asia through long-term contracts of affreightment with owners of very large ore carriers. The vessels employed under these contracts of affreightment reduce energy consumption and greenhouse emissions by carrying an increased amount of cargo in a single trip, reducing our carbon footprint and offering lower shipping costs. The majority of these vessels are efficient and modern Valemax (400,000 DWT) and Gvaibamax (325,000 DWT) vessels, which transported approximately 140 million metric tons of iron ore products in 2022. These vessels also help us mitigate most of the volatility and strength of the capsize spot market.

Considering the IMO regulation that limits global Sulphur emissions to 0.5%, which became effective in January 2020, Vale negotiated the fitting of scrubbers on the majority of the vessels employed under long-term contracts of affreightment. These scrubbers allow the Company to continue bunkering high-sulphur fuel oil, while complying with the new regulation. Since 2021, 97% of the vessels employed under our long-term contracts of affreightment were scrubber-fitted.

### A.3.3. Energy

Vale had developed its energy assets based on the current and projected energy needs of our operations, with the goal of reducing its energy costs, minimizing the risk of energy shortages and meeting the Company's consumption needs through renewable sources.

Energy management and efficient supply in Brazil are priorities for the Company, given the uncertainties associated with changes in the regulatory environment and the risk of rising electricity prices. In 2022, Vale installed capacity in Brazil was 2.1 GW, sourced mostly from directly or indirectly owned power plants. The Company uses the electricity produced by these plants for its internal consumption needs.

The Company have a 50% direct stake at the hydroelectric plant of Candonga (140 MW), located in the Southeastern region. Vale also have an 8.29% direct stake at the hydroelectric plant of Machadinho (1,140 MW), located in the Southern region and a 30% direct stake at the hydroelectric plant of Estreito (1,087 MW), located in the Northern region.

Through its 55% participation in Aliança Geração de Energia S.A. ("Aliança Geração"), Vale also have indirect stakes in the hydroelectric power plants of Igarapava (210 MW), Porto Estrela (112 MW), Funil (180 MW), Candonga (140 MW), Aimorés (330 MW), Capim Branco I (240 MW), Capim Branco II (210 MW), located in the Southeastern Region and, additionally, the Company have indirect stake in Santo Inácio (98,7 MW), a Wind Complex located in the Brazilian state of Ceará, which started operations in December 2017. In addition, in 2019, Vale also approved the construction of two wind farms (Gravier and Acauã) in the Brazilian states of Ceará and Rio Grande do Norte, respectively, with a total of 180.6 MW of installed capacity. Gravier (71.4 MW) began operations in 2022, and Acauã (109.2 MW) is scheduled to start in the fourth quarter of 2023. Part of the electricity generated by Gravier and Acauã is or will be supplied to the Company's operations through power purchase agreements with Aliança Geração.

Vale also has a 4.59% indirect stake in Norte Energia S.A., through our 51% stake in Aliança Norte Energia, a joint venture with Cemig Geração e Transmissão S.A. Norte Energia S.A. is the company established to develop and operate the Belo Monte hydroelectric plant in the Brazilian state of Pará, which started operations in April 2016 and accomplished the start-up of the last of its 24 turbines in 2019. Vale's participation in the Belo Monte



## 1.4. Production/Commercialization/Markets

project gives the right to purchase 9% of the electricity generated by the plant, which has already been contracted through a long-term power purchase agreement with Norte Energia S.A.

With the aim of reaching 100% renewable electricity in Brazil by 2025 and increasing renewable energy sources, in November 2022, Vale announced the operational start-up of the Sol do Cerrado solar project and ramp up is expected by July 2023. The solar plant contemplates a total installed capacity of 766 megawatts peak (MWp) in the municipality of Jaíba, in the state of Minas Gerais, Brazil. The Company’s 100% solar generation also optimizes the generation profile of its portfolio, which is based on hydro generation.

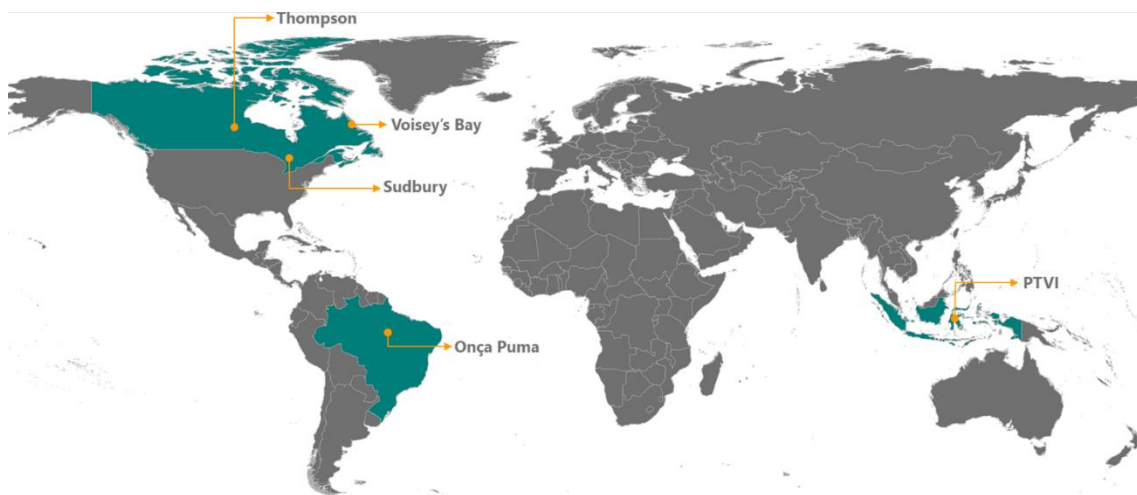
In addition, the Company have entered into a long-term energy supply contract for 20 years, to be supplied by the Folha Larga Sul wind farm, a 151 MW project in Campo Formoso, Bahia, Brazil.

## B. ENERGY TRANSITION METALS

### B.1. Nickel

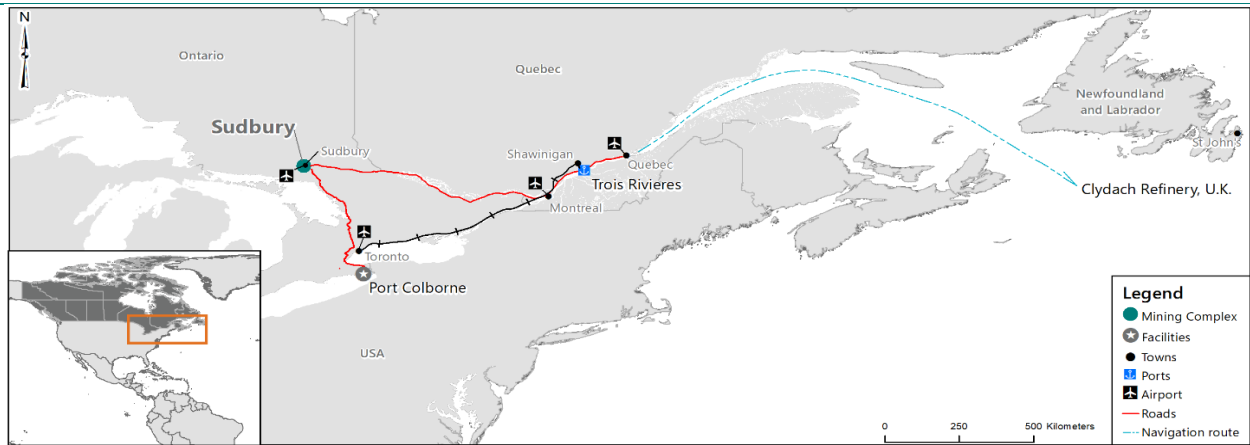
Vale conducts its integrated nickel operations primarily through three regional production systems: (i) the North Atlantic which includes Canada and the United Kingdom, (ii) the Asia-Pacific which includes Indonesia and Japan and (iii) the South Atlantic region in Brazil. Our North Atlantic region also produces Copper as a co-product, as well as cobalt and precious metals as by-products.

Our nickel operations are described in the tables below:



NICKEL OPERATIONS AND PROJECTS
NORTH ATLANTIC OPERATIONS
SUDBURY

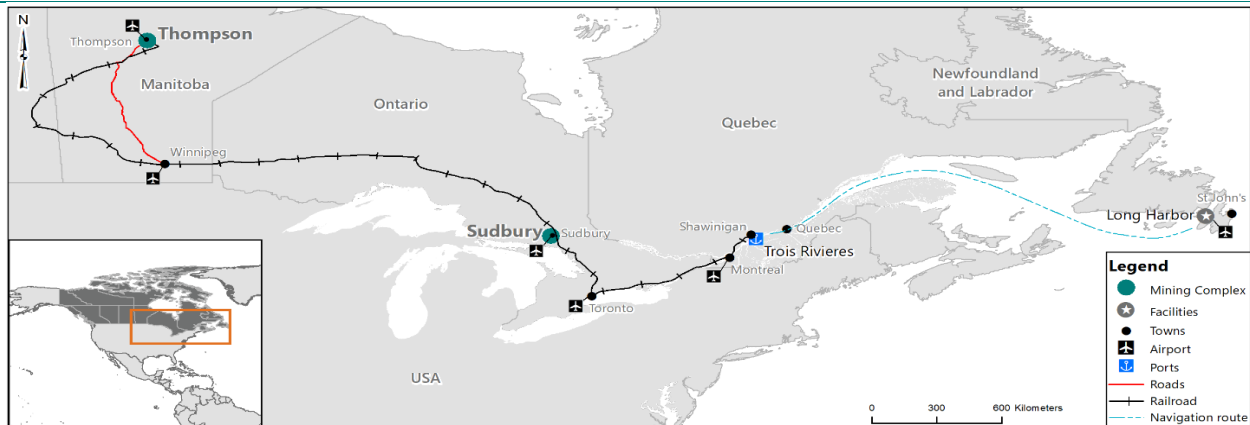
### 1.4. Production/Commercialization/Markets



Ownership interest	100%
Location	Ontario, Canada.
Operator	Vale Canada.
Mineral titles <sup>(1)</sup>	<ul style="list-style-type: none"> <li>- Patented mineral rights with no expiration date.</li> <li>- Mineral leases expire between 2024 and 2042.</li> <li>- Mining licenses of occupation with renewable terms. Vale can continue to operate during the renewal process.</li> </ul> Acreage: 9,062 ha.
Stage/ Operations	Production stage since 1885. Integrated underground/open pit mining, milling, smelting and refining operations.
Key permit conditions	We have or expect to obtain in a timely manner the necessary permits for operations.
Mine types and mineralization styles	Nickel and copper. Primarily underground mining operations with nickel sulfide ore bodies, which also contain some copper, cobalt, PGMs, gold and silver.
Associated facilities and infrastructure	<p><b>Processing plants:</b> Milling, smelting and refining facilities. In Ontario, we also process external feeds from third parties and our Thompson operation. Finished Nickel is produced by the Copper Cliff Nickel Refinery (“CCNR”) and sent for packaging at Port Colborne Refinery (“PCR”). In addition to producing finished nickel in Sudbury, the Company’s ship a nickel oxide intermediate product to its nickel refinery in Clydach, Wales, United Kingdom to produce finished nickel. Intermediate residues from CCNR are also sent to PCR for further treatment and production of Cobalt and Precious Metals (PGMs, Gold and Silver). Copper Concentrate produced by Ontario Mill is directly sold to the market.</p> <p><b>Other facilities:</b> Water treatment plant, acid plant, waste and tailings facilities.</p> <p><b>Logistics:</b> Plants are located by the Trans-Canada highway and two major railways that pass through the Sudbury area. Finished products are delivered to the North American market by truck and rail. For overseas customers, the products are loaded into containers and travel intermodally (truck/rail/containership) through Canadian ports (Quebec, Trois Rivieres) bulk material (Copper Concentrate) is sold directly to market and is shipped bulk via Canadian port (Quebec, Trois Rivieres)</p> <p><b>Energy:</b> Supplied by Ontario’s provincial electricity grid and produced directly by Vale Canada via hydro generation.</p>

(1) Area with reserves and resources associated.

### 1.4. Production/Commercialization/Markets

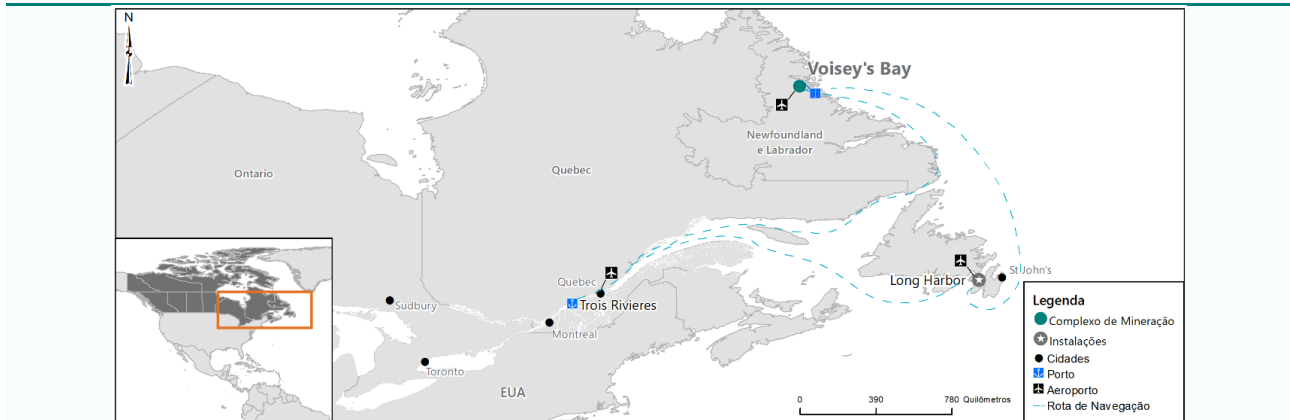


Ownership interest	100%
Location	Thompson, Manitoba, Canada.
Operator	Vale Canada.
Mineral titles <sup>(1)</sup>	<ul style="list-style-type: none"> <li>- Mining Claim Leases (“MCL”) are in good standing and expire between 2023 and 2027.</li> <li>- Transition Agreement with the government of Manitoba will renew MCLs to Mineral Leases, with renewable terms of 21 years. We can continue to operate during the renewal process.</li> </ul> <p>Acreage: 1,793 ha.</p>
Stage/ Operations	Production stage since 1961. Integrated underground mining and milling operations.
Key permit conditions	Vale has or expect to obtain in a timely manner the necessary permits for operations.
Mine types and mineralization styles	Nickel. Primarily underground mining operations with nickel sulfide ore bodies, which also contain copper, PGMs and cobalt.
Associated facilities and infrastructure	<p><b>Processing plants:</b> Following the closure of Thompson Smelter and Refinery, since the second half of 2018, Nickel Concentrate is shipped from Thompson to be processed at Sudbury integrated operations and/or Long-Harbour refinery, depending on the demand.</p> <p><b>Other facilities:</b> Waste and tailings disposal structures.</p> <p><b>Logistics:</b> From Thompson, the nickel concentrate can be trucked or railed to Winnipeg (Manitoba) or directly railed to Sudbury (Ontario) or Trois-Rivieres, (Quebec). From Trois-Rivieres, the concentrate is stored at the port and loaded aboard a ship for Long Harbour Refinery (Newfoundland &amp; Labrador).</p> <p><b>Energy:</b> Hydro-electric power supplied by Manitoba’s provincial utility company.</p>

(1) Area with reserves and resources associated.

**VOISEY’S BAY E LONG HARBOUR**

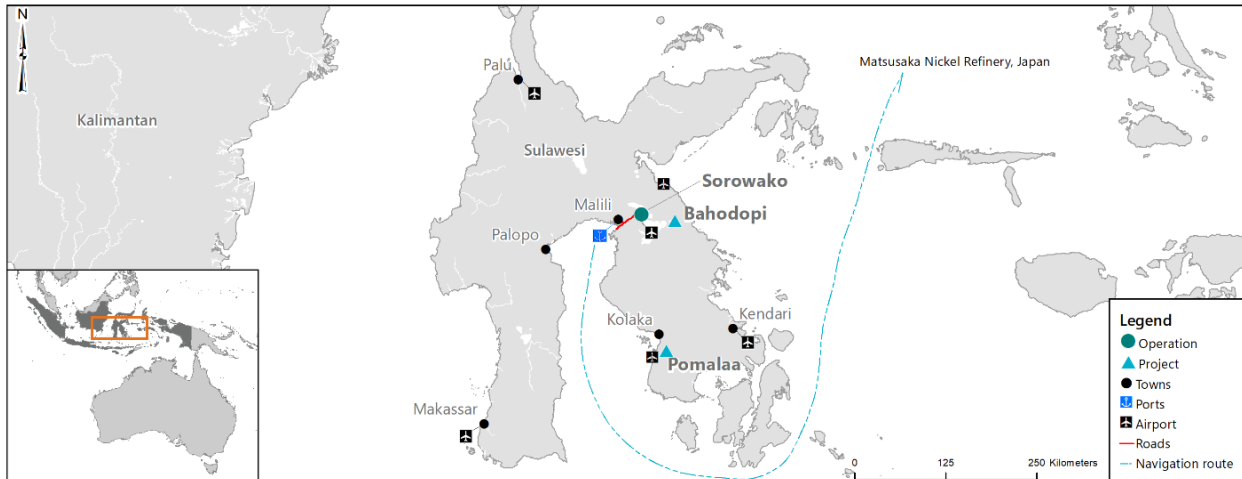
### 1.4. Production/Commercialization/Markets



Ownership interest	100%
Location	Newfoundland and Labrador, Canada.
Operator	Vale Newfoundland & Labrador Limited which is wholly owned by Vale Canada.
Mineral titles <sup>(1)</sup>	Mining lease expiring in 2027 with a right of further renewals for 10-year periods. Acreage: 1,595 ha.
Stage/ Operations	Production stage since 2005. Integrated mining and milling operation at Voisey's Bay producing nickel and copper concentrates. further integrated with Long Harbour Refinery (in operation since 2014).
Key permit conditions	Vale has or expect to obtain in a timely manner the necessary permits for operations.
Mine types and mineralization styles	Nickel and copper. Open pit and underground mining operations with nickel sulfide ore bodies, which also contain copper and cobalt.
Associated facilities and infrastructure	<b>Processing plant:</b> Nickel concentrate from Voisey's Bay (Labrador) is refined at Long Harbor (Newfoundland) to produce finished nickel rounds and pellets, as well as associated copper and cobalt products. Since the second half of 2021, Long Harbor also started processing additional feed from Thompson, Manitoba. Copper Concentrate produced by Voisey's Bay (Labrador) is directly sold to the market. <b>Other facilities:</b> Waste and tailings disposal structures. <b>Logistics:</b> The copper and nickel concentrate from Voisey's Bay are transported to the port by haulage trucks and then shipped by dry bulk vessels to either overseas markets (copper) or to our Long Harbour facilities (nickel) for further processing. Thompson concentrate is sent to Long Harbor by rail and ship. <b>Energy:</b> Power at Voisey's Bay is 100% supplied through Vale-owned diesel generators. Power at the Long Harbour refinery is supplied by the Newfoundland and Labrador provincial utility company.

(1) Area with reserves and resources associated.

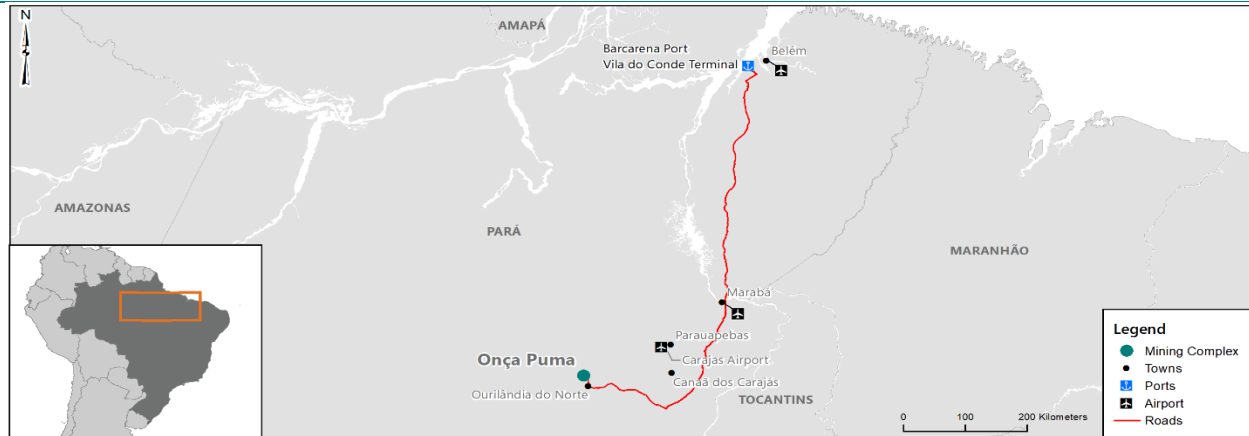
### 1.4. Production/Commercialization/Markets



Ownership interest	Owned by PT Vale Indonesia Tbk (“PTVI”). We indirectly hold 44.34% of PTVI (Sumitomo Metal Mining (“Sumitomo”) holds 15.03%, PT Indonesia Asahan Aluminium (Persero) (“Inalum”) holds 20%, Sumitomo Corporation holds 0.14% and the public holds 20.49%).
Location	<ul style="list-style-type: none"> <li>– Sorowako, South Sulawesi Province.</li> <li>– Bahodopi, Central Sulawesi Province.</li> <li>– Pomalaa, Southeast Sulawesi Province.</li> </ul>
Operator	PTVI.
Mineral titles <sup>(1)</sup>	Contract of Work expires in 2025, with right to two consecutive ten-year extensions. Acreage: 118,017ha.
Stage/ Operations	Sorowako: Production stage since 1978 and engages in mining and value-added smelting activities in the production of nickel matte. Bahodopi and Pomalaa Projects: Exploration Stage.
Key permit conditions	Vale has or expect to obtain in a timely manner the necessary permits for operations.
Mine types and mineralization styles	Nickel laterite open pit mining which also contains cobalt.
Associated facilities and infrastructure	<p><b>Processing plant:</b> PTVI mines nickel laterite ore and produces nickel matte, which is shipped primarily to our nickel refinery in Japan. Pursuant to life of mine off take agreements, PTVI sells part of its production to Vale Canada (currently, 80%) and part of Sumitomo (currently 20%). Vale Canada annual share of the offtake of PTVI may change based on the total production of PTVI.</p> <p><b>Other facilities:</b> Waste disposal structures and hydroelectric power facilities.</p> <p><b>Logistics:</b> PTVI nickel matte product is trucked approximately 55 km to the river port at Malili and then loaded onto barges.</p> <p><b>Energy:</b> Produced primarily by PTVI’s low-cost hydroelectric power plants on the Larona River (there are currently three facilities). PTVI has thermal generating facilities to supplement its hydroelectric power supply with a source of energy that is not subject to hydrological factors.</p>

(1) Area of the contract of work (“COW”).

### 1.4. Production/Commercialization/Markets



Ownership interest	100%
Location	Pará, Brazil.
Operator	Vale S.A.
Mineral titles <sup>(1)</sup>	Mining concession with no expiration date. Acreage: 14,787 ha.
Stage/ Operations	Production stage since 2010. Mining and smelting operation producing a high-quality ferronickel for application within the stainless-steel industry.
Key permit conditions	Vale has or expect to obtain in a timely manner the necessary permits for operations.
Mine types and mineralization styles	Nickel laterite deposit, open pit mining.
Associated facilities and infrastructure	<b>Processing plant:</b> The operation produces ferronickel via a rotary kiln electric furnace process. We are currently operating a single line with one electric furnace and two lines of calcine and rotary kilns, with nominal capacity estimated at 27,000 metric tons per year. The Company have approved the construction of the second furnace. See Additional Information—Legal proceedings—Legal proceedings seeking suspension of certain operations in the state of Pará. <b>Other facilities:</b> Waste and tailings disposal structures. <b>Logistics:</b> The ferro nickel is transported by truck to the Vila do Conde maritime terminal in the Brazilian state of Pará and exported in ocean containers. <b>Energy:</b> Supplied through the national electricity grid. Produced directly by our power plants or acquired through power purchase agreements.

(1) Area with reserves and resources associated.



## 1.4. Production/Commercialization/Markets

### NICKEL REFINERIES



Long Harbour, Port Colborne and Copper Cliff are described as part of Canadian operations summary above.

	CLYDACH	MATSUSAKA
Ownership interest	100%	Vale owns 87.2% of the shares, and Sumitomo owns the remaining shares.
Location	Clydach, Wales (U.K.).	Matsusaka, Japan.
Operator	Vale Europe Limited.	Vale Japan Limited.
Capacity	Standalone nickel refinery (producer of finished nickel), with nominal capacity of 40,000 metric tons per year.	Standalone nickel refinery (producer of intermediate and finished nickel), with a nominal capacity of 60,000 metric tons per year for intermediate nickel products (for finished nickel product capacity the estimated capacity is 30,000 mt).
Operations	Processes a nickel intermediate product, nickel oxide, supplied from our Sudbury and Matsusaka operations to produce finished nickel in the form of powders and pellets.	Produces intermediate products for further processing in our refineries in the UK, and Canada, and finished nickel products using nickel matte sourced from PTVI.
Energy	Supplied through the national electricity grid.	Supplied through the national electricity grid. Acquired from regional utility companies.
Logistics	Transported to final customer in the UK and continental Europe by truck. Products for overseas customers are trucked to the ports of Southampton and Liverpool and shipped by ocean container.	Products trucked over public roads to customers in Japan. For overseas customers, the product is loaded into containers at the plant and shipped from the ports of Yokkaichi and Nagoya.

#### B.1.1. Clients and sales

Vale's nickel customers are spread across the world. In 2022, 45% of Vale's total refined nickel sales were destined to customers in Asia, 23% in Europe, 30% in North America, and 2% in other markets. Vale has short-term fixed-volume contracts with customers for most of its anticipated annual sales of nickel. These contracts generally provide stable demand for a significant portion of the Company's annual production. In addition, the Company has several long-term contracts to sell Class I nickel to the North Atlantic electric vehicle market.

Nickel is an exchange-traded metal, currently listed on the London Metal Exchange ("LME") and the Shanghai Futures Exchange ("SHFE"), and most nickel products are priced at a discount or premium to the stock price. LME, depending mainly on the physical and technical characteristics of the nickel product. Vale's refined nickel products represent what is known in the industry as "primary" nickel, i.e., nickel produced primarily from nickel ores (as opposed to "secondary" nickel, which is recovered from recycled material that contains nickel). Finished primary nickel products are distinguishable by the following characteristics, which determine the product's price level and suitability for various end-use applications:

- Nickel content and purity level: (i) intermediate products have various levels of nickel content, (ii) nickel pig iron has 1.5–15% nickel, (iii) ferronickel has 15–40% of nickel, (iv) refined nickel with less than 99.8% nickel, including products such as Tonimet nickel, (v) standard LME grade nickel has a minimum of

## 1.4. Production/Commercialization/Markets

99.8% nickel and (vi) high grade nickel purity has a minimum of 99.9% nickel and does not contain specific elemental impurities;

- Form (as powder, pellets, discs, squares, and discrete or filamentary strips);
- Size (from submicron dust particles to large size cathodes); It is
- Packaging (such as bulk, 2 ton bags, 250 kg drums, 10 kg bags).

In 2022, the main first-use applications for primary nickel were:

- Stainless steel (64% of global nickel consumption);
- Non-ferrous alloys, steel alloys and foundry (12% of global nickel consumption);
- Nickel plating (6% of global nickel consumption);
- Batteries (15% of global nickel consumption); and
- Others (3% of global nickel consumption).

In 2022, 84% of Vale's refined nickel sales were made to non-stainless steel applications, compared to the industry average for nickel producers of 36%. This provides greater diversification and stability of sales volume for the Company's nickel revenues. As a result of Vale's focus on higher value segments, average realized prices for refined nickel typically exceed spot nickel prices on the LME.

The Company provides sales and technical support to its customers on a global basis through an established marketing network based at its headquarters in Toronto, Canada. Vale has a well-established global marketing network for refined nickel, with sales and technical support distributed around the world with a presence in Singapore and Toronto (Canada) and sales managers located in St. Prex (Switzerland), Paramus, New Jersey (United States), and in various locations in Asia. For information on prices and demand, see item 2.2 of this Reference Form.

### B.1.2. Competition

The global nickel market is highly competitive. Vale's main competitive strengths include its long-life mines, sophisticated exploration and processing technologies and a diversified product portfolio. Its global marketing reach, diverse product mix and technical customer support target products to applications and geographies that offer the highest profit margins.

Vale's nickel production represented 6.13% of global primary nickel consumption in 2022. In addition to Vale, the largest integrated mine-to-market producers in the nickel industry (each with their own integrated facilities, including mining operations, processing, refining and marketing of nickel) are Tsingshan Group, Jiangsu Delong Nickel, Jinchuan Nonferrous Metals Corporation, Nornickel and Eramet. Together with Vale, these companies accounted for around 45% of global refined primary nickel production in 2022.

The quality of nickel products determines their suitability for the market. Higher Class I products, which have higher nickel content and lower levels of deleterious elements, are more suitable for high-grade nickel applications such as the growing market for electric vehicles (batteries) and use in specialist industries (e.g. , aircraft and spacecraft) and get a higher prize. Lower Class I products have slightly higher levels of impurities compared to Upper Class I products and are suitable for more general nickel applications such as foundry alloys and generally receive a lower premium compared to Upper Class I products. Class II products, which have lower nickel content and higher levels of deleterious elements, are more used in the manufacture of stainless steel. Intermediate products do not represent finished nickel production and are generally sold at a discount as they still need to be processed before being sold to end customers.

Much of the world's nickel production is made up of Class II nickel products (61% of the global market in 2022), which include Pig Iron Nickel (NPI) and Nickel Iron (with a nickel content below 99 %). Most of the Company's products are high quality nickel products, making it the preferred supplier for specialty nickel applications. In 2022, 52% of its nickel products were Upper Class I, 13% were Lower Class I and 9% were intermediate.

While stainless steel production is a major driver of global nickel demand, stainless steel producers can source nickel with a wide range of nickel grades, including secondary nickel (scrap). The choice between primary and secondary nickel is largely based on their relative prices and availability.

Competition in the nickel market is based primarily on quality and reliability of supply and price. The Company's operations are believed to be competitive in the nickel market due to the high quality of the Company's nickel products.

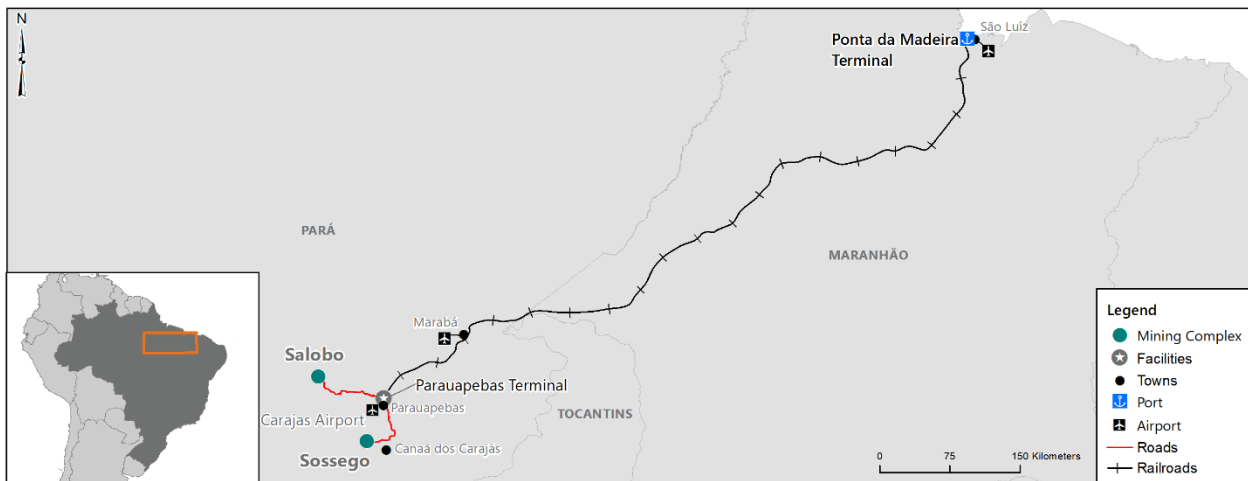
## 1.4. Production/Commercialization/Markets

### B.2. Copper

The Company conducts its copper operations primarily through Vale S.A. and its wholly-owned subsidiary Salobo Metais S.A. in Brazil, and through its subsidiary Vale Canada in Canada.



#### COPPER OPERATION AND PROJECTS



BRASIL SOSSEGO	
Ownership interest	100%
Location	Carajás, State of Pará, Brazil.
Operator	Vale S.A.
Mineral titles	Mining concession and application for mining concession with no expiration date. Acreage: 117,508 ha.
Stage/ Operations	Production stage since 2004. Two main open pits (Sossego and Sequerinho) and a processing facility to concentrate the ore, and satellites deposits (118, Cristalino, Bacaba and Mata II projects).
Key permit conditions	The Company has or expect to obtain in a timely manner the necessary permits for operations. Vale is in the process of obtaining or renewing (1) waste and tailings storage facilities permits and (2) social licenses related to projects.
Mine types and mineralization styles	Iron oxide-copper-gold ("IOCG") deposit, with copper as main element of economic interest and mined using the open pit method.

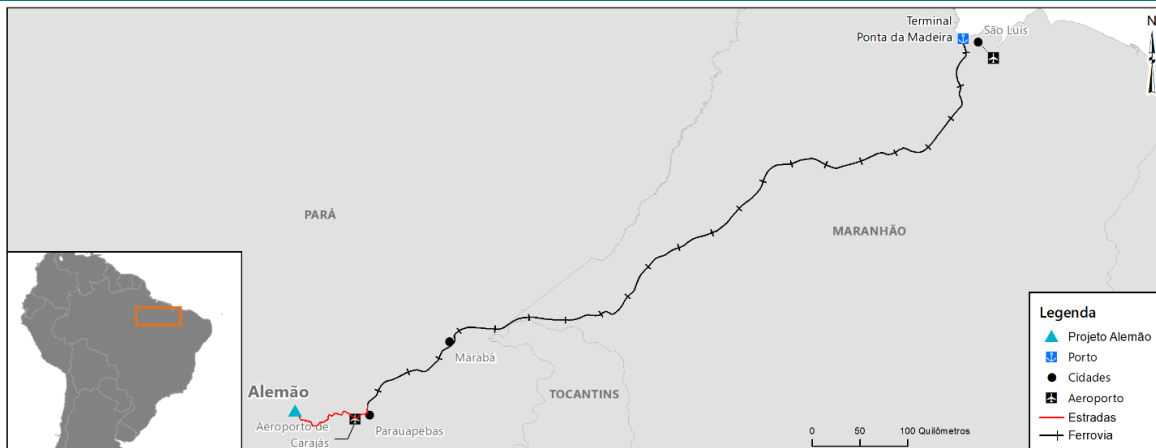
## 1.4. Production/Commercialization/Markets

Associated facilities and infrastructure	<p><b>Processing Facilities:</b> The run of mine is processed at Sossego processing facilities with four main components: crushing, grinding, flotation and concentrate dewatering.</p> <p><b>Other facilities:</b> Waste and tailings disposal structures.</p> <p><b>Logistics:</b> The Company trucks the concentrate to a storage terminal in Parauapebas and then transport it via the EFC railroad to the Itaqui Port in São Luís, state of Maranhão. In Itaqui Port, we lease a storage terminal until 2023, with a proposal for an extension for more 20 years, currently under analysis by competent authorities.</p> <p><b>Energy:</b> Supplied through the national electricity grid. Produced directly by us or acquired through power purchase agreements.</p>
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SALOBO	
Ownership interest	100%
Location	Carajás, State of Pará, Brazil.
Operator	Salobo Metais S.A.
Mineral titles	Mining concession with no expiration date. Acreage: 9,181 ha.
Stage/ Operations	Production Stage since 2012. Integrated open pit mining and milling operations.
Key permit conditions	The Company has or expect to obtain in a timely manner the necessary permits for operations.
Mine types and mineralization styles	Iron oxide–copper–gold ("IOCG") deposit, with copper and gold as main elements of economic interest and mined using open pit method.
Associated facilities and infrastructure	<p><b>Processing Facilities:</b> The run of mine is processed by means of standard primary and secondary crushing, conveying, roller press grinding, ball milling, copper concentrate flotation, tailings disposal, concentrate thickening, filtration and load out.</p> <p><b>Other facilities:</b> Waste and tailings disposal structures.</p> <p><b>Logistics:</b> The Company trucks the concentrate to a storage terminal in Parauapebas and then transport it via the EFC railroad to the Itaqui Port in São Luís, state of Maranhão. In Itaqui Port, we lease a storage terminal until 2023, with a proposal for an extension for more 20 years, currently under analysis by competent authorities.</p> <p><b>Energy:</b> Supplied through the national electricity grid. Acquired through power purchase agreements.</p>

### 1.4. Production/Commercialization/Markets

#### ALEMÃO PROJECT



Ownership interest	100%
Location	Carajás, State of Pará, Brazil.
Operator	Vale S.A.
Mineral titles	Mining concession with no expiration date.
Stage/ Operations	Acreage: 10,000 ha.
Key permit conditions	Exploration Stage – Pre-Feasibility technical study ongoing.
Mine types and mineralization styles	The Company has or expect to obtain in a timely manner the necessary permits for operations.
Associated facilities and infrastructure	Iron oxide-copper-gold deposit situated in the Carajás National Forest. The project is to develop a sublevel caving underground mine.  <i>Processing Facilities:</i> The project is expected to have as processing facilities primary crusher, ball milling, copper concentrate flotation, magnetic concentration, filtration and tailings disposal. <i>Energy:</i> Is expected to improve the current transmission line to 230kV capacity.

#### ÁSIA-PACIFIC HU'U PROJECT



Ownership interest	80% ownership Vale.
Location	Dompu and Bima Regencies of Province of Nusa Tenggara Barat (NTB) Sumbawa Island, Indonesia.
Operator	Sumbawa Timur Mining – STM.
Mineral titles <sup>(1)</sup>	Contract of Work covering approximately 19,260 ha is valid with the Government of Indonesia, comprising all the stages of a Mining project. The exploration stage (feasibility study) based on Government's regulations can be extended annually until the feasibility study report is complete and approved. Following approval, the operation-production stage will start, and will be valid for 30 years, renewable subject to the Government's approval. Acreage: 19,260 ha.

## 1.4. Production/Commercialization/Markets

Stage/ Operations	Exploration stage – Pre-Feasibility technical study ongoing.
Key permit conditions	The Company has or expect to obtain in a timely manner the necessary permits for operations.
Mine types and mineralization styles	80% ownership Vale.
Associated facilities and infrastructure	<i>Logistic:</i> This project is a greenfield project, therefore the actual logistics of transporting ore as well as processing are still under study. <i>Infrastructure:</i> The existing infrastructure is under development due to the project's greenfield location.

### B.2.1 Clients and sales

The Company sells a large part of the copper concentrates in the South Atlantic operations, produced in Sossego and Salobo, through medium and long-term contracts with copper smelters in Europe and Asia. Vale supplies copper concentrate and matte copper from the North Atlantic operations, produced in Sudbury, through medium-term contracts for the domestic market, and to smelters in Europe and Asia through long-term contracts, as well as copper concentrate of Voisey's Bay, through medium-term contracts. In addition, the Company sells copper cathodes from Sudbury and Long Harbor in North America under short-term contracts.

### B.2.2 Competition

The global refined copper market is highly competitive. Producers are integrated mining companies and custom smelters spanning all regions of the world, while consumers are mainly producers of wire rod and copper alloys. Competition takes place mainly on a regional level and is mainly based on production costs, quality, supply reliability and logistical costs. The world's largest copper cathode producers are Jiangxi Copper Corporation Ltd., Tongling Non Ferrous Metals Group Co., Corporación Nacional del Cobre de Chile ("Codelco"), Aurubis AG, Freeport McMoRan and Jinchuan, each acting as parent company. or through subsidiaries. The Company's participation in the global refined copper cathode market is marginal, as it is more competitively positioned in the copper concentrate market.

Copper concentrate and matte copper are intermediate products in the copper production chain. Both the concentrate and matte markets are competitive, with multiple producers, but fewer participants and lower volumes than the copper cathode market due to the high levels of integration of the major copper producers.

In the copper concentrate market, mining occurs globally with predominant participation in South America, while consumers are smelters located mainly in Europe and Asia. Competition in the copper concentrate market takes place primarily on a global level and is based on production costs, quality, logistical costs and supply reliability. Major competitors in the copper concentrate market are Freeport McMoRan, BHP, Glencore, Codelco, First Quantum, Anglo American, Zijin Mining, Rio Tinto and Antofagasta; each operating in a parent capacity or through subsidiaries. The Company's market share in 2022 was around 1.2% of the total copper concentrate market.

### B.3. Cobalt

Vale recovers significant quantities of cobalt as a by-product of its nickel operations. In 2022, the Company produced 909 metric tons of refined cobalt metal (in the form of cobalt rounds) at Vale's Port Colborne refinery, 1,525 metric tons of cobalt rounds at the Company's Long Harbour refinery. Vale sells cobalt on a global basis. The cobalt metal and the Long Harbour cobalt rounds are electrorefined at its Port Colborne refinery and have very high purity levels (99.8%), meeting the LME contract specification. Cobalt metal is used in the production of various alloys, particularly for aerospace applications, and in the manufacturing of cobalt based chemicals primarily for use in rechargeable batteries.

In June 2018, Vale sold to Wheaton and Cobalt 27 Capital Corp. ("Cobalt 27") a combined 75% of the cobalt produced as a by-product at our Voisey's Bay mine from January 1, 2021, which includes the ramp down of production from the existing mine and the life of mine production from our underground mine expansion project. In consideration, the Company received US\$ 690 million in cash from Wheaton and Cobalt 27 upon closing of the transaction on June 28, 2018, and will receive additional payments of 18-22% of cobalt prices upon delivery. In February 2021, the stream originally sold to Cobalt 27 was assigned to Anglo Pacific Group. Vale remain exposed to approximately 40% of future cobalt production from Voisey's Bay, through its retained interest in 25% of cobalt production and the additional payments upon delivery.



## 1.4. Production/Commercialization/Markets

### B.4 Logistics and energy assets to support energy transition metals operations

#### Ports

**Canada.** Vale Newfoundland & Labrador Limited operates a port as part of the Company's mining operation at Voisey's Bay, Labrador and a port as part of our processing operation at Long Harbour, Newfoundland. The port at Voisey's Bay is used for shipping nickel and copper concentrates and re supply. The port at Long Harbour is used to receive nickel concentrate from Voisey's Bay along with goods and materials required for the Long Harbour operation.

**Indonesia.** PTVI owns and operates two ports in Indonesia to support its nickel mining activities.

- I. The Balintang Special Port is located in Balintang Village, South Sulawesi, and has two types of piers, two barge slips for barges with capacity of up to 5,000 DWT each for dry bulk cargo, and a general cargo wharf for vessels of up to 2,000 DWT.
- II. The Tanjung Mangkasa Special Port is in Lampia Village, South Sulawesi, with mooring buoys that can accommodate fuel tankers with capacity of up to 20,000 DWT, and a jetty terminal that can accommodate fuel tanker vessels with capacity of up to 5,000 DWT.

#### Energy

**Canada.** In 2022, the Company's wholly owned and operated hydroelectric power plants in Sudbury generated 13.7% of the electricity requirements of its Sudbury operations. The power plants consist of five separate generation stations High Falls I and II, Big Eddy, Wabageshik and Nairn with an installed generator nameplate capacity of 55 MW. The output of the plants is limited by water availability, as well as by constraints imposed by a water management plan regulated by the provincial government of Ontario. Over the course of 2022, average demand for electrical energy was 161.45 MW to all surface plants and mines in the Sudbury area.

In 2022, diesel generation provided 100% of the electric requirements of the Company's Voisey's Bay operations. We have six diesel generators onsite, with output ranging from 12 to 14 MW, in order to meet seasonal demands.

**Indonesia.** Energy costs are a significant component of Vale's nickel production costs for the processing of lateritic ore at its PTVI operations in Indonesia. A major portion of PTVI's electric furnace power requirements is supplied at a low cost by its three hydroelectric power plants on the Larona River: (i) the Larona plant, which has an average generating capacity of 165 MW, (ii) the Balambano plant, which has an average capacity of 110 MW and (iii) the Karebbe plant, with 90 MW of average generating capacity. These plants help reduce production costs by substituting oil used for power generation with hydroelectric power, reduce CO<sub>2</sub> emissions by replacing nonrenewable power generation, and enable us to increase the Company's current nickel production capacity in Indonesia.

## C. OTHER INVESTMENTS

### C.1. Samarco Mineração S.A. ("Samarco")

Vale has a 50% equity interest in Samarco, and BHP Billiton Brasil Ltda. ("BHP Brasil") owns the remaining 50%. Samarco owns an integrated system comprised of two different pits, three beneficiation plants, three pipelines, four pellet plants and a port. The mines and the beneficiation plants are in the state of Minas Gerais and the pellet plants and port are located in the state of Espírito Santo. From Minas Gerais to Espírito Santo, the production flows through the three pipelines which extend for approximately 400 Km. Samarco's mining and pelletizing operations have been gradually resuming since December 2020.

From November 2015 to December 2020, Samarco's operations were suspended, due to the licences being suspended, since the collapse of the Fundão dam in 05/11/2015 in Mariana/MG. In December 2020, Samarco commenced the gradual resumption of its operations, with the integrated restart of iron ore extraction and beneficiation at the Germano complex, located in Mariana, state of Minas Gerais, and pelletizing at the Ubu complex, located in Anchieta, state of Espírito Santo. Samarco's operations resumed with approximately 8 Mtpy production capacity, with the use of one of three concentrators to beneficiate iron ore at the Germano complex and one of four pellet plants in the Ubu complex, representing 26% of Samarco's productive capacity. The integrated restart of operations occurs following extensive commissioning tests after the five-year halt. Samarco is using new processes for tailings disposal, reflecting its commitment to a sustainable restart and operational safety. Samarco produced 8.3 Mt in 2022 and 7.87 Mt in 2021.

### 1.4. Production/Commercialization/Markets

Through the implementation of the filtration process, Samarco is now able to substantially dewater sand tailings, which represent approximately 80% of total tailings volume, and safely stack these filtered sand tailings in piles. The remaining 20% of tailings are being deposited in Alegria Sul pit, a bedrock self-contained structure, which is safer than a tailings dam. Additionally, Samarco is progressing in the decommissioning of Germano dam, following the required safety standards. Samarco operates a 24/7 Monitoring and Inspection Center in real time to monitor the stability and safety of its geotechnical structures. Furthermore, Samarco is implementing the GISTM in all of its tailing’s facilities.

The carrying value for the Company’s investment in Samarco has been reduced to zero since 2015. Samarco has approximately R\$51 billion in debt subject to a judicial reorganization proceeding in Brazil, of which approximately R\$24 billion is owed to its shareholders, BHPB and Vale. Debt claims of BHPB and Vale are mostly related to, (a) funds that were made available to Samarco after the rupture of the Fundão dam, for the purpose of maintenance and operating expenses, (b) contributions to Fundação Renova that were primarily Samarco’s responsibilities, with the purposed of reestablishment and resumption of Samarco’s operations.

In May 2023, the Company, together with BHPB, Samarco and certain financial creditors of Samarco, reached a binding agreement, that established the parameters for the restructuring of Samarco's debt, to be implemented through a plan of consensual restructuring, which will be subject to the approval of Samarco's creditors and approval by the judicial reorganization court

<b>SAMARCO</b>	
<b>Ownership interest</b>	50% owned by Vale; 50% by BHPB.
<b>Location</b>	Mariana and Ouro Preto, State of Minas Gerais, Brazil.
<b>Operator</b>	Samarco Mineração S.A.
<b>Mining complexes</b>	Integrated system comprised of two different pits, three beneficiation plants, three pipelines, four pump stations, two valves station, four pellet plants and a port.
<b>Mining title<sup>(1)</sup></b>	Mining concession with no expiration date. Acreage: 1,174.30 ha.
<b>Stage/ Operations</b>	Continued operations from 1977 to 2015. Operations were suspended in November 2015, following the collapse of the Fundão dam. Gradually resuming operations since December 2020.
<b>Key permit conditions</b>	The Company understand that Samarco has the necessary permits for its current operations.
<b>Mine types and mineralization styles</b>	Itabirite ore types extracted using an open-pit mining method.
<b>Associated facilities and infrastructure</b>	<p><b>Mine:</b> Long distance conveyor belt systems and trucks transport the ore blending to beneficiation plants.</p> <p><b>Processing plant:</b> The three beneficiation plants, located at the site, process the run of mine by means of standard crushing, milling, concentration steps, producing pellet feed.</p> <p><b>Logistics:</b> Samarco mines supply Samarco pellet plants using three pipelines extending approximately 400 kilometers, with four pump stations and two valve stations. These pipelines transport the iron ore from beneficiation plants to the pelletizing plants in the state of Espírito Santo.</p> <p><b>Port:</b> The production is embarked in an own port in the state of Espírito Santo.</p> <p><b>Energy:</b> Supplied through the national electricity grid. Acquired from regional utility companies or produced directly by Samarco.</p>

## 1.4. Production/Commercialization/Markets

(1) Area with reserves and resources associated.

### C.2. Mineração Rio do Norte S.A. (“MRN”)

**Bauxite.** Vale owns a 40% equity interest in MRN, a bauxite mining business located in Brazil. For more information regarding MRN sale, see item 1.11 of this Reference Form.

MINERAÇÃO RIO DO NORTE S.A.	
<b>Ownership interest</b>	40% owned by Vale; 33% by South 32; 12% by Rio Tinto Alcan, 10% by Companhia Brasileira de Alumínio (“CBA”) and 5% by Hydro.
<b>Location</b>	Oriximiná, State of Pará, Brazil.
<b>Operator</b>	MRN.
<b>Mining complexes</b>	Integrated system comprised of 4 different plateaus, 2 crushers facilities, 32 km of conveyor belt system, washing and dryer plants, railroad system and a port.
<b>Mining title</b>	Mining concession with no expiration date. Acreage: 143,000 ha.
<b>Stage/ Operations</b>	Operating since 1979.
<b>Key permit conditions</b>	The Company understands that MRN has the necessary permits for its current operations or expect to obtain them in a timely manner.
<b>Mine types and mineralization styles</b>	Bauxite ore types extracted using a strip-mining method.
<b>Associated facilities and infrastructure</b>	<p><b>Processing plant:</b> The beneficiation plant, located at the site, process the run of mine by means of standard crushing and washing steps, producing coarse and fines bauxite ores.</p> <p><b>Logistics:</b> MRN mines supply ore to its crushers using 32km of conveyor belt system. The washed ore is transported to the port by 5km conveyor belt to a train load out facility and then by 28km railroad system to the port.</p> <p><b>Port:</b> The production is embarked in an own port located on site (Trombetas Port).</p> <p><b>Energy:</b> Produced on-site using diesel generators.</p>

In 2022, MRN produced 12,333 million tons of bauxite, whereas in 2021 the production was 12,639 million tons and in 2020 12,910 million tons. For information on the sale of MRN, see item 1.11 of this Reference Form.

### C.3. Other investments

**VLI.** VLI provides integrated logistics solutions through 7,940 kilometers of railroads in Brazil (FCA and FNS), eight inland terminals with a total storage capacity of 795,000 metric tons and three maritime terminals and ports operations. Vale holds a 29.6% stake in VLI and are currently party to a shareholders’ agreement with FI FGTS, Mitsui, Brookfield and BNDESPar, which hold the remaining equity interests in VLI. In 2022, VLI transported a total of 41.8 billion ntk of general cargo, including 30.8 billion ntk from FCA and FNS and 11 billion ntk through operational agreements with Vale S.A. VLI’s main assets are:

- **Ferrovias Centro Atlântica S.A. (“FCA”).** Central east regional railway network of the Brazilian national

## 1.4. Production/Commercialization/Markets

railway system, held under a 30 year renewable concession, which expires in 2026. The central east network has 7,220 kilometers of track, extending into the states of Sergipe, Bahia, Espírito Santo, Minas Gerais, Rio de Janeiro, Goiás and the Federal District of Brazil;

- *Ferrovias Norte Sul S.A. ("FNS")*. A 30 year renewable sub concession for the commercial operation of a 720 kilometer stretch of the North South railroad in Brazil, between the cities Açailândia, in the Brazilian state of Maranhão, and Porto Nacional, in the Brazilian state of Tocantins. This railway is connected to EFC railroad, and creates a new corridor for the transportation of general cargo, mainly for the export of soybeans, rice and corn produced in the center northern region of Brazil;
- Right to purchase capacity of our EFVM and EFC railroads for general cargo; and
- Right to purchase capacity of our Tubarão and Praia Mole terminals for general cargo.

*MRS Logística S.A. ("MRS")*. The MRS railroad, in which Vale holds a 48.16% direct and indirect equity interest, is 1,643 kilometers long and links the Brazilian states of Rio de Janeiro, São Paulo and Minas Gerais. The MRS railroad transports the Company's iron ore products from the Southern System mines to Vale's maritime terminals. In 2022, it transported a daily average of 291,9 thousand metric tons of iron ore and 196,5 thousand metric tons of other cargo.

### e. main inputs and raw materials, regarding:

#### (i) Description of relationships with suppliers, including whether they are subject to governmental control or regulation, with indication of the bodies and applicable legislation

Vale is committed to building a sustainable business model and contributing to a more just, environmentally balanced and economically prosperous society. Vale adopts a strategy with its suppliers to maintain a fair relationship in order to promote partnerships that are aimed at the winners of both parties through continuous development and innovation and the provision of quality goods and services with a compatible cost.

In order to achieve continuous improvement and contribute to advances in the production chain, the relationship management with its suppliers includes the following stages:

- (i) Registration of suppliers based on the Company's values, a process that includes a check called Due Diligence, where a reputational evaluation is carried out based on public information, an established risk matrix and the scope of work to be performed. All registered suppliers are also invited to learn about Vale's Principles of Conduct for Third Parties. In addition, the Company requests the sending of documents proving good practices for suppliers that have identified warning signs or for those belonging to certain categories;
- (ii) Compliance with the requirements of the Ethics & Compliance Program, which has anti-corruption rules and controls to prevent and mitigate risks arising from the possible involvement of its business partners in events that violate human rights or anti-corruption laws applicable to Vale, such as the Foreign Corrupt Practices Act – FCPA, UK Bribery Act and the Brazilian law against corruption (Federal Law No. 12,846, of August 1, 2013);
- (iii) Monitoring the financial health of its main suppliers of materials, equipment and services;
- (iv) Periodic performance evaluation to ensure compliance with applicable and defined requirements at the contracting stage, as well as adherence to contract expectations. The Supplier Performance Index (IDF) Program is a formal program that monitors and measures five different criteria (technical quality, health and safety, employee compliance and continuous improvement) in order to maintain transparency and sustainable relationships with their suppliers;
- (v) Development and support in the qualification of suppliers; and
- (vi) Fostering and prospection of new suppliers.

In compliance with the Universal Declaration of Human Rights and the UN Guiding Principles on Business and Human Rights, Vale respects and promotes human rights in its activities, along its production chain and in the regions where it operates.

## 1.4. Production/Commercialization/Markets

In this sense, the Company seeks to establish a commercial relationship with suppliers that share its principles and values and respect human rights.

Vale's principles and values are shared with its suppliers through the Principles of Conduct for Third Parties, a document that is accessed by all companies upon registration and through the Global Policies on Human Rights and Sustainability. It should be noted that this document and other policies are available for viewing on the Company's website ([www.vale.com](http://www.vale.com)).

The registration of suppliers at Vale considers consulting the lists published by CEPIM (Registry of Ineligible Private Non-Profit Entities), and by the Labor Inspection Secretariat, linked to the Ministry of Economy, which lists individuals or legal entities caught in the practice of submitting of workers in conditions analogous to slavery, and the CEIS list (National Register of Disreputable and Suspended Companies), which lists disreputable companies and those suspended by the federal government. Further queries with public sanctioning lists may apply in specific cases. It is noteworthy that all suppliers undergo a process of analysis, which includes Due Diligence and risk evaluation.

The guidelines and standards adopted by Vale to evaluate its suppliers include, in addition to those already mentioned, environmental legal requirements applicable to suppliers.

Regarding the recipients of waste generated in Vale's production processes in Brazil, all are submitted to systematic on-site environmental evaluation processes, aiming at their initial certification and periodic revalidation.

In addition, Vale's Procurement Board encourages its suppliers to adopt practices to measure the emission of gases, including standard contractual trading practice.

The main environmental laws observed in the contracting process of suppliers are:

### a) Environmental Licensing

- Federal Law 6,938/81 – National Environment Policy
- Complementary Law no. 140/11
- Decree no. 8,437/05
- National Council for the Environment Resolution ("CONAMA") no. 01/86, 237/97, 357/05, 362/05, 369/06, 382/06, 430/11, 436/11 and 491/18.
- Federal Law no. 12,305/10 – National Policy on Solid Waste
- Decree no. 10,936/22 – Regulates the National Policy on Solid Waste
- Federal Law no. 12,651/12 – New Forest Code
- Normative Instructions – Brazilian Institute of Renewable Natural Resources ("IBAMA") no. 05/12, 12/21 and 13/21.

### b) Agricultural and Related Defenses (Pest and Vector Control)

- Federal Law no. 7,802/89
- Federal Decree 4,074/02
- ANVISA Resolution no. 622/22

### c) Transportation of Hazardous Products

- Federal Decree no. 96,044/88
- ANTT Resolution no. 5,947/21, 5,982/22 and 5,998/22.
- Normative Instruction – IBAMA no. 05/12.

### d) Radioactive Material

- Federal Law no. 10,308/01
- Federal Law no. 4,118/62
- Decree no. 51,726/63
- Law no. 9,765/1998
- Decree no. 5,935/2003
- Resolution – National Council of Nuclear Energy ("CNEN") no. 13/88, 11/99, 170/14, 208/16 and 251/19.

### e) Explosive Material

- Decree no. 10,030/19
- COLOG Ordinance no. 147/19

## 1.4. Production/Commercialization/Markets

### f) Controlled Chemicals

- Federal Law no. 10,357/01
- Federal Decree no. 4,262/02
- Ministry of Justice Ordinance no. 204/22

### (ii) possible dependence of few suppliers

The main inputs acquired by Vale in 2022 were: liquid, solid and gaseous fuels, grinding media, conveyor belts, explosives, parts and components for mining and railroad equipment and tires. In addition, the main provision of services consisted of sea freight services, cargo transportation, civil works, maintenance and repair of facilities, maintenance and repair of equipment and food.

In 2022, the main categories of equipment acquired by the procurement area were railroad cars, systems, vehicles, mining equipment, railway equipment and photovoltaic panels. Vale's largest groups of suppliers of this equipment jointly accounted for 12% of total purchases of procurement in the period.

The consumption of fuels is quite intense, especially in the operations and transportation of iron ore. The main supplier of this input is Vibra Energia, responsible for the procurement of gas to all of Vale's operations in Brazil.

Vale has power generation assets in Brazil, Canada and Indonesia that meet part of its electricity demand through renewable self-generation, with the rest consumed through the purchase of energy in the market, whose main suppliers were major players in the electric power market in the regions where the operating units are located.

The top ten suppliers of inputs, equipment and services accounted for 20% of total procurement purchases until December 31, 2022.

### (iii) possible price volatility

Vale has some contracts in which prices are linked to market indexes (parametric formulas) and therefore subject to these volatilities. Prices may also vary from historical prices depending on the supply versus demand condition present in the market at the time of competitive process. For more information, see items 2.2.b and 2.2.c of this Reference Form.

## **1.5. Main customers**

### **a. total amount of income from customers**

No single customer represented 10% or more of Vale's net revenue for the year ended December 31, 2022.

### **b. operating segments affected by incomes from customers.**

Not applicable, see item 1.5.a of this Reference Form.



## 1.6. Relevant effects of state regulation

### a. Governmental required authorizations for the exercise of activities and history of relationship with the Government in obtaining such authorizations.

Vale is subject to a wide range of government regulations in all jurisdictions in which it operates around the world. The following discussion summarizes the types of regulation that have the most significant impact on Vale's operations.

#### Mining rights and regulation of mining activities

Mining and mineral processing are subject to extensive regulation. In order to carry out these activities, Vale is required to obtain and maintain certain government or private licenses, which may include concessions, licenses, leases, or permits (all of which are referred to below as "concessions"). The legal and regulatory regime applicable to the mining sector and concessions differs across jurisdictions, often significantly. In most jurisdictions, including Brazil, mineral resources belong to the State and can only be exploited under government concession. In other jurisdictions, such as Ontario, Canada, a substantial part of Vale's mining operations are conducted pursuant to mining rights that Vale owns (private licenses). Government agencies are typically responsible for granting mining concessions and monitoring compliance with mining laws and regulations.

The table below summarizes Vale's main mining rights and mining concessions for its operations, not restricted to the limits of areas with defined resource and mineral reserves.

Location	Mining securities	Approximate covered area (in hectares)	Expiration date
<b>Brazil</b>		<b>515,894</b>	<b>Indefinite</b>
	Mining concessions	280,913	Indefinite
	Request for mining concessions	234,981	-
<b>Canada <sup>(1)</sup></b>		<b>435,923</b>	<b>2021-2042</b>
Ontario		105,469	2024-2042
	Patented mineral Rights (mining concession)	81,145	Indefinite
	Mineral Leases (mining concession)	21,188	2024-2042
	Mining License of Occupation (mining concession)	3,136	Indefinite
Manitoba		111,693	2021-2034
	Order in Council Leases (mining concession)	109,043	2021-2025
	Mineral Leases (mining concession)	2,650	2034
Newfoundland and Labrador	Mining Leases (mining concession)	1,599	2027
<b>Indonesia <sup>(2)</sup></b>	<b>Contract of work (mining concession)</b>	<b>137,277</b>	<b>2025</b>
Sorowako	Contract of work (mining concession)	118,017	2025
Nusa Tenggara Barat (Hu'u Project)	Contract of work (mining concession)	19,260	2023

(1) The renovations submitted in 2022 are still in the approval process. All the conditions necessary for the renewal have been fulfilled. This process usually takes several months but allows for continued operation while the approval process is ongoing. The Order in Council Leases (OIC's) in Manitoba are being converted into mining claims (exploration licenses) and mining leases (mining concessions) through a Transition Agreement that allows Vale to retain the property until the transition is complete. Some OICs will show their expired expiration dates until the transition is complete.

(2) Sorowako – The contract of work (mining concession) signed between PTVI and the Indonesian government expires in 2025. Nusa Tenggara Barat – contract of work (mining concession) in the exploration phase which is renewed annually. The Operation and Production phase will be valid for 30 years, with two 10-year extensions, subject to government approval.

In addition to the Concessions listed above, Vale has licenses and requirements that allow it to explore 2.75 million hectares in Brazil and 1.6 million hectares in other countries.

## 1.6. Relevant effects of state regulation

In Canada, Vale negotiated with the Government of Manitoba the renewal of its mining rights, originally explored under Order in Council Leases, through the conversion to the Mining Leases and Mining Claims regime, in accordance with the applicable legislation. The conversion process started in 2021 and will continue until 2025.

In Indonesia, the government issued new regulations in September 2021 on the implementation of mineral and coal mining business activities. These regulations could have a material impact on PTVI's operations, including with respect to the total area granted to PTVI and exploration period.

### **Royalties and other taxes on mining activities**

We are required in many jurisdictions to pay royalties or taxes on our revenues or profits from mineral extractions and sales. These payments are an important element of the economic performance of a mining operation. The following royalties and taxes apply in some of the jurisdictions in which we have our largest operations:

**Brazil.** Vale is required to pay a royalty known as CFEM (Compensação Financeira pela Exploração de Recursos Minerais) on the revenues from the sale of minerals we extract. The calculation of the CFEM is done as follows: (i) for domestic sales, the basis for calculation of CFEM is the revenue from sales, net of sales taxes levied; (ii) for exports, the basis for calculation of CFEM is the highest amount between the revenue from the exports and the amount equivalent to the transfer pricing in federal income tax legislation; and (iii) for a company's internal mineral consumption, the basis for calculation of CFEM is the value equivalent to the current price of the ore in the domestic market, the international markets or a reference value, as to be determined by ANM. The current CFEM rates are: 3.5% for iron ore; 2% for copper, nickel and other materials; 3% for bauxite and manganese ore.

**Brazilian states and municipalities.** Several Brazilian states, including Minas Gerais and Pará, impose a tax on mineral production (Taxa de Fiscalização de Recursos Minerais—"TFRM"), which is currently assessed at rates ranging from R\$4.37 to R\$5.03 per metric ton of minerals produced in or transferred from the state. In March 2021, a state decree increased the TFRM rate in the state of Pará to R\$13.12 per metric ton, with effectiveness as of April 2021. The Company have not implemented the new rates for 2021, as Vale understands that, under applicable principles of Brazilian constitutional law, the tax increase would only come into force in the year subsequent to its enactment.

In November 2022, Vale adhered to the state tax program entitled as "Programa Estrutura Pará", which aims to promote infrastructure investments in the State of Pará, pursuant to the conversion of 50% of the TFRM payments into construction projects, calculated at the rate of R\$13.12 per metric ton of ore produced in the State of Pará. The related constructions will be delivered to the local communities and, therefore, will not be owned by the Company. For joining the program, Vale had disbursed R\$1,176 million related to the TFRM for 2022, which was calculated based on the rate of R\$13.12 per metric ton and we will prospectively adopt this rate in the State of Pará.

In December 2021, the municipality of Ourilândia do Norte, in the state of Pará, enacted a law imposing TFRM on nickel ore extracted or processed in their territory, currently at a rate of R\$5.14 per metric ton. The municipalities of Marabá, Curionópolis and São Félix do Xingu, in the state of Pará and the state of Maranhão have recently enacted a law imposing TFRM on ore extracted or transported in their territories and we consider that we have solid arguments to contest these taxes.

In August 2022, the Supreme Court of Justice decided that the Brazilian states of Minas Gerais and Pará are authorized to impose the TFRM, the decision is not final, and an appeal is still pending.

**Canada.** The Canadian provinces in which Vale operates charge a tax on profits from mining operations. Profit from mining operations is generally determined by reference to gross revenue from the sale of mine output and deducting certain costs, such as mining and processing costs and investment in processing assets. The statutory mining tax rates are 10% in Ontario; with graduated rates up to 17% in Manitoba; and a combined mining and royalty tax rate of 16% in Newfoundland and Labrador. The mining tax paid is deductible for corporate income tax purposes.

**Indonesia.** PTVI pays mining royalties of 2% on its nickel matte revenues when LME nickel prices are below US\$21,000 per metric ton and 3% of its nickel matte revenues when LME nickel prices are above or equal to US\$21,000 per metric ton.

## 1.6. Relevant effects of state regulation

**Regulation of chemicals.** Some of the Company's products are subject to regulations applicable to the marketing, distribution and use of chemical substances present in their composition. For example, the European Commission has adopted a European Chemicals Policy, known as REACH ("Registration, Evaluation and Authorization of Chemicals"). Under REACH, European manufacturers and importers are required to register substances prior to their entry into the European market and in some cases may be subject to an authorization process. A company that fails to comply with the REACH regulations could face fines and penalties. Vale is compliant with the requirements of the EU REACH regulations. In addition, the U.K. and South Korea are currently implementing a regulation similar to EU REACH, and the Company anticipates further expansion of REACH like regulations in other Asian countries.

**Regulation of international maritime transportation.** Vale is subject to health, safety and environmental regulation by the International Maritime Organization ("IMO"). IMO rules apply not only to the international shipping categories, but also to the types of cargoes transported, including special rules for iron ore, nickel and copper. The IMO is currently discussing further measures for enhancing the energy efficiency of international shipping and reducing its overall greenhouse gas emissions. In April 2018, reduction targets were defined as part of the IMO's initial strategy for curbing the sector's emissions. These targets include a 50% reduction in greenhouse gas emissions by 2050, based on 2008 levels. In June 2021, the IMO adopted amendments that became effective in 2023 and that combine technical and operational approaches to improve the energy efficiency of ships. The new measures require all ships to calculate their Energy Efficiency Existing Ship Index ("EEXI") – a one-time certification, targeting design parameters – and to establish their annual operational Carbon Intensity Indicator, which will have to comply with gradually decreasing carbon intensity parameters. The IMO will revise and further detail its strategy and the measures to be adopted by 2023. These new requirements may increase the Company's freight cost in the future. In 2016, the IMO approved regulation establishing limits for sulfur oxides emission, which became effective in 2020. This regulation may increase freight cost due to the need to use bunker with low sulfur content or to install additional pollutant control equipment (i.e., scrubbers) to limit air emissions. It is expected that further discussions on scrubber wash water regulations will be concluded in 2023, which could restrain the use of open loop scrubbers. Also, the International Convention for the Control and Management of Ships' Ballast Water and Sediments requires compliant ships during their international voyages to manage their ballast water and sediments in accordance with certain parameters. The convention became effective in September 2017 for new ships (those with keels laid after that date) and, for existing ships, the convention became effective in stages with specific deadlines depending on the vessel, beginning in September 2019, with the global fleet required to be fully compliant by September 2024. Such requirements may also result in increases in our freight and port operation costs. In 2022, the European Commission approved the proposals to regulate international shipping emissions. Starting in 2024, over a 3-year phase-in period shipping will be gradually introduced into the EU's Emissions Trading System ("ETS"), a carbon market that operates in all EU countries targeting climate neutrality in the EU by 2050. That will require ship operators to pay for the greenhouse gas emissions during their voyages to, from and between EU ports, and incentivize them to improve their fuels greenhouse gas intensity (GHG). These measures may increase our freight cost in the future.

### Regulation of other activities.

Vale is subject to comprehensive regulatory regimes for some of our other activities, including rail transport, port operations and electricity generation. The Company is also subject to extensive legislation on workers' health, safety, and support of communities near mines, and other matters. The following descriptions relate to some of the other regulatory regimes applicable to our operations:

**Brazilian railway regulation.** The Company's Brazilian railroad business operates pursuant to concession agreements granted by the federal government, and its railroad concessions are subject to regulation and supervision by the Brazilian Ministry of Roads and Railroads and the Brazilian Land Transportation Regulatory agency (Agência Nacional de Transportes Terrestres – "ANTT"). The concessions for EFC and EFVM were renewed for 30 years, and will expire in 2057, upon commitment of investments (such as urban and infrastructure works) and payment of grant. Such investments are subject to risks inherent to the execution of works, including delays. Delays may result in sanctions by ANTT, as provided in the concession agreements. VLI's subsidiary, Ferrovia Norte Sul S.A. ("FNS") has also been awarded a subconcession contract for commercial operation of a 720 kilometer segment of the FNS railroad in Brazil, which expires in 2037. In July 2022, MRS signed an amendment to the concession agreement providing for the early extension of its concession for another 30 years, until 2056. FCA concession expires in 2026 and may be renewed for 30 years at the federal government's discretion. Rail transportation prices can be negotiated directly with the users of such services, subject to a price cap set forth in the concession agreements and annually reviewed by ANTT for each of the concessionaires and for the different products transported. ANTT regulations also require concessionaires to

## 1.6. Relevant effects of state regulation

give trackage rights to other railway operators, to make investments in the railway network, and to meet certain productivity and safety requirements, among other obligations.

**Brazilian port regulation.** Port operations in Brazil are subject to regulation and inspection by the National Waterway Transport Agency (“ANTAQ”), the federal body responsible for maritime transport services, and the Ministry of Ports and Airports, through the National Secretariat of Ports and Water Transport (“SNPTA”), which aims to formulate policies and guidelines. The contracts for Vale to operate its private terminals are valid until 2039 and can be renewed for equal periods, with the exception of the Copper Terminal (Itaqui port, Maranhão state) and CPBS (Itaguaí Port, Rio de Janeiro state) leases. January). The lease for the Copper Terminal expired in January 2023 and is now operated under a court order authorizing the continuity of operations until the contract is renewed or a new contract is signed. An administrative procedure is underway with the SNPTA for the possible renewal of the contract for 20 years, which has not yet been concluded. O. The CPBS lease agreement expires in 2026 and is in the process of being renewed for another 25 years, at the discretion of the Federal Government.

### **b. main aspects related to compliance with legal and regulatory obligations related to environmental and social issues by the issuer.**

#### ***Environmental issues***

The Company is also subject to environmental regulations that apply to the specific types of activities it undertakes. In accordance with current legislation, the Company is required to obtain approvals, licenses, permits and/or authorizations from environmental authorities to build and operate activities that use natural resources or that may cause an impact on the environment. In most jurisdictions, in order to build and operate facilities, the Company must submit assessments of the environmental and social impacts related to its activities for approval by environmental authorities and make investments to avoid, mitigate and compensate for such impacts. The Company must develop its activities in accordance with the terms of approvals, licenses, permissions and/or authorizations issued by the competent environmental authorities.

Environmental legislation has been improved and is becoming stricter around the world, which may increase the costs for the Company to comply with environmental requirements and regulations. The environmental regulations that affect Vale's operations relate, among other matters, to:

- Emissions of pollutants into air, soil and water, including greenhouse gases and climate change regulations;
- Recycling and waste management;
- Protection and preservation of forests, coastlines, caves, cultural heritage, watersheds and other ecosystem features;
- Water use; It is
- Financial provisions and closure plans required for mining permits, including decharacterization, decommissioning, and recovery and remediation costs.

**Cave protection.** In Brazil, natural underground cavities are considered assets of the Union by the Federal Constitution of 1988 and make up the national speleological heritage. In 2008, Federal Decree nº 6.640/2008 was edited, which changed the regulations on the subject until then in force and defined criteria for the classification of natural cavities according to their degree of relevance (maximum, high, medium or low), prohibiting irreversible negative impacts on cavities considered of maximum relevance and allowing intervention in cavities classified with the other degrees of relevance, subject to prior environmental licensing. In this context, Vale has carried out technical studies to identify the existence of cavities in the area of influence of its operations and determine the degree of relevance of each identified cavity. When there is a need for intervention in a cave, Vale proposes compensatory measures to Brazilian environmental regulators within the scope of the environmental licensing process. The occurrence of natural underground cavities has been decisive in the planning and implementation of new mining projects, limiting or modifying exploration plans, as well as generating possible additional costs related to the preservation of cavities or compensatory measures resulting from impacts caused to them, with potential consequences for production volumes, costs or reserves in its iron ore business. In January 2022, new regulations on the subject were published, which, however, are currently suspended on a precautionary basis by means of a decision by the STF.

**Brazilian regulation of mining dams.** In accordance with the provisions of the National Dam Safety Policy – PNSB, established by Law No. 12,334, of 09.20.2010, as well as Resolution No. 95/2022, of the National Mining

## 1.6. Relevant effects of state regulation

Agency – ANM, the companies that own mining dams covered by the PNSB are required to observe specific rules established in the current legislation, including, but not limited to:

**Regular Safety Inspection (“ISR”).** Under the terms set out in art. 19 of Resolution 95/2022, companies that own mining dams that are covered by the PNSB must carry out Regular Safety Inspections – ISR every 6 months for each dam, as well as prepare a stability report, called the Regular Inspection Report – (“RISR”) and the corresponding Stability Condition Statement (“DCE”), always accompanied by the Technical Responsibility Note (“ART”) of the person responsible. One of these audits must be conducted by external auditors. In the Company's Brazilian operations, an external senior engineer (the EOR), not directly involved in day-to-day operations, is responsible for conducting this audit on a regular basis, as part of Vale's governance procedures to assess safety and performance.

**Special Security Inspection (“ISE”).** As determined by art. 27 and following of Resolution 95/2022, whenever detected, in the structure, any anomaly with a score of 10 (ten) in any column of Table 3 – Classification Matrix Regarding the Risk Category of said Resolution, a Special Safety Inspection must be carried out – ISE. Said inspection must also be carried out whenever required by the ANM, regardless of formal request, after the occurrence of exceptional events that may mean impacts on the stability conditions of the dam. The Conclusive Special Inspection Report – RCIE must be accompanied by the Technical Responsibility Note – ART of the person responsible, pursuant to art. 77 of that same Resolution.

**Periodic Dam Safety Reviews.** The RPSB constitutes volume IV of the Dam Safety Plan and must indicate actions to be adopted by the entrepreneur to maintain the safety of the structure. Under the terms set out in art. 15 and following of Resolution 95/2022, said chapter of the PSB must include a detailed analysis of all dam documentation, in particular inspection reports, stability analysis of structures and impacts on the communities involved, including studies of hazards and impact of rupture, the examination of the maintenance and operation procedures adopted by the entrepreneur, the comparative analysis of the performance of the dam in relation to the revisions carried out previously, the carrying out of new analyzes of stability, the analysis of the hydraulic safety in function of the current conditions of filling of the reservoir , analysis of adherence between design and construction, review of “as is” documentation, depending on the case, and analysis of the results of studies to reduce the risk category of the dam. The minimum content of the Periodic Dam Safety Reviews chapter can be found in Annex II of Resolution 95/2022. The Periodic Dam Safety Reviews product consists of a report, including a DCE, which must be attached to the PSB and inserted in the SIGBM. The RPSB reports must be renewed every 3, 5 and 7 years, respectively, for high, medium and low DPA and whenever structural modifications are made. Whenever the RPSB is performed, the PSB must also be updated. The RPSB is carried out by an external company not linked to the EOR.

**Mining Dams Emergency Action Plan Training.** All mining dams that are included in the National Dam Safety Policy must have an Emergency Action Plan for Mining Dams, pursuant to art. 12 et seq. of Law No. 12.334/2010, as well as art. 33 et seq. of Resolution 95/2022. Physical and updated copies of the Emergency Action Plan for Mining Dams must be delivered to the civil defense and protection bodies of the municipalities included in the flood map or, in the absence of these bodies, to the municipal government, and employees and local communities must be trained..

In 2019, the Brazilian National Agency (“ANM”) issued the Resolution No. 13, revoked by Resolution 95/2022, which dealt with dam safety, requiring companies that own upstream dams to present a technical de-characterization project and fully de-characterize such structures in the coming years. Not only that, but a wide range of measures were imposed to ensure the stability and safety of mining dams and their monitoring and warning systems. Additionally, the resolution establishes a minimum safety factor and the mandatory signature of the DCE by a person at a higher level in the company's hierarchy, together with the technician responsible for its preparation.

Also in 2019, the state of Minas Gerais enacted the State Law No. 23,291 prohibiting the raising and construction of any upstream dam. The law also prohibits the expansion, modification or construction of any new structures if the communities settle within their Self-Rescue Zone, an area that encompasses the portion of the valley downstream of the dam, where timely evacuation and intervention by the competent authorities is not possible in possible emergency situations.

In 2020, Federal Law No. 14,066/2020 modified the Law No. 12,334/2010, which instituted the National Policy on Dam Safety, reinforcing the ban on construction and elevation of upstream dams in Brazil. The law also requires companies to de-characterize structures built using the upstream method by 2022.

## 1.6. Relevant effects of state regulation

In 2021, was enacted the State Decree No. 48,140, to regulate certain obligations related to audits and mischaracterization of upstream dams. In addition, many other resolutions were published in the state level in order to regulate the emergency action plan.

In 2022, the ANM published the aforementioned Resolution No. 95/2022, which consolidated the normative acts that provide for the safety of mining dams and, with that, revoked the previous acts, also establishing new rules to be observed by the holders of mining dams under the National Dam Safety Policy. Also in 2022, Resolution 122/2022 was published by the ANM, which provided for the procedures for investigating infractions, sanctions and the amounts of fines applicable as a result of non-compliance with the obligations set forth in current legislation. In addition, Federal Decree No. 11,310/2022 was issued, aiming to regulate provisions of Law No. 12,334/2010, creating the Interministerial Committee for Dam Safety, as well as amending Federal Decree No. 10,000/2019, which provides for the National Resources Council Water.

Recently, in February 2023, ANM edited Resolution No. 130/2023, which amended Resolution 95/2022. The main changes consist of new rules related to (i) active and passive monitoring during the de-characterization of dams, (ii) the simplified study of dam collapse and the simplified emergency action plan ("PAEBM") for specific cases, (iii) the security plan ("PSB") and (iv) the RCO/DCO.

**Other environmental regulations in Brazil.** There are also environmental regulatory obligations applicable to Vale's operations that determine compliance with a series of measures, including those of a compensatory nature, related to the suppression of native vegetation, the protection of biomes and flora species protected by law, as well as territorial spaces subject to of special protection, such as conservation units and permanent preservation areas, and the archaeological and cultural heritage. In addition, new projects that include activities with a significant environmental impact must raise financial resources to support the implementation and maintenance of a Conservation Unit belonging to the full protection group, in order to comply with the environmental compensation obligation provided for in Federal Law No. 9,985/2000.

**Other environmental laws and regulations.** Environmental laws and regulations are becoming more stringent around the world, which can lead to higher compliance costs. There are several examples of environmental laws and regulations and compliance initiatives that may affect the Company's operation:

**Canada.** Canadian laws and policies to address climate change continue to evolve with tighter controls on greenhouse gas emissions. The Supreme Court of Canada upheld the Greenhouse Gas Pollution Pricing Act, a federal law to regulate greenhouse gas emissions, and confirmed that this Act will apply in provinces that have not enacted equivalent legislation. In June 2021, the federal government enacted the Canadian Net-Zero Emissions Accountability Act, which enshrines Canada's 2050 goal of achieving net zero emissions with a framework for setting and reporting emissions reduction targets. The increase in inspections for violations of environmental legislation is also a trend. For example, in Ontario, the government has proposed expanding the use of administrative penalties with increased fines for various environmental infractions. Some of the Company's Ontario operations are over 100 years old, giving rise to potential water impacts from legacy operations. Vale invested in a Water Quality Management Program designed to be a proactive plan, involving hazard screening and a risk assessment process, to guide the identification, prioritization and execution of corrective activities to address the potential water impacts of historic operations.

**Indonesia.** In accordance with the 2014 Indonesian Government Regulation on Waste B3 (Hazardous and Toxic Materials), PTVI's waste is classified as hazardous waste, and PTVI has submitted a formal application to the regulatory body for approval. In February 2021, a new Government Regulation was issued and, as a result, PTVI waste is no longer classified as hazardous waste; however, reporting tailings use and management to the government is required.

**China.** In 2020, the Law for the Prevention and Control of Environmental Pollution by Solid Waste was revised, whereby the Administrative Measures for the Prevention and Control of Environmental Pollution by Waste came into effect from July 1, 2022. These laws and regulations impose obligations more stringent in the prevention and control of pollution caused by solid waste, including tailings, in addition to imposing more severe penalties.

**Environmental responsibility.** Environmental responsibility can occur in three diverse and independent levels: (i) civil; (ii) administrative and (iii) criminal.

- **Civil responsibility.** The entrepreneur, regardless of the existence of guilt, must indemnify or perform

## 1.6. Relevant effects of state regulation

the reparation of the damages caused to the environment and to third parties affected by their activities. Environmental legislation also stipulates the joint character of the polluters' responsibility (art. 3, item IV, Federal Law No. 6,938/81), which implies the possibility of holding accountable all those who, directly or indirectly, cause harm to the environment. It should also be noted that, according to the understanding consolidated in the jurisprudence of the Brazilian Superior Courts, responsibility for damage to the environment is not subject to prescription, that is, it does not expire with the passage of time.

- **Administrative responsibility.** Administrative responsibility derives from an action or omission that violates the legal rules of use, enjoyment, promotion, protection and recovery of the environment, as defined in the legislation (art. 2 of Federal Decree No. 6,514/08). Sanctions against an administrative infraction may include warning, fine, product destruction, suspension of product sale and manufacture, embargo of construction works or activity, demolition of construction works, among other restrictions on rights. According to the understanding consolidated in the jurisprudence of the Supreme Court of Justice, the environmental administrative responsibility has a subjective character, requiring the demonstration of culpability (intent or fault) of the agent for its characterization.
- **Criminal responsibility.** With criminal implications, Federal Law No. 9,605/98 (Environmental Crimes Law) subjects to its effects any individual or legal entity that in any way contributes to the practice of actions deemed harmful to the environment and classified as environmental crimes. In this respect, it should be noted that environmental responsibility in the criminal sphere is subjective in nature, that is, it requires the demonstration of culpability (intent or fault) of the agent. The Law also provides for the possibility of disregarding the corporate entity whenever this is an obstacle to reimbursement losses caused to the quality of the environment. The penalties applicable to legal entities may be (i) penalty; (ii) partial or total suspension of the activity; (iii) temporary interdiction of establishment, construction work or activity; and, (iv) prohibition of contracting with the Government, as well as obtaining subsidies, grants or donations; and (v) providing services to the community.

In order to materialize the sustainability in its projects, Vale develops and implements policies, guidelines and principles associated with its activities, products and services that are periodically evaluated and revised, whenever necessary. Vale has a Global Sustainability Policy considering environmental aspects and social action aligned with ISO standards, the Global Policy on Climate Change and the Global Human Rights Policy.

These commitments, together with specific programs and plans developed for each Vale operation, provide the necessary guidance to achieve its sustainability purposes, seeking continuous improvement with repercussion on its short, medium and long term business decisions.

Vale expects greater attention from various governments to reduce greenhouse gas emissions, as a result of concern about climate change, especially in view of the Paris Agreement. The entry into force of the Paris Agreement at the end of 2016 increased international pressure to establish carbon pricing, at single jurisdiction, multijurisdictional and global scales. This regulatory evolution, along with concern from civil society and investors, has increased pressure on companies to adopt carbon pricing strategies. In 2021, a rulebook was approved at COP26, with the aim of providing practical guidance and accelerating the implementation of the Paris Agreement and the creation of a global carbon market. Negotiations between Paris Agreement signatory nation states regarding the Rulebook continued into 2022, and it is expected that by COP28 (November 2023) or in the short term thereafter, more clarity, including new binding pricing mechanisms of carbon, they will have matured substantially. COP27 reinforced the Company's view that an increased focus on pricing greenhouse gas emissions and the expansion of carbon markets around the world could impact operating costs, primarily through carbon taxes, higher prices of fossil fuels and higher international freight costs. On the other hand, the pricing of greenhouse gas emissions can also present business opportunities for investments and innovations that depend on a higher baseline cost curve (as expressed by the Marginal Abatement Cost Curve – "MACC"), and Vale has partnered with other entities, bringing such initiatives to scale and to the market. During COP27, we announced, with other Brazilian companies, the creation of Biomas, a new company focused on the restoration, conservation and preservation of Brazilian biomes such as the Amazon, Atlantic Forest and Cerrado.

In accordance with the social and environmental commitments assumed by the Company, the ISO14001 certification has been following a gradual increase plan, so that, currently, 50% of the operational sites already have their certificates issued and undergo continuous evaluation for scope maintenance. They are: (i) for Metals for Energy Transition, the sites in Indonesia, China, Wales, Japan, Salobo, Sossego and Onça Puma, in addition to the loading and logistics terminals in Carajás and São Luis; (ii) for Steel Making Industry Solutions, the operations of the Carajás Iron and Manganese mine, the Itabira, Brucutu, and Água Limpa iron mines, in addition to the operations that make up the Vargem Complex (Mine of Capitão do Mato, Aboboras, Tamanduá, do Pico, Vargem Grande power plant and Andaime rail terminal); and (iii) also in Steel Making Industry Solutions,



## 1.6. Relevant effects of state regulation

the pelletizing units in Vargem Grande and pelletizing and logistics (ports and railroad) in Tubarão, Ponta da Madeira and Oman.

In the last 3 years, approximately US\$2.18 billion were invested in environmental management actions, with such actions aimed at complying with regulations or other environmental practices.

The main air pollutants emitted by Vale's operating units are: (i) particulate matter (MP); (ii) sulphur oxides (SOx) and (iii) nitrogen oxides (NOx). Air emissions management at Vale focuses on the inventory of sources, which can be fixed or mobile, punctual or diffuse, generating technical information to support the mathematical model that calculates the dispersion plume of pollutants. In compliance with environmental constraints, Vale also maintains and operates air quality monitoring networks in some units. These initiatives contribute to and support the adoption of control systems, plans for monitoring and managing emissions.

Part of the emissions of particulate matter comes from diffuse sources (fugitive emissions), such as vehicle traffic on unpaved roads, exposed areas subject to wind drag, handling of ore and bulk materials and railroad transport.

Vale acts strongly to reduce these diffuse emissions, adopting control measures such as sprinkler systems, use of dust-suppressing products, enclosure of conveyor belts and transfer houses, wind fences (wind barriers that surround product stockyards and reduce the dragging of dust), revegetation of geotechnical structures and improvement in operational and management processes.

Emissions from stationary sources have a monitoring system in their stacks, in addition to specific control systems, such as bag filters, electrostatic precipitators, gas scrubbers, among others.

In 2021, Vale established the goal of reducing emissions of particulate matter by 16%, reducing emissions of sulphur oxides by 16% and reducing emissions of nitrogen oxides by 10% by 2030. specific technology initiatives were implemented, the use of biofuels, electrification and improved operational efficiency, in synergy with low carbon strategic planning.

As for water resources and effluents, Vale operates considering the ICMM regulations and guidelines aimed at responsible management. This model determines that the use of water must be rational, socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through an inclusive process of stakeholders and considering the watershed where the Company operates as a territorial unit of planning and management. Thus, 4 strategic pillars of action were established: (i) governance; (ii) monitoring and control of water and effluents; (iii) water risk management; and (iv) engagement with stakeholders in the watershed. The gains of this model resulted in: (i) institution of the Water and Water Resources Policy; (ii) anticipated achievement of the goal of reducing the specific use of water; (iii) expansion of the qualitative monitoring network; and (iv) strengthening the water resources commission and consolidating monitoring results into an integrated system. For the next few years, the Company plans to actively engage stakeholders, working actively to collaborate in building a policy and instruments aimed at water safety, conservation and improvement of the quality of the river basins where Vale operates.

Vale's environmental activities also involve the Recovery of Degraded Areas ("RAD"), which is among the most important measures to mitigate and restore part of its impacts. The RAD is aimed both at areas directly and indirectly impacted by mining and at other locations, with the aim of compensating for its impacts. The recovery of areas impacted by mining generally involves the application of engineering (soil, geotechnical, civil), agronomic and silvicultural methods and techniques aimed at physical and chemical stabilization and revegetation of sites or areas that have had, in addition to the vegetation cover removed, the soil and relief degraded by mining, opening of roads (roads and railroads), among other activities involving construction work or earthworks (excavations, cuts, embankment and disposal of materials), with the aim of rehabilitating them in the short and medium term, but also seeking to create environmentally appropriate conditions to restore them in the long term. The recovery as a compensatory measure normally occurs due to the activity of suppression of native vegetation, the cutting of plant species protected by law and the intervention in legally protected spaces, such as, for example, in Permanent Preservation Areas. In this case, the recovery process considers in its process the natural biological diversity and the different forms of life of the reference ecosystems, the matrix of the landscape in which the area is inserted and the frequent use of methods and techniques for handling natural regeneration and planting of plant species (direct sowing or seedling planting) to induce or conduct ecological succession. This process is also frequently used to regularize or adapt the Company's properties to the environment. In all cases, and depending on the circumstances, recovery may involve different procedures of a manual, mechanized or combined nature, with different degrees of intensity, execution times and costs.

## 1.6. Relevant effects of state regulation

Plans or programs for the recovery of degraded areas at Vale are designed and executed based on compliance with all legal requirements associated with the topic and the like, and in accordance with the technical solution required by the competent environmental agencies. In addition, recovery plans or programs aim to restore, as far as possible, the integrity of the areas observed before the impact, seeking to achieve an environmental condition close to or better than that prior to degradation, obviously bearing in mind, in this process, the physical-chemical limitations and biological characteristics of the impacted environments. In this sense, the plans or programs are designed with the purpose of incorporating the ecological, aesthetic, landscape and social and cultural values of the regions where the projects are inserted into the recovery process or in accordance with what is foreseen in the mine closure plan with regard to future use of the areas.

Aligned with the RDA practices and for the purpose of promoting the reintegration of the mined territories to the physical, biotic and socioeconomic environments, Vale has an integrated and strategic plan for the closure of all its mines. To guide its actions, Vale has internal procedures and corporate guidelines for mine closure. These procedures include the composition of the provision for decommissioning assets, which are aligned with the guidelines of the Securities and Exchange Commission of Brazil – CVM and of the Securities and Exchange Commission – SEC (IAS 37 and Sarbanes-Oxley Act). The definition of the future use of each unit is established in the Mine Closure Plan, considering environmental, social and economic aspects, according to specific operating procedure. All of Vale's operations have a current Mine Closure Plan.

Vale operates in several regions, including areas of high cultural value and high relevance to biodiversity. In all its projects and operations, Vale develops actions to (i) avoid, mitigate, recover, compensate and monitor negative impacts, and (ii) enhance positive impacts in the locations where it operates. In addition, it develops and supports actions that encourage research and conservation of biodiversity and the sustainable use of natural resources. Among them, Vale maintains its own protected natural areas and, in partnership with government agencies, supports the maintenance of several conservation units, contributing to the conservation of threatened with extinction species and habitats, in addition to promoting engagement with communities, scientific institutions and other actors relevant.

### Social issues

With a view to building a positive relationship, Vale establishes voluntary agreements with indigenous peoples and traditional communities that are in its areas of influence, focusing on ethnodevelopment, territorial protection, cultural and institutional strengthening, among others, in order to contribute to the improvement in the quality of life and self-sufficiency of these peoples. In addition to voluntary agreements, when the company's licensing processes identify risks and/or direct or indirect impacts on recognized traditional territories, Basic Environmental Programs are also implemented to mitigate these risks/impacts.

**Protection of the rights of indigenous peoples and quilombola communities.** A Brazilian regulation for the protection of indigenous peoples, enacted in 2011 and revised in 2015, requires the Company to carry out specific impact assessments and implement mitigation programs in relation to operations and projects close to territories of indigenous peoples and quilombola communities.

Vale's relationship with indigenous peoples and traditional communities is in line with the main international commitments and standards, such as the position of the ICMM on Mining and Indigenous Peoples, Convention No. 169 of the International Labor Organization ("ILO"), and the United Nations Declaration on the Rights of Indigenous Peoples. In Brazil, the Company has a multidisciplinary team with indigenous experience, with more than 20 professionals dedicated to social action in the territories and permanent relationship with these populations. In other countries, Vale has different structures, always with qualified professionals who work guided by the aforementioned references and by the Global Human Rights Policy. Currently, Vale has a global relationship with 28 indigenous peoples and 47 traditional communities in the countries where it operates.

For more details on the information highlighted above, see the Company's Integrated Report, available for consultation on the website indicated in item 1.9.d of this Reference Form.

### c. dependence on patents, trademarks, licenses, concessions, franchises, relevant royalties contracts to the development of activities.

Vale operates mines, railroads, ports, marine terminals and hydroelectric power plants, generally through concessions granted by federal and state governments in several countries. Therefore, Vale depends on the concession of operating licenses of such assets for the development of its Vale activities.

## 1.6. Relevant effects of state regulation

Moreover, Vale's portfolio of intangible assets, as a whole, generates added value for the operational units in different respects, whether by its commercial bias, which involves the transfer of technology, open innovation and economic exploitation, either as Unique tool of competitiveness, because it creates technological barriers to competitors, freedom of operation, or even as an instrument of productivity increment and/or reduction of personal and environmental risks, as patents related to technologies Health and safety of employees in strategic areas. Among the intangible assets, Vale considers its registers for the brand "VALE" one of the most relevant for the Company's activities, in addition to the domain names "vale.com" and "vale.com.br" which, together with the other assets, bring direct and indirect technical and financial benefits to Vale's activities on several production fronts.

For information on royalties, concessions, licenses, or permissions, see item 1.6.a of this Reference Form.

### **d. financial contributions, indicating the respective values, made directly or through third parties (i) in favor of occupants or candidates for political office, or (ii) in favor of political parties.**

The Company did not make any financial contributions in favor of occupants or candidates for political office, or in favor of political parties in the year ended December 31, 2022. Vale and its subsidiaries in Brazil or abroad are prohibited to make, directly or indirectly through third parties, any contribution to political movements, even organized in parties, and to their representatives or candidates, as provided for in the Company's Articles of Incorporation and in its Global Anti-Corruption Policy.

### **(iii) to fund the exercise of influence activity in public policy decisions, notably in the content of policies acts**

The Company did not make financial contributions to fund the exercise of influencing public policy decisions, notably in the content of policies acts in the year ended December 31, 2022.

## 1.7. Relevant incomes from headquarter country and abroad

### a. income from customers assigned to the issuer's home country and their share of the issuer's total net revenue.

Information presented in item 1.7.b of this Reference Form.

### b. income from customers assigned to each country and their share in the issuer's total net revenue.

The following table summarizes, for the year ended December 31, 2022, the distribution of net operating income from the Company's continued operations, based on the geographic location of customers.

Net operating income per country	Fiscal year ended on December 31, 2022	
	In millions of BRL	% total
<b>Asia</b>		
China	114,960	50.8
Japan	18,239	8.1
South Korea	6,746	3.0
Taiwan	3,180	1.4
Other	6,133	2.7
	<b>149,258</b>	<b>65.9</b>
<b>Europe</b>		
Germany	7,909	3.5
France	2,338	1.0
United Kingdom	1,094	0.5
Italy	3,644	1.6
Other	12,695	5.6
	<b>27,680</b>	<b>12.2</b>
<b>Central and South America</b>		
Brazil	21,267	9.4
Other	3,094	1.4
	<b>24,361</b>	<b>10.8</b>
<b>North America</b>		
USA	8,471	3.7
Canada	3,075	1.4
	<b>11,546</b>	<b>5.1</b>
Other countries	13,553	6.0
	<b>226,508</b>	<b>100.0</b>

### **1.8. Relevant impacts from state regulation.**

For information on the effects of foreign regulation on Vale’s activities, see item 1.6.a e 1.6.b of this Reference Form.

## 1.9. Environmental, social and corporate governance (“ESG”) information

### a. whether the issuer discloses ESG information in an annual report or other specific document for this purpose.

Vale is committed to fully integrating sustainability into its business through a comprehensive approach, based on systematic planning and execution, prioritizing risk and impact management and establishing a positive social, economic and environmental legacy in the places where it operates. Your ESG-related practices are evolving.

As of 2021, the Company annually publishes ESG information (“ESG”) through its Integrated Report, replacing the Sustainability Report.

In 2022, launched its second Integrated Report, and has increased engagement with socially responsible investors and key ESG stakeholders through webinars, roadshows and a dedicated website, the Vale ESG Portal ([www.vale.com/esg](http://www.vale.com/esg)). ESG Portal information is not incorporated by reference in this document.

### b. the methodology or standard followed in preparing that report or document.

The preparation of Vale's Integrated Report, which discloses information on Vale's sustainability performance, is in line with the guidelines of the International Integrated Reporting Framework | Value Reporting Foundation and the Global Reporting Initiative (“GRI”), including the Mining and Metals Sector Supplement. Vale reports its efforts to adhere to the Mining Principles of the International Council on Mining and Metals (“ICMM”), of which it is an active member. The document and its appendix (ESG databook) also include indicators from the Sustainability Accounting Standard Board (“SASB”), the Task Force on Climate-related Financial Disclosures (“TCFD”), the key metrics of the World Economic Forum (“WEF”) and Sustainable Development Goals (“SDGs”) of the United Nations (“UN”).

### c. whether this report or document is independently audited or reviewed.

Vale's Integrated Report for the year ended December 31, 2022 was subject matter to limited assurance on non-financial information by PricewaterhouseCoopers Auditores Independentes Ltda (“PwC”).

### d. the page on the world wide web where the report or document can be found.

The Integrated Report for the year ended December 31, 2022 is available on the Company's ESG Portal ([www.vale.com/esg](http://www.vale.com/esg)).

### e. whether the report or document produced considers the disclosure of a materiality matrix and ESG key performance indicators, and which are the material indicators for the issuer.

The materiality matrix of the Integrated Report is updated annually according to the guidelines of the International Integrated Reporting Framework | Value Reporting Foundation and the GRI, involving the main stakeholders in identifying and prioritizing these topics, with final approval of the materiality matrix by the Company's Sustainability Committee.

For each topic, GRI indicators, indicators from the Metals & Mining segment of SASB and SDGs related to the reported indicators and material subjects were identified.

The material indicators for the Company are: Dams, Biodiversity, Local Communities, Human Rights, Eco-efficiency, Mine Closure and Future Use, Governance and Compliance, Climate Change, People, Health and Safety.

## 1.9. Environmental, social and corporate governance (“ESG”) information

### f. whether this report or document considers the Sustainable Development Goals (SDGs) established by the United Nations and what are the material SDGs for the issuer's business.

The material SDGs for the Company's business, in line with the commitments of the Company's 2030 agenda, are:

- **1. Poverty eradication** – End poverty in all its forms everywhere;
- **3. Health and well-being** – Ensure a healthy life and promoting well-being for all, at all ages;
- **5. Gender equality** – Achieve gender equality and empower all women and girls;
- **6. Clean water and sanitation** – Ensure availability and sustainable management of water and sanitation for all;
- **7. Clean and affordable energy** – Ensure access to cheap, reliable, sustainable and renewable energy for all;
- **8. Decent work and economic growth** – promote sustained, inclusive and sustainable growth, full and productive employment, and decent work for all.
- **10. Reduction of inequalities** – reduce inequalities within and between countries;
- **12. Responsible consumption and production** – Ensure sustainable production and consumption standards;
- **13. Action against global climate change** – Take urgent action to combat climate change and its impacts;
- **14. Life in water:** conservation and sustainable use of oceans, seas and marine resources for sustainable development; and
- **15. Life on land** – Protect, restore and promote the sustainable use of Earth's ecosystems, sustainably manage forests, combat desertification, halt and reverse Earth degradation and halt biodiversity loss.

For more information, see item Advances in our long-term commitments in the Company's Integrated Report for the year ended December 31, 2022.

### g. whether the report or document considers the recommendations of the Task Force on Financial Disclosures Related to Climate Change (“TCFD”) or financial disclosure recommendations from other recognized entities that are related to climate issues.

Vale's Integrated Report considers the TCFD's recommendations for managing the impacts arising from the transition to a low-carbon economy and the physical impacts of climate change on the Company's operations.

For more information, see item 10 Climate of the Company's Integrated Report for the year ended December 31, 2022.

### h. whether the issuer carries out inventories of greenhouse gas emissions, indicating, if applicable, the scope of inventoried emissions and the page on the World Wide Web where additional information can be found.

The Company carries out inventories of Scope 1 greenhouse gas emissions (fuels, industrial processes and other minor sources) and market based indirect Scope 2 emissions (purchase of electricity).

For more information, see the Company's Integrated Report for the year ended December 31, 2022, available on the Company's ESG Portal ([www.vale.com/esg](http://www.vale.com/esg)).

### i. issuer's explanation of the following conduct, if applicable:

#### (i) non-disclosure of ESG information

Item not applicable, see item 1.9.a of this Reference Form.

#### (ii) non-adoption of materiality matrix

Item not applicable, see item 1.9.e of this Reference Form.

#### (iii) non-adoption of ESG key performance indicators



## 1.9. Environmental, social and corporate governance (“ESG”) information

Item not applicable, see item 1.9.e of this Reference Form.

### **(iv) the non-realization of audit or review disclosed ESG information**

Item not applicable, see item 1.9.c of this Reference Form.

### **(v) non-consideration of the SDGs or the non-adoption of the recommendations related to climate issues, issued by the TCFD or other recognized entities, in the disclosed ESG information**

Item not applicable, see items 1.9.f and 1.9.g of this Reference Form.

### **(vi) the non-realization of inventories for greenhouse gas emissions**

Item not applicable, see item 1.9.h of this Reference Form.

## **1.10. Information on a mixed capital company**

### **a. public interest that justified its creation**

Not applicable. Despite being incorporated as a government-controlled company, Vale was privatized in 1997. For more information, see item 1.1 of this Reference Form.

### **b. performance of the issuer in compliance with public policies, including universalization goals, indicating:**

**(i) the government programs implemented in the previous fiscal year, those determined for the current fiscal year, and those foreseen for the coming fiscal years, criteria adopted by the issuer to classify this action as being developed to comply with the public interest indicated in letter “a”**

Not applicable, considering that Vale is not a government-controlled company.

**(ii) regarding the public policies mentioned above, investments made, costs incurred and the origin of the resources involved – cash generation, transfer of funds and financing, including sources of funding and conditions**

Not applicable, considering that Vale is not a government-controlled company.

**(iii) estimated impacts of the above mentioned public policies on the financial performance of the issuer or declaring that there was no analysis of the financial impact of the above mentioned public policies**

Not applicable, considering that Vale is not a government-controlled company.

### **c. pricing process and rules for setting tariffs**

Not applicable, considering that Vale is not a government-controlled company.

## 1.11. Purchase or disposal of relevant asset

**Nickel refinery.** In July 2022, Vale sold its 25% indirect stake in Korea Nickel Corporation, which operates a nickel refinery in South Korea, through a treasury stock repurchase transaction. Korea Nickel Corporation used to produce finished nickel for the stainless-steel industry operations using intermediate products from Vale Nouvelle-Calédonie S.A.S. (“VNC”), but that ceased in 2021 in connection with the sale of our investment held in VNC. The Company received approximately US\$17 million at the closing of the transaction.

**Sale of small hydroelectric plants.** In 2022, Vale concluded the sale of the small hydroelectric plants of Glória and Nova Maurício, both located in Minas Gerais, for approximately US\$6 million.

**Sale of Vale Nickel Dalian (“VND”).** In August 2022, the Company sold all of its shares in Vale Nickel Dalian Co., Ltd. to Dalian Xingbo Mechanical Co., Ltd. for US\$28 million plus certain VAT offset amounts.

For information on disposal of operating segment and acquisition and disposal of equity interest, see item 2.4 of this Reference Form. For information on investment projects, see item 2.10 of this Reference Form.

## **1.12. Corporate operations / capital increase or decrease**

The Company did not carry out or participate in any merger, spin-off, incorporation, share incorporation, capital increase or decrease in the fiscal year ended December 31, 2022.

### **1.13 Shareholders' agreements**

The Company does not have any Vale Shareholders' Agreement in effect filed at its headquarters. There was no execution, termination or modification of the Company's shareholders' agreement in the fiscal year ended December 31, 2022.

#### **1.14. Significant changes on how the business is conducted.**

There were no significant changes in the way the Company's business is conducted in the fiscal year ended December 31, 2022.

**1.15. Relevant agreements signed by the issuer and its subsidiaries**

There were no relevant contracts entered into by the Company and its subsidiaries not directly related to their operating activities in the fiscal year ended December 31, 2022.



## 1.16. Other relevant information

**Consolidation of the Metals Business for Energy Transition into a New Entity.** In line with the Company's energy transition strategy, Vale is working on the carve-out of its energy transition metals business, which will be consolidated into a new company with its own Board of Directors. Vale intends to enter into an agreement with a strategic partner to acquire a minority stake, which believes could accelerate value creation in the Metals for Energy Transition business.

**Agreements to develop Mega Hubs in the Middle East.** In November 2022, the Company signed three agreements with local authorities and customers to jointly study the development of industrial complexes ("Mega Hubs") in the Kingdom of Saudi Arabia, in the United Arab Emirates, and in the Sultanate of Oman to produce low carbon for the steel industry.

The parties aim to cooperate in the development of these Mega Hubs to produce hot briquetted iron ("HBI") and steel products to supply both local and transoceanic markets, with significant reduction of CO2 emissions. The production of HBI using natural gas emits approximately 60% less CO2 when compared to the production of pig iron using the integrated route BF-BOF. In the future, replacing natural gas with hydrogen and using renewable energy could eliminate CO2 emissions.

Vale expects to build and operate the iron ore concentration and briquetting plants at the hubs, ensuring the supply of high-quality agglomerated products; that local partners promote the construction of the necessary logistical infrastructure; and that investors and/or customers build and operate the direct reduction plants and are the purchasers of HBI for the export and domestic markets. These Mega Hubs are supposed to supply different markets around the world, supporting the decarbonization of the steel industry.

### Our environmental, social and governance ("ESG") framework

Based on studies by leading ESG consultants, the Company has identified 63 key gaps in relation to ESG best practices. Based on this assessment, an ESG action plan was mapped to address these gaps. By December 31, 2022, the Company had eliminated 57 gaps. After the tailings dam failure in Brumadinho, Vale decided to strengthen its interactions with ESG stakeholders to discuss a range of issues related to strategy, risk and governance and to accelerate its ESG initiatives. Vale is committed to eliminating its ESG gaps by 2030 ("2030 Commitments"). Information about the annual report through which Vale discloses ESG information ("ESG") is presented in item 1.9 of this Reference Form.

### Environmental

**Climate changes.** Vale is committed to leading the transition towards a net-zero mining industry. The Company is also committed to contributing with solutions that will help limit the increase in the average global temperature to well below 2°C, as set forth in the Paris Agreement. Vale endorsed and are aligned with the Task Force on Climate-related Financial Disclosures ("TCFD") framework for risks and opportunities related to climate change. The Company published the 2021 Climate Change report, following TCFD recommendations and assessed transition risks (possible impacts in our portfolio) and physical risks (mapped physical impacts for our operations). For more information, please see [www.vale.com/web/esg/climate-change](http://www.vale.com/web/esg/climate-change). Information in our website is not incorporated by reference in this annual report.

The Company is focused on the decarbonization of its operations, and plan to reduce its Scopes 1 and 2 absolute emissions by 33% by 2030, with 2017 as baseline, and to become Scope 1 and 2 net-zero emissions by 2050. Vale recognizes that it can only lead the mining industry towards a low carbon economy if lead its value chain in the same direction. The Company's Scope 3 emissions, annually calculated and verified by independent third parties, represent 98% of its total emissions and are not under its direct control. Vale is committed to reduce Scope 3 net emissions by 15% by 2035, with 2018 as baseline, which is based on development of new products, nature-based solutions, partnership and engagement with clients and suppliers. The Scope 3 target will be revised every five years, given the uncertainties regarding low carbon technologies and climate policies.

## 1.16. Provide other information the issuer deems relevant

**Scopes 1 and 2 decarbonization plan.** The Company have built a roadmap, with clear milestones, to meet the reduction targets in Scopes 1 and 2. Vale plans to invest US\$ 4 to US\$ 6 billion until 2030 to develop low carbon solutions, such as biofuels use, electrification and renewable electricity generation. Its current portfolio of initiatives consolidates more than 40 projects, prioritizing the most cost-competitive initiatives to achieve the 2030 target, based on a Marginal Abatement Cost Curve (“MAC Curve”). All investment decisions are submitted to an analysis considering internal carbon price of US\$ 50 per ton of CO2 equivalent. This practice not only encourages investments in greenhouse gas (“GHG”) emission reduction, but also prepares the Company for a scenario of more restrictive regulations. Vale intends to reduce GHG in oits operations by increasing the processes’ energy efficiency, and by developing solutions based on replacing usual energy sources by low carbon and renewable alternatives. These initiatives include, among others, the use of biofuels replacing fossil fuels, electrification of equipment and processes, use of alternative fuels, carbon capture technologies, and development of alternative processes.

**Scope 3 decarbonization plan.** More than 90% of the Company’s Scope 3 emissions relate to the processing of the iron ore in the steel industry. Scope 3 reduction is subject to the pace at which customers’ CO2 reduction roadmaps will be implemented. Vale’s initiatives for Scope 3 reduction are: (i) portfolio differentiation, with high-quality products, biomass, and low CO2 technologies and low carbon solutions such as Mega Hubs and green briquettes; and (ii) partnerships in shipping and in the steel sector. The Company can offset up to 20% of the target with high-integrity carbon credits.

The Company’s goal is to increase the production of agglomerated products, briquettes and pellets, to supply high-quality products to the market and further develop low carbon footprint initiatives, as well as to provide green solutions to the market, such as Mega Hubs.

To provide low carbon solutions to the steel industry, the Company has signed MoUs with over 30 companies representing around 50% of its scope 3 emissions, in which the companies agreed to pursue opportunities to develop steelmaking solutions focused on reducing CO2 emissions.

Additionally, Vale has signed an MoU addendum with Posco related to the development of ironmaking solutions with the intent to develop economic feasibility studies of potential investment in direct reduction plants to produce hot briquette iron (“HBI”), a low-carbon and eco-friendly raw material for steel production, and an MoU with XCMG Construction Machinery Limited to evaluate the potential supply of mining and infrastructure equipment, including zero-emission and autonomous equipment.

In 2022, Vale made progress on its Climate Agenda with new technologies being tested on ships that are used to transport the Company’s iron ore and iron ore agglomerate. Vale’s EcoShipping initiative manages a roadmap of innovative technologies aligned with the International Maritime Organization targets, with projects on energy efficiency (e.g., rotor sails and air lubrication) and alternative fuels (e.g., multi-fuel tank). In July 2021, the first large ore carrier equipped with rotor sails arrived at the Tubarão port. The system will allow an energy efficiency increase of up to 8% per vessel per year. In August 2021, the first ore carrier with air-lubrication technology, which the Company estimates could reduce fuel consumption by around 5 to 8%, arrived at Ponta da Madeira port.

Since 2020 Vale have spent US\$ 810 million on the efforts to reduce greenhouse gas emissions and mitigate climate change, of which US\$ 543 million were spent in 2022.

**Energy.** The three pillars of the Company’s energy initiatives are: (a) renewable electricity, (b) energy efficiency and (c) energy matrix transformation. Vale targets are to (i) achieve 100% renewable electricity consumption in Brazil by 2025, and globally by 2030, and (ii) improve by 5% the global energy efficiency indicator (specific consumption) in relation to the 2017 baseline by 2030. In 2022, the Company were close to reaching its goal of 100% renewable energy in Brazil, but due to the consumptions from Manganese and Midwestern system Vale reached 99.95% of its electricity consumption in Brazil and 86.67% globally came from renewable sources. By December 2022, the Company had concluded the implementation of nine of the 17 photovoltaic units in the Sol do Cerrado Solar Power Generation Project under operation, which we expect to supply 16% of its annual estimated demand for Brazil in 2025.

**Water.** The responsible management of water resources is present in the Company’s organizational culture. By means of four pillars (Governance, Monitoring and Control, Community Engagement and Water Risk Management), Vale endeavors to promote responsible water management in the regions where it operates. In this context, in 2018, the Company committed to reduces by 10% the use of natural water in its production processes by 2030. That goal was achieved and surpassed in 2021 (with a 20% reduction).

## 1.16. Provide other information the issuer deems relevant

**Forest conservation.** Vale's ambition is to act as a global catalyst for forest conservation and reforestation. Currently, the Company helps to protect approximately one million hectares of forest as compensation measures, voluntary initiatives and partnerships. By 2030, Vale intends to recover and protect 500,000 hectares beyond its borders. The target is broken down into two objectives. The first is to recover 100,000 hectares through production arrangements and social and environmental impact businesses. The second is to protect 400,000 hectares through partnerships to support public protected areas and initiatives such as REDD+ projects (Reducing Emissions from Deforestation and Forest Degradation). In 2022, we recovered 1,214 hectares and protected 50,000 hectares.

**Waste.** In 2020, Vale approved its Mining and Metallurgical Waste Management Policy to encourage the transition of its waste management to a circular economy perspective. Vale believes that this transition would be possible through innovation. In addition, in 2022, the Company achieved 79.26% compared to 2021, when Vale achieved 70% of its iron ore production by dry processing method, in line with the Company's goal of having at least 70% of its total production coming from dry processing. To sustain this target at an iron ore production level of 340–360 million metric tons per year ("Mtpy"), Vale is implementing several initiatives, such as its blending strategy, the expansion of Northern System to 240 Mtpy, the Capanema project implementation and the conversion of Plant 1 in Serra Norte to dry processing. In 2021, the Company announced the development of a commercial quality sand for civil construction applications – a sustainable alternative for the construction industry. These efforts are the result of seven years of research and approximately R\$50 million in investments.

### Social

**Social ambition.** In the social dimension, the Company wants to be a partner company in the development of resilient communities, engaged in issues relevant to humanity and committed to sustainable mining. The Brumadinho dam collapse forever changed the way in which we operate. Vale will never forget Brumadinho, nor will the Company ever stop working to fully repair its impact.

**Human rights.** The Company is committed to the United Nations Guiding Principles on Business and Human Rights ("UNGPs"). Vale's Global Human Rights Policy, in place since 2009, reinforces the guidelines related to Human Rights management and allows for greater alignment with the UNGPs. Human Rights is part of the Company's Global Risk Integrated Map and its operations register their human rights risk assessment, mitigation controls and action plans in the Company's global risk management system.

Vale is committed to performing Human Rights Due Diligence ("HRDD") in all of its operations and critical projects in 3-year cycles. By the end of 2022, 76% of the Company operations had gone through human rights due diligence (including 100% of active operations in Brazil). The remainder are operations abroad that will be covered throughout 2023 and 2024. Vale's Human Rights department monitors the risk controls and the action plans of the external due diligence carried out.

**Community engagement.** Vale's operating model is guided by the following principles: transparency, active listening, social participation, engagement, social capacity, diversity and inclusion, adherence to international pacts and operational responsibility. The Company seeks to establish structured dialogue spaces for the construction of Community Engagement Plans. Such plans are structured through a model of shared responsibilities between us, the community and other players for local development, and have as foundational principle the mobilization and social participation in the definition and prioritization of initiatives to be implemented in the territory.

The Engagement Plans are monitored by the community engagement teams, which have a systematic routine of participatory meetings to monitor the execution of actions, evaluating the adherence and effectiveness of the results with the community. In 2022, the Company mapped out 1,532 local relationship communities – 1,156 in Brazil, 82 in Canada, 2 in Wales, 51 in Peru, 1 in Chile, 28 in Oman, 206 in Indonesia and 6 in Malaysia. In Brazil, 165 communities are considered very high or high priority for engagement. Currently, 78% of the high and very high priority communities have implemented an Engagement Plan, and the Company expects to have 100% of priority communities with plans by 2026.

**Indigenous Peoples and Traditional Communities.** Vale is committed with all relevant international standards, such as the International Council on Mining and Metals ("ICMM") position statement on Mining and Indigenous Peoples, Convention No. 169 of the International Labor Organization ("ILO"), and the United Nations Declaration on the Rights of Indigenous Peoples. In the past years, the Company has entered into agreements with indigenous groups in Brazil, including Xikrin do Cateté, Kayapó, Gavião (Parkatejê, Kykatejê,

## 1.16. Provide other information the issuer deems relevant

Akrantikatejê), in Pará State. These agreements reflect Vale's social share value proposition and provide for a better neighborhood relationship between our operations and the indigenous lands.

**Grievance Mechanism.** The Company made available for its stakeholders of several listening channels (Hello Railway – toll free number, Reparation Call Center, Contact Us and Community Engagement Team). These mechanisms are based on the UNGPs, on the guiding principles of the ICMM. In 2022, the Company registered 11,085 interactions with communities, of which 99.36% were answered and 84.22% of the demands were attended. Of this total, 43.54% were complaints related to improvement and accesses, roads and pathways, dust control and weeding/pruning requests.

**Socioeconomic Contribution.** Vale is committed to positively impacting society, by investing in socioeconomic actions and projects focused on community development. The Company is investing in actions that contribute to the development and improvement of urban infrastructure and mobility, traditional communities, education, culture, health, and work and income generation in the regions where we operate. Vale spent US\$ 1.61 billion on social initiatives in 2022, of which 14% was spent on voluntary and mitigating programs, 6% on Brazilian-tax-exempted programs, and 80% on mandatory programs.

**Diversity, Equity and Inclusion ("DEI").** DEI are strategic and connected to the Company's sustainability principles as it directly impacts its ability to innovate and be more attractive to diverse talents. Vale's goal is to have 26% of women in the workforce by 2025. In 2022, the Company achieved 22.1% representation of women, a 5.4% increase in the total number of women in Vale compared to 2021. The Company also achieved 22.1% of women in senior leadership (executive manager positions and above), a 11.5% increase in the representation of women in these positions compared to 2021. Vale's goal is to achieve 40% of its leadership roles in Brazil composed with black employees by 2026. In 2022, the Company reached 32.1%, an increase of 11.1% compared to 28.9% in 2021.

**Health and Safety.** Vale is committed to improving the health and safety of its workers, consistent with the Company's pillar of promoting sustainable mining. Vale's long-term goals are: (i) no recordable injuries with potential for fatality or life-altering injuries, (ii) 50% reduction in the exposure of employees to the top 10 health risks by 2025 and (iii) reduction or elimination of the most significant risk scenarios by 2025.

**Community Safety.** In 2022, there were 95 events with community members that resulted in 17 fatalities and 84 non-fatal injuries related to the Company's activities (whether in areas under our responsibility or in external areas that are in the course of production or related support activities), which represented an 8.7% reduction in the number of events in 2022 when compared to 2021, against Vale's original goal of a 10% reduction. The number of fatalities reduced 32% in 2022, compared to 2021. In 2023, we will keep the Company's goal to reduce the occurrence of community events with injury (fatal and non-fatal) by 10% in relation to the 2022 results.

### Governance

**Corporate Governance.** Since 2017, Vale have been listed on the Novo Mercado segment, the highest level of governance of B3. The Company have been investing in improving its corporate governance, benchmarking against national and international best practices, and developing our understanding of investors' perspective on these matters.

Vale's governance model aims to establish clearly defined principles and roles, transparency, and stability to guide its actions. Vale seeks to build strong and lasting relationships with its stakeholders, invest in mitigating the effects of its activities, work with high ethical standards, practice transparent management, and actively contribute to advances in relation to the environment, biodiversity and sustainable development.

The general guidelines and policies that guide its business activities are established by the Company's Board of Directors, which monitors the implementation of these initiatives through reports provided by its executive officers. Vale's Board of Directors receives support from the Advisory Committees, whose mission is to advise the Board, including proposing improvements related to its area of activity to facilitate greater efficiency and quality in decisions made by the Board of Directors and to ensure that the Company's activities are carried out in compliance with current legislation, the principles of ethics and internal controls. The Fiscal Council is a permanent, supervisory body, independent from the Executive Committee and the Board of Directors, which is responsible, through the principles of transparency, equity and accountability, to supervise the management's activities and verify the compliance with the bylaws and their legal duties.

## 1.16. Provide other information the issuer deems relevant

In December 2022, Vale restructured its Advisory Committees to further improve the Company's governance. As a result, (i) the Audit Committee, originally established in 2020, was renamed to "Audit and Risks Committee," had its scope expanded to oversight risk matters, and it now must be composed entirely of independent board members; (ii) the Nominating Committee's scope was expanded to include the oversight of the company's governance, and was renamed "Nomination and Governance Committee;" (iii) the "People, Remuneration and Governance Committee had the governance component removed from its scope and was renamed "People and Compensation Committee", (iv) the Finance Committee was renamed "Capital Allocation and Projects Committee", to better reflect its scope and responsibilities; (v) the Operational Excellence and Risk Committee was dissolved and discontinued, and risk matters were incorporated by the Audit and Risks Committee; and (vi) the Innovation Committee, originally created in 2021, became a non-statutory and non-permanent body to better match the current challenges faced by the Company's business.

**Compensation.** Vale is committed to align its compensation programs to the Company's business strategy and the goal of being a safer company. Vale implemented a number of changes, such as the adoption of a malus clause and a clawback policy under which, upon the occurrence of events of exceptional severity, the Board of Directors may reduce variable compensation of executives or require that executives return amounts received, and the implementation of new share ownership guidelines for executive officers. Since 2020, Vale is following and reviewing standards for executive officers compensation: for short-term compensation, at least 30% of performance goals must be ESG-driven and directly related to safety, risk management and sustainability targets; and, with respect to long-term compensation, from 2022 at least 25% of performance goals must be based on ESG metrics. Overall, 12% of total remuneration must be linked to ESG metrics. For more information, see the item 8 of this form.

**Risk Management.** Vale has five risk executive committees that advise our management concerning each of these risks categories: (i) operational risks, (ii) geotechnical risks, (iii) strategy, finance and cyber risks, (iv) compliance, institutional relations and communication risks and (v) sustainability.

The Company also have five advisory committees to its Board of Directors, one of them with major roles in advising the Board on and monitoring our risks: the Audit and Risks Committee, which evaluates, and monitors matters related to risks of the Company, including operational and geotechnical risks (after the Operational Excellence and Risk Committee was discontinued), and the effectiveness and sufficiency of its controls and risk management system. The Audit and Risks Committee advises the Board of Directors regarding the risk management strategy, including the analysis of corporate policies on this topic and risk appetite guidelines, as well as the Company's integrated risk map, in addition to advice on the assessment of the efficacy and sufficiency of controls and risk management systems, and follow the implementation, among other attributes defined in each committee's internal regulation.

### Cultural transformation

Cultural transformation is part of Vale's strategy with people, and it is a Company's objective to become even more talent-oriented. In 2019, the Company began a deep process of cultural transformation which seeks to promote culture as a facilitator of its strategy. The Company works continuously to be recognized as a company that seeks operational excellence, leads the transition to a low-carbon economy and generates social and economic progress.

## 2. Directors comments

### 2.1. Financial and equity conditions

The financial information included in this section 2, except when mentioned otherwise, refer to the consolidated financial statements of Vale S.A. (“Vale” or “Company”), prepared according to the International Financial Reports Standards (“IFRS”), issued by the International Accounting Standards Board (“IASB”) and are also in accordance with the accounting practices adopted in Brazil, issued by the Accounting Pronouncements Committee (“CPC”), approved by the Securities Exchange Commission (“CVM”), for the year ended December 31, 2022.

The information contained in this section 2 must be read and analyzed with the consolidated financial statements of Vale, available on the Company’s *website* ([www.vale.com/announcements-results-presentations-and-reports](http://www.vale.com/announcements-results-presentations-and-reports)) and on the CVM’s *website* ([www.gov.br/cvm](http://www.gov.br/cvm)).

#### a. general financial position conditions

Net operating income totaled R\$226,508 million in 2022, a decrease of R\$67,016 million, compared to 2021, reflecting a more challenging market conditions and lower realized iron ore prices. The costs and expenses, including the reparation of Brumadinho, totaled R\$141,631 million in 2022, in line with 2021.

The adjusted EBITDA from continuing operations totaled R\$102,057 million in 2022, representing a decrease of R\$65,999 million, compared to R\$168,056 million recorded in 2021, mainly due to lower prices of iron ore. The adjusted EBITDA was reconciled with the Company’s net income in item 2.5 of this Reference Form.

Vale ended the year with R\$25,031 million in cash and cash equivalents and short-term investments, and R\$66,330 million of gross debt and leases, therefore, a net debt of R\$41,299 million in 2022. The expanded net debt was R\$73,783 million. The reconciliations of net debt and expanded net debt are presented in item 2.5 of this Reference Form.

In addition, the Company balance sheet, income statement and cash flows were affected also by the following events and transactions:

	Reference	Income statement	Statement of cash flows
<i>In millions of R\$</i>			
Discontinued operations (Coal)	2.1.h	9,818	(375)
Capital reduction of foreign subsidiary	2.1.h	7,938	-
Sale of the Midwestern System	2.4.b	5,808	745
Sale of California Steel Industries	2.4.b	1,520	2,269
Shareholders compensation	2.7.c	-	(34,157)
Shares buyback	2.1.c and 2.1.h	-	(30,640)
Sale of the Companhia Siderúrgica do Pecém	2.4.b	(685)	-

#### b. capital structure

The table below presents the Company’s pattern for financing activities, considering its own and third-party capital:

	On December 31, 2022	
	<i>In millions of R\$</i>	<i>% of the total</i>
Third party capital (current and non-current liability)	258,493	57.0%
Own capital (net assets)	194,894	43.0%
<b>Total capital (third party + own)</b>	<b>453,387</b>	<b>100.0%</b>

The Company’s capital structure presents a balanced ratio between own capital and third-party capital, considering the operational cash performance, the financial indexes and the Company’s equity status.

## 2.1. Financial and equity conditions

### c. payment capacity regarding acquired financial commitments.

In the normal course of business, the Company's main financial resource requirements are for investments on property, plant and equipment, and payments for liabilities concerning Brumadinho's event, Samarco and Fundação Renova, in addition to debt service. The Company expects to comply with such requirements mainly by using the cash generated by the operating activities.

The Company is constantly assessing opportunities for generating additional cash and is committed to continue reducing its costs and expenses and to keep the debt level and the discipline in capital allocation.

The Company has adopted the concept of expanded net debt for the management of its liquidity and cash flow, which takes into account, in addition to liabilities assumed with financial institutions, also the obligation to provide cash to third parties out of its regular operating process, more specifically the liabilities concerning the Brumadinho event, Samarco and Fundação Renova.

The table below shows information about the Company's indebtedness:

	December 31,	
	2022	2021
	In millions of R\$	
Gross debt	58,341	67,967
Net debt	41,299	10,472
Expanded net debt	73,783	50,490
Adjusted EBITDA of continued operations	102,057	168,056
Ratio between expanded net debt / adjusted EBITDA of continued operations	0.72	0.30

On December 31, 2022, the Company's gross debt<sup>1</sup> totaled R\$58,341 million, a 14.2% reduction, mainly as a result of the ordinary repayment of bank loans in the period.

Regarding the components of the expanded debt, the reduction of R\$40,698 million in cash and cash equivalents stands out, mainly due to the lower operating cash generation and the shares buyback program at the same levels of the previous year.

The Company understands that, based on the current financial position and the projection of its most recent cash flows, it is fully capable of paying its financial short-term and long-term commitments.

From the point of view of the liquidity indexes there was a reduction compared to the previous year. On December 31, 2022, the Company's current liquidity index was of 1.12 as compared with 1.44 on December 31, 2021. The reduction of the liquidity index resulted mainly due to a reduction in the balance of cash and cash equivalents in 2022. The table below presents the condition of the Company's financial position:

	December 31,	
	2022	2021
	In millions of R\$	
Current assets	81,009	119,332
Non-current assets maintained for sale	-	5,468
Non-current assets	372,378	374,328
Current liabilities	72,478	82,836
Non-current liabilities	186,015	217,256
Liquid assets of the controlling shareholders	187,112	192,403
<b>Current liquidity index (1)</b>	<b>1.12</b>	<b>1.44</b>

(1) The current liquidity index is calculated by dividing the current assets by the current liabilities.

The Company presents healthy financial position conditions to implement its business plan and comply with its short-term and long-term obligations.

### d. funding sources used for working capital and for investments on non-current assets

<sup>1</sup> The gross debt consists of the balance of loan and financing liabilities.

## 2.1. Financial and equity conditions

The main cash sources used by the Company to finance the working capital and investment on non-current assets are its own generation of operating cash and loans. The value of the operating cash flow is strongly affected by the global prices of the products marketed by the Company. In 2022, the net cash generated from continuing operating activities totaled R\$57,988 million. The balance of cash and cash equivalents totaled R\$24,711 million at the end of the period.

### e. funding sources used for working capital and for investments on non-current assets intended to be used to compensate for liquidity deficiencies

The main funding source for working capital and investment on non-current assets used by the Company is its own generation of operating cash. Additionally, to minimize the risk of liquidity, the Company has two revolving credit facilities – RCF, that will expire in 2024 and 2026, in the total amount of R\$27,903 million (US\$5,000 million), which will help in the management of the short-term liquidity and allow a greater efficiency in cash management, consistent with the strategic focus on the reduction of capital cost.

### f. indebtedness levels and characteristics

Indebtedness structure	December 31,	
	2022	2021
	In millions of R\$	
Debt contracts	58,341	67,967
Average time of repayments (in years)	8.7	8.7
Average cost (in % per year)	5.5	4.6

The average debt time of 8.7 was kept in line with the previous year. The average debt cost, after exchange and interest swaps, has increased by 0.9 p.p. when compared to the previous year, mainly due to higher interest rates practiced in the local and international markets.

#### i. relevant loan and financing contracts

The position of the Company's loans and financing on the end of 2022 is presented below:

	Average interest rate	December 31,	
		2022	2021
		In millions of R\$	
<i>Quoted in the secondary market</i>			
<i>Bonds</i>	6.0%	32,125	41,564
<i>R\$, Debentures</i>	10.1%	1,217	2,160
<i>Debt contracts in Brazil in</i>			
<i>R\$, indexed to TJLP, TR, IPCA, IGP-M and CDI</i>	10.6%	1,445	1,975
<i>R\$, with fixed interest rate</i>	3.0%	8	73
<i>Basket of currencies and US\$ indexed to LIBOR</i>		-	61
<i>Debt contracts in the international market in</i>			
<i>US\$, with variable and fixed interest rate</i>	5.0%	22,260	20,173
<i>Other currencies, with variable interest rate</i>	4.1%	49	486
<i>Other currencies, with variable interest rate</i>	3.6%	466	597
		<b>57,570</b>	<b>67,089</b>

The most relevant categories of the Company's total debt, excluding the incurred charges, are presented below:

#### Quoted in the secondary market

**Fixed income papers issued in American dollars (equivalent to R\$32,125 million on December 31, 2022).** The Company had issued several debt securities in the capital market, also by means of its fully owned subsidiary, Vale Overseas Limited ("Vale Overseas"), totaling R\$28,106 million (US\$5,387 million), as of December 31, 2022. The Vale Canada subsidiary has issued debt securities in the amount of R\$1,456 million (US\$279 million).

#### Debt contracts in Brazil including debentures

**Loans contracted in Brazil (R\$2,670 million as of December 31, 2022).** The Company made several loans contracted in Brazil, mainly with BNDES and private Brazilian banks.

#### Debt contracts in the international market



## 2.1. Financial and equity conditions

**Loans and financing contracted in American dollars (equivalent to R\$22,260 million as of December 31, 2022).** These loans include exportation financing lines, loans with commercial banks, loans with development banks and multilateral agencies.

**Loans and financing contracted in other currencies (equivalent to R\$515 million as of December 31, 2022).** This category includes multilateral agencies, among others.

Among the operations occurred in the year ended December 31, 2022, stands out:

- (i) In January 2022, the Company contracted R\$2,361 million (US\$425 million) regarding two loan facilities indexed to the London Interbank Offered Rate (“LIBOR”) maturing in 2027 with The Bank of Nova Scotia, and pre-paid R\$993 million (US\$200 million) of a loan facility expiring in 2023 with the same bank.
- (ii) On April 2022, the Company signed an additive related to an operation with an existing loan facility, in the amount of R\$1,903 million (US\$400 million) with a commercial bank, delaying its expiration to 2027.
- (iii) On May 2022, the Company contracted a loan facility with the MUFG Bank, in the amount of R\$967 million (US\$200 million), indexed to the Secured Overnight Financing Rate (“SOFR”) and with expiration in 2027.
- (iv) On June 2022, the Company repurchased bonds (tender offer) with expirations in 2026, 2032, 2034, 2036, 2039 and 2042, in the amount of R\$6,520 million (US\$1,291 million), e paid a premium of R\$568 million (US\$113 million).
- (v) In June 2022, the Company entered into an amendment relating to an existing credit line operation with the Bank of China of US\$1,000 million postponing its maturity to 2029. On July 2022, the Company contracted a loan facility with the SMBC Bank, in the amount of R\$805 million (US\$150 million), indexed to the SOFR and expiring in 2027. Additionally, signed an additive related to an operation with an existing loan facility of R\$3,368 million (US\$1,000 million) with the same bank, delaying its expiration to 2029.
- (vi) In July 2022, the Company entered into a credit line with Banco SMBC, in the amount of R\$805 million (US\$150 million), indexed to SOFR and maturing in 2027.
- (vii) On November 2022, the Company contracted a loan facility with Export-Import Bank of China in the amount of R\$1,582 million (US\$300 million) indexed to the SOFR and expiring in 2025. The Company has also drawn R\$1,055 million (US\$200 million) with expiration in 2032 regarding a contract signed previously with the Japan Bank Cooperation (“JBIC”).

### ii. other long-term relationships with financial institutions

The Company maintains commercial relationships in the normal course of its business with some of the main financial institutions, both international and domestic, in accordance with the usual financial market practices. The most relevant operations are presented in item 2.1.f above.

### iii. Indebtedness subordination degree

There is no contractual subordination degree among the Company’s corporate unsecured debts. The financial debts secured with real estate guarantee count with the preferences and privileges provided by law.

	December 31,	
	2022	2021
<b>Indebtedness subordination degree</b>	<i>In millions of R\$</i>	
Loans and financing	58,341	67,967
Obligations of unsecured nature	100.0%	99.3%
Obligations with real guarantee	0.0%	0.7%

The securities issued by the Company by means of its subsidiary Vale Overseas are totally and unconditionally guaranteed by Vale.

### iv. eventual restrictions applied to the Company, especially regarding loan limits and the contracting of new debts, the distribution of dividends, the disposal of assets, the issuing of new securities and the disposal of corporate control, also if the Company has been fulfilling such restrictions

## 2.1. Financial and equity conditions

Almost all of the Company's debt contracts have a cross default or cross acceleration clause, and 22.4% of the total debt balance containing obligations related to the compliance with the following indicators at the end of each quarter:

- leverage, understood as the index obtained from the division of the gross debt by the adjusted EBITDA ("Leverage"); and
- interest rate coverage, understood as the ratio obtained from the division of the adjusted EBITDA by the interest expenses ("Interest rate coverage").

For more information about the Adjusted EBITDA of continued operations, including its calculation, see item 2.5 of this Reference Form.

	December 31,	
	2022	2021
Leverage	0.6x	0.4x
<i>Maximum limit of 4.5x</i>		
Interest rate coverage	32.3x	46.7x
<i>Maximum limit of 2.0x</i>		

On December 31, 2022, the Company did not identify any non-conformity event with the levels required for the Leverage and Interest rate coverage indexes. The amount of the debts subject to these clauses was R\$2,504 million as of December 31, 2022.

### g. limits of the contracted financing and the percentages already used

All financing operations still open on December 31, 2022, showed 100.0% of used percentage.

### h. significant changes in items of the income and cash flows statements

	Year ended December 31,		Variation in %
	2022	2021	
<b>Income statement</b>	<i>In millions of R\$</i>		
<b>Continuing operations</b>			
Net operating revenue	226,508	293,524	(22.8)
Cost of products sold and services rendered	(124,195)	(117,267)	5.9
<b>Gross profit</b>	<b>102,313</b>	<b>176,257</b>	<b>(42.0)</b>
<b>Operating expenses</b>			
Selling and administrative	(2,658)	(2,601)	2.2
Research and development	(3,411)	(2,964)	15.1
Pre-operating and operational stoppages	(2,466)	(3,467)	(28.9)
Other operating expenses, net	(8,901)	(16,591)	(46.4)
	<b>(17,436)</b>	<b>(25,623)</b>	<b>(32.0)</b>
Impairment reversal (impairment and disposals) non-current assets, net	3,833	(2,352)	(263.0)
<b>Operating income</b>	<b>88,710</b>	<b>148,282</b>	<b>(40.2)</b>
Financial income	2,685	1,822	47.4
Financial expenses	(6,156)	(6,787)	(9.3)
Other financial items, net	14,849	22,777	(34.8)
Equity results and other results in associates and <i>joint ventures</i>	1,616	(6,947)	(123.3)
<b>Income before income taxes</b>	<b>101,704</b>	<b>159,147</b>	<b>(36.1)</b>
<b>Income taxes</b>	<b>(15,185)</b>	<b>(25,320)</b>	<b>(40.0)</b>
<b>Net income of continuing operations</b>	<b>86,519</b>	<b>133,827</b>	<b>(35.4)</b>
Net income attributable to noncontrolling interests	413	591	(30.1)
<b>Net income from continuing operations attributable to Vale shareholders</b>	<b>86,106</b>	<b>133,236</b>	<b>(35.4)</b>
<b>Discontinued operations</b>			
Net income (loss) from discontinued operations	9,818	(12,484)	(178.6)
Loss attributable to noncontrolling shareholders	-	(476)	(100.0)
<b>Net income (loss) from discontinued operations attributable to Vale shareholders</b>	<b>9,818</b>	<b>(12,008)</b>	<b>(181.8)</b>

## 2.1. Financial and equity conditions

<b>Net income</b>	<b>96,337</b>	<b>121,343</b>	<b>(20.6)</b>
Net income attributable to noncontrolling interests	413	115	259.1
<b>Net income attributable to Vale shareholders</b>	<b>95,924</b>	<b>121,228</b>	<b>(20.9)</b>

### Significant changes in items of the income statement

In 2022, the Company has recorded net income from continued operations of R\$86,519 million, a reduction of R\$47,308 million as compared with the net income of R\$133,827 million recorded in 2021. The adjusted EBITDA of the Company's continued operations has totaled R\$102,057 million in 2022, which is R\$65,999 million lower when compared with the previous year mainly due to lower prices of iron ore.

### Net operating revenue

Net operating revenue from continued operations	Year ended December 31,		Variation in %
	2022	2021	
	In millions of R\$		
<i>Iron Solutions</i> <sup>(1)</sup>			
Iron ore	145,714	206,218	(29.3)
Iron ore pellets	32,251	37,951	(15.0)
Other products and services	2,425	2,950	(17.8)
	<b>180,390</b>	<b>247,119</b>	<b>(27.0)</b>
<i>Energy Transition Metals</i> <sup>(1)</sup>			
Nickel and other products <sup>(2)</sup>	34,226	29,148	
Copper <sup>(3)</sup>	9,235	13,977	(33.9)
	<b>43,461</b>	<b>43,125</b>	<b>0.8</b>
Others	2,657	3,280	(19.0)
	<b>226,508</b>	<b>293,524</b>	<b>(22.8)</b>

(1) The Company renamed its main operating segments starting from the year ended December 31, 2022. The operating segment previously named "Ferrous Minerals" is now disclosed as "Iron Solutions" while the "Base Metals" operating segment is now disclosed as "Energy Transition Metals". There were no changes in the allocation criteria for these operating segments and, therefore, no adjustments were made to the comparative financial information.

(2) Includes co-products of nickel (copper) and sub-products (precious metals, cobalt and others).

(3) Does not include copper produced in nickel operations.

In 2022, the net revenue from continued operations recorded a reduction of R\$67,016 million or 22,8%, when compared to 2021. The reduction is mainly the result of (i) lower prices of Iron Solutions due to the lower realized prices in the sale of iron ore, which reflects the drop in the market reference price (impact of R\$44,852 million), (ii) lower volume of iron ore sales (impact of R\$5,073 million) and (iii) negative effect of the exchange rate on the revenue from iron ore and pellets (R\$9,863 million). These factors were partially offset by higher realized prices in the sale of nickel (impact of R\$5,275 million).

### Cost of products sold and services rendered

The costs related to each business segment are detailed below:

Cost of products sold and services rendered from continued operations	Year ended December 31,		Variation in %
	2022	2021	
	In millions of R\$		
<i>Iron Solutions</i>			
Iron ore	61,650	60,410	2.1
Iron ore pellets	13,837	12,051	14.8
Other products and services	1,723	2,145	(19.7)
	<b>77,210</b>	<b>74,606</b>	<b>3.5</b>
<i>Energy Transition Metals</i>			
Nickel and other products	23,559	19,480	20.9
Copper	5,421	4,733	14.5
	<b>28,980</b>	<b>24,213</b>	<b>19.7</b>
Others	2,252	3,018	(25.4)
Depreciation, depletion and amortization	15,753	15,430	2.1

## 2.1. Financial and equity conditions

<b>124,195</b>	<b>117,267</b>	<b>5.9</b>
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In 2022, the cost of products sold and services rendered totaled R\$124,195 million, as compared to R\$117,267 million in 2021. The increase of R\$6,928 million or 5.9% is mainly the result of higher costs with (i) oil and gas, mainly due to the increase in costs with *bunker* of the segment of Iron Solutions (impact of R\$3,197 million), and (ii) materials and services (impact of R\$3,092 million).

### Expenses per segment

	Year ended December 31,		Variation in %
	2022	2021	
<b>Expenses from continued operations</b>	<i>In millions of R\$</i>		
<i>Iron Solutions</i>			
Iron ore	3,106	3,588	(13.4)
Iron ore pellets	133	105	26.7
Other products and services	90	67	34.3
	<b>3,329</b>	<b>3,760</b>	<b>(11.5)</b>
<i>Energy Transition Metals</i>			
Nickel and other products	791	1,025	(22.8)
Copper	824	506	62.8
	<b>1,615</b>	<b>1,531</b>	<b>5.5</b>
Others	11,859	19,383	(38.8)
Depreciation, depletion and amortization	633	949	(33.4)
	<b>17,436</b>	<b>25,623</b>	<b>(32.0)</b>

### Research and development expenses

The expenses with research and development totaled R\$3,411 million in 2022, an increase of R\$447 million or 15.1% compared to the R\$2,964 million recorded in 2021, mainly due to projects of drilling, geological exploration and mineral exploration in all segments.

### Pre-operating and operational stoppage

The expenses with pre-operating and operational stoppages totaled R\$2,466 million in 2022, a reduction of R\$1,001 million or 28.9% compared to the R\$3,467 million recorded in 2021, mainly caused by the gradual recovery of volumes and the operation of certain iron ore operations related to the Brumadinho event.

### Other operating expenses

The other operating expenses, net, totaled R\$8,901 million in 2022, a reduction of R\$7,690 million or 46.4% compared to the R\$16,591 million recorded in 2021, mainly caused by lower expenses with de-characterization of dams and assets retirement obligations.

### Impairment reversal (impairment and disposals) of non-current assets

	Year ended December 31,		Variation in %
	2022	2021	
<b>Segments per class of assets</b>	<i>In millions of R\$</i>		
Midwestern System	1,066	(440)	(342.3)
Manganese	(56)	(192)	(70.8)
Vale Nouvelle-Calédonie S.A.S. ("VNC")	-	(549)	100.0
<b>Reduction (impairment) of the recoverable value of non-current assets</b>	<b>1,010</b>	<b>1,181</b>	<b>(185.5)</b>
Onerous contracts - Midwestern System	4,554	(100)	(4,654.0)
Result of disposals of non-current assets	(1,731)	(1,071)	61.6
<b>Result of disposal of non-current assets and other results</b>	<b>2,823</b>	<b>(1,171)</b>	<b>(341.1)</b>
<b>Impairment reversal (impairment and disposals) of non-current assets</b>	<b>3,833</b>	<b>(2,352)</b>	<b>(263.0)</b>

Midwestern System – As a result of the agreement for the sales of these assets to J&F Mineração Ltda ("J&F"), the Company recorded a gain in the amount of R\$5,620 million due to the reversal of the *impairment* of the property, plant and equipment assets, of which R\$1,121 million relates to the impairment reversal of property, plant and equipment and R\$4,554 million is due to the onerous contract, partially offset by losses of R\$55

## 2.1. Financial and equity conditions

million, due to working capital adjustments at the closing of the transaction.

In addition, during 2022, the Company has allocated the financial information of the Midwestern System to “Other” segment as this operation is no longer analyzed by the chief operating decision maker as part of to the performance of the Ferrous Minerals business segment due to the binding agreement to sell this operation (note 16b). The comparative information was reclassified to reflect the revision in the allocation criteria.

### Financial result, net

	Year ended December 31,		Variation in %
	2022	2021	
Financial income, net	In millions of R\$		
Financial income <sup>(1)</sup>	2,685	1,822	47.4
Financial expenses <sup>(2)</sup>	(6,156)	(6,787)	(9.3)
<i>Other financial items, net</i>			
Exchange gains (losses), net	(2,195)	2,172	(201.1)
Participative debentures	3,285	(3,691)	(189.0)
Financial guarantees	2,488	1,536	62.0
Derivative financial instruments	6,018	(153)	(4,033.3)
Reclassification of cumulative adjustments to the income statement	8,275	24,367	(66.0)
Indexation losses, net	(3,022)	(1,454)	107.8
	<b>11,378</b>	<b>17,812</b>	<b>(36.1)</b>

(1) Includes earnings from short-term financial investments and other financial income (see note 6 of the Vale consolidated financial statements).

(2) Includes interest on loans and financing (net of capitalized interest), interest on REFIS, interest on the liabilities of leases, expenses with repurchase of bonds and other financial expenses (see note 6 of the Vale consolidated financial statements).

On December 31, 2022, the net financial income totaled a gain of R\$11,378 million compared with a gain of R\$17,812 million on December 31, 2021, representing a reduction of R\$6,434 million, mainly caused by the net impact of the following factors:

- Translation loss of R\$2,195 million in 2022 compared to a translation gain of R\$2,172 million in 2021.
- In 2022, the Company recorded gains of R\$8,275 million compared with gains of R\$24,367 million in 2021. The effect recorded in 2022 refers mainly to the reclassification of the accrued adjustments of the conversion of the net assets to the income of the reporting year, arising from the capital reduction of Vale International SA (“VISA”), which resulted in a gain of R\$7,938 million, compared with a gain of R\$13,634 million recognized in 2021 from a previous capital reduction of VISA. In 2021, beyond this capital reduction effect, we recognized gains from reclassification of the cumulative translation adjustments arising from other divestments.
- In 2022, the Company recorded gains of R\$3,285 million compared with losses of R\$3,691 million in 2021, caused by the variation of the fair value of the participative debentures, due to a reduction of the quotation of R\$49 to R\$37 regarding the average price of these instruments in the secondary market.
- The effect of the fair value of the derivatives represented a gain of R\$6,018 million in 2022 compared to a loss of R\$153 million in 2021, caused by the following principal programs:
  - Protection program for loans and financing – the Company has recorded a gain of R\$5,895 million in 2022 compared to a loss of R\$891 million in 2021. In these *swap* operations, fixed or floating rates are paid in Dollars and the earning is received in Reais according to the interest rates of the protected debts.
  - Cash flow protection program for the purchase of fuel oil (*gasoil*), *Brent* type petroleum and freight – the Company has recorded a gain of R\$128 million in 2022 compared to a gain of R\$666 million in 2021.

### Equity results and other results in associates and joint ventures

In 2022, the equity results and other results in associates and joint ventures has totaled a gain of R\$1,616 million compared to a loss of R\$6,947 million in 2021, representing an expense reduction of R\$8,563 million or 123.3%, mainly caused by lower provisions related to Samarco and Fundação Renova.

### Income taxes

## 2.1. Financial and equity conditions

In 2022, the Company has recorded an expense net of income tax of R\$15,185 million, compared to an expense net of income tax of R\$25,320 million in 2021. The effective rate is different from the nominal rate of 34%, mainly due to the fiscal incentives resulting from the operations with iron ore, copper and nickel in the North and Northeast regions of Brazil (impact of R\$6,414 million) and the expense with interest on capital (impact of R\$2,828 million), resulting in an effective rate of 15%. The reconciliation of the nominal rate with the effective rate is presented in note 8 of Vale consolidated financial statements.

### **Net income (loss) from discontinued operations**

In 2022, the sale transaction of the coal operation was concluded and the Company recorded a net income from discontinued operations of R\$9,818 million for the year ended December 31, 2022, which was mainly driven by the reclassification of the cumulative translation adjustments of R\$14,636 million, from equity to the income statement of the period, which was partially offset by the derecognition of noncontrolling interest of R\$2,783 million as a result of the de-consolidation of the coal assets and the impairment of the assets acquired and working capital adjustments in the amount of R\$2,867 million.

### **Significant changes in items of the statement of cash flows**

	Year ended December 31,		Variation in %
	2022	2021	
	In millions of R\$		
<b>Income before income taxes</b>	<b>101,704</b>	<b>159,147</b>	<b>(36.1)</b>
Reconciliation adjustments	2,012	18,753	(89.3)
Changes in assets and liabilities	(7,923)	915	(965.9)
<b>Cash generated by the operations</b>	<b>95,793</b>	<b>178,815</b>	<b>(46.4)</b>
Net cash generated by operating activities from continuing operations	57,988	138,498	(58.1)
Net cash generated (used) in operating activities from discontinued operations	213	(1,732)	(112.3)
<b>Net cash generated by operating activities</b>	<b>58,201</b>	<b>136,766</b>	<b>(57.4)</b>
<b>Net cash used in investing activities from continuing operations</b>	<b>(23,642)</b>	<b>(22,812)</b>	<b>3.6</b>
<b>Net cash used in investing activities from discontinued operations</b>	<b>(534)</b>	<b>(12,476)</b>	<b>(95.7)</b>
<b>Net cash used in financing activities from continuing operations</b>	<b>(70,951)</b>	<b>(109,154)</b>	<b>(35.0)</b>
<b>Net cash used in financing activities from discontinued operations</b>	<b>(54)</b>	<b>(72)</b>	<b>(25.0)</b>
<b>Reduction in cash and cash equivalents</b>	<b>(36,980)</b>	<b>(7,748)</b>	<b>377.3</b>
Cash and cash equivalents in the beginning of the year	65,409	70,086	(6.7)
Effect of exchange rate changes on cash and cash equivalents	(3,657)	3,071	(219.1)
Cash and cash equivalents from subsidiaries sold and incorporated, net	(61)	-	1.0
<b>Cash and cash equivalents at end of the year</b>	<b>24,711</b>	<b>65,409</b>	<b>(62.2)</b>
<b><u>Net cash from operating activities</u></b>			

The cash flows from operating activities were reduced by 57.4%, from R\$136,766 million in 2021 to R\$58,201 million in 2022, mainly due to the reduction of the adjusted EBITDA of the Company's continuing operations, which had a reduction of R\$65,700 million compared to the same period of 2021, mainly due to a lower performance of the Iron Solutions segment, due to the reduction of the iron ore realized prices and sales volume (impact of R\$44,852 million and R\$7,502 million, respectively).

### **Net cash used in the investing activities from continuing operations**

The cash flows used in the Company's investing activities totaled R\$23,642 million in 2022, in line with the same period de 2021, with the investments on property, plant and equipment and intangibles the main reason for higher cash usage, which totaled R\$28,184 million in 2022, an additional R\$883 million compared with 2021.

### **Net cash used in the financing activities from continuing operations**

The cash flows used in the Company's financing activities totaled R\$70,951 million in 2022, compared to R\$109,154 million in the same period of 2021. The lower cash utilization on financing activities is mainly due to

## **2.1. Financial and equity conditions**

the lower dividends and interest on capital paid to the shareholders, in the amount of R\$34,092 million (compared to R\$73,112 million in 2021), while the amount of R\$30,640 million regarding the share buyback program was kept in line with 2021 (R\$29,121 million).

## 2.2. The directors must comment

### 2.2. The directors must comment

#### a. income of the issuer operations, particularly

##### i. description of any important components of the income

#### Iron ore and pellets

Iron ore and iron ore pellets have their prices based on a wide range of quality levels and physical characteristics. The price differences derive from many factors, such as the iron content of the product of specific ore deposits, the necessary processing for the obtainment of the desired final product, the product grain size, the moisture content and the concentration of impurities in the ore (as phosphorus, alumina, silica and manganese ore). Additionally, iron ore fines, lump iron and pellets normally have different prices.

The demand for iron ore and pellets is the result of the global demand for carbon steel. The demand for carbon steel, by its turn, is strongly influenced by the real estate sector, by civil construction and by the global industrial production. China's demand has been the main promoter of the demand and the global prices.

The average iron ore price in 2022 closed at US\$ 120.2/t/dmt (Platts IODEX 62% Fe), a reduction of 32% with respect to 2021. The fluctuation of the iron ore price was caused by a combination of factors, among them: (i) a transoceanic market under greater pressure, (ii) a significant increase in demand and the in the steel prices in China, (iii) the increase in interest rates by the main economies for inflation control, (iv) China's *lockdown* cycles and (v) the Russia-Ukraine conflict. Additionally, the drop of coal prices in the international market, allied to the drop of the steel margins, even in a scenario of stable pellet inventories in the Chinese ports along the year, resulted on a drop of the premiums of high-grade iron ore.

The Chinese carbon steel production suffered a reduction of 2.1% in 2022, and a reduction of 9.8% in the month of December in the year after year comparison. The real estate and civil construction sectors presented a steep decrease in the fourth quarter of 2022, also affecting the steel demand. The economic growth remained stable in China in 2022, at a growth rate of the Gross Domestic Product ("GDP") of 3.0% year after year. The GDP growth in the last quarter of 2022 was of 2.9% year after year, dropping to 3.9% year after year in the third quarter of 2022, due to the impacts of the changes in the sanitary control policy in China.

The steel production of the main producing regions suffered a reduction of 4% in the year after year comparison, mainly caused by the *lockdowns* in China and the effects of the Russia-Ukraine conflict, with greater losses in Eastern Europe (20%), European Union (11%), followed by the block of Japan, Korea and Taiwan (7%) and North America (6%).

The price differences between high-grade and low-grade iron ore resulted from a structural change that will continue to impact the market in the coming years. The movement towards a more efficient steel mill industry, with the application of stricter environmental policies in China and with the de-carbonization process in Europe, should meet the demand for high-quality ore, which will foster higher productivity and lower emission levels, as the pellets and fines of Carajás ("IOCJ").

The Company believes that the iron ore prices can be subject to additional fluctuations in 2023 due to the ongoing impact of the COVID-19 pandemic on the supply chain and the increase in the global geopolitical instability.

#### Nickel

Nickel is a metal traded on the stock market, listed in the London Metal Exchange ("LME") and, since 2015, in the Shanghai Future Exchange ("SHFE"). Most of the nickel products have their prices based on a discount or premium regarding the LME price, depending mainly on the physical and technical characteristics of the nickel products. The frequent fluctuation of the nickel price in the LME led to a higher fluctuation in the premiums and discounts in 2022, because several fundamental and technical factors have affected the commerce and reduced the liquidity of nickel in the market. The Company expects the normalization of the liquidity in the LME in 2023 and also the reduction of the fluctuation with respect to 2022. The nickel market is strongly affected by the production of stainless steel, which represented 64% of the global consumption of primary nickel in 2022.



## 2.2. The directors must comment

The Company maintains with the clients short-term contracts with fixed volume for most of the foreseen annual sales of nickel. These contracts ensure a stable demand for a significant portion of the Company's annual production. In 2022, 84% of the refined nickel sales was made for applications on non-stainless steels (alloy steels, alloys with high nickel content, galvanization and batteries), compared with the average of the sector for nickel producers of 36%, bringing more diversity and stability to the sales volume. As a result of the focus on these higher value segments, the average prices of refined nickel have normally exceeded the nickel spot prices in the LME.

Stainless-steel is an important promoter of the demand for nickel, mainly in China. In 2022, the stainless-steel production in China represented 40% of the total demand for primary nickel. Therefore, changes in the Chinese stainless-steel production have a great impact on the global nickel demand. In 2022, the Chinese stainless-steel production has dropped 3% year after year, compared to an increase of 8% in 2021. The drop in the stainless-steel production in China was mainly caused by disruptions resulting from COVID-19 pandemic. The Company expects to recover the production in 2023, with additions in the capacity of steel mills and the reopening of the Chinese economy after the rigid *lockdowns* along the pandemic.

Although the stainless steel-production is one of the main promoters of the global nickel demand, the stainless steel producers can purchase nickel with a wide range of nickel content, including secondary nickel (scrap). The choice between primary and secondary nickel is mainly based on its relative prices and availability. As an average, between 2018 and 2022, the secondary nickel represented around 37% of the total nickel used for stainless steel. The regional availability and the consumption of secondary nickel vary. In China, due to the scarce availability of scrap, the use of secondary nickel represented 23% of the total nickel used for stainless steel in 2022.

Historically, the Chinese domestic production of nickel pig iron represented the larger part of the growth of the global nickel offer, using the non-processed nickel from the Philippines and Indonesia. However, the Chinese production of nickel pig iron was affected by the restriction for exportation of non-processed ore from Indonesia. Such dynamics allowed Indonesia to emerge as the largest producer of nickel pig iron. In 2022, approximately 13% of the global primary nickel production was produced as nickel pig iron in China. Approximately 37% of the global primary nickel production was produced as nickel pig iron in Indonesia, with a large part directly integrated for the production of stainless steel. In 2021, Indonesia started to convert nickel pig iron into nickel matte for a later conversion into an adequate material for batteries. The Company expects that the nickel pig iron production in Indonesia, as well as the conversion into nickel matte, continue growing.

Additionally, the high value segment that consists of the Upper Class and Lower Class I products, including the nickel used in batteries, is the second largest market, representing 36% of the nickel demand in 2022. The global demand for high value increased 17% in 2022 when compared year after year, as a result of the growth of the battery sector, compared to an increase of 23% in 2021, as a result of the recovery of the markets after the most critical periods of the pandemic.

The nickel market registered a surplus of approximately 205 kt in 2022. The global stock exchanges (LME and SHFE) reduced by 49 kt from December 31, 2021, to December 31, 2022. Despite the excessive offer in the market, the Class I nickel with delivery in the LME remained very low, while the Class II market remained in surplus. For 2023, the Company expects the market to remain with a slight surplus, mainly because of the Class II nickel offer, which exceeded the stainless-steel growth.

The battery segment is showing an important ascending demand, because the production of electric vehicles continues to attract significant investments. Therefore, the nickel price and our nickel premiums continue to have a positive impact. The battery technologies used in commercially feasible electric vehicles use nickel; the increase in nickel content in such batteries results in a higher energy density and longer autonomy. As a result, the demand for nickel continues to grow, mainly due to the expected increase in the production of electric vehicles and the trends to increase the size of the batteries and the nickel content in the batteries, intended to improve performance.

### **Copper**

The demand for copper in the last years was fostered mainly by China, due to the important role that copper plays in civil construction, besides electrical and consumption applications. The copper prices are determined based on (i) the prices of the copper metal in the final use markets, as LME, SHFE and the Commodities Exchange ("COMEX"), and (ii) in the case of intermediate products, as copper concentrate (that represent most of the Company sales) and copper anode, the treatment and refining rates are negotiated individually with the clients.

## 2.2. The directors must comment

The demand for refined copper increased by 1% in 2022 in the year after year comparison, with China being responsible for approximately 54% of the world consumption. For 2023, the Company expects a relatively balanced market is expected, with stable offer and demand.

### ii. factors that have affected materially the operating results

In 2022, the operating income totaled R\$88,710 million, compared to R\$148,282 million in 2021, representing a reduction of R\$59,572 million. The main factor that affected materially the operating income was the lower performance of the Iron Solutions segment due to the reduction in the realized price and in the sales volumes (reduction of R\$50,456 million and R\$4,258 million, respectively).

### b. relevant variations of income attributable to the introduction of new products and services, volume changes and modifications of prices, exchange rates and inflation

#### Variations in volumes and prices

The table below shows the variations in the sales volumes of the main products in the indicated periods.

	Year ended December 31,		Variation in %
	2022	2021	
	In thousands of metric tons		
<i>Iron Solutions</i>			
Iron ore fines	260,663	270,935	(3.8)
Iron ore pellets	33,164	32,306	2.7
ROM	8,216	2,052	300.4
<i>Energy Transition Metals</i>			
Nickel	181	182	(0.7)
Copper	166	216	(23.1)
Copper as a byproduct of nickel	78	68	14.7
PGMs (000' oz)	215	173	24.3
Gold (000' oz)	277	340	(18.5)
Silver (000' oz)	1,611	1,399	15.2
Cobalt	2,361	2,017	17.1

The table below shows the variations in the average prices obtained of the main products in the indicated periods.

	Year ended December 31,		Variation in %
	2022	2021	
	R\$ per metric ton		
<i>Iron Solutions</i>			
Iron ore fines	559	761	(26.6)
Iron ore pellets	972	1,175	(17.2)
<i>Energy Transition Metals</i>			
Nickel	122,301	97,296	25.7
Copper	41,833	50,453	(17.1)
Copper as a byproduct of nickel	38,660	50,815	(23.9)
Gold (R\$/oz)	9,243	9,530	(3.0)
Silver (R\$/oz)	108	129	(16.3)
Cobalt	302	280	7.9

Iron Solutions – In 2022, the revenue from the Iron Solutions segment totaled R\$180,390 million, compared to R\$247,119 million in 2021, as a result of the lower realized average prices from iron ore, reflecting the drop of the reference index of the iron ore price, the *Platts IODEX 62%*, that was 24,7% lower with respect to 2021 (an impact of R\$50,456 million), lower volumes sold (an impact of R\$3,920 million) and due to the negative effect of the exchange rate (an impact of R\$9,863 million).

## 2.2. The directors must comment

The sales volume of iron ore fines was 5.4% lower in 2022, compared to 2021, due to variations in the mines' production plan, adaptations to the rainy season at the beginning of the year, and logistical adversities throughout 2022.

**Energy Transition Metals** – In 2022, the revenue from the Energy Transition Metals segment totaled R\$43,461 million, in line with the income of R\$43,125 million recorded in 2021.

### **Exchange rate variations**

	Year ended December 31,		
	2022	2021	Variation in %
Average exchange rate (Real/Dollar)	5.17	5.40	(4.3)
Closing exchange rate (Real/Dollar)	5.22	5.58	(6.5)

Most of the Company's income is expressed in U.S. Dollars. During the reporting year of 2022, the U.S. Dollar devaluated by 4.3% compared to the Brazilian currency, resulting in lower income in the Iron Solutions and Energy Transition Metals segments of R\$9,863 million and R\$1,632 million, respectively.

### **Inflation rate variations**

The Company's revenue is not significantly affected by inflation, being the main variations the operating income attributable to price modifications and change in volumes.

### **c. relevant impacts of inflation, of the price variation of the main supplies and products, of the exchange rate and the interest rate on the operating income and the financial income of the issuer**

#### **Inflation**

The Company's operating income and financial results are not significantly affected by inflation.

#### **Price of the main supplies**

The costs of oil and gas are important components of the Vale production costs and have represented 6.8% of its total cost of products sold in 2022. The energy costs represented 3.0% of the total cost of products sold in 2022.

Iron Solutions costs and expenses, without considering the effects of depreciation, totaled R\$80,539 million, R\$2,173 million higher than in 2021, mainly due to higher fuel costs, impacting the cost of freight and C1<sup>2</sup>, being partially offset by the exchange rate.

#### **Exchange rate**

For the relevant impacts of the exchange rate variation, see item 2.1.h and 2.2.b above.

#### **Interest Rate**

Vale is exposed to the interest rate risks of loans and financing. The debt linked to the interest rate in U.S. Dollars consists mainly of loans, including operations of exportation pre-payment and loans in commercial banks and multilateral organizations. Usually, these debts are indexed to rates commonly used in the market, as LIBOR or SOFR. The floating rate of its debts expressed in Reais includes debentures, loans obtained with the BNDES, fixed assets and financing for the acquisition of services in the Brazilian market. The interest of these obligations is mainly linked to the Extended Consumer Prices Index ("IPCA"), to the reference interest rate in the Brazilian interbank market and to the Long Term Interest Rate ("TJLP").

The Company uses swap operations to convert a large part of this debt to fixed rates in U.S. Dollars. As of December 31, 2022, before the swap operations, 5% of the debt was expressed in Reais, and the other 95% expressed in other currencies.

As of December 31, 2022, around 42.1% of the debt was linked to the floating interest rate.

<sup>2</sup> Operating cash cost of producing iron ore fines, comprising mining, processing, transport, including rail, and port costs.

## **2.3. Changes in accounting practices / modified opinions and emphases**

### **a. changes in the accounting practices that might have resulted in significant effects on the information foreseen in the fields 2.1 e 2.2**

Some accounting standards and interpretations were issued recently, however, they are either not yet in force for the year ended December 31, 2022 or had no impact on the financial statements. The Company has not adopted in anticipation any of these standards and expects that these standards have no material impact on the financial statements of subsequent periods.

### **b. modified opinions and emphases present in the auditor report**

There was no modified opinion and also no emphasis paragraph in the report of the independent auditor on the individual and consolidated financial statements of Vale S.A. for the year ended December 31, 2022.

## 2.4. Relevant effects on the financial statements

### 2.4. Relevant impact on the financial statements

#### a. introduction or divestment of operating segment

##### **Sale of coal assets**

In April 2022, the Company concluded the sale of the coal operations to Vulcan Resources (previously Vulcan Minerals) for the amount of R\$1,285 million, and a *royalties* agreement with Vulcan Resources with a period of 10 years, subject to certain production and coal price conditions.

As a result of the mentioned divestment, the Company recorded a net income from discontinued operations of R\$9,818 million in 2022, which is mainly driven by the reclassification of the cumulative translation adjustments of R\$14,636 million, from the equity to the income statement. This gain was partially offset by the loss of R\$2,783 million due to the derecognition of non-controlling interest. Additionally, until the closing of the transaction, the Company recorded losses of R\$2,867 million, mainly due to the impairment of assets acquired in 2022 and variations in working capital.

Concerning the *royalties* agreement, the gains will be recognized as they are incurred. Due to the nature and uncertainties related to the measurement of these *royalties*, the Company has not recognized any gain up to this moment.

#### b. constitution, acquisition or divestment of equity interests

##### **Main acquisitions and constitutions**

There was no acquisition or constitution of relevant equity interests in 2022.

**Vale Oman Pelletizing Company LLC (“VOPC”).** In February 2023, OQ Group exercised its put option on the 30% minority interest held in VOPC. In April 2023, the Company acquired the remaining equity interest in its subsidiary for R\$660 million. The result of this transaction is immaterial and will be recognized in shareholders' equity. As a result, Vale now holds 100% of VOPC's share capital.

##### **Main divestments of equity interests**

**Sale of Mineração Rio do Norte S.A. (“MRN”).** In April 2023, Vale signed a binding agreement with Ananke Alumina S.A., an affiliated company of Norsk Hydro ASA (“Hydro”), to sell 40% of its stake in MRN, including all associated obligations and rights upon disbursement of US\$67,9 million. The transaction is subject to customary regulatory approvals.

**California Steel Industries, Inc (“CSI”).** In February 2022, the Company concluded the sale of its interest of 50% in the CSI to Nucor Corporation for R\$2,269 million and recorded a gain of R\$1,520 million in the income statement for the year.

**Midwestern System.** In July 2022, the Company concluded the sale of its equity interest in Mineração Corumbaense Reunida S.A., Mineração Mato Grosso S.A., International Iron Company, Inc. and Transbarge Navegación S.A., recorded a gain in the amount of R\$5,620 million due to the reversal of the impairment of property, plant and equipment and the provision related to the logistic contracts and recorded a gain of R\$188 million related to the reclassification of the cumulative translation adjustments from the equity to the income statement for the year.

**Companhia Siderúrgica do Pecém (“CSP”).** In July 2022, the Company signed, together with the other shareholders of CSP, a binding agreement with ArcelorMittal Brasil S.A. (“ArcelorMittal”) for the sale of CSP. As a result of this agreement, the Company already recorded impairment of R\$685 million in the income statement for the year ended December 31, 2022. In March 2023, the Company and its partners concluded the sale of their respective stakes in CSP to ArcelorMittal for approximately R\$11,500 million, which will be used to prepay the outstanding net debt balance of CSP in the amount of approximately R\$12,000 million.

**Manganese operations in Minas Gerais.** In January 2022, the Company completed the sale of its ferroalloy operations in Barbacena and Ouro Preto and its manganese mining operations at Morro da Mina, in the state of Minas Gerais, to VDL Group (“VDL”) for a total consideration of R\$210 million. As the Company had already

## 2.4. Relevant effects on the financial statements

adjusted the net assets to the fair value less cost of disposal, the closing did not result in an additional impact on the income statement for 2022.

**Manganese operations in Bahia.** In 2020, the Company decided to shut down the Simões Filho operation, located in the State of Bahia, the plant was part of Vale Manganês business and produced manganese ferroalloys. In 2022, the Company signed a binding agreement with Minas Ligas for a partial sale of the assets of this plant for R\$60 million, which resulted in an impairment loss of R\$56 million for the year ended December 31, 2022.

### c. unusual events or operations

#### **Brumadinho dam collapse**

The main impacts in 2022 arising from the Brumadinho dam collapse are summarized below:

- **Impact on the income statement:** The impact of the dam collapse on the income statement was R\$5,581 million, including R\$3,199 million in expenses with items such as communication services, accommodation and humanitarian assistance, equipment, legal services, water supply, food aid, taxes, among other items.
- **Impact on the balance sheet:** The total amount of provisions recognized in the balance sheet in relation to the Brumadinho dam collapse, including provisions for remediation and reparation obligations under the Framework Agreement, individual indemnification and other commitments was R\$17,282 million as of December 31, 2022.

For more information, see note 24 of Vale's consolidated financial statements.

#### **De-characterization of dams**

Due to the Brumadinho dam collapse and in compliance with Law no 14,066/20, the Company decided to speed up its plan to de-characterize<sup>3</sup> all tailings dams built using the method upstream, certain structures called "centerline structures" and dikes containment facilities located in Brazil. The main impacts are summarized below:

- **Impact on the income statement:** The Company recognized an additional provision of R\$375 million, mainly due to the commitment to make investments in socio-environmental projects for a period of 8 years in exchange for an extension of the deadline for carrying out the projects. Engineering projects for de-characterization of dams are at different stages of maturity, some of them still in the conceptual engineering phase, for which the cost estimate includes in its methodology the high degree of uncertainty in defining the total cost of the project, according to best market practices.
- **Impact on the balance sheet:** The total amount of provisions recognized in the balance sheet in relation to the de-characterization of dams was R\$17,627 million as of December 31, 2022.

#### **Operational stoppage**

Due to the de-characterization projects, some operations were stopped due to court decisions or technical analyzes carried out by Vale on its upstream dam structures located in Brazil. The Company has been recording losses, mainly related to the fixed costs of these operations in the Iron Solutions segment and, in 2022, these expenses totaled R\$1,392 million. The Company is working on legal and technical measures to resume all operations at full capacity.

For more information, see note 26 of Vale's consolidated financial statements.

#### **Fundação Renova e Samarco**

In 2016, Vale, Samarco and BHP Billiton Brasil Ltda ("**BHPB**") signed agreements with the Federal Union, the states of Minas Gerais and Espírito Santo, and some other federal and state authorities, establishing the creation of the Fundação Renova, a not-for-profit private foundation, to develop and implement social and economic remediation and compensation programs, among other obligations.

<sup>3</sup> De-characterization" means that the structure will be dismantled so the structure is effectively no longer a dam.

## 2.4. Relevant effects on the financial statements

In order to implement the projects approved under the signed agreements, Samarco is obliged to finance the Fundação Renova based on the amounts required for such projects annually. Samarco has primary responsibility for complying with the financial contributions of the Fundação Renova, with Vale and BHPB having subsidiary responsibility in proportion to the 50% interest, only when Samarco is unable to fulfill its obligations.

The main impacts in 2022 resulting from the collapse of Samarco's Fundão dam are summarized below:

- Impact on the income statement: The Company recorded an impacted of R\$556 million mainly due to new court decisions on individual indemnities for residents of cities impacted by the dam collapse impacting provisioning related to the Renova Foundation. These decisions mainly altered and expanded the number of types of damage, categories, amounts payable to the affected municipalities.
- Impact on the balance sheet: The total amount of provisions recognized in the balance sheet as of December 31, 2022 was R\$17,328 million, of which R\$16,302 million are related to the reparation and compensation programs of Fundação Renova and R\$1,026 million refer to the de-characterization of Germano dam.

For more information, see note 25 of Vale's consolidated financial statements.

### **Russia-Ukraine Conflict**

The Company is subject to external risk factors concerning its operations and the profile of its client portfolio and supply chains. The global markets are undergoing fluctuations and ruptures after the scaling of the geopolitical tensions deriving from the military conflict between Russia and Ukraine.

The economic sanctions imposed by the United States, Canada, European Union, United Kingdom and other countries as a result of the conflict may continue to impact significantly the supply chains, lead to a significant fluctuation in the prices of commodities, and bring short term uncertainties for the global financial system, including due to the instability of credit and of the capital markets.

Up to this moment, the effects of the Russia-Ukraine conflict have not caused significant impacts on the Company operations or on the fair value of its assets and liabilities. However, the Russia-Ukraine conflict may affect negatively the Company businesses, as the interruption of the international trade flows, extreme fluctuation of the market prices, with impact on the sectors of energy, industrial and agricultural supply chains, shipping and regulatory and contractual uncertainty with the increase of the geopolitical tensions around the world.

## 2.5. Non-gAAP measures

### a. inform the value of the non-gAAP measures

The Company uses the adjusted EBITDA from the continuing operations, the net debt and the expanded net debt as means of non-gAAP measures.

	Year ended December 31,	
	2022	2021
	<i>In millions of R\$</i>	
Adjusted EBITDA from continuing operations	102,057	168,056
Net debt	41,299	10,472
Expanded net debt	73,783	50,490

### b. carry out the conciliation between the values announced and the values of the audited financial statements

#### Adjusted EBITDA from continuing operations

The Company calculates the adjusted EBITDA from the continuing operations according to the terms of Resolution CVM no. 156/2022.

	Year ended December 31,	
	2022	2021
	<i>In millions of R\$</i>	
<b>Net income from continuing operations attributable to Vale shareholders</b>	<b>86,106</b>	<b>133,236</b>
Net income attributable to noncontrolling interests	413	591
<b>Net income from continuing operations</b>	<b>86,519</b>	<b>133,827</b>
(+) Depreciation, amortizations and depletion	16,386	16,379
(+) Income taxes	15,185	25,320
(+) Financial results, net	(11,378)	(17,812)
<b>EBITDA from continuing operations</b>	<b>106,712</b>	<b>157,714</b>
Equity results and other results in associates and joint ventures	(1,616)	6,947
Dividends received and interest from associates and joint ventures	794	1,043
Impairment and disposals (impairment reversal) of non-current assets	(3,833)	2,352
<b>Adjusted EBITDA from continued operations</b>	<b>102,057</b>	<b>168,056</b>

#### Net debt and expanded net debt

	Year ended December 31,	
	2022	2021
	<i>In millions of R\$</i>	
Gross debt	58,341	67,967
Leases	7,989	8,942
<b>Gross debt and leases <sup>(1)</sup></b>	<b>66,330</b>	<b>76,909</b>
(-) Cash and cash equivalents	(24,711)	(65,409)
(-) Short term financial investments	(320)	(1,028)
<b>Net debt</b>	<b>41,299</b>	<b>10,472</b>
(+) Exchange swaps <sup>(2)</sup>	(1,100)	4,036
(+) Liabilities related to Brumadinho <sup>(3)</sup>	17,282	19,737
(+) Liabilities related to associates and joint ventures <sup>(3)</sup>	16,302	16,245
<b>Expanded net debt</b>	<b>73,783</b>	<b>50,490</b>

(1) Includes the values presented in the current liabilities and non-current liabilities and leases.

(2) Refer to the asset derivatives and liability derivatives, net, related to the risk of exchange and interest rates.

(3) Includes the values presented in the current liabilities and non-current liabilities.



## 2.5. Non-gaap measures

### **c. explain the reason why such measurement is understood as the most appropriate for the correct understanding of its financial condition and the result of its operations**

The management bodies responsible for making operational decisions, about resource allocation and performance evaluation, including the Executive Committee, statutory body of ordinary management and representation of the Company, and the Board of Directors, use the adjusted EBITDA from continuing operations as a performance measurement.

The adjusted EBITDA from continuing operations correspond to the Company's operating income or loss added by the dividends received and the interest from associates and joint ventures, excluding (i) depreciation, depletion and amortization and (ii) impairment and disposals of non-current assets. The Adjusted EBITDA of continuing operations represents an approximate measure of the Company's cash generation, because it excludes non-recurrent and non-cash effects.

The Company also evaluates the net debt and the expanded net debt with the assumption purpose of ensuring the continuation of its business on the long term. The Company has adopted the concept of expanded net debt for the management of its liquidity and cash flow, which takes into account, in addition to liabilities assumed with financial institutions, also the obligation to provide cash to third parties out of its regular operating process, more specifically the liabilities concerning the events of Brumadinho, Samarco and Fundação Renova.

The Company presents the Net debt and the Expanded net debt as an additional information, which must be considered together with other measurements and indexes for a better understanding of the Company's performance and financial conditions.

The adjusted EBITDA, the Net debt and the Expanded net debt are not measurements acknowledged by the accounting practices adopted in Brazil ("BRGAAP") or by the IFRS, issued by the IASB, and do not represent the cash flow for the periods presented and must not be considered as replacement for the net income, as indexes for operating performance or as replacement for the cash flow, as an index of the Company's liquidity. These measures have no standard meaning and may not be compared with similar measurements adopted by other companies.

## 2.6. Subsequent event of the last financial statements

The Company's consolidated financial statements related to the year ended December 31, 2022, were approved by the Company's Board of Directors and issued on February 16, 2023. The following subsequent events are disclosed in the Company's consolidated financial statements, according to the terms of the rules provided in the Accounting Pronouncements CPC 24, approved by the Resolution CVM no. 105/2022:

- In January 2020, the State Prosecutors of Minas Gerais ("MPMG") filed criminal charges against 16 individuals (including former executive officers of Vale and former employees) for a number of potential crimes, including homicide, and against Vale S.A. for alleged environmental crimes. In November 2021, the Brazilian Federal Police concluded the investigation on potential criminal responsibility related with the Brumadinho dam failure and the final report sent to the Federal Public Prosecutors ("MPF").

In January 2023, after the Federal Supreme Court ("STF") recognized the competence of the Federal Court, the MPF ratified the complaint presented by MPMG, which was received by the competent authority. The MPF and the Brazilian Federal Police conducted a separate investigation into the causes of the dam failure in Brumadinho, which may result in new criminal proceedings. Vale is defending itself against the criminal claims and is not possible to estimate when a decision will be issued. The likelihood of a financial loss to the Company is classified as possible and it is not yet possible to reliably estimate the amount of a potential loss to Vale.
- In January 2023, the Company paid principal and interest of debentures, in the amount of R\$124 million.
- In February 2023, the Company approved the transfer of 85 million of its own shares held its wholly-owned subsidiaries to Vale S.A.
- In February 2023, the Board of Directors approved the shareholder's remuneration as dividends of R\$8,130 million, of which R\$5,865 million is part of the minimum mandatory remuneration, recorded as a liability for the year ended December 31, 2022, and R\$2,265 million as an additional remuneration, recorded in equity as "Additional remuneration reserve". The payment will be held in March 2023.
- In 2004, a definitive decision of the Superior Court of Justice ("STJ") granted to the Company the right to deduct the Social Contribution on Net Income ("CSLL") from the taxable base of the corporate income tax ("IRPJ"). The Federal Government filed a rescission action ("ação rescisória") in 2006, seeking to reverse the 2004 decision. In 2019, the Federal Court of Appeals ("TRE") upheld the rescission action and, although the decision was not final, the Company decided not to deduct the CSLL from the taxable income since then.

Meanwhile, the STF is judging two extraordinary appeals with impact to all taxpayers. These appeals are discussing how long a court decision related with a tax matter would remain valid if the STF had subsequently issued a contrary decision. Due to the developments of this matter in the STF during 2023, and based on the updated assessment of its legal advisors, the Company concluded that the tax treatment previously adopted will probably not be accepted by the tax authority and, therefore, it recognized a liability in the amount of R\$813 million as "Taxes payable" for the year ended December 31, 2022.

## 2.7. Income destination

Out of the total net income for the year, R\$95,924 million were assigned as follows (i) R\$1,387 million to the legal reserve, (ii) R\$5,818 million to the tax incentive reserve, (iii) R\$25,667 million of remuneration to shareholders, already deliberated by the Board of Directors, (iv) R\$44,359 million to the statutory reserve for investments and (v) R\$18,693 to the retained earnings reserve.

### a. rules about profit retention

Pursuant to articles 39 and 40 of the Company's Bylaws, after the constitution of the legal reserve, the proposal for profit distribution must consider the constitution of the (i) reserve for tax incentives, to be constituted according to the legislation in force; and the (ii) statutory reserve for investments, with the purpose of ensuring the maintenance and the development of the core activities that compose the Company's corporate purpose, in an amount not higher than 50% of the distributable net income up to the maximum limit of the Company's share capital.

### b. rules about dividend distribution

Pursuant to article 41 of the Company's Bylaws, at least 25% of the annual net income, adjusted according to the law, must be assigned to the payment of dividends.

Pursuant the article 5<sup>th</sup>, §5<sup>th</sup>, of the Company's Bylaws, the shareholder owner of preferential shares of the special class is entitled to participate in the dividend to be distributed calculated in the form of Chapter VII of the Company's Bylaws, according to the following criteria: (a) priority in receiving the dividends corresponding to (i) at least 3% of the equity value of the share, calculated based on the financial statements considered that were used as reference for the payment of the dividends or (ii) 6% calculated on the portion of the capital composed by this kind of share, which is the higher among them; (b) right to participate in the net income distributed, in equal conditions as with the ordinary shares, after being guaranteed a dividend equal to the minimum priority established pursuant "a"; and (c) right to participate in eventual gratifications, in equal conditions as with the ordinary shares, observed the priority established for the distribution of dividends.

### c. periodicity of the dividend distribution

The Shareholders Remuneration Policy in force establishes that the shareholder remuneration is composed by two half-yearly payments, the first one in September of the current year and the second in March of the subsequent year, and that the Board of Directors can decide about additional remuneration, through the distribution of extraordinary dividends.

During the reporting year of 2022, the Company paid dividends and interest on capital to its shareholders in the amount of R\$34,157 million, of which R\$17,865 million refer to the year 2021 and R\$16,292 million refer to the year 2022.

### d. eventual restrictions for the distribution of dividends set forth by the legislation or special regulation applicable to the issuer, as well as contracts and legal, administrative or arbitral decisions

There is none.

### e. if the issuer has a formally approved policy for the destination of income, it must inform the agency responsible for the approval, the date of the approval and, should the issuer disclose the policy, locations in the worldwide computer network where the document can be consulted

The Company's Shareholders Remuneration Policy was approved on March 29, 2018, by the Board of Directors, and is made available in the Company's *website* ([www.vale.com/web/esg/policies-and-corporate-documents](http://www.vale.com/web/esg/policies-and-corporate-documents)) and in the CVM's *website* ([www.gov.br/cvm](http://www.gov.br/cvm)).

## 2.8. Relevant items not disclosed in the financial statements

a. **the assets and liabilities held by the issuer, directly or indirectly, which were not included in its balance sheet (*off-balance sheet items*), such as:**

i. **portfolios of acquitted receivables on which the entity has neither substantially withheld nor transferred the risks and benefits of the ownership of the transferred asset, indicating the respective liabilities**

There are no portfolios of written off receivables on which Vale maintains risks and responsibilities that are not included in the Company's consolidated financial statements.

ii. **contracts of future purchase and sale of products or services**

There are no contracts of future purchase and sale of products or services that are not included in the Company's consolidated financial statements.

iii. **contracts of constructions not finished**

There are no contracts of constructions not finished that are not included in the Company's consolidated financial statements.

iv. **contracts of future receivables from financing**

There are no contracts of future receivables from financing that are not included in the Company's consolidated financial statements.

**b. other items not highlighted in the financial statements**

There are no other items not highlighted in the Vale financial statements.

## **2.9. Comments regarding not disclosed items**

### **a. how such items change or might change the revenue, the expenses, the operating income, the financial expenses or other items of the issuer's financial statements**

Not applicable. The Company does not expect relevant effects from operations not highlighted in the consolidated financial statements which might change the revenue, the expenses, the operating income, the financial expenses or other items of the Company's financial statements.

### **b. nature and purpose of the operation**

Not applicable, see item 2.9.a above.

### **c. Nature and amount of the obligations undertaken and of the rights generated on behalf of the issuer arising from the operation**

Not applicable, see item 2.9.a above.

## 2.10. Business plan

### 2.10. Business plan

#### a. investments, including:

##### i. quantitative and qualitative description of the investments in progress and of the foreseen investments:

The Company's capital investments, including growth and sustaining, totaled US\$5.4 billion in 2022, with US\$1.6 billion invested in growth projects and US\$3.8 billion in sustaining projects. The investments were 8% higher than 2021 investments, mainly due to increased investments in the Sol do Cerrado solar energy project, and in the iron ore projects: Serra Sul 120, Capanema, and Tubarão Briquette plants.

	Expenditures <sup>(1)</sup> in	
	2022	2021
	In millions of US\$	
Growth projects	1,587	999
Sustaining projects	3,859	4,034
	<b>5,446</b>	<b>5,033</b>
<i>Total investment per business segment</i>		
Iron Solutions	3,102	3,012
Energy Transition Metals	1,859	1,862
Others	485	159
	<b>5,446</b>	<b>5,033</b>

(1) Executed capital expenditures comprise the sum of cash outflows.

The investment budget for 2023 is estimated at US\$6.0 billion, driven by investments in the contribution Morowali nickel project in Indonesia as well as the progress on the Serra Sul 120 and Capanema iron ore projects in Brazil.

The following table sets forth total expenditures in 2022 for the main investment projects and expenditures budgeted for these projects in 2023, together with estimated total expenditures for each project and the actual or estimated start-up date of each project as of December 31, 2022.

Projects <sup>(1)</sup>	Actual or estimated start-up	CAPEX executed		CAPEX expected	
		2022 <sup>(2)</sup>	Total executed <sup>(3)</sup>	2023 <sup>(4)</sup>	Total expected <sup>(5)</sup>
		In millions of US\$			
<i>Iron Solutions</i>					
Northern System 240 Mt Prog.	2H22	137	524	103	689
Gelado	2H22	64	325	40	388
Briquettes Tubarão	1H23	91	102	63	188
Capanema Maximization	2H23	114	141	235	913
Serra Sul 120	2H24	323	478	434	1,544
<i>Energy Transition Metals</i>					
VBME	2H22	556	2,026	233	2,698
Salobo III	2H22	279	940	83	1,087
Onça Puma 2nd furnace	1H25	16	16	110	532

(1) Projects approved by the Board of Directors.

(2) Executed capital expenditures comprise the sum of cash outflows.

(3) Total executed CAPEX through December 31, 2022, including capital expenditures in prior periods.

(4) Figure presented corresponds to investment guidance for capital expenditure in 2023 of approximately US\$6.0 billion.

(5) Estimated total capital expenditures cost for each project, including capital expenditures in prior periods. Total expected CAPEX includes expenses, in line with the budget approved by the Board of Directors, while these expenses are not included in the expected CAPEX for the year or in the total executed CAPEX.

The main investment projects are described in more detail below:

The **Northern System 240 Mt Program**, approved in December 2018 by the Board of Directors, will expand the production capacity of the S11D and the logistics of the North System in 10 Mtpy. In the S11D, all manufacturing and delivery was completely completed, and part of the new circuits is already being tested with load. The 3rd loading silo is in the final stages of assembly and testing, with a ramp up scheduled for the second half of 2023. Regarding the logistics scope, the railroad was awarded the Installation License that was pending, thus

## 2.10. Business plan

allowing the implementation of the 13 Km foreseen for the conclusion of the project, expected for the first semester of 2024. The works of the Ponta da Madeira Maritime Terminal are still within schedule, with the conclusion expected for the second semester of 2023.

The **Gelado** project, approved in September 2018 by the Board of Directors, will recover approximately 10 Mtpy of *pellet feed* with high iron content in the Complex of Carajás, to feed the pellet plant of São Luís. The project has reached a physical advance of 98%, and the *start-up* took place in the second semester of 2022.

**Briquettes Tubarão.** In December 2020, the Company approved the conversion of the pelletizing plants 1 and 2 of the Tubarão Unit into iron ore briquetting plants, and the construction of a new briquetting plant in the Complex of Vargem Grande. The initial production capacity will be of approximately 6 million tons a year. The operation start-up of the three plants is expected for 2023 and the total investment is US\$188 million.

The original **Capanema** project was replaced in July 2022 by the **Capanema Maximization** project with an installed capacity of 17.8Mtpy of natural moisture *sinter feed*, added to the production of Timbopeba, totaling 26 Mtpy, and US\$913.4 million in multi-annual investments. The project will allow the Timbopeba plant to process a total de 26 Mtpy. The scope of the project considers mine equipment, primary crushing, secondary and tertiary crushing and screening and a new long-distance conveyor with 8.2 km connecting the Capanema mine to the Timbopeba plant. The *start-up* is expected for the first semester of 2025.

The **Serra Sul 120** project was approved by the Board of Directors in August 2020. The project consists in increasing the capacity of the mine-plant S11D up to 20 Mtpy, for a total of 120 Mtpy on the site. The project is expected to yield a capacity increase of the North System mine-plant to 260 Mtpy. The Serra Sul 120 will create an important productive capacity buffer, guaranteeing greater operating flexibility for facing eventual production or licensing restrictions in the North System. The project includes, among other initiatives: (i) the opening of new mining areas; (ii) the duplication of the existing long distance belt conveyor; (iii) the implementation of new processing lines in the plant; and (iv) expansion of the storage areas. The project counts with total multi-annual investments of US\$1.5 billion, and its operation start-up is expected for the second semester of 2024.

The **Voisey's Bay underground mine expansion project ("VBME")** should extend the service life of the Voisey's Bay mine and increase the Voisey's Bay production up to an estimated annual production of around 45 kt of nickel, in average, and around 20 kt of copper and around 2,6 kt of cobalt, in total. The VBME will replace the existing production of the Voisey's Bay open-pit mine, being registered as an operational maintenance investment for the purposes of the Shareholders Remuneration Policy. The project underwent a cost increase due to internal and external factors. The total investment expected has increased to US\$2,698 million, mainly due to: (i) impact of COVID-19 pandemic and changes in the construction schedule, (ii) changes in the scope of the engineering project, (iii) costs of logistics and supply higher than forecast. On the second quarter of 2021, the Company accomplished the first ore production from the Reid Brook deposit, the first of two underground mines to be developed in the project. The *start-up* of the second deposit, Eastern Deeps, took place in the second quarter of 2022. The project is 81% concluded.

The **Salobo III** copper project, approved in October 2018 by the Board of Directors, is a *brownfield* expansion of the Salobo operations, increasing the processing capacity. The project includes a third concentrator line and will use the infrastructure existing in Salobo. Salobo III will produce an average copper volume of approximately 67 ktpy in the first 5 years, 64 ktpy in the first 10 years and 59 ktpy along the mine's service life. The start-up of the project's first and second lines, which will add 60-80 ktpy of copper production, took place in 2022 and 2023, respectively, and are expected to reach full capacity in the fourth quarter of 2024.

Approval of the **Onca Puma 2nd furnace** project with start-up expected in 2025, adding 12-15 ktpy of nickel to the Company's portfolio. The project leverages Onca Puma's existing infrastructure, and once complete is expected to decrease unit production costs for the overall Onca Puma complex by 15%.

### Other projects

- Approval of the **Morowali** project (formerly Bahodopi nickel project) in July 2022 and is expected to start-up in 2025. The RKEF (*Rotary-Kiln Electric Furnace*) project is a partnership between PT Vale Indonesia Tbk ("PTVI") and two Chinese partners with 73 ktpy capacity and estimated investment of around US\$2.2 billion for the plant RKEF and US\$400 million for the mine.
- PTVI and Huayou signed binding agreements on the **Pomalaa** Nickel Project4 to build an HPAL project associated with PTVI's Pomalaa nickel resources. The project is expected to start-up in 2025 with a

## 2.10. Business plan

production capacity of up to 120 ktpy. Ford Motor Company signed a memorandum of understanding with PTVI and Huayou to join the Pomalaa nickel project to create a three-party relationship.

- PTVI and Huayou signed a Heads of Agreement in September to build a 60 ktpy **HPAL** project to process limonite ore from the Sorowako mine.
- Vale's Board of Directors approved the investment of US\$755 million for the **Compact Crushing** project development at S11D, which will allow the processing of a variety of minerals, including the jaspilite waste material. The project will give S11D more flexibility and is expected to be operational in second semester of 2026.
- In Canada, beginning of the first phase of the CAD945 million **Copper Cliff Complex South Mine** Project, which is expected to nearly double ore production at the Copper Cliff mine, adding around 10 ktpy of nickel and 13 ktpy of copper.
- **Tecnored plant.** In May 2022, the Company started the construction works of the first commercial plant of Tecnored in Marabá, Pará, with an investment of approximately R\$1.6 billion. The plant start-up is expected for 2025, with a production capacity of 250 ktpy of green pig-iron and may reach 500 ktpy in the future.
- The **Solar Project Sol do Cerrado** was announced in December 2020 and covers the construction of a photovoltaic plant, including 17 sub-parks which total an installed capacity of 766 peak megawatts (MWp) in the municipality of Jaíba, in the State of Minas Gerais, Brazil. The solar generation, located on the Southeast region, also optimizes the generation profile of the portfolio, which is based on hydroelectric generation. The project also includes the implementation of the elevating substation, transmission line and connection bay in the 230 kV substation of Jaíba, with contracts signed for the connection to the Brazilian National Interconnected System. The project implementation will require investments of approximately US\$590 million. The project will produce approximately 193 average megawatts (Mwa) of power per year for the operations of the Company, corresponding to 16% of the estimated demand in 2025. The project *start-up* took place in 2022, with 9 of the 17 solar parks being energized in the fourth quarter of 2022 and 2 in the first quarter of 2023. The 6 remaining parks will be energized during 2023.
- **Thompson Project Phase 1.** In June 2021, the Company approved the investment of US\$123 million for the execution of the Thompson Project Phase 1, which will expand the present mining activities in Thompson, Manitoba, for 10 years. The Thompson Mine Extension is a two-phase project and includes the construction of critical infrastructure, as new ventilation elevators and fans, increase in the landfill capacity and distribution of additional energy. The *start-up* took place in 2023, replacing the nickel capacity at a rate of 20 ktpy.
- **Project West III** (Province of Zhejiang, China). In October 2020, the Board of Directors approved the creation of a joint venture with the Ningbo Zhoushan Port Company Limited, to build, own and operate the West III project in the port of Shulanghu, city of Zhoushan, province of Zhejiang, China. The project consists in expanding the installations of the Shulanghu Port, developing a storage yard and loading berths with additional capacity of 20 Mtpy. In October 2022, Vale and Ningbo Zhoushan Port Company Limited decided to terminate the West III Project due to the change of Chinese national policies.

### ii. investment financing sources

The Company informs that the resources for the operations and investments are obtained, mainly, from the Company's operating cash flow, capital budgets, bank loans, financing obtained from financial institutions, in addition to the raising of resources in the capital market. In order to carry out investments, the Company will seek, at the right moment, the best capital structure for funding.

### iii. relevant divestments in progress and foreseen divestments

See the sale transaction of the Companhia Siderúrgica do Pecém ("CSP"), described in item 2.4.b of this Reference Form.

### b. if already announced, indicate the acquisition of plants, equipment, patents or other assets that can materially influence the issuer's productive capacity

No acquisition of plants, equipment, patents or other assets that can materially influence the Vale productive capacity has already been announced.

### c. new products and services, pointing out: (i) description of the researches in progress already announced; (ii) total amount of the expenditures of the issuer on research for the development of new products or



## 2.10. Business plan

### services; (iii) projects under development already announced; and (iv) total amount of the expenditures of the issuer on the development of new products or services

**Green Briquette.** Vale continuously assesses the needs of the market and of its clients concerning products and services. In order to meet the growing demand for products that minimize the emission of carbon in the steel making process, Vale is promoting a portfolio of high-quality products and innovative technologies, as high-quality iron ore pellets, pellet feed and sinter feed. Vale is also developing new products for direct loading into blast furnaces and for direct reduction reactors, working with partners to provide low-carbon solutions.

The Company believes that its capacity to offer the clients a complete iron ore solution and that the quality of its products are extremely important advantages to help in the improvement of its competitiveness regarding its competitors, which can be in a more convenient geographical localization.

In 2021, a Vale announced a new product, the “green briquette”, developed by the Company during almost 20 years, is an iron ore agglomerate that enables the replacement of the sintering or pelletizing phase, a coal-intensive stage, in the steelmaking process. Thereby it has the potential to reduce emissions of gases and particulates estimate to be up to 10% greenhouse gases emissions (“GHG”) during the steelmaking production processes of clients. It has lower GHG emissions compared to these products once the briquettes are considered to be cold-agglomerated. In its production there is no burning, but rather a drying process at a temperature between 200 and 250oC, requiring less energy than the pelletizing and sintering process. The product also reduces emissions of particulates and gases such as sulphur dioxide (SOX) and nitrogen oxide (NOX), as well as eliminates the use of water in its production. The briquette production process can also be converted to alternative fuels, such as hydrogen, reducing even further GHG emissions.

During the year of 2022, the product was fully tested in industrial scale and validated in different blast furnaces of the Company’s customers, proving to be an adequate solution for the replacement of conventional agglomerated products.

In 2022, approximately R\$143 million was expensed in research and development of new products, including briquette consolidation projects for application in blast furnaces, development and consolidation of the product concept for use in direct reduction reactors, besides the production of 29kt of briquettes for industrial tests.

**Tecnored.** Seeking to achieve the goal of reducing 15% of scope 3 net emissions by 2035, the Company started in 2022 the construction of the first commercial plant of Tecnored, a wholly-owned subsidiary of Vale, in Marabá, state of Pará, focusing on the production of ferrous pig iron with start-up scheduled for 2025. The project has estimated investments of R\$1.6 billion and has the optional option of replacing coal with biomass as fuel – neutral in carbon emissions.

### d. opportunities inserted in the business plan of the issuer related to ESG questions

The Company is committed to integrate sustainability into its business by means of an encompassing approach, based on systematic planning and execution, giving priority to the management of risks and impacts and seeking a positive social, economic and environmental legacy in the places where Vale operates.

The Vale business plan is aligned to the Company’s ambition to be recognized by the society as leading company in sustainable mining. Seeking positive contributions for this nature, there are investment opportunities on research for the conservation of biodiversity, as well as in the development of new technologies that support the prevention of fires and other risks (“PrevisIA”), and impacting business for the recovery of biomes. With this purpose, the “Biomás” initiative was launched in 2022, a partnership of Vale and other large companies with the objective of restoring and protecting 4 million of hectares of native forests in different Brazilian biomes within the next 20 years. Another opportunity area is related to circular economy and the re-exploitation of waste. Therefore, 580kt of certified sand 2022 were produced based on the re-exploitation of mining waste.

In the climate agenda, the opportunities are associated to energy transition and the agenda of steel mill de-carbonization. Vale is engaged with its main clients (that represent around 50% of the emissions of the Company’s Scope 3<sup>4</sup>) for the development of solutions that minimize CO<sub>2</sub> emissions. The Company has also

<sup>4</sup> Other indirect greenhouse gases (“GHG”) emissions, except those arising from the acquisition of energy.

## 2.10. Business plan

signed three agreements in the Middle East for the development of Mega Hubs intended to promote green solutions for the steel mill industry.

The main actions taken or announced up to this moment, which generate or will generate direct impact on Vale, are presented in note 2 of the Company's consolidated financial statements. Other initiatives are described on the Report of the Management and on the Integrated Report, or both, as well as the financial statements, available in the Company's *website* ([www.vale.com/announcements-results-presentations-and-reports](http://www.vale.com/announcements-results-presentations-and-reports)).

**2.11. Other factors that have relevant influenced on operating performance**

There are no other factors that occurred in the last fiscal year that materially influenced the Company's operating performance and that have not been identified or commented on in the other items of this section.

### 3. Projections

Vale S.A. (“Vale” or “The Company”) clarifies that the information disclosed in this section represents a mere estimate, hypothetical data and, under no circumstances, constitute a promise of performance by the Company and/or its directors. The projections presented below involve market factors beyond the Company's control and, therefore, they may change<sup>5</sup>

#### 3.1. Disclosed projections and premises

##### a. subject of projection

##### Estimated product volumes

	2023	2024	2026	2030+
<b>Iron ore (Mt)</b>	~315	310-320	340-360	>360
<b>Pellets &amp; briquettes (Mt)</b>	~37	38-42	50-55	~100
<b>Nickel (kt)</b>	~165	160-175	210-230 <sup>(1)</sup>	>300 <sup>(1,2)</sup>
<b>Copper (kt)</b>	~325	320-355	375-410	~900

(1) Adjusted to reflect indirect exposure to nickel production from Indonesian Joint Ventures. In 2026, 190-210 kt excluding nickel production from Indonesian Joint Ventures.

(2) Including indirect exposure to total nickel sourced from PTVI mines for Bahodopi, Pomalaa and Sorowako HPAI.

##### All-in components

	2023	2024	2026	2030+
<b>Iron ore premium <sup>(1)</sup></b>	~3	3-4	8 – 12	>18
<b>C1 cash cost of iron ore – ex purchase from third parties <sup>(2)</sup></b>	~22.5	21.5-23.0	<20	-
<b>All-in iron ore cost <sup>(2)</sup></b>	~56	53-57	~45	-
<b>All-in nickel cost <sup>(2)</sup></b>	~16,200	14,500-16,000	11,500-13,500 <sup>(3)</sup>	-
<b>All-in copper cost <sup>(2)</sup></b>	~3,400	4,000-4,500	3,500-4,000	-

(1) Including iron ore fines quality adjustments and weighted contribution from agglomerates business. Projections depend on market conditions.

(2) Excluding sustaining investments.

(3) Not considering the effects of PTVI's divestment.

##### Fixed spending of Iron Ore Solutions (US\$ billion):

Year	2023	2024
<b>Fixed spending <sup>(1)</sup></b>	~180	~250

(1) Values in real terms.

##### Capital expenditure

US\$ billion	2023	2024+
<b>Growth <sup>(1)</sup> (US\$ billion)</b>	~1.8	2.0-2.5
<b>Maintenance of existing operations <sup>(1)</sup> (US\$ billion)</b>	~4.2	4.0-4.5
<b>Total CAPEX <sup>(1)</sup> (US\$ billion)</b>	~6.0	~6.5
<b>Iron Ore Solutions CAPEX <sup>(1)</sup> (US\$ billion)</b>	-	3.5-4.0
<b>Energy Transition Metals' CAPEX <sup>(1)</sup> (US\$ billion)</b>	-	2.5-3.0

(1) Values in real terms.

<sup>5</sup> Throughout this section 3, the exchange rate of 5.1655BRL/USD was used to convert values in US\$ to R\$ for the estimates referring to the year 2023, except when a different exchange rate was informed.

### 3.1. Disclosed projections and premises

#### Brumadinho and Mariana Commitments

US\$ billion <sup>(1)</sup>	2023	2024 <sup>(2)</sup>	2025	2026	2027	2028+
<b>De-characterization</b>	0.4	0.6	0.6	0.6	0.5	0.3 <sup>(3)</sup>
<b>Brumadinho Agreements <sup>(4)</sup></b>	1.4	1.0	1.0	0.7	0.3	0.1 <sup>(5)</sup>
<b>Incurred expenses</b>	0.5	0.4	0.4	0.4	0.3	0.4 <sup>(6)</sup>
<b>Samarco and Renova <sup>(7)</sup></b>	0.6	0.9	0.7	0.8	1.0	0.1 <sup>(8)</sup>
<b>Total</b>	<b>2.9</b>	<b>2.9</b>	<b>2.7</b>	<b>2.4</b>	<b>2.1</b>	<b>-</b>

(1) Values in real terms, net of judicial deposits and without discounting to present value, considering an exchange rate of BRL/USD 4.9962.

(2) Including disbursements of US\$0.4 billion performed in 1Q24.

(3) Average cash flow between 2028 and 2035 (period for de-characterization).

(4) Includes full reparation agreement, individual, labor and emergency compensation and tailings removal work.

(5) Average cash flow between 2028 and 2030 period for Integral Reparation Agreement.

(6) Disbursements related to incurred expenses ending in 2028.

(7) Includes the provision for the de-characterization of the Germano dam and estimates of Samarco's contribution.

(8) Average cash flow between 2028 and 2038 period for Samarco and Renova values.

#### EBITDA

Sensitivity of Vale's 2026 EBITDA ranging from US\$ 15.2 billion to US\$ 31.0 billion, depending on the following assumptions: (a) average annual iron ore price (62% Fe benchmark) ranging from US\$ 90/t to US\$ 130/t; (b) average annual nickel price (LME) ranging from US\$/t 16,000/t to US\$ 24,000/t; (c) average annual copper price (LME) ranging from US\$ 7,000/t to US\$ 11,000/t.

#### Free Cash Flow yield

Sensitivity of Vale's Free Cash Flow yield in 2026 ranging from 5.2% to 23.2%, depending on the following assumptions: (a) average annual iron ore price (62% Fe benchmark) ranging from US\$ 90/t to US\$ 130/t; (b) average annual nickel price (LME) ranging from US\$/t 16,000/t to US\$ 24,000/t; (c) average annual copper price (LME) ranging from US\$ 7,000/t to US\$ 11,000/t.

#### Project pipeline returns (2024–2026):

Assuming a weighted average IRR of 30+% for Iron Ore Solutions projects and 15+% for Energy Transition Metals, potential value creation of US\$ 4 billion.

#### **b. projected period and forecast expiration period**

##### Estimated product volumes

The projected period for the annual production of iron ore, pellets and briquettes, nickel and copper from 2023, 2026 and 2030 onwards are the highlighted fiscal years themselves. In turn, the validity period of the estimate made consists of the disclosure of the production report for the fiscal year listed above, which will occur in the fiscal year following the end of the fiscal year highlighted above, as applicable.

##### All-in Components

###### *Premiums for Iron Ore*

The projected period for iron ore premiums from 2023, 2026 and 2030 onwards consist of the highlighted fiscal years themselves. In turn, the validity period of the estimates made consists of the disclosure of the results of each fiscal year listed above, which will occur in the fiscal year following the end of each fiscal year highlighted above, as applicable.

###### *Iron Ore Costs*

The projected period for the C1 cash cost of iron ore fines without third-party purchase costs in 2023 and 2024 are the highlighted fiscal years themselves. In turn, the expiration period for the estimates made consists of the disclosure of the result for each fiscal year listed above, which will take place in the fiscal year subsequent to the end of each fiscal year indicated above, as applicable.

###### *All-in costs after by-products and before current investment*

### 3.1. Disclosed projections and premises

The projected period for iron ore, nickel and copper all-in costs in 2023 and 2026 consist of the highlighted fiscal years themselves. In turn, the validity period of the estimates made consists of the disclosure of the results of each fiscal year listed above, which will occur in the fiscal year following the end of each fiscal year highlighted above, as applicable.

#### Fixed spending of Iron Ore Solutions

The period projected for the Fixed spending of Iron Ore Solutions in iron ore in 2023 and 2024 is the highlighted fiscal year itself. In turn, the period of validity of the estimate made consists of the disclosure of the results of the fiscal year listed above, which will occur in the fiscal year following the end of the fiscal year highlighted above, as applicable.

#### Capital expenditure

The period projected for the Company's CAPEX for 2023, and between 2024 and 2027 (average per year) consist of the highlighted fiscal years. In turn, the validity period of the estimates made consists of the disclosure of the results of each fiscal year listed above, which will occur in the fiscal year following the end of each fiscal year highlighted above, as applicable.

#### Brumadinho and Mariana Commitments

The projected period for the Company commitments of Brumadinho and Mariana from 2023, 2024, 2025, 2026 and from 2027 onwards consist of the highlighted fiscal years themselves. In turn, the validity period of the estimates made consists of the disclosure of the results of each fiscal year listed above, which will occur in the fiscal year following the end of each fiscal year highlighted above, as applicable.

#### EBITDA

The projected period for EBITDA sensitivity in 2026 consists of the highlighted fiscal year. In turn, the period of validity of the estimate made consists of the disclosure of the results of the fiscal year listed above, which will occur in the fiscal year following the end of the fiscal year highlighted above, as applicable.

#### Free Cash Flow yield

The period projected for the Free Cash Flow yield in 2026 consists of the highlighted fiscal year. In turn, the period of validity of the estimate made consists of the disclosure of the results of the fiscal year listed above, which will occur in the fiscal year following the end of the fiscal year highlighted above, as applicable.

#### Project pipeline returns (2024 – 2026)

The period projected for the Project pipeline returns in 2024 and 2026 consists of the highlighted fiscal year. In turn, the period of validity of the estimate made consists of the disclosure of the results of the fiscal year listed above, which will occur in the fiscal year following the end of the fiscal year highlighted above, as applicable.

#### **c. assumptions for the projection, indicating which may be influenced by the issuer's management and which are beyond its control**

All the assumptions mentioned below are subject to external influence factors, which are beyond the control of the Company's management. Therefore, in the event of any relevant future changes to these assumptions, the Company may review its estimates mentioned below, modifying them compared to those originally presented.

#### Estimated production volume

The assumptions used for projecting the iron ore production volume (Mt) for 2023, 2026 and 2030 onwards were: (a) revision of the production plan; and (b) gradual increase in capacity.

The assumption used for projecting the annual production volume of pellets and briquettes (Mt) for 2023, 2026 and 2030 onwards was the Company's annual iron ore production plan.

### 3.1. Disclosed projections and premises

The assumptions used for projecting annual nickel production volumes (kt) for 2023, 2026 and 2030 onwards were: (a) depletion of the Ovoid mine and ramp-up of the VBME mine; (b) refurbishment of the furnace at the Onça Puma mine; (c) Creighton shaft repair; and (d) start-up of replenishment and growth projects over the projected period.

The assumptions used for the projections of annual copper production (kt) for 2023, 2026 and 2030 onwards were: (a) ramp-up of Salobo 3; (b) continued stabilization of Salobo 1&E and Sossego; and (c) start-up of replenishment and growth projects over the projected period.

#### All-in Components

##### *Premiums for Iron Ore*

The assumptions used for projecting iron ore premiums in 2023, 2026 and 2030 onwards consider (a) higher quality premiums due to the impact of decarbonization trends; and (b) increase of 70 Mt in the production of high quality agglomerates.

##### *Iron Ore Costs*

The assumptions used for the projection of the C1 cash cost of iron ore fines without third-party purchase costs for 2023 were: (a) BRL/USD exchange rate 5.20 in 2023; (b) the ramp-up of filtration plants, health and safety costs, dam management, geotechnics, risk and sustainability in 2023; (c) geological inflation; and (d) cost efficiency.

##### *All-in costs after by-products and before current investment*

The assumptions used to project the all-in costs of the iron ore operation in 2023 and 2026 were (a) higher premiums and share of agglomerated products; (b) lower bunker costs; (c) higher volumes; and (d) fixed cost dilution for iron ore.

The assumptions used to project the all-in costs of nickel operations in 2023 and 2026 were: (a) higher volumes of premium products in the mix including by-products, and fixed cost dilution (VBME and CCM 1 ramp-up); and (b) start-up of the 2nd Furnace at Onça Puma.

The assumptions used to project the all-in costs of copper operations in 2023 and 2026 were: (a) higher volumes and fixed cost dilution; (b) ramp-up of Salobo 3; and (c) productivity improvements.

#### Fixed spending of Iron Ore Solutions

The assumptions used for the projection of R&D expenses with mineral exploration in 2023 and 2024 were the plans to: (a) replenish iron ore reserves; (b) increase production and growth of nickel reserves; and (c) substantially increase exposure to the copper industry.

#### Capital expenditure

The assumption used for CAPEX projections for between 2023 and 2027, and between 2028 and 2035 (average per year) were: (b) BRL/USD exchange rate of 5.0076 in 2023.

#### Brumadinho and Mariana Commitments

The assumptions used for projecting Brumadinho and Mariana's commitments in 2023, 2024, 2025, 2026 and 2027 onwards were: (a) disbursement expectations related to the respective provisions; and (b) expenses incurred.

#### EBITDA

The assumptions used for the projection of EBITDA in 2026 were: (a) average annual iron ore price (62% Fe benchmark) ranging from US\$ 90/t to US\$ 130/t; (b) average annual nickel price (LME) ranging from US\$/t 16,000/t to US\$ 24,000/t; (c) average annual copper price (LME) ranging from US\$ 7,000/t to US\$ 11,000/t.

#### Free Cash Flow yield

### 3.1. Disclosed projections and premises

The assumptions used for the projection of free cash flow yield in 2026 were: (a) average annual iron ore price (62% Fe benchmark) ranging from US\$ 90/t to US\$ 130/t; (b) average annual nickel price (LME) ranging from US\$/t 16,000/t to US\$ 24,000/t; (c) average annual copper price (LME) ranging from US\$ 7,000/t to US\$ 11,000/t.

#### Project pipeline returns (2024–2026)

The assumptions used for the projection of project pipeline returns for between 2024 and 2026 were: (a) assuming a weighted average IRR of 30+% for Iron Ore Solutions projects and 15+% for Energy Transition Metals, potential value creation of US\$ 4 billion.

#### **d. values of the indicators that are subject of the forecast**

##### Estimated product volumes

See below, for reference purposes, the Company's production realized for the last three fiscal years:

	Year ended in December 31 of		
	2022	2021	2020
Iron ore (Mt)	307,8	315.6	300,4
Pellets (Mt)	32,1	31.7	29,7
Nickel (Kt) ex-VNC	179	168.0	183,7
Copper (Kt)	253	296.8	360,1

##### All-in Components

##### *Premiums for Iron Ore*

See below, for reference purposes, the Company's indicators realized for the last three fiscal years:

	Year ended in December 31 of		
	2022	2021	2020
Iron Ore Premiums (US\$/t)	6,9	6.8	5,3

##### *Iron Ore Costs*

See below, for reference purposes, the Company's indicators realized for the last three fiscal years:

	Year ended in December 31 of		
	2022	2021	2020
C1 cash cost of iron ore fines without third party purchase costs (US\$/t)	19.5	17.0	13.7

#### **All-in costs after by-products and before current investment**

The Company clarifies that historical information on this indicator for iron ore, nickel and copper is not available for the last 3 fiscal years.

#### **R&D expenses with mineral exploration**

The Company clarifies that historical information on this mineral exploration indicator for the last 3 fiscal years is not available.

#### **Capital investments**

See below, for reference purposes, the Company's CAPEX realized for the last three fiscal years:

US\$ billion	Year ended in December 31 of		
	2022	2021	2020
CAPEX <sup>(1)</sup>	5.4	5,2	4,4

(1) includes replenishment investments.



### 3.1. Disclosed projections and premises

#### Brumadinho and Mariana Commitments

US\$ million	Year ended in December 31 of		
	2022	2021	2020
<b>De-characterization</b>	349	293338	293
<b>Brumadinho Agreements</b>	1,093	1,248	1.829
<b>Expenses incurred</b>	620	650	510
<b>Samarco &amp; Renova</b>	338	413	560

#### Free cash flow

The Company clarifies that historical information on the free cash flow indicator for the last 3 fiscal years is not available.

### 3.1. Disclosed projections and premises

### 3.2. Projections follow-up

**a. to inform which are being replaced by new projections included in the form and which of them are being repeated in the form**

For information on projections for the current or coming period that have been restated, see item 3.2.c below.

**b. as to the projections for periods already elapsed, to compare the projected data with the effective performance of the indicators, clearly stating the reasons that led to deviations from projections**

#### Monitoring of projections

Nature of projection	Projections 2022	Realized 2022	Explanation
<b>Production</b>			
Ferrous (Mt)			
Iron Ore	~310	307.8	In line
Pellets & briquettes	~33	32.1	In line
Base metals (kt)			
Nickel	~180	179	In line
Copper	~260	253	In line
<b>All-in components (US\$/t)</b>			
Iron ore premium	~7	6.9	In line
C1 cash cost of iron ore – ex-purchase from third parties	19.5 – 20.0	19.5	In line
All-in iron ore cost	49	49.3	In line
All-in nickel cost	13,000	13,440	In line
All-in copper cost	4,000	4,502	In line
<b>R&amp;D expenses with mineral exploration (US\$ million)</b>			
Exploration	~170	170	In line
<b>Capital investments (US\$ billion)</b>			
Capex	~5.5	5.4	In line
<b>Brumadinho and Mariana commitments (US\$ billion)</b>			
De-characterization	0.4	0.3	In line
Brumadinho Agreements	1.4	1.1	Lower disbursement, in line with the execution of agreements
Expenses incurred	0.6	0.6	In line
Samarco & Renova	0.4	0.4	In line
Total	2.8	2.4	As explained above

**c. as to the projections related to ongoing periods, to inform if the projections remain valid on the date of delivery of the form and, when applicable, to explain why they were abandoned or replaced**

The projections and assumptions related to periods still in progress, mentioned in item 3.1 of this Reference Form, remain valid, not having been abandoned or replaced during the annual restatement of the Company's Reference Form.

## 4. Risk factors

### 4.1. Description of risk factors

#### a. issuer

***The collapse of a dam or other geotechnical structure may cause severe damages, including personal, property and environmental damages.*** Vale S.A. (“Vale” or “the Company”) owns a significant number of dams and other geotechnical structures. Some of these tailings’ storage facilities were built using the upstream raising method, which may present higher stability risks, especially related to liquefaction. The collapse of any of these structures could cause loss of life and severe personnel, property and environmental damages, as well as negative social impact, and could have adverse effects on the Company’s business and reputation, as evidenced by the consequences of the dam collapse in Brumadinho and Samarco’s dam collapse in Mariana. Some of the Company’s joint ventures and investees, including Samarco and Mineração Rio do Norte S.A. (“MRN”), also own dams and similar structures, including structures built using the upstream raising method.

Laws and regulations approved in Brazil following the collapse of Brumadinho dam require the Company to de-characterize all of its upstream dams on a specified timetable. Due to the technical complexity involved in the de-characterization works and the necessary actions to increase safety of the structures, in February 2022, the Company has entered into an agreement (*termo de compromisso*) with the state of Minas Gerais, regulatory agencies and state and federal public prosecutors, establishing a new schedule and reinforcing the commitment to eliminate all upstream structures in Brazil. The Company is still establishing the appropriate measures for the de-characterization of certain upstream dams in Brazil.

As of the date hereof, the Company has concluded approximately 40% of its de-characterization plan. This means that these structures have lost their upstream characteristics and no longer have the function of storing tailings. The elimination of 100% of the dams in the de-characterization program is expected to be achieved by 2035, given the dams technical characteristics, such as volumes of tailings contained. Additional information relating to such timelines is available on Vale’s ESG Portal, at [www.vale.com/ESG](http://www.vale.com/ESG). Information on Vale’s website is not incorporated by reference in this Reference Form. The implementation of the de-characterization plan will require significant expenditures, and the de-characterization process may take a long time. As of December 31, 2022, the provision for the conclusion of the de-characterization plan of the Company’s structures was US\$ 3,378 million and of Samarco’s structure was US\$ 197 million, and additional provisions may be recognized as a result of adjustments to the de-characterization projects.

The works related to the de-characterization process may impact the geotechnical behavior of certain upstream tailings facilities, affecting the risk of collapse of these structures. In extreme cases, this process, when associated with other conditions, may contribute to the collapse of structures. The evacuation of the downstream zones of the critical dams, the construction of physical barriers (back-up dams) to contain the tailings in case of failure and other safety measures the Company takes may not be sufficient to prevent damages and impact on communities.

***The collapse of the Company’s tailings dam in Brumadinho has adversely affected its business, financial condition and reputation, and the overall impact of the dam collapse on Vale is still uncertain.*** In January 2019, the dam collapse in Brumadinho resulted in 270 fatalities, in addition to personal, property and environmental damages. This event has adversely affected and will continue to adversely affect Vale’s operations.

- ***Liabilities and legal proceedings.*** The Company continues to be a defendant in a number of legal proceedings and investigations related to the dam collapse, including criminal investigations in Brazil and securities litigation in the United States. Additional proceedings and investigations may be initiated in the future. Adverse results in these proceedings may have a material adverse effect on the Company’s business and financial condition. See items 4.4 to 4.7 of this Reference Form for more information.
- ***Impact on our financial performance.*** The dam collapse had a significant impact on the Company’s financial performance, which included reduced revenues due to the suspension of operations, increased expenditures for assistance and remediation, impairments of fixed assets, provisions for costs of de-characterization, restoration and recovery, and provisions for legal proceedings.

- *Increase in production costs and capital investments.* The Company has made investments and adjustments in its operations and may need to do additional investments and adjustments to increase production, mitigate the impact of suspended operations or comply with additional safety requirements. The Company may also have to use alternative disposal methods to continue operating certain mines and plants, particularly those that rely on tailings dams. These alternative methods may be more expensive or require significant capital investments in mines and plants. As a result, the Company expect its costs to increase, which may have a material adverse effect on its business and financial condition.
- *Additional regulation and restrictions on mining operations.* Rules on mining activities and ancillary activities, such as dam safety, have become stricter following the dam collapse in Brumadinho. Additional rules may be approved. The licensing process for the Company's operations has become longer and subject to more uncertainties. Also, external experts may be reluctant to attest to the stability and safety of our dams, as a result of increasing risks of liability. If any of the Company's dams is unable to comply with the safety requirements or if the Company is unable to obtain the required certification for any of its dams, the Company may need to suspend operations, evacuate the area surrounding this dam, relocate communities and take other emergency actions. These measures are costly, may adversely impact the Company's business and financial condition and may cause further damage to the Company's reputation.
- *Additional environmental impacts.* The full extent of the environmental consequences of the dam collapse in Brumadinho remain uncertain, and additional damages may be identified in the future. Also, failure to implement the Company's de-characterization plan and measures to prevent further accidents could also lead to additional environmental damages, additional impacts on its operations, and additional claims, investigations and proceedings against the Company.
- *Reserves and resources.* New regulations applicable to dam licensing and operations have caused, and may further cause, decreases in the reported reserves and resources or reclassification of proven reserves as probable reserves.
- *Increased cost of insurance.* The Company's cost of insurance may rise, and the Company may not be able to obtain insurance for certain risks.
- *Integral Reparation agreement relating to dam collapse in Brumadinho.* Signed in February 2021, this settlement agreement establishes a set of programs and activities to repair and compensate the damages caused by the dam collapse in Brumadinho.

***Operational problems could materially and adversely affect the Company's business and financial performance.*** Ineffective project management and operational breakdowns might require to suspend or curtail the Company's operations, which could generally reduce its productivity. Operational breakdowns could entail failure of critical plant and machinery. There is no assurance that ineffective project management or other operational problems will not occur. Any damage to the Company's projects or delays in its operations caused by ineffective project management or operational breakdowns could materially and adversely affect its business and results of operations.

The Company's business is subject to several operational risks that may adversely affect the results of its operations, such as:

- Unexpected weather conditions or other force majeure events;
- Adverse mining conditions delaying or hampering the Company's ability to produce the expected quantity of minerals and to meet specifications required by customers, which can trigger price adjustments;
- Accidents or incidents involving the Company's mines, industrial facilities and related infrastructure, such as dams, plants, railway and railway bridges, ports and ships;
- Delays or interruptions in the transportation of the Company's products, including with railroads, ports and ships;
- Tropical diseases, viral outbreaks such as the coronavirus, and other contagious diseases in regions where some of the Company's operations or projects are located, which pose health and safety risks to employees;
- Labor disputes that may disrupt the Company's operations from time to time;
- Changes in market conditions or regulations may affect the economic prospects of an operation and make it inconsistent with business strategy;
- Failure or delay to obtain the renewal of required permits and licenses, or delays or higher than expected costs in obtaining them;
- Disruptions to or unavailability of critical information technology systems or services resulting

- from accidents or malicious acts; and
- Modern slavery, child labor, and child sexual exploitation among other human rights violations related to the Company's activities or supply chain may also affect its business and operations.

***The Company's business could be adversely affected by the failure or unavailability of certain critical assets or infrastructure.*** The Company relies on certain critical assets and infrastructure to produce and to transport products to customers. These critical assets include mines, industrial facilities, ports, railways, roads and bridges. The failure or unavailability of any critical asset, whether resulting from natural events or operational issues, could have a material adverse effect on its business.

Substantially all of the Company's iron ore production from the Northern System is transported from Carajás, in the Brazilian state of Pará, to the port of Ponta da Madeira, in the Brazilian state of Maranhão, through the Carajás railroad (Estrada de Ferro Carajás – "EFC"). Any interruption of the Carajás railroad or of the port of Ponta da Madeira could significantly impact the Company's ability to sell its production from the Northern System. With respect to the Carajás railroad, there is a particular risk of interruption at the bridge over the Tocantins River, in which the trains run on a single line railway. In the port of Ponta da Madeira, there is a particular risk of interruption at the São Marcos access channel, a deep water channel that provides access to the port. Also, any failure or interruption of the long-distance conveyor belt ("TCLD") used to transport iron ore production from the S11D mine to the beneficiation plant, could adversely impact the operations at the S11D mine.

***The Company's projects are subject to risks that may result in increased costs or delay in their implementation.*** The Company is investing to maintain and further increase its production capacity and logistics capabilities. Vale regularly review the economic viability of its projects. As a result of this review, the Company may decide to postpone, suspend or interrupt the implementation of certain projects. The Company's projects are also subject to a number of risks that may adversely affect its growth prospects and profitability, including the following:

- The Company may not be able to obtain financing at attractive rates.
- The Company is subject to delays or higher than expected costs in obtaining the necessary equipment or services and in implementing new technologies to build and operate a project.
- The Company's efforts to develop projects on schedule may be hampered by a lack of infrastructure, including reliable telecommunications services and power supply.
- Suppliers and contractors may fail to meet their contractual obligations to the Company.
- The Company may face unexpected weather conditions or other force majeure events.
- The Company may fail to obtain or renew the required permits and licenses to build a project, or may experience delays or higher than expected costs in obtaining or renewing them.
- Changes in market conditions or regulations may make a project less profitable than expected at the time the Company initiated work on it.
- There may be incidents during project implementation.
- The Company may face shortages of skilled personnel.

***Legal proceedings and investigations could have a material adverse effect on the Company's business.*** The Company is involved in legal proceedings in which adverse parties have sought injunctions to suspend certain operations or claimed substantial amounts against Vale. Under Brazilian law, a broad range of conduct that could be considered to be in violation of Brazilian environmental, labor or tax laws can be considered criminal offenses. Accordingly, the executive officers, employees and, in certain cases, Vale and its subsidiaries could be subject to criminal investigations and criminal proceedings in connection with allegations of violation of environmental, labor or tax laws, and Vale or its subsidiaries could be subject to criminal investigations and criminal proceedings in connection with allegations of violation of environmental laws and human rights.

Defending the Company in these legal proceedings may be costly and time consuming. Possible consequences of adverse results in some legal proceedings include suspension of operations, payment of significant amounts, triggering of creditor remedies and damage to the reputation, which could have a material adverse effect on the Company's results of operations or financial condition. See items 4.4 to 4.7 of this Reference Form for more information.

The Company, as a shareholder of Samarco, is also facing investigations and lawsuits related to the collapse of the Fundão tailings dam, in Mariana, in November 2015. The tax authorities and/or other creditors of Samarco may try to recover the amounts from Vale owed by Samarco, if it does not fulfill its obligations or fails to

restructure its debt. The eventual failure to contain the tailings remaining in Samarco's dams could cause additional environmental damage, impacts on operations and additional claims, fines and lawsuits against Samarco and the Company. Pursuant to the agreements entered into with the competent public authorities, the Company has financed the Renova Foundation, when necessary, in a subsidiary way to Samarco and proportional to its participation in the latter's share capital (50%), to support measures to repair and compensate for damages caused by the collapse of Fundão, the responsibility of Samarco and undertaken through Renova. If Samarco fails to generate sufficient cash flows to finance the reparation and compensation measures required in these agreements, the Company will be obliged to continue partially financing such measures, on a subsidiary basis. In May 2022, one of Samarco's financial creditors (with the support of others) proposed an alternative judicial recovery plan, seeking to impose, among other measures, new obligations on Vale, including those related to the payment of Samarco's debt and the financing of its activities, as well as the resizing of Samarco's debts to its shareholders. Such imposition of new obligations and resizing of the debt were rejected by the Judiciary and the issue is subject to appeal. This plan, with the changes determined by the Court in charge, is still subject to (a) any amendments that may attempt to impose new harmful obligations on shareholders, including the dilution of their respective equity interests, (b) the resolution of creditors and (c) to the examination of legality by the competent courts.

***The Company's governance, internal controls and compliance processes may fail to prevent breaches of legal, regulatory accounting, ethical or governance standards.*** The Company operates in a global environment, and its activities extend over multiple jurisdictions and complex regulatory frameworks, with increasing enforcement activities worldwide. Vale is required to comply with a wide range of laws and regulations in the countries where it operates or do business, including anti-corruption, international sanctions, anti-money laundering and related laws and regulations. The Company's governance and compliance processes, which include the review of internal control over financial reporting, may not timely identify or prevent future breaches of legal, regulatory, accounting, governance or ethical standards. The Company may be subject to breaches of its code of conduct, anti corruption policies, human rights policies or other internal policies, or breaches of business conduct protocols and to instances of fraudulent behavior, corrupt practices and dishonesty by employees, contractors or other agents. This risk is heightened by the fact that Vale has a large number of contracts with local and foreign suppliers, as well as by the geographic distribution of its operations and the wide variety of counterparties involved in its business. Failure to comply with applicable laws and other standards could subject the Company to investigations by authorities, litigation, fines, loss of operating licenses, disgorgement of profits, involuntary dissolution and reputational harm.

***The Company's financial condition, results of operations, cash flows, and competitive position could be materially adversely impacted by pandemics, epidemics, or disease outbreaks, such as the COVID-19 pandemic.*** Disruptions caused by pandemics, epidemics or disease outbreaks, such as COVID-19, could materially adversely impact the Company's financial condition, results of operations, cash flows, and competitive position, particularly as it relates to rising costs and supply chain delays and disruptions. Measures taken by governmental authorities in response to such events may also impact the Company's business, including upon restrictions to operations, lockdowns, shutdowns, reduced inspections, assessments and authorizations, among other difficulties. The Company cannot predict when and if any such events will occur and evolve, neither their scope and duration, and therefore cannot estimate the potential impact in its financial condition, results of operations, cash flows and competitive position.

***The Company's mineral reserve and resource estimates may materially differ from the volume of materials that the Company is actually able to recover; the Company's estimates of mine life may prove inaccurate; more stringent regulations, market price fluctuations and changes in operating and capital costs may render certain mineral reserves and resources uneconomical to mine; and the Company may not be able to replenish its mineral reserves.*** There are numerous uncertainties inherent in estimating quantities of mineral resources and mineral reserves in projecting potential future rates of mineral production, including factors beyond the Company's control. Reduction in the Company's mineral resources and mineral reserves may affect its future production and cash generation, impact depreciation and amortization rates, and result in asset write-downs or write-offs, which may have an adverse effect on the Company's financial performance.

Below are the key risks relating to the Company's resources and mineral reserves:

- Reporting and estimation of mine life involve estimating deposits of minerals that cannot be measured in an exact manner, and the accuracy of any estimate is a function of the quality of available data, engineering, market prices of minerals and metals, more stringent regulations, costs estimates, investments, geotechnical analysis, geological interpretation and judgment. No assurance can be given

that the indicated amount of ore will be recovered or that it will be recovered at the rates the Company anticipates. The Company reviews its mineral resources and reserves estimates from time to time in light of updated information and changes in regulatory framework (including conditions imposed by environmental laws and regulations), which may result in a reduction of its reported mineral resources and mineral reserves;

- Difficulties or the inability to obtain licenses for new operations, supporting structures or activities (such as dams), or to renew existing licenses, can cause a reduction of the Company's mineral resources that could be converted into mineral reserves;
- Once mineral deposits are discovered, it can take several years from the initial phases of drilling until production is possible, during which the economic feasibility of production may change. If a project proves not to be economically feasible by the time the Company is able to exploit it, the Company may incur substantial losses and be obliged to take writedowns or at least to downgrade its mineral reserves into mineral resources categories. In addition, potential changes or challenges involving metallurgical and other technological processes arising during the life of a project may result in delays and cost overruns that may render the project not economically feasible by the time of the reporting;
- The Company engages in mineral exploration, which is highly uncertain in nature, involves many risks and frequently is nonproductive. The Company's exploration programs, which involve significant expenditures, may fail to result in the mineral resources definition suitable for expansion or replacement of mineral reserves depleted by current production. If the Company does not develop new mineral resources and reserves, it will not be able to sustain its current level of production beyond the remaining lives of its existing mines; and
- Mineral reserves are gradually depleted in the ordinary course of a given open pit or underground mining operation. As mining progresses, distances to the primary crusher and to waste deposits become longer, pits become steeper, mines may move from being open pit to underground, and underground operations become deeper. In addition, for some types of deposits, mineralization grade decreases and hardness increases at greater depths. As a result, over time, the Company usually experiences rising unit extraction costs with respect to each mine, or may need to make additional investments, including adaptation or construction of processing plants and expansion or construction of tailings dams. Several of the Company's mines has been operating for long periods, and the Company will likely experience rising extraction costs per unit in the future at these operations in particular.

**Failures in the Company's cybersecurity controls, information technology, operational technology and telecommunications systems may adversely affect its business and reputation.** The Company relies heavily on cybersecurity controls, information technology, operational technology and telecommunications systems for the operation of many of its business processes. Failures in those controls and systems, whether caused by obsolescence, technical failures, negligence, accident or cyber-attacks, may result in the disclosure or theft of sensitive information, loss of data integrity, misappropriation of funds and disruptions to or interruption in the Company's business operations, and impact its ability to disclose financial results. The Company may be the target of attempts to gain unauthorized access to information technology and operational technology systems through the internet, including sophisticated and coordinated attempts often referred to as advanced persistent threats. Disruption of critical cybersecurity controls, information technology, operational technology, or telecommunications systems, as well as data breaches, may harm the Company's reputation and have a material adverse effect on its operational performance, earnings and financial condition.

The Company is subject to laws and regulations relating to data protection and data privacy, including the European Union's General Data Protection Regulation ("GDPR") and Brazilian Lei Geral de Proteção de Dados ("LGPD"). Any noncompliance with those laws and regulations could result in proceedings or actions against the Company, the imposition of fines or penalties or damage to reputation, which could have an adverse effect on the Company and its business, reputation, and results of operations.

**The Company's performance and ability to achieve its ambitions and to maintain its competitive position is dependent on the Company's culture and on the capacity to attract, develop and retain skilled and experienced talented professionals.** Since 2019, Vale has been promoting a transformation of its culture, which it believes is fundamental to the implementation of its business strategy and ambitions. See item 1.16 of this Reference Form for more information. The Company's ability to attract, develop and retain experienced and talented professionals is also dependent on this corporate culture transformation. If the Company fails to achieve culture transformation goals and to attract, develop and retain talents, its reputation, performance and competitive position may be adversely impacted.

**Labor disputes may disrupt the Company's operations from time to time.** A substantial number of the Company's employees, and some of the employees of its subcontractors, are represented by labor unions and are covered by collective bargaining or other labor agreements, which are subject to periodic negotiation. Strikes and other labor disruptions at any of the Company's operations could adversely affect the operation of facilities and the timing of completion and cost of its capital projects. For more information about labor relations, see item 10.4 of this Reference Form. Moreover, the Company could be adversely affected by labor disruptions involving unrelated parties suppliers that may provide it with goods or services.

**The Company may not have adequate insurance coverage for some risks.** The Company's businesses are generally subject to a number of risks and hazards, which could have impact on people, assets and the environment. The insurance Vale maintains against risks that are typical in its business may not provide adequate coverage. Insurance against some risks (including liabilities for environmental damages, damages resulting from dams breaches, spills or leakage of hazardous substances and interruption of certain business activities) may not be available at a reasonable cost, or at all. Even when it is available, the Company may self insure where it determines that is more cost effective to do so. As a result, accidents or other negative developments involving its mining, production or transportation facilities may not be covered by insurance and could have a material adverse effect on its operations.

**It could be difficult for investors to enforce any judgment obtained outside Brazil against the Company or any of its associates.** The Company's investors may be located in jurisdictions outside Brazil and could seek to bring actions against the Company or its directors or officers in the courts of their home jurisdictions. Vale is a Brazilian company, and the majority of its officers and directors are residents of Brazil. The vast majority of its assets and the assets of its officers and directors are likely to be located in jurisdictions other than the home jurisdictions of its foreign investors. It might not be possible for investors outside Brazil to effect service of process within their home jurisdictions on the Company or on its officers or directors who reside outside their home jurisdictions. In addition, a final conclusive foreign judgment will be enforceable in the courts of Brazil without a re examination of the merits only if previously confirmed by the Brazilian Superior Court of Justice (Superior Tribunal de Justiça — "STJ"), and confirmation will only be granted if the foreign judgment: (i) fulfills all formalities required for its enforceability under the laws of the country where it was issued; (ii) was issued by a competent court after due service of process on the defendant, as required under applicable law; (iii) is not subject to appeal; (iv) does not conflict with a final and unappealable decision issued by a Brazilian court; (v) was authenticated by a Brazilian consulate in the country in which it was issued or is duly apostilled in accordance with the Convention for Abolishing the Requirement of Legalization for Foreign Public Documents and is accompanied by a sworn translation into Portuguese, unless this procedure was exempted by an international treaty entered into by Brazil; (vi) it does not cover matters subject to the exclusive jurisdiction of the Brazilian courts; and (vii) is not contrary to Brazilian national sovereignty, public policy or good morals. Therefore, investors might not be able to recover against the Company or its directors and officers on judgments of the courts of their home jurisdictions predicated upon the laws of such jurisdictions.

#### **b. its shareholders, in particular the controlling shareholders**

**The Company does not have a controlling shareholder or control group and is subject to certain risks as a result.** Since 2020, the Company does not have a controlling shareholder or a control group that hold rights that permanently ensure it the majority of votes in the resolutions of the general shareholders' meeting and the power to elect the majority of the members of the Company's Board of Directors. In the absence of a controlling shareholder or controlling group, the minimum quorum required by law for certain decisions at shareholders' meetings may not be reached in respect of certain matters, which could adversely affect the Company's business. Vale is also exposed to shareholder activism, with shareholder groups seeking to cause the Company to take actions that may not be consistent with its business strategy. This may require the Company to incur significant expenses, and require significant time and attention from management and Board of Directors, which could interfere with its ability to implement business strategy and adversely affect its business and operating results.

**The Brazilian Government has certain veto rights.** The Brazilian government owns 12 golden shares of Vale, granting it limited veto power over certain company actions, such as changes to its name, the location of its headquarters and its corporate purpose as it relates to mining activities.

#### **c. its subsidiaries and affiliates**

**The Company's business could be adversely affected by the performance of its counterparties, contractors, joint venture partners or joint ventures the Company does not control.** Customers, suppliers, contractors,



financial institutions, joint venture partners and other third parties may fail to perform existing contracts and obligations, which may unfavorably impact the Company's operations and financial results. The ability of these third parties to perform their obligations may be adversely affected in times of financial stress and economic downturn.

Important parts of Vale's iron ore, pelletizing, nickel, copper, energy and other businesses are held through joint ventures. This may reduce the Company's degree of control, as well as its ability to identify and manage risks. The Company's forecasts and plans for these joint ventures and consortia assume that its partners will observe their obligations to make capital contributions, purchase products and, in some cases, provide skilled and competent managerial personnel. If any of the Company's partners fails to observe its commitments, the affected joint venture or consortium may not be able to operate in accordance with its business plans, or the Company may have to increase the level of investment to implement these plans.

Some of the Company's investments are controlled by partners or have separate and independent management. These investments may not fully comply with Vale's standards, controls and procedures, including health, safety, environment and community standards. Failure by any of its contractors, partners or joint ventures to adopt adequate standards, controls and procedures could lead to higher costs, reduced production or environmental, litigation, health and safety incidents or accidents, which could adversely affect the Company's results and reputation.

#### **d. its managers**

For information on the risks related to the Company's management, see item (a) above: "Legal proceedings and investigations may have a material adverse effect on the Company's business." and "The Company's governance, internal controls and compliance processes may fail to prevent violations of legal, accounting, regulatory, ethical or governance standards."

#### **e. its suppliers**

For information on the risks related to the Company's suppliers, see the risk factor described in item (c) above: "*The Company's business could be adversely affected by the performance of its counterparties, contractors, joint venture partners or joint ventures the Company does not control.*"

**Higher energy costs or energy shortages would adversely affect the Company's business.** Costs of fuel oil, gas and electricity are a significant component of the Company's cost of production, representing 6.8% of its total cost of goods sold in 2022. To fulfill its energy needs, the Company relies on the following sources: (i) oil byproducts, which represented 36.7% of total energy needs in 2022, (ii) coal (14.1%), (iii) electricity (30.2%), (iv) natural gas (16%) and (v) other energy sources (3%).

Electricity costs represented 3% of the Company's total cost of goods sold in 2022. If the Company is unable to secure reliable access to electricity at acceptable prices, it may be forced to curtail production or may experience higher production costs, either of which would adversely affect its results of operations. The Company faces the risk of energy shortages in the countries where it has operations and projects, due to stress of infrastructure, high demand or weather conditions, such as floods or droughts. Future shortages, and government efforts to respond to or prevent shortages, may adversely impact the cost or supply of electricity for its operations.

#### **f. its customers**

For information on the risks related to the Company's customers, see the risk factor described in item (c) above: "*The Company's business could be adversely affected by the performance of its counterparties, contractors, joint venture partners or joint ventures the Company does not control.*"

#### **g. sectors of the economy in which the Company operates**

**Adverse economic developments in China could have a negative impact on the Company's revenues, cash flow and profitability.** China has been the main driver of global demand for minerals and metals over recent decades. In 2022, Chinese demand represented 75% of global demand for seaborne iron ore, 59% of global demand for nickel and 54% of global demand for copper. The percentage of the Company's net operating revenues attributable to sales to customers in China was 50% in 2022. Therefore, any retraction of China's economic growth or change in its economic profile, or changes in the political or sanctions environment globally could result in lower demand for the Company's products, leading to lower revenues, cash flow and

profitability. Underperformance in the Chinese real estate and infrastructure sectors, the largest consumer of carbon steel in China, would also negatively impact the Company's results. COVID-19-related and other pandemic control measures, such as shutdowns resulting from localized outbreaks, could potentially impact the industrial activity and supply chain.

**Vale's business is exposed to the cyclicity of global economic activity and requires significant investments of capital.** As a mining company, the Company are a supplier of industrial raw materials. Industrial production is cyclical and volatile, which affects demand for minerals and metals. At the same time, investment in mining requires a substantial amount of funds in order to replenish reserves and resources, expand and maintain production capacity, build infrastructure, preserve the environment, prevent fatalities and occupational hazards and minimize social impacts. Sensitivity to industrial production, together with the need for significant long term capital investments, are important sources of risk for our financial performance and growth prospects.

Vale may not be able to adjust production volume in a timely or cost efficient manner in response to changes in demand. Lower utilization of capacity during periods of weak demand may expose the Company to higher unit production costs since a significant portion of our cost structure is fixed in the short term due to the capital intensity of mining operations. In addition, efforts to reduce costs during periods of weak demand could be limited by labor regulations or previous labor or government agreements. Conversely, during periods of high demand, our ability to rapidly increase production capacity is limited, which could prevent us from meeting demand for our products. We may be unable to complete expansions and greenfield projects in time to take advantage of rising demand for iron ore, nickel or other products. When demand exceeds our production capacity, we may meet excess customer demand by purchasing iron ore fines, iron ore pellets or nickel from third parties processing and reselling it, which would increase our costs and narrow our operating margins. If we are unable to satisfy excess customer demand in this way, we may lose customers. In addition, operating close to full capacity may expose us to higher costs, including demurrage fees due to capacity restraints in our logistics systems.

**Development of new battery technologies using less nickel may impact the demand of the Company's nickel products.** Global demand for metal for batteries is subject to evolving battery chemistry technologies, which are affected by many factors, including cost, performance, safety, material availability, and consumer preferences, as well as governmental regulation. Sustained production and consumption of non-nickel battery chemistries from end-use demand markets could result in lower nickel demand, reduced prices, postponements of certain projects, and a decrease in production levels. Competitive products in the market have existed for years and with end-use customers, particularly electric vehicle original equipment manufacturer, increasingly adopting a broad and efficient portfolio of battery chemistries. New battery technologies could overtake current technologies, including nickel-based chemistries, having a negative impact in the Company's nickel business.

**Geopolitical tensions and military hostilities, including the ongoing military conflict between Russia and Ukraine, and the economic sanctions imposed as a result of such conflicts may materially adversely impact the Company's business.** Vale's business is subject to external risk factors related to the Company's global operations and the global profile of the clients portfolio and supply chains. U.S. and global markets are experiencing volatility and disruption following the escalation of geopolitical tensions, in particular, in connection with the military conflict between Russia and Ukraine.

The resulting economic sanctions imposed by the United States, the European Union, the UK and other countries as a direct consequence of this conflict may continue to significantly impact supply chains, lead to market disruptions including significant volatility in commodities' prices, and bring heightened near-term uncertainty to the global financial system, including through instability of credit and of capital markets. These factors may have impacts on the Company's production and sales, result in additional costs and expenses, and eventually adversely impact Vale's financial conditions or results of operations.

Any further escalation of the Russia-Ukraine conflict could lead to other additional impacts which may adversely affect the Company business, such as disruption of international trade flows, extreme market pricing volatility, with particular impact on the energy sector, industrial and agricultural supply chains, shipping, and regulatory and contractual uncertainty, and increased geopolitical tensions around the world. These factors could negatively affect the global markets being difficult to predict and estimate in advance as to their potential impact on our business, financial position, or operational results.

**Development of low carbon emission technologies that reduce or dismiss the usage of high-quality ores may increase the demand for low grade iron ore and could impact the value of the Company's iron ore products.**

Decarbonization requires reducing CO2 emissions. New technologies in iron and steel sector are being developed to reduce and deliver net zero emissions. Due to their characteristics, such technologies can demand a variety of iron ore grades according to each process. Technologies that can allow the competitive use of lower grade iron ores could reduce the relative value in use of the Company's higher-grade portfolio and have a negative impact on the demand and premium of its iron ore products. Vale continues to monitor disruptive technologies and market trends to deliver appropriate supply answers.

#### **h. regulation of the sectors in which the issuer operates**

***Political, economic and social conditions in the countries in which we have operations projects, customers or suppliers, could adversely impact the Company's business.*** Vale may have its financial performance negatively affected by regulatory, political, economic and social conditions in the countries where it has significant operations or projects. In many of these jurisdictions, Vale is exposed to various risks, such as: socio-political instability, acts of war, piracy on international transport routes, terrorism, cyber-attacks. In the transactional sphere, it is exposed to illegal requests in violation of the Company's code of ethics and its organizational culture, such as extortion, corruption, bribery. In the sphere of physical risks to the company's assets or staff, it is exposed to risks such as theft and violation of human rights. The existence of any of these factors, singly or together, to an unacceptable degree for the Company's precepts, may adversely affect the economic conditions and other conditions under which the Company operates in various ways, significantly harming its current and future businesses. In Brazil, where a significant part of the Company's operation is concentrated, the federal government's economic policies may have important effects on Brazilian companies, including Vale, and on market conditions and prices of securities of Brazilian companies. The Company's financial condition and results of operations may be adversely affected, for instance, by the following factors and the Brazilian federal government's response to these factors:

1. exchange rate movements and volatility;
2. inflation and high interest rates;
3. financing of the current account deficit;
4. liquidity of domestic capital and lending markets;
5. tax policy;
6. pension, tax and other reforms;
7. political instability resulting from allegations of corruption involving political parties, elected officials or other public officials; and
8. other political, diplomatic, social and economic developments in or affecting Brazil.

Historically, Brazil's political situation has influenced the performance of the Brazilian economy, and political crises have affected the confidence of investors and the general public, which resulted in economic deceleration, downgrading of credit ratings of the Brazilian government and Brazilian issuers, and heightened volatility in the securities issued abroad by Brazilian companies. Political instability may aggravate economic uncertainties in Brazil and increase volatility of securities of Brazilian issuers. Future economic, social and political developments in Brazil may impair the Company's business, financial condition or results of operations, or cause the market value of our securities to decline.

***The Company could be adversely affected by changes in government policies or by trends such as resource nationalism, including the imposition of new taxes or royalties on mining activities.*** Mining is subject to government regulation, including taxes and royalties, which can have a significant financial impact on Vale's operations. In the countries where Vale are present, the Company is subject to potential renegotiation, nullification or forced modification of existing contracts and licenses, expropriation or nationalization of property, foreign exchange controls, capital ownership requirements, changes in local laws, regulations and policies and audits and reassessments. Vale also subject to new taxes or raising of existing taxes and royalty rates, reduction of tax exemptions and benefits, renegotiation of tax stabilization agreements or changes on the basis on which taxes are calculated in a manner that is unfavorable to the Company. Governments that have committed to provide a stable taxation or regulatory environment may alter those commitments or shorten their duration. The Company also faces the risk of having to submit to the jurisdiction of a foreign court or arbitral tribunal or having to enforce a court decision against a sovereign nation within its own territory. For more information, see item 1.6.c of this Reference Form.

Vale also required to meet domestic beneficiation requirements in certain countries, such as local processing rules, export taxes or restrictions or charges on unprocessed ores. The imposition of or increase in such requirements, taxes or charges can significantly increase the risk profile and costs of operations in those jurisdictions. Vale and the mining industry are subject to rising trends of resource nationalism in certain

countries in which we operate that can result in constraints on the Company's operations, increased taxation or even expropriations and nationalizations.

As a supplier of iron ore, nickel and other raw materials to the global integrated steel industry and to other metal-consuming sectors such as battery production and other specified, industrial end-uses we are subject to additional risk from the imposition of duties, tariffs, import and export controls and other trade barriers impacting our products and the products our customers produce. Global trade is subject to a growing trend of increased trade barriers, which could exacerbate commodities' price volatility and in turn result in instability in the prices of the Company's products.

**Concessions, authorizations, licenses and permits are subject to expiration, limitation on renewal and various other risks and uncertainties.** Vale's operations depend on authorizations, concessions and licenses from governmental regulatory agencies and other authorities in the countries in which we operate. The Company are subject to laws and regulations in many jurisdictions that can change at any time, and changes in laws and regulations may require modifications to Vale's technologies and operations and result in unanticipated capital expenditures.

Some of the Company's mining concessions are subject to fixed expiration dates and might only be renewed a limited number of times for a limited period. Apart from mining concessions, Vale may need to obtain various authorizations, licenses and permits from governmental or other regulatory bodies in connection with the planning, maintenance, operation and closure of our mines and related logistics infrastructure, which may be subject to fixed expiration dates or periodic review or renewal. There is no assurance that renewals will be granted as and when sought, and there is no assurance that new conditions will not be imposed in connection with renewal. Fees for mining concessions might increase substantially due to the passage of time from the original issuance of each individual exploration license. If so, the costs of holding or renewing our mining concessions may render our business objectives not viable. Accordingly, the Company need to continually assess the mineral potential of each mining concession, particularly at the time of renewal, to determine if the costs of maintaining the concession are justified by the results of operations to date, and we might elect to let some of our concessions lapse. There can be no assurance that concessions will be obtained on terms favorable to Vale, or at all, for the Company's future intended mining or exploration targets.

In a number of jurisdictions where the Company have exploration projects, Vale may be required to retrocede to the state a certain portion of the area covered by the exploration license as a condition to renewing the license or obtaining a mining concession. This requirement can lead to a substantial loss of part of the mineral deposit originally identified in our feasibility studies.

For information on risks related to environmental regulations, see the risk factor described in item (k): "The Company's business may be adversely affected by environmental and health and safety regulations, including regulations related to climate change."

**Changes in Brazilian fiscal policies and tax laws could have an adverse effect on the Company's financial condition and results and on investments in Vale's securities.** The Brazilian government has frequently implemented and may continue to implement changes in its fiscal policies, including, but not limited to tax rates, fees, sectoral charges and occasionally the collection of temporary contributions. Changes in tax laws and in the interpretation of tax laws by Brazilian tax authorities and courts may occur and may result in tax increases and revocation of tax exemptions. Brazilian legislators are currently debating a comprehensive tax reform, which may include the elimination or unification of certain taxes, the creation of new taxes, the increase of existing taxes and contribution rates, the revocation of income tax exemptions on the distribution of profits and dividends and changes relating to interest on net equity. The approval of these legislative proposals or changes in fiscal policies, tax laws and interpretations may impact the Company's tax obligations and may have a material adverse effect on Vale's financial condition and results, and on investments in the Company's securities.

#### **i. foreign countries where the issuer operates**

**If ADR holders exchange ADSs for the underlying shares, they risk losing the ability to remit foreign currency abroad.** The custodian for the shares underlying our ADSs maintains a registration with the Central Bank of Brazil permitting the custodian to remit U.S. dollars outside Brazil for payments of dividends and other distributions relating to the shares underlying our ADSs or upon the disposition of the underlying shares. If an ADR holder exchanges its ADSs for the underlying shares, it will be entitled to rely on the custodian's registration for only five business days from the date of exchange. Thereafter, an ADR holder may not be able to obtain and remit foreign currency abroad upon the disposition of, or distributions relating to, the underlying

shares unless it obtains its own registration under applicable regulation. See Additional Information—Exchange controls and other limitations affecting security holders. If an ADR holder attempts to obtain its own registration, it may incur expenses or suffer delays in the application process, which could delay the receipt of dividends or other distributions relating to the underlying shares or the return of capital in a timely manner.

The custodian's registration or any registration obtained could be affected by future legislative changes, and additional restrictions applicable to ADR holders, the disposition of the underlying shares or the repatriation of the proceeds from disposition and taxation of dividends could be imposed in the future.

**ADR holders may not have all the rights of our shareholders and may be unable to exercise voting rights or preemptive rights relating to the shares underlying their ADSs.** ADR holders may not have the same rights that are attributed to our shareholders by Brazilian law or our bylaws, and the rights of ADR holders may be subject to certain limitations provided in the deposit agreement or by the securities intermediaries through which ADR holders hold their securities.

ADR holders do not have the rights of shareholders. They have only the contractual rights set forth for their benefit under the deposit agreements. ADR holders are not permitted to attend shareholders' meetings, and they may only vote by providing instructions to the depositary. In practice, the ability of a holder of ADRs to instruct the depositary as to voting will depend on the timing and procedures for providing instructions to the depositary either directly or through the holder's custodian and clearing system. With respect to ADSs for which instructions are not received, the depositary may, subject to certain limitations, grant a proxy to a person designated by the Company.

The ability of ADR holders to exercise preemptive rights is not assured, particularly if the applicable law in the holder's jurisdiction (for example, the Securities Act in the United States) requires that either a registration statement be effective or an exemption from registration be available with respect to those rights, as is in the case in the United States. We are not obligated to extend the offer of preemptive rights to holders of ADRs, to file a registration statement in the United States, or to make any other similar filing in any other jurisdiction, relating to preemptive rights or to undertake steps that may be needed to make exemptions from registration available, and we cannot assure holders that we will file any registration statement or take such steps.

**The legal protections for holders of the Company's securities differ from one jurisdiction to another and may be inconsistent, uncertain or less effective than investors anticipate.** Vale are a global company with securities traded in several different markets and investors located in many different countries. The legal regime for the protection of investors varies around the world, sometimes in important ways, and investors in the Company's securities should recognize that the protections and remedies available to them may be different from those to which they are accustomed in their home markets. Vale are subject to securities legislation in several countries, which have different rules, supervision and enforcement practices. The only corporate law applicable to the Company's parent company is the law of Brazil, with its specific substantive rules and judicial procedures. The Company are subject to corporate governance rules in several jurisdictions where Vale's securities are listed, but as a foreign private issuer, Vale are not required to follow many of the corporate governance rules that apply to U.S. domestic issuers with securities listed on the New York Stock Exchange, and the Company are not subject to the U.S. proxy rules.

## **j. social issues**

### **Disagreements with local communities could adversely impact the Company's business and reputation.**

Disputes with communities where Vale operates may arise from time to time. Incidents involving mines, industrial facilities and related infrastructure, such as the collapse of the tailings dam in Brumadinho, may significantly impact the communities where the Company operates. In some instances, Vale's operations and mineral reserves and resources are located on or near lands owned or used by indigenous peoples, traditional communities or other groups of stakeholders. Some of the Company's mining and other operations are located in territories where title may be subject to disputes or uncertainties, or in areas claimed for agriculture or land reform purposes, which may lead to disagreements with landowners, organized social movements, local communities and the government. In some jurisdictions, the Company may be required to consult and negotiate with these groups as part of the process to obtain licenses required to operate, to mitigate impact on Vale's operations or to obtain access to their lands. Disagreements or disputes with local communities and groups, including indigenous peoples, traditional communities, organized social movements and local communities, could cause delays in obtaining licenses, increases in planned budget, delays or interruptions to our operations. These issues may adversely affect Vale's reputation or hamper the Company's ability to develop their reserves and resources and conduct the operations. In addition, difficulties in the engagement with stakeholders in social, environmental, and health and safety aspects of the mine closure process may

adversely impact the Company's business and reputation. For more information see items 4.4 to 4.7 of this Reference Form.

#### **k. environmental issues**

For information on risks related to environmental issues, see item (a) above: "The failure of a dam or other geotechnical structure can cause serious damage, including personal, property and environmental damage."; item (j) above: "Disagreements with local communities could have a negative impact on the Company's business and reputation." and

***The Company's business is subject to environmental, health, safety and human rights incidents.*** The viability of the Company's business is intrinsically connected to the well-being of the environment, workers and communities in which Vale operates.

Vale's activities involves the use, handling, storage, discharge and disposal of hazardous substances into the environment and the use of natural resources, resulting in significant risks and potential adverse impacts on people and the environment, including fire, explosion, toxic gas leaks, spilling or seepages of polluting substances or other hazardous materials, rockfalls, incidents involving dams, failure of other operational structures, as well as activities involving mobile equipment, vehicles or machinery and other potentially fatal incidents. Incidents may occur due to deficiencies in identifying and assessing risks or in implementing sound risk management, and once these risks materialize, they could result in significant environmental and social impacts, human rights violations, damage to or destruction of mines or production facilities, personal injury, illness and fatalities, involving employees, contractors or community members near our operations, as well as delays in production, monetary losses and possible legal liability. Additionally, the Company's employees may be exposed to tropical and contagious diseases that may affect their health and safety, and we have corporate guidelines to mitigate these risks. Notwithstanding our standards, policies, controls and monitoring procedures, our operations remain subject to incidents that could adversely impact our business, stakeholders, reputation or violate human rights.

***The Company's business may be adversely affected by social, environmental and health and safety regulation, including regulations pertaining to climate change.*** Nearly all aspects of Vale's activities, products and services associated with capital projects and operations, including mine closure activities, around the world are subject to social, environmental and health and safety regulations, which may expose us to increased liability or increased costs. These regulations require the Company to have environmental licenses, permits and authorizations for our operations and projects, and to conduct environmental and social impact assessments, including a hazard identification and risk analysis, in order to get approval for our projects and permission for initiating construction and continuing operating. Significant changes to existing operations are also subject to these requirements.

In connection with Vale's authorizations, licenses and permits, the Company's may be subject to restrictions relating to the operation and maintenance of dams, protection of indigenous people, protection of caves, fauna and flora, climate change, among others, which may require us to limit or modify the Company's mining plans, having an impact on Vale's production volumes, costs and reserves and resources. For more information on the Company's mining concessions and other similar rights, see Information on the Company—Regulatory matters. Difficulties in obtaining or renewing permits may lead to construction delays, cost increases, and may adversely impact the Company's production volumes. Social, environmental and health and safety regulations also impose standards, procedures, monitoring and operational controls on activities relating to mineral research, mining, beneficiation, pelletizing activities, railway and marine services, ports, de-characterization, decommissioning, mine closure activities, distribution and marketing of the Company's products. Such regulation may give rise to significant costs and liabilities. Litigation and legal and regulatory uncertainties relating to these or other related matters may adversely affect Vale's financial condition or cause harm to the Company's reputation.

Social, environmental and health and safety regulations in many countries in which we operate have become stricter in recent years, and it is possible that more regulation or more stringent enforcement of existing regulations will adversely affect us by imposing restrictions on our activities, products, and assets, creating new requirements for the issuance or renewal of environmental licenses and labor authorizations, resulting in licensing and operation delays, raising Vale's costs or requiring the Company to engage in expensive reclamation efforts. All these factors may affect the Company's practices and result in costs or expense increase, taking Vale to new capital expenditures, restrict or suspend operations, write down or write off assets or reserves and resources.

For a discussion of the rules related to the licensing and operation of dams after the failure of the tailings dam in Brumadinho, see item 1.6 of this Reference Form. For more information on the rules related to the protection of caves in Brazil, which may require the Company to limit or modify its mining plans from time to time, see item 1.6 of this Reference Form. For a discussion of national policies and international regulations related to climate change, which may affect a number of the Company's businesses in several countries, see item 1.6 of this Reference Form. For a discussion of the regulatory initiatives of the International Maritime Organization (IMO) Standard, which prohibits high sulfur fuel oil, as well as the IMO targets on greenhouse gas reductions in the industry, see item 1.6 of this Reference Form.

***Natural disasters may cause severe damage to our operations and projects in the countries where we operate and may have a negative impact on our sales to countries affected by such disasters.*** Natural disasters, such as windstorms, droughts, floods, earthquakes and tsunamis may adversely affect the Company's operations, projects and people in the countries where Vale operates and may cause a retraction in sales to countries adversely affected due to, among other factors, power outages and the destruction of industrial facilities and infrastructure. The physical impact of climate change on the Company's business has been assessed based on both Task Force on Climate-related Financial Disclosures recommendations and "Vale Climate Forecast", our in-house developed methodology. The Company have found, so far, that we are likely to experience changes in rainfall patterns, increased temperatures, floods, droughts, water shortages, sea level rising, increased incidence and intensity of atmospheric discharges (lightning), which may adversely affect our operations, employees, contractors and community members. On some occasions in recent years, we have determined that force majeure events have occurred because of the effect of severe weather on Vale's mining and logistics activities.

#### **I. climate issues, including physical and transition risks**

For information on the risks related to the Company's climate issues, see item (k) above: *"The Company's business is subject to environmental, health, safety and human rights incidents."; "The Company's business may be adversely affected by social, environmental and health and safety regulation, including regulations pertaining to climate change."; e "Natural disasters may cause severe damage to our operations and projects in the countries where we operate and may have a negative impact on our sales to countries affected by such disasters"*.

#### **m. other issues not included in the previous items**

There are no other issues not covered in the previous items.

#### **4.1. Describe the risk factors**

#### **4.2. Indicate the 5 (five) main risk factors**

The Company's 5 (five) main risk factors are:

- I. The collapse of a dam or other geotechnical structure may cause severe damages, including personal, property and environmental damages.
- II. The collapse of the Company's tailings dam in Brumadinho has adversely affected its business, financial condition and reputation, and the overall impact of the dam collapse on Vale is still uncertain.
- III. Operational problems could materially and adversely affect the Company's business and financial performance.
- IV. The Company's business could be adversely affected by the failure or unavailability of certain critical assets or infrastructure.
- V. The Company's projects are subject to risks that may result in increased costs or delay in their implementation.



### 4.3. Description of main market risks

#### **Significant market risks applicable to the Company**

Considering the nature of the Company's business and operations, the main market risk factors to which it is exposed are:

- Prices of products and inputs:
- Exchange rates and interest rates.

#### **Product and input price risk**

The Company is exposed to market risks related to the volatility of the prices of its production inputs and products, as highlighted below:

***Lower cash flows, resulting from suspension of operations or decreased prices of the Company's products, may adversely affect the Company's credit ratings and the cost and availability of financing.*** The suspension of operations or a decline in the prices of the Company's products may adversely affect its future cash flows, credit ratings and the ability to secure financing at attractive rates. It may also negatively affect the Company's ability to fund its capital investments, including disbursements required to remediate and compensate damages resulting from the dam collapse in Brumadinho, provide the financial assurances required to obtain licenses in certain jurisdictions, pay dividends and comply with the financial covenants in some of long-term debt instruments. See items 4.3 and 2.1.f of this Reference Form for more information.

***The prices for Vale's products are subject to volatility, which may adversely affect the Company's business.*** Global prices for metals are subject to significant fluctuations and are affected by many factors, including actual and expected global macroeconomic and political conditions, regional and sectorial factors, levels of supply and demand, the availability and cost of substitutes, inventory levels, technological developments, regulatory and international trade matters, investments by commodity funds and others and actions of participants in the commodity markets. Sustained low market prices for the products the Company's sells may result in the suspension of certain of Vale's projects and operations, decrease in the Company's mineral reserves and resources, impairment of assets, and may adversely affect Vale's cash flows, financial position and results of operations. The price of the Company's products could be subject to volatility in 2023 in case of measures taken by the Chinese government to control the COVID-19 pandemic, the withdrawal of governmental benefits and relief measures, geopolitical risk, and other macroeconomic factors.

Demand for the Company's iron ore and nickel products depends on global demand for steel. Iron ore and iron ore pellets, which together accounted for 80% of Vale's 2022 net operating revenues from continuing operations, are used to produce carbon steel. Nickel, which accounted for 15% of the Company's 2022 net operating revenues from continuing operations, is used mainly to produce stainless and alloy steels. The prices of different steel products and the performance of the global steel industry are highly cyclical and volatile, and these business cycles in the steel industry affect demand and prices for Vale's products. In addition, vertical backward integration of the steel and stainless-steel industries and the use of scrap could reduce the global seaborne trade of iron ore and primary nickel. The demand for copper is affected by the demand for copper wire, and a sustained decline in the construction industry could have a negative impact on our copper business. Copper products accounted for 4% of our 2022 net operating revenues from continuing operations.

Vale are mostly affected by movements in iron ore prices. For example, a price reduction of US\$1 per dry metric ton unit ("dmt") in the average iron ore price would have reduced our operating income for the year ended December 31, 2022, by approximately US\$279 million. Average iron ore prices significantly changed in the last five years, from US\$69.49 per dmt in 2018, US\$93.40 per dmt in 2019, US\$108.87 per dmt in 2020, US\$159.49 per dmt in 2021 and US\$120.16 per dmt in 2022, according to the average Platts IODEX (62% Fe CFR China). On January 21, 2023, the year-to-date average Platts IODEX iron ore price was US\$121.69 per dmt.

For information on risks related to inputs, see the Risk Factor described in item 4.1 above.

#### **Currency risk**

The Company's cash flow is subject to the volatility of several currencies, since the prices of its products are predominantly indexed to the US dollar, while a significant part of costs, expenses and investments are indexed to other currencies, mainly reais and dollars. Canadians, as highlighted in the risk below.

The Company also has debt instruments and other liabilities denominated in currencies other than the US dollar, primarily in Brazilian reais.

Variations in the exchange rates of the currencies in which the Company carries out its operations may adversely affect its financial condition and operating results. A substantial portion of the Company's revenues, trade receivables and debt is expressed in US dollars, and considering that its functional currency is the Brazilian real, variations in exchange rates may result in (i) losses or gains on its net debt expressed in US dollars and in accounts receivable, in addition to (ii) losses or gains in market value on its foreign exchange derivatives used to stabilize its cash flow in US dollars. In 2022, the Company had net foreign exchange losses of R\$2,195 million, against net foreign exchange gains of R\$2,172 million in 2021. In addition, changes in the values of the Brazilian real, the Canadian dollar, the Indonesian rupiah, the Chinese yuan and other currencies in relation to the US dollar affect the Company's results, since most of its costs of goods sold are denominated in currencies other than the US dollar, mainly the real (42.26% in 2022) and the dollar Canadian (5.7% in 2022), while its revenues are mostly denominated in US dollars. Currency fluctuations should continue to affect the Company's financial results, expenses and cash flow generation.

As of March 1, 2023, the commercial U.S. dollar selling rate published by the Central Bank was R\$5.2070 per US\$1.00, which represents a decrease of 0.21% compared to the R\$5.2070 selling rate \$5.2177 for \$1.00 as of December 31, 2022. Significant volatility in currency prices, among other factors, may also result in disturbances in currency markets and limit the Company's ability to transfer or convert certain currencies into US dollars and in other currencies so that you can make interest and principal payments on your debts as they mature. Central banks and governments of countries in which Vale operates may institute restrictive exchange rate policies in the future and charge taxes on exchange rate transactions.

#### **Interest rate risk**

The Company is also exposed to interest rates on loans and financing. Debt with floating interest rates in US dollars consists primarily of loans that include export prepayment transactions and loans from commercial banks and multilateral organizations. In general, these debts are indexed to LIBOR (London Interbank Offered Rate) and SOFR (Secured Overnight Financing Rate).

#### 4.4. Relevant non-confidential processes

Vale is a party involved in labor, civil, tax and other actions in the administrative and judicial spheres. The accruals for the losses arising out of these actions are estimated and updated by the Company, based on the opinion of legal advisors.

For the purposes of this item 4.4, the processes, among others, that may have a significant impact on the Company's equity or business, quantitatively representing the amount in dispute greater than the equivalent to BRL 4 billion. In addition, without prejudice to the materiality standard mentioned above, relevant processes have also been included due to other aspects, regardless of the amount involved.

##### (I) Processes relevant to the Company's and/or its subsidiaries' business that do not involve the Brumadinho or Mariana events

###### (i) Tax

<b>1. Action for Relief from Judgment no. 2006.02.01001869-2 (0001869-93.2006.4.02.0000)</b>
<b>a) Court:</b>
Regional Federal Court of the 2 <sup>nd</sup> Region ("TRF-2")
<b>b) Instance:</b>
Supreme Court of Justice - Higher Instance
<b>c) Filed on:</b>
02/20/2006
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Government
Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Deconstitution of Vale's right to deduct the values of the Social Contribution on Net Income("CSLL") from the Corporation Income Tax ("IRPJ") calculation basis recognized in the case record of Ordinary Case No. 0010717-73.1998.4.02.5101, which granted Vale the right to deduct CSLL values from the IRPJ calculation basis.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- In 2004, within the scope of process 0010717-73.1998.4.02.5101 (98.0010717-7), a final and unappealable decision of the TRF2 granted Vale the right to deduct CSLL values from the IRPJ calculation basis, from 1998 onwards.</li> <li>- In 2006, the Federal Government filed an action for relief from judgment, for the purpose of revoking this decision and, thus, Vale's right to deduct CSLL values from the IRPJ calculation basis.</li> <li>- Administrative processes No. 16682.721.163/2020-90 and 16682.721.410/2021-39, described in items 2 and 3 of the tax processes, constitute assessments for the collection of IRPJ, as a result of disallowance of the deduction of CSLL values from the IRPJ calculation basis.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 05/15/2008, the TRF-2 deemed the Action for Relief from Judgment invalid.</li> <li>- On 09/05/2014, in an appeal of the Federal Government, o STJ annulled the decision of the TRF-2.</li> <li>- On 11/14/2019, in a new appeal by the Federal Government, the TRF-2 changed its understanding and upheld the action for relief from judgment, annulling the decision favorable to Vale handed down in 2004.</li> <li>- On 06/28/2021, on appeal by Vale, in a decision by the trial court, Justice Assusete Magalhães ordered a new judgment of the action for relief from judgment by the TRF-2. The decision by the trial court was the subject matter of an appeal by the Federal Government to the STJ, which is still pending judgment;</li> </ul>
<b>h) Stage of the process:</b>
Awaiting judgment by the STJ of the appeal filed by the Federal Government against the decision by the trial court.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process is relevant because it aims at overturning a final and unappealable decision in favor of Vale, which authorizes the deductibility of CSLL from the IRPJ calculation basis. The overturning of <i>res judicata</i> in tax matters is being discussed within the scope of RE No. 955.227 and 949.297, Topics 881 and 885 of General Repercussion in the STF. The STF decided that a final and unappealable decision in favor of the taxpayer may be overturned in case of a later decision by the STF applicable to all taxpayers in the opposite direction. This decision will still be the subject matter of an appeal for discussion of modulation of effects.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale may lose the right to deduct CSLL from taxable income. As a result of the outcomes of this action, the Company decided not to deduct CSLL from its taxable income as of the base year of 2018.

#### 4.4. Relevant non-confidential processes

<b>2. Administrative Process no. 16682.721.163/2020-90</b>
<b>a) Court:</b> Regional Judgment Office (DRJ)
<b>b) Instance:</b> Administrative Council of Tax Appeals (CARF) – 2nd Administrative Instance
<b>c) Filed on:</b> 11/24/2020
<b>d) Parties to the process:</b> Plaintiff(s): Federal Government Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b> Collection of IRPJ and related fines in the amount of BRL 2.61 billion.
<b>f) Main facts:</b> In 2020, the Brazilian Internal Revenue Service (RFB) issued a tax assessment against Vale, charging values referring to IRPJ and related fines for the years 2016 and 2017, due to the disallowance of the deduction of CSLL values from the IRPJ calculation basis. Vale understands that this charge is undue because it was supported by a final court decision that is the subject matter of Action for Relief from Judgment No. 2006.02.01001869-2 (0001869-93.2006.4.02.0000), listed in tax process 1 above.
<b>g) Summary of decisions on the merits rendered:</b> On 06/07/2021, the DRJ partially accepted Vale's defense, reducing the collection of the notice of violation to BRL 813 million, due to error verified in the calculation of the tax assessment. Vale and the Federal Government filed appeals with the CARF against the decision, which are pending judgment.
<b>h) Stage of the process:</b> Awaiting judgment by the CARF of the appeals filed by the Federal Government and Vale.
<b>i) If the chance of loss is: (likely, possible or remote)</b> Possible
<b>j) Reason why the process is considered relevant:</b> The process is relevant because it aims at overturning an administrative decision favorable to Vale, which authorizes the deductibility of CSLL from the IRPJ calculation basis. This process is related to the discussion on the overturning of <i>res judicata</i> in tax matters within the scope of RE No. 955.227 and 949.297, Topics 881 and 885 of General Repercussion in the STF. The STF decided that a final and unappealable decision in favor of the taxpayer may be overturned in case of a later decision by the STF applicable to all taxpayers in the opposite direction. This decision will still be the subject matter of an appeal for discussion of modulation of effects. As a result of this decision on the merits of the STF, Vale made a provision on 12/31/2022 in the amount of BRL 813 million considering the impossibility of deducting CSLL in the IRPJ calculation basis in the years of 2016 and 2017, as well as the annulled value of the DRJ's notice of violation.
<b>k) Analysis of the impact in case of losing the process:</b> In the event of possible loss in the process, Vale could sustain material financial and operational impacts, including a potential reduction in the 2016 tax loss by approximately BRL 265 million (base) and a reduction in the tax loss of 2017 by approximately BRL 283 million (base) and, consequently, tax assessments arising from the use of such disallowed losses.
<b>3. Administrative Process no. 16682.721.410/2021-39</b>
<b>a) Court:</b> Regional Judgment Office (DRJ)
<b>b) Instance:</b> Administrative Council of Tax Appeals (CARF) – 2nd Administrative Instance
<b>c) Filed on:</b> 11/24/2021
<b>d) Parties to the process:</b> Plaintiff(s): Federal Government Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b> Collection of IRPJ and related fines in the amount of BRL 5.95 billion from 2011 to 2013.
<b>f) Main facts:</b> In 2021, the Brazilian Internal Revenue Service (RFB) issued a tax assessment against Vale, charging values referring to IRPJ and related fines for the years 2011 and 2013, due to the disallowance of the deduction of CSLL values from the IRPJ calculation basis. Vale understands that this charge is undue because it was supported by a final court decision that is the subject matter of Action for Relief from Judgment No. 2006.02.01001869-2 (0001869-93.2006.4.02.0000), listed in tax process 1 above.
<b>g) Summary of decisions on the merits rendered:</b> On 07/28/2022, DRJ accepted Vale's defense, recognizing the forfeiture of the right to collect, fully annulling the collection. The Federal Government filed an appeal with CARF against the decision, which is pending judgment.
<b>h) Stage of the process:</b> Awaiting judgment by CARF of the appeal filed by the Federal Government.
<b>i) If the chance of loss is: (likely, possible or remote)</b> Remote
<b>j) Reason why the process is considered relevant:</b>

#### 4.4. Relevant non-confidential processes

The process could result in a financial impact of BRL 5.95 billion and in the impossibility of deducting CSLL from the IRPJ calculation basis in the years 2011 to 2013.

**k) Analysis of the impact in case of losing the process:**

In the event of possible loss in the process, Vale could sustain material financial and operational impacts, including a potential reduction in the tax loss of years 2011 to 2013 by approximately BRL 3.21 billion (base).

**4. Writ of Mandamus no. 2011.51.01.011763-1**

**a) Court:**

17<sup>th</sup> Federal Court of Rio de Janeiro

**b) Instance:**

Regional Federal Court of the 2<sup>nd</sup> Region ("TRF-2") – 2nd Instance

**c) Filed on:**

08/05/2011

**d) Parties to the process:**

Plaintiff(s): Valepar S.A. (company merged with and succeeded by Vale S.A. in 2017)

Defendant(s): Federal Government

**e) Amounts, assets or rights involved:**

- Right to exclude the values received from Vale as interest on the stockholder's equity ("JCP") from the calculation basis of the Social Integration Program ("PIS") and Contribution for the Financing of Social Security ("COFINS") of Valepar, as well as the refund of the values paid in the last 5 years prior to the filing of the action.
- The value involved amounts to BRL 2.38 billion (updated until December 31, 2022).
- To guarantee the collection, judicial deposits were made in the amount of BRL 2.76 billion (December 31, 2022) and BRL 533 million referring to the adhesion to Refis.

**f) Main facts:**

- In 2011, Valepar filed a Writ of Mandamus for the purpose of assuring the right to exclude the values received from Vale as JCP from the PIS and COFINS calculation basis, as well as the refund of values paid in the last 5 years prior to the filing of the action.
- During the course of the process, Valepar made judicial deposits of the values of PIS and COFINS arising from each distribution of JCP carried out by Vale in the amount of BRL 2.76 billion (December 31, 2022) and BRL 533 million referring to the adhesion to Refis.
- During the course of the process, in December 2013, Valepar adhered to the payment in installments of federal tax debts (REFIS) related to the taxable events of Oct/2004, Apr/2005, Oct/2005, Apr/2006, Oct/2006, Apr/2007, Oct/2007, Apr/2008 and Oct/2008, and partially withdrew from the judicial discussion in relation to these taxable events.
- In 2020, Vale, as Valepar's successor due to the merger, requested the waiver of the remaining tax liability corresponding to the taxable events from Oct/2009 to Apr/2017, which period was not included in the REFIS.
- With the discussion on the merits of the process closed, Vale requested the survey (i) of the values deposited in court linked to partial withdrawals, and (ii) of the portion of the court deposits related to the adhesion to Refis, as well as the conversion into income in favor of the Federal Government of the remaining amount. The Federal Government challenged the request to survey any amount deposited in court, on the grounds of non-compliance with requirements for adhering to REFIS.

**g) Summary of decisions on the merits rendered:**

- On 03/19/2012, the 17th Federal Court dismissed the process without resolution of the merits, in view of alleged *lis alibi pendens* with another writ of mandamus previously filed by Valepar, which, despite having the same subject matter, had a different cause of action.
- On 11/27/2012, in an appeal by Valepar, the TRF-2 upheld the decision of the 17th Federal Court.
- On 12/19/2013, Vale adhered to REFIS, created by Law no. 12,865/2013, and partially withdrew from the legal discussion regarding the taxable events of Oct/2004, Apr/2005, Oct/2005, Apr/2006, Oct/2006, Apr/2007, Oct/2007, Apr/2008, and Oct/2008. After joining, the TRF-2 ratified the partial withdrawal of resources in relation to the taxable events included in REFIS.
- On 08/18/2016, on appeal by Valepar, the STJ ruled in favor of Valepar, dismissing the *lis alibi pendens*, annulling the ruling, and ordering the return of the case record to the 17th Federal Court for a new analysis of the merits and a new ruling.
- On 08/03/2017, the 17th Federal Court dismissed the Writ of Mandamus, determining the conversion into income in favor of the Federal Government of all judicial deposits made. Valepar filed an appeal to the TRF-2 against the decision.
- On 10/25/2018, the TRF-2 upheld the decision of the first instance of rejecting the Writ of Mandamus.
- On 08/04/2020, after filing of petition by Vale, as Valepar's successor due to the merger, the STF ratified Vale's request for waiver of the claimed right relating to the taxable events of the period Oct/2009 to Apr/2017.
- On 06/02/2021, the judge of the 17th Federal Court designated the carrying out of an accounting technical inspection to check the values that should be raised by the Federal Government and any balance to be raised by Vale. The Federal Government filed an appeal with TRF-2 against the decision, which is pending judgment.

**h) Stage of the process:**

Awaiting judgment by the TRF-2 of the appeal filed by the Federal Government.

**i) If the chance of loss is: (likely, possible or remote)**

Likely

**j) Reason why the process is considered relevant:**

The process may result in the loss of judicial deposits in the amount of BRL 2.76 billion (December 31, 2022) and BRL 533 million referring to the adhesion to Refis.

#### 4.4. Relevant non-confidential processes

<b>k) Analysis of the impact in case of losing the process:</b>
Given the withdrawal of the appeal and the waiver of rights by Valepar (today Vale), Vale could sustain significant financial impacts, resulting from the withdrawal of judicial deposits by the Federal Government and the rejection of the request to survey the REFIS balance by Vale.

<b>5. Tax Provisional Remedy no. 0021378-63.2018.4.01.3800</b>
<b>a) Court:</b>
5th Federal Tax and Extrajudicial Execution Court of Belo Horizonte/MG of TRF-6
<b>b) Instance:</b>
Regional Federal Court of the 6th Region ("TRF-6") – Second Instance
<b>c) Filed on:</b>
06/05/2018
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Government Defendant(s): Vale S.A. and others.
<b>e) Amounts, assets or rights involved:</b>
Unavailability of assets and rights of Vale, as a shareholder holding 50% of the share capital of Samarco Mineração S.A. (Samarco) to guarantee Samarco's tax and social security debts in the amount of approximately BRL11 billion (June 2018).
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- In 2018, the Federal Government requested the unavailability of Vale's assets and rights, to guarantee Samarco's alleged tax and social security debts in the approximate value of BRL 11 billion, according to an evaluation carried out by the National Treasury Attorney's Office.</li> <li>- In 2018, due to the creation of TRF-6, the process was reassigned, no longer being processed in the 27th Federal Court of Belo Horizonte (of TRF-1, its original court), and starting to be processed in the 5th Federal Tax and Extrajudicial Execution Court of Belo Horizonte of the TRF-6.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 07/03/2018, the 27th Federal Court of Belo Horizonte granted an injunction partially granting the request of the Federal Government, which resulted in the determination of unavailability of assets and rights in the amount of supposedly chargeable tax liabilities, in the amount of BRL 9,939,258,899.14.</li> <li>- On 08/27/2018, the 5th Federal Court determined the postponement of compliance with the measures of unavailability of assets and rights not yet implemented and, on 08/29/2018, extended said decision to suspend the effects of the official letters of unavailability of assets and rights already issued, determining the unblocking of Vale's assets and rights.</li> <li>- On 05/06/2019, the 5th Federal Court handed down a ruling dismissing the process without resolution of the merits, recognizing the lack of procedural interest of the Federal Government. The Federal Government appealed to the TRF-6 against the ruling.</li> </ul>
<b>h) Stage of the process:</b>
Awaiting judgment by the TRF-6 of the appeal filed by the Federal Government.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process may result in the unavailability of Vale's assets and rights in the approximate amount of BRL 11 billion, according to an evaluation carried out by the National Treasury Attorney's Office.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale may be liable for Samarco's liabilities. Eventual unavailability of assets and rights due to Samarco's debts may cause restrictions to Vale's activities, with relevant operational and financial impact.

<b>6. Administrative Process no. 16682.721173/2013-04</b>
<b>a) Court:</b>
Regional Judgment Office (DRJ)
<b>b) Instance:</b>
Administrative Council of Tax Appeals (CARF) – 2nd Administrative Instance
<b>c) Filed on:</b>
11/14/2013
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Government Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Fine for non-compliance with ancillary PIS and COFINS obligations in the amount of BRL 2 billion (December 31, 2022) for the period from 2008 to 2010
<b>f) Main facts:</b>
In 2013, the Brazilian Internal Revenue Service (RFB) filed a tax assessment against Vale, charging a fine for alleged omissions and inaccuracies in magnetic files in the delivery of accessory obligations related to PIS and COFINS from 2008 to 2010, based on Normative Instrucion/RFB 86. The collection considered as basis for calculation of the fine 1% on the gross income of Vale in the years 2008 to 2010.
<b>g) Summary of decisions on the merits rendered:</b>

#### 4.4. Relevant non-confidential processes

<p>– On 06/10/2014, the DRJ issued a decision partially favorable to Vale, reducing the percentage of the fine on Vale's gross income from 1% to 0.2%.</p> <p>– On 02/28/2018, in Vale's appeal, the CARF maintained the reduction of the percentage of the fine at 0.2% of Vale's gross revenue, and additionally limited the basis for calculating the fine considering only the revenue of the month prior to the delivery of the magnetic files, which resulted in the reduction of the fine to – On 05/04/2018, the Federal Government filed an appeal with the Superior Chamber of CARF against the decision, which is pending judgment;</p>
<b>h) Stage of the process:</b>
Awaiting judgment by the Superior Chamber of CARF on the appeal filed by the Federal Government.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process could result in a financial impact of BRL 2 billion (December 31, 2022).
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale could sustain material financial impacts.

<b>7. Administrative Process no. 16682-900.154/2021-44</b>
<b>a) Court:</b>
Regional Judgment Office (DRJ)
<b>b) Instance:</b>
Administrative Council of Tax Appeals (CARF) – 2nd Administrative Instance
<b>c) Filed on:</b>
03/08/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Government
Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Collection of IRPJ in the amount of BRL 2.29 billion for the year 2016
<b>f) Main facts:</b>
In 2021, the Brazilian Internal Revenue Service (RFB) filed a tax assessment against Vale, only partially approving the offset of taxes paid abroad and used to deduct IRPJ in 2016. The tax authorities understand that the rules applicable to the offset of income tax paid abroad have not been complied with in Brazil.
<b>g) Summary of decisions on the merits rendered:</b>
On 09/08/2021, the DRJ partially accepted Vale's defense and validated the payment of BRL 1.44 billion as income tax abroad that can be used by Vale, but applied, as a quantitative deduction limit, the amount of BRL 74.64 million, which refers only to the year 2016. Vale filed an appeal with CARF, against the partial use of the deduction, which is pending judgment.
<b>h) Stage of the process:</b>
Awaiting judgment by CARF of the appeal filed by Vale.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process could result in a financial impact of BRL 2.29 billion.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of possible loss in the process, Vale could sustain material financial impacts.

<b>8. Administrative Process no. 13136-725.420/2021-41</b>
<b>a) Court:</b>
Regional Judgment Office (DRJ)
<b>b) Instance:</b>
Administrative Council of Tax Appeals (CARF) – 2nd Administrative Instance
<b>c) Filed on:</b>
12/13/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Government
Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Collection of IRPJ in the amount of BRL 126 million for the year 2016.
<b>f) Main facts:</b>
In 2021, the Brazilian Internal Revenue Service (RFB) filed a tax assessment against Vale, charging IRPJ and CSLL values for the year 2016. The RFB understood that there was an undue deduction of expenses incurred by Vale with the Renova Foundation, created to promote civil and environmental remediations resulting from the accident occurred in Mariana-MG in 2015. The RFB considered that such expenses would not be necessary for Vale's operating activities. In turn, Vale considers that expenses with the Renova Foundation are deductible, as they arise from obligations assumed under the Transaction and Consent Decree Instrument (TTAC) entered into on 06/02/2016, by Samarco Mineração S.A. ("Samarco"), its shareholders Vale and BHP, among other parties, within the scope of Public-Interest Civil Action No. 0069758-

#### 4.4. Relevant non-confidential processes

61.2015.4.01.3400, and considering Vale's condition as a shareholder holding 50% of the share capital of Samarco and funding entity of the Renova Foundation.
<b>g) Summary of decisions on the merits rendered:</b>
On 08/04/2022, the DRJ rejected Vale's defense and maintained the collection provided for in the notice of violation, understanding that the expenses with the Renova Foundation would no longer be necessary, normal and usual expenses for the development of Vale's corporate purpose and, consequently, could not be deducted from the IRPJ and CSLL calculation basis. Vale filed an appeal with CARF against the decision, which is pending judgment.
<b>h) Stage of the process:</b>
Awaiting judgment by CARF of the appeal filed by Vale.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
It is possible that new similar assessments will be received in other years, due to expenses related to remediation obligations assumed by Vale, as well as the risk of damage to Vale's image by involving tax matters related to the rupture of the Mariana Dam.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of possible loss in the process, Vale could sustain image damage, as well as material financial impacts, including a reduction in the tax loss of year 2016 by BRL 71.6 million (base).

<b>9. Action for Annulment no. 6100767-10.2015.8.13.0024</b>
<b>a) Court:</b>
1st Tax Court of the State of Minas Gerais
<b>b) Instance:</b>
Supreme Court of Justice (STJ) – Superior Court
<b>c) Filed on:</b>
10/07/2015
<b>d) Parties to the process:</b>
Plaintiff(s): Vale S.A. Defendant(s): State of Minas Gerais
<b>e) Amounts, assets or rights involved:</b>
Collection of ICMS and related fines in the amount of BRL 1.18 billion from 2011 to 2013.
<b>f) Main facts:</b>
In 2015, Vale filed an Action for Annulment against a tax assessment by the Internal Revenue Service of the State of Minas Gerais, which charged Goods and Services Tax (ICMS) and related fines on the transportation of iron ore between Vale's own establishments, for the years 2011 to 2013.
<b>g) Summary of decisions on the merits rendered:</b>
– On 08/14/2017, the 1st Court handed down a ruling upholding Vale's request and dismissing the tax liability due to the absence of a taxable event on transportation carried out between establishments owned by Vale. – On 11/05/2018, on appeal by the State of Minas Gerais, the Court of Appeals of the State of Minas Gerais (TJMG) upheld the ruling of the 1st Court, favorable to Vale. The State of Minas Gerais filed appeals against the TJMG decision. – On 07/09/2020, decisions were handed down rejecting the special appeal and extraordinary appeal filed by the State of Minas Gerais, against which appeals were filed, pending judgment by the STJ and STF.
<b>h) Stage of the process:</b>
Awaiting judgment by the STJ and STF of the appeals filed by the State of Minas Gerais
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process could result in a financial impact of approximately BRL 1.2 billion. Furthermore, charging ICMS on ore transport between Vale's own establishments could have a significant impact on its operating costs.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of any loss in the process, Vale could have material financial impacts, with a significant increase in operating costs arising from the transportation of iron ore between Vale's own establishments.

#### (ii) Civil

<b>1. Popular Action no. 1009492-23.2017.4.01.3400</b>
<b>a) Court</b>
22 <sup>nd</sup> Federal Court of the Judicial District of the Federal District
<b>b) Instance:</b>
Regional Federal Court of the 1st Region ("TRF-1") – 2nd Instance
<b>c) Filed on:</b>
08/09/2017
<b>d) Parties to the process:</b>
Plaintiff(s): Max Mauran Pantoja da Costa, Antonio Augusto de Miranda e Souza, Ronaldo Tedesco Vilardo, Silvio Sinedino Pinheiro and Délvio Joaquim Lopes de Brito



#### 4.4. Relevant non-confidential processes

<b>Defendant(s):</b> Vale S.A., Valepar S.A., Banco Nacional do Desenvolvimento Econômico e Social – BNDES, BNDES Participações S.A. – BNDESPAR, Fundação dos Economizários Federais – FUNCEF, Fundação Petrobrás de Seguridade – PETROS, Caixa de Previdência dos Funcionários do Banco do Brasil – PREVI and Federal Government
<b>e) Amounts, assets or rights involved:</b>
Incalculable amounts as it concerns a discussion on the validity of Vale's Special Shareholders' Meeting (AGE), held on June 27, 2017, which approved the necessary acts for Vale's entry into B3's Novo Mercado.
<b>f) Main facts:</b>
In 2017, FUNCEF directors and representatives of the oil tanker category filed a Class Action against Vale and other parties, requesting the annulment of the AGE held on June 27, 2017, which approved, among other resolutions: (i) the conversion of Vale's preferred shares into common shares; (ii) the merger of Valepar with Vale; and (iii) the other acts necessary for Vale's entry into B3's Novo Mercado. The plaintiffs claimed that the corporate restructuring carried out caused losses for the Federal Government.
<b>g) Summary of decisions on the merits rendered:</b>
– On 08/10/2017, the 22nd Federal Court rejected a request for an injunction to suspend the resolutions taken at the AGE. – On 09/19/2020, the 22nd Federal Court dismissed the action, recognizing the regularity of the resolutions taken at the AGE. The case was sent (remittance required) for judgment by the Regional Federal Court of the 1st Region (TRF-1), and the judgment is still pending.
<b>h) Stage of the process:</b>
Awaiting judgment by the TRF-1.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process may result in the annulment of the AGE that modified Vale's corporate structure and made it possible for Vale to enter the Novo Mercado of B3.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of loss, Vale and its shareholders could sustain invaluable financial impacts, due to the undoing of the corporate restructuring and Vale's exit from the B3 Novo Mercado.

<b>2. Ordinary Action no. 0079940-46.2010.4.01.3800</b>
<b>a) Court</b>
9 <sup>th</sup> Federal Civil Court of Belo Horizonte/MG
<b>b) Instance:</b>
9 <sup>th</sup> Federal Civil Court of Belo Horizonte/MG - 1st Instance
<b>c) Filed on:</b>
02/18/2004
<b>d) Parties to the process:</b>
<b>Plaintiff(s):</b> Transger S/A ("Transger") <b>Defendant(s):</b> Ferrovia Centro Atlântica S/A, Mineração Tacumã Ltda. (current VLI Multimodal S/A), KRJ Participações S/A, CPP Participações S/A, Carmo Administração e Participações Ltda., Fundação Vale do Rio Doce de Seguridade Social – Valia and Companhia Siderúrgica Nacional – CSN
<b>e) Amounts, assets or rights involved:</b>
Inestimable value as it deals with a discussion on the validity of the Special Shareholders' Meeting of Ferrovia Centro-Atlântica S.A. – FCA (FCA) held on 05/14/2003 (AGE), which approved the increase of share capital of FCA.
<b>f) Main facts:</b>
On 02/18/2004, Transger, as shareholder of FCA, filed an Ordinary Action against Ferrovia Centro Atlântica S/A, Mineração Tacumã Ltda. (current VLI Multimodal S/A), KRJ Participações S/A, CPP Participações S/A, Carmo Administração e Participações Ltda., Fundação Vale do Rio Doce de Seguridade Social – Valia and Companhia Siderúrgica Nacional – CSN, requiring the annulment of the AGE that authorized the FCA capital increase. Transger alleged that there was abuse by the controlling shareholders of FCA, which allegedly, through the capital increase, caused unjustified dilution of minority shareholders, to the detriment of Transger and other shareholders.
<b>g) Summary of decisions on the merits rendered:</b>
On 06/06/2019, the 9th Court partially upheld the action to sentence the defendants: (i) to pay indemnity to Transger, in the amount of BRL 56,352,307.12, (in May 2019 (corresponding to BRL 71,193,061.91, in April/2023), to be apportioned among the defendants in the "current proportion" of the share control in relation to former RFFSA; without, however, clarifying the time frame of the equity interest to be considered for apportionment purposes, which is still pending judgment and (ii) to hold a new election to guarantee the participation of former railroad workers on the FCA Board of Directors. All parties filed an appeal.
<b>h) Stage of the process:</b>
Awaiting judgment, by the lower court, of the appeals filed by Transger and by all defendants (except CSN).
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process may result in the annulment of the AGE that authorized the FCA capital increase, leading to the holding of almost all of the shares by Mineração Tacumã (currently VLI). As it is a subsidiary of Vale, it may have a material impact

#### 4.4. Relevant non-confidential processes

on Vale's corporate organization, including FCA and VLI. Furthermore, the process could result in damage to Vale's image, as a result of accusations made by Transger of alleged fraudulent management, which allegedly involved Vale directly.

**k) Analysis of the impact in case of losing the process:**

Although Vale is not a party to the process, in the event of possible acceptance of greater scope at the end of the process, the AGE that determined the capital increase of FCA, with the holding of almost all shares by Mineração Tacumã (currently VLI), may be annulled, potentially causing relevant corporate and reputational impacts to Vale.

<b>3. Public-Interest Civil Action No. 0009362-71.1997.4.02.5001</b>
<b>a) Court</b>
5th Federal Civil Court of Vitória
<b>b) Instance:</b>
Supreme Court of Justice (STJ) – Superior Court
<b>c) Filed on:</b>
11/10/1997
<b>d) Parties to the process:</b>
<u>Plaintiff(s):</u> Federal Prosecution Office ("MPF") and Federal Government
<u>Defendant(s):</u> Vale S.A., Gerdau Açominas S.A., ArcelorMittal Tubarão Comercial S.A., Usinas Siderúrgicas de Minas Gerais S.A. – USIMINAS, Odacir Klein, Luis Andre Rico Vicente, Jorge Eduardo Brada Donato, José Armando Figueiredo Campos, Rinaldo Campos Soares, João Jackson Amaral, Claudio José Anchieta de Carvalho Borges, Ivo Costa Serra and Companhia Docas do Espírito Santo – CODESA
<b>e) Amounts, assets or rights involved:</b>
Incalculable – Request for annulment of the Concession Agreement for port exploration of the Praia Mole private use terminal (TUP P. Mole) and the steel products terminal – TPS.
<b>f) Main facts:</b>
In 1997, the MPF filed a Public-Interest Civil Action against Vale and others requesting the annulment of the Concession Agreement for port exploration of the Praia Mole private use terminal (TUP P. Mole) and the steel products terminal – TPS. The MPF claimed that such assets should have remained under the administration of the Government, so that the Defendants would be unduly benefiting from public assets.
<b>g) Summary of decisions on the merits rendered:</b>
– On 11/09/2007, the judgment of the 5th Federal Court of the Judiciary Section of Espírito Santo dismissed the action and recognized the validity of the Adhesion contract that allows the exploration of TUP P. Mole. – On 7/3/2012, on appeal by the MPF, the TRF2 upheld the lower court decision, recognizing the validity of the Adhesion contract and the groundlessness of the action. The MPF filed appeals with the Superior Court of Justice (STJ) and the Federal Supreme Court (STF) against the TRF2 decision, which are still pending judgment.
<b>h) Stage of the process:</b>
Awaiting judgment by the STJ of the appeal filed by the MPF, against the TRF2 decision.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The annulment of the TUP P. Mole Adhesion Agreement would bring operational, economic and image impacts to Vale. The operation as a private terminal has been consolidated since 1993.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale would have potential impacts on its operation in the State of Espírito Santo, since this process questions the validity of the concession agreement for the exploration of the Praia Mole Complex Terminals.

<b>4. Public-Interest Civil Action No. 0024892-89.2011.8.13.0570</b>
<b>a) Court</b>
1 <sup>st</sup> Civil District Court of Salinas, Minas Gerais
<b>b) Instance:</b>
1 <sup>st</sup> Civil District Court of Salinas, Minas Gerais – 1st Instance
<b>c) Filed on:</b>
09/14/2011
<b>d) Parties to the process:</b>
<u>Plaintiff(s):</u> Public Prosecution Office of the State of Minas Gerais ("MP-MG").
<u>Defendant(s):</u> Vale S.A, Instituto de Terras de Minas Gerais – ITER (ITER), Manoel da Silva Costa Junior, Evandro Carvalho, Mauro Euripedes Rocha Mendes, Ricardo de Carvalho Rocha, Luciana Rocha Mendes, Orozino Marques de Carvalho, Adeluith Marques Santos, Altemar Alves Ferreira, Breno Rodrigues Mendes
<b>e) Amounts, assets or rights involved:</b>
Rights involving agrarian legitimization titles issued by ITER, located in several municipalities in the State of Minas Gerais. Indemnity in the amount of BRL200 million and civil fine not less than BRL600 million. Damage to image of incalculable value, as a result of possible association between Vale and the practice of fraudulent appropriation of land.

#### 4.4. Relevant non-confidential processes

<b>f) Main facts:</b>
In 2011, the MP-MG filed a Public-Interest Civil Action against Vale and other parties, requesting the annulment of agrarian legitimation titles issued by ITER, involving land located in the municipalities of Salinas, Santa Cruz de Salinas, Padre Carvalho, Fruta de Leite, Rubelite, located in the State of Minas Gerais, in the period between January 2007 and August 2011. The MP-MG also requested that the Defendants be sentenced to pay indemnity in the amount of BRL200 million and a civil fine of no less than BRL600 million, resulting from Vale's alleged participation in the appropriation of State lands (fraudulent appropriation of land).
<b>g) Summary of decisions on the merits rendered:</b>
There is no decision on the merits.
<b>h) Stage of the process:</b>
Awaiting conciliation hearing.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process may result in damage to Vale's image due to possible association with Vale's name to the practice of fraudulent appropriation of lands in the northern part of the State of Minas Gerais.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of loss, the acquisition of land by Vale may be annulled, with an estimated financial loss of BRL 35 million. Vale could also sustain incalculable damage to its image, as a result of the practice of fraudulent appropriation of lands.
<b>5. Public-Interest Civil Action No. 1013658-23.2021.4.01.3800</b>
<b>a) Court</b>
6 <sup>th</sup> Federal Civil Court of Belo Horizonte/MG
<b>b) Instance:</b>
Regional Federal Court of the 6th Region ("TRF-6") – 2nd Instance
<b>c) Filed on:</b>
03/23/2021
<b>d) Parties to the process:</b>
<u>Plaintiff(s)</u> : State of Minas Gerais – Attorney General's Office of the Legislative Assembly of the State of Minas Gerais <u>Defendant(s)</u> : Vale S.A, Federal Government and National Agency of Land Transport ("ANTT")
<b>e) Amounts, assets or rights involved:</b>
Inestimable values as it is a matter of discussing the validity of the 3rd Amendment Award Report of the Concession Agreement for the Vitória to Minas Railroad ("EFVM").
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>– On 12/18/2020, Vale and the Federal Government signed the 3rd Amendment Award Report to the EFVM Concession Agreement, extending the concession period until 2057, subject to new service, tariff and investment obligations. Since then, VALE has been complying with the rules of the 3rd amendment, including investments in the mesh of EFVM and Ferrovia de Integração Centro-Oeste (FICO).</li> <li>– In 2021, the State of Minas Gerais, represented by the Attorney General's Office of the Legislative Assembly of the State of Minas Gerais, filed a Public-Interest Civil Action against Vale and ANTT, requesting the annulment of the 3rd Amendment Award Report to the EFVM Concession Agreement, as a result of alleged irregularities related to the list of concession assets, reversal thereof to the Federal Government, previous economic studies, lack of definition regarding scope, lack of advantage, insufficiency of investments in the State of Minas Gerais.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>– On 04/19/2021, the 6th Federal Court rejected the complaint, having considered the Attorney General's Office of the Legislative Assembly of the State of Minas Gerais to be an illegitimate party to represent the State of Minas Gerais in court. The Attorney General's Office of the Legislative Assembly of the State of Minas Gerais filed an appeal with the Regional Federal Court of the 6th Region (TRF-6), which is still pending judgment.</li> <li>– On 11/05/2022, the 6th Federal Court dismissed the action, recognizing that the suspension of the execution of the 3rd Amendment Award Report to the EFVM Concession Agreement would make investments of potential importance for the country's progress unfeasible, and have an impact on the creation of jobs, resulting in economic damage to the development of the State of Minas Gerais. The Attorney General's Office of the Legislative Assembly of the State of Minas Gerais filed an appeal with the TRF-6 against this decision, which is still pending judgment.</li> </ul>
<b>h) Stage of the process:</b>
Awaiting judgment of the appeal by the Attorney General's Office of the Legislative Assembly of the State of Minas Gerais by TRF-6.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The process may result in the annulment of the 3rd Amendment Award Report to the EFVM Concession Agreement. The annulment of the EFVM concession would result in relevant financial and operational impacts for Vale, as Vale would have to adopt a contractual alternative for the outflow of iron ore production.
<b>k) Analysis of the impact in case of losing the process:</b>

#### 4.4. Relevant non-confidential processes

In the event of loss, Vale may sustain material financial and operational impacts, and shall be subject to re-discussing the conditions for the ordinary extension of the EFVM Concession Agreement (in 2027), in addition to insecurity regarding the acts related to the concession performed since 2021.
<b>6. Public-Interest Civil Action no. 1010780-28.2021.4.01.3800</b>
<b>a) Court</b>
6 <sup>th</sup> Federal Civil Court of Belo Horizonte/MG
<b>b) Instance:</b>
Regional Federal Court of the 6th Region ("TRF-6") – 2nd Instance
<b>c) Filed on:</b>
03/10/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Instituto Cidades
Defendant(s): Vale S.A, Federal Government and National Agency of Land Transport ("ANTT")
<b>e) Amounts, assets or rights involved:</b>
Inestimable values as it is a matter of discussing the validity of the 3rd Amendment Award Report of the Concession Agreement for the Vitória to Minas Railroad ("EFVM").
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- On 12/18/2020, Vale and the Federal Government signed the 3rd Amendment Award Report to the EFVM Concession Agreement, extending the period until 2057, subject to new service, tariff and investment obligations.</li> <li>- In 2021, Instituto Cidades filed a Public-Interest Civil Action against Vale and ANTT, requesting the annulment and suspension of the execution of clause 18 of the 3rd Amendment Award Report of the EFVM Concession Agreement, a clause that deals with the payment of the grant for the concession, as a result of alleged irregularities related to investments provided for in the 3rd Amendment Award Report. The plaintiff asked that all investment values in the Centro-Oeste Integration Railroad (FICO), as well as the grant payment, be replaced by new investments exclusively in the EFVM mesh in the States of MG and ES.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 03/23/2021, the 6th Federal Court rejected a request for an injunction to suspend the execution of the 3rd Amendment Award Report to the EFVM Concession Agreement.</li> <li>- On 11/05/2022, the 6th Federal Court dismissed the action, recognizing that the suspension of clauses of the 3rd Amendment Award Report to the EFVM Concession Agreement would make investments of potential importance for the country's progress unfeasible, and have an impact on the creation of jobs, resulting in economic damage to the development of the State of Minas Gerais. Instituto Cidades requested the 6th Federal Court to refund the deadline for filing an appeal against the decision.</li> </ul>
<b>h) Stage of the process:</b>
A decision is awaited by the 6th Federal Court on the refund of deadline for filing an appeal by Instituto Cidades.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The process may result in the annulment of the 3rd Amendment Award Report to the EFVM Concession Agreement. The annulment of the EFVM concession would result in relevant financial and operational impacts for Vale, as Vale would have to adopt a contractual alternative for the outflow of iron ore production.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of loss, Vale may sustain material financial and operational impacts, and shall be subject to re-discussing the conditions for the early extension of the EFVM Concession Agreement, in addition to insecurity regarding the acts related to the concession performed since 2021.

#### (iii) Environmental

<b>1. Public-Interest Civil Action no. 0027542-58.2019.8.08.0024</b>
<b>a) Court</b>
2 <sup>nd</sup> Municipal, State Public Finance Court, Public Registers, Environment and Health of Vitória/ES
<b>b) Instance:</b>
2 <sup>nd</sup> Municipal, State Public Finance Court, Public Registers, Environment and Health of Vitória/ES – 1st Instance
<b>c) Filed on:</b>
09/23/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Associação Juntos SOS ES Ambiental
Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Suspension of the environmental license of Vale's Tubarão Pelletizing Unit ("Tubarão Unit"). Collective moral damages of BRL 32,597,100.45 (updated by 09/30/2022).
<b>f) Main facts:</b>
In 2019, Associação Juntos SOS ES Ambiental filed a Public-Interest Civil Action against Vale, questioning the licensing of the expansion of Vale's Tubarão Pelletizing Unit and non-compliance with the Nox gas (nitrogen oxide) emission

#### 4.4. Relevant non-confidential processes

parameter outside supposedly applicable administrative rules. The Association requested the suspension of Vale's environmental licensing and resulting shutdown of activities at the Tubarão Unit.
<b>g) Summary of decisions on the merits rendered:</b>
On 10/19/2020, the 2nd Court rejected an injunction requesting the suspension of the environmental license of the Tubarão Pelletizing Unit.
<b>h) Stage of the process:</b>
After the production of evidence phase, the process is expected to be tried by the 2 <sup>nd</sup> Court.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The process could result in the shutdown of the Tubarão Pelletizing Unit if the environmental license is invalidated, with a relevant operational impact.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

<b>2. Public-Interest Civil Action no. 0013741-46.2017.8.08.0024</b>
<b>a) Court</b>
5 <sup>th</sup> Municipal, State Public Finance Court, Public Registers, Environment and Health of Vitória/ES
<b>b) Instance:</b>
5 <sup>th</sup> Municipal, State Public Finance Court, Public Registers, Environment and Health of Vitória/ES – 1st Instance
<b>c) Filed on:</b>
5/25/2017
<b>d) Parties to the process:</b>
Plaintiff(s): Associação Juntos SOS ES Ambiental Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Suspension of groundwater withdrawal from existing wells at the Tubarão/ES Operating Unit, with the potential to interrupt operations. Collective moral damages of BRL 13,240,001.32 (updated by 09/30/2022).
<b>f) Main facts:</b>
In 2017, Associação Juntos SOS ES Ambiental filed a Public-Interest Civil Action against Vale, in order to prevent the Company from continuing to explore groundwater, without first eliminating contamination allegedly existing in the artesian wells located in Tubarão/ES. In addition to requesting the suspension of exploration of artesian wells, the Association also requested that Vale present new analyses of the quality of water and carry out improvements in the treatment system.
<b>g) Summary of decisions on the merits rendered:</b>
On 09/22/2017, the 5th Court rejected a request for an injunction to suspend the exploration of artesian wells located in Tubarão/ES.
<b>h) Stage of the process:</b>
After the production of evidence phase, the process is expected to be tried by the 5 <sup>th</sup> Court.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The process may result in the shutdown of the Tubarão/ES Pelletizing Unit if exploration of the artesian wells becomes unfeasible, with a relevant operational impact. Additionally, the process may result in damage to Vale's image, due to possible correlation between the company's activities and damage to the health of people and communities.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

<b>3. Public-Interest Civil Action No. 0070320-92.2002.8.13.0317</b>
<b>a) Court</b>
1 <sup>st</sup> Civil Court of Itabira/MG
<b>b) Instance:</b>
1 <sup>st</sup> Civil Court of Itabira/MG – 1st Instance
<b>c) Filed on:</b>
08/22/1996
<b>d) Parties to the process:</b>
Plaintiff(s): Municipality of Itabira/MG. Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Indemnity for environmental and social damage in the amount of BRL 9,999,002,944.19.
<b>f) Main facts:</b>

**4.4. Relevant non-confidential processes**

<p>- In 1996, the Municipality of Itabira/MG filed a Public-Interest Civil Action against Vale, claiming that the operations of the iron mines in Itabira allegedly caused environmental and social damage. The Municipality requested an adverse judgment against Vale, ordering it to pay indemnity for environmental and social damages for the replenishment of the ecological, history, cultural and landscape complex, in particular that of Morro Cauê.</p> <p>- In the process, there is controversy between the parties over the use of an expert report prepared by company Velloso &amp; Gontijo Consultoria Empresarial S/C at the request of the City Government of the Municipality of Itabira for purposes of any quantification of the alleged damage. Based on the opinion report, Vale understands that the loss analysis should be broken down, as indicated in item (i) below.</p>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <p>- On 08/06/2021, the judge of the 2nd Civil Court of Itabira in the case record of process No. 0317.02.002977-1 decided that the expert report should not be used for evidence purposes, by virtue of its nullity due to alleged favoring to Vale. Vale filed an appeal against the decision.</p> <p>- On 09/23/2022, the TJMG judged the appeal filed by Vale, reversing the decision of the 2nd Court, declaring that the expert report can be used for the purpose of evidence in the present action</p>
<p><b>h) Stage of the process:</b></p> <p>After the production of evidence phase, the process is expected to be tried by the 1<sup>st</sup> Court.</p>
<p><b>i) If the chance of loss is: (likely, possible or remote)</b></p> <p>For indemnity of environmental and social damages, according to the technical opinion report presented by the Municipality of Itabira in the amount of BRL 657,246,583.44: Possible</p> <p>For indemnity of environmental and social damages, according to the technical opinion report presented by the Municipality of Itabira in the amount of BRL 9,341,756,361.54: Remote</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>The process involves claiming indemnity for environmental and social damages in the amount of BRL 9,999,002,944.19.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>Referencing it to the information's on item "j" above</p>

<p><b>4. Public-Interest Civil Action No. 0029748-94.2002.8.13.0317</b></p>
<p><b>a) Court</b></p> <p>2<sup>nd</sup> Civil Court of Itabira/MG</p>
<p><b>b) Instance:</b></p> <p>2<sup>nd</sup> Civil Court of Itabira/MG - 1st Instance</p>
<p><b>c) Filed on:</b></p> <p>09/26/1996</p>
<p><b>d) Parties to the process:</b></p> <p>Plaintiff(s): Municipality of Itabira/MG</p> <p>Defendant(s): Vale S.A.</p>
<p><b>e) Amounts, assets or rights involved:</b></p> <p>Indemnity for environmental damage in the amount of BRL 10,019,753,594.21.</p>
<p><b>f) Main facts:</b></p> <p>- In 1996, the Municipality of Itabira/MG filed a Public-Interest Civil Action against Vale, claiming that Vale had caused property damage to the Municipality due to the exploitation and subsequent closure of the exploitation of mineral resources. According to the Municipality, with the closure of Vale's activities, the Municipality bore the costs of infrastructure, services, health, education and housing for the people who had settled in the region on account of Vale, and that the mineral exploration charge paid by Vale had not properly reimbursed the Municipality's investments. The Municipality requested an adverse judgment against Vale, ordering it to pay the indemnity of civil damages in the amount of BRL 10,019,753,594.21.</p> <p>- In the process, there is controversy between the parties over the use of an expert report prepared by company Velloso &amp; Gontijo Consultoria Empresarial S/C at the request of the Municipality for purposes of any quantification of the alleged damage. Based on the opinion report, Vale understands that the loss analysis should be broken down, as indicated in item (i) below.</p>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <p>- On 06/22/2021, the 2nd Court decided on the impossibility of precluding the production of expert evidence by the Municipality. Vale filed an appeal against this decision.</p> <p>- On 12/16/2021, the TJMG dismissed Vale's appeal, upholding the decision of the 2nd Court. Vale filed an appeal with the STJ against the decision of the TJMG, which is still pending judgment.</p>
<p><b>h) Stage of the process:</b></p> <p>Awaiting judgment by the STJ of Vale's appeal against the TJMG's decision. The process is suspended until the decision of the STJ.</p>
<p><b>i) If the chance of loss is: (likely, possible or remote)</b></p> <p>For indemnity of environmental damage in the amount of BRL 1,528,023,902.56: Possible</p> <p>For indemnity of environmental damage in the amount of BRL 8,491,729,691.65: Remote</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>The process involves claiming indemnities in the amount of BRL 10,019,753,594.21.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>Referencing it to the information's on item "j" above</p>

**4.4. Relevant non-confidential processes**

#### 4.4. Relevant non-confidential processes

<b>5. Public-Interest Civil Action No. 5154226-70.2017.8.13.0024</b>
<b>a) Court</b>
1 <sup>st</sup> State Public Finance Court and Instrumentalities of Belo Horizonte/MG
<b>b) Instance:</b>
1 <sup>st</sup> State Public Finance Court and Instrumentalities of Belo Horizonte/MG – 1st Instance
<b>c) Filed on:</b>
10/01/2017
<b>d) Parties to the process:</b>
<u>Plaintiff(s)</u> : Prosecution Office of Minas Gerais (MP-MG)
<u>Defendant(s)</u> : Vale S.A. and State of Minas Gerais
<b>e) Amounts, assets or rights involved:</b>
Rights involving the implementation of the Dam Maravilhas III of the Vargem Grande Mine Complex ("Dam Maravilhas III"), located in the Municipality of Nova Lima/MG.
<b>f) Main facts:</b>
In 2017, the MP-MG filed a Public-Interest Civil Action against Vale and the State of Minas Gerais, requesting that the State of Minas Gerais did not grant environmental licenses for the construction and implementation of the Dam Maravilhas III, and that Vale be prohibited from performing any act related to the implementation of the Dam Maravilhas III.
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 11/10/2017, the 1st Court granted an injunction, determining that Vale refrained from deploying the Dam Maravilhas III.</li> <li>- On 11/29/2017, the 1st Court revoked the injunction, allowing Vale to continue the implementation of the Dam Maravilhas III. The MP-MG filed several appeals to the TJMG, against the decision of the 1st Court.</li> <li>- The TJMG rejected the appeals filed by the MP-MG, upholding the decision of the 1st Court, allowing the implementation of the Dam Maravilhas III.</li> </ul>
<b>h) Stage of the process:</b>
Awaiting judgment of the process by the 1st Court.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
In the event of shutdown of activities at the Dam Maravilhas III, which is essential for the continuity of operations at the Vargem Grande Mine Complex, Vale could sustain a significant operational impact.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above
<b>6. Public-Interest Civil Action No. 0119078-42.2018.8.13.0188 (5021728-34.2022.8.13.0024 new number)</b>
<b>a) Court</b>
2nd Civil Court of Nova Lima/MG
<b>b) Instance:</b>
1st Court of the Public Treasury and Government Agencies of the Court District of Belo Horizonte – 1st Instance
<b>c) Filed on:</b>
10/20/2018
<b>d) Parties to the process:</b>
<u>Plaintiff(s)</u> : Prosecution Office of Minas Gerais ("MP-MG").
<u>Defendant(s)</u> : Vale S.A. and State of Minas Gerais
<b>e) Amounts, assets or rights involved:</b>
Rights involving the implementation and operation of the Dams Maravilhas II and III of the Vargem Grande Mine Complex (Dams Maravilhas II and III), located in the Municipality of Nova Lima/MG. Obligation to take structural safety measures.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- In 2018, the MP-MG filed a Public-Interest Civil Action against Vale and the State of Minas Gerais, requesting that the State of Minas Gerais did not grant environmental licenses for the construction of the Dam Maravilhas III, and operation of the Dams Maravilhas II and III, and that Vale be prohibited from taking safety measures in the structures.</li> <li>- In 2021, the TJMG determined the meeting in connection with the Public-Interest Civil Action of this item with Public-Interest Civil Action No. 5154226-70.2017.8.13.0024 (process indicated in item 5), and determined the adoption of the new numbering of the Judicial District of BH: 5021728-34.2022.8.13.0024.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
- On 10/08/2018, the 2nd Court granted an injunction, determining: (i) preparation of an Emergency Action Plan for the projects Maravilhas II and III; (ii) preparation of Safety Plan for Dams of the projects Maravilhas II and III; (iii) immediate communication to the competent bodies of any situation of elevation/increase of risk of rupture of the tailings containment structures; (iv) refraining from releasing tailings into dams. In case of non-compliance with the decision, Vale is subject to a daily fine in the amount of BRL 100,000.00, up to a limit of BRL 50,000,000.00. Vale filed an appeal with the Court of Appeals of the State of Minas Gerais (TJMG) against the decision of the 2nd Court.



#### 4.4. Relevant non-confidential processes

<p>– On 10/11/2018, in Vale's appeal, the TJMG partially suspended the injunction regarding requests "i", "ii", "iv", establishing that the effects of the TJMG's decision must be in force until the res judicata of the final decision of the process.</p> <p>– On 02/22/2020, the TJMG determined the meeting of this process with ACP 5154226-70.2017.8.13.0024 (process listed in item 5 above) by connection, receiving the new numbering referring to the Judicial District of BH, namely: 5021728-34.2022.8.13.0024.</p>
<p><b>h) Stage of the process:</b></p> <p>After the production of evidence phase, the process is expected to be tried by the 1<sup>st</sup> State Public Finance Court and Instrumentalities of Belo Horizonte/MG.</p>
<p><b>i) If the chance of loss is: (likely, possible or remote)</b></p> <p>Possible</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>In the event of shutdown of activities at the Dam Maravilhas II and III, which is essential for the continuity of operations at the Vargem Grande Mine Complex, Vale could sustain a significant operational impact.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>Referencing it to the information's on item "j" above</p>
<p><b>7. Public-Interest Civil Action No. 1020547-27.2020.4.01.3800 (new number 5039689-51.2023.8.13.0024)</b></p>
<p><b>a) Court</b></p> <p>21st Federal Civil Court of Belo Horizonte/MG</p>
<p><b>b) Instance:</b></p> <p>21st Federal Civil Court of Belo Horizonte/MG – 1st Judicial Instance</p>
<p><b>c) Filed on:</b></p> <p>06/02/2020</p>
<p><b>d) Parties to the process:</b></p> <p><u>Plaintiff(s)</u>: Associação dos Proprietários de Passárgada – ASPAS  <u>Defendant(s)</u>: Vale S.A., Brazil's National Mining Agency ("ANM") and State of Minas Gerais</p>
<p><b>e) Amounts, assets or rights involved:</b></p> <p>Suspension of operating licenses for the Mar Azul, Tamanduá and Capão Xavier mines, located in Nova Lima/MG.</p>
<p><b>f) Main facts:</b></p> <p>In 2020, ASPAS – Associação dos Proprietários de Passárgada filed a Public-Interest Civil Action against Vale, ANM and the State of Minas Gerais, requesting: (i) annulment of the mining and environmental licenses of the Mines of Mar Azul, Tamanduá and Capão Xavier; (ii) annulment of the environmental authorization that allegedly excluded contaminating metals from the monitoring of water quality in Fechos; (iii) adverse judgment against Vale, ordering it to execute Closure Plans of said mines; (iv) measures for testing and reparation of alleged contamination in residents around Ribeirão dos Macacos; (v) adverse judgment against Vale, ordering it to pay material and moral damages to the affected residents.</p>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <p>– On 06/22/2020, the 21st Federal Court considered that the Federal Court had no jurisdiction to judge the process due to the matter involved. ASPAS filed an appeal to the Regional Federal Court of the 1st Region (TRF-1).  – On 04/08/2022, TRF1 upheld the decision of the 21st Federal Court and ordered the submission of the process to the State Justice.</p>
<p><b>h) Stage of the process:</b></p> <p>Awaiting submission of the process to State Justice, for processing and judgment.</p>
<p><b>i) If the chance of loss is: (likely, possible or remote)</b></p> <p>Possible</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>In the event of shutdown of activities at Minas Mar Azul, Tamanduá and Capão Xavier, Vale could sustain a material operational impact. Furthermore, Vale can be assigned obligations to carry out environmental and area contamination studies, reparation environmental damage and recovery of degraded areas.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>Referencing it to the information's on item "j" above</p>
<p><b>8. Public-Interest Civil Action No. 5000818-88.2020.8.13.0239</b></p>
<p><b>a) Court</b></p> <p>Single Court of Entre-Rios de Minas/MG</p>
<p><b>b) Instance:</b></p> <p>Single Court of Entre-Rios de Minas/MG – 1st Instance</p>
<p><b>c) Filed on:</b></p> <p>09/22/2020</p>
<p><b>d) Parties to the process:</b></p> <p><u>Plaintiff(s)</u>: Municipality of Jeceaba  <u>Defendant(s)</u>: Vale S.A.</p>
<p><b>e) Amounts, assets or rights involved:</b></p> <p>Suspension of the operation of Dam 7 at the Viga Mine, located in the Municipalities of Jeceaba/MG and Entre Rios de Minas/MG.</p>

#### 4.4. Relevant non-confidential processes

Indemnity for collective moral damages in the amount of BRL 731,729,157.79.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- In 2020, the Municipality of Jeceaba filed a Public-Interest Civil Action against Vale, requesting an adverse judgment against the Company, ordering it to: (i) stop discharging tailings at Dam 7, belonging to the Viga Mine, without the issuance of the respective Location and Operating Permit; and (ii) not carry out works on Dam 7 without the issuance of the relevant Construction Permit. Additionally, it required the suspension of Vale's activities, until safety measures are taken to protect human lives and the environment. The Municipality also requested an adverse judgment against Vale, ordering it to pay collective moral damages in the amount of BRL 500,000,000.00.</li> <li>- In 2021, Vale signed a partial agreement with the Municipality of Jeceaba, committing to take various safety measures at Dam 7, with the Municipality issuing a construction permit in return for the performance of such interventions in the structure. The process continues in relation to the Operating Permit and other requests from the City Government.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 09/24/2020, the Single Court granted an injunction, determining the shutdown of Vale's activities at Dam 7.</li> <li>- On 11/26/2021, the Single Court ratified the agreement between Vale and the Municipality of Jeceaba regarding the works to increase the structure and issuance of the respective Construction Permit, remaining the judicial dispute in relation to the other requests of the municipality contained in item f above.</li> </ul>
<b>h) Stage of the process:</b>
After the production of evidence phase, the process is expected to be tried by the Single Court.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
In the event of shutdown of operations in the Viga Mine, Vale could sustain a material operational impact.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of loss, Vale could sustain a material operational impact as a result of the shutdown of operations in the Viga Mine. Moreover, Vale may incur financial costs arising from the payment of collective moral damages.

<b>9. Public-Interest Civil Action No. 5170520-61.2021.8.13.0024</b>
<b>a) Court</b>
1st Court of the Public Treasury and Government Agencies of the Court District of Belo Horizonte
<b>b) Instance:</b>
1st Court of the Public Treasury and Government Agencies of the Court District of Belo Horizonte – 1st Instance
<b>c) Filed on:</b>
03/12/2021
<b>d) Parties to the process:</b>
Plaintiff(s): NGO Abrace a Serra da Moeda
Defendant(s): Vale S.A., Ferrous Resources do Brasil S.A. ("Ferrous" succeeded by Vale by merger), the Brazil's National Mining Agency ("ANM"), and the State of Minas Gerais
<b>e) Amounts, assets or rights involved:</b>
Cancellation of licenses for the Serrinha Mine, located in the municipality of Brumadinho/MG.
<b>f) Main facts:</b>
In 2021, the NGO Abrace a Serra da Moeda filed a Collective Civil Action against Vale, Ferrous, ANM and the State of Minas Gerais, due to the granting of Simplified Environmental Licensing – Simplified Environmental Report (LAS/RAS) No. 44/2020 to Ferrous on April 29, 2020 for the reuse of iron ore fines at the Serrinha Mine, which exempted Vale from (i) licensing the tailings dam, and (ii) submitting the EIA/RIMA and plan for recovering the degraded area, closing the Serrinha Mine, or emergency in case of collapse of dams.
<b>g) Summary of decisions on the merits rendered:</b>
- On 04/09/2021, the 1st Court rejected the injunction requested by the NGO Abrace a Serra da Moeda.
<b>h) Stage of the process:</b>
After the production of evidence phase, the process is expected to be tried by the 1 <sup>st</sup> Court.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
In the event of annulment of licenses and shutdown of operations in the Serrinha Mine, Vale could sustain a material operational impact.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

<b>10. Public-Interest Civil Action No. 0026295-47.2012.4.01.3700</b>
<b>a) Court:</b>
8 <sup>th</sup> Federal Court of São Luís/MA
<b>b) Instance:</b>
8 <sup>th</sup> Federal Court of São Luís/MA – 1st Instance
<b>c) Filed on:</b>
07/22/2012

#### 4.4. Relevant non-confidential processes

<b>d) Parties to the process:</b>
<u>Plaintiff(s)</u> : Sociedade Maranhense de Direitos Humanos, Conselho Indigenista Missionário (CIMI), Centro de Cultura Negra do Maranhão – CNN
<u>Defendant(s)</u> : Vale S.A. and IBAMA
<b>e) Amounts, assets or rights involved:</b>
Shutdown of the operation of Expansion of the Carajás Railroad (EFC), and the resulting impact on the outflow of ore production from the S11D Project, located in Pará, with an inestimable financial impact
<b>f) Main facts:</b>
– In 2012, Sociedade Maranhense de Direitos Humanos, Conselho Indigenista Missionário (CIMI), Centro de Cultura Negra do Maranhão – CNN filed a Public-Interest Civil Action against Vale, requesting the suspension of the licensing process of the EFC Expansion. The plaintiffs claimed that the environmental licenses granted by IBAMA were based on an environmental study that did not sufficiently analyze the global impacts generated by the work, with the environmental licenses having been unduly fragmented, in order to distort Vale's obligation to promote proper environmental compensation and proportional to the project.
– In 2017, the EFC expansion works were completed.
<b>g) Summary of decisions on the merits rendered:</b>
– On 07/26/2012, the 8th Federal Court granted an injunction, by determining the suspension of all the works and activities related to the expansion of the Carajás Railroad of Vale.
– On 9/13/2012, on appeal by Vale and IBAMA, the Regional Federal Court of the 1st Region ("TRF1"), decided to suspend the injunction.
– On 09/15/2014, the 8th Federal Court rejected the request for injunction for IBAMA and Vale to submit organizational documents for the licensing process for the EFC expansion.
<b>h) Stage of the process:</b>
After the production of evidence phase, the process is expected to be tried by the 8 <sup>th</sup> Federal Court.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
In case of suspension of the Carajás Railroad Expansion operation, Vale could suffer a relevant operational impact.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

<b>11. Public-Interest Civil Action No. 1059046-89.2020.4.01.3700</b>
<b>a) Court:</b>
8th Federal Court of São Luís – Judicial District of Maranhão
<b>b) Instance:</b>
8th Federal Court of São Luís – Judicial District of Maranhão – 1st Instance
<b>c) Filed on:</b>
12/14/2020
<b>d) Parties to the process:</b>
<u>Plaintiff(s)</u> : Federal Prosecution Office ("MPF")
<u>Defendant(s)</u> : Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Indemnity for alleged environmental damage caused by the sinking of a ship chartered by Vale to transport ore, in addition to reimbursement of expenses by the Government.
<b>f) Main facts:</b>
In 2020, the MPF filed a Public-Interest Civil Action against Vale, requesting an adverse judgment against Vale, ordering it to pay indemnity for alleged environmental damage caused by the sinking, which occurred in June 2020 off the coast of Maranhão, of the iron ore carrier MV Stellar Banner, flying the flag of the Marshall Islands, chartered by Vale to Polaris Shipping Co. Ltda, which had departed from the Ponta da Madeira Maritime Terminal bound for Qingdao, China, loaded with approximately 295 Mt of iron ore produced by Vale. Additionally, the MPF requested the reimbursement of expenses incurred by the Government with the ship's salvage operation.
<b>g) Summary of decisions on the merits rendered:</b>
There are no relevant decisions on the merits.
<b>h) Stage of the process:</b>
The start of the evidence production phase is awaited.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process could result in damage to Vale's image, due to the possibility of linking Vale to the waste and oil leakage into the ocean, as well as unknown financial impact.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of loss, Vale could suffer a relevant reputational impact, due to a possible correlation between Vale and the waste and oil leakage into the ocean. Moreover, Vale could sustain a financial impact, resulting from the payment of indemnity for environmental damages of inestimable value.

**4.4. Relevant non-confidential processes**

#### 4.4. Relevant non-confidential processes

<b>12. Public-Interest Civil Action No. 0002383-85.2012.4.01.3905</b>
<b>a) Court:</b> Single Federal Court of Redenção/PA
<b>b) Instance:</b> Single Federal Court of Redenção/PA – 1st Instance
<b>c) Filed on:</b> 05/28/2012
<b>d) Parties to the process:</b> Plaintiff(s): Federal Prosecution Office (MPF) Defendant(s): Vale S.A., National Indigenous Foundation (“FUNAI”), and State of Pará Assistant Co-Parties: Kakarekre Indigenous Association of Defense of the Xikrin People of the Djudjeko, Tuto Pombo Indigenous Association, Porekro Indigenous Association of Defense of the Xikrin People of the Cateté, Pore Kayapó Indigenous Association, Bayprã Indigenous Association of Defense of the Xikrin People of the Oodja
<b>e) Amounts, assets or rights involved:</b> Suspension of nickel extraction at the Onça Puma Mine, located in the Municipality of Ourilândia do Norte/PA Indemnity for material and moral damages of inestimable value.
<b>f) Main facts:</b> – In 2012, the MPF filed a Public-Interest Civil Action against Vale, the State of Pará and FUNAI, seeking the suspension of nickel extraction operations at the Onça Puma Mine, due to the alleged impact on the indigenous communities of Xikrin do Cateté and Kayapó. – In 2021, Vale and the Xikrin Indigenous Community entered into a global agreement for the dismissal of all lawsuits to which they were party. – In 2022, Vale and the Kayapó Indigenous Community entered into a global agreement for the dismissal of all lawsuits to which they were party. With the signing of the agreements, two amounts of monthly allowance were established, namely: BRL 1.7 million for the Xikrin Indigenous Community of TI Cateté, and BRL 1.5 million for the Kayapó Indigenous Community. – In 2022, VALE and the Public Prosecutor's Office in Redenção (PR-RDO), as a member of the MPF, resumed negotiations to build a possible conciliation on requests of an environmental nature. – In 2022, Vale requested the extension of the suspension of the process due to the negotiations with the MPF to conclude an agreement that ends the discussions involving the environmental aspects of the process.
<b>g) Summary of decisions on the merits rendered:</b> – On 10/18/2012, the Unique Federal Court rejected the request for an injunction claimed by the MPF, for the suspension of Nickel extraction activities at the Onça Puma Mine. – On 06/02/015, after an appeal by the MPF, the Unique Federal Court accepted the MPF's request, determining that Vale should deposit BRL400,000.00 monthly, to be distributed proportionally among the villages that make up the Xikrin IL. – On 07/14/2015, on appeal by the MPF, the Regional Federal Court of the First Region (TRF-1) granted an injunction, and determined the increase in Vale's monthly deposit obligation to BRL 1,000,000.00 per village affected by the project, as well as the immediate shutdown of operations at the Onça Puma Mine. – On 09/16/2019, after several appeals filed by the parties and decisions to suspend and release activities at the Onça Puma Mine, the President of the Federal Supreme Court (STF) decided to fully release the operation of Vale's project at the Onça Puma Mine, as well as the survey by the Xikrin of the values deposited by Vale in a judicial account throughout the process. – On 03/04/2022, the Federal Single Court ratified in full the agreement entered into with the Xikrin, starting the implementation of the established actions. – On 10/10/2022, the Federal Single Court ratified in full the agreement entered into with the Kayapó, starting the implementation of the established actions.
<b>h) Stage of the process:</b> A decision is awaited by the Federal Single Court on the request for an extension of the suspension of the process filed by Vale, so that the negotiation and execution of an agreement between Vale and the MPF on the requests of an environmental nature involved in the process is feasible. If there is no agreement, the judgment of the case by the Federal Single Court is expected after the production of evidence phase.
<b>i) If the chance of loss is: (likely, possible or remote):</b> For requests of an environmental nature: Possible For requests of a socioeconomic nature: Remote, as a result of the conclusion and judicial approval of agreements with the beneficiary indigenous communities
<b>j) Reason why the process is considered relevant:</b> If operations at the Onça Puma Mine are suspended, Vale could suffer a material operational impact. It may also be ordered to indemnify environmental damage, of inestimable value.
<b>k) Analysis of the impact in case of losing the process:</b> Referencing it to the information's on item “j” above
<b>13 Public-Interest Civil Action No. 1000305-06.2018.4.01.3901</b>
<b>a) Court:</b> 2 <sup>nd</sup> Federal Civil Court of the Judiciary Subsection of Marabá/PA
<b>b) Instance:</b>

#### 4.4. Relevant non-confidential processes

2 <sup>nd</sup> Federal Civil Court of the Judiciary Subsection of Marabá – 1st Instance
<b>c) Filed on:</b> 07/10/2018
<b>d) Parties to the process:</b> <u>Plaintiff(s)</u> : Associação Indígena Bayaprã de Defesa do Povo Xikrin do O–Odjá, Associação Indígena Kakarekré de Defesa do Povo Xikrin do Djudjekô, Associação Indígena Porekrô de Defesa do Povo Xikrin do Cateté and Associação Bebô Xikrin do Bacajá <u>Defendant(s)</u> : Vale S.A., SALOBO METAIS S. A. (SALOBO), Federal Government, Fundação Nacional do Índio (FUNAI), Instituto Brasileiro do Meio Ambiente e Recursos Naturais Renováveis (IBAMA), Instituto Chico Mendes de Conservação da Biodiversidade (ICMBIO), Instituto do Patrimônio Histórico e Artístico Nacional (IPHAN), Agência Nacional de Mineração (ANM) and Banco Nacional de Desenvolvimento Econômico e Social (BNDES)
<b>e) Amounts, assets or rights involved:</b> Shutdown of the operations of the Salobo Mine, located in the Municipality of Marabá/PA Indemnity in the amount equivalent to five (05) minimum wages per month, per indigenous member of the applicant indigenous community, until the end of the project. Value attributed to the case by the court of BRL 2,000,000,000.00.
<b>f) Main facts:</b> – In 2018, the Indigenous Associations filed a Public-Interest Civil Action against Vale and other defendants, requesting (i) the suspension of the Salobo Mine Operating License and the shutdown of the mine operations; (ii) that Vale should carry out an Indigenous Component Study (ECI) of the Salobo project; (iii) that Vale compensates the indigenous people in the allegedly affected areas. – In 2020, the process was suspended for dialogue and discussions on an agreement between Vale and the Xikrin Indigenous Community that ended all actions in which Vale and the associations that represent it are part of the process. – In 2021, upon Vale's application, the 2nd Federal Civil Court suspended due to negotiations of an agreement with the MPF and Indigenous Associations within the scope of Public-Interest Civil Action 002383–85.2012.4.01.3905 (described in item 12 above). – In 2021, Vale and the Xikrin Indigenous Community entered into a global agreement for the dismissal of all lawsuits to which they were party.
<b>g) Summary of decisions on the merits rendered:</b> – On 06/19/2019, the 2nd Federal Civil Court rejected requests for injunctions to suspend Vale's operations at the Salobo Mine and for Vale's obligation to pay the monthly amount, and decided that Salobo and Vale should carry out the Indigenous Component Study (ECI), to assess the existence or otherwise of the project's impacts on the Xikrin do Cateté Indigenous Land ("TI"). – On 06/08/2022, the 2nd Civil Court ratified the agreement entered into between the parties, and, consequently, extinguished the action with judgment on the merits in relation to the Xikrin Indigenous Community of TI Cateté. In the same decision, the court dismissed the process without judgment on the merits in relation to the Xikrin Indigenous Association of the Trincadeira Bacajá TI. The Xikrin do Bacajá Indigenous Community filed an appeal against the decision with the Regional Federal Court of the First Region ("TRF-1").
<b>h) Stage of the process:</b> Judgment is awaited by the TRF-1 of the appeal filed by the Xikrin Indigenous Association of the Trincadeira Bacajá TI, against the decision that dismissed the process without judgment on the merits.
<b>i) If the chance of loss is: (likely, possible or remote):</b> Possible
<b>j) Reason why the process is considered relevant:</b> In the event of suspension of operations in the Salobo Mine, Vale could sustain a material operational impact. It may also be ordered to indemnify material and moral damages, of inestimable value.
<b>k) Analysis of the impact in case of losing the process:</b> Referencing it to the information's on item "j" above

<b>14. Public-Interest Civil Action No. 0008974–12.2013.4.02.5001 (5036954–20.2022.8.08.0024)</b>
<b>a) Court</b> 5 <sup>th</sup> State Court of the Treasury, City, Public Registers, Environment and Health of the Judicial District of Vitória/ES
<b>b) Instance:</b> 5 <sup>th</sup> State Court of the Treasury, City, Public Registers, Environment and Health of the Judicial District of Vitória/ES – 1st Instance
<b>c) Filed on:</b> 09/19/2013
<b>d) Parties to the process:</b> <u>Plaintiff(s)</u> : Eraylton Moreschi Junior <u>Defendant(s)</u> : Arcelormittal Brasil S.A. and Vale S.A.
<b>e) Amounts, assets or rights involved:</b> Indemnity to the Unified Health System (SUS) for excessive disbursements in the treatment of respiratory and cardiovascular diseases due to air pollution in Major Vitória/ES in the amount of BRL 284,490,876.00 (updated until 02/28/2023).
<b>f) Main facts:</b>

#### 4.4. Relevant non-confidential processes

In 2013, Mr. Eraylton Moreschi Junior filed a Public-Interest Civil Action against Vale and Arcelor, questioning the emission of particulates and industrial gases in the air in the region of Major Vitória/ES, allegedly generating excessive costs for SUS due to the treatment of respiratory and cardiovascular diseases in the region's residents. The plaintiff requested an adverse judgment against Vale and Arcelor in the amount of one hundred million reais (BRL 100,000,000.00) in history and estimated values, also requiring a technical inspection.
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 01/13/2014, the 4th Federal Civil Court of Vitória/ES declared lack of jurisdiction of the Federal Court to judge the action, assigning the process to the State Court. Mr. Eraylton Moreschi Junior appealed to the Court of Appeals of Espírito Santo ("TJES") against this decision.</li> <li>- On 01/16/2022, the Second Panel of the Federal Supreme Court confirmed the decision of the 4th Federal Civil Court and assigned the process to the State Justice.</li> </ul>
<b>h) Stage of the process:</b>
Awaiting the defense by Vale, which was summoned on 03/09/2023 to file a defense to the State Justice.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The process could result in damage to Vale's image, due to the possibility of linking Vale's operation in Tubarão to respiratory and cardiovascular diseases of inhabitants of the region, in addition to potential inestimable financial impact.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

#### (iv) Labor

<b>1. Public-Interest Civil Action No. 0126600-17.2006.5.03.0012</b>
<b>a) Court:</b>
12th Labor Court of Belo Horizonte/MG
<b>b) Instance:</b>
Superior Labor Court ("TST") – Superior Court
<b>c) Filed on:</b>
11/27/2006
<b>d) Parties to the process:</b>
<u>Plaintiff(s):</u> Labor Prosecution Office of Minas Gerais (MPT-MG)
<u>Defendant(s):</u> Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Vale's right to outsource core activities in the State of Minas Gerais. Collective moral damages.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- In 2006, MPT-MG filed a Public-Interest Civil Action against Vale, for the purpose of declaring the outsourcing of the following services illegal: (i) operation of machinery and equipment intended for mining, such as wheel loader, excavator and drill; (ii) monitoring and reading of instruments in tailings dams and waste dumps; and (iii) preparation and execution of a blasting plan (blasting) ("<u>Services</u>"), and consequently prohibiting Vale from outsourcing them. Additionally, the MPT-MG requested that Vale be ordered to pay collective moral damages on the grounds that it understood that such outsourcing would not only harm the worker, but also the legal system.</li> <li>- In 2018, Vale requested the TST to recognize the loss of the object of the action, due to the enactment of Laws 13,429/2017 and 13,467/2017 (Labor Reform), which started to authorize the outsourcing of core activities. Since 09/10/2018, the process remains suspended by decision of the TST, due to the judgment by the STF in ADPF No. 324, which addresses the constitutionality of the Labor Reform.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 08/20/2009, the 12th Labor Court upheld the action, declaring the outsourcing of Services in the State of Minas Gerais to be illegal, prohibiting it from outsourcing them and establishing a daily fine of BRL 1,000.00 per outsourced worker. In addition, it handed down an adverse judgment against Vale, ordering it to pay collective moral damages in the amount of BRL 100,000.00 in favor of the Fundo de Amparo ao Trabalhador (FAT).</li> <li>- On 02/22/2010, on appeals filed by Vale and MPT-MG, the Regional Labor Court of the 3rd Region (TRT-3) upheld the lower court's decision on the merits of the action. In addition, it ordered Vale to immediately comply with the decision of the 12th Labor Court, ceasing to outsource the Services. Vale filed an appeal with TST against the decision, which is pending judgment. In turn, the MPT-MG requested the 12th Labor Court to impose a fine on Vale in the amount of BRL 968,797.34, as it understood that, by appealing of the decision, Vale would be failing to comply with its decision.</li> <li>- On 09/10/2018, on appeal by Vale, the TST suspended the TRT-3 decision that had determined immediate compliance with the decision of the 12th Labor Court. The TST is awaiting a decision by the STF under ADPF No. 324, which addresses the constitutionality of the Labor Reform implemented by Laws 13,429/17 and 13,467/17.</li> </ul>
<b>h) Stage of the process:</b>
Judgment by the STF is awaited under ADPF No. 324, which addresses the constitutionality of the Labor Reform. Next, the TST shall judge Vale's appeal against the TRT-3 decision.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Request for declaration of illegality and prohibition of outsourcing the Services: remote

#### 4.4. Relevant non-confidential processes

Request for adverse judgment, ordering it to pay collective moral damages: Remote
<b>j) Reason why the process is considered relevant:</b>
The ban on outsourcing in the State of Minas Gerais would force Vale to hire its own employees for the Services, generating a relevant operational impact.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of loss, Vale could sustain a material operational impact. Additionally, Vale may incur financial costs for the payment of collective moral damages.

<b>2. Public-Interest Civil Action No. 0001698-92.2014.5.03.0179</b>
<b>a) Court:</b>
41st Labor Court of Belo Horizonte/MG
<b>b) Instance:</b>
Federal Supreme Court (STF) – Superior Court
<b>c) Filed on:</b>
06/04/2014
<b>d) Parties to the process:</b>
Plaintiff(s): Sindicato dos Trabalhadores em Empresas Ferroviárias de BH (STEFBH) – Railroad Workers' Union of BH Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Vale's right to use a single driver system (one train driver per locomotive). Indemnity for labor sums in the amount of BRL 5,664,143.31] (updated until 09/30/2022). Collective moral damages in the amount of BRL 1,212,354.69 (updated until 09/30/2022). Individual moral damages in the amount of BRL 3,297,604.76 for lack of proper health conditions.
<b>f) Main facts:</b>
On 06/04/2014, STEFBH filed a Public-Interest Civil Action against Vale, requesting an adverse judgment against Vale, ordering it to replace the single driver system (one train driver per locomotive) with a dual driver system (two train drivers per locomotive) in ore railroad transport, and provide better health conditions for train drivers in charge of this transport. Additionally, the STEFBH requested an adverse judgment against Vale, ordering it to pay various labor sums in favor of the train drivers, as well as the payment of indemnity for collective moral damages.
<b>g) Summary of decisions on the merits rendered:</b>
– On 12/05/2014, the 41st Labor Court of Belo Horizonte/MG dismissed the request to replace the single-drive system with the dual-drive system, for collective and individual moral damages, but ordered Vale to pay labor compensation sums in the amount of BRL 30,000.00 – On 06/22/2015, on appeals filed by Vale and STEFBH, the Regional Labor Court of the 3rd Region (TRT-3) overturned the decision of the 41st Labor Court of Belo Horizonte/MG, ordering Vale to replace the single-drive system with the dual-drive system, and to pay installments falling due for obligations to pay interval overtime. TRT-3 also ordered Vale to pay indemnity for individual moral damages in the amount of BRL 10,000.00 for each worker, and indemnity for collective moral damages in the amount of BRL 500,000.00, to be reverted to the Fundo de Amparo ao Trabalhador. Vale filed an appeal with the TST against the decision. – On 10/20/2017, on appeal by Vale, the TST upheld the TRT-3 decision. Vale filed an appeal with STF against the decision, which is pending judgment.
<b>h) Stage of the process:</b>
Judgment of Vale's appeal by the STF is pending.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Request for replacement of the single-drive system with the dual-drive system: Likely. Labor indemnity claims: Remote Claims for indemnity for individual moral damages: Possible Claims for indemnity for collective moral damages: Likely
<b>j) Reason why the process is considered relevant:</b>
Vale may be required to adopt the dual-driver system for ore transport, with relevant operational impact. In addition, Vale may suffer financial impact arising from adverse judgments, ordering it to pay labor sums and individual and collective moral damages.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

<b>3. Public-Interest Civil Action No. 0000184-50.2022.5.08.0126</b>
<b>a) Court:</b>
2nd Labor Court of Parauapebas/PA
<b>b) Instance:</b>
2nd Labor Court of Parauapebas - 1st Instance
<b>c) Filed on:</b>
03/10/2022
<b>d) Parties to the process:</b>
Plaintiff(s): Labor Prosecution Office of the State of Pará (MPT-PA) Defendant(s): Vale S.A.



#### 4.4. Relevant non-confidential processes

<b>e) Amounts, assets or rights involved:</b>
Moral damages in the amount of 363,372,230.80 (updated until March 2023), due to the exposure of workers in the Self-Rescue Zone of the Carajás project. Obligation to take various safety measures to protect the life and physical integrity of workers in the Self-Rescue Zone of the Downstream Pera Dam.
<b>f) Main facts:</b>
- In 2022, as a result of an administrative procedure (IC No. 000022.2019.08.002/7), the MPT-PA filed a Public-Interest Civil Action against Vale, aimed at preventing workers from staying in the Self-Rescue Zone of the Downstream Pera Dam, from the Serra Norte Mine, in Pará. The MPT-PA also requested that several other safety measures be adopted to protect the life and physical integrity of workers, in addition to handing down an adverse judgment against Vale, ordering it to pay indemnity for collective moral damages in the amount of BRL 293,500,000.00, as a result of exposure of workers in the Self-Rescue Zone of the Carajás project of the Downstream Pera Dam. The parties entered into agreements on the taking of safety measures to protect the life and physical integrity of workers in the Self-Rescue Zone of the Downstream Pera Dam, and collective moral damages amounting to five million reais (BRL 5,000,000.00), without such payment constituting the recognition of collective moral damage.
<b>g) Summary of decisions on the merits rendered:</b>
- On 06/29/2022, the first partial agreement between Vale and MPT-PA was signed and ratified, through which Vale undertook to fulfill various obligations of do's and don'ts, including: (i) performance of safety training for workers; (ii) fulfillment of obligations set forth in the Regular Inspection and Safety Report (RISR) on the performance of works and services; (iii) installation of an alarm system, sirens and other warning mechanisms, ensuring immediate awareness by workers in case of emergency; (iv) maintenance and updating of the Emergency Action Plan for Mining Dams (PAEBM), in addition to assuring its dissemination to workers and other stakeholders and checking its compliance; (v) inspection of compliance with the Safety Plan; (vi) preparation and disclosure of the traffic routing system; (vii) control of access to the Self-Rescue Zone; (viii) availability of transportation, including in emergencies; (ix) monitoring of the Dam structures; (x) adoption of several other control and safety measures for the Downstream Pera Dam and workers. - On 09/21/2022, a new partial agreement between the parties was signed and judicially ratified, whereby Vale undertook to: (i) prevent the permanence of workers in the ZAS – Self-Rescue Zone of the Downstream Pera Dam, except those necessary for the operation and maintenance of the Dam and its structures; (ii) install a deflector barrier that will exclude certain structures from the Self-Rescue Zone. In the event of non-compliance with any of these obligations, Vale will also be subject to the payment of a fine of BRL 50,000.00 per obligation not complied with. - On 02/09/2023, Vale and MPT-PA signed a new agreement addressing collective moral damages. Vale paid the amount of BRL 5 million, without acknowledging the occurrence of collective moral damage.
<b>h) Stage of the process:</b>
Process at the filing phase, considering that Vale and MPT-PA signed agreements on the entire subject matter of the action.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Fine due to possible non-compliance with the obligation to do provided for in the agreement: Possible Collective moral damages BRL 5,000,000.00: Likely. Collective moral damages BRL 363,372,230.80: Remote.
<b>j) Reason why the process is considered relevant:</b>
The process addresses the safety of workers at dams. Non-compliance with obligations assumed by Vale may result in damage to its image.
<b>k) Analysis of the impact in case of losing the process:</b>
If non-compliance with the ratified agreement is identified, Vale may still be required to pay the fines provided for in the transaction, and shut down the activities allocated at Downstream Pera.

<b>4. Public-Interest Civil Action No. 0000080-85.2022.5.08.0117</b>
<b>a) Court:</b>
2nd Labor Court of Marabá/PA
<b>b) Instance:</b>
2nd Labor Court of Marabá – 1st Instance
<b>c) Filed on:</b>
03/04/2022
<b>d) Parties to the process:</b>
Plaintiff(s): Labor Prosecution Office of the State of Pará (MPT-PA) Defendant(s): Salobo Metais and Vale S.A
<b>e) Amounts, assets or rights involved:</b>
Collective moral damages in the amount of BRL 320,523,788.90 (updated until December 2022). Obligation to take various safety measures to protect the life and physical integrity of workers in the Self-Rescue Zone of the Mirim Dam of Salobo Mine, in Pará.
<b>f) Main facts:</b>
- In 2022, as a result of an administrative procedure (IC No. 000022.2019.08.002/7), the MPT-PA filed a Public-Interest Civil Action against Vale and Salobo Metais, aimed at preventing workers from staying in the Self-Rescue Zone of Mirim Dam of Salobo Mine, in Pará. The MPT-PA also requested that several other safety measures be adopted to protect the life and physical integrity of workers, in addition to handing down an adverse judgment against Vale/Salobo, ordering it to pay indemnity for collective moral damages in the amount of BRL 293,500,000.00, as a result of alleged repeated

**4.4. Relevant non-confidential processes**

<p>failure to comply with legislation protecting the work environment and the alleged exposure of workers to risks in the Self-Rescue Zone (ZAS) of the Mirim Dam.</p> <ul style="list-style-type: none"> <li>- The parties entered into an agreement on the taking of safety measures to protect the life and physical integrity of workers in the Self-Rescue Zone of the Mirim Dam of Salobo Mine, in Pará, and collective moral damages amounting to five million reais (BRL 5,000,000.00), without such payment constituting the recognition of collective moral damage.</li> </ul>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <ul style="list-style-type: none"> <li>- On 06/24/2022, a conciliation hearing was held at the 2nd Labor Court, in which a partial agreement was signed between Vale and MPT-PA, through which Vale undertook to comply with part of the obligations to do listed, among them: (i) preparation of reports and technical studies on the Mirim Dam; (ii) carrying out safety training for workers; (iii) maintenance and dissemination among workers of the Emergency Action Plan for Mining Dams (PAEBM); (iv) adoption of various control and safety measures for the Mirim Dam and workers. The parties were unable to reach an agreement on the fine in the event of non-compliance with Vale's obligations, and therefore it was not possible to ratify the agreement on June 24, 2022.</li> <li>- On 07/05/2022, the agreement entered into between the defendants and the MPT-PA was completed and ratified. In addition to the obligations already agreed upon on June 24, 2022, the defendants also assumed obligations related to: (i) compliance with obligations set forth in the Regular Inspection and Safety Report (RISR) on the execution of works and services; (ii) the installation of an alarm system, sirens and other warning mechanisms, ensuring immediate awareness by workers in case of emergency; (iii) the establishment of a communication and approach procedure for removing unauthorized workers; (iv) the provision of transportation, including in emergencies; (v) monitoring of the Dam structures; (vi) adoption of several other control and safety measures for the Mirim Dam and workers. In the event of non-compliance by the defendants with any of the obligations provided for in the agreement, the companies will be subject to the payment of a fine of BRL 50,000.00 per obligation not complied with.</li> <li>- On 09/20/2022, the parties signed a new agreement, duly ratified on the same date, through which the defendants undertook to comply with the following obligations: (i) ban on the permanence of workers in the ZAS - Self-Rescue Zone of the Mirim Dam, except those strictly necessary for its operation and maintenance, and that of its structures; and (ii) demobilization or isolation of certain structures. In the event of non-compliance with any of these obligations, the defendants will also be subject to the payment of a fine of BRL 50,000.00 per item not complied with.</li> <li>- On 02/08/2023, Vale and MPT-PA signed a new agreement addressing collective moral damages. Salobo paid the amount of BRL 5 million, without acknowledging the occurrence of collective moral damage.</li> </ul>
<p><b>h) Stage of the process:</b></p> <p>Process agreed in its entirety in the process of filing.</p>
<p><b>i) If the chance of loss is: (likely, possible or remote):</b></p> <p>Collective moral damages BRL 5,000,000.00: Likely.          Collective moral damages BRL 363,372,230.80 Remote.</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>The process addresses the safety of workers at dams. Non-compliance with obligations assumed by Vale may result in damage to its image.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>In case of loss, Salobo may suffer (i) damage to its image; and (ii) financial impact.          If non-compliance with the ratified agreement is identified, Salobo may also be required to pay the fines provided for in the transaction, in addition to shutting down Salobo, considering that secondary crushing, a fundamental part of the production process, remains at ZAS</p>
<p><b>5. Public-Interest Civil Action No. 0001703-41.2014.5.08.0126</b></p>
<p><b>a) Court</b></p> <p>2nd Labor Court of Parauapebas/PA</p>
<p><b>b) Instance:</b></p> <p>Superior Labor Court – Superior Court</p>
<p><b>c) Filed on:</b></p> <p>11/27/2014</p>
<p><b>d) Parties to the process:</b></p> <p><u>Plaintiff(s):</u> Labor Prosecution Office of Pará (MPT-PA)  <u>Defendant(s):</u> Vale S.A and Sindicato Metabese de Carajás (Union)</p>
<p><b>e) Amounts, assets or rights involved:</b></p> <p>Collective moral damages in the amount of BRL 777,353.80 (updated until 12/15/2022)</p>
<p><b>f) Main facts:</b></p> <p>In 2014, MPT-PA filed a Public-Interest Civil Action against Vale S.A. and the Sindicato Metabese de Carajás, requesting the declaration of invalidity of the Clause of the Collective Agreement specific to Carajás from the years 2011 to 2013, especially regarding clause 7.7, which provides that higher-level employees, supervisors and managers would be exempt from recording a timesheet, as well as adverse judgment against Vale, ordering it to pay collective moral damages in the amount of BRL500,000.00, due to allegedly not having correctly registered the time of its employees. The MPT-PA also required the establishment of electronic clocking for all employees.</p>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <ul style="list-style-type: none"> <li>- On 06/07/2017, the 2nd Labor Court judged the action partially valid, invalidating the clause of the Collective Agreement and ordering Vale to immediately carry out control over the working hours of employees who hold a higher-education level, with the exception of those who meet the requirements of article 62 of the CLT. Additionally, Vale was</li> </ul>

**4.4. Relevant non-confidential processes**

<p>ordered to pay BRL 300,000.00 for collective moral damages. The Union, in turn, was ordered not to enter into Collective Agreements with clauses that exempt employees from recording a timesheet.</p> <p>- On 05/23/2018, on appeals by Vale and the MPT, the Regional Labor Court of the 8th Region (TRT-8) overturned the decision of the 2nd Labor Court and dismissed the request for adverse judgment against Vale, ordering it to pay collective moral damages, but maintained the decision on the invalidity of the clause of the Collective Agreement, therefore determining that Vale would start to register electronically the working hours of all its employees, including those who hold a position of trust and who occupy a high-level position. Vale filed an appeal with the TST against the TRT-8 decision, which is pending judgment by the TST. The TST awaits a decision by the STF within the scope of the process ARE 1.121.633 in the STF – Topic 1,046 on the constitutionality of agreements and collective agreements that agree to limit labor rights.</p>
<p><b>h) Stage of the process:</b></p> <p>Awaiting judgment by the STF within the scope of the process ARE 1.121.633 in the STF – Topic 1,046 on the constitutionality of agreements and collective agreements that agree to limit labor rights. Next, the TST shall judge Vale's appeal against the TRT-8 decision.</p>
<p><b>i) If the chance of loss is: (likely, possible or remote)</b></p> <p>Remote</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>The process is strategic for Vale, as the MPT-PA seeks to invalidate a clause in the Collective Agreement that exempts higher-level employees, managers and supervisors etc. to subscribe to its attendance, in addition to the risk of questioning of the same nature or repercussion of the same topic throughout the national territory. If the obligation to record electronic time attendance is maintained, Vale will have to adjust its practice regarding the control of employee working hours and breaks, generating a relevant operational impact.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>Referencing it to the information's on item "j" above</p>

<p><b>6. Notice of Violation No. 20.589.903-0</b></p>
<p><b>a) Court:</b></p> <p>Regional Management of Labor and Employment of Conselheiro Lafaiete – Ministry of Labor and Employment (MTE)</p>
<p><b>b) Instance:</b></p> <p>Regional Superintendence of Labor and Employment/MG – 2nd Administrative Instance</p>
<p><b>c) Filed on:</b></p> <p>02/12/1015</p>
<p><b>d) Parties to the process:</b></p> <p><u>Plaintiff(s)</u>: Ministry of Labor and Employment (MTE)  <u>Defendant(s)</u>: Vale S.A.</p>
<p><b>e) Amounts, assets or rights involved:</b></p> <p>Characterization of work analogous to slavery</p>
<p><b>f) Main facts:</b></p> <p>- In 2015, the MTE filed an inspection action against Vale, to check the working conditions related to the activities of company Ouro Verde Locação e Serviços S.A. ("Ouro Verde"), which provided services to Vale for the transportation of finished products between Pico Mine (Itabirito-MG) and the railway terminals in Fábrica Mine (Congonhas-MG). The inspection resulted in the issuing of notices of violation against Vale related to alleged irregularities involving the services provided by Ouro Verde: (i) inadequate hygiene conditions; (ii) violation of safety regulations; (iii) excessive hours; (iv) illegal outsourcing of Vale's core activities. Due to this set of notices, the MTE issued Notice of Violation AI 20.589.903-0, attributing to Vale the adoption of practices analogous to slave labor.</p> <p>- As a result of these notices of violation, the Labor Prosecution Office of Minas Gerais (MPT/MG) started Public Civil Inquiry No. 3212.2014.03.000/9-12, to investigate the alleged practice of work similar to slavery in the services provided by Ouro Verde and the possible co-responsibility of Vale.</p> <p>- On 07/31/2015, Vale and the MPT signed the Term of Conduct Adjustment 118/2015 ("TAC" – indicated in item 4.7, II, subitem 1), through which preventive and corrective measures were agreed upon to guarantee the labor rights of employees of service providers. The commitments agreed between Vale and the MPT were duly fulfilled and on 09/04/2019 the TAC was provisionally archived.</p> <p>- On 04/29/2016, after exhausting the administrative sphere, Vale filed a Precautionary Action (process no. 0010627-83.2016.5.03.0005) in which it obtained a favorable injunction to suspend the enforceability of the fine.</p> <p>- On 05/27/2016, Vale filed an Action for Annulment of Notices of Violation (Process 0010787-11.2016.5.03.0005, process indicated in item 7 below), aimed at the annulment of Notice of Violation 20.589.903- 0.</p>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <p>- On 04/06/2015, the 1st Administrative Instance of the Regional Superintendence of Labor and Employment of Minas Gerais upheld the Notice of Violation and imposed a fine against Vale in the amount of BRL 402.53. Vale filed an appeal against the decision.</p> <p>- On 09/11/2015, in the context of Vale's appeal, the Regional Superintendence of Labor and Employment/MG upheld the decision of the 1st instance of drawing up the Notice of Violation and imposing the fine against Vale.</p>
<p><b>h) Stage of the process:</b></p> <p>AI 20.589.903-0 is suspended at the 1st Administrative Instance, awaiting the final and unappealable decision regarding Annulment Action 0010787-11.2016.5.03.0005, filed by Vale.</p>
<p><b>i) If the chance of loss is: (likely, possible or remote)</b></p>

#### 4.4. Relevant non-confidential processes

Likely
<b>j) Reason why the process is considered relevant:</b>
The adverse judgment of Vale for practices similar to slavery may result in damage to its image, non-compliance with financial agreements, difficulties in raising financial resources, in addition to a negative assessment of the adoption of ESG practices.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above.
<b>7. Annulment Action No. 0010787-11.2016.5.03.0005 (Item 4.3, Labor Process No. 4 FRE)</b>
<b>a) Court:</b>
5th Labor Court of Belo Horizonte/MG
<b>b) Instance:</b>
Superior Labor Court ("TST") – Superior Court
<b>c) Filed on:</b>
05/27/2016
<b>d) Parties to the process:</b>
Plaintiff(s): Vale S.A. Defendant(s): Federal Government
<b>e) Amounts, assets or rights involved:</b>
Characterization of work analogous to slavery.
<b>f) Main facts:</b>
In 2016, Vale filed an Annulment Action against the Federal Government with the objective of annulling Notice of Violation 20.589.903-0 (on the Notice of Violation, check item 6 of Vale's labor processes), drawn up by the Regional Labor Management of Conselheiro Lafaiete – Ministry of Labor and Employment (MTE), who declared that outsourced workers who provided services to Vale through Ouro Verde Locação e Serviços S.A. worked in conditions analogous to those of slavery.
<b>g) Summary of decisions on the merits rendered:</b>
- On 05/10/2016, the 5th Labor Court granted an injunction, determining that the Ministry of Labor should no longer promote the registration of the fine resulting from the drawing up of the Notice of Violation in overdue debt of the Federal Government, and stop executing it before the final and unappealable decision of the Annulment Action. - On 04/30/2018, the 5th Labor Court dismissed Vale's request for annulment of Notice of Violation 20.589.903-0 and revoked the preliminary decision. Vale filed an appeal with the TRT-3 against the decision. - On 02/22/2019, on appeal by Vale, the Regional Labor Court of the 3rd Region (TRT-3) upheld the decision of the 5th Labor Court. Vale filed an appeal with the TST against the decision.
<b>h) Stage of the process:</b>
Awaiting judgment by the Superior Labor Court on Vale's appeal
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Likely.
<b>j) Reason why the process is considered relevant:</b>
The adverse judgment of Vale for practices similar to slavery may result in damage to its image, non-compliance with financial agreements, difficulties in raising financial resources, in addition to a negative assessment of the adoption of ESG practices.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above
<b>8. Public-Interest Civil Action No. 0016167-64.2017.5.16.0022</b>
<b>a) Court:</b>
7th Labor Court of São Luís/MA
<b>b) Instance:</b>
1st Judicial Instance
<b>c) Filed on:</b>
02/02/2017
<b>d) Parties to the process:</b>
Plaintiff(s): SINDICATO DOS TRABALHADORES EM EMPRESAS FERROVIARIAS OF THE STATES OF MARANHÃO, PARÁ AND TOCANTINS – STEFEM Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
BRL 192,818,765.23, regarding indemnity for collective moral damage and attorney's fees. As for the main request, that is, Vale's abstention regarding the practice of the railroad single-driver system, the value is invaluable. There are other requests considered invaluable due to the lack of attribution of value by the Plaintiff, namely, overtime, indemnity for moral damage due to the inadequacy of bathrooms, and indemnity for social dumping.
<b>f) Main facts:</b>
This is a public-interest civil action filed on 02/02/2017, through which the union pleads for adverse judgment of the company, in terms of interlocutory relief, in the obligation to stop the use of the single-driver system, under penalty of

**4.4. Relevant non-confidential processes**

<p>a daily fine, and, on the merits, the confirmation of interlocutory relief, as well as the conviction of the company to pay indemnity for individual moral damages in the amount of BRL 100,000.00 per injured worker (to be raised at the liquidation phase), indemnity for collective moral damage suffered by the professional category and in favor of the community, as well as indemnity for social dumping and payment of overtime related to the intraday break not granted to those replaced, with effects on prior notice, overdue and proportional vacations + 1/3, 13th salary, job bonus, allowances, profit sharing, paid days off and weekly rest, per diem, night shift premium, unhealthy and dangerous work premium, FGTS + 40% fine, and other amounts that make up the compensation.</p> <p>This process is being processed jointly with process 0016622-92.2017.5.16.0001, brought by the Labor Prosecution Office of the 16th Region, in view of the identity of requests (obligation to abstain from using the railroad single-driver system). In its defense, Vale claimed preliminarily the biennial and five-year prescription, the lack of action due to the legal impossibility of the request (prohibition of the use of the single-driver system <i>ad infinitum</i>). On the merits, the total invalidity of the action was argued, given the lack of a law or reason capable of justifying the impediment or restriction on the free exercise of free initiative for the adoption of the single-driver system, as well as the lack of overtime due to the full concession of not just one, but several intraday breaks to train drivers along the route on the Carajás Railroad – EFC (“EFC”), and also the absence of individual, collective moral damage and social dumping to be redressed. Finally, the plaintiff union was required to pay a fine for litigation in bad faith.</p> <p>On 05/06/2019, after an on-site judicial inspection on the Carajás Railroad – EFC, a detailed judicial inspection report was attached to the case record and pointed out, in the view of the Judge, who is not an expert in the matter, that “(...) the train system demands full-time attention from an operator and, therefore, the single-driver system prevents the worker from having any right break for rest, food or physiological needs, depending on unpredictable stops, which may or may not happen and, still, it leaves them without quick assistance in unforeseen moments, such as machine malfunctions, accidents or even sudden illness”.</p> <p>After attaching said Inspection Report, a long march followed to continue the procedural instruction, with the collection of statements from the parties and witnesses and analysis by the Court of request (filed by VALE) regarding the need to carry out technical inspection (broad) by an expert specialized in Railroad matters, which was approved.</p> <p>Currently, the process (in first instance) awaits the end of the production of evidence phase, pending the completion of a technical inspection that will assess the health and safety conditions of the railroad, with the aim of issuing an opinion report that ratifies the possibility of maintaining the railroad single-driver regime, adopted worldwide, in addition to evaluating other health and safety conditions within the locomotive's driving cab. Also with regard to technical inspection, a procedural handling by the Judicial Expert is awaited to set a date for the technical inspection.</p> <p>At the same time, Writ of Mandamus No. 0016421-98.2020.5.16.0000 (procedural incident) was filed before the TRT-16, with a request for an injunction, in favor of VALE, against the order of the lower court that rejected the request for acknowledgment of prescription of the claims in the case record of ACP No. 0016167-64.2017.5.16.0022, and determined the removal of documents attached to the case record and denied the request for multidisciplinary technical inspection.</p> <p>On 11/24/2020, a decision was issued partially granting the injunction only in relation to the request to suspend the effects of the decision issued by the 1st degree court regarding the strike of the documents attached to the case record. Subsequently, after an unsuccessful procedural discussion against the decision by the trial court, which did not grant the preliminary injunction sought by VALE, the TRT-16 decided the Writ of Mandamus to uphold the decision only regarding the strike of documents, with the claim regarding the recognition of the limitation period, which would put an end to actions 0016167-64.2017.5.16.0022 and 0016622-92.2017.5.16.0001, being impaired. The final decision of TRT-16 in the Writ of Mandamus gave rise to the filing of an ordinary appeal to the TST, reiterating the claim for recognition of the limitation period, which is awaiting a decision.</p>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <p>No decision on the merits has yet been rendered.</p>
<p><b>h) Stage of the process:</b></p> <p>The case is currently in the evidentiary stage, awaiting the designation of a technical expert, who will assess the health and safety conditions of the railway operation on the Carajás Railroad, which will make it possible to say about the possibility of implementing the railway single-driver system/scheme.</p>
<p><b>i) Chance of loss</b></p> <p>All claims considered invaluable are classified as possible loss, due to the early procedural phase, still pending judgment and other possibility of appeal, as well as the fact that the case is suspended/stayed.</p> <p>Claims for collective moral damages and attorney's fees are classified as remote loss, considering the early stage of the proceedings, without judgment, keeping only 01 (one) real in the possible loss to reflect the existence of the possibility of an adverse judgment in this regard.</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>The validity of claims would have operational and economic impacts on VALE;</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>Referencing it to the information's on item “j” above</p>

<p><b>9. Public-Interest Civil Action No. 0016622-92.2017.5.16.0001</b></p>
<p><b>a) Court:</b></p> <p>7<sup>th</sup> Labor Court of São Luís/MA</p>
<p><b>b) Instance:</b></p> <p>Appellate Court</p>
<p><b>c) Filed on:</b></p> <p>04/11/2017</p>
<p><b>d) Parties to the process:</b></p>

#### 4.4. Relevant non-confidential processes

<p><b>Plaintiff(s):</b> LABOR PROSECUTION OFFICE – MA  <b>Defendant(s):</b> Vale S.A.</p>
<p><b>e) Amounts, assets or rights involved:</b>  R\$ 17,322,542.62, related to the claim for collective moral damage.  The action has as its main and invaluable claim the obligation to do with regard to VALE's abstention from the use of the railway single-driver scheme.  There are other claims that are considered invaluable because they are obligations to do, namely, ensuring health and hygiene conditions on the locomotives, ensuring sound insulation, providing PPE and guaranteeing statutory breaks.</p>
<p><b>f) Main facts:</b>  It is a public-interest civil action filed on 04/11/2017, based on Public Civil Investigations No. 000196.2011.16.000/7-105 and No. 000354.2013.16.000/7-105, through which the MPT seeks an award against the company, on anticipatory relief, for the fulfillment of obligations to do/not to do related to the company's abstention from adopting the single-driver system and health, hygiene and safety standards, under penalty of a daily fine of R\$ 10,000.00 (ten thousand reais) per each unfulfilled obligation. Finally, it requests confirmation of the interlocutory relief, as well as the award of collective moral damage against the company, for the amount of R\$ 10,000,000.00 (ten million reais).  In defense, VALE preliminarily argued the lack of right of action due to the legal impossibility of the claim (prohibition of using the single-driver system <i>ad infinitum</i>), as well as the active illegitimacy of the MPT to claim in court issues related to heterogeneous individual rights. On the merits, the total invalidity of the action was argued, given the lack of a law or reason capable of justifying the impediment or restriction on the free exercise of free initiative for the adoption of the single-driver system, as well as the fulfillment of the other obligations required in the case record, and also the full granting of intraday breaks to train drivers and the absence of moral damage to be redressed.  In a joint hearing for cases No. 0016622-92.2017.5.16.0001 and No. 0016167-64.2017.5.16.0022, held on 11/06/2019, the 7<sup>th</sup> Labor Court of São Luís/MA issued an order to the effect that "from now on, all acts related to cases 0016167-64.2017.5.16.0022 and 0016622-92.2017.5.16.0001 shall be performed exclusively in the record of case 0016167-64.2017.5.16.0022".  Based on that order, all proceedings and procedural acts performed/attached to case No. 0016167-64.2017.5.16.0022 are used for case No. 0016622-92.2017.5.16.0001 (filed by STEFEM), which has been suspended/stayed (since 04/12/2021) until final decision under case No. 0016167-64.2017.5.16.0022.  Within the scope of case No. 0016167-64.2017.5.16.0022, after the said Inspection Notice was attached, a long journey followed to continue the evidentiary stage, with the taking of testimonies from the parties and witnesses and analysis, by the Court, of the request (made by VALE) related to the need to carry out a (broad) technical judicial inspection by an expert in railway matters, which was granted.  Currently, the case (at first instance) awaits the end of the evidentiary stage, pending the completion of technical expertise report, which will assess the health and safety conditions of the railroad, with the aim of signing a report that says about the possibility of maintaining the railway single-driver scheme, in addition to evaluating other health and safety conditions within the locomotive's driving cabin. Also with regard to the expert evidence, a procedural handling by the Judicial Expert is awaited to set a date for the expert evidence.  At the same time, Writ of Mandamus No. 0016421-98.2020.5.16.0000 (procedural incident) was filed before TRT-16, with a request for an injunction, in favor of VALE, against the order of the Court of first instance that rejected the request of recognition of the statute of limitations of the claims made in the record of the ACP (Public-Interest Civil Action) No. 0016167-64.2017.5.16.0022, and also determined the strike of documents attached to the record and denied the request for multidisciplinary technical expert evidence. On 11/24/2020, a decision was issued partially granting the injunction only in relation to the request to suspend the effects of the decision issued by the 1st degree court regarding the strike of the documents attached to the case record. Subsequently, after an unsuccessful procedural discussion against the decision by the trial court, which did not grant the preliminary injunction sought by VALE, the TRT-16 decided the Writ of Mandamus to uphold the decision only regarding the strike of documents, with the claim regarding the recognition of the limitation period, which would put an end to actions 0016167-64.2017.5.16.0022 and 0016622-92.2017.5.16.0001, being impaired. The final decision of TRT-16 in the Writ of Mandamus gave rise to the filing of an ordinary appeal to the TST, reiterating the claim for recognition of the limitation period, which is awaiting a decision.</p>
<p><b>g) Summary of decisions on the merits rendered:</b>  No decision on the merits has yet been rendered.</p>
<p><b>h) Stage of the process:</b>  The case is currently in the evidentiary stage (pending in the record No. 0016167-64.2017.5.16.0022), awaiting the designation of a technical expert, who will assess the health and safety conditions of the railway operation on the Carajás Railroad, which will make it possible to say about the possibility of implementing the railway single-driver system/scheme.</p>
<p><b>i) Chance of loss</b>  All claims considered invaluable are classified as possible loss, due to the early procedural phase, still pending judgment and other possibility of appeal, as well as the fact that the case is suspended/stayed.  The claim for collective moral damages is classified as subject to remote loss, considering the early stage of the proceedings, without judgment, keeping only 01 (one) real in the possible loss to reflect the existence of the possibility of an adverse judgment in this regard.</p>
<p><b>j) Reason why the process is considered relevant:</b>  The action includes, as its main (invaluable) claim, the "Obligation to do so that VALE refrains from using the railway single-driver system", adopting the two-driver scheme on its locomotives on the Carajás-EFC Railroad, which would imply an immeasurable financial and operational impact, with the possibility of stopping the railroad network depending on the conditions imposed for hiring new employees able to drive trains and, consequently, the interruption in the flow of ore between mine and port. There are other claims that are considered invaluable because they are also obligations</p>

#### 4.4. Relevant non-confidential processes

to do: ensuring health and hygiene conditions on the locomotives, ensuring sound insulation, providing PPE and guaranteeing statutory breaks. Action pending jointly with case No. 0016167-64.2017.5.16.0022.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

**(v) Criminal**

<b>1. Criminal Action No. 0138811-17.2018.8.13.0245</b>
<b>a) Court</b>
1 <sup>st</sup> Criminal Court of the Judicial District of Santa Luzia/MG
<b>b) Instance:</b>
1 <sup>st</sup> Criminal Court of the Judicial District of Santa Luzia/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
05/04/2020
<b>d) Parties to the process:</b>
Plaintiff(s): Prosecution Office of Minas Gerais ("MP-MG")
Defendant(s): Vale S.A. and Ana Luiza Almeida
<b>e) Amounts, assets or rights involved:</b>
Discussion of an alleged environmental crime committed by a Vale employee. Incalculable value in case of enforcement of criminal sanctions.
<b>f) Main facts:</b>
In 2020, the MP-MG filed a Criminal Action against Vale and its employee Ana Luiza Almeida, alleging the practice of criminal offenses provided for in articles 38 (crimes against flora), 68 and 69 (both crimes against the environmental administration) of Law No. 9,605/98. The alleged crimes would have been committed as a result of the suppression of tree species in 2017 at the Mining Development Center, located in Santa Luzia/MG, carried out due to the risk of destabilization of the existing slope.
<b>g) Summary of decisions on the merits rendered:</b>
There is none yet.
<b>h) Stage of the process:</b>
Decision of the 1 <sup>st</sup> Criminal Court is pending.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
Vale may sustain inestimable damage to its image and reputation, as a result of conviction in criminal proceedings for an environmental crime.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

<b>2. Criminal Action No. 0004766-45.2016.8.19.0030</b>
<b>a) Court</b>
Single Court of the Judicial District of Mangaratiba/RJ
<b>b) Instance:</b>
1 <sup>st</sup> Instance
<b>c) Filed on:</b>
12/06/2016
<b>d) Parties to the process:</b>
Plaintiff(s): Prosecution Office of Rio de Janeiro ("MPRJ")
Defendant(s): Former directors of Minerações Brasileiras Reunidas S.A. ("MBR"), a company whose partial spun-off assets were merged into Vale
<b>e) Amounts, assets or rights involved:</b>
Discussion about tax crime The amount involved in the tax proceeding related to the criminal action is approximately R\$9.5 million (as of December 31, 2022), fully guaranteed by an insurance policy.
<b>f) Main facts:</b>
In 2016, the MPRJ filed a complaint accusing former directors of MBR of tax evasion by the company's former directors, as a result of an infraction notice drawn up by the State of Rio de Janeiro for the requirement of Tax debits on Circulation of Goods and Services (ICMS), allegedly levied on the activity of re-screening the ore at its port facilities.
<b>g) Summary of decisions on the merits rendered:</b>
There is none yet.
<b>h) Stage of the process:</b>
Decision of the Single Court is pending.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>

#### 4.4. Relevant non-confidential processes

The process is relevant due to the potential damage to the Company's image, given the allegation of possible tax crime by former directors.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

<b>3. Criminal Action No. 0002261-08.2021.8.19.0030</b>
<b>a) Court</b>
Single Court of the Judicial District of Mangaratiba/RJ
<b>b) Instance:</b>
1 <sup>st</sup> Instance
<b>c) Filed on:</b>
01/08/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Prosecution Office of Rio de Janeiro ("MPRJ")
Defendant(s): Former directors of Minerações Brasileiras Reunidas S.A. ("MBR"), a company whose partial spun-off assets were merged into Vale
<b>e) Amounts, assets or rights involved:</b>
Discussion about tax crime. The amount involved in the tax proceeding related to the criminal action is approximately R\$911 million (as of December 31, 2022), fully guaranteed by an insurance policy.
<b>f) Main facts:</b>
In 2021, the MPRJ filed a complaint accusing former directors of the MBR of alleged underbilling in the provision of port services at the Ilha Guaíba Terminal.
<b>g) Summary of decisions on the merits rendered:</b>
There is none yet.
<b>h) Stage of the process:</b>
Decision of the Single Court is pending.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process is relevant due to the potential damage to the Company's image, given the allegation of possible tax crime by former directors.
<b>k) Analysis of the impact in case of losing the process:</b>
Referencing it to the information's on item "j" above

#### (II) Proceedings involving reparation related to the events in Mariana and Brumadinho

##### (i) Civil

<b>1. Public-Interest Civil Action No. 1024354-89.2019.4.01.3800 (former No. 0069758-61.2015.4.01.3400)</b>
<b>a) Court:</b>
4 <sup>th</sup> Federal Civil and Agrarian Court of Belo Horizonte of the Regional Federal Court of the 6 <sup>th</sup> Region "TRF6" (Former 12 <sup>th</sup> Federal Court of TRF-1)
<b>b) Instance:</b>
4 <sup>th</sup> Federal Civil and Agrarian Court of Belo Horizonte of the Regional Federal Court of the 6 <sup>th</sup> Region "TRF6" (Former 12 <sup>th</sup> Federal Court of TRF-1) - 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
12/17/2015
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Government, Brazilian Environmental Protection Agency ("IBAMA"), Chico Mendes Institute, National Water Agency ("ANA"), National Mineral Production Department ("DNPM"), State Government of Minas Gerais, State Forest Institute ("IEF"), Minas Gerais Water Management Institute ("IGAM"), State Environmental Foundation ("FEAM"), State Government of Espírito Santo, State Environment and Water Resources Institute ("IEMA"), and State Water Resources Agency ("AGERH"). Defendants: Samarco Mineração S.A., Vale S.A. and BHP Billiton Brasil Ltda. ("BHPB").
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it aims to take measures for the environmental recovery of areas affected by the breach of the Fundão dam ("Fundão Dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company in which Vale and BHPB each hold 50% of the share capital and are secondarily liable to Samarco within the limit of said shareholdings.
<b>f) Main facts:</b>
- The case stems from the breach of the Fundão dam, which took place on November 05, 2015. - In 2015, the Federal Government filed a Public-Interest Civil Action against Samarco, Vale and BHPB, claiming compensation for the alleged social and environmental damage resulting from the breach of the Fundão Dam, as well as the taking of measures to prevent future damage.



#### 4.4. Relevant non-confidential processes

<p>– In 2016, the Federal Government, the Government of the State of Minas Gerais, Vale and Samarco entered into a Settlement and Consent Decree Agreement (“TTAC”), establishing obligations related to redressing damages resulting from the breach of the Fundão Dam. The TTAC provided for the establishment of the Renova Foundation and the implementation of 42 reparation programs. For further information about the TTAC, see item 4.7 (1).</p> <p>– In 2017, the Parties entered into the Preliminary Consent Decree I (“TAP”), which established, in summary, the hiring of experts, as technical assistants of the Federal Prosecution Office (“MPF”), in addition to the posting of guarantees by Samarco, Vale and BHPB.</p> <p>– In 2018, the Parties entered into the Amendment to the TAP and the Consent Decree (“Governance TAC”), which, in summary, established definitions related to the social and economic axis of the reparation, improved the effective participation process of those affected, redefined the structure of the Renova Foundation and determined the process for renegotiating the programs provided for in the TTAC.. For information regarding the Governance TAC, see item 4.7 (4).</p> <p>– In 2019, in a court hearing, the Parties agreed to submit the thematic axes considered as priorities to the 4<sup>th</sup> Court, in order to speed up the execution of reparation and indemnity programs. As of 2020, the thematic axes of indemnity were established, which each gave rise to an independent process, although linked to the records of this Public-Interest Civil Action, which have their own progress and decisions:</p> <ul style="list-style-type: none"> <li>• <b>Priority Axis No. 1:</b> Extra and intra-river channel environmental recovery (case no. 1000242–22.2020.4.01.3800)</li> <li>• <b>Priority Axis No. 2:</b> Risk to Human Health and Ecological Risk arising from the breach (case No. 1000260–43.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 3:</b> Resettlement of the District of Gesteira in Barra Longa (case No. 1000321–98.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 4:</b> Infrastructure and Development (case No. 1000398–10.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 5:</b> Operational resumption of the Risoleta Neves Hydroelectric Power Plant (case No. 1000406–84.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 6:</b> Performance measurement and monitoring (case No. 1000412–91.2020.4.01.3800). The axis has several subjects as themes, among them marine modeling of sediments, food security, among others;</li> <li>• <b>Priority Axis No. 7:</b> Registration and Indemnification of those impacted by the breach (case No. 1000415–46.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 8:</b> Resumption of economic activities impacted by the breach (case No. 1000417–16.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 9:</b> Water Supply for Human Consumption (case No. 1000462–20.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 10:</b> Hiring of Technical Consultancies in favor of those impacted by the breach (case No. 1003050–97.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 11:</b> Availability of a Fund in the amount of 150 million for use by the States of Minas Gerais and Espírito Santo for investment in health actions (case No. 1021611–72.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 12:</b> IEF Ordinance No. 40/2017 – Prohibition of fishing in the Rio Doce basin in Minas Gerais (case No. 1029406–32.2020.4.01.3800);</li> <li>• <b>Priority Axis No. 13:</b> Restructuring of the Renova Foundation's Internal Organizational Management System (case No. 1011729–52.2021.4.01.3800);</li> <li>• <b>Priority Axis No. 14:</b> Recognition of new locations as being impacted, such as: Santa Rita do Ituêto/MG, Alvinópolis/MG, Mathias Lobato/MG, Dom Silvério/MG, Frei Inocêncio/MG, São Geraldo da Piedade/MG, Acaiaca/MG, Sooretama/ES, Vila Velha/ES, Praia Grande/Fundão/Vitória/ES (case No. 1013996–85.2023.4.06.3800).</li> </ul> <p>– In 2022, the case was transferred from the 12<sup>th</sup> Federal Court of Belo Horizonte of the Regional Federal Court of the 1<sup>st</sup> Region (“12<sup>th</sup> Court” and “TRF-1”) to the 4<sup>th</sup> Federal Court, due to the creation of the Regional Federal Court of the Sixth Region (“4<sup>th</sup> Court” and “TRF-6”) and consequent reassignment of cases.</p> <p><b>g) Summary of decisions on the merits rendered:</b></p> <p>– On December 18, 2015, the 12<sup>th</sup> Federal Court granted the injunction requested by the plaintiffs, in order to (i) determine that Samarco prevented (or prove if it had already been remedied) the leakage of the volume of tailings that were still in the ruptured dam; (ii) determine that the Defendants hire companies to assess the contamination of fish by inorganic substances and the risk eventually caused to human consumption; (b) prepare studies and take measures aimed at preventing the volume of mud released into the Doce River from reaching the Rio Doce lagoon system and the protection of mineral water sources, (c) carry out studies of the impacted locations; (iii) that Samarco made an initial judicial deposit of R\$ 2.0 billion; (iv) decree the unavailability of concession licenses for mining exploration existing on behalf of the Defendants; (v) submission of a overall social and environmental recovery plan for the Rio Doce Basin and the entire degraded area. Within the scope of the decision in question, a daily fine of R\$ 150,000 was also established in the event of non-compliance with any of the measures imposed on the Defendants, and also a daily fine of R\$ 1.5 million was established per day of delay in relation to the fulfillment of the initial judicial deposit obligation in the amount of R\$ 2.0 billion.</p> <p>– On 03/02/2016, the TRF-1 ratified the Settlement and Consent Decree Agreement (“TTAC”) between Vale and the Federal Government, the states of Minas Gerais and various government authorities, within the scope of the Federal Courts Conciliation System of TRF-1.</p> <p>– On 11/04/2016, the TRF-1 determined that Vale should submit studies of the environmental impacts and make a deposit in the total amount of R\$ 1.2 billion to guarantee future reparation measures.</p> <p>– On 03/16/2017, the 12<sup>th</sup> Federal Court partially ratified the TAP, determining the suspension of the case until further court decision and accepting the guarantees provided for in the TAP.</p> <p>– On 08/08/2018, the 12<sup>th</sup> Court ratified the Governance TAC and the Amendment to the TAP, dismissing the phase of cognizance of ACP No. 0069758–61.2018.4.01.3400 with prejudice.</p> <p>– On 01/07/2020, an order of the 12<sup>th</sup> Federal Court (currently 4<sup>th</sup> Federal Court) was published determining the opening of a specific procedure for each Priority Axis, as listed in the table on the Main Facts.</p>
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#### 4.4. Relevant non-confidential processes

<p>h) Stage of the process:</p> <p>The priority axes are in the following stages:</p> <ul style="list-style-type: none"> <li>• <b>Priority Axis No. 1:</b> Extra and intra-river channel environmental recovery (case No. 1000242-22.2020.4.01.3800) – On 03/01/23, the Renova Foundation provided various information on the progress of the Axle and on measures that, in its understanding, should be adopted for the its continuation. In addition, it requested the ratification of some items of Priority Axis No. 1, suggesting that any developments related to them should be followed through administrative channels and as established in the TTAC. Finally, it sought to recognize the inclusion of the analysis of the new areas indicated in CIF Resolution No. 58/2017 in the Tailings Management Plan;</li> <li>• <b>Priority Axis No. 2:</b> Risk to Human Health and Ecological Risk resulting from the breach (case No. 1000260-43.2020.4.01.3800) – On 03/08/23, Samarco, Vale, BHPB and the Renova Foundation submitted the preliminary questions and technical assistants and, on 03/27/2023, companies submitted additional questions.</li> <li>• <b>Priority Axis No. 3:</b> Resettlement of the District of Gesteira in Barra Longa (case no. 1000321-98.2020.4.01.3800) – In a hearing held on 03.22.2023, a new hearing was designated for ratification of the agreement, to be held on 04.24.23, at 2 pm, in person.</li> <li>• <b>Priority Axis No. 4:</b> Infrastructure and Development (case No. 1000398-10.2020.4.01.3800) – On 02/28/23, Samarco, Vale and BHPB submitted a proposal for the implementation of the Simplified Compensation System for Damage to Infrastructure (“Novel Infrastructure”), aiming to give effect to the agreement ratified at the hearing held on 02/08/2022. On March 10 and March 16, the Courts requested that the guidelines for the implementation of the Novel be ratified, with some additions, but only after the statement of the municipality of Linhares;</li> <li>• <b>Priority Axis No. 5:</b> Operational resumption of the Risoleta Neves Hydroelectric Power Plant (case no. 1000406-84.2020.4.01.3800) – On 03/13/23, the MPF and the MPMG expressed cognizance of the appeal filed by Samarco, Vale and BHPB, requesting recognition of the loss of its subject matter or, alternatively, its rejection. On March 20 and March 29, the Candonga Consortium attached a statement, requesting, among other things, that the companies and the Renova Foundation comply with the Minimum Operating Conditions, in addition to the urgent priority actions. Furthermore, it argued that short, medium and long-term measures should be granted;</li> <li>• <b>Priority Axis No. 6:</b> Performance measurement and monitoring (case No. 1000412-91.2020.4.01.3800) – On 03/13/23, Samarco, Vale and BHPB requested that item 5 of Axis No. 6 be declared fully complied with. Item 5 says that “the field monitoring work of the aquatic fauna, in Minas Gerais, are hereby preserved and maintained by the Federal University of Viçosa (UFV), subject to the scope initially provided for in CIF Resolution No. 212, subsequently amended by CIF Resolution No. 361, until the research groups selected by FAPEMIG start their job”;</li> <li>• <b>Priority Axis No. 7:</b> Registration and Indemnities of those impacted by the breach (case No. 1000415-46.2020.4.01.3800) – On 03/13/23, the Renova Foundation filed an appeal, requesting the granting of supersedeas regarding facts related to the deadline for enabling access to the Online platform, so that those affected who have already received general damage can claim water damage; regarding attorney’s fees; regarding the arguments about the possibility of claiming compensation for general damages by those who received water damage in NOVEL, among others. On 02.17.23, a decision was issued determining the establishment of Axis 14, which addresses the issue of the scope and implementation of the TTAC, with the objective of outlining the social and economic and social and environmental impact resulting from the breach, in order to identify the total scope of the disaster area.</li> <li>• <b>Priority Axis No. 8:</b> Resumption of economic activities impacted by the breach (case No. 1000417-16.2020.4.01.3800) – On 03/23/23, the experts pointed out that, in the period from January 21, 2023 to February 22, 2023, the expert evidence team remained available, with no work being carried out, as well as ratifying that the documentation related to the 105 cases of ineligibility for the supply of silage had not been made available by the Renova Foundation until February 22, 2023. On March 27, the companies attached a statement requesting the suspension of the decisions that determined the preparation of the Plan of Measures for Reparation and Compensation for the Municipalities of Ouro Preto and Anchieta, until the appeal filed by the Company is decided. Likewise, and if the claim for revocation of the order to include the Municipality of Ouro Preto in Environmental Area 2 is not granted, the Companies requested the suspension of the decision.</li> <li>• <b>Priority Axis No. 9:</b> Water supply for human consumption (case No. 1000462-20.2020.4.01.3800) – On 03/08/23, the experts pointed out that, in March 2023, the initial schedule was maintained, visits to the Headquarters of Linhares, Boninsegna and Headquarters of Baixo Guandu;</li> <li>• <b>Priority Axis No. 10:</b> Hiring of Technical Consultancies in favor of those impacted by the breach (case No. 1003050-97.2020.4.01.3800) – On 03/08/23, the MPF, the MPMG, the MPES, the DPU, the DPMG and the DPES filed a statement, arguing the indispensability of transferring the amount of R\$ 251,477.30 to the Interstate Agricultural Development Association to operate in Territory 16 – Capixaba North Coast Macroregion, so that ATI could carry out the beginning of its work in the field satisfactorily (data from ADAI-Territory 16); they also requested that a new official letter be issued to effect the transfer of the indicated amount;</li> <li>• <b>Priority Axis No. 11:</b> Availability of a Fund of 150 million for use by the States of Minas Gerais and Espírito Santo to invest in health actions (case No. 1021611-72.2020.4.01.3800) – On 03/10/23, the MPF stated that it had no objection to the transfer of the amount of R\$ 82,800,000.00 to the Single Cash Account of the State of Minas Gerais, provided that the transfer to a specific current account was subsequently carried out, for monitoring and transparency purposes, both by the State and by the control bodies and by the 4th Court. Furthermore, it added the need to prove the transfer, as well as accountability and updating of projects in the process;</li> <li>• <b>Priority Axis No. 12:</b> IEF Ordinance No. 40/2017 – Prohibition of fishing in the Rio Doce basin in Minas Gerais (Case No. 1029406-32.2020.4.01.3800) – On 02/23/23, AECOM submitted a progress report on the activities of Stages 3 (fishing activity) and 4 (biodiversity); On February 17, 2023, a decision was issued reconsidering previous resolutions to determine that AECOM integrates the causality assessment in the preparation of its studies;</li> </ul>
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#### 4.4. Relevant non-confidential processes

<ul style="list-style-type: none"> <li>• <b>Priority Axis No. 13:</b> Restructuring of the Renova Foundation's Internal Organizational Management System (case No. 1011729-52.2021.4.01.3800) – On 01/23/23, Samarco, Vale and BHPB presented a new and relevant fact, consistent with CIF Resolution No. 628/2022, which approves the judicialization of the Annual Planning of Programs, judicialization of the Annual Planning of Programs provided for in the TTAC. In addition, they reiterated the request for the immediate inclusion of the CIF in the scope of the expert evidence in progress;</li> <li>• <b>Priority Axis No. 14:</b> Recognition of new areas as being impacted – On 03.01.2023, the Axle was established, and the statement of the parties on the decision determining the creation of the Axle is awaited.</li> </ul>
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The action (ACP) and the resulting proceedings (Priority Axes) are considered relevant (i) because they involve social and economic and social and environmental obligations in excess of R\$ 20 billion for compliance with the Settlement and Consent Decree Agreement and (ii) because they could cause damage to Vale's image.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of a loss, Vale could have a material financial impact and cause damage to its image.

<b>2. Public-Interest Civil Action No. 5023635-78.2021.8.13.0024</b>
<b>a) Court:</b>
5th State Civil Court of Belo Horizonte
<b>b) Instance:</b>
5th State Civil Court of Belo Horizonte – 1st Instance
<b>c) Filed on:</b>
02/24/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Public Ministry of Minas Gerais ("MP-MG"). Defendants: Samarco Mineração S.A., Vale, BHP Billiton Brasil Ltda. ("BHPB") and Fundação Renova
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations related to claims for damages arising from the rupture of the Fundão dam ("Fundão Dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company in which Vale and BHPB each hold 50% of the share capital and respond subsidiarily to Samarco, within the limit of the said holdings.
<b>f) Main facts:</b>
– The case stems from the breach of the Fundão dam, which took place on November 05, 2015. – In 2021, MP-MG filed a Public Civil Action, requesting the appointment of an intervenor to the Renova Foundation with a mandate to manage the repair activities conducted by the Foundation. The MP-MG also requested the extinction of the Renova Foundation and its replacement by another structure on the grounds that another structure would have greater autonomy and independence in relation to Vale, Samarco and BHPB, in addition to condemning Samarco, Vale and BHPB to repair the material and moral damages caused by the alleged misuse of purpose and illicit acts committed at Fundação Renova, in the amount of R\$10 billion. The MP-MG claimed that repairing the damage caused by the rupture of the Fundão dam, as has been carried out by the Renova Foundation, would supposedly be inefficient due to management failures attributable to the Renova Foundation itself.
<b>g) Summary of decisions on the merits rendered:</b>
– On 05/25/2021, after the Union raised a positive conflict of competence (Conflict of Competence No. 179.834) between the State Justice and the Federal Justice, the Superior Court of Justice provisionally determined the competence of the judgment of the 12th Federal Court of Belo Horizonte for consideration of urgent matters. – On 08/10/2021, the 5th Court determined the suspension of the process until the final determination on the competent court to prosecute and judge the action.
<b>h) Stage of the process:</b>
Suspended process. A final decision is awaited in the records of Conflict of Jurisdiction No. 179,834 on jurisdiction to judge the case.
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process is considered relevant as it involves amounts in excess of R\$10 billion.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of a loss, Vale could have a financial impact in excess of R\$10 billion. In addition, the Renova Foundation may have an impact on its governance and on the measures taken to repair those affected by the rupture of the Fundão Dam.

<b>3. Public-Interest Civil Action No. 0028358-94.2016.4.01.3800 (formerly case No. 0426085-72.2015.8.13.0105)</b>
<b>a) Court:</b>
4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1)
<b>b) Instance:</b>
4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1) – 1st Instance
<b>c) Filed on:</b>
12/14/2015

#### 4.4. Relevant non-confidential processes

<b>d) Parties to the process:</b>
Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendants: Samarco Mineração S.A. and Vale.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it aims at the reparation obligation of environmental and social damages due to the breach of the Fundão dam ("Fundão dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company in which Vale and BHPB each hold 50% of the share capital and are secondarily liable to Samarco within the limit of said shareholdings.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The case stems from the breach of the Fundão dam, which took place on November 05, 2015.</li> <li>- In 2015, the MP-MG filed a Public-Interest Civil Action against Samarco and Vale, requesting the taking of measures to mitigate the impacts of the breach of the Fundão Dam, such as: (i) the preparation and execution of the preliminary design for the construction of stations for harvesting, pumping and supplying water from the Suaçuí Pequeno and Grande River to the stations of the Autonomous Water and Sewer Service (SAAE); (ii) the supply to SAAE of the polymers needed to treat the Rio Doce water; (iii) monitoring the quality of the water in the Rio Doce and the drinking water served to the population of Governador Valadares, as well as the freezing of Vale and Samarco accounts and the payment of compensation for collective moral damages.</li> <li>- On 12/20/2015, Samarco filed a positive conflict of jurisdiction, with the aim of determining the jurisdiction of the Federal or State Courts (2nd Federal Court of Governador Valadares/MG and 7th Civil Court of Governador Valadares/MG) to adjudicate matters related to the supply of water to the city of Governador Valadares.</li> <li>- Due to the decision issued by the Superior Court of Justice - STJ in the Conflict of Competence No. 144.922/MG - the competence of the 12th Federal Civil Court of MG to process and judge all claims related to the Mariana disaster remained established.</li> <li>- On 04.28.2023, the suspension of the process was determined, considering the connection with the main actions, the system of priority axes and the risk of conflicting decisions</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 12/17/2015, the 12th Court partially granted the preliminary injunction filed by the MP-MG, ordering Samarco and Vale to pay for monitoring the quality of the water in the Doce River and the drinking water served to the population of Governador Valadares, under penalty of a daily fine of R\$2 million. In addition, it determined the delivery of drinking water to the residences of Governador Valadares, pursuant to decision under case No. 0395595-67.2015.8.13.0105, as well as the submission of a logistics plan regarding the delivery of water to the residences.</li> <li>- On 12/27/2015, the 4th Court determined the suspension of compliance with the preliminary injunction, partially granting the request to suspend the determination of daily supply by Samarco of mineral water to the population of Governador Valadares, as well as the determination that the Union Federal make military personnel available for distribution. It was also determined that (i) Samarco should collect new samples of the water distributed by SAAE-GV; and (ii) the other procedures agreed upon in the previous settlement are complied with. Finally, the decision determined that, after compliance with the agreed measures, the case file should be concluded for examination of the definitive revocation of the preliminary injunction and possible extinction of the case for loss of object.</li> <li>- On 03/29/2017, the 12th Court suspended the case as a result of TAP's homologation decision, issued under cases No. 69758-61.2015.4.01.3400 and No. 23863-07.2016.4.01.3800, and recognized the connection between them and the action dealt with.</li> </ul>
<b>h) Stage of the process:</b>
The lawsuit is suspended due to the connection with lawsuits No. 69758-61.2015.4.01.3400 and No. 23863-07.2016.4.01.3800 ((Due to the decision issued by the Superior Court of Justice - STJ in Conflict of Competence No. 144.922 - MG, the universal competence of the 12th Federal Civil Court of MG was established to process and judge all claims related to the Mariana disaster, safeguarding the competence for local affairs).
<b>i) If the chance of loss is:</b>
Possible.
<b>j) Reason why the process is considered relevant:</b>
The case is considered relevant because it involves the payment of indemnities that exceed the amount of 5 billion reais, in addition to being able to damage Vale's reputation.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

<b>4. Public-Interest Civil Action No. 0043356-50.2015.8.13.0400</b>
<b>a) Court:</b>
2 <sup>nd</sup> Civil Court of the Judicial District of Mariana/MG
<b>b) Instance:</b>
2 <sup>nd</sup> Civil Court of the Judicial District of Mariana/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
12/10/2015
<b>d) Parties to the process:</b>
Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendants: Samarco Mineração S.A., Vale and BHP Billiton Brasil Ltda.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it is a reparation obligation of damages due to the breach of the Fundão dam ("Fundão dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company in which

#### 4.4. Relevant non-confidential processes

Vale and BHPB each hold 50% of the share capital and are secondarily liable to Samarco within the limit of said shareholdings.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The case stems from the breach of the Fundão dam, which took place on November 05, 2015.</li> <li>- In 2015, MP-MG filed an Action for Provisional Remedy No. 0039891-33.2015.8.13.0400 requesting the freezing of assets of Samarco, Vale and BHPB. The 2nd Court granted the freezing of R\$ 300,000,000.00 from Samarco's accounts.</li> <li>- In 2015, the MP-MG filed a Public-Interest Civil Action against Samarco, Vale and BHPB, requesting: (i) adoption of measures aimed at mitigating the impacts resulting from the breach of the Fundão Dam, seeking to minimize the impact, damage or losses; (ii) implementation of a social communication program on the activities carried out; (iii) provision of health care and education for those impacted; (iv) provision of support in the rescue of goods, animals, tombstones and mortal remains in the affected locations, among others; (v) resettlement and economic and social restructuring of impacted families; and (vi) upholding of the freeze of assets subject matter of the Action for a Provisional Remedy No. 0039891-33.2015.8.13.0400.</li> <li>- In 2015, at a court hearing, the Parties agreed upon: (i) criteria for allocation of affected families; (ii) payment, by Samarco, of emergency aid to affected people; (iii) payment of indemnities, by Samarco, to families that lost family members due to the Fundão dam breach; (iv) payment of indemnities, by Samarco, to families that were physically displaced.</li> <li>- In 2016, a new court hearing was held among the Parties, agreeing to accelerate the payment of compensation to affected people.</li> <li>- In 2018, a conciliation hearing was held among the Parties, in which the guidelines for restoring the right to housing for those affected by the breach of the Fundão Dam were agreed.</li> </ul> <p>The Public-Interest Civil Action gave rise to Enforcement of Judgment that deal with compliance with the agreements ratified in the record of this action, namely: (i) Enforcement of Judgment III (No. 0041497-28.2017.8.13.0400) - Delivery of resettlements; (ii) Enforcement of Judgment Compensation (No. 5001070-93.2020.8.13.0400) - Compensation within the scope of resettlements; (iii) Enforcement of the New Hubs Judgment (No. 5002815-45.2019.8.13.0400): Milestone for the formation of new hub to be contemplated by resettlement; (iv) Enforcement of Águas de Juliana Judgment (No. 5003441-93.2021.8.13.0400) - Water availability in collective resettlements and spring "Águas de Juliana"; (v) Enforcement of Judgment for Provision of Animal Feed (No. 5004748-48.2022.8.13.0400).</p>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 12/23/2015, the 2<sup>nd</sup> Civil Court ratified the agreement formalized by the Parties at the hearing held on the same date.</li> <li>- On 01/20/2016, the 2<sup>nd</sup> Civil Court ratified the agreement formalized by the Parties at the hearing held on the same date.</li> <li>- On 06/02/2018, the 2nd Civil Court ratified the agreement formalized by the Parties at the hearing, in which the guidelines for repairing the right to housing of those affected by the disruption were agreed.</li> <li>- On 09/13/2018, the 2nd Civil Court ratified a new agreement formalized by the Parties at the hearing, in which new guidelines were agreed and added to repair the right to housing for those affected by the disruption.</li> <li>- On 02/19/2019, the 2nd Civil Court ratified the Settlement Agreement entered into by the Parties, related to the payment of indemnities regarding the relocation of those affected by damages caused as a result of the breach of the Fundão dam.</li> <li>- On 03/15/2023, the 2nd Court suspended, in view of the Conflict of Jurisdiction between the judges of the 4th Federal Court of Belo Horizonte and the 2nd Civil Court of Mariana.</li> </ul>
<b>h) Stage of the process:</b>
Proceeding suspended due to the Conflict of Competence between the 4th Federal Court of the TRF6 and the State Justice. After defining the accounting/final audit of Cáritas Brasileira, the judgment by the 2nd Court is awaited.
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process is relevant and strategic for Vale, as it established, by consensus, compensation parameters for people affected by the breach of the Fundão Dam, with disbursements that may exceed R\$ 2 billion. Failure to comply with agreements may result in damage to Vale's image.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.
<b>5. Public-Interest Civil Action No. 1012518-22.2019.4.01.3800 (formerly case No. 0273073-38.2015.8.13.0105)</b>
<b>a) Court:</b>
4 <sup>th</sup> Federal Court of Belo Horizonte/MG
<b>b) Instance:</b>
4 <sup>th</sup> Federal Court of Belo Horizonte/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
12/28/2015
<b>d) Parties to the process:</b>
Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendants: Vale S.A., Samarco Mineração S.A. and Serviço Autônomo de Água e Esgoto (SAAE).
<b>e) Amounts, assets or rights involved:</b>

#### 4.4. Relevant non-confidential processes

Inestimable values, as it involves obligations related to the demands for reparation of damages resulting from the breach of the Fundão dam ("Fundão Dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company whose partners are Vale and BHPB.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The case stems from the breach of the Fundão dam, which took place on November 05, 2015.</li> <li>- In 2015, MP-MG filed a Public-Interest Civil Action against Samarco, Vale and SAAE, requesting (i) the submission of a solid waste management plan for water treatment plants in the municipality of Governador Valadares, with proper final disposal of these solids; and (ii) the authors' abstention from allocating waste from water treatment into any body or in natura, until the implementation of the management plan. The MP-MG claimed that the breach of the Fundão Dam would have directly impacted the distribution of water in the municipality of Governador Valadares.</li> <li>- In 2022, the case was transferred from the 12th Federal Court of Belo Horizonte of TRF-1 ("12th Court") to the 4th Court, due to the creation of the Regional Federal Court of the Sixth Region and consequent reassignment of cases.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 12/25/2015, the 12th Court preliminarily determined that Samarco, Vale and SAAE submit a solid waste management plan at water treatment stations in the Municipality of Governador Valadares. Vale filed an appeal against the decision.</li> <li>- On 01/29/2016, on appeal filed by Vale, the TRF-1 suspended the effects of the injunction decision of the 12th Court.</li> <li>- On 11/01/2016 and 03/27/2017, on appeals filed by Samarco and Vale, the TRF-1 decided that the 5th Civil Court would not have jurisdiction over the case, determining the remittance of the records to the 12th Court, as determined by the Conflict of Jurisdiction No. 144.922/MG.</li> <li>- On 10/03/2020, the 12th Court suspended the proceeding until further decision, as well as its attachment to the record No. 69758-61.2015.4.01.3400 (case indicated in item 1).</li> </ul>
<b>h) Stage of the process:</b>
A decision is awaited on the prosecution of the action and attachment to the record No. 69758-61.2015.4.01.3400 (case indicated in item 1).
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The case could result in damage to Vale's image, as it involves obligations related to alleged damage to the collective and individual water supply, resulting from the breach of the Fundão Dam.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.
<b>6. Public-Interest Civil Action No. 0073114-91.2016.4.01.3800 (formerly case No. 0000640-06.2016.8.08.0014)</b>
<b>a) Court:</b>
4th Federal Court of Belo Horizonte of TRF-6 (formerly 12th Court of TRF-1)
<b>b) Instance:</b>
4th Federal Court of Belo Horizonte of TRF-6 (formerly 12th Court of TRF-1) - 1st Instance
<b>c) Filed on:</b>
01/15/2016
<b>d) Parties to the process:</b>
Plaintiff(s): Prosecution Office of the State of Espírito Santo ("MP-ES"). Defendants: Vale S.A., Samarco Mineração S.A. and BHP Billiton Brasil Ltda. ("BHPB").
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations related to the demands for reparation of damages resulting from the breach of the Fundão dam ("Fundão Dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company whose partners are Vale and BHPB.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The case stems from the breach of the Fundão dam, which took place on November 05, 2015.</li> <li>- In 2016, MP-ES filed a Public-Interest Civil Action against Samarco, Vale and BHPB, ordering the payment of diffuse moral damages, resulting from the alleged constraints experienced by the population of the municipality of Colatina, due to the breach of the Fundão Dam. The MP-ES also requested the disregard of Samarco's corporate entity, due to its supposed risk of insolvency, in order to reach the equity of its shareholders (Vale and BHPB). The MP-ES, in a provisional remedy, requested: (i) freezing of the amount of R\$ 2 billion in the accounts of Samarco, Vale and BHPB; (ii) removal of tax confidentiality for Samarco, Vale and BHPB.</li> <li>- In 2022, the case was transferred from the 12th Court to the 4th Federal Court of the TRF-6 in Belo Horizonte due to the creation of the Regional Federal Court of the Sixth Region and the consequent reassignment of cases.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 02/11/2016, the 12th Federal Court of Belo Horizonte of the TRF-1 ("12th Court") rejected the request of the MP-ES to freeze accounts of Samarco, Vale and BHPB in the amount of R\$ 2 billion. The MP-ES filed an appeal against the decision.</li> <li>- On 03/23/2016, on appeal filed by the MP-ES, the TRF-1 upheld the decision of the 12th Court that rejected the request by the MP-ES to freeze the accounts of Samarco, Vale and BHPB.</li> <li>- On 03/29/2017, the 12th Court suspended the prosecution of the case due to the confirmatory decision of the Settlement and Consent Decree Agreement (TTAC), issued within the scope of proceedings No. 69758-61.2015.4.01.3400 (case indicated in item 1) and 0023863-07.2016.4.01.3800 (case indicated in item 8).</li> </ul>
<b>h) Stage of the process:</b>
It is currently suspended due to the ratification of the TTAC.

#### 4.4. Relevant non-confidential processes

<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The lawsuit involves payment of diffuse damages, which could generate a financial impact in amounts in excess of R\$ 2 billion, in addition to potential damage to Vale's image, as it is a lawsuit related to the breach of the Fundão Dam.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of loss, Vale could sustain a financial impact of R\$ 2,343,560,742.81 and damage to its image. Vale may also be impacted by non-compliance with the TTAC.

<b>7. Public-Interest Civil Action No. 0062888-27.2016.4.01.3800 (former No. 0016395-63.2016.8.13.0521)</b>
<b>a) Court:</b>
4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1)
<b>b) Instance:</b>
4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1) – 1st Instance
<b>c) Filed on:</b>
02/18/2016
<b>d) Parties to the process:</b>
Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendants: Vale S.A., Samarco Mineração S.A. and BHP Billiton Brasil Ltda. ("BHPB")
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations related to the demands for reparation of damages resulting from the breach of the Fundão dam ("Fundão Dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company whose partners are Vale and BHPB.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The case stems from the breach of the Fundão dam, which took place on November 05, 2015.</li> <li>- In 2016, the MP-MG filed a Public-Interest Civil Action, requesting that Vale, Samarco and BHPB adopt measures aimed at recovering the damage allegedly caused to the urban environmental heritage of the Municipality of Barra Longa, District of Gesteira and Barretos village, as well as ordering Samarco, Vale and BHPB to prepare and execute: (i) basic, structural and executive projects for the full reconstruction, recovery and reparation of all public goods and infrastructure that were affected in the locations; (ii) containment works for the entire bed of the Carmo River in the section where it crosses the headquarters of the city of Barra Longa; (iii) containment works capable of making the city of Barra Longa and the community of Gesteira resilient to any dam failure; (iv) project for the implementation of a complete and adequate sewer treatment system and project for the implementation of an adequate system for the final disposal of solid urban and industrial waste, as compensation for the damage caused to the urban environment. In addition, it requested: (i) payment of indemnity in the amount to be determined by the judge for the adoption of measures to recover the environment, to be deposited in a specific fund to be created by the municipality of Barra Longa; (ii) payment of collective moral damages in the minimum amount of R\$ 300,000,000.00, in addition to freezing the minimum amount of R\$ 500,000,000.00 from Samarco, Vale and BHPB.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 02/19/2016, the 2nd Civil Court of the Judicial District of Ponte Nova partially granted the injunction requested by the MP-MG, determining the fulfillment of the following obligations, under penalty of a daily fine of R\$ 500,000.00: (i) execution of basic, structural and executive projects for the full recovery of impacted public goods; and (ii) carrying out containment works for the entire bed of the Carmo River in the necessary sections, as well as determining the freeze of R\$500,000,000.00 and the submission of an agreement proposal.</li> <li>- On 03/29/2017, after acknowledging the jurisdiction of the Federal Courts, with the remittance of the records to the 12th Federal Court (currently the 4th Federal Court, after the creation of TRF-6), considering the confirmatory decision of the Settlement and Consent Decree Agreement (TTAC), issued within the scope of cases No. 0069758-61.2015.4.01.3400 (case indicated in item 1 of this section) and 0023863-07.2016.4.01.3800 (case indicated in item 8), suspended the case.</li> </ul>
<b>h) Stage of the process:</b>
It is currently suspended due to the ratification of the TTAC.
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The lawsuit is considered relevant because it involves potential damage to Vale's image, as it is related to the breach of the Fundão dam, in addition to obligations in excess of R\$ 600 million.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale could sustain damage to its image, in addition to a financial impact of R\$ 850,882,446.86.

<b>8. Public-Interest Civil Action No. 1016756-84.2019.4.01.3800 (former No. 0023863-07.2016.4.01.3800)</b>
<b>a) Court:</b>
4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1)
<b>b) Instance:</b>
4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1) – 1st Instance
<b>c) Filed on:</b>
05/03/2016

#### 4.4. Relevant non-confidential processes

<p><b>d) Parties to the process:</b>  Plaintiff: Federal Prosecution Office (MPF).  Defendants: Vale S.A., Samarco Mineração S.A. and BHP Billiton Brasil Ltda. (“BHPB”), the Federal Government, Minas Gerais and Espírito Santo States, the Brazilian Water Agency (ANA), the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), the Brazilian Department of Mineral Production (DNPM), the Chico Mendes Institute of Biodiversity (ICMBio), the National Indigenous Foundation (FUNAI), the Brazilian Health Surveillance Agency (ANVISA), the Brazilian Institute of Historic and Artistic Heritage (IPHAN), the Brazilian National Development Bank (BNDES), the State Institute of Forests (IEF), the Minas Gerais Water Management Institute (IGAM), the State Foundation of the Environment (FEAM), the Minas Gerais State Institute of Historic and Artistic Heritage (IEPHA), the State Institute of Environment and Water Resources (IEMA), the Espírito Santo Institute of Agricultural and Forestry Defense (IDAF) and the State Agency for Water Resources (AGERH).</p>
<p><b>e) Amounts, assets or rights involved:</b>  Inestimable values, as it involves obligations related to the demands for reparation of damages resulting from the breach of the Fundão dam (“Fundão Dam”), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company in which Vale and BHPB each hold 50% of the share capital and are secondarily liable to Samarco within the limit of said shareholdings.</p>
<p><b>f) Main facts:</b>  – The case stems from the breach of the Fundão dam at the Germano Industrial Complex in Mariana/MG (Fundão dam), which took place on 11/05/2015.  – In 2016, the MPF filed a Public-Interest Civil Action against Vale and others, requesting (i) the adoption of measures aimed at mitigating and repairing social, economic, environmental, cultural and immaterial impacts resulting from the breach of the Fundão Dam; (ii) payment of indemnity for moral damages to the community for the time it would have been unable to enjoy a balanced environment; (iii) ordering to pay collective moral damages; (iv) the financial security for the execution of reasonable measures; and (v) freezing of amounts received by Vale, Samarco and BHPB by way of dividends.  – In March 2016, the Settlement and Consent Decree Agreement (“TTAC”) was entered into between the parties within the scope of cases No. 0069758–61.2015.4.01.3400 (case indicated in item 1) and subsequently the Governance TAC, as described in item 4.7 (4), remaining agreed upon to carry out the necessary programs for the environmental and social recovery in the areas impacted by the accident. For more information about the TTAC, see item 4.7 of this Reference Form. Furthermore, the Preliminary Consent Decree I (“TAP”) was entered into, whose purpose was to adapt the provisions contained in the TAP with regard to activities related to the social and economic axis, allowing the social and economic survey and the hiring of technical advisory services to people affected, in relation to the guarantees and the Governance TAC, which dismissed this action.  – In 2022, the case was transferred from the 12th Federal Court to the 4th Federal Court of the TRF-6 in Belo Horizonte due to the creation of the Regional Federal Court of the Sixth Region and the consequent reassignment of cases.</p>
<p><b>g) Summary of decisions on the merits rendered:</b>  – On 03/16/2017, the 12th Federal Court partially ratified the Terms of the Preliminary Consent Decree I and II entered into between Samarco, Vale, BHPB and MPF and determined the suspension of the lawsuit.  – On 09/20/2017, the 12th Federal Court ratified a partial amendment to the Preliminary Consent Decree.  – On 08/31/2018, the 12th Federal Court decided (i) to dismiss, with prejudice, the phase of cognizance of ACP No. 0069758–61.2015.3400 (case indicated in item 1); (ii) suspend this ACP (ACP No. 0023863–07.2016.4.01.3800) in relation to requests not contemplated in the Governance TAC and TAP; (iii) immediately suspend ACP No. 0023863–07.2016.4.01.3800.  – On 02/28/2023, the Regional Court of the 6th Region, on the appeal filed by Vale, suspended the decision that determined the start of studies by FGV on the health of those affected and the subject matter of expert evidence and discussions existing in Axis 2 (as described in lawsuit 1 of this report).</p>
<p><b>h) Stage of the process:</b>  The Companies requested the determination of the centralization of discussions on the performance of the Brazil Human Rights Fund regarding the coordination of technical advisory activities. In this sense, a court decision is awaited with the notice of the FDBH so that it can submit clarifications.</p>
<p><b>i) If the chance of loss is:</b>  Possible</p>
<p><b>j) Reason why the process is considered relevant:</b>  The lawsuit is considered relevant because it involves obligations in excess of R\$ 215 billion.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b>  Reference to item “j” above</p>
<p><b>9. Public-Interest Civil Action No. 1002605–16.2019.4.01.3800 (former No. 0033942–91.2016.8.13.0400)</b></p>
<p><b>a) Court:</b>  4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1)</p>
<p><b>b) Instance:</b>  4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1) – 1st Instance</p>
<p><b>c) Filed on:</b>  05/03/2016</p>
<p><b>d) Parties to the process:</b>  Plaintiff(s): Public Prosecution Office of the State of Minas Gerais (“MP–MG”).  Defendants: Samarco Mineração S.A., Vale S.A. and BHP Billiton Brasil Ltda.</p>



#### 4.4. Relevant non-confidential processes

<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations related to claims for damages resulting from the breach of the Fundão dam ("Fundão Dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company whose partners are Vale and BHPB.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The case stems from the breach of the Fundão dam, which took place on November 05, 2015.</li> <li>- In 2016, MP-MG filed a Public-Interest Civil Action against Samarco, Vale and BHPB, preliminarily requesting the monthly payment of R\$ 1,394,308.39 to the Local Government of Mariana, corresponding, according to MP-MG's allegation, to the monthly average of the Municipality's collection with the payment of the Financial Compensation for Exploitation of Mineral Resources – "CEFEM", collected by Samarco as a result of its activities.</li> <li>- In 08/29/2022, the case was transferred from the 12th Federal Court to the 4th Federal Court of the TRF-6 in Belo Horizonte due to the creation of the Regional Federal Court of the Sixth Region and the consequent reassignment of cases.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 09/12/2017, the 12th Court denied the claim for interlocutory relief filed by the MP-MG. The MP-MG appealed to the TRF-1 against the decision.</li> <li>- On 03/25/2021, the 12th Federal Court decided that it had jurisdiction to adjudicate the case, determining its suspension, due to the ongoing agreements and discussions within the scope of the main ACPs related to the breach of the Fundão Dam, to which this lawsuit is related (case No. 1024354-89.2019.4.01.3800 indicated in item 1 "ACP 20 BI" and case No. 1016756-84.2019.4.01.3800 indicated in item 8 "ACP 155 BI").</li> </ul>
<b>h) Stage of the process:</b>
A decision is awaited on the prosecution of the case, which is currently suspended.
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The lawsuit is considered relevant because it involves potential damage to Vale's image, as it is related to the breach of the Fundão dam.
<b>k) Analysis of the impact in case of losing the process:</b>
In the event of loss, Vale may sustain a financial impact in the amount of up to R\$ 1,931,438.18 and may also sustain damage to its image.

<b>10. Public-Interest Civil Action No. 1023835-46.2021.4.01.3800</b>
<b>a) Court:</b>
4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1)
<b>b) Instance:</b>
4th Federal Civil and Agrarian Court of Belo Horizonte of TRF-6 (formerly 12th Federal Court of TRF-1) – 1st Instance
<b>c) Filed on:</b>
05/11/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Prosecution Office ("MPF"), Prosecution Office of the State of Minas Gerais ("MP-MG"), Federal Public Defender's Office ("DPU"), Public Defender's Office of the State of Minas Gerais ("DP-MG") and Public Defender's Office of the State of Espírito Santo ("DP-ES"). Defendants: Samarco, Vale, BHP Billiton Brasil Ltda. ("BHPB") and Renova Foundation.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations related to claims for damages resulting from the breach of the Fundão dam in the Industrial Complex of Germano located in the Municipality of Mariana/MG, owned by Samarco ("Fundão Dam").
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- In 2021, the plaintiffs filed a Public-Interest Civil Action, alleging the illegitimacy of advertisements for activities to redress damage resulting from the breach of the Fundão Dam, requesting: (i) the immediate suspension of advertising by Fundação Renova; (ii) refraining from incurring new expenses related to advertisements and publicity campaigns; (iii) the release of an official notice stating that the campaigns already broadcast would be based on partial technical and scientific conclusions; and (iv) the broadcasting of a new campaign informing that there is persistent doubt about the current conditions of water quality and toxicity of the waste, in order to prevent contamination and exposure of the affected population to risks.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 08/19/2021, suspension of the lawsuit was granted, in view of the Letter of Assumptions of the Renegotiation, entered into within the scope of the National Council of Justice ("CNJ").</li> </ul>
<b>h) Stage of the process:</b>
The lawsuit is suspended. If it is resumed, the decision of the 4th Court on the lawsuit will be awaited.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The lawsuit is relevant because it involves potential damage to Vale's image, due to the questioning about the legitimacy of the Renova Foundation's communication documents.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

#### 4.4. Relevant non-confidential processes

<b>11. Public-Interest Civil Action – ACP No. 5010709–36.2019.8.13.0024 (ACP 5026408–67.2019.8.13.0024), 5044954–73.2019.8.13.0024 and 5087481–40.2019.8.13.0024</b>
<b>a) Court:</b>
2 <sup>nd</sup> Court for Public Finance and Governmental Agencies of Belo Horizonte/MG
<b>b) Instance:</b>
2 <sup>nd</sup> Court for Public Finance and Governmental Agencies of Belo Horizonte/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
01/25/2019
<b>d) Parties to the process:</b>
Plaintiff(s): State of Minas Gerais, Public Prosecution Office of the State of Minas Gerais (“MP–MG”) and Public Defender’s Office of the State of Minas Gerais (“DP–MG”). Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations related to claims for damages arising from the breach of the B1 dam (“B1 dam”) at the Córrego do Feijão mine, in Brumadinho/MG.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>– The lawsuits arise from the breach of Dam B1, which took place on 01/25/2019.</li> <li>– In 2019, the MP–MG and DP–MG filed public-interest civil actions requesting that Vale be ordered to pay indemnity for environmental and social and economic damage resulting from the breach of the B1 Dam. The three actions are pending jointly.</li> <li>– In 2021, the Judicial Agreement for Full Reparation (“AJRI”) was entered into between Vale, the State of Minas Gerais, DP–MG, MP–MG and the MPF, which has the purpose of fully redressing the collective environmental and social damage resulting from the rupture of Dam B1, in the estimated amount of R\$ 37,689,767,329.00.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
– On 02/04/2021, the AJRI was ratified by the Court of Appeals of the State of Minas Gerais.
<b>f) Stage of the process:</b>
Vale has been complying with the terms of the AJRI. The processes continue with the technical inspections being carried out to quantify individual damages.
<b>i) If the chance of loss is:</b>
Likely, with regard to claims extinguished by the Judicial Agreement for Full Reparation; and Possible, with regard to those that remain active as the subject matter of ongoing expert evidence in legal proceedings (individual damages).
<b>j) Reason why the process is considered relevant:</b>
The lawsuit is considered relevant because it involves amounts in excess of R\$ 37 billion, in addition to potential additional costs due to the determination of the quantification of individual damages. In addition, Vale may sustain damage to its image, as it is related to the B1 dam breach.
<b>k) Analysis of the impact in case of losing the process:</b>
With the execution of the AJRI, there is no possibility of losing the action. However, there is still pending determination of individual indemnities, which may create additional costs, in addition to potential damage to Vale’s image.
<b>12. Public-Interest Civil Action No. 5000045–50.2019.8.13.0054</b>
<b>a) Court:</b>
Sole Court of the Judicial District of Barão de Cocais/MG
<b>b) Instance:</b>
Sole Court of the Judicial District of Barão de Cocais/MG – 1st Instance
<b>c) Filed on:</b>
02/25/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Prosecution Office of Minas Gerais (“MP–MG”), Public Defender’s Office of the State of Minas Gerais (“DP–MG”). Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations to redress damages related to the risk of collapsing the tailings dams at the Gongo Soco Mine, located in the Municipality of Barão dos Cocais.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>– The action arises from the evacuation carried out by Vale at dawn on February 8, 2019, determined by the Brazil’s National Mining Agency, of approximately 500 residents of the communities of Socorro, Tabuleiro, Piteiras and Vila Congo, all located in the Municipality of Barão de Cocais, downstream of the dam of Mina Gongo Soco, located in the Municipality of Barão de Cocais (“Southern Upper Dam”).</li> <li>– In 2019, the MP–MG filed an action against Vale, requesting: (i) compensation for alleged collective material and moral damages due to the risk of breach of the Southern Upper Dam; (ii) unavailability of Vale’s assets, in the amount of R\$ 1,000,000,000.00; (iii) Vale’s liability for costs with medical care, support, accommodation in hotels, inns, leased properties, in addition to costs related to transfers, transport of personal property (including motor vehicles), people and animals, as well as total cost of food, medicines, transportation of affected people; and (iv) adaptation of locations to the characteristics of each family.</li> </ul>

#### 4.4. Relevant non-confidential processes

<p><b>g) Summary of decisions on the merits rendered:</b></p> <ul style="list-style-type: none"> <li>- On 03/08/2019, the Single Court granted the freezing of R\$ 50,000,000.00 from Vale and determined the adoption of the following measures: (i) carry out support, accommodation in hotels, inns, leased properties, bearing the costs related to transfers, transport of personal property (including motor vehicles), people and animals, in addition to (ii) total cost of food, medicines, transportation, always under conditions equivalent to the status quo prior to evacuation; and (iii) ensure full assistance to the displaced residents, including medical care and school transportation.</li> <li>- On 7/17/2019, the Single Court ordered Vale to pay compensation for individual moral damages to each citizen residing in Barão de Cocais, in the minimum amount of R\$ 100,000.00, and to pay collective and social moral damages, quantified at R\$ 2,000,000,000.00.</li> <li>- On 5/18/2019, the Single Court ordered Vale to pay monthly emergency aid, for an additional period of 01 year, to affected people who are displaced from their homes in the amount of 01 (one minimum wage) per each adult, 1/2 (half) minimum wage per each teenager and 1/4 (one quarter) of the minimum wage per each child, in addition to the payment of a basket of staples to each family.</li> </ul>
<p><b>h) Stage of the process:</b></p> <p>Case suspended for an attempt to reach an agreement before the Judicial Center for Conflict Resolution and Citizenship of the Court of Appeals of the State of Minas Gerais.</p>
<p><b>i) If the chance of loss is:</b></p> <p>Possible.</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>The lawsuit is considered relevant, as it involves discussion about Vale's responsibility for evacuations arising from the change in the emergency level of the Sul Superior Dam.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>In the event of loss, Vale may sustain a material financial impact, of inestimable value yet, in addition to damage to its image and reputation due to the emergency evacuations carried out.</p>
<p><b>13. Public-Interest Civil Action No. 5000901-97.2019.8.13.0188</b></p>
<p><b>a) Court:</b></p> <p>2nd Civil Court of the Judicial District of Nova Lima/MG</p>
<p><b>b) Instance:</b></p> <p>2nd Civil Court of the Judicial District of Nova Lima/MG – 1st Instance</p>
<p><b>c) Filed on:</b></p> <p>03/14/2019</p>
<p><b>d) Parties to the process:</b></p> <p>Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendants: Vale S.A.</p>
<p><b>e) Amounts, assets or rights involved:</b></p> <p>Inestimable values, as it involves obligations to redress damages related to the risk of breach of the B3 and B4 dams, located in the District of São Sebastião das Águas Claras, in the Municipality of Nova Lima/MG.</p>
<p><b>f) Main facts:</b></p> <ul style="list-style-type: none"> <li>- In 2019, the MP-MG filed a Public-Interest Civil Action against Vale, requesting the granting of an injunction determining medical care, support, accommodation in hotels, inns, leased properties, in addition to costs related to transfers, transport of personal property (including motor vehicles), people and animals, as well as full cost of food, medicines, transportation, always in conditions equivalent to the previous status of people who were evacuated and those who somehow sustained material and moral damages due to the increase in the emergency level of B3 and B4 Dams, located in the District of São Sebastião das Águas Claras, Municipality of Nova Lima/MG.</li> <li>- In 2022, the Parties entered into an agreement, establishing compensation and full reparation to people who sustained damages as a result of raising the emergency level of B3 and B4 Dams, in the estimated amount of R\$ 500 million. The actions provided for in the agreement propose a system of reparation and/or compensation, divided into Vale's obligations to do and to pay.</li> </ul>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <ul style="list-style-type: none"> <li>- On 03/15/2019, the 2nd Court preliminarily granted the request for an interlocutory relief filed by the MP-MG, determining the freezing of R\$ 1 billion from Vale.</li> <li>- On 06/02/2019, the 2nd Court, upholding the effects of the injunction granted, determining that Vale adopt several measures such as: providing medical care, support and accommodation, execution of projects, payment of vouchers, among others.</li> <li>- On 06/22/2021, the 2nd Court ratified the Agreement entered into between the Parties, suspending the case.</li> <li>- On 12/15/2022, the 2nd Court ratified the agreement entered into between Vale and the MP-MG, ending the case with prejudice.</li> </ul>
<p><b>h) Stage of the process:</b></p> <p>Compliance with the obligations of the agreement entered into between Vale and the MP-MG is awaited.</p>
<p><b>i) If the chance of loss is:</b></p> <p>Likely</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>The process is considered relevant, as it involves discussion about Vale's responsibility for evacuations arising from the change in the emergency level of the B3/B4 Dam.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>In case of loss, Vale could have a relevant financial impact and damage to its image.</p>
<p><b>14. Public-Interest Civil Action No. 5036049-79.2019.8.13.0024</b></p>

#### 4.4. Relevant non-confidential processes

<b>a) Court:</b>
1 <sup>st</sup> Court for Public Finance and Governmental Agencies of Belo Horizonte/MG
<b>b) Instance:</b>
2nd Court for Public Finance and Governmental Agencies of Belo Horizonte/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
03/21/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Association of Servants of the Fire Department and Military Police of the State of Minas Gerais (“ASCOBOM”). Defendants: Vale S.A. and State of Minas Gerais.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations related to claims for damages arising from the breach of the B1 dam at the Córrego do Feijão mine in Brumadinho/MG (“B1 Dam”).
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>– The lawsuit stems from the breach of Dam B1, which took place on 01/25/2019.</li> <li>– In 2019, ASCOBOM filed a Public-Interest Civil Action against Vale and the State of Minas, requesting: (i) that Vale pay for health care (including psychiatric) treatments, in addition to the replacement of material and equipment for all military firefighters who worked in search and rescue activities in the city of Brumadinho and (ii) the freezing of Vale's values in the amount of up to R\$ 300 million.</li> <li>– In 2019, the records were sent to the 6th Public Finance Court and Government Agencies of Belo Horizonte, currently the 2nd Public Finance Court, for consideration together with public-interest civil actions No. 5046408-67.2019.8.13.0024 (case indicated in item 11) and No. 5026408-67.2019.8.13.0024 (case indicated in item 11).</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
– On 10/16/2020, the 2nd Court suspended the lawsuit until judgment of the public-interest civil actions mentioned above.
<b>h) Stage of the process:</b>
Case suspended, awaiting decisions of public-interest civil actions No. 5044954-73.2019.8.13.0024, 5087481-40.2019.8.13.0024 and No. 5026408-67.2019.8.13.0024.
<b>i) If the chance of loss is:</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The case is considered relevant, as it could result in damage to Vale's image, as it involves an entity representing the Fire Department, a category valued by society.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale may sustain damage to its image.

<b>15. Legal Entity Liability Action for the Practice of Act against the Public Administration No. 5002549-18.2019.8.13.0090</b>
<b>a) Court</b>
1st Civil, Criminal and Juvenile Court of the Judicial District of Brumadinho/MG
<b>b) Instance:</b>
1 <sup>st</sup> Public Finance Court of the State of Belo Horizonte/MG – 1st Instance
<b>c) Filed on:</b>
10/17/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Public Prosecution Office of the State of Minas Gerais (“MP-MG”). Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it may involve adverse judgment ordering to pay a pecuniary penalty calculated on Vale's gross revenue.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>– The lawsuit stems from the submission of an allegedly false Stability Condition Statement (DCE) for Dam I at the Córrego do Feijão mine, in Brumadinho/MG to, state public authorities.</li> <li>– In 2019, the MP-MG filed a Legal Entity Liability Action against the Public Administration, requesting that Vale be ordered to pay a pecuniary penalty and suspend its activities (as provided for in Articles 6 and 19 of Law No. 12,846/ 2013), in addition to the obligation to fully redress the damage caused by the breach of B1 Dam. It also requested that the unavailability of Vale's assets, rights and values in the amount of R\$ 30,004,900,000.00 be preliminarily determined. The MP-MG alleged that Vale would have hindered the inspection activity of the state environmental agency (FEAM – State Foundation of Environment), the investigation activity of the MP-MG and intervened in its performance, by issuing and illegally using the Stability Condition Statement (DCE) for the B1 Dam.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>– On 08/12/2020, the Judge of the 1st Civil, Criminal and Juvenile Court of the Judicial District of Brumadinho/MG rejected jurisdiction over the case and, on 09/18/2020, ordered its remittance to the 1st State Public Finance Court of the Judicial District of Belo Horizonte (“1st Public Finance Court”). The MP-MG filed an appeal against the decision.</li> <li>– On 08/26/2021, the 1st Finance Court fully rejected the MP-MG's request for a preliminary injunction for the unavailability of Vale's assets, rights and values up to the amount of R\$ 30,004,900,000.00. The MP-MG filed an appeal against the decision.</li> </ul>

#### 4.4. Relevant non-confidential processes

<ul style="list-style-type: none"> <li>- On 06/28/2022, on appeal filed by the MP-MG, the Court of Appeals of Minas Gerais ("TJMG") fully upheld the lower court decision that rejected the preliminary injunction against Vale. Thus, Vale was not required to post a security.</li> <li>- On 01/31/2023, the TJMG dismissed the MP-MG's appeal and recognized the jurisdiction of the 1st Finance Court to prosecute and adjudicate the case. The MP-MG appealed to the TJMG against the decision, which is still pending.</li> </ul>
<b>h) Stage of the process:</b>
TJMG's decision on MP-MG's appeal is awaited.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The lawsuit is considered relevant as it involves (i) amounts in excess of R\$ 30 billion; and (ii) potential damage to Vale's image.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

<b>16. Public-Interest Civil Action No. 1000504-03.2020.4.01.3822</b>
<b>a) Court:</b>
4 <sup>th</sup> Federal Civil and Agrarian Court of Belo Horizonte
<b>b) Instance:</b>
4 <sup>th</sup> Federal Civil and Agrarian Court of Belo Horizonte – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
03/12/2020
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Prosecution Office ("MPF"). Defendants: Samarco Mineração S.A., Vale, BHP Billiton Brasil Ltda. ("BHPB") and Renova Foundation.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations related to claims for damages resulting from the breach of the Fundão dam ("Fundão Dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company in which Vale and BHPB each hold 50% of the capital stock and are secondarily liable to Samarco within the limit of said shareholdings.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- On 09/04/2020, the Renova Foundation, Samarco, Vale, BHPB and the Municipality of Barra Longa/MG entered into an agreement establishing the obligation of the Renova Foundation to provide technical and financial support to assist the Municipality of Barra Longa in the execution of health action plans or health actions already agreed upon, due to the effects resulting from the breach of the Fundão dam.</li> <li>- In 2020, the MPF filed a Public-Interest Civil Action requesting full funding for the implementation of the Barra Longa Health Action Plan, in favor of the Unified Health System - SUS, including through transfers that may be necessary to the Municipality of Barra Longa.</li> <li>- In 2020, Renova Foundation, Samarco, Vale, BHPB and the Municipality of Barra Longa/MG entered into an agreement regarding the implementation of a definitive solution on the transshipment and final disposal of solid waste, establishing the Renova Foundation's obligation to carry out works and pay for operations.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 04/16/2020, the Judicial Subsection of Ponte Nova denied the requests for granting an injunction and ordered the remittance of the case to the 12th Federal Court of Belo Horizonte ("12th Federal Court").</li> <li>- On 07/29/2020, the 12th Federal Court dismissed the case, as it understood that the MPF did not have legitimacy to file the action. The MPF appealed to the Court of Appeals of Minas Gerais ("TJMG") against the decision.</li> <li>- On 09/10/2020, the 12th Federal Court ratified the Agreement entered into between the parties regarding the implementation of the Barra Longa Health Plan.</li> <li>- On 10/05/2020, the 12th Court ratified the Agreement regarding the implementation of a definitive solution regarding the transshipment and final disposal of solid waste, thus dismissing the case.</li> <li>- On 09/08/2022, the TRF-1 granted the appeal filed by the MPF, recognizing the MPF's legitimacy to file the action, reversing the effects of the decision of the 12th Court dated 07/29/2020. Samarco, Vale, BHP and Renova Foundation filed an appeal against the TRF-1 decision.</li> </ul>
<b>h) Stage of the process:</b>
A final decision by TRF-1 on the appeal filed by Samarco, Vale, BHPB and Renova Foundation is awaited.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The case is considered relevant as it could result in potential damage to Vale's image, as it is related to the breach of the Fundão dam.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

<b>17. Public-Interest Civil Action No. 5000885-66.2020.8.13.0461</b>
<b>a) Court:</b>
1 <sup>st</sup> Civil Court of Ouro Preto/MG
<b>b) Instance:</b>

#### 4.4. Relevant non-confidential processes

1 <sup>st</sup> Civil Court of Ouro Preto/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b> 04/07/2020
<b>d) Parties to the process:</b> Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b> Inestimable values, as it involves obligations to redress damages related to the risk of breach of the Doutor dam, belonging to the Timbopeba Mine complex located in the District of Antônio Pereira, Municipality of Ouro Preto/MG ("Doutor Dam").
<b>f) Main facts:</b> – In 2020, the MP-MG filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to pay (i) independent technical consultancy, (ii) housing, food, transportation, medical and psychological care and emergency payment to all people removed, (iii) multidisciplinary technical staff for the preparation of the Social Diagnosis Plan and execution of the Full Reparation Plan for Damages, (iv) technical assistant for the plaintiff, (v) award of full compensation for impacts related to raising the emergency level of the Doutor Dam, and (vi) reimbursement of costs incurred by the State and Local Government. – In 2021, work plans were submitted to the 1st Court by the Guaicuy Institute and by the Social and Environmental Studies and Research Group of the Federal University of Ouro Preto ("GEPISA-UFOP") of the Social and Economic Diagnosis and execution of the Full Damage Reparation Plan. – In 2021, Vale required that families residing or invading the Self-Rescue Zone ("ZAS") be removed by the Civil Defense, even if compulsorily.
<b>g) Summary of decisions on the merits rendered:</b> – On 09/10/2020, the 1st Court held the case partially valid, ordering Vale to pay compensation to the families removed due to the risk of breach of the Doutor Dam. – On 08/19/2022, the 1st Court ratified the Work Plans submitted by the Guaicuy Institute and by GEPISA.
<b>h) Stage of the process:</b> A decision by the TJMG on the appeals filed by the Parties is awaited.
<b>i) If the chance of loss is:</b> Possible
<b>j) Reason why the process is considered relevant:</b> The case is considered relevant because there is a discussion about Vale's responsibility for the removal of people (and animals) residing in the ZAS of the Doutor Dam, with financial and reputational impacts.
<b>k) Analysis of the impact in case of losing the process:</b> Reference to item "j" above.

<b>18. Public-Interest Civil Action No. 1035519-02.2020.4.01.3800</b>
<b>a) Court:</b> 14 <sup>th</sup> Federal Civil Court of Minas Gerais
<b>b) Instance:</b> Regional Federal Court of the 6 <sup>th</sup> Region ("TRF-6") – 2 <sup>nd</sup> Instance
<b>c) Filed on:</b> 08/31/2020
<b>d) Parties to the process:</b> Plaintiff(s): Federal Prosecution Office Defendants: Vale S.A., Brazilian Securities Commission ("CVM") and National Mining Agency ("ANM")
<b>e) Amounts, assets or rights involved:</b> Rights related to the appointment of an intervening manager at Vale.
<b>f) Main facts:</b> In 2020, the MPF filed a Public-Interest Civil Action against Vale, CVM and ANM, requesting judicial intervention in Vale's management, for the appointment of an interventor by the court, with a mandate to restructure the Company's safety and disaster prevention policies, in addition to hiring an independent audit at Vale's expense. In addition, it requested the prohibition of the payment of dividends or interest on equity.
<b>g) Summary of decisions on the merits rendered:</b> – On 03/05/2021, the 14th Federal Civil Court held the action invalid. The MPF filed an appeal against this decision.
<b>h) Stage of the process:</b> A decision by the TRF on the appeal filed by the MPF is awaited.
<b>i) If the chance of loss is:</b> Remote
<b>j) Reason why the process is considered relevant:</b> The lawsuit is considered relevant because it involves changes in Vale's corporate governance, as well as the risk of appointing an intervening manager.
<b>k) Analysis of the impact in case of losing the process:</b> In case of loss, Vale may sustain judicial intervention in its governance and management system, impacting its autonomy.

#### 4.4. Relevant non-confidential processes

<b>19. Enforcement of Judgment No. 5002387-92.2021.8.13.0400</b>
<b>a) Court:</b>
2nd Civil, Criminal and Penal Enforcement Court of Mariana/MG
<b>b) Instance:</b>
Court of Appeals of the State of Minas Gerais – 2nd Instance
<b>c) Filed on:</b>
08/31/2020
<b>d) Parties to the process:</b>
Plaintiff(s): Prosecution Office of Minas Gerais (MP-MG). Defendants: Vale, Samarco Mineração S.A. and BHP Billiton Brasil Ltda. ("BHPB").
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations related to claims for damages resulting from the breach of the Fundão dam ("Fundão Dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company whose partners are Vale and BHPB.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The case stems from the breach of the Fundão dam, which took place on November 05, 2015.</li> <li>- In 2020, MP-MG filed a Judgment Enforcement against Vale, Samarco and BHPB, requesting compliance with judgments under Public-Interest Civil Actions in which Vale had entered into agreements, alleging non-reparation of people affected by the breach of the Fundão dam in Mariana.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
On 07/11/2022, the 2nd Civil Court declared the active illegitimacy of the MP-MG to enforce the judgment and, thus, dismissed the enforcement. The MP-MG filed an appeal against the decision.
<b>h) Stage of the process:</b>
A decision by the TJMG on the appeal filed by the MP-MG is awaited.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Possible.
<b>j) Reason why the process is considered relevant:</b>
The lawsuit is considered relevant because it involves (i) potential damage to Vale's image, as a result of alleged non-compliance with agreements and indemnity payments to those affected by the breach of the Fundão Dam; and (ii) obligations greater than R\$ 2,450,770,051.25.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.
<b>20. Ordinary Action no. 5006199-05.2021.8.13.0090</b>
<b>a) Court:</b>
1st Civil, Criminal and Juvenile Court of Brumadinho/MG
<b>b) Instance:</b>
1st Civil, Criminal and Juvenile Court of Brumadinho/MG – 1st Instance
<b>c) Filed on:</b>
12/02/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Municipality of Brumadinho. Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Award for the payment of compensation in the amount of R\$ 12,719,177,897.73 (updated until November 30, 2022), to redress damages resulting from the breach of the Fundão dam ("Fundão Dam"), in the Industrial Complex of Germano, located in the municipality of Mariana/MG, owned by Samarco, a company whose partners are Vale and BHPB.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The case stems from the breach of the Fundão dam, which took place on November 05, 2015.</li> <li>- In 2021, the Municipality of Brumadinho filed an Ordinary Action against Vale, requesting payment by Vale for: (i) moral damages, for alleged damage to image and reputation, in the amount of R\$ 1 billion; (ii) pecuniary damages, due to the increase in public expenses, in the amount of R\$ 1,596,807,741.90; and (iii) loss of profits, due to the loss of revenue until 2034 (expected depletion of the CFJ Mine), totaling R\$ 9,450,920,160.51, as follows: R\$ 6,089,101,414.54 related to the potential collection of Mineral Exploration Charge (CFEM) in the amount of R\$ 3,069,378,231.55 related to the potential collection of ICMS and R\$ 292,440,514.42 related to the potential collection of ISSQN. The Municipality of Brumadinho also requested the granting of an injunction to freeze R\$ 5 billion, as well as the monthly payment of R\$ 3,788,394.32 (average CFEM collection in the last 12 months).</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 06/09/2022, the 1st Civil, Criminal and Juvenile Court rejected the request for an injunction from the Municipality of Brumadinho, for the freezing of R\$ 5 billion and the monthly payment of R\$ 3,788,394.32 as compensation for the loss of CFEM revenue. The Municipality of Brumadinho filed an appeal against the decision.</li> <li>- On 03/09/2023, the Court of Appeals of the State of Minas Gerais ("TJMG") rejected the appeal filed by the Municipality of Brumadinho, rejecting the freezing of R\$ 5 billion of Vale's accounts and the monthly payment of R\$ 3,788,394.32 as compensation for the loss of CFEM revenue.</li> </ul>
<b>h) Stage of the process:</b>
After the evidentiary stage, the trial of the case by the 1st Court is awaited.

#### 4.4. Relevant non-confidential processes

<b>i) If the chance of loss is:</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The case is considered relevant as it involves (i) amounts in excess of R\$ 12 billion; and (ii) possible damage to Vale's image, as it is related to the breach of the Fundão dam.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

<b>21. Public-Interest Civil Action No. 5002708-51.2022.8.13.0317</b>
<b>a) Court:</b>
1 <sup>st</sup> Civil Court of Itabira/MG
<b>b) Instance:</b>
1 <sup>st</sup> Civil Court of Itabira/MG – 1st Instance
<b>c) Filed on:</b>
04/25/2022
<b>d) Parties to the process:</b>
Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, as it involves obligations to redress damages related to the risk of breach of the tailings dams of the Pontal System, located in the Municipality of Itabira.
<b>f) Main facts:</b>
- In 2022, the MP-MG filed a Public-Interest Civil Action against Vale, requesting full compensation for the alleged social and economic damage caused due to the increased risk of breach of mining dams and dikes belonging to the Pontal System, in Itabira/MG, as well as the hiring of technical consultancy and the payment of prior and emergency measures for public health policies. Additionally, the MP-MG requested, in case of emergency removal, (i) emergency payment and baskets of staples; (ii) funding for temporary housing; (iii) obligation to pay R\$ 10,000 per vacated real estate unit; (iv) payment of IPTU to each owner of a vacated property; (v) health assessment of residents; and (vi) provision of PPE.
<b>g) Summary of decisions on the merits rendered:</b>
On 06/03/2022, the 1 <sup>st</sup> Civil Court rejected the request to freeze R\$ 500 million, but prevented Vale from concluding negotiations on compensation to people who would be removed from their homes. Vale filed an appeal against the decision. On 02/23/2023, the 5 <sup>th</sup> Civil Court partially granted Vale's appeal, allowing for the execution of individual agreements and also rejecting prior expert evidence requested by the MP-MG.
<b>h) Stage of the process:</b>
A decision by the 1 <sup>st</sup> Court is awaited on the request for amendment to the complaint made by the MP-MG.
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The case is considered relevant as it involves the removal of people from areas impacted by works to de-characterize structures in the Pontal System, in the city of Itabira/MG. In addition, the measures required by the MP-MG may make it difficult or even hinder the execution of individual agreements with the people affected.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale could sustain damage to its image and reputation, in addition to financial impact.

<b>22. Divergence Incident No. 1040611-58.2020.4.01.3800</b>
<b>a) Court:</b>
4 <sup>th</sup> Federal Court of Belo Horizonte/MG
<b>b) Instance:</b>
Regional Federal Court of the 6 <sup>th</sup> Region ("TRF-6") – 2 <sup>nd</sup> Instance
<b>c) Filed on:</b>
08/30/2020
<b>d) Parties to the process:</b>
Plaintiff(s): Vale S.A., Samarco Mineração S.A., BHP Billinton Brasil LTDA. And Renova Foundation Defendants: Federal Government and Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA).
<b>e) Amounts, assets or rights involved:</b>
To date, a judicial deposit of R\$ 10,340,000,000.00 has been determined with the objective of promoting the reparation process in the State of Espírito Santo. In addition, any adverse judgment would involve inestimable amounts related to the reparation of damages resulting from the breach of the Fundão dam ("Fundão dam"), owned by Samarco, a company whose partners are Vale and BHPB.
<b>f) Main facts:</b>
In 2020, the companies challenged, based on Clause 258 of the TTAC and Clause 103, sole paragraph, of the TAC-Governance, the initiation of the divergence incident, with the purpose of settling the controversy between the TTAC and the position issued by the Interfederative Committee ("CIF") under Resolution No. 58, regarding the inclusion of new



#### 4.4. Relevant non-confidential processes

locations (“New Areas”) in the concept of “affected municipalities” listed in the TTAC. Thus, they sought a declaration of nullity of said statement and its derived acts.
<b>g) Summary of decisions on the merits rendered:</b>
– On 09/01/2021, the 4th Federal Civil Court determined the consolidation of the case records with those of cases No. 1038680–20.2020.4.01.3800 and No. 1035848–77.2021.4.01.3800, so that they can be resolved jointly, since the subject matter of the case No. 1040611–58.2020.4.01.3800 includes the subject matter of the other cases.
– On 09/21/2022, a decision was issued under which the request for anticipation of the effects of the appeal filed by the Companies was rejected. Thus, compliance with the CIF Resolutions was determined.
– On 03/30/2022, a decision was issued determining that the Companies made the judicial deposit in the amount of R\$ 10,340,000,000.00 with the objective of promoting the reparation process of the State of Espírito Santo, also pointing out that the amount could only be transferred at the request of the Renova Foundation, the Public Prosecutor's Office, the Public Defender's Office, the State of Espírito Santo or the CIF for the execution of actions in the Municipalities subject to the Resolution.
<b>h) Stage of the process:</b>
A decision is awaited by the TRF on the Interlocutory Appeal filed by the Companies in view of the decision issued on 03/30/2022, through which the Companies were determined to make a judicial deposit in the amount of R\$ 10,340,000,000.00.
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The case is considered relevant as it involves amounts in excess of R\$ 10 billion.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale may sustain damage to its image and reputation, in addition to financial impact, according to the amounts indicated above.

<b>23. Claim nº HT–2022–000304 Part 20 Additional Particulars of Claim</b>
<b>a) Court:</b>
High Court of Justice Business and Property Courts in London Technology and Construction Court (Kbd)
<b>b) Instance:</b>
1st Instance
<b>c) Filed on:</b>
12/02/2022
<b>d) Parties to the process:</b>
Plaintiff(s): BHP Group (UK) LTD e BHP Group LTD Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Priceless, the value depends on the settlement in the main action.
<b>f) Main facts:</b>
– In 2022, BHP Group (UK) LTD and BHP Group LTD filed an Additional Claim Against Third Party Contribution Action (“Part 20 Claim”) against Vale, within the scope of the Re–Amended Master Particulars of Claim (“RAMPOC”) filed by the Municipality of Mariana and others, through which they require that Vale be sentenced to contribute with 50% or more of the possible conviction that BHP Group (UK) LTD and BHP Group under the RAMPOC.
– In 2023, Vale filed a Jurisdiction Application through which it requires recognition of the lack of jurisdiction of the English Court over the Part 20 Claim.
<b>g) Summary of decisions on the merits rendered:</b>
There are no relevant decisions on the merits.
<b>h) Stage of the process:</b>
Awaiting judgment of the Jurisdiction Application filed by Vale on 02/28/2023 and supplemented on 05/02/2023, against the New Part 20 Claim.
<b>i) If the chance of loss is:</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The process is considered relevant as it potentially involves amounts in excess of R\$10 billion, depending on what is produced in the procedural instruction and what is calculated in the liquidation phase.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale could suffer damage to its image, as well as an invaluable financial impact.

<b>24. Process nº 1:19–cv–526–RJD–SJB</b>
<b>a) Court:</b>
New York Federal Court
<b>b) Instance:</b>
United States District Court for the Eastern District of New York (“Eastern District of New York”)
<b>c) Filed on:</b>
01/28/2019 (First Complaint) e 10/25/2019 (“Amended Complaint”).
<b>d) Parties to the process:</b>
Plaintiff(s): Colleges of Applied Arts and Technology Pensions Plan

#### 4.4. Relevant non-confidential processes

Defendants: Vale S.A., Murilo Ferreira, Fabio Schvartsman, Luciano Siani, Peter Poppinga e Luis Eduardo Osorio.
<b>e) Amounts, assets or rights involved:</b>
Invaluable, considering that the value includes eventual reimbursement of the losses supposedly borne by the class members, which will be calculated later.
<b>f) Main facts:</b>
In 2019, the Colleges of Applied Arts and Technology Pensions Plan (representing investors holding American Depositary Receipts and Notes issued by Vale, based on U.S. Federal Securities Laws), filed a class action in the Federal Court of New York, against Vale and some of its former executives. The investors allege that Vale made false and misleading statements or failed to make disclosures about the risks and dangers of the operations of Dam I and the adequacy of programs and procedures related to dams.
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 05/13/2019, the District Court for the Eastern District of New York ordered consolidation of the actions and designated the lead plaintiff (Lead Plaintiff) for the case and respective counsel.</li> <li>On October 25, 2019, the lead plaintiff filed an amended and consolidated initial claim that will serve as a complaint in the proceeding ("Consolidated Amended Complaint").</li> <li>- On 05/20/2020, the District Court rejected, in part, the preliminary defense presented by Vale (Motion to Dismiss), and dismissed the action only in relation to some of the Plaintiff's allegations.</li> <li>- 03/31/2022, the District Court fully accepted the opinion of its assistant magistrate, certifying the class required by the Plaintiff. Vale filed an appeal with the United States Court of Appeals for the Second Circuit against this decision,</li> <li>- On 07/09/2022, the Court of Appeals denied Vale's request to file an appeal, emphasizing that the decision to certify the class could be reviewed at a later time.</li> </ul>
<b>h) Stage of the process:</b>
The completion of the production of evidence ("Discovery") phase is awaited.
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process is considered relevant as it could result in Vale's great exposure to the North American market, as well as damage Vale's image. In addition, Vale can have an invaluable financial impact.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

<b>25. Process nº 1:21-cv-6590-RJD-SJB</b>
<b>a) Court:</b>
New York Federal Court
<b>b) Instance:</b>
United States District Court for the Eastern District of New York ("Eastern District of New York")
<b>c) Filed on:</b>
11/24/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Orbis Global Equity LE Fund (Australia) et. Defendants: Vale S.A., Murilo Ferreira, Fabio Schvartsman, Luciano Siani, Peter Poppinga e Luis Eduardo Osorio.
<b>e) Amounts, assets or rights involved:</b>
The authors did not specify the values of the alleged losses.
<b>f) Main facts:</b>
Approximately one year after the filing of the consolidated class action (Consolidated Amended Complaint) related to the Brumadinho event, seven investment funds from the same group and their financial advisors filed a separate request (opt-out claim) to disassociate themselves from of the class members that are part of the main action (class action). The requests are practically identical to those formulated by the main Plaintiff in the class action, in which it is also alleged that Vale made false and misleading statements or failed to disclose the risks and dangers of the operations of Dam I and the adequacy of programs and dam-related procedures. The plaintiffs did not specify an amount for the alleged damages in these lawsuits, they only ask that the defendants be ordered to reimburse the damages allegedly borne exclusively by the Orbis funds, which will be calculated at a later stage. Vale presented its preliminary defense with a request for dismissal of the case without examination of the merits (Motion to Dismiss) on June 6, 2022, with the written allegations phase (opposition by Orbis and reply) ending on August 25, 2022.
<b>g) Summary of decisions on the merits rendered:</b>
In November 2021, the same Court of the Eastern District of NY only received the separate request from the Orbis group (opt-out claim), with the subpoena from Vale to also respond to the separate action. However, there has not yet been a decision on the relevant merits, since the phase of written allegations ended in August 2022 and the Plaintiffs of this action are jointly participating in the production of evidence (Discovery) phase of the main class action.
<b>h) Stage of the process:</b>
The discovery phase is currently ongoing in conjunction with the main class action. While waiting for a court decision on Vale's motion to dismiss ("Motion to Dismiss"), the Plaintiffs of this action are participating in the production of evidence that is taking place in the main action ("class action").
<b>i) If the chance of loss is:</b>
Possible
<b>j) Reason why the process is considered relevant:</b>

#### 4.4. Relevant non-confidential processes

It is a parallel action to the class action in New York, proposed by large investment funds, with great exposure of the Company to the American market and, depending on the final result of the process, could also generate great repercussions in Brazil, among shareholders. and investors located in Brazil, not counting the possible financial loss, indicated below.
<b>k) Analysis of the impact in case of losing the process:</b>
Any loss could generate financial losses and damage to the Company's image and reputation.
<b>26. Process No. 5164648-65.2021.8.13.0024 - Incident of Disregard of Legal Entity of Samarco</b>
<b>a) Court:</b>
2nd Business Court of the District of Belo Horizonte/MG
<b>b) Instance:</b>
2nd Business Court of the District of Belo Horizonte/MG – 1 <sup>st</sup> instance
<b>c) Filed on:</b>
10/18/2021
<b>d) Parties to the process:</b>
Plaintiff(s): York Global Finance BDH, LLC – Citibank DTVM AS and others Defendants: Samarco Mineração S.A. ("Samarco"), Vale S.A. and BHP Billiton Brasil Ltda ("BHPB"), and, together ("Companies").
<b>e) Amounts, assets or rights involved:</b>
Estimated value of R\$51,219,049,141.25, considering the nature of the process, Vale and BHP may be condemned to pay the obligations contained in Samarco's judicial recovery, with the liability estimated above.
<b>f) Main facts:</b>
On 10/18/2021, York Global Finance BDH, LLC, Citibank DTVM and others, filed an Incident of Disregard of the Legal Personality of Samarco, requesting, in summary, that the legal personality of Samarco Mineração S.A. be disregarded, with the consequent liability of its shareholders, Vale and BHPB, in the amount of R\$50,737,049.65, an amount corresponding to the debt listed in Samarco's judicial recovery on the date of the request for recovery.
<b>g) Summary of decisions on the merits rendered:</b>
On 11/14/2022, the 2nd Court dismissed the request for disregard of legal personality, without decision on the merits, referring to the portion of the credits not held by York and others, due to their active illegitimacy. As for the portion referring to the credits held by York and others, the judgment dismissed, on the merits, the request for disregard of the legal personality of Samarco, on the grounds that there was no demonstration of equity confusion between Samarco and its shareholders (Vale and BHPB), nor of unlawful acts committed with the intention of defrauding creditors through the filing of Judicial Reorganization. York and others filed an appeal against that decision.
<b>h) Stage of the process:</b>
Judgment of the appeal against the decision of the 2nd Court is pending.
<b>i) If the chance of loss is:</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The process is considered relevant since the amount involved in the incident exceeds BRL 50 billion, given that, in case of granting the plaintiff's request, the amount will be apportioned between Vale and BHP, discounting the credits held by the shareholders themselves in face of from Samarco, (of which R\$11,930,800,689.49 from Vale, and R\$11,818,590,979.27 from BHP), mostly referring to contributions made to Fundação Renova, Samarco's primary obligation, and resources made available to Samarco to cover its expenses basics, while its operation was suspended.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

<b>27. Process No. 5124030-78.2021.8.13.0024 - Incident of Disregard of Legal Entity of Samarco</b>
<b>a) Court:</b>
2nd Business Court of the District of Belo Horizonte/MG.
<b>b) Instance:</b>
2nd Business Court of the District of Belo Horizonte/MG – 1 <sup>st</sup> instance
<b>c) Filed on:</b>
08/18/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Public Ministry of Minas Gerais ("MP-MG") Defendants: Samarco Mineração S.A. ("Samarco"), Vale S.A. and BHP Billiton Brasil Ltda ("BHPB"), and, together ("Companies").
<b>e) Amounts, assets or rights involved:</b>
Estimated value of R\$51,219,049,141.25, considering the nature of the process, Vale and BHP may be condemned to pay the obligations contained in Samarco's judicial recovery, with the liability estimated above.
<b>f) Main facts:</b>
On 08/18/2021, the MPMG filed an Incident of Disregard of Legal Personality requesting, in summary, that the legal personality of Samarco Mineração S.A. be disregarded, with the consequent liability of its shareholders (Vale and BHPB), for the total liabilities listed in Samarco's judicial reorganization, in the amount of R\$50,737,049.65, corresponding to the debt listed in Samarco's judicial reorganization on the date of the request for reorganization. OMPMG requested, on a preliminary basis, (i) the precautionary attachment of Vale and BHP's assets in the amount of the credits listed by

#### 4.4. Relevant non-confidential processes

Samarco in the request for judicial recovery; and (ii) the suspension of Samarco's judicial recovery process until the final judgment of the incident
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 08/19/2021, the 2nd Court rejected the preliminary injunctions made by the MP-MG. The MP-MG filed an appeal against this decision.</li> <li>- On 11/14/2022, the 2nd Court judged the process extinct, without resolution of the merits, on the grounds of active illegitimacy and lack of interest of the MP-MG to act to propose a claim aimed at guaranteeing the equity rights of the creditors in the bankruptcy. The judgment confirmed the rejection of the MP-MG's preliminary injunctions.</li> <li>- On 08/03/2022, the TJMG judged the appeal filed by the MP-MG against the decision that rejected its preliminary injunctions and upheld the decision of the 2nd Court. The MP-MG filed a Special Appeal against the decision.</li> <li>- On 12/16/2022, within the scope of the appeal filed by the MP-MG against the decision that extinguished the process, the TJMG issued an injunction provisionally suspending the decision of the 2nd Court that extinguished the process, as well as determined the manifestation of the appellees for objections. Vale presented its counterarguments on 02/13/2023.</li> <li>- On 05/03/2023, the TJMG suspended the appeal filed by the MP-MG against the decision that extinguished the process, due to the attempt to conciliate Vale, BHP and Samarco with the MP-MG.</li> </ul>
<b>h) Stage of the process:</b>
Process is suspended due to the attempt to conciliate Vale, BHPB and Samarco with MP-MG. In addition, an analysis of the appeals presented by the MP-MG is awaited.
<b>i) If the chance of loss is:</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The process is considered relevant since the amount involved in the incident exceeds BRL 50 billion, given that, in case of granting the plaintiff's request, the amount will be apportioned between Vale and BHP, discounting the credits held by the shareholders themselves in face of from Samarco, (of which R\$11,930,800,689.49 from Vale, and R\$11,818,590,979.27 from BHP), mostly referring to contributions made to Fundação Renova, Samarco's primary obligation, and resources made available to Samarco to cover its expenses basics, while its operation was suspended.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

#### (ii) Environmental

<b>1. Public-Interest Civil Action No. 5012680-56.2019.8.13.0024</b>
<b>a) Court:</b>
2 <sup>nd</sup> Court for Public Finance and Governmental Agencies of Belo Horizonte/MG
<b>b) Instance:</b>
2 <sup>nd</sup> Court for Public Finance and Governmental Agencies of Belo Horizonte/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
01/30/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Network of Non-Governmental Organizations of the Atlantic Rainforest ("RMA") Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Compensation for collective and individual moral damages, in the total amount of R\$ 38,160,693,000.00 (updated until 11/30/2022).
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The lawsuit stems from the breach of the B1 dam at the Córrego do Feijão mine located in the municipality of Brumadinho/MG ("B1 dam"), which took place on 01/25/2019.</li> <li>- On 01/30/2019, RMA filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to pay compensation for damages due to the breach of B1 Dam, in the following amounts: (i) R\$ 30,000,000,000.00 for collective moral damages; (ii) R\$ 1,000,000.00 for moral damages due to death per each affected family unit; (iii) R\$ 500,000.00 for moral damages per each person subjected to direct personal risk due to the breach, as well as compensation for property damage, in an amount to be settled.</li> <li>- On 03/11/2019, the lawsuit was suspended, awaiting the trial of the Case No. 5010709-36.2019.8.13.0024, listed in item 17, which deals with public-interest civil actions filed by the State of Minas Gerais and the Prosecution Office of the State of Minas Gerais, after the breach of the B1 Dam, aiming at full compensation for the environmental and social and economic damage resulting from the event. Said proceedings covers the claims made in this judicial proceeding.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 03/11/2019, the 2nd Court determined the suspension of the proceeding, until the judgment of Proceeding No. 5010709-36.2019.8.13.0024 (listed in item 11 of this Section/Proceedings involving the Mariana or Brumadinho accidents - Civil), which deals with public civil actions filed by the State of Minas Gerais and the Public Prosecution Service of the State of Minas Gerais, after the rupture of Dam B1, aiming at full compensation for the environmental and socioeconomic damages resulting from the event. Said process covers requests made in this process. RMA filed a Writ of Mandamus No. 0189571-89.2019.8.13.0000 against the decision of the 2nd Court suspending the process.</li> <li>- On 07/16/2019, the Court of Justice of the State of Minas Gerais ("TJ-MG") denied the Writ of Mandamus, on the grounds of inadequacy of the chosen route. RMA filed an appeal against this TJ-MG decision.</li> </ul>

#### 4.4. Relevant non-confidential processes

- On 04/19/2023, the Superior Court of Justice ordered the return of the records to the TJ-MG so that the Writ of Mandamus could be judged, pending judgment by the TJ-MG.
<b>h) Stage of the process:</b>
A decision by the TJ-MG on the Writ of Mandamus filed by the RMA is awaited.
<b>i) If the chance of loss is:</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The lawsuit is considered relevant as it involves a claim for compensation in the amount of R\$ 38,160,693,000.00 billion.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale could sustain a financial impact of R\$ 38,160,693,000.00, in addition to being ordered to pay collective and individual indemnities, which will depend on the calculation based on the number of people considered to be affected and/or on determination by the judge.

<b>2. Public-Interest Civil Action No. 0003811-02.2019.8.13.0054</b>
<b>a) Court:</b>
Sole Court of Barão de Cocais/MG
<b>b) Instance:</b>
Sole Court of Barão de Cocais/MG – 1st Instance
<b>c) Filed on:</b>
02/13/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, due to possible compensation for damages related to the risk of breach of the tailings dams of the Gongo Soco Mine located in the Municipality of Barão dos Cocais/MG ("Sul Superior Dam").
<b>f) Main facts:</b>
- In 2019, the MP-MG filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to carry out emergency measures aimed at implementing an action plan with changes suggested by IBAMA in a technical notice, seeking the protection and preservation of the fauna in the flooding area, due to the evacuations that took place on 02/08/2019 at the Sul Superior Dam, including locating, rescuing and caring for domestic animals, and deterrence, monitoring and rescuing of wild fauna in the "Dam Break" area. - The case is related to the Barão de Cocais Fauna Settlement and Consent Decree Agreement (TAC), described in item 4.7, subitem IV, item C, "Other Relevant Consent Decrees (TACs) and Commitment Agreements".
<b>g) Summary of decisions on the merits rendered:</b>
- On 06/13/2019, the Single Court ratified the TAC entered into between MP-MG and Vale on 05/29/2019, dismissing the case. - On 02/25/2021, the case was restarted, at the request of the MP-MG and Vale, and the Single Court ratified the amendment to the TAC, entered into by the parties on 03/03/2020.
<b>h) Stage of the process:</b>
Final dismissal of the case is pending. Despite the decision of the Single Court ratifying the TAC and its amendment, the case was not definitively dismissed, due to the fact that there are still amounts deposited in court pending withdrawal by the MP-MG. The amounts deposited in court by Vale are withdrawn by the MP-MG, as the MP-MG chooses projects to which the funds will be allocated.
<b>i) If the chance of loss is:</b>
Likely
<b>j) Reason why the process is considered relevant:</b>
The case is considered relevant because it is a discussion related to the protection of the existing fauna in the flooding area of the Sul Superior Dam.
<b>k) Analysis of the impact in case of losing the process:</b>
Vale may sustain damage to its image, in addition to financial impact from the application of a daily fine for non-compliance with the TAC, in the amount of R\$ 100,000.00 (one hundred thousand reais).

<b>3. Public-Interest Civil Action No. 5000683-69.2019.8.13.0188</b>
<b>a) Court:</b>
2nd Civil Court of Nova Lima/MG
<b>b) Instance:</b>
2nd Civil Court of Nova Lima/MG – 1st Instance
<b>c) Filed on:</b>
02/23/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>

#### 4.4. Relevant non-confidential processes

Inestimable values, due to any obligation to adopt measures for the preservation and recovery of the fauna in the flooding area of the B3/B4 dam, located at Mar Azul Mine, in Nova Lima/MG, and compensation for moral damages.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- In 2019, the MP-MG filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to carry out emergency measures for the protection and preservation of the fauna in the flooding area, due to the evacuations that took place on 02/16/2019 from B3/B4 dam, located at Mar Azul Mine, in Nova Lima/MG, such as (i) taking care of all rescued animals until they can be returned to their guardians, (ii) paying compensation for material and moral damages to guardians who cannot receive the animals back, (iii) paying compensation for material and moral damages to guardians in the event of the animal's death, (iv) holding adoption fairs for rescued dogs and cats that cannot be returned to their guardians; and (v) carrying out the rehabilitation and release of wild animals seized in unlawful captivity.</li> <li>- This case is related to the Nova Lima Fauna Settlement and Consent Decree Agreement (TAC), described in item 4.7, subitem IV, item C, "Other Relevant Consent Decrees (TACs) and Commitment Agreements".</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
- On 11/29/2020, the 2nd Court ratified the TAC entered into on 08/30/2019 between MP-MG and Vale, dismissing the case.
<b>h) Stage of the process:</b>
Final dismissal of the case is pending. Despite the decision of the 2nd Court ratifying the TAC, the case was not definitively dismissed, as there are still amounts deposited in court pending withdrawal by the MP-MG. The amounts deposited in court by Vale are withdrawn by the MP-MG, as the MP-MG chooses projects to which the funds will be allocated.
<b>i) If the chance of loss is:</b>
Probable
<b>j) Reason why the process is considered relevant:</b>
The case is considered relevant because it is a discussion related to the protection of the existing fauna in the flooding area of the B3/B4 dam of the Mar Azul mine, in Nova Lima/MG.
<b>k) Analysis of the impact in case of losing the process:</b>
Vale may sustain damage to its image, in addition to financial impacts due to the application of a daily fine for non-compliance with the TAC, in the amount of R\$ 100,000.00.
<b>4. Public-Interest Civil Action No. 5013909-51.2019.8.13.0024</b>
<b>a) Court:</b>
1 <sup>st</sup> Court for Public Finance and Governmental Agencies of Belo Horizonte/MG
<b>b) Instance:</b>
1 <sup>st</sup> Court for Public Finance and Governmental Agencies of Belo Horizonte/MG - 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
02/01/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Prosecution Office of the State of Minas Gerais ("MP-MG") and State of Minas Gerais Defendants: Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, due to any obligation to adopt measures to improve safety related to the Laranjeiras, Menezes II, Capitão do Mato, Dike B, Taquaras, Forquilha I, II and III, Sul Superior, Vargem Grande and B3/B4 dams ("Dams"), in addition to any obligation to stop mining activities that result in the release of new tailings from the Dams.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- In 2019, the MP-MG filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to implement measures to improve the safety of the Dams and the immediate stoppage of the release of tailings and of all activities that may increase the risk of breach in the dams and in any others that are at risk or under attention, due to supposed activities that may accelerate the emergence of anomalies in the structures of the Dams.</li> <li>- This case is related to the Rizzo Gongo Soco Conduct Adjustment Term (TAC Gongo Soco), signed on 07/23/2019, to the SLR Conduct Adjustment Term (TAC SLR), signed on 09/23/2019, to the Rizzo - Factory Conduct Adjustment Term (TAC Rizzo - Factory), signed on 09/23/2029, to the Worley Conduct Adjustment Term (Worley TAC), signed on 7/17/2019, and to the Amendment to the Terms of Commitment (Amendment TC), signed on 08/25/2022, described in item 4.7 sub-item V, item b.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 02/01/2019, the 1st Court granted an injunction, determining: (i) the immediate stoppage of the release of tailings or the practice of activities that could increase the risk of breach in the dams of Laranjeiras, Menezes II, Capitão do Mato, Dike B, Taquaras, Forquilha I, Forquilha II, Forquilha III, as well as other structures that were in a risk or attention zone; (ii) the hiring of an independent technical audit firm to monitor and inspect the measures for repairing and reinforcing the dams; (iii) preparation of an action plan that would guarantee the total stability and safety of the dams, as well as an emergency action plan, under penalty of a daily fine in the amount of R\$ 1,000,000.00.</li> <li>- On 03/18/19, the 1st Court granted the claims made by Vale, authorizing the resumption of mining activities related to the Norte Laranjeiras dam and the Brucutu mining complex. The 1st Court also acknowledged that the dam is not in the "alarm zone", which corresponds to the attention zone defined by the probabilistic risk management model adopted by Vale, designed according to international guidelines with the aim of identifying structures that require improvements, and it was not built using the "upstream" method, the constructive method used in the B1 dam, whereby the raising</li> </ul>

#### 4.4. Relevant non-confidential processes

<p>shells are supported on the tailings or sediments previously released and deposited. The MP-MG appealed to the Court of Appeals of Minas Gerais ("TJMG") against the decision of the 1st Court.</p> <ul style="list-style-type: none"> <li>- On 03/25/19, the TJMG, on appeal filed by the MP-MG, partially granted the claims made by the MP-MG, determining that Vale refrain from releasing tailings or carrying out activities that would increase risks to the Sul Superior dam, located in the Gongo Soco Mine.</li> <li>- On 04/29/19, the TJ-MG, on appeal filed by the MP-MG, determined the: (i) suspension of the authorization to use the Norte Laranjeiras Dam; (ii) authorization for the State of Minas Gerais to revoke the Dams' licenses.</li> <li>- On 09/04/2019, the 1st Court ratified the Rizzo Gongo Soco TC entered into between the parties on 07/23/2019, dismissing the case with regard to the structures that are part of the Gongo Soco Mine (Sul Superior Dam), located in the city of Barão de Cocais-MG.</li> <li>- On 10/23/2019, the 1st Court ratified the SLR TC and Rizzo (Fábrica) TC entered into between the parties on 09/23/2019, and the claims related to the structures of the Mines of Abóboras (where the Vargem Grande dam is located ), Fábrica (where the Forquilhas and Grupo dams are located) and Mar Azul (where the B3/B4 and Taquaras dams are located) were deemed dismissed.</li> <li>- On 12/07/2022, the 1st Court ratified the TC Amendment entered into between MPMG, MPF and Vale on 08.25.2022, with the intervention of the State Foundation for the Environment and the State of Minas Gerais, regarding the implementation of a new monitoring flow to be followed by audits within the scope of SLR TAC, Gongo Soco TAC, Rizzo – Fábrica TAC and Worley TAC.</li> </ul>
<p><b>h) Stage of the process:</b></p> <p>Case dismissed in relation to the structures of Vargem Grande, Taquaras, B3/B4, Forquilha I, Forquilha II, Forquilha III and Sul Superior. Consideration of the request for ratification of the Worley TAC and dismissal of the case in relation to the Menezes II dam is awaited, with a view to ratification of the Aecom TAC.</p> <p>In 2023, a sentence was handed down extinguishing the case with a decision on the merits. Awaiting the final and unappealable decision or the filing of an appeal by the MP-MG.</p>
<p><b>i) If the chance of loss is: (likely, possible or remote):</b></p> <p>Possible, only with respect to requests pending decision.</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>The lawsuit may result in the suspension of Vale's activities at the dams of Laranjeiras (Brucutu Mine), Menezes II (Feijão Mine), Capitão do Mato (Capitão do Mato Mine), Dike B (Capitão do Mato Mine), Taquaras and B3/B4 dams (Mar Azul Mine), Forquilha I, Forquilha II and Forquilha III (Fábrica Mine), Sul Superior (Gongo Soco Mine), in the event that the signed agreements are deemed to have been breached, as well as generating a relevant and invaluable financial impact, which may consequently also result in damage to Vale's image.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>Reference to item "j" above.</p>

<p><b>5. Public-Interest Civil Action No. 5000021-03.2019.8.13.0319</b></p>
<p><b>a) Court:</b></p> <p>2nd Civil, Criminal and Penal Enforcement Court of Itabirito/MG</p>
<p><b>b) Instance:</b></p> <p>2nd Civil, Criminal and Penal Enforcement Court of Itabirito/MG – 1st Instance</p>
<p><b>c) Filed on:</b></p> <p>04/03/2019</p>
<p><b>d) Parties to the process:</b></p> <p>Plaintiff(s): Prosecution Office of Minas Gerais ("MP-MG") Defendants: Vale S.A.</p>
<p><b>e) Amounts, assets or rights involved:</b></p> <p>Inestimable values, due to any obligation to refrain from increasing any risks to the Maravilhas II Dam of the Mina do Pico Mining Complex, located in the Municipality of Itabirito/MG ("Maravilhas II Dam") and the possibility of stopping activities at the dam.</p>
<p><b>f) Main facts:</b></p> <ul style="list-style-type: none"> <li>- In 2019, as a result of investigations within the scope of the Civil Investigation (MPMG-0319.18.000192-1), established with the objective of investigating the environmental suitability and stability of the Maravilhas II Dam and the need to adopt preventive, mitigating, restorative and compensatory measures, MP-MG filed a Public-Interest Civil Action against Vale, requesting the immediate stoppage of activities at the Maravilhas II Dam and other structures of the Mining Complex of Mina do Pico, located in the municipality of Itabirito/MG, while the complete stability and safety of the structures has not been demonstrated, as well as for Vale to adopt several preventive measures.</li> <li>- The lawsuit is related to the SLR Term of Commitment (SLR TC), entered into between Vale, the Prosecution Office of the State of Minas Gerais and the Labor Prosecution Office on 09/23/2019 (contained in item 4.7, subitem V).</li> </ul>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <ul style="list-style-type: none"> <li>- On 04/11/2019, the 2nd Court partially granted the MP-MG's request for an interlocutory relief, determining that Vale adopt measures such as: (i) refraining from releasing tailings and operating the Maravilhas II dam, until the complete stability of the structure is proven; (ii) refraining from increasing any risks to the Maravilhas II dam and other structures that make up the mining complex of Mina do Pico; (iii) hiring a new auditing firm to monitor and inspect the measures for repairing and reinforcing the dam; (iv) preparing/updating a plan to ensure the safety and stability of the structure, as well as an emergency action plan, under penalty of a daily fine in the amount of R\$ 1,000,000.00. Vale appealed to the TJ-MG against the decision.</li> <li>- On 07/09/2019, the TJ-MG did not accept Vale's appeal against the decision of the 2nd Court.</li> </ul>

#### 4.4. Relevant non-confidential processes

– On 12/04/2019, the 2nd Court ratified the Term of Commitment (“SLR TC”) entered into between Vale, the Prosecution Office of the State of Minas Gerais and the Labor Prosecution Office (contained in item 4.7, subitem V), and determined the prosecution of the case with regard to MP–MG requests, such as: (i) refraining from releasing tailings and performing any act tending to build, operate, alter and/or use the Maravilhas II dam, until the complete stability of the structure is proven; (ii) the interruption of activities that increase risk to the structures of Mina do Pico, as well as (iii) adoption of reparation and compensation measures in case of need for evacuation, due to the lack of stability of the structures that make up Mina do Pico.
<b>h) Stage of the process:</b>
After the conclusion of the evidentiary stage, the 2 <sup>nd</sup> Court is expected to render a decision on the case.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process could result in the suspension of Vale's operations at the dams that are part of Pico Mine, generating a relevant operational impact, and could also result in damage to Vale's image.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item “j” above.

<b>6. Notice of Violation No. 109203/2019</b>
<b>a) Court:</b>
State Foundation of Environment/MG (FEAM)
<b>b) Instance:</b>
Normative Appellate Chamber of the State Council for Environmental Policies – COPAM–MG – 2 <sup>nd</sup> Administrative Instance
<b>c) Filed on:</b>
08/01/2019
<b>d) Parties to the process:</b>
Plaintiff(s): FEAM Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights:</b>
Fine in the amount of R\$ 605,249.82 (adjusted until February 2023). Validity of the Stability Condition Statement (DCE), issued by audit/certification company TUV SUD (“TUV–SUD”), of B1 Dam at the Córrego do Feijão mine in Brumadinho/MG (“B1 Dam”).
<b>f) Main facts:</b>
– The process is related to the breach of Dam B1, which occurred on 01/25/2019. – In 2019, the inspection area of FEAM issued a notice of violation against Vale, stating that Vale violated the Stability Condition Statement (DCE) of Dam B1, issued by TUV SUD, in September 2018. According to FEAM, the Statement was allegedly prepared and presented in a totally or partially false way, for omitting the need to finish the complementation of the installation of deep horizontal drains, to guarantee the safety conditions of B1 Dam, thus enabling its operation.
<b>g) Summary of decisions on the merits rendered:</b>
On 02/09/2022, FEAM decided to maintain the notice of violation and the fine imposed on Vale. Vale filed an administrative appeal to COPAM–MG against this decision, which is still pending trial.
<b>h) Stage of the process:</b>
COPAM–MG's decision on the administrative appeal filed by Vale is pending.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Likely
<b>j) Reason why the process is considered relevant:</b>
The process could result in damage to Vale's image, as a result of the alleged use of false, misleading or missing documentation related to the safety of B1 Dam.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item “j” above.

<b>7. Public-Interest Civil Action No. 5205612–03.2021.8.13.0024</b>
<b>a) Court:</b>
1 <sup>st</sup> Court for Public Finance and Governmental Agencies of Belo Horizonte/MG
<b>b) Instance:</b>
1 <sup>st</sup> Court for Public Finance and Governmental Agencies of Belo Horizonte/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
12/17/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Prosecution Office of Minas Gerais (“MP–MG”) Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, due to the possible obligation to adopt preventive measures at Maravilhas II Dam and the possibility of paralyzing activities at the dam. Stoppage of Vale's activities at the Forquilha V Dam, located at the Fábrica Mine in Ouro Preto/MG.



#### 4.4. Relevant non-confidential processes

In the event of non-compliance with any injunction granted, the MP-MG requested the imposition of a daily fine in the amount of R\$ 100,000.00 (one hundred thousand reais).
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The process consists of one of the measures taken by the government authorities as a result of the breach of B1 dam at the Córrego do Feijão mine in Brumadinho/MG ("B1 Dam"), which occurred on 01/25/2019, and was assigned to the same judge presiding over a connected process due to the connection with Public-Interest Civil Action No. 5013909-51.2019.8.13.0024, as described in item 4.</li> <li>- In 2021, the MP-MG filed a Public-Interest Civil Action against Vale, requesting that Vale abstain from operating the Forquilha V dam, at the Fábrica Mine, until it had an Emergency Action Plan (EAP) duly approved by the agencies competent authorities, as well as ensuring the supply of drinking water to the affected communities in the event of a rupture, under penalty of a daily fine in the amount of R\$ 100,000.00 (one hundred thousand reais).</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
There have been no decisions on the merits of the process yet.
<b>h) Stage of the process:</b>
Consideration of the requests for urgent relief requested by the MP-MG is awaited.
<b>i) If the chance of loss is: (likely, possible or remote):</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process could result in the stoppage of Vale's activities at the Forquilha V dam, at the Fábrica Mine, located in Ouro Preto/MG, with a relevant operational impact. Vale could also suffer damage to its image, since the stoppage would result from the judicial recognition of the lack of effectiveness of the emergency action plan for the Forquilha V dam.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.
<b>8. Public-Interest Civil Action (Early Interlocutory Relief) no. 1003397-62.2022.4.01.3800</b>
<b>a) Court:</b>
12 <sup>th</sup> Federal Civil Court of the Judicial District of Minas Gerais
<b>b) Instance:</b>
12 <sup>th</sup> Federal Civil Court of the Judicial District of Minas Gerais – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
01/26/2022
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Prosecution Office ("MPF"); Pataxó Hã Hã Hãe Indigenous Peoples, and Pataxó Indigenous People from Naô Xohã Indigenous Village; and Federal Public Defender's Office ("DPU") Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, due to any obligation to reallocate and support indigenous communities that inhabited Naô Xohã Indigenous Village, affected by the breach of B1 dam at the Córrego do Feijão mine in Brumadinho/MG ("B1 Dam").
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The process stems from the results of the flooding of the Paraopeba River, which reached locations where the Pataxó and Pataxó Hã-Hã-Hãe indigenous communities lived, on the bank of the river. The plaintiffs allege that the river floods was aggravated by the breach of Dam B1.</li> <li>- On 04/05/2019, a Preliminary Adjustment Agreement (TAP-E) was signed between Vale, the Federal Prosecution Office and Pataxó Hã Hã Hãe and Pataxó Naô Xohã Indigenous Communities, later amended on 08/09/2021, establishing the metrics for payment of lodgment and subsistence funds to part of the reallocated families. The other families that are not part of the TAP-E entered into agreements separate from the TAP-E, which have already been approved in court, in autonomous processes.</li> <li>- In 2022, the MPF and others filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to present a plan for the temporary reallocation of Pataxó and Pataxó Hã-Hã-Hãe indigenous communities, for the monthly payment of lodgment and subsistence funds to the reallocated families, as well as the carrying out of a study by the Institute for Sustainable Development Studies on the social and environmental and social and economic damage caused by the dam breach to those communities.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 02/16/2022, the 12<sup>th</sup> Court determined Vale, within five (5) days, to present a plan for the temporary reallocation of Pataxó and Pataxó Hã Hã Hãe indigenous communities, from Naô Xohã Indigenous Village. The Court also determined that Vale should immediately start paying the monthly lodgment and subsistence funds to the reallocated families, including those who were forced to move before the flooding of Naô Xohã Indigenous Village, in the amount of one minimum wage per family group, until the definitive reallocation of the indigenous community.</li> <li>- On 05/12/2022, the 12<sup>th</sup> Court determined that Vale should make the monthly payment of lodgment and subsistence funds to the reallocated families, with the exception of the families belonging to Katurãma Indigenous Village and the Family Nucleus of Mrs. Eline, in view of their disassociation from the chief of Naô Xohã Indigenous Village, as informed by the MPF and the DPU and the decision issued.</li> <li>- On 07/22/2022, the 12<sup>th</sup> Court admitted FUNAI to the process as amicus curiae.</li> </ul>
<b>h) Stage of the process:</b>
After the production of evidence phase, the process is expected to be tried by the 12 <sup>th</sup> Court.
<b>i) If the chance of loss is:</b>
Possible

#### 4.4. Relevant non-confidential processes

<b>j) Reason why the process is considered relevant:</b>
The process could result in damage to Vale's image, as it involves redress to traditional indigenous communities, as a result of the breach of B1 dam, located in Brumadinho/MG.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.
<b>9. Public-Interest Civil Action No. 1027738-55.2022.4.01.3800</b>
<b>a) Court:</b>
12 <sup>th</sup> Federal Civil Court of the Judicial District of Minas Gerais
<b>b) Instance:</b>
12 <sup>th</sup> Federal Civil Court of the Judicial District of Minas Gerais – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
06/10/2022
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Prosecution Office ("MPF") and Federal Public Defender's Office ("DPU") Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, due to any obligation of indemnity for the material and moral damages of traditional indigenous communities affected by the breach of B1 dam at the Córrego do Feijão mine in Brumadinho/MG ("B1 Dam").
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The process stems from the rupture of Dam B1, which occurred on 01/25/2019 and reached locations occupied by Pataxó Hã Hã Hãe and Pataxó indigenous communities from Naô Xohã Indigenous Village, from the trunk of Mr. Gervásio and Mrs. Antonia and the family of Manoel Neves Portugal Junior (Joo-Pek) and Sara Thaimara Ferreira.</li> <li>- In 2019, Vale, the MPF and Pataxó Hã Hã Hãe and Pataxó Naô Xohã Indigenous Communities entered into an Extrajudicial Preliminary Adjustment Agreement (TAP-E), providing for working groups to develop criteria for individual compensation. Between December 2021 and February 2022, the DPU applied the damage matrices to determine individual damages, elaborating the parameters for individual reparation in a unique way for all family groups, reaching claims for material, immaterial and moral damages suffered on an individual basis.</li> <li>- In 2022, the MPF and the DPU filed a Public Civil Action against Vale, requesting that Vale be ordered to pay compensation for pain and suffering and material damages to the Pataxó Hoje Hãe and Pataxó indigenous people of Aldeia Naô Xohã, from the trunk of their Gervásio and Dona Antonia and the family of Manoel Neves Portugal Junior (Joo-Pek) and Sara Thaimara Ferreira, due to the rupture of Dam B1.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
- On 11/21/2022, the MPF and the DPU requested the redistribution of this process, due to dependence on Process No. of the 12 <sup>th</sup> Court. This request was accepted on November 22, 2022.
<b>h) Stage of the process:</b>
After the production of evidence phase, the process is expected to be tried by the 12 <sup>th</sup> Court.
<b>i) If the chance of loss is:</b>
Possible.
<b>j) Reason why the process is considered relevant:</b>
The process could result in damage to Vale's image, as it involves compensation to traditional indigenous communities, as a result of the breach of B1 dam, located in Brumadinho/MG.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

#### (iii) Labor

<b>1. Public-Interest Civil Action No. 0010261-67.2019.5.03.0028 (Item 4.3, Labor Process No. 6 FRE)</b>
<b>a) Court:</b>
5 <sup>th</sup> Labor Court of Betim/MG
<b>b) Instance:</b>
5 <sup>th</sup> Labor Court of Betim/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
03/25/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Labor Prosecution Office ("MPT"); Union of Employees in Cleaning Companies; Union of Employees in Collective Meal Companies; Federal Public Defender's Office; Union of Workers in the Iron and Base Metal Extraction Industry of Brumadinho and Region; Union of Workers in Event Production, Organization and Project Companies of the State of Minas Gerais; Union of Workers in the Heavy Construction Industries of Minas Gerais; Union of Workers in the Construction and Real Estate Industries of the State of Minas Gerais; Union of Workers in General Leasing Companies in the State of Minas Gerais; and Union of Employees in Data Processing, IT Services and Similar Companies in the State of Minas Gerais. Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Collective moral damages R\$ 400,000.00.

#### 4.4. Relevant non-confidential processes

Payment of indemnities for moral damages, property damages and additional insurance for work accident in an amount to be calculated individually.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The process stems from the breach of B1 dam at the Córrego do Feijão mine in Brumadinho/MG ("B1 dam"), which occurred on 01/25/2019 and resulted in the death of workers.</li> <li>- In 2019, the MPT and others filed a Public-Interest Civil Action against Vale, requesting the adverse judgment against Vale for "social dumping", as well as the payment for material and moral damages to relatives of deceased workers, payment of funeral aid, fine of 40% on the FGTS, reimbursement of expenses, in addition to the payment of collective moral damages, as well as the prohibition of Vale to dismiss employees and the obligation to pay for advertising with clarifications about the accident.</li> <li>- In 2019, the MPT and Vale entered into settlement agreement on the process, establishing indemnity parameters for the relatives of deceased workers. Up to 11/08/2022, Vale signed individual agreements with 1,719 relatives of the deceased people, with Vale disbursing more than R\$ 1.1 billion in indemnities.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 07/15/2019, the 5<sup>th</sup> Court ratified an agreement entered into between the MPT and Vale, through which the following indemnity parameters were established for the families of the fatal victims: (i) parents, spouses or partners and children of deceased or uncontactable employees will receive, individually, R\$ 500,000 as moral damages and R\$ 200,000 as additional insurance for work accident; and (ii) siblings will receive, individually, R\$ 150,000. The agreement also provides for: (i) the payment of material damages to the family nucleus of dependents, the minimum amount of which is R\$ 800,000; (ii) the payment of day care assistance in the amount of R\$ 920 per month for children of deceased workers up to 3 years of age, and education allowance in the amount of R\$ 998 per month for children between 3 and 25 years of age; (iii) the concession of a lifetime health plan for spouses or partners and for children up to 25 years of age; (iv) stability for own workers and outsourced workers working at the Córrego do Feijão mine on the day of the dam breach and survivors who were working at the time of the dam breach, for a period of 3 years, starting on 01/25/2019, which may be converted into cash indemnity; and (v) the payment of R\$ 400 million as collective moral damages.</li> </ul>
<b>h) Stage of the process:</b>
The process is active, although discussions on the merits have been closed, in view of the agreement entered into on 07/15/2019, ratified by the 5 <sup>th</sup> Court.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Remote
<b>j) Reason why the process is considered relevant:</b>
The process is strategic for the Company, since it established, by consensus, the indemnity parameters for the relatives of the deceased workers as a result of the breach of B1 dam. Failure to comply with the agreements entered into would damage Vale's image. Vale continues to make the payment under the agreement in the individual enforcement actions.
<b>k) Analysis of the impact in case of losing the process:</b>
By 05/01/2023, Vale had entered into individual agreements involving over R\$1.1 billion in compensation paid to family members in individual enforcement actions, in addition to having paid the amount of R\$400 million in collective moral damages, as agreed in the agreement ratified by the 5th Court.

<b>2. Public-Interest Civil Action No. 0010357-31.2019.5.03.0142 (Item 4.3, Labor Process No. 7 FRE)</b>
<b>a) Court:</b>
5 <sup>th</sup> Labor Court of Betim/MG
<b>b) Instance:</b>
5 <sup>th</sup> Labor Court of Betim/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
04/10/2019
<b>d) Parties to the process:</b>
<p><b>Plaintiff(s):</b> Union of Workers in the Iron and Base Metal Extraction Industries of Brumadinho and Region (Metabase Brumadinho Union); Union of Workers in the Heavy Construction Industries; Union of Employees in Collective Meal Companies of Minas Gerais; Federation of Workers in the Construction and Furniture Industries of the State of Minas Gerais; Union of Workers in Event Production, Organization and Project Companies of Minas Gerais; Union of Workers in General Leasing Companies in the State of Minas Gerais; Union of Employees in Data Processing, IT Services and Similar Companies of the State of Minas Gerais; Union of Employees in Tidiness, Conservation and Urban Cleaning Companies in the Metropolitan Area of Belo Horizonte (collectively, "Union Entities").</p> <p><b>Defendant(s):</b> Vale S.A.</p>
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, due to the claim for compensation for material and moral damages as a result of the rupture of Dam B1 at the Córrego do Feijão mine in Brumadinho/MG ("B1 Dam").
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The process stems from the breach of B1 dam occurred on 01/25/2019, which resulted in the death of workers.</li> <li>- In 2019, the Union Entities filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to pay indemnities for collective material and moral damages to: (i) the families of deceased or uncontactable victims; (ii) workers who survived the breach of Dam B1; (iii) the in-house workers at the Córrego do Feijão and Jangada mines at the time of the B1 dam breach. The Union Entities also requested that Vale be obliged to maintain jobs and reinstate any dismissed employees.</li> <li>- Up to 05/01/2023, Vale signed 778 individual agreements with in-house/surviving, own/outsourced workers. More than R\$ 108 million was paid as indemnity.</li> </ul>

#### 4.4. Relevant non-confidential processes

<b>g) Summary of decisions on the merits rendered:</b>
- On 03/13/2020, the 5 <sup>th</sup> Court ratified an agreement entered into by Vale and the Union Entities, through which the following indemnity parameters were established: (i) surviving workers will receive R\$ 100,000 for moral damages, R\$ 150,000 for material damage and psychiatric and psychological treatment will be granted, in an accredited network, until January 2022 or for the term of the employment contract that already includes the same benefit; (ii) the in-house workers will receive R\$ 40,000 for moral damages and R\$ 40,000 for material damages; (iii) workers on leave will receive indemnity of R\$ 40,000.
<b>h) Stage of the process:</b>
The process is active, although discussions on the merits have been closed, in view of the agreement entered into on 03/13/2020.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Remote.
<b>j) Reason why the process is considered relevant:</b>
The process is strategic for the Company, as it set forth, in a consensual manner, the indemnity parameters for surviving workers and in-house workers at the Córrego do Feijão mine. Failure to comply with the agreements entered into would damage Vale's image. Vale continues to make the payment under the agreement in the individual enforcement actions.
<b>k) Analysis of the impact in case of losing the process:</b>
Up to 11/08/2022, Vale signed 778 agreements with in-house/surviving, own/outsourced workers. Vale paid more than R\$ 108 million was paid as indemnity.

<b>3. Public-Interest Civil Action No. 0010319-76.2019.5.03.0026 (Item 4.3, Labor Process No. 8 FRE)</b>
<b>a) Court:</b>
5 <sup>th</sup> Labor Court of Betim/MG
<b>b) Instance:</b>
Labor Superior Court (TST) – Superior Instance
<b>c) Filed on:</b>
04/05/2019
<b>d) Parties to the process:</b>
Plaintiff(s): Union of Industrial Assembly Workers (SINTRAMONTI)
Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Fine applied in the amount of R\$ 6,456.45.
<b>f) Main facts:</b>
- The process stems from the breach of B1 dam at the Córrego do Feijão mine in Brumadinho/MG ("B1 dam"), which occurred on 01/25/2019 and resulted in the death of workers. - In 2019, SINTRAMONTI filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to pay indemnities to dependents of deceased employees (affiliated to SINTRAMONTI) of not less than R\$ 5,000,000.00 for each family group.
<b>g) Summary of decisions on the merits rendered:</b>
- On 04/12/2019, Vale and SINTRAMONTI entered into an out-of-court agreement, within the same parameters of the court agreement entered into with the Labor Prosecution Office in the scope of process 0010261-67.2019.5.03.0142 (described in item 1 above). - On 07/18/2019, the 5 <sup>th</sup> Court dismissed the action without resolution of the merits, on the grounds that the action was a simulated process, rendering an adverse judgment against SINTRAMONTI and Vale to pay a fine for malicious prosecution, in the amount of R\$ 5,000.00, jointly and severally. The parties filed appeals to the Regional Labor Court of the 3 <sup>rd</sup> Region ("TRT-3") against the decision of the 5 <sup>th</sup> Court. - On 12/06/2019, based on the parties' appeals, TRT-3 upheld the decision of the 5 <sup>th</sup> Court. Vale filed an appeal with the Superior Labor Court ("TST") against the TRT-3 decision. - On 09/28/2020, the TST dismissed Vale's appeal. Vale filed a new appeal with the TST.
<b>h) Stage of the process:</b>
Trial by the TST of a new appeal filed by Vale is pending.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Fine for malicious prosecution: Likely. Other subject matters (indemnities): Remote, in view of the agreement signed with the MPT in ACP 0010261-67.2019.5.03.0142 (described in item 1 above).
<b>j) Reason why the process is considered relevant:</b>
The process may result in damage to Vale's image, if the malicious prosecution practiced by Vale is recognized.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

<b>4. Public-Interest Civil Action No. 0010730-45.2021.5.03.0028 (Item 4.3, Labor Process No. 11 FRE)</b>
<b>a) Court:</b>
5 <sup>th</sup> Labor Court of Betim/MG
<b>b) Instance:</b>
Regional Labor Court of the 3 <sup>rd</sup> Region (TRT-3) – 2 <sup>nd</sup> Instance
<b>c) Filed on:</b>

#### 4.4. Relevant non-confidential processes

06/25/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Union of Employees in Tidiness, Conservation and Urban Cleaning Companies in the Metropolitan Area of Belo Horizonte (Union)
Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Indemnity for individual moral damages to deceased workers (death damage) in the claim amount of R\$ 37.5 million.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The process stems from the breach of B1 dam at the Córrego do Feijão mine in Brumadinho/MG ("B1 dam"), which occurred on 01/25/2019 and resulted in the death of workers.</li> <li>- In 2021, the Union filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to pay indemnity to 25 workers for individual moral damages resulting from death (death damage), in the amount of R\$ 1,500,000.00 per deceased victim.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 04/22/2022, the 5<sup>th</sup> Court upheld the claim for indemnity, ordering Vale to pay indemnity for death damage in the amount of R\$ 1,500,000.00 per deceased victim. Vale filed an appeal with the TRT-3 against the decision.</li> <li>- On 09/20/2022, in Vale's appeal, the TRT-3 dismissed the case without resolution of the merits, recognizing the illegitimacy of the Union to file the action as plaintiff. The Union filed an appeal with the TRT-3 against the decision of the 5<sup>th</sup> Court, which is still pending trial.</li> </ul>
<b>h) Stage of the process:</b>
Trial by the TRT-3 of the appeal filed by the Union is pending.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible.
<b>j) Reason why the process is considered relevant:</b>
The process could result in damage to Vale's image, as well as create an unfavorable precedent for Vale for the recognition of "Death Damage", which is not provided for in the Brazilian law. Additionally, if the TST recognizes that the Union has legitimacy to file the action, other unions could propose similar actions.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

<b>5. Public-Interest Civil Action No. 0010165-84.2021.5.03.0027 (Item 4.3, Labor Process No. 13 FRE)</b>
<b>a) Court:</b>
5 <sup>th</sup> Labor Court of Betim/MG
<b>b) Instance:</b>
Superior Labor Court ("TST") – Higher Instance
<b>c) Filed on:</b>
01/24/2021
<b>d) Parties to the process:</b>
Plaintiff(s): Union of Workers in the Iron and Base Metal Extraction Industry of Brumadinho and Region ("Union")
Defendant(s): Vale S.A.
<b>e) Amounts, assets or rights involved:</b>
Indemnity for individual moral damages to deceased workers (death damage) in the claim amount of R\$ 471.6 million.
<b>f) Main facts:</b>
<ul style="list-style-type: none"> <li>- The process stems from the breach of B1 dam at the Córrego do Feijão mine in Brumadinho/MG ("B1 dam"), which occurred on 01/25/2019 and resulted in the death of workers.</li> <li>- In 2021, the Union filed a Public-Interest Civil Action against Vale, requesting that Vale be ordered to pay indemnity to 131 workers for individual moral damages resulting from death (death damage), in the amount of R\$ 3,000,000.00, as well as, according to an injunction, the freezing of R\$ 471.6 million.</li> </ul>
<b>g) Summary of decisions on the merits rendered:</b>
<ul style="list-style-type: none"> <li>- On 04/12/2021, the 5<sup>th</sup> Court rejected an injunction to freeze R\$ 471.6 million from Vale's accounts.</li> <li>- On 06/09/2021, the 5<sup>th</sup> Court upheld the claim for indemnity for death damage and ordered Vale to pay indemnity in the amount of R\$ 1,000,000.00 per deceased worker. Vale and the Union filed appeals to the Regional Labor Court of the 3<sup>rd</sup> Region ("TRT-3") against the decision.</li> <li>- On 03/18/2022, in appeals by Vale and the Union, TRT-3 upheld the adverse judgment of the 5<sup>th</sup> Court. Vale and the Union filed appeals with TST against the decision.</li> </ul>
<b>h) Stage of the process:</b>
The trial by the TST of Vale's and the Union's appeals is pending.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible.
<b>j) Reason why the process is considered relevant:</b>
The process could result in damage to Vale's image, as well as create an unfavorable precedent for Vale for the recognition of "Death Damage", which is not provided for in the Brazilian law.
<b>k) Analysis of the impact in case of losing the process:</b>
Reference to item "j" above.

#### (iv) Criminal

#### 4.4. Relevant non-confidential processes

<b>1. Criminal Action No. 0002725-15.2016.4.01.3822</b>
<b>a) Court:</b>
Single Federal Court of Ponte Nova/MG
<b>b) Instance:</b>
Single Federal Court of Ponte Nova/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
10/20/2016
<b>d) Parties to the process:</b>
Plaintiff(s): Federal Prosecution Office ("MPF"). Defendant(s): Samarco Mineração S.A., Vale S.A., BHP Billiton Brasil Ltda. ("BHPB"), VogBr Recursos Hídricos e Geotecnia Ltda. and certain individuals.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, given that the dosimetry of any penalty is only carried out in the case of a court decision on the merits, with pecuniary and restrictive penalties being imposed on Vale.
<b>f) Main facts:</b>
– The process stems from the Fundão dam breach ("Fundão Dam"), in the Industrial Complex of Germano, located in the Municipality of Mariana/MG, owned by Samarco, a company in which Vale and BHPB hold each a 50% share capital, in Mariana/MG, which took place on 11/05/2015. – In 2016, the MPF filed a complaint against Vale, Samarco, BHPB and VogBr for alleged crimes against the environment and crimes against the environmental administration. With regard to individuals, in addition to the crimes highlighted above, the MPF alleged the practice of crimes of (i) triple-qualified homicide; (ii) serious bodily injury; and (iii) flooding and landslides or collapses.
<b>g) Summary of decisions on the merits rendered:</b>
– On 05/03/2019, the Regional Federal Court 1 <sup>st</sup> Region ("TRF1") tried three Habeas Corpus filed by individuals denounced in the process and granted an order to determine the suspension of the criminal action at origin, specifically with regard to the accusation of homicide, for all individuals. – On 09/20/2019, after TRF1 having tried the aforementioned Habeas Corpus, the judge of the Single Court determined the change of the procedural class from jury procedure to ordinary procedure. – On 05/02/2019, the Single Court rejected Vale's request for the limitation period of the complaint in relation to the legal entity. Vale filed an appeal against the decision. – On 06/30/2022, in Vale's appeal, the President of the STJ upheld the decision of the Single Court that rejected the limitation period of the complaint. Vale filed an appeal with the STJ against the decision of the President of the STJ. – On 02/28/2023, the Single Court appointed hearings for the examination of defense witnesses.
<b>h) Stage of the process:</b>
Awaiting decision by the STJ on Vale's appeal against the decision of the President of the STJ that upheld the decision of the Single Court on the limitation period. At the same time, in the first instance, the holding of hearings for examination of the witnesses is pending.
<b>i) If the chance of loss is: (likely, possible or remote)</b>
Possible
<b>j) Reason why the process is considered relevant:</b>
The process is considered relevant, as it is of a criminal nature and stems from the breach of Fundão dam, which could result in significant financial impacts and damage to Vale's image.
<b>k) Analysis of the impact in case of losing the process:</b>
In case of loss, Vale S.A. may suffer relevant financial impacts, damage to its image, in addition to restrictive penalties of law.
<b>2. Criminal Action No. 0003237-65.2019.8.13.0090 / (current 1003479-212023.4.06.3800)</b>
<b>a) Court</b>
2 <sup>nd</sup> Civil, Criminal and Execution Court of Brumadinho/MG
<b>b) Instance:</b>
2 <sup>nd</sup> Civil, Criminal and Execution Court of Brumadinho/MG – 1 <sup>st</sup> Instance
<b>c) Filed on:</b>
03/14/2020
<b>d) Parties to the process:</b>
Plaintiff(s): Public Prosecution Office of the State of Minas Gerais ("MP-MG"). Defendant(s): Vale S.A., Tüv Süd and certain individuals.
<b>e) Amounts, assets or rights involved:</b>
Inestimable values, given that the dosimetry of any penalty is only carried out in the case of a court decision on the merits, with pecuniary and restrictive penalties being imposed on Vale.
<b>f) Main facts:</b>
– The process stems from the breach of B1 dam ("B1 dam") at the Córrego do Feijão mine in Brumadinho/MG, which occurred on 01/25/2019. – In 2020, the MP-MG filed a complaint against Vale, Tüv Süd and certain individuals, for allegedly practicing the offenses provided for in Articles 121, § 20, items III and IV, of the Penal Code, 270 times (qualified homicide); of article 29, head provision and § 1, item II, and § 4, item V and VI, and of article 33, head provision and items V and VI, of Law n. 9,605/1998

#### 4.4. Relevant non-confidential processes

<p>(crimes against fauna); of article 38, head provision, of article 38-A, head provision, of article 40, head provision and of article 48 combined with article 53, item I, of Law no. 9,605/1998 (crimes against flora); of article 54, § 2, item III, of Law 9,605/1998 (pollution crime); as a result of B1 dam breach.</p> <ul style="list-style-type: none"> <li>- In 2022, the STF ordered the referral of the case to the Federal Court.</li> <li>- In 2023, the case was transferred to the 2nd Federal Criminal Court of the Judiciary Subsection of Belo Horizonte (formerly the 9th Federal Court of the Judiciary Section of Minas Gerais), receiving number 1003479-212023.4.06.3800. Thus, within the scope of Federal Justice, the MPF ratified the complaint filed by the MP-MG in 2020 against Vale, Tüv Süd and certain individuals, for allegedly committing the crimes set forth in articles 121, § 20, items III and IV, of the Penal Code, 270 times (qualified homicide); of article 29, caput and § 1, item II, and § 4, item V and VI, and of article 33, caput and items V and VI, of Law n. 9,605/1998 (crimes against fauna); of article 38, caput, of article 38-A, caput, of article 40, caput and of article 48 combined with article 53, item I, of Law no. 9,605/1998 (crimes against flora); of article 54, paragraph 2, item III, of the Law. 9,605/1998 (crime of pollution); due to the rupture of Dam B1. Immediately, the Federal Court of the 2nd Federal Criminal Court of the Judiciary Subsection of Belo Horizonte received the complaint.</li> </ul>
<p><b>g) Summary of decisions on the merits rendered:</b></p> <ul style="list-style-type: none"> <li>- On 10/19/2021, after examining ordinary appeals in Habeas Corpus filed by two individuals, the Superior Court of Justice decided that the competence to judge the Criminal Action belongs to the Federal Court, having declared null all the decisions handed down by the court of the 2nd Court of Brumadinho, including the receipt of the Criminal Action. The MP-MG filed an appeal against the decision.</li> <li>- On 01/14/2022, on appeal by the MP-MG, the STF established jurisdiction in the Common Court in Brumadinho (2nd Court). Appeals were filed against this decision by individuals.</li> <li>- On 12/19/2022, in an appeal filed by individuals, the Federal Supreme Court ("STF") recognized the competence of the Federal Court to judge the criminal action, annulling the receipt of the complaint and other decision-making acts performed by the Court of the 2nd Civil, Criminal and Criminal Execution Court of the Judicial District of Brumadinho/MG.</li> <li>- On 01/18/2023, the President of the STF, Min. Rosa Weber, ordered the immediate shipment of a copy of the appeals being processed by the STF to the then 9th Federal Court of the Judiciary Section of Minas Gerais (currently the 2nd Federal Criminal Court of the Judiciary Subsection of Belo Horizonte), without prejudice to the shipment of the original proceedings state criminal by d. Judgment of the 2nd Civil, Criminal and Criminal Execution Court of the District of Brumadinho/MG.</li> <li>- On 01/19/2023, the receipt of the records of the STF was certified by the 2nd Federal Criminal Court of the Judiciary Subsection of Belo Horizonte (formerly the 9th Federal Court of the Judiciary Section of Minas Gerais), and the procedure was distributed under No. 1003479- 212023.4.06.3800. On the same day, the records were sent to the Federal Public Ministry.</li> <li>- On 01/23/2023, the MPF ratified, in its exact terms, the complaint previously offered by the MPMG in the records of the state criminal action. On the same day, D. Judge of the 2nd Federal Criminal Court of the Judiciary Subsection of Belo Horizonte (formerly the 9th Federal Court of the Judiciary Section of Minas Gerais) ratified the receipt of the complaint and determined the digitization of the state records in full and the subsequent imputation of the entire collection in the PJE system of the Federal Justice (TRF6).</li> <li>- On 01/31/2023, state records No. 0003237-65.2019.8.13.0090 were sent to the archive, considering the decline of jurisdiction from the State Court to the Federal Court.</li> <li>- On 03/02/2023, the Federal Court determined: (i) the subpoena of the MPF so that it manifests itself in relation to the digitization of the records; (ii) after the manifestation of the MPF, the Secretariat will proceed with the dismemberment of the fact in relation to the environmental crimes, clarifying that two more processes must be formed, one for the company Vale and its employees and another for the company Tüv Süd and its employees . Therefore, the process already filed and distributed under No. 1003479-212023.4.06.3800 should remain for the crimes of homicide.</li> <li>- On 04/17/2023, the defense of Chris-Peter Meier (Tüv Süd employee) filed an appeal against the decision given on 03/2/2023 and which determined the dismemberment of the feat.</li> <li>- On 02/05/2023, the Federal Court received the appeal filed by the defense of Chris-Peter Meier (employee of Tüv Süd), as well as determined that the Public Prosecutor's Office should comment on the requests for qualification as assistants to the prosecution made by the estates of 40 (forty) victims and by AVABRUM.</li> </ul>
<p><b>h) Stage of the process:</b></p> <p>Awaiting, after the instruction phase of the process, the judgment by the 2nd Court.</p>
<p><b>i) If the chance of loss is: (likely, possible or remote)</b></p> <p>Possible.</p>
<p><b>j) Reason why the process is considered relevant:</b></p> <p>The process is considered relevant, as it is of a penal nature and stems from the breach of B1 dam in Brumadinho, which could result in significant financial impacts and damage to Vale's image.</p>
<p><b>k) Analysis of the impact in case of losing the process:</b></p> <p>In case of loss, Vale S.A. may suffer relevant financial impacts, damage to its image, in addition to restrictive penalties of law.</p>

#### 4.4. Relevant non-confidential processes

#### 4.5. Total amount provisioned of non-confidential processes

As of December 31, 2022, the total amount provisioned for, considering the processes considered relevant to the Company's business and/or its subsidiaries described in item 4.4 above, and its composition can be summarized as follows.

<b>Nature</b>	<b>(I) Amount (R\$ million) provisioned for processes that do not involve the Brumadinho and Mariana events</b>	<b>(II) Amount (R\$ million) provisioned for post-processes considered relevant to the business of the Company and/or its subsidiaries involving the events of Brumadinho and Mariana</b>
Tax	2.598	-
Civil	-	-
Labor	11	-
Environmental	24	4
Criminal	-	-
<b>Total</b>	<b>2.633</b>	<b>4</b>



#### 4.6. Relevant confidential process

<b>1) Process No. 1015425-06.2019.4.01.3400</b>
<b>Amounts, assets or rights involved</b>
Incalculable amount. It is a citizen suit for the purpose of preventing CADE from authorizing Vale to acquire a specific company.
<b>Analysis of impact in the case of losing the process</b>
The process is relevant due to the economic impact in the event of possible annulment of the business carried out, in addition to having reputational/image impacts.
<b>2) Process No. 00190.104883/2020-98</b>
<b>Amounts, assets or rights involved</b>
Up to 20% of gross profit for 2018. The Office of the Federal Controller General has initiated an administrative accountability process (PAR) against Vale, on the grounds of article 5, item V, law No. 12846/13, on the grounds that the company would have obstructed the supervision of the National Mining Agency (ANM) by adding incomplete or untrue information in the SIGBM regarding Dam I, located in the Córrego do Feijão mine, in Brumadinho/MG, and presenting a false Stability Condition Statement (DCE) in September 2018 for the same structure. On August 15, 2022, the CGU, in a decision published on this date, concluded that Vale failed to present reliable information in the Brazil's National Mining Agency (ANM) system in relation to Dam I of Brumadinho/MG and that it issued a positive Stability Condition Statement for the structure, in the period from June to September 2018, when, in the understanding of the control body, it should be negative, whose circumstances consisted of a harmful act to the Public Administration by making it difficult for the mining authority to inspect. Thus, based on item V of article 5 of Law 12,846/2013 – even recognizing the non-existence of acts of corruption – the CGU determined the fine in the amount of approximately R\$ 86.3 million, the minimum level established by law, recognizing the non-involvement or tolerance by the Top Management. The CGU determined the extraordinary publication of its decision, for a period of thirty (30) days, pursuant to article 6, items I and II, of Law No. 12,846/2013. The administrative decision (which may even be challenged in court) is not yet final, having been questioned by VALE's request for reconsideration, which has not yet been tried. Analysis of the request for reconsideration submitted by Vale to the Minister of State for the Office of the Federal Controller General, on which COREP presented a recent technical opinion deciding to take cognizance on it and, on the merits, denying it.
<b>Analysis of impact in the case of losing the process</b>
In case of loss, there is a risk of adverse judgment against the Company for the payment of a fine calculated on the annual gross revenue of 2018, from 5% to 20% of this total amount, as well as any damage to its image.
<b>3) Process No. 02/2020</b>
<b>Amounts, assets or rights involved</b>
Up to 20% of gross profit for 2018. The Office of the Federal Controller General of the State of Minas Gerais has initiated an administrative accountability process (PAR) against Vale, on the grounds of article 5, item V, law no. 12,846/13, on the grounds that the company would have obstructed the supervision of FEAM by submitting a false Stability Condition Statement (DCE) for Dam I, located in the Córrego do Feijão mine, in Brumadinho/MG, in September 2018, and the presentation of the same document, together with its audit report, in November 2018, to the Prosecution Office of Minas Gerais. On March 2, 2021, Vale filed a written defense before the State Comptroller General and, at the same time, filed a writ of mandamus against this PAR based on bis in idem, considering that the imposition of the penalty in the form of a fine has already been requested in the judicial sphere by the Prosecution Office of Minas Gerais. The injunction formulated in this writ of mandamus was granted to suspend the progress of the PAR. On April 19, 2021, the AGE, representing the State of Minas Gerais, filed an appeal against the decision that granted the injunction of the writ of mandamus. On December 14, 2021, the appeal was granted by the AGE, revoking the injunction of the writ of mandamus that had suspended the progress of the PAR. On May 10, 2022, a notification was sent to Vale S.A ordering that it submitted a statement on the CPAR resolution, with regard to instructive acts, such as holding hearings, technical inspection and gathering of documents. On May 16, 2022, Vale S.A filed a petition in the case record for the writ of mandamus, reiterating the need for its immediate trial. In November 2022, the hearings of the witnesses were held within the PAR. Currently, trial on the merits of the writ of mandamus is pending, as well as the completion of the investigation phase within the PAR.

<b>Analysis of impact in the case of losing the process</b>
In case of loss, there is a risk of adverse judgment against the company for the payment of a fine calculated on the annual gross revenue of 2018, from 5% to 20% of this total amount, as well as any damage to its image.
<b>4) Arbitrations proposed by minority shareholders, a professional class association and foreign trusts (no. 136/19, 137/19, 172/20, 206/22, 207/22, and 208/22)</b>
<b>Amounts, assets or rights involved</b>
<p>Vale is a defendant in: (i) an arbitration filed by 385 alleged minority shareholders; (ii) two arbitrations initiated by a professional association that supposedly represented the Company's shareholders; and (iii) three arbitrations filed by foreign legal entities, acting as representatives or jointly with other foreign legal entities. All arbitrations are managed by B3's Market Chamber and are processed confidentially.</p> <p>In the six arbitrations, the Claimants allege that Vale was aware of the risks associated with the B1 dam in Brumadinho B1 and other tailings dam, and that it allegedly failed in its obligation to disclose such risks to investors, which would be required by applicable Brazilian legislation and the standards of the Securities and Exchange Commission. Based on this argument, the Claimants seek indemnity.</p> <p>The Company contests all ongoing procedures, in which no arbitration agreement has even been entered into so far. Based on the evaluation of the Company's legal advisors, the expectation of loss is classified as possible for the six procedures and, considering the initial phase of all arbitrations, it is not possible at this time to reliably estimate the amount and any impact of a possible loss.</p> <p>With regard to the amounts involved in the disputes, in four of the six arbitrations, amounts in dispute were indicated solely for the purpose of collecting costs. In one of the arbitrations filed by foreign legal entities, the claimants estimated the amount of the alleged losses at approximately R\$ 1.8 billion, whereas, in the other arbitration, the claimants estimated the amount at approximately R\$ 3.9 billion. The Company understands that, for these two arbitrations, the expectation of loss of value as estimated by the claimants is remote.</p>
<b>Analysis of impact in the case of losing the process</b>
Any adverse decision in the cases would generate financial loss for the Company, <u>as well as any damage to its image.</u>

## 4.6. Relevant confidential process

## 4.7. Other relevant contingencies

In this item, the Company provides information on:

- I. repetitive and related processes that the Company deems relevant;
- II. investigations and CPIs to which the Company was subject on December 31, 2022;
- III. terms of Commitment and the Conduct Adjustment Terms entered into by the Company or its subsidiaries, which are relevant to the business; It is
- IV. Closed or excluded processes that were reported in the December 31, 2021 reference form and are no longer reported in this reference form

### (I) Repetitive and related processes that the company deems relevant

#### (i) Labor

Considering the Company's magnitude, the number of employees and service providers and the number of labor claims, repetitive processes were considered as those representing more than 5% of the total claims filed against the Company on December 31, 2022, which are described in the table below, namely: joint/subsidiary responsibility (26%); overtime (17%); additional unhealthy and dangerous work (7%); obligation to do (6%); attorney fees (6%).

As of December 31, 2022, the total amount provisioned, considering the labor claims that, together, are material, described below, was approximately R\$814 million.

<b>Legal fact and/or cause</b>	The most recurrent subject matters are secondary/joint and several liability, overtime and premium for dangerous and hazardous work.
<b>Amounts involved</b>	R\$ 9.7 billion
<b>Practice of the Company or its controlled company that caused such a contingency</b>	Differences in interpretation given by the Company, employees and unions regarding various facts, legal provisions and policies concerning the issues mentioned above.

#### (ii) Tax

<b>Legal fact and/or cause</b>	ICMS charges and fine
<b>Amounts involved</b>	R\$ 3.82 billion (base date December 31, 2022)
<b>Practice of the Company or its controlled company that caused such contingency</b>	Vale, its subsidiaries and divested companies (which liabilities remain under the responsibility of Vale) discuss the charging of goods and services tax (ICMS) and fine in several Brazilian states. In such processes, the main allegations of the tax authorities are: (i) levy of ICMS on own transport; (ii) undue crediting of the tax, (iii) levy of ICMS on transfers between establishments of the same holder, (iv) need to include the TUST/TUSD in the ICMS calculation basis, and (v) levy of ICMS on interstate transactions with the electric power commodity. In 2022, Vale joined PROREFIS in Pará, including the amount of R\$ 683 million in the program, which was paid with a reduction. The amount paid was R\$365 million. The Company was charged new ICMS amounts in the period from January to March 2023 in the amount of R\$ 32.7 million, which will be challenged in all its aspects as they are considered undue. The new processes originate mainly from charges of: (i) ICMS on electric power acquisition operations and use of the electric power transmission system (TUST)

**4.6. Relevant confidential process**

<b>Legal fact and/or cause</b>	Discussion on the taking of PIS and COFINS credits
<b>Amounts involved</b>	R\$ 9 billion (base date December 31, 2022)
<b>Practice of the Company or its controlled company that caused such contingency</b>	<p>Vale, its subsidiaries and divested companies, the liabilities of which remains under the responsibility of Vale, are parties to several charges related to the taking of PIS and COFINS credits (federal taxes levied on the gross revenue of companies). Brazilian tax legislation authorizes taxpayers to use PIS and COFINS tax credits, such as those related to the purchase of production consumables and other items.</p> <p>The Company, its subsidiaries and divested companies, the liabilities of which remains under the responsibility of Vale, received new charges from January to March 2023, related to the taking of PIS and COFINS credits (federal taxes levied on the gross revenue of companies) in the amount of R\$ 119.4 million. The tax authorities claim mainly that (i) some credits were not related to the production process, and (ii) the right of use of such credits was not properly shown. Such charges are considered undue by the Company and are under discussion at the administrative and judicial levels.</p>
<b>Legal fact and/or cause</b>	Fines resulting from non-approved offsets.
<b>Amounts involved</b>	R\$ 2.8 billion (on December 31, 2022)
<b>Practice of the Company or its controlled company that caused such contingency</b>	<p>Vale, its subsidiaries and divested companies (whose liabilities remain under Vale's responsibility) received several notices from the Brazilian Internal Revenue Service ("RFB"), regarding the imposition of fines corresponding to 50% of the denied offsets for the settlement of federal debts. The RFB understands that such offsets were effected with undue tax liabilities. The Company understands that such assessments are undue and contests the aforementioned fine charges, as well as the non-approval of offset in other processes. If it succeeds in the processes in which the non-approval of offset is discussed, the expectation is that the corresponding fines will be canceled. The constitutionality of the fine charged is discussed by another company in a leading case before the STF, and in March 2023 a favorable decision was rendered in this case, which will be applicable to all taxpayers who discuss this thesis. Vale no longer expects to receive new similar assessments due to the trial of the leading case</p>
<b>Legal fact and/or cause</b>	Discussions about the Financial Compensation for the Exploration of Mineral Resources – CFEM
<b>Amounts involved</b>	R\$ 9.56 billion (on December 31, 2022)
<b>Practice of the Company or its controlled company that caused such contingency</b>	<p>Vale, its subsidiaries and divested companies (which liabilities remain under the responsibility of Vale) are parties in several administrative and legal processes related to mining royalties known as CFEM. The processes arise from collections filed by the former National Mineral Production Department ("DNPM"), replaced with the National Mining Agency ("ANM"), which main discussions involve the deduction of insurance and transportation taxes, insurance and costs highlighted in invoice, as well as the application of CFEM on pellets and revenues from sales carried out by the Company's subsidiaries abroad.</p> <p>The Company understands that these charges are undue and presents its defense through the means permitted by the Brazilian law, both at the administrative and judicial levels. There are favorable and unfavorable decisions, pending final and unappealable decision.</p> <p>In 2013, the companies paid amounts related to transportation, not highlighted in the invoice and not preempted, having been considered the preemptive period of 5 years.</p> <p>The former DNPM argued that the deadline for the collections would be 20 years. The companies argued that the applicable preemptive period would be 5 years. In December 2015, the Federal Attorney's Office (AGU) issued legal advice concluding that the CFEM charges are subject to the preemptive period of 10 years. This conclusion is in accordance with the decisions of the Supreme Court of Justice (STJ).</p> <p>In 2016, the complementary discharge of the transportation values not highlighted in note and not preempted, this time considering the limitation period of 10 years.</p> <p>ANM reviewed the charges regarding the deduction of deferred amounts, in accordance with the opinion of the Federal Attorney's Office (AGU), and the allocation of additional payments made by the Company in relation to transport costs that had not been highlighted in the invoice. A statement was presented regarding the amounts indicated by ANM.</p>

**4.6. Relevant confidential process**

<b>Legal fact and/or cause</b>	Taxation on Profits Earned by Foreign Subsidiaries
<b>Amounts involved</b>	For the periods from 1996 to 2002 (and indirect cancellations in 2005), the amount involved, on December 31, 2019, was R\$ 2.3 billion, which came to be R\$ 1.00 as of May 2020, in view of a court decision in favor of Vale. For the periods from 2003 to 2012, the amount is R\$ 22.2 billion (amount divided into REFIS in 2013).
<b>Practice of the Company or its controlled company that caused such contingency</b>	In 2003, Vale filed a Writ of Mandamus to recognize the right not to be subject to taxation of IRPJ and CSLL over the profits of its subsidiaries and affiliates abroad, pursuant to article 74, of Provisional Measure 2,158-34/2001, and later re-editions. The Federal Government made several administrative and legal charges for the IRPJ and CSLL requirements on the profits earned by Vale subsidiaries and affiliates abroad, referring to the years from 1996 to 2008, and the values for the base years 2009 to 2012 were acknowledged and constituted by the company, for inclusion in the installments addressed below. In 2013, the amount under discussion was significantly reduced due to the Company's adherence to REFIS-TBU for the years from 2003 to 2012, except for the base year 2005, the installment related to the reflections from 1996 to 2002. Under REFIS, the Company paid R\$5.9 billion in 2013 and divided the remaining R\$16.3 billion into monthly installments, adjusted by SELIC. On December 31, 2022, the remaining balance to be paid by the Company was R\$ 11.43 billion, divided into 70 future installments. The discussion about the period from 1996 to 2002, which had not been included in the REFIS, was finished in favor of the Company by a final decision of the judge of the 5 <sup>th</sup> Federal Court of Tax Foreclosure of Rio de Janeiro. This decision determined the complete extinction of the debit in the amount of R\$ 2.3 billion (base date: December 2019), on the grounds that the MP 2158/2001 could not date back to obtain taxable events were prior to its validity, as decided by the Federal Supreme Court in the Direct Action for The Declaration of Unconstitutionality (ADI) No. 2588. In March 2021, the judge-rapporteur of the Writ of Mandamus filed in 2003, dismissed the extraordinary appeal brought by the Federal Government. Against this decision, the Federal Government filed an appeal, which is awaiting judgment by the STF. The Supreme Court of Justice (STJ) decision, currently in force, determines: (i) the incompatibility of the taxation treatment for the profits of subsidiaries and affiliates domiciled abroad, introduced by article 74 of Provisional Measure no. 2,158-35/01 with certain international treaties against double taxation; (ii) the illegality of the taxation of the positive result of the equity equivalence provided for in article 7, of Normative Instruction no. 213/2002 and (iii) that the profits calculated by Vale in the Bermudas are subject to article 74, head provision of MP 2,158-35/2001.
<b>Legal fact and/or cause</b>	Collection of IRPJ and CSLL on the alleged non-deductibility of the amortization of goodwill recorded on the purchase of investments valued at equity value
<b>Amounts involved</b>	As of December 31, 2022, the total amount under discussion involved a charge of approximately R\$ 2.70 billion (taxes, interest and fine) for the years 2013 to 2018, in addition to the reduction of tax losses and negative base calculated in the assessed period, whose tax effect corresponds to R\$ 319.8 million.
<b>Practice of the Company or its controlled company that caused such contingency</b>	Vale discusses three (4) notices of violation issued by the Federal Government to collect IRPJ and CSLL for the years 2013 to 2018. Said notices are based on the alleged non-deductibility of goodwill amortization expenses recorded by Vale on the purchase of companies evaluated by the net assets, later incorporated by Vale. The Company understands that these assessments are undue and is discussing these charges at the administrative level.
<b>Legal fact and/or cause</b>	Deductibility of the Intermediation Cost in the Transfer Price Calculation - PECEX
<b>Amounts involved</b>	On December 30, 2022, the total amount under discussion was R\$ 4.32 billion, in addition to the reduction of tax losses and the negative tax base of CSLL for 2015 and 2017, whose tax effect is R\$ 1.88 billion.

**4.6. Relevant confidential process**

<b>Practice of the Company or its controlled company that caused such contingency</b>	<p>Vale was assessed for the collection of corporate income tax (IRPJ) and social contribution on net income (CSLL), for the base years of 2015 to 2017.</p> <p>The tax authorities allege that these charges stem from the deduction, allegedly undue, of the costs of intermediation in the determination, by the Company, of the transfer price on the sale of iron, pellet, copper and manganese to its subsidiary abroad.</p> <p>The Company understands that these assessments are undue and is discussing these charges at the administrative level. After unfavorable decisions at the first administrative level, the Company filed appeals, pending judgment.</p>
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<b>Legal fact and/or cause</b>	Collection of IRPJ and CSLL on the alleged non-deductibility of Interest on Equity
<b>Amounts involved</b>	As of December 30, 2022, the total amount under discussion involved a collection of R\$ 6.02 billion for the years 2017 and 2018, as well as a reduction of the tax losses and negative base, whose tax effect corresponds to R\$ 699 million.
<b>Practice of the Company or its controlled company that caused such contingency</b>	<p>The Company received notices for the collection of IRPJ and CSLL referring to the base years of 2017 and 2018.</p> <p>The tax authorities allege that there was an undue deduction of Interest on Equity, due to an alleged violation of the accrual basis and non-compliance with certain deductibility requirements.</p> <p>The Company understands that the assessments are undue and is discussing these charges at the administrative level, still pending a final decision in this sphere. For the 2018 calendar year, the defense presented by the Company was upheld. Judgment of the ex-officio appeal filed by the Federal Government is pending. In relation to the calendar year 2017, the objection was dismissed. Judgment of the appeal filed by the company is pending.</p>

**(iii) Civil**

<b>Legal fact and/or cause</b>	<p>Collective actions involving cosmetic and/or property damages indirectly arising from the breach of Fundão tailings dam, located in the municipality of Mariana, whose subject matters are covered by ACPs 20 BI and 155 BI (cases No. 23863-07.2016.4.01.3800 and 69758-61.2015.4.01.3400), with connection being recognized by Honorable Judge of the 12<sup>th</sup> Federal Court of Belo Horizonte. Such lawsuits are suspended until further judicial resolution, in view of the existence of a universal judgment and the need for a procedural unity, avoiding conflicting or contradictory decisions</p>
<b>Amounts involved</b>	Until December 31, 2022, Vale had been served with process in 23 lawsuits within this category, and the amount involved is invaluable.
<b>Practice of the Company or its controlled company that caused such contingency</b>	The lawsuits plead moral damages and/or pecuniary damages originated from Fundão tailings dam, located in the Municipality of Mariana, Minas Gerais State, property of Samarco Mineração S.A., company in which Vale holds 50% of share capital, with the remaining 50% held by BHP Billiton Brasil Ltda. ("BHPB").

<b>Legal fact and/or cause</b>	Four lawsuits were filed by holders of participating debentures issued by the Company in 1997, in which the plaintiffs claim a remuneration condition different from that contained in the deed of issue of the debentures. Vale is defending itself in said lawsuits, demonstrating that there is no obligation to pay premiums before the deadline specifically provided for in the deed of debentures.
<b>Amounts involved</b>	Invaluable at the present time, considering that the setting of the amount involved depends on the liquidation of the judgment, in the event of merit.
<b>Practice of the Company or its controlled company that caused such contingency</b>	Participating debentures are governed by a debenture deed, which provides that premium payments would be due when sales volumes of reference products reach specified thresholds. Vale made all payments in accordance with the applicable provisions of the debenture deed. However, some debenture holders filed suit, alleging that premium payments should have been triggered by the achievement of extraction volume, and not by sales volumes. In the hypothesis of success, these actions could change the timeframe considered for payment of the prize to the authors. The Company understands that such actions are unfounded.

**4.6. Relevant confidential process**

**(II) Investigations and Parliamentary Committee of Inquiry**

<b>1) Civil Investigation No. 0054.21.000181-1 (SEI no. 19.16.1486.0101650/2021-76)</b>	
<b>Prosecution</b>	MPMG – Prosecution Office of the Judicial District of Barão de Cocais – MG
<b>Instance</b>	Administrative
<b>Filed on</b>	10.22.2021
<b>Parties to the process</b>	VALE S.A. (Defendant)
<b>Amounts, assets or rights involved</b>	Incalculable. In the case of a civil investigation, administrative investigation procedure, there is no amount in dispute or requests.
<b>Main facts</b>	This is a civil investigation initiated by the Prosecution Office of the State of Minas Gerais, in order to determine whether Vale may have violated or threatened to violate individual and collective Human Rights within the scope of factual and legal relations with the communities and people affected in the Municipality of Barão de Cocais /MG, after the evacuation resulting from the elevation of the emergency level of the Sul Superior dam, at the Gongo Soco Mine. Vale provided information refuting the alleged facts in November 2021 and again in March 2022. On March 31, 2022, a new progress of the Civil Investigation is awaited, after Vale's statement.
<b>Chances of loss</b>	Possible
<b>Impact analysis in case of loss / Reasons why the process is relevant for the Company</b>	Impact to the image, since this is a civil investigation that deals with human rights, although Vale is refuting the allegations of any violation in this regard. In addition, if the Civil Investigation is not shelved, the MPMG may file a Public-Interest Civil Action, with requests of an economic nature in the future. In any case, it is about the investigation process.
<b>Notes</b>	Vale vehemently refutes the allegation of human rights violations, given that its conduct during the removals was guided by respect for the affected community, as well as the need to protect the people's physical integrity and life.

<b>2) CPI Brumadinho – Indemnifications</b>	
<b>Prosecution</b>	City Council of Brumadinho
<b>Instance</b>	Parliamentary Inquiry Commission
<b>Filed on</b>	April 20, 2022
<b>Parties to the process</b>	Vale S.A. (Defendant)
<b>Amounts, assets or rights involved</b>	Incalculable. In the case of a Parliamentary Inquiry Commission, there is no amount in dispute or requests.
<b>Main facts</b>	On April 20, 2022, the Parliamentary Commission of Inquiry n. 01/2022 with the purpose of "investigating and determining responsibilities regarding events of relevant interest to public life and to the constitutional, legal, economic and social order of the Municipality of Brumadinho/MG, causing diffuse socioeconomic damage, collective and homogeneous individual of the people, families, communities, localities/districts and municipalities affected, after the collapse of the Vale S/A Company's ore tailings dam on 01/25/2019, in the town of Córrego do Feijão. In compliance with the requests of the members of the CPI, Vale presented information with a view to clarifying the facts under investigation and company executives gave testimonies in sessions designated by the commission. On December 7, 2022, Vale formalized before the CPI the commitment to develop a program to re-examine claims for compensation due to illness or damage to mental health originally considered ineligible under the Extrajudicial Individual Indemnity Program, based on criteria to be discussed and defined within the scope of the CPI. On April 27, 2023, the 4-month period began for interested applicants to request reanalysis by observing the established criteria. The preparation of a final report by the CPI is awaited.
<b>Chances of loss</b>	Possible
<b>Analysis of the impact in case of Loss / Reasons why the process is relevant for the Company</b>	Impact to the image or reputation.
<b>Notes</b>	Only those who had already requested compensation for illness or damage to mental health within the term of the Extrajudicial Indemnity Program and who were residents at the time of the rupture in Brumadinho, in addition to the victims' relatives, may request the reanalysis, upon presentation of a medical record or psychological. Vale's commitment is to indemnify all those who prove to have suffered an illness or damage to their mental health with a direct causal relationship with the rupture of dam I in Brumadinho.

**4.6. Relevant confidential process**

<b>3) Civil Investigation No. 1.22.000.001997/2022-16</b>	
<b>Prosecution</b>	MPF – Federal Prosecution Office in Minas Gerais
<b>Instance</b>	Administrative
<b>Filed on</b>	06.28.2022
<b>Parties to the process</b>	VALE S.A. (Defendant)
<b>Amounts, assets or rights involved</b>	Incalculable. This is a preliminary administrative investigation, which may or may not result in legal action by the MPF against Vale.
<b>Main facts</b>	<p>This civil investigation was initiated to determine whether Vale may have engaged in illegal mining activities concerning specific mining rights leased from Minerações Brasileiras Reunidas S.A. – MBR ("MBR"), a subsidiary of Vale.</p> <p>The inquiry originated from a communication by the National Department of Mineral Production (DNPM), later succeeded by the National Mining Agency (ANM), to the MPF. This communication notified the MPF about the commencement of an administrative process to determine the potential illegality of certain mining operations conducted between 2007 and 2014 by Vale. These operations were questioned as they occurred before the lease contract was officially registered by the DNPM. Moreover, the administrative process mentioned a sum of R\$ 66,525,595,700.61, corresponding to the total gross revenue earned by Vale from the examined mining operations during that period.</p> <p>The MPF has initiated the Civil Inquiry to investigate the identical set of facts.</p> <p>In July 2023, Vale submitted information to the MPF, elucidating that the lease agreement had been appropriately filed with the DNPM before operations commenced. However, registration with the agency was delayed due to a regulatory requirement challenged by Vale in a Writ of Mandamus, resulting in an injunction in Vale's favor. Vale emphasized that, as the operations were conducted with the full knowledge of the regulatory authority (DNPM, later succeeded by ANM), there was no justification for the amount mentioned in the administrative process, which was included without the use of any technical parameter. For this reason, the company formally petitioned for the closure of the Civil Inquiry.</p> <p>In September 2023, the MPF rejected Vale's request to close the Civil Inquiry. In addition, it ordered the supplementation of the letters already sent to the relevant authorities involved, ensuring their awareness of the information conveyed by Vale in July.</p> <p>It's important to highlight that on December 8, 2023, the ANM, through a unanimous decision by its Board of Directors: (i) ordered the closure of the investigation within its jurisdiction into the same facts; and in particular (ii) recognized that there was no illegal mining in the case.</p> <p>There is no further progress on the Civil Inquiry.</p>
<b>Chances of loss</b>	Remote
<b>Impact analysis in case of loss / Reasons why the process is relevant for the Company</b>	If the Civil Investigation is not shelved, the MPF may file a Public-Interest Civil Action, with requests of an economic nature in the future. If a lawsuit is filed, Vale could suffer damage to its image, since the Civil Inquiry concerns the practice of illegal mining.
<b>Notes</b>	Vale vehemently refutes the allegation of practice of illegal mining, since (i) the entire activity was duly supported by valid and current mining titles and environmental licenses; (ii) all amounts owed for the activity, particularly the CFEM payment, were duly collected by the Company; and (iii) Vale's mining activity in the Mining Rights of MBR, its subsidiary, was widely known to the competent regulatory body. This legality is ratified under the terms of Article 246, §2, of DNPM Ordinance 155/2016.

**(III) Terms of Engagement and Consent Decree Agreements****(A) Breach of Dam I at Córrego do Feijão Mine**

<b>1) TAC AECOM – MPMG</b>	
<b>Origin:</b>	Civil Investigation No. MPMG 0090.16.000311-8 and ratified in the ACP 5026408-67.2019.8.13.0024
<b>(a) Signatories</b>	Prosecution Office of Minas Gerais ("MPMG") and Vale S/A, with the intervention of AECOM do Brasil LTDA.
<b>(b) Date of execution</b>	02/15/2019
<b>(c) Description of the facts that led to the execution of the agreement</b>	On January 26, 2019, the day after the collapse of the BI, BIV and BIVA dams, the MPMG, acting on an emergency basis, called on the intervener so that its technicians immediately went to the site of the Breach to assess the effectiveness of the measures adopted by the committed party to ensure the safety and stability of the



**4.6. Relevant confidential process**

	remaining structures of the Paraopeba II complex – Córrego do Feijão Mine, in the municipality of Brumadinho-MG, as well as to verify the adequacy of the measures adopted to contain tailings and mitigation of impacts and damage to the environment, due to the necessity of verifying compliance with a court decision handed down by the district court of Brumadinho.
<b>(d) Assumed obligations</b>	(a) check the safety and stability of the remaining structures of the Paraopeba 11 complex – Feijão Mine, in Brumadinho; (b) assess the effectiveness of the measures that have been and will be adopted by Vale for the containment of tailings and for the social and environmental recovery of all impacted areas. Scope of services: (i) certifying accountant in geotechnics areas; (ii) dam safety; (iii) archeology, (iv) speleology, (v) handling of tailings, (vi) characterization, (vii) environmental remediation and (viii) monitoring of the air, fauna, flora and water resources impacted by the breach of the dams.
<b>(e) Deadline, if any</b>	(a) Field visits of the geotechnical, hydraulic, hydrology, environmental remediation audit team of AECOM, with weekly frequency in the first 6 months, and monthly from the seventh month, with the appropriate duration to meet the defined scope; (b)Preparation of the detailed certifying accountant reports, which will be submitted to the committed party and the committing party, within 10 working days of the presentation meeting, which will be held after each monthly field visit. The deadlines are still in progress in view of the continuity of the reparation works.
<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary conducts to fulfill the obligations under the TAC that remain in the Term of Agreement (safety of paralyzed structures) after the Global Agreement. This TAC was ratified in the Comprehensive Reparation Judicial Agreement executed on February 4, 2021.
<b>(g) Consequences in case of non-compliance</b>	Failure to comply with the obligations assumed shall be notified by the committing party to the committed party to be remedied or duly justified within 30 working days. If non-compliance persists and is not justified, the obligatory daily fine of up to R\$ 30,000.00 may be applied, limited to a 30-day penalty period, which will be reverted to FUNEMP.

#### 4.7. Other relevant contingencies

<b>2) Preliminary Adjustment Agreement – TAP-E Pataxó</b>	
<b>Origin:</b> IC MPF: 1.22.000.000418/2019-12	
<b>(a) Signatories</b>	Federal Prosecution Office, Pataxó Hã Hã Hãe, Indigenous People, Pataxó, Indigenous People, Naô Xohã Community, National Indigenous Foundation – FUNAI and Vale.
<b>(b) Date of execution</b>	04/05/2019
<b>(c) Description of the facts that led to the execution of the agreement</b>	Definition and Regulation of emergency measures to interrupt and/or mitigate the socioeconomic and environmental damages suffered by the indigenous community.
<b>(d) Assumed obligations</b>	Adoption or continuity of actions to control the appearance of animal carcasses, the proliferation of synanthropic species and vectors of communicable diseases, caused by the breach of the B1 Dam. Costing of contracting an entity that will provide independent technical audit to the members of the Indigenous Community, through the carrying out of impact studies, preparation and definition of mitigation, reparatory and/or compensatory programs and the implementation of these programs. Emergency monthly payments to all indigenous persons already resident in the Indigenous Community on the date of rupture for a period of 12 months. Contracting of an independent entity to diagnose damages and impacts suffered by the Indigenous Community as a result of the rupture (socioeconomic consultancy). On January 7, 2020, the parties signed the amendment to the Preliminary Adjustment Agreement, through which they agreed on the extension of the emergency payment for another ten (10) months, starting from January 2020. Through negotiations in hearings with the MPF, the emergency payment was postponed to May 2021. In August 2021, the 2 <sup>nd</sup> Amendment Award Report was signed, providing for the replacement of the emergency payment by a financial transfer equivalent to the installments until December 2023, in addition to the extension of complementary health care.
<b>(e) Deadline, if any</b>	30 days for costing of entity that will provide technical consultancy services. It was registered in the minutes of the meeting of January 31, 2020 that “the deadline for hiring technical advisory shall be counted from the receipt of the work plan, as it shall submit the proposal and plan to its internal procedures of comparison of values with other companies/institutions in the sector, scope of work, compliance, among others”. The work plan has not yet been received. 12 months of emergency payments. Ten (10) months, as of January 2020, to make the emergency payment, in favor of members of the indigenous community. Through negotiations in hearings with the MPF, the emergency payment was postponed to May 2021. In August 2021, the parties signed the 2 <sup>nd</sup> Amendment Award Report to anticipate the discharge of the emergency payment that would be made until 2023 and maintained obligations for health care.
<b>(f) Information on the measures that are being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary conducts to fulfill the obligations under the TAC.
<b>(g) Consequences in case of non-compliance</b>	Fine of R\$ 360,000.00 for each provision breached, plus a daily fine of R\$ 20,000.00.

#### 3) Term of Engagement on the Safety of Dams

#### 4.7. Other relevant contingencies

<b>Origins:</b> TC Cauê Mine: ACPs 5000406–54.2019.8.13.0317 and 5000402–17.2019.8.13.0317; TC Meio and Conceição Mines: ACPs n. 5000548–58.2019.8.13.0317 and 5000549–43.2019.8.13.0317 TC Brucutu and Capitão do Mato Mines: ACPs n. 5013909–51.2019.8.13.0024, 5000153–77.2019.8.13.0572 and 5000121–74.2019.8.13.0054 TC Gongo Soco Mine: ACPs n. 5013909–51.2019.8.13.0024, n. 5000121–74.2019.8.13.0054 and n. 5000045–50.2019.8.13.0054 TC Fábrica Mine: ACPs n. 5013909–51.2019.8.13.0024, 0004741–98.2019.8.13.0319 and 5000203–75.2019.8.13.0064 TC Abóboras, Mar Azul, Tamanduá, Alegria, Pico, and Timbopeba Mines ACPs n. 5013909–51.2019.8.13.0024, 5000435–60.2019.8.13.0461, 5100838–87.2019.8.13.0024, 5000905–37.2019.8.13.0188, 5001130–57.2019.8.13.0188, 5000616–50.2019.8.13.400, 5000021–03.2019.8.13.0319 and 5000901–97.2019.8.13.0188. TC Córrego do Meio, Capanema, and Fazendão Mines: ACPs n. 5000149–40.2019.8.13.0572, 5000150–25.2019.8.13.0572 and 5000833–77.2019.8.13.0567 TC Igarapé Bahia Mines: ACPs n. 1002242–17.2019.4.01.3901, 1002244–84.2019.4.01.3901, 0000356–94.2019.5.08.0126 and 0000361–07.2019.5.08.0130 TC Água Limpa and Fábrica Nova Mines: ACP n. 5000092–67.2019.8.13.0557 Amendment to the Terms of Engagement (except for TC Cauê Mine and TC Conceição and Meio Mine)	
<b>(a) Signatories</b>	Prosecution Office of the State of Minas Gerais and Vale, State of Minas Gerais, respective audit company and, as the case may be, the Labor Prosecution Office.
<b>(b) Date of execution</b>	TC Cauê Mine: 04/16/2019 TC Conceição and Meio Mine: 06/03/2019 TC Brucutu and Capitão do Mato Mines: 07/17/2019 TC Gongo Soco Mine: 07/23/2019 TC Fábrica Mine: 09/23/2019 TC Abóboras, Mar Azul, Tamanduá, Alegria, Pico, and Timbopeba Mines 09/23/2019 TC Córrego do Meio, Capanema, and Fazendão Mines: 01/23/2020 TC Igarapé Bahia Mines: 08/14/2020 TC Água Limpa and Fábrica Nova Mines: 10/02/2020 Amendment to the Terms of Engagement (except for TC Cauê Mine and TC Conceição and Meio Mine):08/25/2022
<b>(c) Description of the facts that led to the execution of the agreement</b>	After the breach of the dam B-I, the MPMG filed several public-interest civil lawsuits requesting an injunction for the adoption of a series of safety measures for VALE dams, including the check of the stability of their structures, revision of the PAEBM and PSB, among others. Most of the injunctions were granted, requiring VALE to implement measures in technically unenforceable deadlines, under penalty of a daily fine of R\$ 1,000,000.00. In this scenario, VALE and MPMG initiated negotiations to technically adapt the obligations imposed by the injunctions and solve the respective ACPs. As a result of these negotiations, several similar Terms of Engagement were executed, in which it was agreed upon the hire of an independent technical audit company, which has never been hired by VALE, to assess the issues with regard to the safety of VALE's and all of its mines in the State of Minas Gerais, with the exception of Del Rey Mine.
<b>(d) Assumed obligations</b>	Hiring of independent technical audit to verify the safety parameters of the dams, monitoring the implementation of the necessary safety measures to ensure the stability of the dams, as well as monitoring of revision of the Dam Safety Plan and PAEBM, by virtue of the injunction rendered in the respective public-interest civil actions. In relation to emergency level 3 dams, the audit of the reasonable measures for worker safety was also included. In accordance with the Terms of Engagement, Vale, unless otherwise technically justified, must guide its conduct in accordance with the recommendations of these audits.
<b>(e) Deadline, if any</b>	Continuous compliance with monitoring.
<b>(f) Information on the measures that are being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary measures to fulfill the obligations under the Terms of Engagement.
<b>(g) Consequences in case of non-compliance</b>	Daily fine of R\$ 100,000.00 in case of non-compliance with any clause of the agreements.

#### 4) Preliminary Term of Engagement – Fauna – Brumadinho

**Origin:** Civil Investigation 0090.019.000014–2

**4.7. Other relevant contingencies**

<b>(a) Signatories</b>	Prosecution Office of Minas Gerais and Vale
<b>(b) Date of execution</b>	04/05/2019
<b>(c) Description of the facts that led to the execution of the agreement</b>	Adoption of emergency/mitigation measures and action plans for the preservation of domestic and wild fauna directly and indirectly affected by the rupture.
<b>(d) Assumed obligations</b>	Vale was obliged to maintain the actions of the emergency plan for the actions of search, rescue and care of animals affected by the dam breach of its mining complex in Brumadinho until definition of the final term by SEMAD. The obligation includes (i) the maintenance of sufficient and proficient professionals to be part of the technical team; (ii) the provision of infrastructure, equipment, machinery, vehicles and supplies necessary for the search, rescue and care of animals; (iii) diagnosis of affected areas; (iv) promotion of the immediate rescue of isolated animals, unless technical unfeasibility. Vale also made a weekly report to the Prosecution Office for a period of 2 months on compliance with the plan. Vale was also obliged to ensure favorable animal well-being conditions, including testing for canine visceral leishmaniasis, and the cases of positive results were treated. Vale was still forced to complete the slurry enclosure.
<b>(e) Deadline, if any</b>	Vale's obligations relating to TAP and Fauna Brumadinho remain valid until approval of the Fauna Plan by the environmental agency.
<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary conducts to fulfill the obligations under the TAC. According to the Comprehensive Reparation Judicial Agreement executed on February 4, 2021, the General Fauna TAC terminated and, as a result, the independent technical audit on this TCP-Fauna Brumadinho terminated.
<b>(g) Consequences in case of non-compliance</b>	-

**5) Term of Engagement – GENERAL FAUNA**

**Origin:** Public-Interest Civil Actions 0003811-02.2019.8.13.0054 5000045-50.2019.8.13.0054 5000121-74.2019.8.13.0054, 5000905-37.2019.8.13.0188, 5000435-60.2019.8.13.0461, 5000915-81.2019.8.13.0188, 5001130-57.2019.8.13.0188, 5000021-03.2019.8.13.0319, 0004741-98.2019.8.13.0319, 5000203-75.2019.8.13.0064, 5000616-50.2019.8.13.0400, 5000092-67.2019.8.13.0557, 5000402-17.2019.8.13.0317, 5000406-17.2019.8.13.0317, 5000548-58.2019.8.13.0317, 5000549-43.2019.8.13.0317, 5000833-77.2019.8.13.0567, 5000149-40.2019.8.13.0572, and 5000153-77.2019.8.13.0572 ("ACPs") Provisional Remedies No. 5000901-97.2019.8.13.0188 and 5000150-25.2019.8.13.0572.

<b>(a) Signatories</b>	Prosecution Office of Minas Gerais and Vale
<b>(b) Date of execution</b>	07/16/2021
<b>(c) Description of the facts that led to the execution of the agreement</b>	Adoption of protection measures for domestic and wild animals found in the flood spots of VALE's structures in Minas Gerais.

#### 4.7. Other relevant contingencies

<b>(d) Assumed obligations</b>	Vale undertook to continue the actions aimed at protecting the fauna in the flood spots of dikes and dams under Vale's responsibility in the State of Minas Gerais. The obligations are divided into (i) elaboration of a single Reference Statement that will objectively delimit the necessary content to guide the elaboration/update of emergency response plans focused on faunal issues for all the Engagement Party's Structures; and (ii) the establishment of the conditions for contracting and funding an independent technical audit to check compliance by the Engagement Party with the obligations: a) relating to the establishment of the Reference Statement for the preparation or updating of emergency response plans focused on fauna issues; b) referring to the elaboration/updating of emergency response plans focused on faunal issues of Structures with Associated Potential Damage (DPA) considered high, listed exhaustively, attached to the Statement and c) of the activities foreseen within the scope of the agreements signed in Public-Interest Civil Actions 3811- 02.2019 .8.13.0054 9 (Sul Superior dam in Barão de Cocais) and 5000683-69.2019.8.13.0188 (B3/B4 dam in Nova Lima), as well as, exclusively, actions of care with animals resulting from the evacuations already carried out to the Norte/Laranjeiras, Doutor and Forquilhas dams, which will be replaced with the obligations of the Fauna Plan approved for these structures, for a period of two years, by carrying out quarterly cycles, according to the constant methodology attached to the Statement, from the signature of the Term of Engagement.
<b>(e) Deadline, if any</b>	2 years from the execution.
<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary measures to fulfill the obligations under the Term of Engagement.
<b>(g) Consequences in case of non-compliance</b>	As this is an extrajudicial executive term, in the event of unjustifiable non-compliance, Vale will be sued in court, including through the application of administrative penalties, which may have an impact on its image as it is a management of fauna related to structures at the level of emergency.

<b>6) TAC Dam Break</b>	
<b>Origin:</b> N/A	
<b>(a) Signatories</b>	Prosecution Office of the State of Minas Gerais, Vale S.A., Aecom do Brasil Ltda., and State of Minas Gerais
<b>(b) Date of execution</b>	09/23/2019
<b>(c) Description of the facts that led to the execution of the agreement</b>	After the BI dam breach in Brumadinho, the Prosecution Office of the State of Minas Gerais filed several public-interest civil actions against Vale, seeking to inspect and ensure dam safety measures. As a result of these various public-interest civil actions, they entered into a commitment agreement, aiming at the preparation/update of hypothetical breach studies of all mining dams in the State of Minas Gerais, having as its intervener the external audit company Aecom.
<b>(d) Assumed obligations</b>	(i) Preparation/update of the revision methodology of hypothetical breach studies of all mining structures in the State of Minas Gerais and monitoring of such revision by an independent technical audit team; (ii) establishment of a schedule for the preparation and/or update of hypothetical breach scenario studies; (iii) establishment of the conditions for contracting and funding the audit to be carried out by the company Aecom; and (iv) adoption of all measures resulting from the update of the flood areas, such as update/review of the Dam Safety Plan, the Emergency Action Plan, with adaptation of escape routes and muster points, implementation of field signaling and warning system, strategies for evacuation and rescue of the population, communication, adequacy of logistics structure, rescue and care of animals, cultural assets, among others.
<b>(e) Deadline, if any</b>	In addition to the schedule agreed upon between the parties, adopt, within 120 days, as of the delivery of the final report of the hypothetical breach studies for each mining structure, all measures resulting from the update of the flood areas, such as the update/review of the Dam Safety Plan – PSB and the Emergency Action Plan – PAEBM.

#### 4.7. Other relevant contingencies

<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	Vale's operational team (geotechnics and engineering) is aligned with independent technical audit company AECOM to fulfill obligations.
<b>(g) Consequences in case of non-compliance</b>	Imposition of a daily fine in the amount of one hundred thousand reais (R\$ 100,000.00).

<b>7) TC Monitoring IGAM</b>	
<b>Origin:</b> ACP 5010709-36.2019.8.13.0024 (ACP 5087481-40.2019.8.13.0024 n. 5026408-67.2019.8.13.0024), 5044954-73.2019.8.13.0024	
<b>(a) Signatories</b>	Prosecution Office of the State of Minas Gerais and VALE S.A., with the intervention of AECOM, the State of Minas Gerais, IGAM, and the Federal Prosecution Office.
<b>(b) Date of execution</b>	11/13/2019
<b>(c) Description of the facts that led to the execution of the agreement</b>	Provision of independent technical and environmental audit services by AECOM, to assess and guarantee the reliability of: (i) the surface water and sediment quality monitoring plan in the Paraopeba river and São Francisco river basin; (ii) the groundwater quality monitoring plan; (iii) the drinking water distribution program for the population affected by the breach; (iv) sediment entrainment studies; and (v) the program for transfer of the management of monitoring and data generated to IGAM.
<b>(d) Assumed obligations</b>	Implementation of (i) the surface water and sediment quality monitoring plan in the Paraopeba river and São Francisco river basin; (ii) the groundwater quality monitoring plan; (iii) the drinking water distribution program for the population affected by the Breach, currently carried out by Vale; (iv) sediment entrainment studies; and costing of (v) the program for transfer of monitoring and generated data management to the Water Management Institute of Minas Gerais – IGAM. Funding of the provision of technical audit services.
<b>(e) Deadline, if any</b>	The deadline for transferring monitoring management to IGAM was novated by the Global Agreement concluded on February 4, 2021, to be completed in 33 months. Monitoring obligations: 10 years. This TC was ratified in the Comprehensive Reparation Judicial Agreement executed on February 4, 2021.
<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary conducts to fulfill the obligations under the TAC.
<b>(g) Consequences in case of non-compliance</b>	Daily fine of R\$ 100,000.00.

<b>8) Instrument of Substitute Agreement of Environmental Penalty – SEMA Brumadinho</b>	
<b>Origin:</b> ACP 5001905-75.2019.8.13.0090	
<b>(a) Signatories</b>	Municipality of Brumadinho, Secretariat of Environment and Sustainable Development of the Municipality of Brumadinho – SEMA and VALE S.A.
<b>(b) Date of execution</b>	07/11/2019
<b>(c) Description of the facts that led to the execution of the agreement</b>	Assumption of social and environmental obligations by VALE vis-à-vis the MUNICIPALITY OF BRUMADINHO, for the total amount of fines imposed by SEMA, that is, R\$ 108,782,890.00, to be applied, within the scope of Brumadinho, at (i) projects, works and related infrastructure initiatives, including those related to health, and (ii) in social and environmental projects, both directly and indirectly related to the Breach and its consequences.
<b>(d) Obligations assumed</b>	Allocate the necessary resources to carry out the aforementioned projects, works and initiatives. Contract the INCT Proposal and Diagnostic Plan, which has already been accomplished. Perform, by itself or third parties, the social and environmental measures to be established in the Preliminary Design, under the terms, deadlines and conditions defined therein.
<b>(e) Deadline, if any</b>	The Instrument of Agreement was ratified in court and the deadlines depend on the approval of projects by the municipality of Brumadinho, after which the provisioned amount will be released.

#### 4.7. Other relevant contingencies

<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary conducts to fulfill the obligations under the TAC. This Agreement was ratified by the Comprehensive Reparation Judicial Agreement executed on February 4, 2021.
<b>(g) Consequences in case of non-compliance</b>	Fine of R\$ 20,000.00 per act of default.

<b>9) TC SEMA Brumadinho</b>	
<b>Origin:</b> Official Letter 287/2019	
<b>(a) Signatories</b>	Municipality of Brumadinho and VALE S/A
<b>(b) Date of execution</b>	09/25/2019
<b>(c) Description of the facts that led to the execution of the agreement</b>	Provide technical environmental consultancy services to SEMA Brumadinho.
<b>(d) Assumed obligations</b>	1) Pay for the hiring of a specialized company to perform the technical environmental consultancy services, to monitor and assess the measures that have been taken for the environmental recovery of the municipality. 2) Rental of the following vehicles, in a unique and exclusive service for inspection and monitoring activities within the jurisdiction of the municipality: a double cab truck, 4x4 traction, gas and two passenger vehicles. The rental period is now over. 3) Carry out the maximum and global financial transfer of up to one million, seven hundred and fifteen thousand reais (R\$ 1,715,000.00), which it considers to be sufficient for the performance of the subject matter of the Term, being the use of said sums exclusively for such purposes.
<b>(e) Deadline, if any</b>	Period of 6 months, from the hiring of environmental consultancy services and ending automatically with the completion of the services provided.
<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary conducts to fulfill the obligations under the TC. The City Government carried out the competitive process for the hiring of technical consultancy in 2021. This term was ratified by the Comprehensive Reparation Judicial Agreement executed on February 4, 2021.
<b>(g) Consequences in case of non-compliance</b>	Daily fine of R\$ 100 thousand.

<b>10) TC DUP Brumadinho</b>	
<b>Origin:</b> Official Letter 287/2019	
<b>(a) Signatories</b>	Municipality of Brumadinho and VALE S/A
<b>(b) Date of execution</b>	07/11/2019
<b>(c) Description of the facts that led to the execution of the agreement</b>	Vale assumes all the costs of expropriation and any other properties affected by the dam breach, and undertakes to implement the Ferro-Carvão Municipal Park in the area with the costs of managing the UC for 12 years after the recovery of the area.
<b>(d) Assumed obligations</b>	Assumption of full responsibility for the execution of environmental recovery activities that make the creation, implementation and maintenance of the Ferro-Carvão Municipal Park feasible, occupying the territory affected by the slimes of mining tailings arising from the dam breach of Córrego do Feijão.
<b>(e) Deadline, if any</b>	Creation and implementation of the Park within 18 months of signing the Term and the final removal of the tailings, having been extended in December 2021 for an additional period of 18 months and with a forecast of a new automatic extension if the tailings management activities from the breach are not completed within this new period. Vale informed the City Government about the need to extend the deadline for the creation and implementation of the Park considering that the area in which the implementation will be made is still under the care of the Fire Department to conduct searches and removal of the tailings. Responsible for maintaining the Park for a period of 12 years.

#### 4.7. Other relevant contingencies

<b>(f) Information on the measures that are being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary conducts to fulfill the obligations under the TAC.
<b>(g) Consequences in case of non-compliance</b>	-

<b>11) Environmental Penalty Substitute Agreement – IBAMA</b>	
<b>Origin:</b> 1030458-63.2020.4.01.3800	
<b>(a) Signatories</b>	IBAMA and Vale, with the intervention of the Federal Government and ICMBio.
<b>(b) Date of execution</b>	07/06/2020
<b>(c) Description of the facts that led to the execution of the agreement</b>	Application of environmental penalties to VALE, due to the breach of the Brumadinho Dam, in the amount of R\$ 250 million.
<b>(d) Assumed obligations</b>	Make the judicial deposit of R\$ 250 million. In a secondary manner, apply up to R\$ 150 million in the National Parks of Serra da Canastra, Caparaó, Serra do Cipó, Serra do Gandarela, Cavernas do Peruaçu, Grande Sertão Veredas and Sempre-Vivas, all in the State of Minas Gerais, enabling the strengthening of these conservation units and increasing the ecotourism life, with works (infrastructure, refurbishment or implementation), enclosure and signaling, strengthening and support to management, handling plans, when absent or outdated, fire fighting, demarcation and adaptation of tracks. Forward to IBAMA, ICMBio and the Ministry of the Environment, every six months, (i) monitoring reports, detailing the physical and financial performance until the final implementation of these projects and measures; and (ii) accountability report.
<b>(e) Deadline, if any</b>	Thirty-six (36) months.
<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	The process is suspended due to the appeal filed by the MPF against the approval decision. This Agreement was ratified in the Comprehensive Reparation Judicial Agreement executed on February 4, 2021.
<b>(g) Consequences in case of non-compliance</b>	-

<b>12) Commitment Agreement, Civil Defense</b>	
<b>Source:</b> Relief No. 5010709-36.2019.8.13.0024 (ACP 5026408-67.2019.8.13.0024), 5044954-73.2019.8.13.0024 and 5087481-40.2019.8.13.0024	
<b>(a) Signatories</b>	State of Minas Gerais, Public Prosecution Office of the State of Minas Gerais and Vale, with the Military Office of the Governor of Minas Gerais as intervening party.
<b>(b) Date of the execution</b>	November 20th, 2020
<b>(c) Description of the facts that led to the execution of the agreement</b>	Application of resources to assist Civil Defense members who participated and still participate in Brumadinho's actions.
<b>(d) Assumed obligations</b>	Acquisition and transfer, by VALE, of assets to the Civil Defense of Minas Gerais, in order to integrate a set of compensatory actions for the benefit of the State of Minas Gerais.
<b>(e) Term, if any</b>	None.
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the agreement</b>	Vale, to date, has been complying with the agreement. This Agreement was ratified in the Comprehensive Reparation Judicial Agreement executed on February 4th, 2021.
<b>(g) Consequences in case of non-compliance</b>	-

<b>13) Commitment Agreement, Fire Department</b>	
<b>Source:</b> Relief No. 5010709-36.2019.8.13.0024 (ACP 5026408-67.2019.8.13.0024), 5044954-73.2019.8.13.0024 and 5087481-40.2019.8.13.0024	
<b>(a) Signatories</b>	State of Minas Gerais, Public Prosecution Office of the State of Minas Gerais and Vale, with the Military Fire Department of Minas Gerais as intervening party.
<b>(b) Date of the execution</b>	November 17th, 2020
<b>(c) Description of the facts that led to the execution of the agreement</b>	Application of resources to assist military firefighters who participated and still participate in Brumadinho's actions.



#### 4.7. Other relevant contingencies

<b>(d) Assumed obligations</b>	Acquisition and transfer, by VALE, of assets to the Military Fire Department of Minas Gerais, in order to integrate a set of compensatory actions for the benefit of the State of Minas Gerais.
<b>(e) Term, if any</b>	None.
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the agreement</b>	Vale, to date, has been complying with the agreement. This Agreement was ratified in the Comprehensive Reparation Judicial Agreement executed on February 4th, 2021.
<b>(g) Consequences in case of non-compliance</b>	-

<b>14. Judicial Settlement for Comprehensive Redress (Global Settlement)</b>	
<b>Source:</b> Guardianship n. 5010709-36.2019.8.13.0024 (ACP 5026408-67.2019.8.13.0024), 5044954-73.2019.8.13.0024 and 5087481-40.2019.8.13.0024	
<b>(a) Signatories</b>	State of Minas Gerais, Public Ministry of the State of Minas Gerais, Federal Public Ministry, Public Defender of the State of Minas Gerais and Vale.
<b>(b) Date of the execution</b>	04/02/2021
<b>(c) Description of the facts that led to the execution of the agreement</b>	Repair and full compensation for damages, negative impacts and socio-environmental and socio-economic losses (with the exception of divisible individual damages) as a result of the rupture and its consequences.
<b>(d) Assumed obligations</b>	<p>The estimated economic value of R\$37,689,767,329.00 corresponds to the sum of the obligations defined in the Agreement and the amounts indicated by Vale as expenses already incurred in the reparation actions and as an advance payment for collective and diffuse damages. As a rule, the amounts provided for in the Agreement will be monetarily restated by the IPCA.</p> <p>On the environmental axis:</p> <p>Development and execution, after approval by the parties, of the Environmental Recovery Plan for the Paraopeba River Basin.</p> <p>Development and implementation of projects to compensate for already known environmental damage, after approval of the committers (cap value R\$1,550 million).</p> <p>Availability of resources for the operationalization and execution of Water Security Projects, to be managed by the State Executive Branch (R\$2,050 million).</p> <p>On the socioeconomic axis:</p> <p>Availability of resources for the cost of Demand Projects of the Affected Communities ceiling value of R\$3,000 million).</p> <p>Availability of resources to fund the Income Transfer Program for the affected population and its implementation – in definitive replacement of the Emergency Payment (cap value of R\$4,400 million).</p> <p>Development and execution of projects for affected municipalities in the Paraopeba Basin (cap value of R\$2,500 million).</p> <p>Development and execution of projects for Brumadinho (cap value of R\$1,500 million).</p> <p>Availability of funds for the development, by the State of Minas Gerais, of the Mobility Program (cap value R\$4,950 million).</p> <p>Availability of resources for development, by the State of Minas Gerais, for the Public Service Strengthening Program (cap value R\$3,650 million).</p> <p>Development of the Biofábrica Wolbachia and Funed projects, in the total amount of R\$135 million.</p> <p>Funding of Public expenses and the temporary hiring of personnel due to the Termination and the execution of this Agreement, in the total amount of R\$310 million.</p> <p>Funding for the support structure provided for in the agreement, including audits and technical assistance, in the total amount of R\$700 million.</p> <p>Payment, to the Diffuse Rights Fund of the Public Ministry, compensation for damages caused to the "Berros II" archaeological site, in the amount of R\$361,250.00.</p>
<b>(e) Term, if any</b>	For the to-do obligations, the deadlines are individualized by project – some projects in the quick response package have already had the execution order issued by the Committers and have specific

#### 4.7. Other relevant contingencies

	<p>schedules.</p> <p>For obligations to pay: As a rule, Vale has 30 days from the release of the amount of deposited guarantees to deposit the complement, in case the balance is not sufficient.</p> <p>The Income Transfer Program was marked by the end of the transition period for Vale to make the deposit.</p> <p>The Mobility Program and the Public Service Strengthening Program will be paid in 12 and 6 installments, respectively, the first 60 days after the final and unappealable decision of the Agreement.</p> <p>The Payment to FUNEMP observed the deadline of 10 working days from the final and unappealable decision of the ratification of the Agreement</p>
<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	All guarantees and amounts deposited in court for compliance with certain obligations to pay provided for in the Agreement were released. Deposit of the balance of R\$4.4 billion allocated to the PTR, the first four installments of the Mobility Program and the Public Service Strengthening Program, the obligation to pay 125MM of Annex I.3 and the remaining amount of Annex I.1. Payment made to FUNEMP. The socioeconomic audit was contracted and is working. The contracting of the financial audit is in the contractual negotiation phase. Obligations to do are in compliance
<b>(g) Consequences in case of non-compliance</b>	If the default is not remedied or justified, in the case of obligations to pay, Vale will be subject to a fine of 2% on the overdue amount and default interest of 1% per month. In the case of obligations to do, Vale will be subject to a daily fine of R\$100,000, with a limit of R\$6 million or up to the value of the economic content of the defaulted obligation, whichever is lower.

<b>15) Commitment Agreement for decommissioning of upstream dams</b>	
<b>(a) Signatories</b>	Prosecution Office of the State of Minas Gerais, Federal Prosecution Office, State of Minas Gerais, State Environmental Foundation, and Vale.
<b>(b) Date of the execution</b>	February 25, 2022
<b>(c) Description of the facts that led to the execution of the agreement</b>	After the rupture of the BI dam, it was determined, through new federal and state norms, the decommissioning of the dams raised using the upstream method within 3 years. Given the understanding of the state agency that it is impossible to extend this period, due to the technical impossibility of decommissioning part of the dams upstream of the Company within this period, the government agencies proposed to Vale and other entrepreneurs in the same situation to execute this agreement, as a form to avoid the matter from being taken to court. Non-compliance with state law, given the failure to meet the 3-year period, would generate the risk of suspension of environmental licenses related to such structures, with the consequent risk of shutdown of Vale's operational activities.
<b>(d) Assumed obligations</b>	Hiring of a specialized technical team to support government bodies in the evaluation of the decommissioning projects and measures to control and repair the environmental impacts proposed by Vale, as well as payment of BRL 236,759,722 (two hundred and thirty-six million, seven hundred and fifty-nine thousand, seven hundred and twenty-two reais) for the purpose of funding projects aimed at environmental preservation and the improvement of government action related to the safety of mining tailings dams.
<b>(e) Term, if any</b>	Continuous compliance with the follow-up until the completion of the decommissioning works.
<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary measures to fulfill the obligations under the Commitment Agreements.
<b>(g) Consequences in case of non-compliance</b>	Daily fine of R\$ 20,000.00 in case of non-compliance with any clause of the agreements, with the exception of the clause referring to the decommissioning term, according to the specific schedule for each structure, whose daily fine for non-compliance was set at R\$ 100,000.00.

#### **16) Agreement for Pataxó and Pataxó Hã Hã Hãe Indigenous Community**

#### 4.7. Other relevant contingencies

<b>(a) Signatories</b>	Vale S.A., the Pataxó and Pataxó Hã Hã Hãe Indigenous Community, two groups from the community.
<b>(b) Date of the execution</b>	September 19th, 2022
<b>(c) Description of the facts that led to the execution of the term</b>	Two confidentiality agreements for indemnity, damages, compensation, for all damage and losses, both individually and collectively, caused to the Pataxó and Pataxó Hã Hã Hãe (two specific groups) Indigenous Community, due to the rupture of the B1 Dam at the Córrego do Feijão mine, in Brumadinho.

<b>17) Commitment Agreement for Non-Reported Dams</b>	
<b>(a) Signatories</b>	Prosecution Office of the State of Minas Gerais and Vale.
<b>(b) Date of the execution</b>	August 8th, 2022
<b>(c) Description of the facts that led to the execution of the agreement</b>	This agreement, considering the filing of public civil action No. 5055004-90.2021.8.13.0024, is pending before the 25th Civil Court of the Judicial District of Belo Horizonte, through which the Prosecution Office of the State of Minas Gerais filed against the Company for the payment of compensation for collective pain and suffering and restitution of illicit profit earned from irregular activities in twelve (12) dams whose existence was only reported by VALE on June 5th, 2020.
<b>(d) Assumed obligations</b>	Implementation and adherence to the requirements of the GISTM (Global Industry Standard and Tailings Management), with the submission of an "Emergency Response" specific report; Submission to the Committed Party of an updated list of all dams in the State of Minas Gerais under Vale's responsibility, and Payment of R\$ 40,000,000 (forty million reais).
<b>(e) Term, if any</b>	Continuous compliance, in order to implement the GISTM, and 90 days for reporting; Term for submission of the updated list: 60 days; Transfer of the amount to Vale's interest-bearing account: 60 days.
<b>(f) Information on the measures being adopted to comply with the obligations assumed under the agreement</b>	The Company is adopting the necessary measures to fulfill the obligations under the Commitment Agreements.
<b>(g) Consequences in case of non-compliance</b>	Daily fine of R\$ 20,000.00 in case of non-compliance with any clause of the agreements, with the exception of the clause referring to the identification of existing or registered dams, after the period provided for in the agreement, which provides for a fine in the amount of R\$ 3,000,000 (three million reais).

#### (B) Terms Relating to the Rupture of Samarco Dam

Vale is a defendant in several public-interest civil actions filed by Judicial Institutions, federative entities, other authorities or civil associations that claim compensation for socio-environmental and socio-economic damage as a result of the rupture of the Fundão dam, owned by Samarco Mineração S.A. ("Samarco"), a company in which Vale and BHPB each hold a 50 percent stake in the share capital. The relief requested in these cases are generally similar to the reliefs demanded in the public-interest civil action filed by the Brazilian government (case No. 0069758-61.2015.4.01.3400, currently No. 1024354-89.2019.4.01.3800), among others, and similar to the public-interest civil action filed by the Federal Prosecution Office ("MPF") (case No. 0023863-07.2016.4.01.3800, currently No. 1016756-84.2019.4.01.3800).

In 2017, the Superior Court of Justice (STJ) decided that the 12th Federal Court of Belo Horizonte, currently the 4th Federal Court, is the court of competent jurisdiction to rule on all these public-interest civil actions, with the exception of matters relating to Mariana. However, there is a Conflict of Jurisdiction pending, in which the scope of competence of the State and Federal Courts is discussed, in connection with the matters related to the municipality of Mariana. Several public-interest civil actions were suspended due to the negotiations and agreements entered into with the Federal Prosecution Office ("MPF"), as described in this item 4.7 of the Reference Form.

In October 2020, the Federal Prosecution Office ("MPF") filed a motion for the resumption of the main public-interest civil action filed with the 12th Federal Court of Belo Horizonte ("ACP 155 BI"), due to the impasse in hiring experts to help the MPF identify socio-environmental and socio-economic impacts, as provided for in the June 2018 Agreement ("Governance Consent Decree (TAC)"). In July 2021, due to negotiations mediated by the National Council of Justice ("CNJ"), the MPF filed a motion for a new suspension of the case to allow the continuity of out-of-court negotiations before the CNJ. As mentioned, the Governance TAC provided for the

#### 4.7. Other relevant contingencies

possibility of renegotiating the Renova Foundation's redress programs, upon completion of studies carried out by an expert hired by the Federal Prosecution Office. Negotiations began in April 2021, and in June 2021 a charter of principles was executed by BHPB, Samarco and us, as well as by representatives of the Federal Prosecution Office and other authorities involved. Discussions on the renegotiation are still ongoing.

Vale has been appointed as defendant in several private actions, which are pending before different state and federal courts in the states of Minas Gerais and Espírito Santo, filed by individuals, legal entities, municipalities and other entities that seek redress and compensation for environmental, pecuniary and pain and suffering damages resulting from the rupture of the Fundão dam. These lawsuits include motions for significant amounts in damages, injunctions, attached property, and freezing of the Company's bank accounts. Vale reached a settlement of some of these cases and continues to defend itself in several others.

Samarco is involved in several other investigations and actions seeking compensation for damages resulting from the rupture of the dam. Immediately after the rupture of the dam, the environmental body of the State of Minas Gerais and the Brazilian Department of Mineral Production (DNPM, currently National Mining Agency ("ANM")) established an investigation of the causes for the rupture of the dam and determined the suspension of operations of Samarco, conditioning the resumption thereof upon the completion of investigations of the causes for the rupture of the dam. The investigations concluded that concomitant factors occurred – structural failures and seismic shocks – that culminated in the breach. Later, in September 2019, Samarco obtained the Corrective Operational Licensing ("LOC"), considering to rectify existing structures and emergency works, including new solutions for the treatment of tailings. After obtaining the LOC, the implementation of measures necessary for the resumption of operations was initiated, such as operational readiness and installation of the filtration process. For more information on Samarco's activities, see item 1.4 of this Reference Form.

<b>1) Settlement and Consent Decree Agreement (TTAC) within the scope of Public Interest Civil Action No. 0069758-61.2015.4.01.3400</b>	
<b>(a) Signatories</b>	Samarco Mineração SA, Vale SA, BHP Billiton Brasil Ltda. (" <u>BHPB</u> "), Federal Union, States of Espírito Santo and Minas Gerais, Brazilian Institute of Environment and Renewable Natural Resources (" <u>IBAMA</u> "), Chico Mendes Institute, National Water Agency (" <u>ANA</u> "), Brazilian Department of Mineral Production (" <u>DNPM</u> "), the Brazilian Indian Foundation (" <u>FUNAI</u> "), State Forestry Institute (" <u>IEF</u> "), Mining Institute of Water Management (" <u>IGAM</u> "), State Environmental Foundation (" <u>FEAM</u> "), and State Institute of Environment and Water Resources, Institute of Agricultural and Forestry Defense of Espírito Santo and State Agency of Water Resources.
<b>(b) Date of the execution</b>	March 2nd, 2016
<b>(c) Description of the facts that led to the execution of the agreement</b>	The signatory authorities filed a Public Interest Civil Action (Process No. 0069758-61.2015.4.01.3400) against Samarco and its shareholders seeking compensation for alleged socioeconomic and socio-environmental damages resulting from the rupture of the Samarco tailings dam, as well as the adoption of a series of measures by Samarco and its shareholders in order to mitigate, repair and compensate for the damages allegedly arising from the said accident. For information on said Public-Interest Civil Action no. 0069758-61.2015.4.01.3400, see item 4.3 of this Reference Form and for additional information regarding the accident, see items 4, 7.9 and 10.1 of this Reference Form.  The amount of the Public-Interest Civil Action set by its plaintiffs was R\$ 20,204,968,949. Following a series of negotiations between the authorities, Samarco, Vale and BHPB, the parties entered into the TTAC, which provides for a long-term redress and compensation plan in response to the event.

#### 4.7. Other relevant contingencies

<p><b>(d) Assumed obligations</b></p>	<p>According to the TTAC, on June 24, 2016, Samarco, Vale and BHPB established a Foundation, called "Renova Foundation", which will develop and implement environmental and socio-economic programs to redress and compensate for damage caused by the rupture of the Samarco dam ("<u>Foundation</u>").</p> <p>TTAC includes two broad types of programs: a) Reparation Programs to restore the environment, local communities and social conditions of the affected regions; b) Compensation Programs to offset the damages in the cases in which reparation is not possible, and provision of funds for certain special projects, always acting in good faith. In addition, the Foundation's activities are monitored by an independent external auditor.</p> <p>Samarco will fund the Foundation with contributions as follows (calendar year):</p> <ul style="list-style-type: none"> <li>○ R\$ 2 billion in 2016, less the amount of funds already spent on or allocated to reparation and compensation activities;</li> <li>○ R\$ 1.2 billion in 2017; and</li> <li>○ R\$ 1.2 billion in 2018.</li> <li>○ As of 2019, the value of the annual contributions will be defined in a sufficient amount, compatible with the projection for the execution of the Projects for the corresponding year.</li> </ul> <p>Samarco agreed on approved annual contributions necessary to carry out the repair and compensation projects for each fiscal year, and for the years 2019 to 2021 these contributions will be from R\$ 800 million to R\$ 1.6 billion.</p> <p>As of the execution of the TTAC, the Foundation will allocate an annual amount of R\$ 240 million, for a period of 15 years, for the performance of repairs and compensation projects. These annual amounts are already included in the contributions for the first six years.</p> <p>In addition, a contribution of R\$ 500 million will be made for the basic sanitation of the affected regions.</p> <p>Finally, let it be noted that the TTAC does not provide any acknowledgment of civil, criminal or administrative liability for the rupture of the Fundão dam. The TTAC anticipates that, within three years of the date of the agreement, the parties will review their terms to evaluate the effectiveness of ongoing repair and compensation activities.</p>
<p><b>(e) Term, if any</b></p>	<p>The term of the TTAC is 15 years, renewable for periods of one year, successively, until all the obligations provided for in that term are fulfilled.</p>
<p><b>(f) Information on the actions being adopted to comply with the obligations assumed under the agreement</b></p>	<p>Data and studies were developed, and continue to be developed and evaluated, aiming at the development and fulfillment of the TTAC. In addition, the programs provided by TTAC are being implemented. In addition, the review of such programs occurs according to the governance provided for in the TTAC.</p>
<p><b>(g) Consequences in case of non-compliance</b></p>	<p>Should Samarco fail to fulfill its obligation to provide resources to the Foundation, Vale and BHPB are required to provide resources to the Foundation in proportion to their 50% interest in Samarco.</p>
<p><b>(h) Other comments</b></p>	<p>Status of the Current Stage of TTAC's Proceedings</p> <p>The TTAC was approved by the Federal Regional Court of the 1st Region on May 5, 2016, and suspended the Public Interest Civil Action (Process No. 0069758-61.2015.4.01.34) highlighted above.</p> <p>Nevertheless, against the decision that approved the TTAC, the Federal Public Prosecution Office has filed a motion for clarification, challenging the jurisdiction of the Federal Regional Court of the 1st Region to approve the TTAC. In addition, the Federal Prosecution Office challenged the terms of the TTAC signed, regarding the adequacy of the measures established therein, as well as the legitimacy of the parties agreeing to the conclusion of the TTAC. It required, at this point, the granting of appeal against a nonunanimous appellate decision to the appeal and the suspension of the effectiveness of the decision.</p> <p>The Federal Prosecution Office also filed a complaint before the Superior Court of Justice (STJ) against the decision of the Federal Regional Court of the 1st Region that approved the TTAC.</p> <p>On June 30, 2016, the Justice-rapporteur of the complaint filed a</p>

#### 4.7. Other relevant contingencies

	<p>preliminary injunction to suspend, until the final judgment of the complaint, the decision of the Federal Regional Court of the 1st Region (TRF), dated May 5, 2016, which approved the TTAC.</p> <p>On August 17, 2016, the Fifth Panel of the Federal Regional Court of the 1st Region declared null and void the decision that approved the TTCA and denied the interlocutory appeals filed by Vale, BHP and Samarco, and maintained the preliminary decision rendered by the Court of the 12th Federal Court on December 18, 2015 in Belo Horizonte, which includes the unavailability of the Defendants' mining concessions for the mining of ore, without, however, limiting its production and marketing activities.</p> <p>The TTAC remains valid and the parties will continue to fulfill their obligations already provided for.</p> <p>The Company further clarifies that:</p> <p>i the following letters were issued: (i) OF/CPI/No. 124/2019, by the State Legislature of the State of Espírito Santo, which generally alleges the existence of noncompliance of the TTAC; and (ii) Letter no. 11/2020/CAO-MA, by the Public Prosecution Office of the State of Minas Gerais, through which seven (07) occurrences of fines are recorded, until January 7th, 2020. These letters were also questioned by the CVM, an opportunity in which it was clarified that:</p> <p>ii the facts and alleged non-compliances mentioned in the letters OF/CPI/No. 124/2019 and Letter no. 11/2020/CAO-MA and their respective fines are returned to RENOVA FOUNDATION, and VALE is simply responsible in a subsidiary manner for the fulfillment of SAMARCO's primary liability financial obligations, only in proportion to its participation;</p> <p>iii such facts are being discussed in administrative appeals by the Renova Foundation and judicial incidents, in the manner provided for in the TTAC, and there is no final decision that recognizes them; and yet,</p> <p>iv the initial proposal to create the ten priority thematic axes, as described in item 4.3 of this Reference Form, which materialize the main divergences between the parties, in order to expedite the implementation of the TTAC reparation and compensation programs, was presented at the end of 2019, which is why such information is provided for in this Reference Form and was not in the Reference Form for the year 2018;</p> <p>there is no contradiction to the existence of these discussions, whose mechanisms are provided for in the TTAC, with the statement that the agreement has been fulfilled by the parties and the Company, whose exclusive financial obligation in January 2021, also received the letter no. 008/2021 of the State Legislature of the State of Espírito Santo, which generally alleges the existence of non-compliance with clauses 19 and 38 of the TTAC, in relation to the payment of compensation to rural producers impacted by the breach of Fundão dam.</p> <p>In response, Vale clarified, among other issues, that: (i) the preparation and execution of projects, within the guidelines established by the socioeconomic and socio-environmental programs provided for in the TTAC, are solely and exclusively the responsibility of the Renova Foundation, established and maintained by SAMARCO, VALE and BHP. The funding entities shall be responsible for the financial obligations of the TTAC, especially the contribution of resources for the formation and maintenance of the heritage of the Renova Foundation. These financial obligations are primarily up to SAMARCO, and only in case of non-compliance with this obligation, is that Vale and BHP, in the proportion of 50% for each, would bear any amounts not allocated to the Renova Foundation in relation to each annual budget. This is clearly clear from clause 225 and following clauses of the TTAC; and (ii) despite the existence of several factors unrelated to the measures to be adopted by the Renova Foundation and its funding entities that influence the flow and prevent the conclusion of indemnification proceedings, the Renova Foundation has met the deadlines for payment in the context of indemnification proceedings, which are usually carried out long before maturity,</p>
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#### 4.7. Other relevant contingencies

	<p>and there is no need to talk about any dilatory action or non-compliance.</p> <p>v it did not have its fulfillment questioned.</p> <p>For information on Public-Interest Civil Action No. 0069758-61.2015.4.01.3400 and the thematic axes abovementioned, see item 4.3 of this Reference Form.</p> <p>The TTAC does not automatically cover private civil actions, other public-interest civil actions, or criminal charges.</p>
<p><b>2) Source: Public-Interest Civil Action No. 0023863-07.2016.4.01.3800 Preliminary Consent Decree I</b></p>	
<p><b>(a) Signatories</b></p>	<p>Federal Prosecution Office, Samarco, Vale and BHPB</p>
<p><b>(b) Date of execution</b></p>	<p>January 18, 2017</p>
<p><b>(c) Description of the facts that led to the execution of the agreement</b></p>	<p>The Federal Prosecution Office filed the public interest civil action no. 0023863-07.2016.4.01.3800, ongoing before the 12th Federal Court of Belo Horizonte against Samarco and its shareholders seeking compensation for alleged socioeconomic and socioenvironmental damages resulting from the rupture of the Samarco's tailings dam, as well as the adoption of a series of measures by Samarco and its shareholders in order to mitigate, repair and compensate for the damages allegedly arising from said accident.</p> <p>The value of the Public Interest Civil Action set by its plaintiffs was R\$ 155,052,000,000. After a series of negotiations among the authorities, Samarco, Vale and BHPB, the parties entered into the Preliminary Consent Decree I, whose purpose is to establish conditions and parameters for the hiring of a body of technical assistants who will assist the Federal Prosecution Office in a socio-environmental and socioeconomic diagnosis, as well as defining a specific timetable for holding public hearings and prior consultations with traditional populations. Financial guarantees were also provided to comply with the court order issued under the case no. 0069758-61.2015.4.01.3400.</p> <p>This Commitment Agreement was amended on November 16th, 2017, with MPF and MPMG, in order to include the hiring of Experts from the area of socioeconomics to: (i) elaboration of a socioeconomic diagnosis by Fundação Getúlio Vargas, (ii) provision of technical advisory services to those affected and coordination of public hearings by the Brazilian Fund for Human Rights; and (iii) definition of mechanisms for participation and social control. All other clauses of the Preliminary Consent Decree, including the guarantees, remained unchanged.</p> <p>Based on the amendment and the progress of the negotiations, the Parties requested the extension of the deadline for the conclusion of the Final Commitment Agreement and hiring of Experts.</p> <p>On April 20th, 2018, the court of the case granted a new extension of time for the conclusion of the Final Commitment Agreement and hiring of Experts, until June 25th, 2018. On this date, the contracts entered into with the Brazilian Fund for Human Rights and with the Getúlio Vargas Foundation were signed and presented in court to carry out the work on the socioeconomic axis.</p>
<p><b>(d) Assumed obligations</b></p>	<p>It was assumed by the contracting companies the obligation of fully funding the activities to be executed by the experts, advisors/technical assistants, as well as financing the socio-environmental and socio-economic reparation programs of the impacts resulting from the rupture of the Fundão dam.</p> <p>It was also assumed the obligation of promoting, at least, 11 public hearings, being 5 in the State of Minas Gerais and 3 in the State of Espírito Santo and one for each Indigenous Territory involved in the TTAC (Krenak, Comboios and Caieiras Velhas).</p> <p>The companies have committed to giving to the 12<sup>th</sup> Federal Court of Belo Horizonte guarantees for the accomplishment of the funding and financing obligations of the Programs for Socio-Environmental and Socio-Economic Reparation of the impacts resulting from the rupture of the Fundão dam, in the amount of R\$ 2.2 billion.</p>

#### 4.7. Other relevant contingencies

<b>(e) Term, if any</b>	<p>See below the main terms:</p> <ul style="list-style-type: none"> <li>▪ From January 30, 2017 to November 27, 2017 <ul style="list-style-type: none"> <li>– Companies will make available to experts all studies and research conducted so far for impact assessment; petition for suspension requests in court; completion of the hiring of experts; definition of schedule, technical support and methodology of public hearings and prior inquiries; conclusion of hearings and prior inquiries; meetings and steps to define the final Consent Decree instrument – including the Government and, where possible or appropriate, other branches of the Public Prosecution Office; deadline for signing preliminary contracts with the Getúlio Vargas Foundation and the Brazilian Fund for Human Rights.</li> </ul> </li> <li>▪ By June 25, 2018: Deadline for signature of the final consent decree and hiring of Socioeconomics Experts.</li> </ul> <p>Pursuant to this Preliminary Consent Decree, the schedule is subject to modifications, by reason of the negotiations with the Federal Prosecution Office.</p>
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the Preliminary Consent Decree</b>	This Preliminary Consent Decree I is being duly accomplished in the agreed form.
<b>(g) Consequences in case of non-compliance</b>	Failure to comply with the deadline for concluding the hiring of experts, due to the exclusive fault of the companies, will imply a daily fine of R\$ 100,000, to be reverted to the hiring of the referred to experts.
<b>(h) Other comments</b>	The Preliminary Consent Decree I was ratified by the Judge of the 12 <sup>th</sup> Federal Court of the Judicial District of Belo Horizonte on March 16, 2017.

#### 3) Source: Public-Interest Civil Action No. 0010263-16.2016.4.01.3800 Preliminary Consent Decree for the Creation of the Reserve and Implementation of Socio-Economic and Socio-Environmental Measures in the area of Barra Longa ("Preliminary Consent Decree II")

<b>(a) Signatories</b>	Federal Prosecution Office, Samarco, Vale and BHPB
<b>(b) Date of execution</b>	January 18, 2017
<b>(c) Description of the facts that led to the execution of the agreement</b>	<p>The Prosecution Office of the State of Minas Gerais filed a public-interest civil action under no. 0010263-16.2016.4.01.3800, before the 2<sup>nd</sup> Civil Court of the Judicial District of Ponte Nova, later remitted to the 12<sup>th</sup> Federal Court of the Judicial District of Belo Horizonte, claiming for the adoption and funding, by Samarco, Vale and BHPB, of a series of measures to repair damages caused by the rupture of the Fundão Dam in the municipalities of Barra Longa, Rio Doce, Santa Cruz do Escalvado and Ponte Nova.</p> <p>Considering that Samarco, Vale and BHPB have agreed with the Prosecution Office of the State of Minas Gerais to adopt certain measures to mitigate the impact of Fundão's rupture in the municipality of Mariana, the Federal Prosecution Office understands that the same measures should be implemented, as applicable, in Barra Longa and adjacent areas. In view of the foregoing, the signatory companies have agreed to adopt the measures described below in Barra Longa and adjacent areas.</p>



#### 4.7. Other relevant contingencies

<b>(d) Assumed obligations</b>	<ul style="list-style-type: none"> <li>▪ Payment of emergency financial aid to the affected families, to be deducted from a possible future indemnity. In the event that a family unit has more than one economically active member, who is unable to continue his/her work, due to the rupture of the Fundão Dam, the amount will be paid to each one of them;</li> <li>▪ Payment of expenses related to residential rental for the dislodged families, as well as the providing of furniture, bedding, household appliances and utensils needed to maintain a decent life. This obligation shall survive until the final relocation;</li> <li>▪ Establishment of a communication channel that allows access to information in an assertive and agile manner;</li> <li>▪ Provision of health assistance to the affected families, providing, immediately, a team of health professionals, including medical doctors, nurses, psychologists and social workers, to provide care on all days of the week, in liaison with the Municipal Health Departments of the elected municipalities, as well as dispensing medicines and supplies necessary to the medical care, in accordance with the medical prescription of the above-mentioned health team, in a form supplementary to the Brazilian Universal Healthcare Program – SUS;</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Promote the rescue of assets, animals and other, including those belonging to the affected persons, that could be given back;</li> <li>▪ Hiring independent multidisciplinary advisory services, with recognized experience and reputation in the area, chosen by the community and with the participation of the Public Prosecution Office, with the aim at monitoring the implementation of the programs and providing the affected families with technical and legal support;</li> <li>▪ Reconstruction of rural infrastructure; and</li> <li>▪ Registration of those affected, subject to review, in case of failures or gaps identified by the technical advisors and agreed by the parties.</li> </ul>
<b>(e) Term, if any</b>	<p>The companies agreed, within a maximum period of 15 days, from the date of execution of this Preliminary Consent Decree II, to start the actions required for the implementation of the measures.</p> <p>The amounts of R\$ 200 million will be contributed, in advance, with information to the Federal Prosecution Office, by the companies within 90 days after acceptance of the guarantees provided for in the Preliminary Consent Decree I entered into with the Federal Prosecution Office, on the same date.</p> <p>The amounts of R\$ 200 million will be contributed according to the following schedule: (i) R\$ 50 million by February 28, 2017; (ii) R\$ 100 million by March 31, 2017; and (iii) R\$ 50 million by April 30, 2017.</p> <p>Failure to comply with the deadlines defined herein shall imply a daily fine of R\$ 100,000. to be reverted to the accomplishment of the purpose of this Commitment Agreement.</p> <p>The companies will submit to the Federal Prosecution Office, within 30 days, a detailed report of the measures that are planned or being implemented in Barra Longa and its adjacent areas.</p>
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the consent decree</b>	This Preliminary Consent Decree II is being duly accomplished in the agreed form.
<b>(g) Consequences in case of non-compliance</b>	Failure to comply with the defined deadlines shall imply a daily fine of R\$ 100,000.00 to be reverted to the accomplishment of the purpose of this Preliminary Consent Decree II.
<b>(h) Other comments</b>	The Preliminary Consent Decree II was ratified by the Judge of the 12 <sup>th</sup> Federal Court of the Judicial District of Belo Horizonte. The confirmatory decision was published on March 23, 2017.

#### 4) Governance Consent Decree (TAC) within the scope of Public-Interest Civil Actions No. 00238630720164013800 e 00697586120154013400 ("Governance TAC")

<b>(a) Signatories</b>	Federal Prosecution Office, Prosecution Office of the State of Minas Gerais, Prosecution Office of the State of Espírito Santo, Federal Government Public Defender's Office, Public Defender's Office of the State of Minas Gerais, Public Defender's Office of the State of Espírito Santo, Samarco Mineração S.A., BHP Biliton Brasil Ltda.,
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#### 4.7. Other relevant contingencies

	Renova Foundation, Vale and other governmental entities.
<b>(b) Date of the execution</b>	June 25th, 2018
<b>(c) Description of the facts that led to the execution of the agreement</b>	<p>On June 25th, 2018, Vale, Samarco, BHPB and the Federal and State Public Prosecutor's Offices (Minas Gerais and Espírito Santo), public defenders and attorneys general, among others, entered into a comprehensive agreement to improve the governance of Renova Foundation and to establish a process for possible revisions of TTAC remediation programs based on the results of experts contracted by Samarco to advise the MPF over a two-year period (the June 2018 Agreement). The June 2018 Agreement provided for the closure of certain actions, including public-interest civil actions filed by the Brazilian federal government and the States of Minas Gerais and Espírito Santo. It also contemplates the future termination of other public-interest civil actions through agreement on remedial programs under expert review, and confirmed the guarantee provided by the parties to guarantee payment of remediation measures in the amount of R\$ 2.2 billion.</p> <p>On August 8, 2018 the Governance TAC was filed in its entirety. In addition, the amendment to the Preliminary Consent Decree I was filed, in part and with interpretative/additive reservations (for more information on this term, see table above). In view of these approvals, the phase of knowledge of ACP No. 0069758-61.2081.3400 was dismissed with prejudice, and the partial termination, in the extension of the applications covered by the agreement, of ACP No. 23863-07.2016.4.01.3800, was agreed upon. It should be noted that the Governance TAC consists of an instrument, which purpose is to (a) change the governance process set forth in the <b>Settlement and Consent Decree Agreement within the scope of Public-Interest Civil Action No. 0069758-61.2015.4.01.3400 ("TTAC")</b> for the definition and execution of programs, projects and actions that are intended to provide full compensation for damages resulting from the failure of the Fundão dam, (b) improvement of mechanisms for effective participation of the persons affected by the failure, and (c) establishment of a negotiation process, aiming at the possible renegotiation of the programs set forth by the TTAC.</p>
<b>(d) Assumed obligations</b>	<ul style="list-style-type: none"> <li>▪ Hiring of managers, through which expenses will be incurred by members of the Inter-federative Committee, Local Commissions, Regional Commissions and Observer Forum with participation and logistics and meeting structures, as well as monitoring activities of the Interfederal Committee - CIF, within the limits previously established of annual budgets.</li> <li>▪ Redefinition of the contracts with the experts, according to the new attributions derived from the new governance of the TTAC.</li> <li>▪ Preparation and approval of a management policy to fund the Interfederal Committee - CIF and damaged parties.</li> </ul>
<b>(e) Term, if any</b>	The selected managers must be submitted to the Prosecution Office for approval within 10 days. As for the process of redefining the scope of the experts, this must start within 10 days and be completed within 60 days, from the agreement ratification date. The other obligations do not have a defined period.
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the Preliminary Consent Decree</b>	The Consent Decree has been implemented, as agreed between the parties.
<b>(g) Consequences in case of non-compliance</b>	The unjustified noncompliance of any funding obligations assumed by the companies and Foundation will subject the companies to the payment of a daily fine of R\$ 100,000 per unfulfilled obligation.

#### (C) Other Relevant Consent Decrees (TACs) and Commitment Agreements

#### 4.7. Other relevant contingencies

<b>1) Fauna TAC – Barão de Cocais</b>	
<b>Source:</b> ACP 0003811-02.2019.8.13.0054	
<b>(a) Signatories</b>	Prosecution Office of the State of Minas Gerais and Vale S.A.
<b>(b) Date of execution</b>	May 29th, 2019
<b>(c) Description of the facts that led to the execution of the consent decree</b>	Adoption of measures to continue the protection of domestic and wild animals that have already been rescued, or that are still in the dam break areas of the Sul Superior Dam, subject matter of ACP 0003811-02.2019.8.13.0054, and still within the scope of this proceeding, to establish ecological compensation for the impacts on fauna resulting from evacuations, which are the subject matter of said demand.
<b>(d) Assumed obligations</b>	<p>Maintain the measures established in the emergency plans for the search, rescue and care of animals in areas provided for in the “Dam Break” in question, according to the declared emergency level.</p> <p>Carry out all the measures provided for in the Action Plan for the Protection of Fauna, promoting improvements in their actions, as indicated by public agencies and the Committed Party.</p> <p>Maintain enough dedicated professionals to form a qualified technical team, preferably qualified in ecological management, to carry out search, rescue and care of animals; and provide infrastructure, equipment, machinery, vehicles and supplies necessary for the search, rescue and care of animals.</p> <p>Promote the immediate rescue of isolated animals and, until the rescue is carried out, the provision of food, water and veterinary care.</p> <p>Carry out actions aimed at locating the guardians of the rescued animals, according to the plan prepared by a qualified professional, which provides, at least, for advertising campaigns, face-to-face actions with the affected residents, as well as the creation of a virtual database for inquiry and executive schedule.</p> <p>Promote the adoption of dogs, cats and other small or large domestic animals rescued and not returned to their guardians, and, for this purpose, they must hold fairs and advertising campaigns for this purpose, for a period of twelve (12) months after the end of the emergency situation in all evacuated areas.</p> <p>Carry out ecological compensation for impacts on fauna resulting from evacuation.</p> <p>Transfer R\$ 1 million to the Municipality of Barão de Cocais to develop and execute programs aimed at apprehending, welcoming, caring and keeping animals.</p> <p>On March 3rd, 2020, the parties entered into an amendment to the TAC, whereby an obligation to deposit R\$ 2 million in a judicial bank account was included, with the first installment to be paid within 30 days from the date of receipt of the current account data, and the second on the same following day.</p>
<b>(e) Term, if any</b>	<p>Promote, in 20 days, improvements in the Action Plan for the Protection of Fauna.</p> <p>Perform (i) the test for canine visceral leishmaniasis (CVL) of all rescued dogs, according to official public protocol, within 30 days from receiving the animals at the shelter; and (ii) start the treatment of animals testing positive for CVL, through the use of officially permitted medication and repellent collars, within 10 days from diagnosis.</p> <p>Submit, on a monthly basis, for 24 months, the printed report of the actions taken to comply with the Consent Decree.</p> <p>Submit an action plan provided for in the Consent Decree, within 30 days from the execution of the document.</p>

#### 4.7. Other relevant contingencies

	<p>Promote, for a period of 12 months, the adoption of dogs, cats and other small or large domestic animals rescued and not returned to their guardians, and, for this purpose, they must hold fairs and advertising campaigns for this purpose. Inspect, for a period of 8 months, the delivery of animals to the adopters, upon signature of a responsible custody agreement.</p> <p>Submit to the State Forestry Institute (IEF), within 45 days, with copy to the Prosecution Office of the State of Minas Gerais (MPMG): (a) Rehabilitation, release and monitoring plan for wild animals seized in captivity in the evacuation areas; (b) Monitoring Plan for wildlife in the dam break area and its surroundings.</p> <p>Carry out ecological compensation for the impacts on fauna resulting from evacuations, by supporting the development and implementation of an ethical population control project for dogs and cats in the Municipality of Barão de Cocais; (ii) support in the preparation and execution of a program aimed at the apprehension, reception, care and custody of medium and large stray animals, and must be registered in the Semente platform within 90 days, in the amount of R\$ 1 million, which must be transferred within 45 days from the execution of the commitment agreement with the platform. If the project is not registered in the Semente Platform within 90 days, or after that period, the deposit of the amount must be made into the FUNEMP account, within 30 days from notification by the MPMG.</p> <p>On March 3rd, 2020, the 1st Amendment to the Commitment Agreement was executed, establishing the deposit of R\$ 2 million in a judicial bank account, and the first installment must be paid within 30 days of receipt of the current account data, and the second on the same day of the following month. The deposit was made on May 11th, 2020, has not yet been added to the case record due to the suspension of the functioning of the physical protocols.</p>
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the consent decree</b>	The Company is adopting the necessary conducts to fulfill the obligations under the Consent Decree.
<b>(g) Consequences in case of non-compliance</b>	Daily fine of up to R\$ 100 thousand.

<b>2) FAUNA TAC – Macacos (Nova Lima)</b>	
<b>Source:</b> ACP 5000683-69.2019.8.13.0188	
<b>(a) Signatories</b>	Prosecution Office of the State of Minas Gerais and VALE S.A.
<b>(b) Date of execution</b>	August 30th, 2019
<b>(c) Description of the facts that led to the execution of the consent decree</b>	Measures to continue the protection of domestic and wild animals that have already been rescued, or that are still in the self-rescue zone (ZAS) of the B3 and B4 dams, subject matter of ACP 5000683-69.2019.8.13.0188
<b>(d) Assumed obligations</b>	<p>Maintain the measures established in the emergency plans for the search, rescue and care of animals in the ZAS of the dams.</p> <p>Promote the immediate rescue of isolated animals and, until the rescue is carried out, the provision of food, water and veterinary care.</p> <p>Carry out actions aimed at locating the guardians of the rescued animals, according to the plan prepared by a qualified professional, which provides, at least, for advertising campaigns, face-to-face actions with the affected residents, as well as the creation of a virtual database for inquiry and executive schedule.</p> <p>Promote the adoption of dogs, cats and other small or large domestic animals rescued and not returned to their guardians, and, for this purpose, they must hold fairs and advertising campaigns for this purpose, for a period of twelve (12) months after the end of the emergency situation in all evacuated areas.</p> <p>Carry out ecological compensation for impacts on fauna resulting from evacuations, by depositing R\$ 2 million in a judicial bank account, within 30 days from the receipt of the current account data. The deposit was made on February 5th, 2020 and added to the case record on February 7th, 2020.</p> <p>Promote the adoption of dogs, cats and other small or large domestic animals rescued and not returned to their guardians, and, for this purpose, they must hold fairs and advertising campaigns for this purpose, for a period of twelve (12) months</p>

#### 4.7. Other relevant contingencies

	after the end of the emergency situation in all evacuated areas. Carry out ecological compensation for impacts on fauna resulting from evacuations, by depositing R\$ 2 million in a judicial bank account, within 30 days from the receipt of the current account data. The deposit was made on February 5th, 2020 and added to the case record on February 7th, 2020.
<b>(e) Term, if any</b>	Perform within 30 days from the execution of the instrument, improvements to the Action Plan for the Protection of Fauna, including, among others, proposals for measures to drive away wild animals from emergency areas, a communication plan with the affected community on animal care, and animal collection in the secondary security zone (ZSS). Carry out ecological compensation for impacts on fauna resulting from evacuations, by depositing R\$ 2 million in a judicial bank account, within 30 days from the receipt of the current account data. The commitments provided for in the TAC remain until the Fauna Plan is approved by the environmental agency.
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the consent decree</b>	The Company has already fulfilled the obligations assumed in the TAC and has already paid the compensatory amount.
<b>(g) Consequences in case of non-compliance</b>	Daily fine of R\$ 100 thousand.

<b>3) Water Safety TC</b>	
<b>Source:</b> ACP 5010709-36.2019.8.13.0024, ACP 5026408-67.2019.8.13.0024 and ACP 5044954-73.2019.8.13.0024	
<b>(a) Signatories</b>	Prosecution Office of the State of Minas Gerais, VALE S.A., with AECOM, the State of Minas Gerais, COPASA, and the Federal Prosecution Office as intervening parties.
<b>(b) Date of the execution</b>	February 7th, 2020
<b>(c) Description of the facts that led to the execution of the agreement</b>	Performance of technical-environmental feasibility studies and preparation of basic designs based on these studies of structural interventions that guarantee compliance with the current water demand of the metropolitan region of Belo Horizonte (RMBH), corresponding to 15,000 L/s.
<b>(d) Assumed obligations</b>	<ol style="list-style-type: none"> <li>1) Prepare and complete the Feasibility Studies to support the assessment of the technical and environmental feasibility of implementing a new direct water intake, adduction and reserve in Ribeirão da Prata, with a minimum flow rate of 600 L/s;</li> <li>2) Prepare and complete the Feasibility Studies to support the assessment of the technical-environmental feasibility of implementing a new direct water intake, adduction and reserve in the region called "Ponte de Arame do Rio das Velhas", assuring the minimum expected flow rate of 2,000 L/s, and required operating flow even during dry periods.</li> <li>3) Prepare and complete the Feasibility Studies to support the assessment of the technical and environmental feasibility of implementing a new direct water intake, adduction and reserve in Ribeirão Macaúbas, with a minimum flow rate of 2500 L/s.</li> <li>4) Prepare and complete the Feasibility Studies to support the assessment of the technical-environmental feasibility for the expansion of the Rio Manso system, included between the direct water intake and the Morro Vermelho reservoir, including the water treatment plant (ETA) pipelines, elevations and substation, in order to achieve a nominal flow rate of 9,000 l/s.</li> <li>5) Prepare and complete the Feasibility Studies to support the assessment of the technical-environmental feasibility for the implementation of a Transfer pipeline between the Paraopeba Basin (SPB) and Rio das Velhas (SRV) Systems, for a transport capacity of 3,200 L/s.</li> </ol>
<b>(e) Term, if any</b>	The deadlines agreed in the schedule between VALE, MPMG and Copasa are being met in a timely manner, and it has been submitting the relevant justifications when it is necessary to review the schedule, which is monitored by the MPMG audit.
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the consent decree</b>	The Company is adopting the necessary conducts to fulfill the obligations under the Consent Decree. This Consent Decree was ratified by the Global Agreement executed on February 4th, 2021.

#### 4.7. Other relevant contingencies

<b>(g) Consequences in case of non-compliance</b>	Daily fine of R\$ 100 thousand.
<b>4) Environmental Commitment Agreement No. 035/2018</b>	
<b>(a) Signatories</b>	Vale S.A., Federal Prosecution Office (“MPF”), Prosecution Office of the State of Espírito Santo (“MP/ES”), State of Espírito Santo, State Secretariat for the Environment and Water Resources (“SEAMA”) and State Institute of Environment and Water Resources (“IEMA”).
<b>(b) Date of the execution</b>	September 21st, 2018.
<b>(c) Description of the facts that led to the execution of the agreement</b>	Environmental Commitment Agreement (“TCA”), entered into between Vale S.A., MPF, MP/ES, State of Espírito Santo, SEAMA and IEMA with the purpose of obeying the recommendations of CETESB arising from the Environmental Commitment Agreement previously executed, which covers the same subject, aiming at ensuring improvements on the control of atmospheric emissions in the Tubarão Unit for the improvement of the air quality of the Metropolitan Region of Greater Vitória.
<b>(d) Obligations assumed by Vale and deadlines</b>	Implementation of the Guidelines, Goals (48 goals), and Action Plan based on the Emission Reduction Targets Plan of the Tubarão Industrial and Port Complex proposed by IEMA, resulting from the technical analysis services carried out by CETESB. The short-term goals are expected to end within no less than 12 months from the execution of the TCA. Long-term goals can vary up to 5 years from the date of execution of the TCA.
<b>e) Information on the actions adopted to comply with the obligations assumed under the consent decree</b>	Vale is making every effort to comply with the TCA and its monitoring is supervised monthly by the Monitoring Committee, composed of representatives of all TCA signatories, and from time to time of representatives of the Municipalities of Vitória, Vila Velha and Serra. It also includes the Preliminary Atmospheric Environmental Commitment Agreement (“TCAP”), signed by Vale S.A., Federal Prosecution Office (“MPF”), Prosecution Office of the State of Espírito Santo (“MP/ES”), State of Espírito Santo, State Secretariat for the Environment and Water Resources (“SEAMA”) and State Institute of Environment and Water Resources (“IEMA”) on November 17th, 2017. Long-term targets were expected to be met by 2023. However, as a result of the confirmed impacts due to the COVID-19 pandemic (whether on the contracts or absenteeism rate, for example), in December 2021, a motion was filed to extend the deadline of some goals for 2024.
<b>(f) Consequences in case of non-compliance</b>	In the event of unjustified non-compliance with the obligations assumed in this TCA, provided that it has been established that the default occurred due to Vale’s sole fault, the MPF and the MPES should notify the company so that any non-compliance is remedied and/or justified within 30 days, under the penalty of the incidence of a compensatory fine in the amount of R\$ 50,000, per day of delay, limited, in any case, to the amount corresponding to the respective obligation that was not met, and it cannot exceed R\$100,000,000.
	The presentation of the justification by Vale, documented and understood as appropriate by the MPF and MPES, will prevent the compensatory fine from being imposed. In the event that MPF and MPES consider that Vale’s rationale is unfounded, they must notify the company of the imposition of the compensatory fine. The amounts of any penalties will be allocated to the State Environment Fund, FUNDEMA, set up by State Complementary Law No. 513 of December 11th, 2009, 20% to the Municipal Environment Fund called FUNDAMBIENTAL, established by the Municipal Law of Vitoria No. 7,876 dated January 12th, 2010 and 10% divided to the Municipal Funds of the Environment of the Municipalities of Vila Velha and Serra, with it being allowed the conversion thereof into provision of services or donation of assets for the development of actions aimed at environmental protection and control, respecting the proportionality and the form to be established by the Entities, or, if proposed by Vale, with the approval of the Entities.

#### 4.7. Other relevant contingencies

<b>5) Conditional Permit Agreement (TDC) No. 001/2019</b>	
<b>(a) Signatories</b>	Vale S.A and Municipality of Vitória
<b>(b) Date of the execution</b>	February 12th, 2019.
<b>(c) Description of the facts that led to the execution of the agreement</b>	Vale entered into a Conditional Permit Agreement for the Tubarão Port Complex ("TDC") with the Municipal Government of Vitória/ES, with the release of the effluent treatment systems interdicted on February 7th, 2019, with the consequent immediate return of operations in the yard of raw materials, in pelletizing plants 1, 2, 3 and 4, circulation of the access way to the coal pier.
<b>(d) Obligations assumed by Vale and deadlines</b>	The agreement establishes that Vale will invest in actions to improve liquid and atmospheric effluent treatment systems on plants 1 and 4, and on the improvement of the air quality of the city of Vitória. Varied deadlines established according to the nature of each obligation.
<b>(e) Information on the actions adopted to comply with the obligations assumed under the agreement</b>	Vale is making every effort to comply with the TDC.
<b>(f) Consequences in case of non-compliance</b>	In case of unjustified non-compliance with the obligations assumed by Vale, the TDC may be suspended and/or terminated with the possibility of further prohibitions. In addition to the termination of the TDC, Vale will be subject, in case of non-compliance, to the imposition of the penalties established in art. 16, item XXXII of Municipal Decree No. 10,023/1997.

<b>6) Instrument of Cooperation not arising from Legal/Administrative Proceeding</b>	
<b>Source: Commitment Agreements signed with the Indigenous Land Community (TI) Mãe Maria</b>	
<b>(a) Signatories</b>	Mpakwyri Mpawor Indigenous Association, Gavião Je Amjip Indigenous Association, Parkrekapare Association, Je Jokrityiti Association, Te Mempapytarka Indigenous Association, Parkateje Amjip Indigenous Association and Vale
<b>(b) Date of the execution</b>	May 19th, 2015; May 29th, 2015; May 26th, 2015; May 07th, 2015; April 1st, 2015; May 1st, 2015; February 28, 2022
<b>(c) Description of the facts that led to the execution of the agreement</b>	Based on its social responsibility policy, Vale already had Terms of Commitment Agreements signed with the indigenous people who live in Mãe Maria TI (Indigenous Land), whose validity expired in 2012. So, due to the influence of the Carajás Railroad ("EFC") on this community, Vale decided to keep the transfer of funds intended to meet the emergency needs of the members of the community, ensuring the execution of the study of the Indigenous Component and of the Basic Environmental Plan ("PBA"), documents required for the licensing process of the Carajás Railroad expansion, now counting on the participation of FUNAI, which is assisting the communities with the management of the funds.
<b>(d) Assumed obligations</b>	Make financial transfers for the support of the actions of health, education, productive activities, territory surveillance and administration. On the other hand, the indigenous communities undertook not to paralyze any productive activity or to invade Vale's facilities, especially the Carajás Railroad, as well as to authorize the study of the Indigenous Component and the PBA, documents necessary for the approval of the licensing process of the Carajás Railroad expansion project.
<b>(e) Term, if any</b>	Several deadlines, due in July 2021. The Community Relations Board, together with the legal area, is currently discussing with the Indigenous Community Gavião of Mãe Maria TI the conditions for the execution of a new Commitment Agreement that will replace the one that is about to expire. Throughout 2021, it entered into agreements with the associations that represent the Gavião Indigenous Community of Mãe Maria TI, and concluded this process in 2022, signing an agreement with the 15 villages that make up Gavião TI.
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the agreement</b>	The Community Relations Board has focal points that monitor compliance with the obligations established in the Commitment Agreements, in particular the transfer of financial resources.

#### 4.7. Other relevant contingencies

<p><b>(g) Consequences in case of non-compliance</b></p>	<p>Non-compliance on the part of the indigenous community may result in the suspension of the transfer of resources and health care. If Vale is liable for the non-compliance, this creates the risk that the indigenous people will promote actions that may stop or interfere with the activities of the Company or its subsidiaries, such as demonstrations that imply the stoppage of the EFC, adversely affecting the EFC's rail operations. These demonstrations also tend to have repercussions on the lack of liberation, by the indigenous people, of the access of Vale's teams or contractors who carry out studies related to the environmental licensing processes and the execution of actions related to the fulfillment of conditions, and may be characterized as a failure to comply with the environmental licenses granted by the environmental body and weaken the position of Vale or its subsidiaries at an institutional level, without mentioning the executive measures to be taken by MPF, IBAMA, FUNAI and other entities involved in the protection of indigenous people's rights.</p>
<p><b>7) 2<sup>nd</sup> Amendment to the Term for the Promotion of Sustainable Development, formalized with FUNAI and the Krenak People, effective from 2011 to 2019, with this term being an addendum to the Agreement that finalized the Public-Interest Civil Action No. 2006.38.13.009676-0</b></p>	
<p><b>Source: Authorized agreement that extinguished the Public-Interest Civil Action filed by MPF and FUNAI against CEMIG - Companhia Energética de Minas Gerais, CVRD - Companhia Vale do Rio Doce and CHA - Aimorés Hydroelectric Consortium ("Public-Interest Civil Action" and "Agreement"), respectively). Following the termination of the Agreement, on November 30, 2011, the Company freely offered to formalize the following documents: (i) Term to Promote the Sustainable Development of the Krenak Indigenous Land ("<u>Term of Development</u>"), (ii) First Amendment to the Term of Development and (ii) Second Amendment to the Term of Development.</b></p>	
<p><b>(a) Signatories</b></p>	<p><b>a) Agreement</b> - MPF, FUNAI, CEMIG - Companhia Energética de Minas Gerais, CVRD - Companhia Vale do Rio Doce and CHA - Aimorés Hydroelectric Consortium;  <b>b) Term of Development</b> - Vale, Krenak Indigenous People, FUNAI and MPF;  <b>c) First Amendment to the Term of Development</b> - Vale, Krenak Indigenous People, FUNAI and MPF;  <b>d) Second Amendment to the Term of Development</b> - Vale, Krenak Indigenous People, and FUNAI as the intervening party;  <b>e) Third Amendment to the Term of Development</b> - Vale, Krenak Indigenous People, and FUNAI as the intervening party;  <b>f) Fourth Amendment to the Term of Development</b> - Vale, Krenak Indigenous People, and FUNAI as the intervening party;  <b>g) Fifth Amendment to the Term of Development</b> - Vale, Krenak Indigenous People, and FUNAI as the intervening party;  <b>h) Sixth Amendment to the Term of Development</b> - Vale, Krenak Indigenous People, and FUNAI as the intervening party;</p>
<p><b>(b) Date of the execution</b></p>	<p><b>(a) Agreement</b> - executed on July 18th 2008 - effective from July 18th, 2008 to November 30th, 2011  <b>(b) Term of Development</b> - executed on October 24th, 2011 - effective from December 1st, 2011 to June 1st, 2012  <b>(c) First Amendment to the Term of Development</b> - executed on May 3rd, 2012 - effective from December 1st, 2011 to December 1st, 2013*  <b>Second Amendment to the Term of Development</b> - executed on March 27th, 2015 - effective from December 1st, 2011 to December 1st, 2019 *  <b>(e) Third Amendment to the Term of Development</b> - Executed on November 13th, 2019 - effective from December 1st, 2011 to September 1st, 2020**  <b>(f) Fourth Amendment to the Term of Development</b> - Executed on September 1st, 2020 - effective from December 1st, 2011 to April 1st, 2021**  <b>(g) Fifth Amendment to the Term of Development</b> - Executed on April 2020 - effective from December 1st, 2011 to December 30, 2021**  <b>(h) Sixth Amendment to the Term of Development</b> - Executed on November 2021 - effective from December 1st, 2011 to December 30, 2022**  *The amendments above change clauses of the original Term of</p>



#### 4.7. Other relevant contingencies

	<p>Development, producing retroactive effects. Therefore, their respective validity should be considered as of December 1st, 2011, the effective date of the Term of Development.</p> <p>** The third and fourth amendments only change the deadline of the Original Term of Development.</p>
<b>(c) Description of the facts that led to the execution of the agreement</b>	<p>The homologation of the Agreement terminated the Public Civil Action, filed by the MPF and FUNAI, the objective of which was to implement measures to mitigate and compensate for the implementation of the Aimorés Hydroelectric Power Plant. The objective of the formal Agreement was to provide environmental, social and economic assistance through the recuperation of 54 hectares of green area, the construction of 5 cultural centers and the implementation of a dairy cattle project. After the termination of the Agreement, at the free will of the Company, and to maintain the support of and Vale's relationship with the Krenak People, new terms were formalized, maintaining the Company's assistance to the ethno-development of the indigenous people. The instrument currently in force is the Second Amendment to the Term of Development.</p>
<b>(d) Assumed obligations</b>	<p>Provide financial and technical support for the dairy cattle project, in addition to the delivery of ration, mineral salt, and medicines for cattle and basic food baskets to families.</p>
<b>(e) Term, if any</b>	<p><b>(a) Agreement</b> – July 18th, 2008 to November 30th, 2011 – executed on July 18th, 2008</p> <p><b>(b) Term of Development</b> – December 1st, 2011 to June 01st, 2012 – executed on October 24th, 2011</p> <p><b>(c) First Amendment to the Term of Development</b> – December 1st, 2011 to December 1st, 2013* – executed on May 3rd, 2012</p> <p><b>(d) Second Amendment to the Term of Development</b> – December 1st, 2011 to December 1st, 2019* – executed on March 27, 2015</p> <p><b>(e) Third Amendment to the Term of Development</b> – December 1st, 2011 to September 1st, 2020** – executed on November 13, 2019</p> <p><b>(f) Fourth Amendment to the Term of Development</b> – December 1st, 2011 to April 1st, 2021** – executed on September 1st, 2020</p> <p><b>(g) Fifth Amendment to the Term of Development</b> – December 1st, 2011 to April 28, 2021 – effective from December 1st, 2011 to December 30, 2021**</p> <p><b>(h) Sixth Amendment to the Term of Development</b> – effective from December 1st, 2011 to December 30, 2022**</p> <p>*The amendments above change clauses of the original Term of Development, producing retroactive effects. Therefore, their respective validity should be considered as of December 1st, 2011, the effective date of the Term of Development.</p> <p>** The third and fourth amendments only change the deadline of the Original Term of Development.</p>
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the consent decree</b>	<p>The Management of Relationship with Indigenous Peoples and Traditional Communities has a focal point that monitors compliance with the obligations set forth in the Second Amendment to the Term of Development.</p>
<b>(g) Consequences in case of non-compliance</b>	<p>Non-compliance by the indigenous people with the Second Amendment to the Term of Development may result in the suspension of the transfer of resources. If the non-compliance is attributed to Vale, there is a risk that the indigenous people may promote actions that stop or interfere with the activities of the Company or its subsidiaries, such as demonstrations that imply the stoppage of the Vitória-Minas</p>
	<p>Railroad ("EFVM"), adversely affecting the EFVM railway operations. These demonstrations also tend to have repercussions on the lack of liberation, by the indigenous people, of the access of Vale's teams or contractors who carry out studies related to the environmental licensing processes and the execution of actions related to the fulfillment of conditions, and may be characterized as a failure to comply with the environmental licenses granted by the environmental body and weaken the position of Vale or its subsidiaries at an institutional level, without mentioning the executive measures to be taken by MPF, IBAMA, FUNAI and other entities involved in the protection of indigenous people's rights.</p>

#### 4.7. Other relevant contingencies

<b>8) Instrument of Cooperation not arising from Legal/Administrative Proceeding</b>	
<b>Source: Commitment Agreements signed with Indigenous Communities in Maranhão.</b>	
<b>(a) Signatories</b>	Vale, Guajajara Indigenous Community of the Caru Indigenous Land, Guajajara Indigenous Community of the Rio Pindaré Indigenous Land, Ka'apor Indigenous Community of the Alto Turiacu Indigenous Land, Awá Indigenous Community of the Caru, Awá and Alto Turiacu Indigenous Lands and Brazilian Indian Foundation – FUNAI.
<b>(b) Date of execution</b>	February 20th, 2017
<b>(c) Description of the facts that led to the execution of the agreement</b>	Based on its social responsibility policy, Vale already had Commitment Agreements entered into with the indigenous people whose indigenous lands are close to the Carajás Railroad (EFC). Due to the influence of the railroad on these communities, Vale decided to maintain the transfer of financial resources destined for the application in strategic actions of territorial protection, preservation and conservation of natural resources, economic sustainability and income generation, cultural strengthening, institutional strengthening, health, education, citizenship, basic sanitation and infrastructure, with observance of what was approved by the Fiscal Council constituted to monitor the application of the resources, counting on the participation of FUNAI, which is assisting the communities in the administration of the amounts received.
<b>(d) Assumed obligations</b>	Transfer of financial resources destined for the application in strategic actions of territorial protection, preservation and conservation of natural resources, economic sustainability and income generation, cultural strengthening, institutional strengthening, health, education, citizenship, basic sanitation and infrastructure, with observance of what was approved by the Fiscal Council constituted to monitor the application of the resources.
<b>(e) Term, if any</b>	10 years.
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the agreement</b>	The Community Relations Board has focal points that monitor the fulfillment of the obligations established in the Commitment Agreements, which is already in its fourth year of execution, especially the transfer of financial resources.
<b>(g) Consequences in case of non-compliance</b>	Non-compliance on the part of the indigenous community will result in the transfer of resources being suspended. Non-compliance on the part of Vale poses a risk that the indigenous people will promote actions that stop or interfere with the activities of the Company or its subsidiaries, such as demonstrations that imply the stoppage of EFC, adversely affecting its railway operations.
<b>09) Environmental Commitment Agreement: TCA of Itabirito Peak</b>	
<b>Source: Public-Interest Civil Investigation No. 0319.02.000001-8 MPMG</b>	
<b>(a) Signatories</b>	Minerações Brasileiras Reunidas S.A. – MBR, Vale S.A., Public Prosecution Office of the State of Minas Gerais (“MPMG”), State Forestry Institute, Minas Gerais State Secretariat for the Environment and Sustainable Development, and AngloGold Ashanti Brasil Mineração Ltda.
<b>(b) Date of the execution</b>	July 9th, 2010
<b>(c) Description of the facts that led to the execution of the agreement</b>	Term signed for the environmental and landscape rehabilitation of the Itabirito Peak protection of cultural heritage area and the area covered by the “Trincheira e Mina Velha” waste dumps. Adoption of measures to preserve the Cata Branca Historic and Archaeological Site.
<b>(d) Assumed obligations</b>	<ul style="list-style-type: none"> <li>i) Execute a Rehabilitation Project according to the environmental agencies;</li> <li>ii) Perform the continuous follow-up and monitoring of the implementation of the Project;</li> <li>iii) Develop a Heritage Education Project;</li> <li>iv) Carry out the fencing work of the Cata Branca Mine Archaeological Site, and indicative and interpretative signaling of the area;</li> <li>v) Submit a fencing and signaling project to the IEF and IPHAN for approval;</li> <li>vi) Prepare the geo-referencing of the area;</li> <li>vii) Allow the IEF unrestricted access without cost and without any encumbrance to the area mentioned in item (iv) above, as well as authorize the interventions and constructions intended for the</li> </ul>

#### 4.7. Other relevant contingencies

	implementation, construction and maintenance of the Conservation Unit, free of charge of any burden, provided that such interventions do not imply, in any way, the restriction of the use of their mining rights, observing the provisions of the agreement.
<b>(e) Term, if any</b>	The maximum deadline for the total execution of the rehabilitation project, which may be extended by submitting technical justifications accepted by the Federal Prosecution Office or in case of force majeure or fortuitous event, was 5 years, as of September 1st, 2010. Refer to item (f) below for information regarding Vale's compliance with its obligations.
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the consent decree</b>	<p>Procedures for the recovery of the areas in progress, with execution of the fencing work and signaling of the archaeological site, environmental and heritage education programs, and execution of environmental rehabilitation project of the Itabirito Peak area. The TAC was fully complied with, according to an official letter sent by the Company to the MPMG on September 2nd, 2015.</p> <p>On July 14, 2017, a report was presented by CONPATRI concluding that the TAC was not fully complied with.</p> <p>In November 2017, the Company submitted a technical report challenging said document and corroborating the understanding that the TAC was fully complied with, but no reply has been received until the date of this Reference Form.</p> <p>In March 2020, the MP requested that updated information on the full compliance with the TAC be submitted, and This request was replied to in May 2020. VALE reiterated then that it fulfilled all TAC obligations, with the completion of environmental rehabilitation works at the Itabirito Peak and approval of the RPPN. It was also emphasized that, although the restoration to good standing of the RPPN property land remains necessary, the area receives adequate protection and treatments, with full access and support being granted to the IEF for supervising and scheduling technical visits in the area. Since then the investigation has been suspended because of the COVID 19 prevention measures.</p> <p>In March 2023, the MPMG requested new information on the status of compliance with obligations, and the company is preparing its response clarifying the actions taken.</p>
<b>(g) Consequences in case of non-compliance</b>	Prohibitory fine of R\$ 2,500.00/day of delay and performance of the agreed but unfulfilled part.

<b>10) Consent Decree No. 118/2015</b>	
<b>Source: Public Civil Investigation No. 3212.2014.03.000/9-12 – Regional Labor Attorney of the 3rd Region/MG – Minas Gerais</b>	
<b>(a) Signatories</b>	Labor Federal Prosecution Office and Vale S.A.
<b>(b) Date of the execution</b>	July 31st, 2015
<b>(c) Description of the facts that led to the execution of the agreement</b>	The alleged slavery-like labor practiced by Vale's contractor, Ouro Verde Locação e Serviços S/A. For further information, see sub-item (i) of item 4.3 of this Reference Form.
<b>(d) Assumed obligations</b>	The preventive and corrective measures have been adjusted to guarantee the labor rights of the employees of the service providers, especially regarding the sanitary conditions of their facilities, and to promote decent work, and elimination of all forms of forced labor or slavery-like labor. The commitments undertaken have been properly implemented.
<b>(e) Term, if any</b>	Indefinite term except as otherwise provided for in the agreement.
<b>(f) Information on the actions being adopted to comply with the obligations assumed under the consent decree</b>	From the second half of 2015, Vale promoted several training sessions with the company's managers, in the same State, in order to inform them of the obligations assumed by Vale. There was guidance for the inclusion of a specific standard clause in the contracts signed by the company, providing for its resolution in the event of the use of child labor or slave labor by the contractor or any situation that may characterize an attack on human dignity.
<b>(g) Consequences in case of non-compliance</b>	R\$ 20,000 per item not complied with, up to the limit of R\$ 500,000.
<b>(h) Other comments</b>	The Consent Decree, in addition to avoiding a possible lawsuit by the Federal Prosecution Office, allows Vale to objectively demonstrate

**4.7. Other relevant contingencies**

	the adoption of preventive and prohibitive measures to exploit degrading or slavery-like labor in its production chain, proving the fulfillment of the National Pact to Combat Slave Labor signed by it.
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<b>11) Environmental Commitment Agreement of the Camburi Liability (“TCA”)</b>	
<b>(a) Signatories</b>	Vale S.A., Federal Prosecution Office (“MPF”), Prosecution Office of the State of Espírito Santo (“MP/ES”), State of Espírito Santo, State Secretariat for the Environment and Water Resources (“SEAMA”) and State Institute of Environment and Water Resources (“IEMA”), Vitória Municipality and Vitória Municipality Secretariat of Environment (“SEMMAM”).
<b>(b) Date of the execution</b>	March 16th, 2017.
<b>(c) Description of the facts that led to the execution of the agreement</b>	A TCA entered into between Vale S.A., MPF, MP/ES, Espírito Santo State, SEAMA, IEMA, Vitoria Municipality and SEMMAM, which consists of the execution of the action plans that allow full compensation and recovery of the Camburi beach northern region.
<b>(d) Assumed obligations and deadlines</b>	<ul style="list-style-type: none"> <li>• Specific monitoring of the beach intervention area: execution, after IEMA and SEMMAM approval, of the environmental monitoring program of the northern region of Camburi Beach, contemplating the actions of adequate monitoring of the involved environmental compartments (water, sediment and biota) of the body of interest and ecosystems of the Bay of Espírito Santo, with systematic documentation of the development of the actions and evaluation of trends and possible deviations in the execution of the proposed activities, anticipating and predicting the possibilities of reaching the objectives and recommending corrective and preventive actions for the adjustment or replanning, under supervision by IEMA and SEMMAM, with the following actions: <ul style="list-style-type: none"> <li>➢ Approval by IEMA, in consultation with SEMMAM, of the monitoring plan for water, sediment and biota of the body of interest and ecosystem of the Bay of Espírito Santo presented by Vale on December 7, 2015. Term: 30 days from the date of execution of the TCA; and</li> <li>➢ Start date of implementation of the monitoring plan. Term: 6 months, from the approval of the monitoring plan by IEMA.</li> </ul> </li> <li>• Restoration of the emerged shoreline, by surface removal of sediments with iron from the emerged region and recovery (pedological, vegetative with native and landscape species) of the object area of this Agreement, with the following actions: <ul style="list-style-type: none"> <li>➢ Mapping and identifying the limits of the Coastal Park, in the Atlantic Park area, without prejudice to the creation of a future conservation unit in the area. Term: 4 months, from the execution of the TCA;</li> <li>➢ Preparation and presentation of a methodology for the execution of sediment removal and recovery of the area. Term: 6 months, from the execution of the TCA; and</li> <li>➢ Implementation of the project of removal and recovery of the area. Term: as defined by the removal and recovery plan for the area approved by IEMA and SEMMAM.</li> </ul> </li> <li>• Compensatory measures for environmental recovery through the implementation of actions for protection the ecosystem and revitalization, with the following actions: <ul style="list-style-type: none"> <li>➢ Preparation of the project and deployment of the Coastal Park in compliance with the proposal demand for a future use of the northern region of Camburi Beach to be recovered: <ul style="list-style-type: none"> <li>○ Definition of purpose, scope and assumptions of the project by the Municipal Government of Vitória along with Vale. Term: 4 months, from the execution of the TCA;</li> <li>○ Hiring, by Vale, of a company for the preparation of the project. Term: to be defined by Vale;</li> <li>○ Preparation and presentation of the project with executive schedule. Term: to be presented by Vale after completion of the item above;</li> <li>○ Hiring of a company for the implementation of the work. Term: to be presented by Vale; and</li> <li>○ Implementation of the work. Term: to be presented by Vale, after completion of the item above.</li> </ul> </li> </ul> </li> </ul>

#### 4.7. Other relevant contingencies

	<ul style="list-style-type: none"> <li>➤ Preparation of the project and implementation of Zé da Bola Park leisure area: <ul style="list-style-type: none"> <li>○ Definition of purpose, scope and assumptions of the project by the Municipal Government of Vitória along with Vale. Term: 4 months, from the execution of the TCA;</li> <li>○ Hiring, by Vale, of a company for the preparation of the project. Deadline: to be presented by Vale, after completion of the item above;</li> <li>○ Preparation of the project, with executive schedule. Term: to be presented by Vale, after completion of the item above;</li> <li>○ Hiring of a company for the implementation of the work. Term: to be presented by Vale after the completion of the item above; and</li> <li>○ Implementation of the work. Term: to be presented by Vale after completion of the item above.</li> </ul> </li> <li>➤ Preparation of the project and implementation of the physical protection of the restinga vegetation of the shoreline of Camburi beach: <ul style="list-style-type: none"> <li>○ Definition of purpose, scope and assumptions of the project by the Municipal Government of Vitória along with Vale. Term: 4 months, from the execution of the TCA;</li> <li>○ Hiring, by Vale, of a company for the preparation of the project. Term: to be presented by Vale after completion of the item above;</li> <li>○ Preparation of the project, with executive schedule. Term: to be presented by Vale after completion of the item above;</li> <li>○ Hiring of a company for the implementation of the work. Term: to be presented by Vale after completion of the item above; and</li> <li>○ Implementation of the work. Term: to be presented by Vale after completion of the item above.</li> </ul> </li> <li>• Additional measures to environmental recovery, through the preparation of a technical cooperation agreement, with the following actions: <ul style="list-style-type: none"> <li>➤ Preparation of a technical cooperation agreement between Vale and SEMMAM to prepare the necessary studies for the recovery of the erosion of the southern portion of the Camburi beach. The studies will be funded by Vale. Term: 6 months, from the execution of the TCA.</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>• Social mobilization, through the disclosure and promotion of the enterprise, so that, in a transparent way, actions are presented for the socio-environmental development of the region, as well as for mitigation of the environmental impacts caused by the works, with the following actions: <ul style="list-style-type: none"> <li>➤ Preparation and submission of the Communication Plan to the IEMA and SEMMAM for approval. Term: 3 months, from the execution of the TCA; and</li> <li>➤ Implementation of the Communication Plan. Term: 6 months, from the approval by IEMA and SEMMAM, and execution as defined by the communication plan to be approved.</li> </ul> </li> </ul>
<p><b>(e) Information on the actions adopted to comply with the obligations assumed under the consent decree</b></p>	<p>Vale is making every effort to comply with the TCA and has been monitored by the Monitoring Committee made up of eight (08) members: a representative of the MPF, a representative of the MP/ES, a representative of SEMMAM, a representative of IEMA, a representative of Vale, a representative from the Jardim Camburi Residents' Association, a representative from the Jardim da Penha Residents' Association, and a representative from the Mata da Praia Residents' Association.</p> <p>In order for an Assignment Agreement for a portion of the area in which the implementation of the Coastal Park is planned to be entered into with the Municipality of Vitória, a consent was obtained from the SPU and an Assignment of Use Agreement was executed. The issuance of the Environmental Licenses necessary for the implementation of the park is pending.</p>
<p><b>(f) Consequences in case of non-compliance</b></p>	<p>In case of non-compliance with its obligations, Vale shall be notified, within thirty (30) days, to remedy such non-compliance, under penalty of a compensatory daily fine of R\$ 5,000 (five thousand reais), per day of delay in the compliance with each obligation,</p>

#### 4.7. Other relevant contingencies

	amounts that will be allocated 50% (fifty percent) to the State Environment Fund ("FUNDEMA"), established by the State Complementary Law No. 513, of December 11 <sup>th</sup> , 2009, and 50% (fifty per cent) to the Municipal Environmental Fund ("FUNDAMBIENTAL"), established by the Municipal Law of Vitória no. 7,876, of January 12 <sup>th</sup> , 2010.
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<b>12) Judicial Agreement entered into in Case No. 5000430-27.2019.8.13.0400</b>	
<b>(a) Signatories</b>	PROSECUTION OFFICE OF THE STATE OF MINAS GERAIS AND VALE S.A.
<b>(b) Date of the execution</b>	April 16th, 2019
<b>(c) Description of the facts that led to the execution of the agreement</b>	Due to the Vargem Grande Dam being raised to level 2 and emergency, part of BR 356 suffered interference through the implementation of a system "PARE E SIGA" (STOP AND GO) in compliance with the security plan approved by the Civil Defense. The interdiction increased traffic through alternative routes and brought other risks to the population.
<b>(d) Assumed obligations and deadlines</b>	<p>Agreement entered into and approved at a hearing for VALE</p> <p>(i) to reinstate the assisted operation" system on BR 356 in case the risk level of the Vargem Grande Dam is increased to Level II or III, within 24 hours, depending on the urgency of the concrete case and orders/instructions from the Civil Defense and State Highway Police;</p> <p>(ii) perform improvement works in the public building of Posto 04 of the State Highway Police, in accordance with the demand/work plan to be presented by the State Highway Police to VALE, within the limit of R\$ 40,000; and (iii) implement the replacement of the stop-follow system by assisted operation, by means of: (i) distribution of flyers on April 17th, 2019, from 12:00 p.m. to 8:00 p.m., on the assisted operation; (ii) radio programs throughout April 17th, 2019 and April 18th, 2019, on assisted operation; (iii) information on VALE's website about the assisted operation; (iv) theoretical training of assisted operation operators, on April 17th, 2019, in the morning shift; (v) practical training of operators and simulation of assisted operation, on April 17th, 2019; (vi) signs within Kms 37 and 40 of BR 356, pursuant to the presentation made by Imtraff at the hearing on April 16th, 2019, within 15 days; (vii) flexible cones between Kms 37 and 40, in order to discourage users from returning in the event of dam breach, within 45 days; and (viii) adopt all other guidelines contained in the presentation of Imtraff, provided that the approval of the competent public agencies is obtained.</p> <p><u>Deadlines:</u></p> <p>The deadlines defined in the Commitment Agreement were of immediate compliance, which, at the time, were met. On the occasion of the emergency level increase of the dam to level 2, the deadline for VALE to resume the actions outlined in the document is 24 hours.</p>
<b>(e) Information on the actions adopted to comply with the obligations assumed under the consent decree</b>	The actions of the agreement were of immediate fulfillment for provision of information to the community and control of the traffic for a short period. By changing the emergency level of the dam, VALE is committed to resuming the flow of communication and traffic control. This no longer happened, as the dam remains at emergency level 1.
<b>(f) Consequences in case of non-compliance</b>	In case of non-compliance, VALE will be notified to remedy the irregularity in the shortest possible time. If the irregularity remains, a daily fine of R\$ 30,000.00 may be imposed.

<b>13) Commitment Agreement for Macacos – Individual Indemnities</b>	
<b>(a) Signatories</b>	PUBLIC DEFENDER'S OFFICE OF THE STATE OF MINAS GERAIS
<b>(b) Date of the execution</b>	March 4th, 2021
<b>(c) Description of the facts that led to the execution of the agreement</b>	Commitment Agreement entered into due to the increase in the risk level of the structure of the B3/B4 Dam, located in the Mar Azul Mine, which led to the need to evacuate the Self-Rescue Zone, in the community of the District of São Sebastião das Águas Claras, Municipality of Nova Lima/MG, causing damage to residents of the region, and community members.

#### 4.7. Other relevant contingencies

<b>(d) Assumed obligations and deadlines</b>	This Commitment Agreement brought the indemnity parameters to be applied to the individual indemnities, referring to the following damages: (i) bare rural and urban land; (ii) rural and urban housing; (iii) non-reproductive improvements and buildings; (iv) working livestock; (v) personal property and equipment; (vi) expenses related to the increase in cost of living; (vii) financial losses, loss of profit in commerce, industry, and also in agricultural activities; (viii) job loss and interruption of income-generating activity; (ix) pain and suffering damages. <b>Deadlines:</b> This Commitment Agreement is of immediate enforcement, as of the signature of the instrument in individual cases.
<b>(e) Information on the actions adopted to comply with the obligations assumed under the agreement</b>	The actions set forth in the agreement were immediately complied with for the execution of individual agreements in the Extrajudicial Indemnity Program. Furthermore, meetings are held with the Public Defender's Office of the State of Minas Gerais, for any adjustments and inspection of the progress of the enforcement.
<b>(f) Consequences in case of noncompliance</b>	In the event of non-compliance with the Agreement, there may be an impact on the company's image, as well as, in relation to the payment obligations set forth in the individual agreements, the Company may incur a fine of 30% on the unpaid amount. Furthermore, the said Commitment Agreement may be enforced by the Public Defender's Office.

<b>14) General and Specific Commitment Agreement for Itabira – Individual Indemnities</b>	
<b>(a) Signatories</b>	PUBLIC DEFENDER'S OFFICE OF THE STATE OF MINAS GERAIS
<b>(b) Date of the execution</b>	November 12, 2021 and June 3rd, 2022
<b>(c) Description of the facts that led to the execution of the agreement</b>	General and Specific Commitment Agreement entered into due to possible impact on an urban area, which may result in the removal of people in order to perform interventions, works and work safety strip, as well as to reinstatement of local urban dynamics, when the Downstream Containment Structure (ECJ2), necessary for the decommissioning of Minervino and Cordão Nova Vista dikes of the Pontal dam, is built.
<b>(d) Assumed obligations and deadlines</b>	The said General Commitment Agreement brought the general parameters, with chapters (i) on the subject-matter of the TC; and (ii) on guidelines applicable to the indemnity. These items will be used to prepare a Specific Commitment Agreement, when the damage to be treated by Vale will be defined. The Specific Commitment Agreement establishes the criteria and procedures for the payment of pecuniary, out-of-court and individual or per family core compensation to the people who will be affected by the removal for the construction of the ECJ2. <b>Deadlines:</b> There is no deadline to be met as of the date of execution of the General Commitment Agreement, which is designed to enable the continuation of negotiations for a Specific Commitment Agreement.
<b>(e) Information on the actions adopted to comply with the obligations assumed under the agreement</b>	The execution of the Commitment Agreements brings the need for immediate application of the criteria and procedures for people who have already been mapped for removal. Furthermore, meetings are held with the Public Defender's Office of the State of Minas Gerais, for any adjustments and inspection of the progress of the performance.
<b>(f) Consequences in case of non-compliance</b>	In the event of non-compliance with the Agreement, there may be an impact on the company's image, as well as, in relation to the payment obligations set forth in the individual agreements, the Company may incur a fine of 30% on the unpaid amount. Furthermore, the said Commitment Agreement may be enforced by the Public Defender's Office.

<b>15) Global Agreement for Xikrin</b>	
<b>(a) Signatories</b>	Vale S.A., Bayprã Indigenous Association of the Xikrin do Cateté TI, Kakarekré Indigenous Association of the Xikrin do Cateté TI, Porekrô Indigenous Association of the Xikrin do Cateté TI and the Djôre Indigenous Association of the Xikrin do Cateté TI, and MPF/Redenção as intervening and consenting party
<b>(b) Date of the execution</b>	December 17th, 2021

#### 4.7. Other relevant contingencies

<b>(c) Description of the facts that led to the execution of the agreement</b>	<p>Agreement for the dismissal of 6 Public-Interest Civil Actions, to which Vale and the indigenous associations are parties, through the assumption of mutual obligations of transfer of funds to be applied to actions for ethno-development of the Xikrin Indigenous Community of the Cateté TI, having an impact on the following cases:</p> <ul style="list-style-type: none"> <li>• Xikrin/Ferro ACP (Case No. 0001061-52.2006.4.01.3901);</li> <li>• Xikrin/Onça Puma ACP (CaseNo. 0002383-85.2012.4.01.3905);</li> <li>• Xikrin/S11D ACP (Case No. 0001254-18.2016.4.01.3901);</li> <li>• Xikrin/Salobo ACP (Case No. 1000305-06.2018.4.01.3901);</li> <li>• Xikrin/Alemão Project ACP (Case No. 1002950-33.2020.4.01.3901);</li> <li>• Xikrin/Royalties ACP (Case No. 1002171-66.2020.4.01.3905) and</li> <li>• Xikrin/SEMAS ACP (Case No. 1002061-67.2020.4.01.3905).</li> </ul>
<b>(d) Assumed obligations and deadlines</b>	<p>Transfer of monthly funds by Vale for the Xikrin indigenous associations to invest in ethno-development actions, in the following amounts:</p> <ul style="list-style-type: none"> <li>• Ferro Carajás – R\$ 1.705 million;</li> <li>• Onça Puma – R\$ 1.705 million;</li> <li>• S11D – R\$ 1.362 million;</li> <li>• Salobo – R\$1.362 million;</li> <li>• Alemão – R\$ 1.362 million;</li> <li>• New Developments located less than 10 km distant from the edge of the Indigenous Territory – R\$ 1.705 million;</li> <li>• New Developments located more than 10 km distant from the edge of the Indigenous Territory and within a Conservation Unit adjacent to the Indigenous Territory – R\$ 0.852 million;</li> </ul> <p>The values informed above will be adjusted every 12 months, as of January 9, 2021.</p> <p>The agreement terms and conditions, in particular that of the payment obligation, will survive for as long as each project operations remain.</p>
<b>(e) Information on the actions adopted to comply with the obligations assumed under the agreement</b>	<p>Vale's Relations with Indigenous Peoples and Traditional Populations ("PICT") area is responsible for managing the agreement and complying with the monthly processing of the payment and monitoring of the application of funds by the indigenous associations.</p>
<b>(f) Consequences in case of non-compliance</b>	<p>Payment of a 2% fine and suspension of obligations under the agreement.</p>

<b>16) Commitment Agreement 04 – Água Itabira TC</b>	
<b>(a) Signatories</b>	<p>Prosecution Office of the State of Minas Gerais ("MPMG"), Vale S/A and municipality of Itabira, and AECOM do Brasil LTDA as intervening party.</p>
<b>(b) Date of the execution</b>	<p>August 27th, 2020</p>
<b>(c) Description of the facts that led to the execution of the agreement</b>	<ul style="list-style-type: none"> <li>• Agreement to solve the issue of lack of water in the Municipality of Itabira due to the inoperability of some water treatment plants due to alleged contamination by manganese</li> </ul>
<b>(d) Assumed obligations and deadlines</b>	<p>The purpose of this Commitment Agreement is the fulfillment of the following obligations by the COMMITTED PARTY:</p> <ul style="list-style-type: none"> <li>• a) Revise and expand, if necessary, the design of the projects already prepared by the municipality of Itabira, for 600l/s, regarding the deployment of a new water intake system to be treated by the THIRD INTERVENING PARTY for the public water supply of Itabira on the Tanque river, including the prior analysis of the quantity and quality of the Tanque river water;</li> <li>• b) Procure and carry out the works for deployment of an intake system, a water treatment plant and a raw water adduction system so that the water from the Tanque River is treated and distributed</li> <li>• by the THIRD INTERVENING PARTY, which can be complemented by another intake point in the nearby</li> </ul>



**4.7. Other relevant contingencies**

	<ul style="list-style-type: none"> <li>• watersheds, within the geographical limits of the municipality of Itabira/MG, in case the intake from the Tanque river proves to be unfeasible or</li> <li>• insufficient, which should reach, at the end of its deployment, the treatment capacity of 600 l/s of water, according to the feasibility studies and</li> <li>• detailed projects to be carried out by the COMMITTED PARTY, as well as fund the intake activities and the adduction system, until the municipality's</li> <li>• need reaches a flow rate of 600 l/s;</li> <li>• c) Deliver a daily volume of water in quality and quantity as per the table in Annex I, until the long-term,</li> <li>• new intake solution provided for in item "b" of the clause above meets the demand for 160l/s;</li> <li>• d) Prepare an updated a water demand study for the municipality of Itabira and the projected medium- and long-term demand;</li> <li>• e) Fund the independent audit services to be carried out by the FIRST INTERVENING PARTY, under the terms set forth in this</li> <li>• Commitment Agreement and Annexes hereto, referring to the monitoring of COMMITTED PARTY's compliance with the obligations set forth in items "a",</li> <li>• "b", "c" and "d", of this clause and in clauses 8 and 11.</li> <li>• f) Fund the independent audit services to be carried out by the FIRST INTERVENING PARTY regarding the maintenance by SAAE of</li> <li>• wells No.01, 02 and 03 of the Três Fontes ETA (water treatment plant) and of the two wells of the Areão ETA.</li> <li>• II – OBLIGATIONS OF THE COMMITTED PARTY:</li> <li>• 2. The COMMITTED PARTY shall submit to the COMMITTING PARTY, the</li> <li>• FIRST and the THIRD INTERVENING PARTY, within a period of ninety (90) days as of the date of execution hereof, the following: (i) detailed schedule for the performance of the obligations provided for in clause I, items "a", which</li> <li>• shall also include the deadlines for updating of the previous feasibility studies and water availability for this intake system, carried out by the</li> <li>• COMMITTED PARTY in the past, in order to parameterize the treatment capacity of the new intake system and for the</li> <li>• COMMITTED PARTY to obtain the relevant grant for the new intake system in the Tanque River, in addition to a project development; and "b", which shall also</li> <li>• provide for the delivery of a new water intake system to the THIRD INTERVENING PARTY in a staggered manner.</li> <li>• 3. The COMMITTED PARTY shall, subject to the term to be previously agreed upon between the PARTIES and the FIRST INTERVENING PARTY,</li> <li>• based on the schedule referred to in item 2 of this clause, prepare and complete all the obligations under the clause I, item I, "a" and "b" hereof.</li> <li>• 5. The deadlines set forth in the schedules referred to in items 2 and 3 may be extended by the COMMITTING PARTY, after submission of a reasonable justification by the COMMITTED PARTY and issuance of an analysis and</li> <li>• technical opinion by the FIRST INTERVENING PARTY, if the justification is technical, subject to the jurisdiction of the competent State bodies.</li> <li>• 6. The deployment of a water intake system, a water treatment plant and a raw water adduction system by the THIRD INTERVENING PARTY for the</li> <li>• public water supply of Itabira from the Tanque River, by the COMMITTED PARTY, shall be carried out as defined by the</li> </ul>
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#### 4.7. Other relevant contingencies

	<ul style="list-style-type: none"> <li>feasibility study, the detailed engineering project, the execution plan and work schedule, to be prepared by the COMMITTED PARTY.</li> </ul>
<b>(e) Information on the actions adopted to comply with the obligations assumed under the agreement</b>	Both technical and operational teams are responsible for fulfilling all obligations assumed, mainly regarding the daily supply of a volume of 160l/s.
<b>(f) Consequences in case of non-compliance</b>	Payment of a daily fine in the amount of R\$ 20 thousand, in case of total or partial non-compliance with obligations.

<b>17) Consent Decree – RPPN TAC (a) Signatories</b>	
<b>(a) Signatories</b>	Prosecution Office of the State of Minas Gerais (“MPMG”) and Vale S.A., and State Forestry Institute – IEF and State of Minas Gerais as intervening parties
<b>(b) Date of the execution</b>	October 4th, 2022
<b>(c) Description of the facts that led to the execution of the agreement</b>	<ul style="list-style-type: none"> <li>Term of agreement aimed at restoring the Private Natural Heritage Reserve - RPPN and Perpetual Environmental Easement areas to good standing</li> </ul>
<b>(d) Assumed obligations and deadlines</b>	<p>The purpose of the Commitment Agreement is the implementation of 51 Conservation Units through RPPNs and Perpetual Environmental Easements, totaling 13 thousand hectares of preserved areas within 3 years as of the date of execution of the agreement;</p> <p>Prepare and publish Atlas of Biodiversity within a maximum period of 2 years;</p> <p>Donation of an area of 277 hectares to the IEF for incorporation into the Sumidouro Park within 2 years as of the approval of the area;</p> <p>Partner with the Waitá Institute to establish an ASA (Wild Animal Release Area) within 180 days following the execution of the agreement.</p> <p>Payment of R\$ 5 million to be invested in socio-environmental programs to be directed by the MPMG.</p>
<b>(e) Information on the actions adopted to comply with the obligations assumed under the agreement</b>	Land and environment team are monitoring and performing activities for the timely fulfillment of obligations.
<b>(f) Consequences in case of non-compliance</b>	Payment of a daily fine in the amount of R\$ 1 thousand, limited to a total amount of R\$ 100 thousand.

<b>18) Consent Decree – TAC Córrego Água Santa</b>	
<b>(a) Signatories</b>	Vale S.A. and MPMG
<b>(b) Date of the execution</b>	March 29th, 2023
<b>(c) Description of the facts that led to the execution of the agreement</b>	<ul style="list-style-type: none"> <li>The purpose of the commitment agreement is the defense and protection of the environment, with the prevention/recovery of/compensation for the facts verified in the Criminal Investigation Procedure of the Prosecution Office of the State of Minas Gerais No. 0317.21.000127-5, in connection with the Poço de Água Santa stream.</li> </ul>
<b>(d) Assumed obligations and deadlines</b>	<p>Obligations of the Committed Party: The COMMITTED PARTY shall forthwith refrain from dumping industrial effluents from the “Chacrinha Pit”, “Onça Pit” and “Periquito Pit” into the Poço de Água Santa Stream, or into any water body in the District of Itabira/MG, in a manner below of against the standards required by the environmental laws, particularly the Joint Normative Deliberation COPAM/CERH-MG No. 1/2008. The COMMITTED PARTY shall pay the amount of R\$ 17,765.30 (seventeen thousand, seven hundred and sixty-five reais and thirty cents), as a compensation for environmental damage considered technically irrecoverable, resulting from the facts that are subject-matter of the MPMG Criminal Investigation Procedure No. 0317.21.000127-5, according to the attached damage assessment report.</p> <p>The COMMITTED PARTY shall pay the amount of R\$ 17,765.30 (seventeen thousand, seven hundred and sixty-five reais and thirty cents), as compensation for environmental damage deemed technically irrecoverable, due to alleged violation of environmental standards and, therefore, the essential immaterial values that such</p>

#### 4.7. Other relevant contingencies

	norms represent, namely, the expectation of a healthy quality of life, health, tranquility, peace, impaired by the emission of odors in the location the facts took place.
<b>(e) Information on the actions adopted to comply with the obligations assumed under the agreement</b>	The environment and operational teams are already working to avoid new effluent dumping events, as well as to settle the agreed amount.
<b>(f) Consequences in case of non-compliance</b>	Payment of a daily fine in the amount of R\$ 10,000.

<b>19) Macaco agreement</b>	
<b>(a) Signatories</b>	Vale, Public Ministry of the State of Minas Gerais, Federal Public Ministry, Public Defender of the State of Minas Gerais and Municipality of Nova Lima.
<b>(b) Date of the execution</b>	15/12/2022
<b>(c) Description of the facts that led to the execution of the agreement</b>	Activation of the emergency level 2 of dam B3/B4, at Mina Mar Azul, located in the district of São Sebastião das Águas Claras, which led to the removal of residents from the Self-Rescue Zone of the dam in February 2019.
<b>(d) Assumed obligations</b>	Repair and full compensation for damages, negative impacts and socio-environmental and socio-economic losses - with the exception of (i) unknown or future collective and diffuse damages, (ii) individual and (iii) reimbursement to the treasury of costs, expenses and extraordinary impacts - as a result of the removals that took place in the district of São Sebastião das Águas Claras and their consequences. The economic value of the agreement is R\$500 million, divided between Vale's obligations to make and pay, foreseen through specific programs, called "income transfer", "requalification of commerce and tourism", "strengthening of the municipal public service". " and "demands of affected communities".
<b>(e) Deadline, if any</b>	The obligations have individual terms provided for in the agreement, divided into 60 (02/13/2023), 90 (03/15/2023), 120 (04/14/2023) and 180 days (06/13/2023), counted from the ratification of the agreement, on 12/15/2022.
<b>(f) Information on the actions adopted to comply with the obligations assumed under the agreement</b>	Presentation of the Escape Route Maintenance Plan (paving) on 02/13/2023. Judicially deposited, on 03/15/2023, the amounts related to (i) improvement of public transport in Macacos, (ii) Municipal Public Strengthening Program and Demands of the Affected Community, and (iii) hiring of technical assistance. Presented, on 04/14/2023, the details and schedules for (i) construction of the Rubem Costa Lima school, already completed, (ii) construction of the funicular, parking and other associated structures (Service Center and Tourist Reference and events esplanade ), (iii) revitalization of Rua Dona Maria da Glória, (iv) construction of the wake chapel and (v) revitalization of the soccer field. In addition, the emergency payment is being maintained in the same manner and parameters in force before the conclusion of the agreement.
<b>(g) Consequences in case of non-compliance</b>	If the default is not remedied or justified after notifying the Committers, Vale will be subject to a daily fine of R\$100,000, up to a limit of R\$3 million.

#### (IV) Closes or excluded proceedings that were reported in the Reference Form of December 31<sup>st</sup>, 2021 and are no longer reporter in this Reference Form

<b>Environmental:</b>
<b>1. Class Civil Action Case No. 0800301-57.2020.8.14.0062</b>
<b>Filed on:</b> May 13th, 2020
The case (item 22 of the Reference Form released in 2022) was excluded from the relevant case report, because the Tucumã Consent Decree that the MPPA intended to annul through the Class Civil Action never came to produce effects, as it needed approval from INCRA, which never happened. As a result, the case lost relevance, failing to meet the materiality criteria established by Vale to identify relevant cases
<b>Labor:</b>
<b>2. Public-Interest Civil Action No. 0000356-94.2019.5.08.0126 and PublicInterest Civil Action No. 0000361-</b>

#### 4.7. Other relevant contingencies

<b>07.2019.5.08.0130</b>
<b>Filed on:</b> April 16th, 2019
The cases were excluded from the relevant case report, because the Labor Prosecution Office of Pará (MPT-PA) and Vale entered into agreements for dismissal of the cases. The agreements were ratified by final court decisions. The only matter that remains controversial in the cases concerns the arbitration of costs in the amount of R\$ 2,689,660 for each case, an amount below the materiality criterion established by Vale to identify relevant cases.
<b>3. Action for Annulment no. 0010784-59.2016.5.03.0004</b>
<b>Filed on:</b> May 27, 2016
The case (item 3 of the Reference Form released in 2022) was excluded from the relevant case report, because Vale obtained a final favorable decision, which became final and unappealable, annulling Notice of Infraction No. 20.588.905-1, drawn up by Management Regional Labor Office of Conselheiro Lafaiete – Ministry of Labor and Employment (MTE). The only matter that remains controversial in the case concerns the return of judicial deposits raised by the Federal Government, in the historical amount of R\$ 495,877.92, an amount below the materiality criteria established by Vale to identify relevant cases.
<b>III. CLOSED CASES</b>
<b>Public-Interest Civil Action No. 5027434-03.2019.8.13.0024</b>
<b>Filed on:</b> February 26th, 2019
The case (item 19 of the Civil processes of the Reference Form disclosed in 2022) was closed on December 23, 2021, as a result of the final and unappealable decision that dismissed the appeal filed by CIDDHC, against the judgment that dismissed the case without prejudice due to its active illegitimacy.
<b>III. CLOSED CASES</b>
<b>Popular Action No. 5020547-95.2022.8.13.0024</b>
<b>Filed on:</b> February 7th, 2022
The case (item 2 of the new environmental cases of the Reference Form disclosed in 2022) was closed on 08/16/2022, with respect to the part relevant to Vale, due to the withdrawal of the action by the plaintiff regarding the requests related to the Company after our objection in this regard. The Vale decision to dismiss the defendant's position in this action has already become final and unappealable.
<b>III. CLOSED CASES</b>
<b>Public-Interest Civil Action No. 1002244-84.2019.4.01.3901 (Igarapé Bahia 2)</b>
<b>Filed on:</b> July 12th, 2019.
The case (item 18 of the Reference Form disclosed in 2022) was closed on September 14, 2021, as a result of an agreement entered into between the Parties, ratified by the Judge of the 2nd Civil and Criminal Court of the Judiciary Subsection of Marabá-PA. The agreement provided for (i) the replacement of the consulting firm in cases No. 1002242-17.2019.4.01.3901, 1002244-84.2019.4.01.3901, 0000356-94.2019.5.08.0126 and 0000361-07.2019.5.08.0130 with an independent technical audit company, for the continuity of technique audit services under development, in order to monitor and certify the COMMITTING PARTIES and the PUBLIC-INTEREST CIVIL ACTION JUDGES as to the fulfillment by the COMMITTED PARTIES of the obligations contained in the respective preliminary decisions, subject to the terms of Paragraph One of Clause Two, as well as those assumed hereunder; b) the assessment of As-Is studies and confirmation of the sufficiency of the new in situ CPTu tests already carried out by the COMMITTED PARTY, with pore-pressure dissipation tests, for in situ evaluation of the geomechanical properties of permeability in penetrable soils, in order to confirm the sufficiency of the studies to guarantee the stability and safety of the Tailing Ponds; c) if the need is confirmed by the independent external audit, new CPTu tests must be carried out; d) monitoring of water quality to assess possible contamination caused by dam activities to the environment, under the terms agreed in this Term of Agreement; e) assessment of the suitability of works on spillways installed at the Water Intake dam and decommissioning works for the Tailings Ponds to the technical safety and stability standards applicable to the STRUCTURES; and N) assessment of the need for daily inspections of the Tailings Ponds.
<b>6. Notice of Violation No. 20.588.905-1</b>
<b>Filed on:</b> Feb 12th, 2015
The case (item 2 of the Reference Form disclosed in 2022) was closed on 03/07/2022, due to the annulment of the notice of infraction 20.588.905-1 by the court decision rendered in the records of the annulment action 0010784-59.2016.5.03.0004, which was maintained before the 5th Labor Court of Belo Horizonte.
<b>7. COVID-19 Commitment Agreement (Public-Interest Civil Action 0010170-96.2020.5.03.0171; Writ of Mandamus 0011029-43.2020.5.03.0000; Administrative Proceedings 000762.2020.03.000-8, 001089.2020.03.000-6, 00059.2020.03.006-8, 000196.2020.03.007-2 and 002010.2020.03.000-0)</b>
<b>Filed on:</b> May 22, 2020
Proceedings closed on 09/19/2022, as of the consummation of the resolutive clause provided for in the court agreement and in the Terms of Commitment entered into by VALE with the MPT, which conditions their validity to the existence of a declaration of the pandemic condition by municipal rule, issued by the Municipality where there is the predominantly establishment of its essential activities of extraction and processing of iron ore, or activities carried out in the Dams in an emergency situation and downstream thereof, limited to the respective self-rescue areas, or the decree of State of Calamity due to the COVID-19 pandemic by the Government of the State of Minas Gerais, in any case, prevailing what occurs last.

#### **4.7. Other relevant contingencies**

In August 2022, VALE submitted information to the MPT that all municipalities in which it carries out its activities have already decreed the end of the state of calamity, which had also already occurred at the state and national levels, which is why the Judicial Agreement and the Terms of Commitments celebrated, which have a temporary nature, while the pandemic state lasted, lost their objects. The MPT verified and confirmed the information presented by VALE and, in September 2022, determined the archiving of the administrative processes.

## 5. Risk Management Policy and Internal Controls

### 5.1. Description of risk management and market risks

#### a. if the issuer has a formal risk management policy, highlighting the body that approved it and the date it was approved, and, if not, state why the issuer has not adopted a policy

Vale S.A. ("Vale" or "Company") Risk Management Policy, which formalizes the guidelines and instructions for the integrated risk management, had its last version reviewed and approved by the Board of Directors on December 1, 2022.

In addition, the Company has a Policy for the Use of Derivatives, which establishes guidelines and scopes of authority for contracting hedge operations for its exposure to market risk factors, among other provisions, which had its last version reviewed and approved by the Board of Directors on September 16, 2021.

These and other policies are available on the Company's website ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos)), as well as on the CVM website ([www.gov.br/cvm](http://www.gov.br/cvm))

#### b. purposes and strategies of the risk management policy:

The main purposes of the Company's Risk Management Policy are the following:

- Promote a culture of risk management in order to prevent or mitigate potential negative impacts on people, communities, the environment, operational continuity and reputation.
- Support the strategic planning and sustainability of Vale's businesses.
- Optimize capital allocation and strengthen asset management, based on the concept of lines of defense.
- Adopt as a reference the concepts and guidelines of ISO 31000, ISO 55000 and COSO-ERM in risk management, and RBPS (Risk Based Process Safety) for process safety.
- Use the risk appetite methodology as an instrument to guide the Company and its managers in the decision-making process, in the capital allocation and in the formulation of actions to respond to mapped risks.
- Support the evaluation of potential impacts related to new investments, procurements and divestments.
- Map emerging risks in order to seek solutions that can timely minimize any negative impacts on the Company's business purposes.

#### i. risks for which protection is sought

The Company seeks to protect the risks that may adversely and relevantly impact the strategic purposes, its reputation as well as its financial and operating profit, which are described in items 4.1 and 4.3 of this Reference Form.

#### ii. instruments used for protection

##### **Integrated Risk Map**

Instrument that contains the set of risk topics approved by the Board of Directors, on the recommendation of the Executive Committee, which must be evaluated and monitored by the Company.

Whenever necessary or as requested by the Executive Committee, the topics of the Integrated Risk Map should be evaluated by Vale's Board of Directors, and may be maintained, revised, excluded or added.

##### **Risk Matrix**

Instrument that contains the classification of risks based on the combination of two factors: probability and severity of events. This combined analysis establishes a risk priority scale, with each event being classified as Very High, High, Medium or Low priority. This method provides comparisons between potential risk events, allowing the definition of risk treatment, which should be aligned with the Company's risk appetite.

## **Risk Appetite**

It briefly defines the scale of risks that the Company is willing to accept in the pursuit of its strategic purposes.

## **Risk Prevention or Mitigation Measures**

The main risks are evaluated and monitored periodically, as well as the effectiveness of the methodology applied and the instruments used in the process of managing these risks, which include, for example:

- (i) Definition of indicators and parameters for risk monitoring purposes;
- (ii) Development and qualification of Company's employees on the risk management process;
- (iii) Adoption of systems, standards and processes for the management of geotechnical risks, such as dams, extraction sites and piles, aligned with the best international practices, such as:
  - a. the GISTM (Global Industry Standard on Tailings Management), which includes the adoption of EoR (Engineer of Record) and ITRB (Independent Tailings Review Boards) in the risk management process;
  - b. the TDMS (Tailings and Dams Management System);
  - c. the GCMS (Ground Control Management System).
- (iv) Adoption of several measures to manage cyber risk, in line with international best practices (ISO/IEC 27001 and ISA-62443), such as:
  - a. information security policies and standards and workforce awareness;
  - b. advanced technologies for protection, detection and monitoring of cyber threats based on Artificial Intelligence and Machine Learning;
  - c. Planning and execution of cyber incident response simulations and recovery of technological environments.
- (v) Conducting periodic assessments based on specific elements of the Vale Management Model ("VPS") aimed at preventing and mitigating risks and promoting continuous improvement in safety and encouraging employee health care for Health and Safety Management of Work, so that identified deviations are reported and treated. The main initiatives are:
  - a. Process Safety Management ("PSM");
  - b. Secure Work Permit ("PTS");
  - c. Asset Integrity Technical Standards ("PNR");
  - d. Critical Activity Requirements ("RAC");
  - e. Exposure to health risks (global corporate guideline for managing occupational health programs);and
  - f. Disability prevention (guideline with a list of tools to manage integrated individual and collective health, as well as promoting quality of life);
- (vi) Adoption of actions related to the monitoring, identification and qualification (qualitative and quantitative analysis) of factors, exogenous to the company, that may represent risks in the spheres of strategic planning, current or future operations, value chains, licensing, reputation, among others; this includes qualification regarding full compliance with current environmental legislation, demands and commitments and of other nature, periodic review of tools and policies for the standardization of processes, continuous improvement in Vale's ability to comply with the risk management, and planned engagement and constant contact with the government (agencies et al) and civil society (opinion makers on issues of potential impact on the company);
- (vii) Application of corrective measures for events that generate environmental liabilities;
- (viii) Prepare environmental studies aimed at limiting the extent of environmental degradation;
- (ix) Internal credit rating and a credit limit for each counterparty based on proprietary methodology supplemented with market information. Based on the counterparty's credit risk, risk mitigation strategies may be used to manage the Company's credit risk. The main credit risk mitigation strategies include cashless discounting of receivables, insurance instruments, letters of credit, corporate and bank guarantees, mortgages, among others. For further information regarding credit risk control, see item 5.5 of this Reference Form;
- (x) Due diligence process of suppliers that meet the requirements set forth in the Principles of Conduct for Third Parties, in addition to conducting contracting processes in accordance with the company's standards and procedures;
- (xi) The management of the portfolio consisting of energy from our own generation plants, consortia and related companies, and long-term provision contracts, based on the current and anticipated energy needs of its operating units, in order to maximize cost competitiveness, the reduction of environmental impacts and safety in supply;
- (xii) Continuous verification of the estimation and declaration of mineral resources and reserves according to the established global governance process, which is based on the principles of transparency,

materiality and professional competence, in line with S-K1300 and international codes for the declaration of resources and reserves minerals: ,

- a. Estimates of mineral resources and reserves declared to the market are periodically reviewed, in order to absorb possible material changes in the base assumptions, whether regulatory (for example, environmental licenses), economic or geological knowledge;
  - b. Estimates of mineral resources and reserves are certified/signed by Qualified Persons as required by international standards for stock exchange reporting and under a system of accountability by professional tiers;
  - c. Estimates of mineral resources and reserves are periodically submitted to an external technical audit process, carried out by globally recognized companies, in order to validate the declared figures;
  - d. Material deposits are audited at least every 5 years or, at any time, in the event of any material variation in the declared masses or in the case of low reconciliation rates, as provided for in an internal procedure;
  - e. The Reconciliation, a tool that compares the actual annual production of the mine versus the mass of ore estimated by the declared mineral reserve, is controlled annually, making it possible to assess the quality of the estimates.;
  - f. Continuous investment in mineral research and development of mineral projects in the search for the replacement of mineral resources and reserves naturally depleted by annual production and in order to maintain mineral rights in accordance with current regulations.
- (xiii) Systematic monitoring of changes in government and regulatory policies in the sector, aiming to participate in discussions regarding such changes through entities representing the mining sector;
- (xiv) Promote its activities in a responsible manner in all the locations in which it is present, aiming to respect the communities and the environment with actions that contribute to the reduction of risk levels, such as the implementation of additional prevention/mitigation controls or improvements in existing controls, through:
- a. adoption of the United Nations Guiding Principles on Business and Human Rights (“UNGP”);
  - b. Global Human Rights Policy in force since 2009;
  - c. human rights due diligence in operations and projects;
  - d. social action model, guided by the following principles: transparency, active listening, social participation, engagement, social capacity, diversity and inclusion, adherence to international agreements and operational responsibility;
  - e. construction of Community Relationship Plans structured through a model of shared responsibility between Vale, the community and other participants for local development, in the definition and prioritization of initiatives to be implemented in the territory;
  - f. commitment to all relevant international standards, such as the positioning of the International Council on Mining and Metals (“ICMM”) on Mining and Indigenous Peoples, Convention No. 169 of the International Labour Organization (“ILO”), and the United Nations Declaration on the Rights of Indigenous Peoples;
  - g. Listening and response mechanism, with the availability of several listening channels (Alô Ferrovia, Reparation Call Center, Contact Us and Community Relations Team), mechanism based on the UN Guiding Principles on Business and Human Rights and guiding principles of the ICMM;
  - h. Preparation of community safety plans, with risk mapping and adoption of additional and/or complementary measures to reduce events with communities related to our operations;
  - i. Participation of Community Relations teams in crisis management plans, and involvement of communities in emergency response training;
  - j. Periodic review of the Survey of Environmental Aspects, Impacts, Risks and Controls (“LAIA”);
  - k. Preparation and dissemination of the Synthetic and General Map of Environmental Aspects and Risks, with the respective controls mapped, facilitating the management of LAIA in operations;
  - l. Continuous improvement of investigations of environmental events, with back analysis of causes and risk controls;
  - m. Implementation of process indicators, focusing on mapping and maintaining critical operational assets for risk controls with critical and very critical environmental severity classification;
  - n. Monitoring and technical support to the 1<sup>st</sup> Line of Defense in the implementation of the actions of the Operational Master Plans, mainly those related to the Management of Effluents, Waste and Air Emissions;
  - o. Establishment of operational rules and agreements with the 1<sup>st</sup> Line of Defense, via operational process indicators, for risk management and improvements in operational processes of environmental interest;



- p. Application of an environmental checklist and monitoring of project development, mitigating risks in the implementation and operation phases.
- (xv) Continuous monitoring of the contingencies and lawsuits, making every effort to defend the lawsuits in which the Company and its subsidiaries are a party;
- (xvi) Preparation of emergency plans for situations of crisis and disaster that include immediate response to protect people, assets and the Company's image;
- (xvii) Taking out of insurance. For more information, see item 5.5 of this Reference Form.

### **Lines of Defense**

Vale has an integrated Risk Management Governance flow, based on the concept of Lines of Defense, which is structured as follows:

- The **1<sup>st</sup> Line of Defense** comprises the executors of the Company's operational and non-operational processes, being responsible for recording and managing the risks identified throughout the chain of the operating model; and for implementing preventive and/or mitigating controls, as well as defining action plans in compliance with the risk response strategy defined by Vale, weighted by the company's risk appetite.
- The **2<sup>nd</sup> Line of Defense** composed of the Integrated Risk Management (Enterprise Risk Management – ERM), which reports to the Executive Vice-President of Finance and Investor Relations, whose responsibilities include (i) consolidating, organizing and reporting the performance of the risk management; (ii) developing and implementing policies, methodologies and processes; (iii) supporting and monitoring compliance with the risk governance model; and (iv) supporting the 1<sup>st</sup> Line of Defense.
- The **2<sup>nd</sup> Specialist Line of Defense** comprises areas defined by Vale's Executive Committee responsible for (i) defining methodologies, technical, technological and management minimum standards, as well as risk and asset reliability indicators to be mandatorily adopted by the 1<sup>st</sup> Line of Defense and (ii) monitor adherence to defined guidelines.
- The **3<sup>rd</sup> Line of Defense** is composed of the Internal Audit and the Reporting Channel, which conducts, observing their respective areas of operation, evaluations and inspections, by means of control tests and investigation of complaints, providing exempt assurance, including on the effectiveness of risk management and prevention, internal controls and compliance.

For more information about the duties and performance of each of the lines of defense, as well as the duties of each responsible person and executor, please check the Risk Management Policy as available on the Company's website ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos)), as well as on the CVM website ([www.gov.br/cvm/pt-br](http://www.gov.br/cvm/pt-br)).

### **Instruments used for protection of market risks**

The financial instruments used for hedging include predominantly forward transactions, swaps, futures and options.

The approval of the hedging programs for the Company's exposure to market risk factors is the competence of the Board of Directors, or of the Executive Committee, by delegation of the Board of Directors, according to the limits set out in the Policy for the Use of Derivatives mentioned in item 5.1.a. The Executive Committee, in turn, can delegate powers in the hierarchical line, within its scope of authority. The Capital Allocation and Project Committee is informed about the approval of new hedging programs decided by the Executive Committee or by its delegation.

In addition, it is noteworthy to mention that all operations involving derivatives are subject to previous risk assessment and approval by the competent authority, and the control of all such operations is centralized in the Company's Global Treasury and Corporate Finance Board.

The protection programs contracted by Vale and its purposes are as follows:

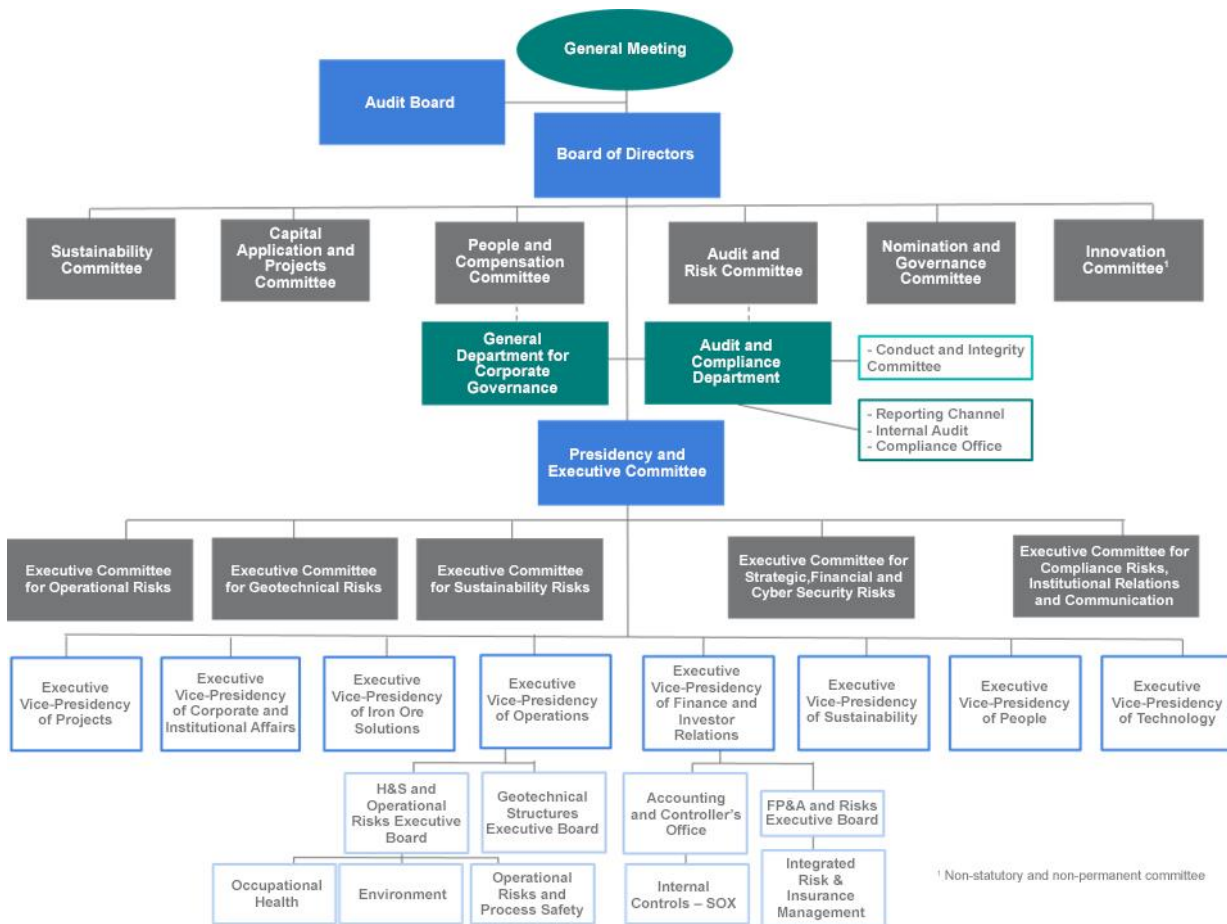
- **Program to hedge loans and financing and other financial obligations in reais pegged to CDI:** in order to reduce cash flow volatility, swaps were used to convert the cash flow for debt pegged to CDI into US dollars for loan agreements and financing and other financial obligations. In these transactions, the Company pays fixed rates in US dollars and receives remuneration in reais pegged to the CDI.
- **Program to hedge loans and financing in reais pegged to TJLP:** in order to reduce cash flow volatility, swaps were used to convert the cash flow for debt pegged to TJLP into US dollars for BNDES loan

agreements. In these transactions, Vale pays fixed rates in US dollars and receives remuneration in reais pegged to the TJLP.

- Program to hedge loans and financing and other financial obligations in reais at fixed rates: in order to reduce cash flow volatility, swaps and forward transactions were used to convert the cash flow for debt and financial obligations denominated in reais at a fixed rate. In these transactions, Vale pays fixed rates in US dollars and receives a fixed rate in reais.
- Program to hedge loans and financing in reais pegged to IPCA: in order to reduce cash flow volatility, swaps were used to convert the cash flow for debt pegged to IPCA. In these transactions, Vale pays fixed rates in US dollars and receives remuneration in reais pegged to the IPCA.
- Program to hedge loans and financing in US dollars pegged to the Libor: in order to reduce cash flow volatility, swaps were used to convert the cash flow for debt pegged to TJLP into fixed rate. In these transactions, Vale pays fixed rates in US dollars and receives remuneration in US dollars pegged to the Libor.
- Program of hedging used to purchase nickel products: to reduce the risk of a price mismatch between the period to purchase and the period to sell nickel product, hedging was used, which are usually sales of nickel for future settlement, in the over-the-counter market.
- Fixed-price nickel sales program: in order to maintain the exposure of income to nickel price fluctuations, derivatives were used to convert floating price nickel contracts with customers requesting fixed prices. The transactions are intended to ensure that prices relating to these sales are equivalent to the London Metal Exchange (LME) average price when the product is physically delivered to the customer. The transactions usually carried out in this program are purchases of nickel for future settlement, in the over-the-counter market.
- Program for hedging part of the nickel income: with the purpose of reducing the volatility in its cash flow caused by changes in the price of nickel, the Company implemented a Nickel Revenue Hedging Program. Hedge operations were carried out according to this program, through forward contracts, to hedge part of the projected volumes of floating price sales, with highly likely execution, insuring prices above the average unit nickel production cost and investments for the hedged volumes. Hedge accounting was used in this program. The transactions are carried out in the over-the-counter market.
- Program for hedging part of the palladium income: with the purpose of reducing the volatility in its cash flow caused by changes in the price of palladium, the Company implemented a Palladium Revenue Hedging Program. Hedge operations were carried out according to this program, through options agreements, to hedge part of the projected volumes of floating price sales, with highly likely execution. Hedge accounting was used in this program, and the contracts are traded in the over-the-counter market. In 2022, this program ended.
- Hedging program for shipping bunker fuel purchases: to reduce the impact of fluctuations in bunker fuel prices on the contracting/provision of maritime freight and, consequently, to reduce the volatility of the Company's cash flow, hedge operations were carried out for this raw material, through options.
- Hedging program for contracting maritime chartering: In order to reduce the impact of the volatility of the sea freight price on the company's cash flow, hedge operations were carried out through Forward Freight Agreements (FFAs). The hedged item is a portion of Vale's cost tied to the spot price of sea freights.

### iii. organizational structure of risk management

The organizational chart below features the main governance bodies of Vale:



Below, we highlight the bodies that, among their attributions, are responsible for supervising the risk management process:

- **Audit Board:** established in compliance with Brazilian law and whose main responsibility is to supervise and check the action of the Managers and the fulfillment of their legal and statutory duties. For further information, see item 7.1 of this Reference Form.
- **Board of Directors.** The Board of Directors is the body responsible for approving Vale's risk policy, as well as the integrated risk map and definition of priority risk topics, the multi-annual investment plan for Risk Management, the risk response strategy, risk appetite levels and their respective declarations. The Board of Directors is supported by advisory committees that, in general, are responsible for monitoring the scope of action and the effectiveness of the risk management by the Executive Committee, aligned with the guidelines set out by Vale's Board of Directors.
- **Advisory Committees to the Board of Directors:** The Board of Directors has five permanent Advisory Committees, among which the Audit and Risk Committee is responsible for evaluating the company's risk management environment, as detailed below. For further information on the main powers of the Advisory Committees, see item 7.2 of this Reference Form.
  - **Audit and Risk Committee:** The composition and assignments of the Risk and Audit Committee are regulated by the Vale Bylaws, for the compliance with the rules of the Statutory Audit Committee regulated by the CVM and the Novo Mercado Regulation, in addition to the Audit Committee rules applicable to the Brazilian companies with ADRs listed in the American market. As provided for in its Internal Regulations, the main attributions of the Audit and Risk Committee with regard to risk management are: (a) Supervise the activities of the internal controls and controllership area, responsible for preparing the Company's financial statements, as well as evaluate the internal control environment at its different levels, competences and responsibilities with regard to the preparation of the Company's financial statements; (b) Monitor the recommendations for improvements in the internal control and risk management systems made by the internal auditors and independent auditors contained in the annual letter of recommendations, review them with the Board of Directors and monitor their implementation for the purpose of eliminating or mitigating relevant deficiencies that may be identified; (c)

Evaluate and monitor Vale's integrated risk map, as well as the effectiveness and sufficiency of risk management and control systems, and propose improvements; (d) Evaluate and monitor the Company's risk exposures, and even require detailed information on policies and procedures related to (i) the compensation of the Company's management; (ii) the use of Company assets; and (iii) expenses incurred on behalf of the Company.

- **Audit and Compliance Department**: it is led by the Chief Audit and Compliance Officer, who reports directly to the Board of Directors and is supervised by the Audit and Risk Committee, ensuring autonomy and independence to other executive structures of the company. The Chief Audit and Compliance Officer is responsible for supervising the Internal Audit, Corporate Integrity, and the Reporting Channel, the latter two areas being responsible for Vale's Ethics & Compliance Program. This Program has six pillars, which guide the expected behaviours and decision-making in an ethical and responsible manner: (1) Governance, (2) Guidelines, (3) Communication and Training, (4) Monitoring & Risks, (5) Reporting Channel and (6) Consequence Management. In 2022, the Internal Audit area obtained a global quality certification granted by The Institute of Internal Auditors – IIA. The certification demonstrates that the governance standards and processes adopted by Vale are in line with international market guidelines. Also in 2022, the Ethics & Compliance Program launched the Support Channel, a telephone channel operated by a specialized and independent team to listen, welcome and guide employees and contractors who are going through a situation of sexual harassment or discrimination. Another important milestone of the Program in 2022 was holding the Ethics Week at Vale, a global mobilization to promote reflections on ethics and the impact of individual decisions of each person who acts on behalf of the company. In addition, Vale restructured its corruption risk management model during the last year.
- **Executive Committee**: responsible for promoting a risk management culture; approve the risk matrix and the severity and probability rules for risk classification; provide, through human, financial and any other resources, through resolutions under its authority, the necessary support for the 1<sup>st</sup> and 2<sup>nd</sup> Lines of Defense to act in risk prevention or mitigation, according to the response strategy and risk appetite established by the company.
- **Executive Risk Committees**: The Executive Risk Committees are divided into five committees with different scope of action: (i) Operational Risks, (ii) Geotechnical Risks, (iii) Strategic, Financial and Cybernetic Risks, (iv) Compliance, Institutional Relations and Communication Risks and (v) Sustainability Risks. They conduct preventive actions and have the following mission, among other attributions: to promote a culture of risk management; support Vale's Executive Committee in monitoring the risks of the categories in the Integrated Risk Map; recommend revisions to the risk management principles and instruments, aiming at the continuous improvement of the process; evaluate and suggest, when necessary, changes in the risk management strategy for subsequent approval by Vale's Executive Committee.
- **Lines of Defense**: for more information on the attributions of the three lines of defense within the scope of the risk management process, see item 5.1.b. ii above.

### **c. adequacy of the operational structure and internal controls to check the effectiveness of the policy adopted**

#### **In relation to the risks indicated in item 4.1:**

In compliance with the Company's Risk Management Policy, Vale has a Financial Planning, Performance and Risk Management Board, responsible for the 2<sup>nd</sup> Line of Defense – Enterprise Risk Management (ERM) to develop and implement policies, methodologies, processes, infrastructure and the integrated communication system so that risk management takes place at Vale in a standardized way, allowing verification of the effectiveness of the policy adopted.

Vale also has other structures that act as a 2<sup>nd</sup> Specialist Line of Defense Experts, in particular the Technical Executive Vice-President, which is the 2<sup>nd</sup> Line of Defense for Operational and Geotechnical Risks, which, among other duties, performs independent verification of critical controls related to potentially relevant risks, thus reinforcing the verification of the effectiveness of the policy.

Additionally, the Internal Control and Process Governance Management performs, during the SOX (Sarbanes-Oxley) Certification stages, evaluation of the control environment at the entity level in order to ensure the enterprise risk management governance for the Company. The purpose of this evaluation is to provide assurance regarding the reliability of the financial statements.

For more information on the line of defense model, see item 5.1.ii above.

**In relation to the risks indicated in item 4.3:**

Monitoring and a periodic evaluation of the consolidated position of financial instruments used to mitigate Vale's market risks allows for financial results and the impact on the cash flow to be monitored, as well as ensuring that the purposes initially set are achieved. The calculation for the fair value of the positions is made available in a monthly basis for managerial monitoring.

For this reason, the Global Backoffice department, which is part of the Treasury and Corporate Finance Global Board, monitors these financial instruments, and is responsible for confirming the financial characteristics of the transactions, as well as the counterparties with whom the operations were carried out and to report the fair value of the positions. This department also evaluates whether transactions were carried out in accordance with internal approval.

In addition to this area, the Executive Board of Internal Controls and Process Governance checks, during the SOX (Sarbanes–Oxley) Certification stages, the integrity of controls that mitigate risks in transactions contracted within the governance standards set forth above. In addition, Internal Audit also acts upon the verification of the compliance with the guidelines and rules of the Company's policies.

## 5.1. Description of risk management and market risks

### 5.2. Internal control description

#### **a. the main internal control practices and the level of efficiency of these controls, indicating possible imperfections and measures taken to correct them.**

Vale's management has assessed, during the SOX (Sarbanes-Oxley) Certification stages, the effectiveness of the Company's internal controls in financial statements through processes designed to provide reasonable assurance regarding the reliability of the financial statements, in accordance with the standards established in the Internal Control – 2013 – issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

The evaluation process of internal controls includes joint action with the business areas for assessment of reporting risks, process mapping, assessment of their compliance with the other policies and standards, as well as the validation of applicable controls aimed at mitigating the risks that may affect the Company's ability to start, authorize, record, process and disclose relevant information in the financial statements.

The Company's management has not identified material changes in its internal control on financial reporting that occurred during the fiscal year ended on December 31, 2022 that have materially affected or are reasonably likely to materially affect its internal control over financial reporting.

In addition, the Internal Control Management interacts with the Internal Audit, the Reporting Channel and the Audit and Risk Committee in order to capture any occurrences that may impact the financial statements.

At the end of the fiscal year 2022, based on tests carried out by management throughout the SOX (Sarbanes-Oxley) Certification stages, no significant deficiencies were identified in the performance of controls.

#### **b. organizational structures involved**

The Company has an organizational structure of internal controls to ensure that reliable financial statements are prepared. It is comprised of the Internal Control Management, reporting to the Accounting and Controller's Office, reporting to the Vice-President of Finance and Investor Relations, with the respective monitoring of the Audit and Risk Committee. The process also includes the participation of the Internal Audit and the Reporting Channel, reporting to the Audit and Compliance Department, which reports to the Board of Directors and is supervised by the Audit and Risk Committee.

#### **c. if and how efficiently are the internal controls being supervised by the issuer's management, stating the position of the persons responsible for monitoring them**

As part of the annual certification process of the internal controls environment, Management promotes an evaluation of all controls with the effective participation of all the Executive Boards involved in the processes. The Internal Audit validates the tests in order to search for the effectiveness of the controls.

At the end of the cycle, the executives responsible for the processes of all the Company's business areas and support areas, mapped on Sarbanes-Oxley controls and tests of adequacy, electronically sign to support the evaluation of the internal controls environment as well as the disclosure of the financial statements.

In addition, the Audit and Risk Committee supervises the internal control evaluation process carried out by Management, the Internal Audit and the Independent Auditors (KPMG Auditores Independentes), through regular meetings to present the results of the work of the Internal Control Management and respective remediation plans established by the people responsible for the processes.

## 5.1. Description of risk management and market risks

### **d. deficiencies and recommendations on internal controls contained in the detailed report prepared and sent to the issuer by the independent auditor, under the terms of the regulations issued by the CVM that deal with the registration and exercise of the independent audit activity**

The management assessed the effectiveness of Vale's internal controls related to the financial statements as of December 31, 2022 and concluded that internal controls provide reasonable assurance in relation to the reliability of financial reporting and the preparation of consolidated financial statements and are considered effective. In order to comply with the Sarbanes-Oxley Act, the internal control environment was audited by PricewaterhouseCoopers Auditores Independentes, an independent audit firm, in accordance with the standards established in the document Internal Controls – Integrated Structure (2013) (Internal Control (2013)), issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and, in its evaluation, no significant deficiencies were identified.

### **e. comments of the officers on the shortcomings identified in the independent auditor's report and on the corrective actions taken**

The Company's Officers made an evaluation on the other recommendations reported by the independent auditor and, based on the relevance, probability and possible magnitude of such failures, reached the conclusion that the action plans defined for such shortcomings are adequate for proper implementation of such recommendations, pointing out that as described in item (d) above, no significant shortcoming was identified by the independent auditors.

## 5.2. Internal control description

### 5.3. Integrity program

**a. if the issuer has rules, policies, procedures or practices aimed at the prevention, detection and remediation of deviations, fraud, irregularities and illegal acts committed against public administration, identifying, if so, the following:**

**i. the main integrity mechanisms and procedures adopted and their adequacy to the profile and risks identified by the issuer, informing how often the risks are reassessed and the policies, procedures and practices are adapted**

The Audit and Compliance Department is responsible for supervising the Internal Audit, Compliance Office, and the Reporting Channel, the latter two areas being responsible for the Ethics & Compliance Program. The Program has six important pillars: (1) Governance; (2) Guidelines; (3) Communication and Training; (4) Monitoring & Risks; (5) Reporting Channel; (6) Consequence Management.

Vale's Code of Conduct (made available at [www.vale.com/documents/d/guest/codigo\\_de\\_conduta\\_pt-1](http://www.vale.com/documents/d/guest/codigo_de_conduta_pt-1)) is the main document of the Program's Guidelines pillar. The Code unfolds the Company's purpose and values into ethical principles, which must be practiced by all Vale's employees and managers. Periodically, employees and managers are invited to renew their commitment to ethics by signing the Code's acknowledgment and commitment agreement. New employees sign the Code of Conduct upon hiring.

In 2022, the new document Principles of Conduct for Third Parties was published, which complement the Code of Conduct, explaining how the Company is implementing its values in the relationship with third parties, including suppliers, customers and other types of partners.

Vale has zero tolerance for corruption and bribery. The guidelines of the Ethics & Compliance Program include the anti-corruption rules, which are mechanisms designed to ensure compliance with all applicable anti-corruption laws, including the American Foreign Corrupt Practices Act (FCPA), the Brazilian Anti-Corruption Law (Law No. 12.846/2013) and local laws of each country in which it operates. Such rules are defined in the Global Anti-Corruption Policy and detailed in the internal document Global Anti-Corruption Manual.

Both the Code of Conduct and the Anti-Corruption Policy must be revised at least once every three years, or upon demand.

The Monitoring & Risks pillar monitors the Company's adherence to the guidelines of the Ethics & Compliance Program. In addition, Vale has a Reporting Channel that can be used by any person, inside or outside the company, to report a case of suspicion or violation of the Code of Conduct.

More information about the Ethics & Compliance Program and its guidelines is available on the Company's website ([www.vale.com/pt/web/esg/etica-compliance-transparencia-fiscal%E2%80%8B](http://www.vale.com/pt/web/esg/etica-compliance-transparencia-fiscal%E2%80%8B)).

**ii. the organizational structures involved in the monitoring of operation and efficiency of the internal integrity mechanisms and procedures, indicating their attributions, if their creation was formally approved, the bodies of the issuer to which they report, and the mechanisms to guarantee the independence of their leaders, if any**

The Audit and Compliance Department is the area responsible for Vale's Ethics & Compliance Program. It works together with the Conduct and Integrity Committee, is supervised by the Audit and Risk Committee and reports directly to Vale's Board of Directors.

This structure guarantees the necessary autonomy and independence for the Audit and Compliance Department to lead the Internal Audit, Reporting Channel and Compliance Office areas.

The duties of the Audit and Risk Committee are to: Recommend the adoption of policies whereby reports and complaints involving the top management, managers and leaders of the Company are immediately reported to the Audit and Risk Committee, as per item 5.1, iii, above; and give its opinion about the development of procedures to ensure the effectiveness of consequence management.



## 5.2. Internal control description

The Conduct and Integrity Committee is composed of 5 (five) members, including the Chief Audit and Compliance Officer, the Executive Board of People, the Chief Corporate and Institutional Affairs Officer (formerly the Chief Legal Officer), the Executive Board of Corporate Integrity and, since 2021, an external member, without conflicts of interest with Vale or its subsidiaries or affiliates, and with knowledge compatible with the purposes of this Committee. The duties and responsibilities of this Committee include the following: (a) To supervise the application of Vale's Code of Conduct and related policies, procedures and guidelines (which collectively form the "Vale's Ethics & Compliance Program"); (b) Monitor and evaluate the effectiveness of Vale's Ethics & Compliance Program and propose improvements; (c) Guide the Compliance Office regarding the interpretation of the guidelines and rules of Vale's Ethics & Compliance Program; (d) Monitor the performance of the Reporting Channel and the application of the Consequence Management Policy; (e) Recommend to the Executive Committee, the Board of Directors and its advisory Committees in cases of divergence in the application of the Consequence Management Policy; (f) Support the Executive Committee, the Board of Directors and its advisory Committees in reviewing Vale's Consequence Management Policy.

### iii. if the issuer has a formally approved code of ethics or conduct, indicating:

- **if it applies to all officers, tax advisors, board members and employees and also covers third parties, such as suppliers, service providers, brokers and associates**

The Code of Conduct is approved by the Board of Directors and is part of Vale's Ethics & Compliance Program, which is monitored by the Audit and Risk Committee, the Conduct and Integrity Committee and the Audit and Compliance Board Department.

The Code of Conduct applies to Vale and its subsidiaries, in Brazil or in other countries, employees, managers, interns, suppliers and any person who acts on behalf of Vale or its subsidiaries. At the same time, Vale seeks to encourage the adoption of the principles of the Code of Conduct in all companies in which it has a shareholding interest.

The Principles of Conduct for Third Parties are also part of Vale's Ethics & Compliance Program guidelines, which complement the Code of Conduct, explaining how the Company implements its values in its relationship with third parties, including suppliers, customers and other types of partners.

- **the penalties applicable in the event of a breach of the code or other standards relating to the matter, identifying the document where such penalties are provided for**

When any principle of Vale's Code of Conduct is not followed, there is a misconduct. This action will have consequences for those responsible, in order to discourage this type of practice and its negative impacts.

The Consequence Management Policy, approved in 2021, establishes the guidelines that characterize a misconduct, the expected consequences for each level of severity and the roles and responsibilities of each party involved in the consequence management process.

The application of disciplinary measures is conducted in an equitable manner, in accordance with local legislation and with the appropriate terms of collective bargaining agreements. Misconduct is classified as very light, light, medium, high or very high severity. The classification of misconduct determines what type of disciplinary action should be applied. Disciplinary measures provided for in Vale's Consequence Management Policy include verbal warning, written warning, re-conduction of training, suspension, removal, dismissal, among others.

Vale's Consequence Management policy is available on the Company's website ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos)).

- **body that approved the code, date of approval and, if the issuer discloses the code of conduct, locations on the world computer network where the document can be consulted**

Vale's Code of Conduct is a document that unfolds the Company's purpose and values into ethical principles, which must be practiced by all Vale's employees and managers.

The latest version of the Code of Conduct was approved on November 12, 2020 by Vale's Board of Directors and is available on the Company's website ([www.vale.com/brasil/pt/aboutvale/ethics-and-conduct-office/code-of-ethics/Paginas/default.aspx](http://www.vale.com/brasil/pt/aboutvale/ethics-and-conduct-office/code-of-ethics/Paginas/default.aspx)), as well as on the CVM website

## 5.2. Internal control description

([www.gov.br/cvm/pt-br](http://www.gov.br/cvm/pt-br)).

### b. if the issuer has a reporting channel, indicating, if so:

- **if the reporting channel is internal or if it is in the charge of third parties**

Vale has a Reporting Channel which is one of the pillars of the Ethics & Compliance Program. The Reporting Channel area is independent and autonomous, reports to the Board of Directors through the Audit and Compliance Department and is supervised by the Audit and Risk Committee. The Reporting Channel is responsible for the investigation of complaints and treatment of the complaints received. The receipt of complaints is done via an outsourced and independent company. Reports received are investigated by the internal team at Vale's Reporting Channel.

- **if the channel is open to receive third-party complaints or if it receives complaints from employees only**

Any person, inside or outside the Company, who wishes to report a case of suspected or effective misconduct, must use Vale's Reporting Channel.

- **if there are mechanisms for anonymity and protection of bona fide whistleblowers**

As provided in the Code of Conduct, under no circumstances will there be a breach of confidentiality, intimidation or retaliation against the complainant. The Reporting Channel guarantees all the conditions for a report to be investigated independently. In addition, the Reporting Channel is structured to guarantee absolute secrecy, protecting the complainant's anonymity and preserving the information so that a fair investigation can take place.

- **body of the issuer responsible for the investigation of complaints**

The person responsible for the Reporting Channel area centralizes the investigation of complaints and, when necessary, uses the support of other Lines of Defense of the Company for a timely investigation. In turn, the person responsible for the Reporting Channel reports directly to the Chief Audit and Compliance Officer who is supervised by the Audit and Risk Committee and reports to the Board of Directors.

The Reporting Channel issues periodic reports on the outcome of the investigations which is shared with the Conduct and Integrity Committee, the Audit and Risk Committee, the Board of Directors and the Audit Board, recording the evidence obtained for the reported situations, as well as the appropriate actions for the resolution of improprieties. The main data related to the Reporting Channel are available in the Annual Report of the Ethics & Compliance Program published on the Company's website ([www.vale.com/pt/web/esg/etica-compliance-transparencia-fiscal%E2%80%8B](http://www.vale.com/pt/web/esg/etica-compliance-transparencia-fiscal%E2%80%8B)).

### c. number of cases confirmed of deviations, fraud, irregularities and illegal acts in the last three (3) fiscal years committed against the public administration and corrective measures adopted

No deviations, fraud, irregularities and illegal acts committed against the public administration were identified in the last 3 fiscal years.

### d. if the issuer does not have rules, policies, procedures or practices aimed at the prevention, detection and remediation of deviations, fraud, irregularities and illegal practices against public administration, to identify the reasons why the issuer has not adopted controls in this regard

Not applicable.

### 5.3. Integrity program

### 5.4. Significant changes

#### ***Risk Appetite Statement***

In 2022, the Board of Directors, as proposed by the Executive Committee, approved Vale's Risk Appetite Statement, which is a document for internal use that covers the risk appetite for each category of the Integrated Risk Map, with the purpose of guiding the organization's managers in business decisions, capital allocation and efforts to manage and mitigate its risks.

Risk appetite, in turn, summarizes the scale of potential risks that the company is willing to accept in pursuit of its strategic purposes. It should be noted that the risk appetite does not represent, in any way, any acceptance or assumption of the probability of materialization of risks of any kind or nature in results or concrete events, either by Vale and/or its executives.

#### ***Emerging Risks***

Vale maps its emerging risks, which are new or known risks, but under new or different conditions and/or circumstances and which have a high degree of uncertainty as to their trend, severity and probability of occurrence. They are usually influenced by external factors and therefore difficult to predict.

#### ***Risks related to the Rupture of a Dam***

By the end of 2021, Vale has concluded 23% of the Dam De-characterization Plan. Several steps must be taken to ensure that all work is in line with best engineering practices and is performed as safely as possible. The most recent update of the De-characterization Plan indicates that 90% of the upstream dams are expected to be eliminated by 2029 and 100% by 2035. Implementing the de-characterization plan will require significant expenditures, and the de-characterization process can take a long time. As of December 31, 2022, the Company's provision for completing the plan to de-characterize its structures is US\$3,378 million and that of Samarco's structure is US\$197 million, and additional provisions may be set up as a result of adjustments to the de-characterization projects.

Regarding the risk management program for dams and EARs (Tailings Storage Structures), progress is made in the implementation of the TDMS (dams and tailings management system), which aims to establish processes and standards in line with the best international practices. Among these practices, the Engineer of Record ("EoR") stands out, which was implemented in all EAR's, as well as the ITRB's (Independent Tailings Review Boards) implemented in 2021 within the ferrous metals business. Another important process throughout 2021 was the progress in HIRA's (Hazard Identification and Risk Assessment) where 100% of the Tailings Storage Structures (EAR) classified as extreme consequences were evaluated by HIRA, having defined their respective critical controls.

#### ***Risks related to the Economic Sectors in which the Company operates***

For information on the risks related to the sectors of the economy in which the Company operates, see item 4.1.(g): Geopolitical tensions and military hostilities, including the ongoing military conflict between Russia and Ukraine, and the economic sanctions imposed as result of such conflicts may adversely affect the Company's business

## 5.5. Other relevant information

The Company's risk management strategy considers the impact on its strategic purposes, and continually seek to improve Vale's integrated risk management structure to which the Company are exposed.

### **Operational Risk**

Operational risk management is the structured approach the Company has adopted to manage uncertainty related to internal and external events. Internal events consist of inadequate or failed internal processes, people and systems, while external events include natural and operational disasters caused by others.

Vale conducted Hazard Identification and Risk Assessment (HIRA), a process that identifies and analyzes operational risks and defines performance standards and establishes the assurance of associated critical controls. The Hazard Identification and Risk Assessment (HIRA) process was implemented to strengthen the risk management discipline. In the first cycle, 100% of all mines, processing plants, railroads and ports were evaluated from 2019 to 2021, and the assessment of 100% of tailings dams is expected to be completed in 2022. The first cycle is focusing on scenarios with potential consequences for human life and the environment. A second cycle is already starting in 2022 and will not only include reassessment of the scenarios covered in the first cycle, but also addition of business interruption scenarios to the analysis. The process is part of Element #4 of the Company's Management System, and will be carried out in a continuous cycle of 3-5 years. To date, more than 850 unwanted material events have been identified, and the Company has taken more than 2,100 immediate actions to manage them, in addition to mapping out and monitoring more than 8,700 critical controls. Some of the implemented measures included changing or replacing the production process, such as replacing the use of liquid chlorine with bleach (sodium hypochlorite) in operations in Canada and reducing ammonium nitrate stocks in Mozambique. In broader terms, Vale is currently developing a strategic plan to reduce the use of potentially hazardous substances in its production processes.

Operational risk was reduced by implementing new controls, improving existing ones and monitoring their effectiveness. Response plans address high-risk scenarios and identify the resources needed to mitigate impacts. The Company seeks a clear view of the main risks to which it is exposed, the cost-effectiveness of mitigation plans and the existing controls to closely monitor the impact of operational risks and efficiently allocate capital to reduce them.

### **Geotechnical Risk**

Geotechnical risk management is the structured approach used by Vale to manage particularly the risks of rupture of dams, slopes and ore piles with the potential to cause fatalities, impacts on the community, the environment and/or interrupt its activities, which are very significant for its business. The geotechnical risks are continuously monitored and are fully integrated to the enterprise risk management.

Vale has been working on improving its tailings management practices, through the implementation of the Tailings and Dams Management System ("TDMS"). This system is based on adopting multiple layers of protection, including the three internal and external lines of defense such as the Engineer of Record ("EoR") and the Independent Tailings Review Board (ITRB).

Risks posed by geotechnical structures are also assessed by the HIRA process. The HIRA methodology was adjusted to reflect the particularities of the Company's geotechnical structures, and allow the implementation of critical control tools based on the identified risks.

### **Operational, Planning and Continuity Risks**

Planning and operational continuity risks include risks that can interrupt operations, such as unavailability of critical resources and a site for the disposal of tailings, risks of not obtaining or not renewing licenses, concessions and mining rights, logistical risks and risks of availability and quality of reserves. The Company's performance may also be affected by political, geopolitical, regulatory, economic and social conditions in the regions where it operates.

The scope of Vale's production orientation depends on several factors (internal and external). To mitigate these risks, long-term planning is carried out that monitors the life cycle of mineral resources and geotechnical structures, as well as the development, licensing and implementation schedules of new projects. Based on this, Vale works to prioritize engineering efforts and strengthen relationships with communities and environmental bodies in order to obtain authorizations, environmental and social licenses for us to operate. To mitigate impacts and support the Master Plan, the Company also invests in studies and research that support the sustainability of operations.

Additionally, according to the Company's methodology, developed internally to assess the physical risks related to climate change, "Vale Climate Forecast", based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), physical impacts on its assets caused due to climatic events, operational impacts are also considered and these impacts are evaluated as operational, planning and continuity risks.

### **Cybernetic Risk**

Cybernetic risk management is the approach adopted to manage information security risks, such as theft and leakage of information, unavailability of technology assets and compromise of data integrity. The growth of cyber threats scenarios is a natural trend in the world and it is no different in the mining sector. The ever-evolving risks in this space come from a variety of actors such as nation-states, cybercriminals, hacktivists and insiders, each with different motivations. Vale faces threats to the safety of its information, but none of them had an impact on its business in 2022.

The Company takes various measures to manage this risk in order to protect, detect and respond to cyber events, including information security policies and standards, safety protection technologies, threat detection and monitoring, as well as response and recovery procedure tests. In order to encourage vigilance among its personnel, a culture of cyber-safety awareness was raised in the company through a training program that comprises topics such as e-mail phishing, information classification and other information security practices recommended.

### **Credit Risk**

Vale is exposed to credit risk arising from accounts receivable from customers, derivative operations, guarantees, advances to suppliers and financial investments. Vale's credit risk management process provides a framework to evaluate and manage counterparty credit risk and to maintain the Company's risk at an acceptable level.

Vale assigns an internal classification rating and credit limit to each counterparty using its own quantitative methodology for credit risk analysis, which is based on market prices, external credit ratings and counterparty financial information, as well as qualitative information on the counterparty's strategic position and history of commercial relationships.

Based on the counterparty's credit risk, risk mitigation strategies may be used to manage the Company's credit risk. The main credit risk mitigation strategies include non-recourse discount of receivables, insurance instruments, letters of credit, corporate and bank guarantees, mortgages, among others.

From a geographic point of view, Vale has a diversified accounts receivable portfolio, with Asia, Europe and Brazil being the regions with the greatest exposure. According to each region, different guarantees can be used to improve the credit quality of receivables. The Company monitors the portfolio's counterparty exposure periodically and blocks additional commercial credit to defaulting customers.

To manage the credit exposure originated from financial investments and derivative instruments, credit facilities are approved for each counterparty to which the Company has credit exposure. Vale controls the diversification of the portfolio and monitors different solvency and liquidity metrics of its different counterparties that were approved for trading.

### **Compliance Risks**

#### Public Official Corruption Risk

The Company's Ethics & Compliance Program has specific anti-corruption rules, which are established in the Code of Conduct, in the Global Anti-Corruption Policy and detailed in the internal document Global Anti-Corruption Manual. The program, which is under the responsibility of the Audit and Compliance Department, establishes that the Company has zero tolerance for corruption and bribery in all its forms (direct or indirect).

The Company's main anti-corruption rules are related to:

- Direct or indirect political contributions on behalf of Vale are prohibited. This includes company donations or contributions to political parties, political candidates and election campaigns.
- Facilitation payments are prohibited.
- External social and environmental and institutional expenditures must be previously evaluated by Compliance Office using an internal tool and must have contracts with anti-corruption and accountability clauses.
- Gifts, meals and entertainment involving government officials above a specific value must be previously approved by Compliance Office through an internal tool, with gifts in cash or equivalent being prohibited at Vale, regardless of the value.
- All suppliers, entities, associations or any third parties that receive payments from the Company must, before being registered, go through a due diligence process, where a background check is carried out and a risk of corruption is defined. Anti-corruption clauses must be included in the contracts.
- The employee and leader recruitment and selection process related to any other government official must be previously approved by the Compliance Office.
- Any conflict of interest must be declared by Company employees (with computer access) through a global campaign carried out periodically.
- Company employees are prohibited from holding political office, pursuant to the rule established in the internal document Global Guidelines on Conflict of Interests.
- The Company provides regular training and communications on its global anti-corruption rules, as well as specialized training for the personnel who have substantial compliance-related responsibilities.

### **Strategic Risk**

Strategic risk involves risk factors to which the Company's businesses are subject, in particular in the following lines: governance, business model, external environmental issues, regulatory, political, geopolitical, economic or social actions taken by governments or other interested parties, that may affect Vale's global operations, the global profile of its customer portfolio and related supply chains.

Vale is exposed to a number of external factors that may affect its ability to achieve its long-term goals. Such risks can be attributed to changes in industry dynamics, such as acceleration or delay in market trends, new entrants, creation of product substitutes and/or changes in supply chain dynamics. Thus, the Company needs to identify changes and, when possible, anticipate and reposition itself to respond to them in a timely manner.

*Sustainability, institutional relations and reputational risks*

### **Social and Human Rights Risk**

In 2020, following the Company's review of governance and risk management, the social and Human Rights risk management has been incorporated into the enterprise risk management process.

It involves evaluating the social and economic characteristics of the communities with which it relates, how it fulfills its commitments to them and how the potential impacts of its operations are perceived by these communities, including Indigenous Peoples and Traditional Communities.

Social risk management involves assessing the socioeconomic characteristics of the communities with which the Company relates, how it fulfills its commitments to them and how the potential impacts of operations are perceived by these communities, including Indigenous Peoples and Traditional Communities.

Human rights risk management involves analyzing issues such as degrading working conditions and modern slavery, child labor and sexual exploitation of children and adolescents, violations in labor relations, violations in communities and large-scale human rights violations.

In 2022, Vale continues to improve social risk and human rights management. Based on the risks recorded by the operational teams in the risk management system, action plans are developed and inspections are carried out focusing on the risks that may affect communities, their safety, ways of life and human rights. In addition, human rights due diligence is performed on project and supplier operations. The results are integrated into action plans, which are monitored. There have also been advances in managing human rights risks related to suppliers in Brazil and Canada, including increasing human rights inspections of suppliers in Brazil and developing more human rights standards for suppliers. Vale maintains complaint mechanism channels to receive, record and deal with demands from stakeholders. Risk identification can also occur from communications made through these channels.

**Insurance**

Vale takes out various types of insurance policies, such as: operational risk insurance, engineering risk insurance (projects), credit risk insurance, civil liability, life insurance for its employees, among others. The coverage of these policies, similar to those used by large companies in the mining industry, is contracted in accordance with the Company's purposes, corporate risk management practice and the limitations imposed by the global insurance and reinsurance markets. Insurance management is carried out with multidisciplinary support from the operational areas of the Company. Among its insurance management instruments, Vale uses a captive reinsurer that allows the retention of part of the risk, contracting insurance on a competitive basis, as well as direct access to the main international insurance and reinsurance markets, and diversification of counterparties.

**Information about internal claims on the Code of Conduct and the improvements made based on complaints**

In 2022, Vale's Reporting Channel received 6,736 reports. Throughout the year, 6,600 records were closed, of which 60.3% correspond to complaints verified in 2022. Violations were confirmed in 46.6% of the investigated complaints. All confirmed violations triggered remediation plans. During the year, 2,941 corrective actions and disciplinary measures were established, including 171 dismissal actions. In addition to dismissal actions, actions were taken to demobilize contractors, feedback, warnings and suspensions, process reviews and other measures.

More information about Vale's Reporting Channel and actions to promote a culture of ethics and integrity in the company are reported in the Annual Report of the Ethics & Compliance Program available on the Company's website ([www.vale.com/pt/web/esg/etica-compliance-transparencia-fiscal%E2%80%8B](http://www.vale.com/pt/web/esg/etica-compliance-transparencia-fiscal%E2%80%8B)).

## 5.5. Other relevant information

## 6. Control and economic group

### 6.1./6.2. Shareholding position

Identify the controlling shareholder or group of controlling shareholders, specifying the following in relation to each of them:

Shareholder	Nationality / Brazilian state	Legal Representative / Agent	Brazilian individual / Corporate Taxpayer Number (CPF/CNPJ) of Agent	CPF/CNPJ	Common Stock		Preferred Stock – Special Class		Total Preferred Stock		Total Stock		Party shareholders' agreement	Controlling shareholder	Date of last alteration
					Number	%	Number	%	Number	%	Number	%			
Previ – Caixa de Previdência dos Funcionários do Banco do Brasil	Brazilian	N/A	N/A	33.754.482/0001-24	393.946.556	8,679	0	0	0	0	393.946.556	8,679	No	No	28/04/2023
Mitsui & Co., Ltd	Japanese	Mitsui & Co. (Brasil) S.A.	61.139.697/0001-70	05.466.338/0001-57	286.347.055	6,309	0	0	0	0	286.347.055	6,309	No	No	28/04/2023
BlackRock, Inc.	United States	Banco BNP Paribas Brasil S.A.	01.522.368/0001-82	N/A	277.715.458	6,118	0	0	0	0	277.715.458	6,118	No	No	28/04/2023
Federal Government	Brazilian	-	-	-	0	0,000	12	100	12	100	12	0,001	No	No	28/04/2023
Treasury stock	-	N/A	N/A	-	109.575.980	2,414	0	0	0	0	109.575.980	2,414	N/A	N/A	28/04/2023
Other	-	N/A	N/A	-	3.471.422.519	76,479	0	0	0	0	3.471.422.519	76,479	N/A	N/A	28/04/2023
<b>Total</b>	-	-	-	-	<b>4.539.007.568</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>12</b>	<b>100</b>	<b>4.539.007.580</b>	<b>100</b>	-	-	-



**5.5. Other relevant information****6.3. Capital distribution**

<b>Date of last alteration</b>	28/04/2023
<b>Number of individual shareholders</b>	528,853
<b>Number of corporate shareholders</b>	15,049
<b>Number of institutional investors</b>	1,193

**Outstanding Shares per class and specie**

Outstanding shares correspond to all the issuer's shares, with the exception of shares held by the controlling shareholder, related persons, the issuer's managers and shares held in treasury.

	<b>Number</b>	<b>Percentage</b>
<b>Number of common stock</b>	4,427,123,466	97.535%
<b>Number of preferred stock</b>	0	0.000%
<b>Number of preferred stock – Class E</b>	12	100.000%
<b>Total</b>	4,427,123,478	97.535%

#### 6.4. Investments in subsidiaries, associates, and joint ventures

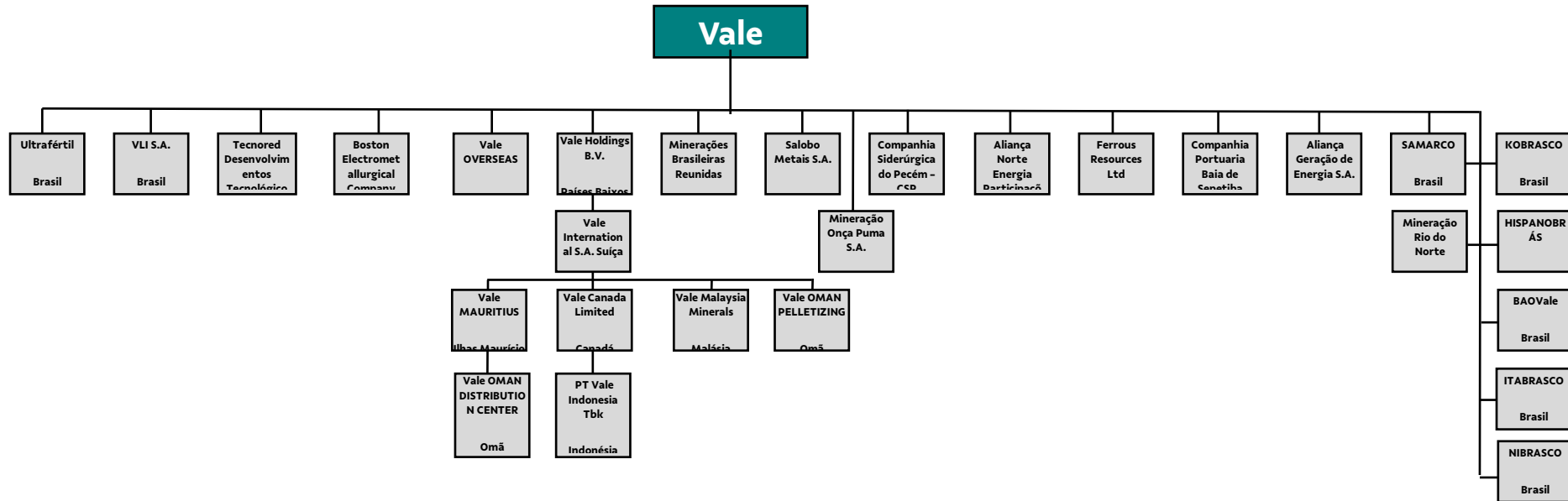
	Location	Main activity/Business
<b>Direct and indirect subsidiaries</b>		
Companhia Portuária da Baía de Sepetiba (“ <u>CPBS</u> ”)	Brazil	Iron ore
Minerações Brasileiras Reunidas S.A. (“ <u>MBR</u> ”)	Brazil	Iron ore
Salobo Metais S.A.	Brazil	Copper
PT Vale Indonesia (“ <u>PTVI</u> ”)	Indonesia	Nickel
Tecnored Desenvolvimento Tecnológico S.A.	Brazil	Iron ore
Vale Holdings B.V. (“ <u>VHBV</u> ”)	Netherlands	Holding and research
Vale Canada Limited (“ <u>VCL</u> ”)	Canada	Nickel
Vale International SA (“ <u>VISA</u> ”)	Switzerland	Trading and holding
Vale Malaysia Minerals Sdn. Bhd. (“ <u>VMM</u> ”)	Malaysia	Iron ore
Vale Oman Distribution Center LLC (“ <u>VODC</u> ”)	Oman	Iron ore and pelletizing
Vale Oman Pelletizing Company LLC (“ <u>VOPC</u> ”)	Oman	Pelletizing plant
<b>Affiliates and joint ventures</b>		
Aliança Geração de Energia S.A.	Brazil	Power
Aliança Norte Energia Participações S.A.	Brazil	Power
Baovale Mineração S.A.	Brazil	Iron ore
Companhia Coreano-Brasileira de Pelotização (“ <u>Kobrasco</u> ”)	Brazil	Pellets
Companhia Hispano-Brasileira de Pelotização (“ <u>Hispanobras</u> ”)	Brazil	Pellets
Companhia Ítalo-Brasileira de Pelotização (“ <u>Itabrasco</u> ”)	Brazil	Pellets
Companhia Nipo-Brasileira de Pelotização (“ <u>Nibrasco</u> ”)	Brazil	Pellets
Samarco Mineração S.A.	Brazil	Pellets
Companhia Siderúrgica do Pecém (“ <u>CSP</u> ”)	Brazil	Steel making
Mineração Rio do Norte S.A. (“ <u>MRN</u> ”)	Brazil	Bauxite
MRS Logística S.A.	Brazil	Logistics
VLI S.A.	Brazil	Logistics

(1) In February 2023, the Company became the holder of 100% of the capital stock of VOPC. For more information, see item 2.4.b of this Reference Form.

(2) Vale is party to a shareholders' agreement in which it shares the power to direct the relevant activities of Baovale with the counterparty.

### 6.5. Organizational chart of shareholders and economic group

The table below presents the organizational chart with the main direct and indirect equity interests of the Company.



(1) In February 2023, the Company became the holder of 100% of the capital stock of VOPC. For more information, see item 2.4.b of this Reference Form.

**a. all direct and indirect subsidiaries and, if the issuer desires, shareholders that own at least 5% of any class or type of share**

Following the expiration on November 9, 2020 of the Shareholders' Agreement entered into on August 14, 2017 between Litel Participações S.A., Bradespar S.A., Mitsui & Co, Ltd and BNDES Participações – BNDESPAR, and joined on September 9, 2019, through an Adhesion Agreement, by Litela Participações S.A., Vale no longer has any controlling shareholders.

Shareholders with a stake equal to or greater than 5% are presented in item 6.1/6.2 of this Reference Form.

**b. issuer's main subsidiaries and affiliates**

The Company's main subsidiaries and affiliates are presented in item 6.4 above of the Reference Form.

**c. stakes held by the issuer in group companies**

Significant direct subsidiaries	Stake	Location	Main activity/Business
Companhia Portuária da Baía de Sepetiba	100%	Brasil	Iron ore
Minerações Brasileiras Reunidas S.A.	100%	Brazil	Iron ore
Tecnored Desenvolvimento Tecnológico S.A.	100%	Brazil	Iron ore
Salobo Metais S.A.	100%	Brazil	Copper
Vale Holdings B.V.	100%	Netherlands	Holding and research

**d. group companies' stakes in the issuer**

On December 31, 2022, none of the group's companies held any direct or indirect stake in the Company.

**e. main companies under common control**

For information on the Company's equity stakes, see item 6.4 of this Reference Form.

## **6.6. Other relevant information**

### **Additional clarifications to item 6.3**

Regarding the information presented in item 6.3.c of this document, the Company clarifies that, despite having made efforts to do so, it was not possible to obtain a breakdown of institutional investors across all the securities that make up its capital, from the institutions responsible for controlling this, especially in relation to ADR holders, due to the lack of operational systems that enable the creation of reports covering this information.

Thus, in item 6.3.c, for the purposes of reporting the “number of institutional investors,” in relation to ADR holders, only the depository bank for these ADRs, Citibank N.A., was considered.

The Company also clarifies that it was not possible to identify 3.69% of all shareholders and so it was not possible to categorize them as “individual shareholders,” “corporate shareholders” or “institutional investors” in item 6.3.

## 7. Shareholders' meeting and management

### 7.1. Main characteristics of the issuer's management bodies and fiscal council

#### a. Main characteristics of the policies for nominating and filling positions, if any, and, if the issuer discloses it, locations on the World Wide Web where the document can be consulted

##### **Board of Directors**

The Board of Directors of Vale S.A. ("Vale" or "Company") is composed of 11 to 13 effective members and one alternate, elected by the Shareholders' Meeting for a unified term of 2 years, re-election being allowed. In case of vacancy or impediment of a member of the Board of Directors, the remaining members may appoint a substitute, who shall hold the position until the next Shareholders' Meeting.

Shareholders vote to elect individual members of the Board of Directors (instead of voting on a slate of candidates) and directly elect the Board's Chairman and Vice-Chairman being certain that the Chairman of the Company's Board of Directors cannot hold the position of Chairman of the Statutory Board of Executive Officers, a body named as the "Executive Committee" at Vale.

As provided in the Company's Bylaws, the Company's employees elect, by direct vote, a member of the Board of Directors and his alternate. The process is conducted by a Bipartite Electoral Board composed of representatives of the Company and the unions, created especially for this purpose and the election is approved at the Ordinary General Meeting.

Pursuant to Vale's Bylaws, in June 2022, the Nomination and Governance Committee ("CIG") was established to advise the Company's Board of Directors in the process of electing the members of the Board of Directors for each term of office. The result of the CIG's main discussions and recommendations, including the number of seats, the profile of candidates that best meets the needs of the Company, observing the Policy for Appointing Managers and the proposal of candidates for the Board of Directors, is presented in the form of its final report.

The Bylaws establish that at least 7 members of the Board of Directors shall be independent directors. Independent members are those who qualify according to the terms of the Novo Mercado Regulations of B3 S.A. – Brasil, Bolsa, Balcão ("B3"), CVM Resolution No. 59/2021, as amended by CVM Resolution No. 168/2022 ("Resolution No. 59"), the Company's Bylaws and Policy for Directors' Nomination ("Nomination Policy").

Vale's Bylaws provide for that, in addition to the regulatory demands, to be considered independent, a director cannot (i) hold, directly or indirectly, more than 5% (five percent) of the Company's capital stock or have any formal or declared relationship with any shareholder holding it; or (ii) have served, whether consecutively or not, 5 (five) or more terms, or 10 (ten) years as a director of the Company.

The characterization of the nominee as an independent director shall be resolved by the Shareholders' Meeting that elects him/her.

The Directors' Appointment Policy establishes the following minimum qualifications for the candidate to the Board of Directors: (i) is not impeded by special law, or convicted of a bankruptcy crime, prevarication, bribery or bribery, concussion, embezzlement, against the popular economy, public faith or property, or the criminal penalty that prohibits, even temporarily, access to public office; (ii) has not been declared disqualified by an act of the Securities Commission; (iii) has not exercised an elective mandate in the Executive or Legislative branch during the last 3 years; (iv) has an unblemished reputation; (v) is aligned and committed to Vale's mission, values and Code of Conduct; (vi) does not have a conflicting interest of a structural nature with the Company, except, when applicable, waiver from the General Meeting; and (vii) does not hold positions in companies that may be considered competitors in the market, especially in advisory, management or fiscal councils, except when waived by the General Meeting.

Additionally, they must have the following characteristics and skills: (i) professional experience; (ii) strategic vision; (iii) availability of time to exercise the function; (iv) communication skills; and (v) ability to work in a team.

## 7.1. Main characteristics of the issuer's management bodies and fiscal council

In the case of re-election, the IGC must take into account the result of the last annual evaluation of the body, the member's attendance at meetings, whose minimum percentage is 75%, except in the case of medical leave, and the loss of independence or adherence to the minimum qualifications mentioned above.

The Bylaws also provide for the role of Lead Independent Director (“LID”) to engage with shareholders, always in line with the Investor Relations area. If the elected Chairman of the Board is a non-independent director, the elected independent members must appoint an independent director to act as LID; even though the Chairman is an independent director, the Board of Directors may make such an appointment.

In order to hold a position as a member, more information on the identification and evaluation of candidates for the Company's Board of Directors, see Policy for Appointing Managers, which is available for consultation on the websites of the Brazilian Securities Commission (“CVM”) ([www.gov.br/cvm](http://www.gov.br/cvm)) and the Company ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos)).

### **Executive Committee**

The Executive Committee is made up of 6 to 11 members, with a 3-year term of office, re-election being allowed. The members of the Executive Committee shall be appointed and removed by the Board of Directors at any time.

The Directors' Appointment Policy establishes the following minimum qualifications for: (i) is not prevented by special law or convicted of a crime of bankruptcy, nonfeasance, bribery or corruption, demanding bribe, embezzlement, forgery, crime against the consumer or against property, or any criminal penalty that prohibits, even temporarily, access to public offices; (ii) has not been declared disqualified by any act of the Securities and Exchange Commission; (iii) has not held an elective mandate in the Executive or Legislative Branch over the last 3 years; (iv) have an unblemished reputation; (v) is aligned with and committed to Vale's mission, values and Code of Conduct; (vi) has no conflict of interest in relation to the Company's corporate structure, except, when applicable, upon waiver by the Shareholders' Meeting; and (vii) does not hold positions in companies that may be considered competitors in the market, especially in advisory, management or fiscal councils, except when waived by the Shareholders' Meeting.

The selection and nomination of candidates for Executive Vice-President positions is carried out by the President, with the support of the People Executive Vice-Presidency, taking into account the names of potential internal candidates mapped in the Company's Succession Plan.

The Personnel and Compensation Committee (“CPR”) is responsible for evaluating and recommending to the Board of Directors (a) the appointment of the Company's President and, on his recommendation, the other members of the Executive Committee and other Directors who report directly to the President; (b) the succession plan for the Executive Committee and other Directors who report directly to the President, including their successors, taking into account the desirable experiences and knowledge for these positions so that the Company can fulfill its objectives and face its challenges, with the Committee also responsible for monitoring leadership training initiatives; and (c) hire external experts to assist in the performance of these functions.

For further information on the identification and evaluation of candidates for members of the Executive Committee, please refer to the Policy for Directors' Nomination, which is available for reference on the websites of the CVM ([www.gov.br/cvm](http://www.gov.br/cvm)) and the Company ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos)).

### **Advisory Committees**

Pursuant to the Company's Bylaws, the members of the Committees shall have experience and technical capacity with regard to the matters under the responsibility of the Committee in which they participate and shall be subject to the same legal duties and responsibilities as the directors.

Additionally, the Bylaws provide for that such collective bodies shall be composed exclusively of members of the Board of Directors and, therefore, the same requirements contained in the Nomination Policy mentioned in the item “Board of Directors” above shall apply to the members of the Committees. In addition, the Advisory Committees will have 3 to 5 members, and the composition rules of each Committee are regulated by the respective Internal Regulations, available at [www.vale.com/pt/web/esg/conselho-lideranca#membersofthecommittees](http://www.vale.com/pt/web/esg/conselho-lideranca#membersofthecommittees).

## 7.1. Main characteristics of the issuer's management bodies and fiscal council

Regarding the members of the Audit and Risk Committee, the Bylaws establish the following requirements: (a) its members must be independent directors of the Company, observing the independence criteria provided for in the applicable legislation and in the Internal Regulation of the body; (b) at least one member must have recognized experience in corporate accounting matters (financial specialist), pursuant to applicable law; (c) the participation, as members of the Audit and Risks Committee, of directors of the Company, directors of its subsidiaries, its controlling shareholder, if any, direct or indirect affiliates or companies under common control.

The selection and nomination of candidates to the Committees is carried out by the CIG, which recommends to the Board of Directors the desirable profile of candidates that best suits the Company's needs, in accordance with criteria and guidelines set forth in the internal policies and rules on the subject.

For further information on the identification and evaluation of candidates for Committee members, please refer to the Policy for Directors' Nomination and the Internal Regulations of the Committees, which are available for reference on the websites of the CVM ([www.gov.br/cvm](http://www.gov.br/cvm)) and the Company ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos) and [www.vale.com/pt/web/esg/conselho-lideranca](http://www.vale.com/pt/web/esg/conselho-lideranca)).

### **Fiscal council**

The Fiscal council is composed of a 3 to 5 members. The members of the Fiscal council are elected annually by the Company's Shareholders' Meeting for terms of office ending at the first Annual Shareholders' Meeting following the election, and they may be re-elected.

Brazilian law requires that members of a Fiscal council (i) must be residents of the country and graduates of a university course or who have exercised, for at least 3 years, the position of business administrator or fiscal advisor; (ii) cannot hold a position as a member of the Board of Directors, Fiscal council or advisory committee of any company that competes with Vale or has an interest conflicting with Vale, unless compliance with this requirement is expressly waived by shareholder vote, (iii) cannot be an employee or member of senior management or the Board of Directors of Vale or its subsidiaries or affiliates, or (iv) cannot be a spouse or relative up to the third degree, by affinity or consanguinity, of a director or officer of Vale.

The Internal Regulations of the Fiscal council are available for reference on the websites of the CVM ([www.gov.br/cvm](http://www.gov.br/cvm)) and the Company ([www.vale.com/pt/web/esg/conselho-lideranca](http://www.vale.com/pt/web/esg/conselho-lideranca)).



## 7.1. Main characteristics of the issuer's management bodies and fiscal council

### b. If there are mechanisms for evaluating the performance, and, if so, indicate:

	Board of Directors	Advisory Committees	Executive Committee	Fiscal council
<b>i. frequency of performance evaluations</b>	Annual			
<b>i. scope of performance evaluations</b>	<p>The Board of Directors, as a collective body, is evaluated individually by its directors. The consolidated results of the evaluations are brought to the attention of the Board of Directors, with the aim of identifying opportunities for continuous improvement of its governance and performance. In 2022, the members of the Company's Executive Committee also participated in the evaluation process of the Board of Directors as a collective body, allowing a very comprehensive view on the subject.</p> <p>Additionally, in 2022, an individual evaluation process of the members of the Board of Directors was conducted through self-evaluation and peer evaluation. The individual results were shared with the Chairman of the Board of Directors for further discussion and individual feedback with each member.</p> <p>The Nomination and Governance Committee, pursuant to its Internal Regulations, assists in conducting the process for evaluating the performance of the Board of Directors.</p>	<p>The Advisory Committees for the Board of Directors, as collective bodies, are evaluated individually by their members. The consolidated results of the evaluations are brought to the attention of the Board of Directors, with the aim of identifying opportunities for continuous improvement in the performance of the Committees.</p> <p>In 2022, the other members of the Board of Directors, and the members of the Executive Committee with whom each Committee interacts most, also participated in the process for evaluating the Committees as collective bodies, allowing an expanded view of opportunities for continuous improvement.</p> <p>The Nomination and Governance Committee, pursuant to its Internal Regulations, assists in conducting the process for evaluating the performance of the Advisory Committees.</p>	<p>The members of the Executive Committee, including the Chairman, are evaluated individually in a formal process conducted by the Board of Directors, with the support of the CPR, in light of the key behaviors defined for the Company's leadership, and has a broad concept:</p> <ul style="list-style-type: none"> <li>• For the Chairman: self-evaluation and evaluation by subordinates and members of the Board of Directors; and</li> <li>• For the other members of the Executive Committee: self-evaluation and peer evaluation and by the Chairman.</li> </ul> <p>The evaluations are made numerically, being scored from 0 to 10, with 10 being the maximum.</p> <p>To evaluate the Chairman, the average of scores assigned by subordinates, and the average of scores assigned by members of the Board of Directors, is taken.</p>	<p>The Fiscal council conducts a self-evaluation of its performance as a collective body, as provided for in its Internal Regulations.</p>
<b>ii. methodology adopted in performance evaluations</b>	<p>The methodology adopted in the process for evaluating the performance of the Board of Directors and the Advisory Committees is based on assumptions considered in previous evaluation processes, for better comparability and evolution of results, and improvements based on national and international benchmark surveys, governance practices and Vale's business context have been also incorporated.</p> <p>The process includes reviewing the evaluation questionnaire adopted in previous years to allow an even more comprehensive view of the challenges and opportunities for improving the effectiveness of the Board of Directors and Advisory Committees, with the implementation of specific questionnaires to evaluate each of the Advisory Committees additionally.</p> <p>In addition to the answers to the questionnaires, the evaluation process also includes individual interviews with the members of the Board of Directors, the Advisory Committees and the Executive Committee, as well as the General Secretary for Corporate Governance.</p> <p>In 2022, the process was carried out independently by a specialized external consulting firm, with the assessment results being submitted, on a consolidated basis, to the Board of Directors and the respective Committees.</p>		<p>The process for evaluating the individual performance of the members of the Executive Committee has evaluations carried out 100% online and anonymously. Each evaluation criterion is scored from 0 to 10 and includes blank fields for additional comments.</p> <p>The results of the evaluations are shared with the members of the CPR and, subsequently, submitted for final resolution at a meeting of the Board of Directors.</p> <p>As consequences of the evaluations, we have:</p> <ul style="list-style-type: none"> <li>• Definition of the Performance Behavioral Factor ("FCD") on an individual and discretionary basis,</li> </ul>	<p>The process is carried out with the support of the Governance Secretariat. The members of the Fiscal council receive a questionnaire and individually evaluate all the work carried out by the Fiscal council, as a collective body, according to the criteria detailed below. In turn, the Secretariat consolidates the scores and shares the averages with the Fiscal council.</p>

**7.1. Main characteristics of the issuer's management bodies and fiscal council**

	<b>Board of Directors</b>	<b>Advisory Committees</b>	<b>Executive Committee</b>	<b>Fiscal council</b>
	Based on the results obtained, the priorities to be addressed for the evolution of its effectiveness and performance are aligned with the Board of Directors and, subsequently, the respective action plan is developed, with several initiatives being developed in this context throughout 2022, including the revision of the Company's Bylaws, which also reflected the restructuring of the Board's Advisory Committees.		based on the scores obtained in the evaluations. The FCD has a direct impact on the annual bonus and can leverage or reduce the amount to be paid based on the performance presented by the executive during the year; and <ul style="list-style-type: none"> <li>Individual actions of meritocracy and differentiation, which can be implemented for members of the Executive Committee who perform better, with a direct impact on their compensation (pay for performance).</li> </ul> <p>After completing the evaluation process and its consequences/outputs, each executive receives the appropriate feedback.</p>	
<b>ii. main criteria used in performance evaluations</b>	<p>Within the scope of the evaluation of the Board of Directors, as a collective body, the following aspects are addressed:</p> <ul style="list-style-type: none"> <li>Fulfillment of the mandate;</li> <li>Composition and Structure;</li> <li>Support Processes and Structure;</li> <li>Dynamics and Effectiveness; and</li> <li>Contributions.</li> </ul> <p>With regard to individual evaluation, each member of the Board of Directors carries out a self-evaluation and is evaluated by peers, according to the following aspects:</p> <ul style="list-style-type: none"> <li>Contributions;</li> <li>Participation and Engagement; and</li> <li>Skills and Personal Profile.</li> </ul>	<p>Advisory Committees are evaluated by their own members, by the members of the Board of Directors and by the members of the Executive Committee with whom they interact most, with the main focus being on evaluating issues related to:</p> <ul style="list-style-type: none"> <li>Execution of the mandate</li> <li>Composition and Contributions</li> <li>Dynamics and Effectiveness</li> </ul>	<p>The individual performance evaluation process is carried out based on the key behaviors defined for the Company's leadership, namely:</p> <ul style="list-style-type: none"> <li>Obsession with safety and risk management;</li> <li>Open and transparent dialogue; Empowerment with commitment;</li> <li>Responsibility for the whole and collaboration; and</li> <li>Active listening and engagement with society.</li> </ul>	<p>In the self-evaluation process, issues regarding responsibilities are taken into account, as well as supervision and interaction with management, auditors (internal and external) and ombudsman, parameters involving financial statements, risks and internal controls and compliance, in addition to training, development of the members of the Fiscal council, its composition, dynamics and other issues that impact the body's functioning.</p>
<b>iii. whether external consulting or advisory services have been hired</b>	As in previous processes, a specialized and independent external consulting firm has been hired to conduct the evaluation process of the Board of Directors and Advisory Committees.		There is no external support or service in the process of evaluating Executive Committee members.	There is no external support or service in the process of evaluating Fiscal council members.

## 7.1. Main characteristics of the issuer's management bodies and fiscal council

### c. Rules for identifying and handling conflicts of interest

The Company's Related-Party Transactions and Conflict of Interest Policy ("Related-Party Transaction Policy") sets out guidelines and principles to ensure that transactions with related parties and other situations with potential conflict of interest involving Vale, its subsidiaries or Reference Shareholders (as defined in the Related Party-Transactions Policy) are conducted at arm's length, with market conditions being observed and in line with current legislation and with the best corporate governance practices, including the exclusion of any person with potentially conflicting interests from participating in the decision-making process, thus ensuring transparency and full respect for the Company's interests.

Pursuant to the Related-Party Transactions Policy, there is a conflict of interest when someone acts for their own benefit, or for the benefit of family members, close relatives, shareholders or government officials, regardless of whether the Company benefits or is harmed.

The identification of related and conflicting parties is done by receiving the annual questionnaire for identifying related and conflicting parties from key management personnel, which must be completed and answered annually by the managers and reference shareholders.

To assess transactions with a potential conflict of interest, at least the following factors are analyzed, among others deemed relevant for the analysis of the specific transaction: (i) reasons why the transaction should be considered to be at arm's length or provides for adequate compensation and meets market conditions; (ii) the results of the competitive process carried out by the proposing/requesting area; (iii) whether there are clearly demonstrable reasons, from the point of view of the Company's business, for entering into the transaction with the related party; (iv) whether the transaction will be entered into on terms at least equally favorable to the Company compared to those generally available in the market or those offered to/or by a third party unrelated to the Company, under equivalent circumstances; (v) the results of evaluations carried out or opinions issued by a specialized and independent company, if any; (vi) whether the transaction involves any reputational risk to the Company; (vii) whether the transaction with a related party will not violate restrictions contained in the Company's contracts; (viii) detailed analysis of the measures taken and procedures adopted to guarantee the commutativity of the transaction; e (ix) the reasons for entering into the transaction with the related party and not with third parties.

Any person involved in the process of hiring, evaluating or approving the transaction, who has a potential conflict of interest with the decision to be taken, must declare himself/herself impeded.

The shareholder or representative of the shareholder, member of Vale's Board of Directors, an Advisory Committee or Executive Committee who is in a situation of conflict of interest shall express it immediately. If he/she fails to do so, someone else may express the conflict.

As soon as the conflict of interest has been identified in relation to a specific topic, the Vale shareholder or representative the shareholder involved has access only to the documents or information on the matter disclosed to the market, pursuant to the legislation in force, and shall leave, including physically, the discussions, without neglecting their legal duties.

As soon as a conflict of interest is identified in relation to a specific topic, the member of the Board of Directors, of the Advisory Committee or of the Executive Committee involved, must not receive any document or information on the matter and must distance himself, including physically, from the discussions, without neglecting their legal duties. The manifestation of conflict of interests, the abstention and the temporary removal of such manager must be recorded in the minutes.

The Chairman of the Shareholders' Meeting, the Chairman of the Board of Directors, the Chief Executive Officer of Vale or the Committee Coordinator shall not compute any vote cast in conflict of interests, as the case may be, at a Shareholders' Meeting or meeting of a management body.

Failure to comply with the guidelines and the provisions of the Related-Party Transactions Policy results in the adoption of measures provided for in the Company's Code of Conduct.

For further information on conflict of interests, please refer to the Related-Party Transactions Policy and, regarding sanctions, refer to the Code of Conduct, both available for reference on the websites of the CVM ([www.gov.br/cvm](http://www.gov.br/cvm)) and the Company ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos)).

### d. per body

## 7.1. Main characteristics of the issuer's management bodies and fiscal council

### i. total number of members, grouped by self-declared gender identity

Administrative body	Female	Male	Non binary	Other	Prefers not to answer
Board	2	7	-	-	-
Board of Directors – Effective	2	10	-	-	-
Board of Directors – Substitute	-	1	-	-	-
Fiscal council – Effective	1	4	-	-	-
Fiscal council – Substitute	3	2	-	-	-
<b>Total = 32</b>	<b>8</b>	<b>24</b>	<b>-</b>	<b>-</b>	<b>-</b>

### ii. total number of members, grouped by self-declared color or race identity

Administrative body	Yellow	White	Black	Brown	Indigenous	Other	Prefers not to answer
Board	-	9	-	-	-	-	-
Board of Directors – Effective	2	8	1	1	-	-	-
Board of Directors – Substitute	-	-	-	1	-	-	-
Fiscal council – Effective	-	5	-	-	-	-	-
Fiscal council – Substitute	-	4	1	-	-	-	-
<b>Total = 32</b>	<b>2</b>	<b>26</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>

### iii. total number of members grouped by other diversity attributes the issuer considers relevant

All relevant diversity attributes are shown in items 7.1.d.i and 7.1.d.ii above.

### e. if any, specific objectives that the issuer has regarding gender, color or race diversity or other attributes among the members of its management bodies and its Fiscal council

As of the date of this Reference Form, Vale has no specific objectives regarding diversity among the members of its management bodies and its Fiscal council. In any case, in the composition of the management bodies, the Company increasingly seeks to expand the diversity of gender, race and other diversity attributes, even if a specific goal has not been set.

### f. role of management bodies in assessing, managing and overseeing climate-related risks and opportunities

The Board of Directors is the highest governance body for the issue of climate change, and this body is responsible for approving the Company's Global Policy on Climate Change. The Executive Vice-Presidency for Sustainability is responsible for proposing plans, projects and targets on climate change for approval by the Executive Committee, as well as implementing the general policies and guidelines established by the Board of Directors. It is also responsible for evaluating, monitoring and communicating to the Board of Directors the performance, risks and opportunities for Vale in relation to climate change. The Sustainability Committee advises the Board of Directors on issues related to sustainability, including climate change. Since 2019, Vale has had the Low Carbon Forum, a monthly meeting, which has the presence of the Company's President on a quarterly basis, aimed at monitoring the performance of the deliveries of the climate agenda.

Vale uses a risk matrix considering the severity and probability of each occurrence. In the case of climate change-related risks, Vale has developed specific analysis methodologies divided into impacts resulting from the transition to a low-carbon economy and physical impacts, in line with the guidelines of the Task-force on Climate-Related Financial Disclosures – TCFD.

For more details on climate governance, consult the Integrated Report available at [www.vale.com/pt/web/esg/reportes-de-sustentabilidade](http://www.vale.com/pt/web/esg/reportes-de-sustentabilidade).

## 7.1. Main characteristics of the issuer's management bodies and fiscal council

### 7.2. Information regarding the board of directors

#### a. permanent bodies and committees reporting to the Board of Directors

On December 21, 2022, a Special Shareholders' Meeting was held, which amended the Company's Bylaws and, among other changes, approved the new structure of the Advisory Committees for the Board of Directors, with a reduction from 7 to 5 permanent statutory committees, with new nomenclatures and scopes: (i) the Finance Committee had its name changed to Capital Allocation and Project Committee; (ii) the Audit Committee became the Audit and Risk Committee, absorbing the Company's risk duties, with the consequent extinction of the Operational Excellence and Risk Committee; (iii) the Nomination Committee incorporated governance attributions and had its name changed to Nomination and Governance Committee; (iv) the People, Compensation and Governance Committee had its name changed to People and Compensation Committee, increasing its focus on the agenda for cultural transformation and people training; (v) the Sustainability Committee did not have changes in nomenclature. The Innovation Committee has become a non-statutory and non-permanent committee.

The mission of the Committees is to advise the Board of Directors, also proposing improvements related to their respective areas of action, in order to give greater efficiency and quality to the decisions of the Board of Directors.

The Advisory Committees members mandate expires at the end of the Board of Directors members mandate or upon removal of the member approved by the Board of Directors or his/her resignation.

The Internal Regulations of the Advisory Committees are available for reference on the websites of the CVM ([www.gov.br/cvm](http://www.gov.br/cvm)) and the Company ([www.vale.com/pt/web/esg/conselho-lideranca](http://www.vale.com/pt/web/esg/conselho-lideranca)).

**(i) Audit and Risks Committee:** the attributions of the Audit and Risks Committee are described in item 5.1.b.iii of this Reference Form.

**(ii) Capital Allocation and Project Committee:** responsible, among other duties, for evaluating and recommending to the Board of Directors: the Company's long-term capital allocation strategies, the Company's capital structure strategy and financial guidelines, the fundraising and the Company's indebtedness strategy, the guidelines for implementing, managing and monitoring the Company's portfolio of capital projects and current investments, with the Committee being responsible for monitoring the pipeline of said projects, their degrees of maturity and adherence to execution, Vale's annual and multi-annual budget, in addition to monitoring their execution.

**(iii) Nomination and Governance Committee:** responsible, among other duties, for evaluating and recommending to the Board of Directors: Vale's internal policies and rules regarding the process of nominating members of the Board of Directors, Advisory Committees and the Company's President, the evolution and the continuous improvement of the Corporate Governance practices adopted by Vale, the Governance system adopted by Vale, the desirable profile of candidates for members of the Board of Directors and Advisory Committees, the independence of Directors, indicating and justifying any new circumstances that may change such condition, the succession plan of the Board of Directors, the performance evaluation process of the Board of Directors and the Advisory Committees, the annual budget of the Board of Directors and the Advisory Committees.

**(iv) People and Compensation Committee:** responsible for evaluating and recommending to the Board of Directors: Vale's long-term people strategies proposed by the Executive Committee, guidelines for encouraging initiatives related to Vale's organizational culture, especially with regard to diversity, equity and inclusion and people's health and safety and guidelines related to the Company's organizational structure, the Executive Committee's compensation strategy and the proposed distribution of the global annual budget for management compensation, the definition of performance evaluation targets for the Executive Committee and other Officers who report directly to the President, the nomination of the Company's President and the succession plan for the Executive Committee and other Officers who report directly to the President.

**(v) Sustainability Committee:** responsible for, among other duties, evaluating and recommending to the Board of Directors: the Sustainability strategy and guidelines and their integration into the Company's strategic planning, the Company's corporate sustainability policies related to its area of operation in the fields of safety, environment, health, education and relationship with communities, indigenous peoples and others stakeholders, human rights, communication and institutional relations; the direction of the Company's strategic sustainability indicators and their communication and disclosure; guidelines for the process for Vale to adhere to or remain with initiatives, technical standards or agreements, at the national or international level, related to sustainability issues; the direction of the Company's portfolio of sustainability projects, the guidelines for long-term social and environmental commitments; monitoring of the achievement of environmental goals (especially, decarbonization) and social goals (especially, the fight against poverty) and reparation guidelines involving Mariana and Brumadinho.

**b. how the Board of Directors evaluates the work of the independent audit, indicating whether the issuer has a policy for contracting extra-audit services with the certifying accountant and, if the issuer discloses the policy, sites on the World Wide Web where the document can be consulted**

The Board of Directors evaluates the work of the certifying accountant through the Audit and Risk Committee, which is the body responsible for supervising and evaluating the work of the certifying accountants.

Vale's Policy for Hiring Certified Accountants aims to establish the guidelines and principles for hiring audit services, whether related or unrelated to the audit of the consolidated financial statements of the Company and its subsidiaries, in accordance with the requirements set forth in the applicable legislation.

The Policy for Hiring Certified Accountants establishes specific procedures for the initial hire of certified accountants, as well as the subsequent hire of other services rendered by the certified accountant, based on principles that preserve the auditor's independence.

All contracts are evaluated by the Audit and Risk Committee, which is responsible for recommending the hiring of certified accountants for approval by the Board of Directors.

The Policy for the Hiring of Vale's Certified Accountants is available for reference on the CVM website ([www.gov.br/cvm](http://www.gov.br/cvm)) and Company website ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos)).

**c. if any, channels in place for critical issues related to ESG and compliance issues and practices to come to the attention of the Board of Directors**

Vale's Board of Directors meets periodically with the Company's Audit and Compliance Board to monitor the Audit Reports, issues related to the Reporting Channel and Vale's Code of Conduct, which include aspects of Environmental, Social & Governance ("ESG").

Complaints about critical issues with imminent risk are also reported to the Board of Directors in a timely manner, at the discretion of the Audit and Compliance Officer.

In addition, whenever necessary, the Audit and Compliance Officer shall report to the Audit and Risk Committee, an advisory body for the Board of Directors, any deficiencies in control and exposure to significant risks identified, including fraud risks, governance issues and other matters.



### 7.3. Composition and professional experience of each director and member of the fiscal council

Name	Date of birth	Management Body	Election date	Term of office
CPF (Individual Taxpayer ID)	Profession	Elective position held	Investiture Date	Elected by the controller
<b>Other positions and roles held at the issuer</b>				
<b>Daniel André Stieler</b>	03/14/1965	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
391.145.110-53	Accountant	20 - Chairman of the Independent Board of Directors	04/30/2023	No
Coordinator of the Nomination and Governance Committee and member of the Capital Allocation and Projects Committee				
<p><b>Position(s):</b> Chairman (since April 2023) and member (since November 2021) of Vale's Board of Directors, Coordinator (since May 2023) and member (since December 2022) of the Nomination and Governance Committee and member of the Capital Allocation and Projects Committee (since May 2023). <b>Main experiences in the last 5 years:</b> (i) Coordinator of the Capital Allocation and Projects Committee (December 2022 to April 2023); member (November 2021 to May 2022) and Coordinator of the Finance Committee (May 2022 to December 2022) and member of Vale's Nomination Committee (January 2022 to April 2022 and May 2022 to December 2022); (ii) President of the Banco do Brasil Employees' Pension Fund – PREVI (June 2021 to February 2023); (iii) member of the Deliberative Council of the Brazilian Association of Closed Pension Funds – ABRAPP (since July 2021); (iv) member of the Board of Directors at Tupy S.A. (April 2022 to April 2023); (v) member of the Board of Directors at Alelo S.A. (April 2020 to April 2022); (vi) member of the Board of Directors at Livelos S.A. (April 2020 to October 2021); (vii) Superintendent Officer (January 2021 to June 2021), Chairman of the Deliberative Council (July 2020 to January 2021) and member of the Fiscal council (June 2016 to July 2020) of Economus Social Security Institute; (viii) member of the Deliberative Council of the Corporate University of Supplementary Social Security – UniAbraap (February 2021 to June 2021); (ix) Statutory Controlling Officer at Banco do Brasil S.A. (July 2019 to January 2021); (x) member of the Advisory and Finance Board at Banco Votorantim S.A. (October 2016 to October 2019); (xi) Executive Manager of the Accounting Disclosure Management at Banco do Brasil Conglomerate in the Accounting Department of Banco do Brasil S.A. (March 2009 to June 2019); and (xii) member of the Accounting Affairs Committee of Financial Institutions of the Brazilian Federation of Banks – Febraban (from December 2009 to July 2019).</p> <p><b>Education:</b> He graduated in Accounting Sciences from the Federal University of Santa Maria – UFSM in 1989; Postgraduate degree in Financial Administration from Getúlio Vargas Foundation – FGV in 1998; MBA in Auditing from Getúlio Vargas Foundation – FGV completed in 2000; MBA in Accounting from the Foundation Institute for Accounting, Actuarial and Financial Research – FIPECAFI completed in 2003.</p>				
<b>Marcelo Gasparino da Silva</b>	02/13/1971	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
807.383.469-34	Lawyer	25 - Vice-Chairman of the Board of Directors	05/02/2023	No
Member of the Nomination and Governance Committee and member of the People and Compensation Committee				
<p><b>Position(s):</b> Vice-Chairman (since April 2023) and independent member (since April 2020) of Vale's Board of Directors, member of the Nomination and Governance Committee (since December 2022) and member of the People and Compensation Committee (since April 2024). <b>Main experiences in the last 5 years:</b> (i) Member of the Capital Allocation and Projects Committee (May 2023 to April 2024), Coordinator of the Sustainability Committee (May 2021 to April 2023), member of the Nomination Committee (May 2022 to December 2022), member of the Operational Excellence and Risk Committee (May 2021 to May 2022), member of the Sustainability Committee (June 2020 to April 2021), alternate member of the Board of Directors (May 2019 to April 2020), and alternate member of Vale's Board of Directors (May 2016 to April 2017); (ii) Member of the Board of Directors of Banco do Brasil (since April 2023), where he is member of the People, Remuneration, and Eligibility Committee, (iii) Chairman of the Board of Directors of Eternit S.A. (April 2017 to March 2023); (iv) member of the Board of Directors of CEMIG (April 2016 to July 2022); (v) member of the Board of Directors (April 2021 to May 2021 and since August 2021) and member of the Fiscal council (May 2019 to April 2021) of Petrobras, where he is the President of the Statutory Committees for Health, Safety, and Environment, and the Minority Committee, and a Member of the following statutory committees: Audit Committee of Petrobras Conglomerate companies, Investment Committee, and People Committee; (vi) member of the Board of Directors of CELESC (April 2018 to April 2019); (vii) professor at ENA Foundation – School of Government for certification of administrators of state-owned enterprises and government-controlled private companies; (viii) Member of the Board of Directors of Eletrobras (April 2016 to April 2017 and since August 2022), where he/she is also Vice President of the Statutory Committee for Strategy, Governance, and Sustainability of Eletrobras (since August 2022); (ix) Member of the Fiscal Council (April 2018 to April 2019) of Braskem; (x) Member of the Board of Directors (April 2017 to April 2020) of Kepler Weber. <b>Education:</b> He graduated in Law from the Federal University of Santa Catarina in 1994; Postgraduate degree in Corporate Tax Administration from Fundação ESAG – UNICA in 2000; Certified Board Member by Experience (CCA+) from the Brazilian Institute of Corporate Governance – IBGC in 2010. <b>Independence Criterion:</b> He is an independent member of the Board of Directors in accordance with the independence criteria set out in the Novo Mercado Regulation, CVM Resolution No. 59, and Paragraph 4 of Article 11 of Vale's Bylaws.</p>				
<b>Douglas James Upton</b>	28/06/1960	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
719.094.251-33	Investment manager	27 - Independent Board of Directors (Permanent)	05/25/2023	No
N/A				

<b>Professional experience:</b> Independent member of Vale's Board of Directors (since May/2023). <b>Main experiences in the last 5 years:</b> (i) Partner responsible for investments in metals or mining at Capital Research Company (August/2004 to January/2023). <b>Education:</b> Bachelor of Science from the University of Western Australia in 1981; Master's Degree in Business Administration from the University of Western Australia in 1988. <b>Independence Criteria:</b> He is an independent member of the Board of Directors in accordance with the independence criteria set out in the Novo Mercado Regulation, CVM Resolution No. 59 and § 4 of Article 11 of the Bylaws from Vale.				
<b>Fernando Jorge Buso Gomes</b>	06/06/1956	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
370.624.177-34	Banker	22 – Board of Directors (Full Member)	05/05/2023	No
Member of the Capital Allocation and Projects Committee				
<b>Position(s):</b> Member of Vale's Board of Directors (since April 2015) and member of Vale's Capital Allocation and Projects Committee (since December 2022). <b>Main experiences in the last 5 years:</b> (i) Member of Vale's Innovation Committee (May 2023 to April 2024), Vice-Chairman of Vale's Board of Directors (January 2017 to April 2023), Coordinator (May 2019 to April 2021) and member (May 2021 to December 2022) of the People, Compensation and Governance Committee, Member of the People and Compensation Committee (December 2022 to April 2023), Coordinator (December 2019 and April/2021 and from November 2021 to May 2022) of the Financial Committee, Coordinator of the Sustainability Committee (November 2017 to April 2019) and member and Coordinator of the People Committee (November 2017 to April 2019) at Vale; (ii) Chief Executive Officer (since April 2015), Investor Relations Officer (since April 2015), member of the Board of Directors (since April 2022), Vice-Chairman of the Board of Directors (April 2018 to October 2019) and Chairman of the Board of Directors (October 2019 to April 2020) at Bradespar S.A.; (iii) Investor Relations Officer at Millennium Security Holdings Corp. (since October 2015); and (iv) member of the Board of Directors (November 2014 to December 2018) and Officer (June 2016 to December 2018) at 2B Capital S.A. <b>Education:</b> He graduated in Economic Sciences from Faculdades Integradas Bennett in 1979.				
<b>João Luiz Fukunaga</b>	11/07/1983	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
324.445.148-90	Bank officer	22 – Board of Directors (Full Member)	04/28/2023	No
Coordinator of the People and Compensation Committee and Member of the Sustainability Committee				
<b>Professional experience:</b> Member of the Board of Directors of Vale (since May/2023), Coordinator of the People and Compensation Committee (since May/2023) and Member of the Sustainability Committee (since May/2023). <b>Main experiences in the last 5 years:</b> Served as: (i) President of PREVI – Banco do Brasil Employees' Pension Fund (since February/2023); (ii) Officer (2012 to February/2023), National Coordinator of the BB Employee Trading Commission (since 2019); Secretary of Legal Affairs (since 2017), responsible for the Organization and Administrative Support area (from 2020 to February/2023) and Union Auditor of the Bank Workers Union of São Paulo (2022 to February/2023). <b>Education:</b> Degree in History from the Pontifical Catholic University – PUC-SP in 2007; Master in Social History from the Pontifical Catholic University – PUC-SP in 2009.				
<b>Luis Henrique Cals de Beauclair Guimarães</b>	08/10/1966	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
902.946.707-00	Statistician	27 – Independent Board of Directors (Permanent)	04/28/2023	No
Coordinator of the Capital Allocation and Projects Committee and Member of the People and Compensation Committee				
<b>Professional experience:</b> Independent member of the Board of Directors of Vale (since May/2023), Coordinator of the Capital Allocation Committee and Projects (since May/2023) and Member of the People and Compensation Committee (since May/2023). <b>Main experiences in the last 5 years:</b> (i) Chief Executive Officer (since April/2020), Member of the Board of Directors (since July/2020) of Cosan S.A.; (ii) Member of the Board of Directors (since April/2020), Chief Executive Officer (April/2016 to April/2020) of Raízen S.A.; (iii) Member of the Board of Directors of Compass Gás e Energia S.A. (July/2020 to March/2023); (iv) Member of the Board of Directors of Companhia de Gás São Paulo – Comgás (December/2012 to March/2023); (v) Deputy Chairman of the Board of Directors of Rumo S.A. (November/2020 to March/2023); (vi) Member of the Board of Directors of Cosan Luber Invested Limited (since August/2020); (vii) Member of the Board of Directors of Cosan Lubrificantes e Especialidades S.A. (since October/2020); (viii) Member of the Board of Directors of Logum Logística S.A. (since June/2016); (ix) Chief Executive Officer of the Brazilian Association of Listed Companies (ABRASCA); (x) Member of the Board of Directors of Radar Property Agrícolas S.A. (June/2020 to February/2023); (xi) Member of the Board of Directors of Radar II Property Agrícolas S.A. (June/2020 to February/2023); (xii) Member of the Board of Directors of Janus Brasil Participações S.A. (June/2020 to February/2023); (xiii) Member of the Board of Directors of Tellus Brasil Participações S.A. (June/2020 to February/2023); (xiv) Member of the Board of Directors of Duguetiapar Empreendimentos e Participações S.A. (October/2020 to February/2023); (xv) Member of the Board of Directors of Gamioapar Empreendimentos e Participações S.A. (October/2020 to February/2023); (xvi) Member of the Board of Directors of Rede Integrada de Lojas de Conveniência e Proximidade S.A. (October/2019 to February/2023); and (xvii) Chief Executive Officer (April/2016 to April/2020) and Member of the Board of Directors (April/2020 to June/2021) of Raízen Energia S.A. <b>Education:</b> Graduation in Statistical Sciences from the Brazilian Institute of Geography and Statistics (IBGE) in 1987; MBA in Business Administration from Coppead Institute for Graduate Studies and Research in Business Administration – UFRJ in 1993. <b>Independence Criteria:</b> He is an independent member of the Board of Directors in accordance with the independence criteria set out in the Novo Mercado Regulations, CVM Resolution No. 59 and § 4 of Article 11 of Vale's Bylaws.				
<b>Manuel Lino Silva de Sousa Oliveira</b>	03/03/1952	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
717.221.071-97	Economist	27 – Independent Board of Directors (Permanent)	05/03/2023	No
Expert Member of the Audit and Risk Committee and Member of the Capital Allocation and Projects Committee				



<p><b>Position(s):</b> Lead Independent Director (“LID”) of Vale’s Board of Directors (since June 2023, member since May 2021), Expert Member of the Audit and Risk Committee (since December 2022, where served as Coordinator until June 2023) and Member of the Capital Allocation and Projects Committee (since April 2024). <b>Main experiences in the last 5 years:</b> He has served as: (i) Member of the People and Compensation Committee (from May 2023 to March 2024), Coordinator of Vale’s Audit Committee (August 2021 to December 2022), Member of Nomination and Governance Committee (December 2022 to April 2023), member of Vale’s Nomination Committee (May 2022 to December 2022), and member of Vale’s People, Compensation and Governance Committee (August 2021 to May 2022); (ii) member (since May 2022) and Chairman (since June 2022) of the Board of Directors of Jubilee Metals Group PLC; (iii) senior independent member of the Board of Directors of Polymetal International PLC (April 2018 to March 2022); (iv) senior independent member of the Board of Directors of Antofagasta PLC (October 2011 to August 2021); and (v) independent member of the Board of Directors of Blackrock World Mining Investment Trust PLC (February 2020 to July 2021). <b>Education:</b> He graduated in Accounting and Business Economics from the University of Natal-Durban, in South Africa, in 1973; Specialization in Accounting Theory from the University of Natal-Durban, in South Africa, completed in 1975; Specializations in chartered accountant and chartered management accountant from the Institute of Chartered Accountants in South Africa, completed in 1978, and from the Institute of Chartered Management Accounts in the UK, completed in 1988. <b>Independence Criterion:</b> He is an independent member of the Board of Directors in accordance with the independence criteria set out in the Novo Mercado Regulation, CVM Resolution No. 59, and Paragraph 4 of Article 11 of Vale’s Bylaws.</p>				
<b>Paulo Cesar Hartung Gomes</b>	04/21/1957	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders’ Meeting is held
698.412.417-49	Economist	27 – Independent Board of Directors (Permanent)	04/29/2023	No
Member of the Sustainability Committee and Member of the Audit and Risk Committee				
<p><b>Professional experience:</b> Independent member of Vale’s Board of Directors (since May/2023), Member of the Sustainability Committee (since May/2023) and Member of the Audit and Risk Committee (since April/2024). <b>Main experiences in the last 5 years:</b> (i) Member of Vale’s Innovation Committee (May/2023 to April 2024); and (ii) CEO of Ibá – Indústria Brasileira de Árvores (since March/2019). <b>Education:</b> Degree in Economics from the Federal University of Espírito Santo in 1978. <b>Independence Criteria:</b> He is an independent member of the Board of Directors in accordance with the independence criteria set out in the Novo Mercado Regulations, CVM Resolution No. 59 and § 4 of Article 11 of the Vale’s Bylaws.</p>				
<b>Rachel de Oliveira Maia</b>	01/30/1971	She belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders’ Meeting is held
143.363.438-45	Accountant	27 – Independent Board of Directors (Permanent)	04/29/2023	No
Coordinator of the Sustainability Committee and Member of the Nomination and Governance Committee				
<p><b>Position(s):</b> She is an independent member of Vale’s Board of Directors (since May 2021), Coordinator of the Sustainability Committee (since May 2023) and member of the Nomination and Governance Committee (since April 2024). <b>Main experiences in the last 5 years:</b> She has served as: (i) Member of the Audit and Risk Committee (from May 2022 to April 2024); Member of the Sustainability Committee (May 2021 to April 2023) and member of Vale’s Audit Committee (May 2022 to December 2022); (ii) founder of the non-profit organization CAPACITA-ME (since December 2018); (iii) founder and CEO of RM Consulting, focus on “S” of ESG and Leadership (since April 2018); (iv) Independent member of the Board of Directors of Banco do Brasil (May 2021 to April 2023); (v) independent member of the Board of Directors of CVC Corp (since March 2021); (vi) independent member of the Board of Directors of Grupo Soma (December 2020 to May 2022); (vii) Diversity and Inclusion advisor at Carrefour (November 2020 to November 2021); (viii) member of the Women of Brazil Group (since 2020); (ix) member of the Economic and Social Committee of the Development Council (since 2018); (x) administrative consultant at SumUp (December 2020 to December 2021); (xi) Chairman of UNICEF Advisory Board (October 2019 to September 2021); (xii) member of the General Council of the Danish Consulate (April 2014 to November 2020); (xiii) member of the Danish Chamber of Commerce (April 2014 to November 2020); (xiv) CEO at Lacoste S.A. (Brasil) (October 2018 to September 2020); (xv) member of the President’s Committee of the American Chamber of Commerce (Amcham) (April 2016 to October 2019); (xvi) member of the Institute for Retail Development (from 2016 to 2018); (xvii) CEO at Pandora Brasil (April 2010 to April 2018); and (xviii) member of the Council of the Americas of the Executive Leadership Group (ELG) (January 2013 to March 2018). <b>Education:</b> She graduated in Accounting from Centro Universitário FMU in 1996; MBA from Getúlio Vargas Foundation (FGV) completed in 2018; Sant’ Paul SEER: Advanced Program for CEOs, Directors and Presidents in 2021; Harvard Business School Executive Education Negotiation &amp; Leadership (held in 2014); FIA – Fundação Instituto de Administração Master of Business Administration, Finance Executive (between 2006 and 2007); University of Victoria English Language and Leadership Program, General Management (between 2000 and 2001). <b>Independence Criterion:</b> She is an independent member of the Board of Directors in accordance with the independence criteria set out in the Novo Mercado Regulation, CVM Resolution No. 59, and Paragraph 4 of Article 11 of Vale’s Bylaws.</p>				
<b>Shunji Komai</b>	10/26/1971	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders’ Meeting is held
057.477.947-79	Bachelor of Art (foreign language)	22 – Board of Directors (Full Member)	05/02/2023	No
Member of the People and Compensation Committee and Member of the Capital Allocation and Projects Committee				
<p><b>Professional experience:</b> Member of the Board of Directors of Vale (since May/2023), Member of the People and Compensation Committee (since May/2023) and Member of the Capital Allocation and Projects Committee (since April/2024). <b>Main experiences in the last 5 years:</b> (i) Member of the Innovation Committee (May/2023 to April/2024); (ii) Senior Director Vale Negócios (since February/2023), Deputy General Manager, new metals and aluminum (July/2021 to October/2021) and General Manager, Brazil business department (April/2012 to August/2020) by Mitsui &amp; CO. LTD.; (iii) Vice President of Mitsui &amp; CO. (Brazil) SA (since February/2023); and (iv) CEO and President of Mitsui &amp; CO. Mineral Resources Development (Asia) (November/2021 to January/2023). <b>Education:</b> Degree in Arts, Foreign Languages from Dokkyo University in 1994.</p>				

<b>Vera Marie Inkster</b>	06/27/1971	She belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
719.060.091-47	Bachelor's degree in business administration	27 – Independent Board of Directors (Permanent)	05/12/2023	No
Coordinator of the Audit and Risk Committee and Member of the Capital Allocation and Projects Committee				
<b>Professional experience:</b> Independent member of Board of Directors (since May/2023), Coordinator of the Audit and Risks Committee (since June/2023, Member since May/2023) and Member of the Capital Allocation and Projects Committee (since April/2024) of Vale. <b>Main experiences in the last 5 years:</b> (i) Member of the Nomination and Governance Committee (from May/2023 to March/2024) at Vale; (ii) Member of the Board of Directors, Chairman of the Audit Committee and member of the Compensation Committee of Lucara Diamond Corp (since June/2014); (iii) President (September/2018 to September/2021) and CEO (September/2018 to September/2021), Director (September/2018 to December/2021) and Chief Financial Officer (May/2009 to September/2018) of Lundin Mining Corp; and (iv) President (November/2020 to January/2022) and Director (October/2018 to January/2022) of the International Zinc Association. <b>Education:</b> Degree in Business Administration from St. Francis Xavier University, Canada in 1993; Postgraduate degree in Chartered Professional Accountant from the Institute of Chartered Accountants of Ontario in 1998. <b>Independence Criteria:</b> He is an independent member of the Board of Directors in accordance with the independence criteria set out in the Novo Mercado Regulations, CVM Resolution No. 59 and § 4 of the Article 11 of Vale's Bylaws.				
<b>André Viana Madeira</b>	07/04/1985	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
076.512.086-09	Specialized Mechanic	22 – Board of Directors (Full Member)	04/28/2023	No
Member of the Sustainability Committee				
<b>Position(s):</b> Member of Vale's Board of Directors elected by all Vale employees (since May/2023) and Member of the Sustainability Committee (since May 2023). <b>Main experiences in the last 5 years:</b> Alternate member of Vale's Board of Directors (May 2021 to April 2023), and member of the Innovation Committee (May 2022 to April 2023), member of the Operational Excellence and Risk Committee (May 2021 to December 2022). <b>Education:</b> He graduated in Law from Centro de Ensino Superior de Itabira, in 2009; Degree in Theology from Escola Bíblica Permanente São – EBPS in 2006; Degree in Law from the FUNCESI University Center in the City of Itabira in 2008.				
<b>Wagner Vasconcelos Xavier</b>	01/20/1983	He belongs only to the Board of Directors	04/28/2023	Until the 2025 Annual Shareholders' Meeting is held
094.690.887-78	Patio Machinist	23 – Board of Directors (Alternate)	05/07/2023	No
N/A				
<b>Professional experience:</b> Alternate member of the Board of Directors elected by all Vale employees (since May/2023). <b>Main experiences in the last 5 years:</b> (i) Member of the Innovation Committee (May/2023 to April/2024) of Vale; and (ii) President of SINDFER (since January/2020). <b>Education:</b> Incomplete degree in Business Administration from Estácio de Sá.				
<b>Eduardo de Salles Bartolomeo</b>	04/12/1964	He belongs only to the Board of Executive Officers	03/15/2021	05/26/2024
845.567.307-91	Engineer	10 – Chief Executive Officer / Superintendent	03/18/2021	No
N/A				
<b>Position(s):</b> He is Vale's Chief Executive Officer (since March 2019). <b>Main experiences in the last 5 years:</b> He has served as: (i) permanent participant of the Information Disclosure Committee (April 2019 to February 2020), and member of Vale's Financial Committee (April 2017 to December 2017); (ii) Executive Officer of Base Metals at Vale Canada Ltd. (January 2018 to March 2019); and (iii) Chairman of the Board of Directors of Login – Logística Intermodal (April 2016 to April 2019). <b>Education:</b> He graduated in Metallurgical Engineering from the Fluminense Federal University in 1988; MBA from Katholieke Universiteit Leuven – Belgium, completed in 1993; MBA from Massachusetts Institute of Technology – USA, completed in 2013.				
<b>Alexandre Gomes Pereira</b>	07/24/1969	He belongs only to the Board of Executive Officers	03/15/2021	05/26/2024
014.732.957.42	Mathematician	19 – Other Officers	03/18/2021	No
N/A				
<b>Position(s):</b> He is Executive Vice President for Business at Vale (since August 2017). <b>Main experiences in the last 5 years:</b> (i) Global CIO (October 2011 to July 2017), (ii) Information Technology Officer in the Base Metals sector, (iii) Officer for Global Information Technology Services (July 2009 to October 2011), and (iv) CIO for Nickel Business (February 2007 to July 2009) at Vale. <b>Education:</b> He graduated in Mathematics/Computer Science from the State University of Rio de Janeiro – UERJ in 1991; Postgraduate degree in Business Management from Fundação Dom Cabral in 1992; Postgraduate degree in Computer Networks from the Federal University of Espírito Santo – UFES in 1996; MBA in Business from the University of São Paulo – USP completed in 2002.				
<b>Alexandre Silva D'Ambrosio</b>	08/01/1962	He belongs only to the Board of Executive Officers	03/15/2021	05/26/2024

042.170.338-50	Lawyer	19 – Other Officers	03/18/2021	No
Executive Vice-President for Corporate and Institutional Affairs, Coordinator of the Executive Risk Committee – Compliance, Institutional Relations and Communication, and member of the Conduct and Integrity Committee				
<b>Position(s):</b> He is Executive Vice-President for Corporate and Institutional Affairs at Vale (since March 2021), member of the Conduct and Integrity Committee (since March 2018) and Coordinator of the Executive Risk Committee – Compliance, Institutional Relations and Communication (since March 2021, member since August 2019). <b>Main experiences in the last 5 years:</b> (i) Statutory Officer at Vale International S.A. (since June 2018); (ii) member of the Board of Commissioners of PV Vale Indonesia (since June 2020); (iii) member of the Board of Directors of PT Vale – Indonesia (since June 2018); (iv) member of the Board of Directors of Vale Nouvelle Caledonie (June 2018 to March 2021); (v) Vale's general consultant (March 2018 to March 2021); and (vi) Executive Vice-President at Banco Santander S.A. (March 2016 to March 2018). <b>Education:</b> He graduated in Law from the University of São Paulo in 1984; LLM (Master of Laws) from Harvard Law School in 1986; MCL (Master Comparative Law – American Practice) – Juris Doctor Equivalent from the National Law Center, George Washington University, in 1989.				
<b>Carlos Henrique Senna Medeiros</b>	08/01/1963	He belongs only to the Board of Executive Officers	03/15/2021	05/26/2024
048.556.228-69	Engineer	19 – Other Officers	03/18/2021	No
Coordinator of the Business Risk Executive Committee – Operational Risks and of the Business Risk Executive Committee – Geotechnical Risks				
<b>Position(s):</b> He is Executive Vice-President for Operations at Vale (since June/2019). <b>Main experiences in the last 5 years:</b> He has served as: (i) Coordinator of the Business Risk Executive Committee – Operational Risks (August 2019 to December 2022) and Coordinator of the Executive Business Risk Committee – Geotechnical Risks (August 2019 to December 2022) at Vale; (ii) President for North and Central America at Ball Corporation (June 2016 to June 2019); and (iii) Chairman of the Board of Directors at Envases de Centroamerica (September 2014 to June 2019). <b>Education:</b> He graduated in Mechanical Engineering – Aeronautics from Instituto Tecnológico da Aeronáutica in December 1985, completed a specialization in Marketing from Escola Superior de Propaganda e Marketing in December 1997, as well as the Senior Executive Program from Stanford University in August 2001.				
<b>Gustavo Duarte Pimenta</b>	06/20/1978	He belongs only to the Board of Executive Officers	09/20/2021	05/26/2024
035.844.246-07	Economist	19 – Other Officers	11/01/2021	No
Coordinator of the Business Risk Executive Committee – Strategic, Financial and Cyber Risks				
<b>Position(s):</b> He is Executive Vice-President for Finance and Investor Relations at Vale (since November 2021) and Coordinator of the Business Risk Executive Committee – Strategic, Financial and Cyber Risks (since November 2021). <b>Main experiences in the last 5 years:</b> He has served as: (i) an independent member of the Board of Directors at J.M. Huber (since January 2021); (ii) member of the Board of Directors at AES Clean Energy (February 2019 to October 2021); (iii) Chief Financial Officer (CFO) at The AES Corporation (January 2019 to October 2021); (iv) Deputy CFO at The AES Corporation (February 2018 to December 2018); and (v) CFO at AES Mexico (January 2014 to January 2018). <b>Education:</b> He graduated in Economic Sciences from the Federal University of Minas Gerais in 2002; Professional Master's Degree in Economics from Fundação Getúlio Vargas – FGV in 2013.				
<b>Marcello Magistrini Spinelli</b>	11/23/1973	He belongs only to the Board of Executive Officers	03/15/2021	05/26/2024
197.378.918-30	Production Engineer	19 – Other Officers	03/18/2021	No
N/A				
<b>Position(s):</b> He is Executive Vice-President for Iron Ore Solutions at Vale (since May 2019). <b>Main experiences in the last 5 years:</b> He has served as: (i) CEO at VLI Logística S.A. (July 2011 to May 2019); (ii) member of the Board of Directors of FNS – Ferrovia Norte e Sul (August 2011 to May 2019); (iii) Director at VLI Multimodal S.A. (November 2010 to May 2019); (iv) Director at VLI Operações Ferroviárias Independentes (August 2011 to May 2019); (v) Director at VLI Soluções S.A. (October 2011 to May 2019); and (vi) CEO at FCA – Ferrovia Centro Atlântica (February 2007 to April 2019). <b>Education:</b> He graduated in Production Engineering from the Polytechnic School at USP in 1996; Extension Program in Marketing at ESPM – Escola Superior de Propaganda in 2014; Senior Leadership Program at Massachusetts Institute of Technology in 2005; Leadership Program at IMD Business School in 2007.				
<b>Maria Luiza de Oliveira Pinto e Paiva</b>	07/14/1963	She belongs only to the Board of Executive Officers	03/15/2021	05/26/2024
129.079.488-06	Psychologist	19 – Other Officers	03/17/2021	No
Coordinator of the Business Risk Executive Committee – Sustainability, Institutional Relations and Reputation				
<b>Position(s):</b> She is Executive Vice President for Sustainability at Vale (since March 2021) and Coordinator of the Business Risk Executive Committee – Sustainability, Institutional Relations and Reputation (since August 2022). <b>Main experiences in the last 5 years:</b> She has served as: (i) member of the Board of Directors of Rede Brasil Pacto Global (January 2020 to March 2021); (ii) member of the Board of Directors of the Brazilian Business Council for Sustainable Development (August 2019 to March 2021); (iii) Executive Officer for Sustainability at Suzano S.A. (January 2019 to February 2021); and (iv) Executive Officer for Sustainability at Fibria S.A. (March 2015 to January 2019). <b>Education:</b> She graduated in Psychology from the Pontifical Catholic University of the State of São Paulo (PUC-SP) in 1986.				
<b>Marina Barrenne de Artagão Quental</b>	04/18/1964	She belongs only to the Board of Executive Officers	03/15/2021	05/26/2024

772.073.197-20	Psychologist	19 – Other Officers	03/17/2021	No
Member of the Conduct and Integrity Committee				
<b>Position(s):</b> She is Executive Vice President for People at Vale (since March 2021) and member of the Conduct and Integrity Committee (since November 2017). <b>Main experiences in the last 5 years:</b> She has served as: <b>(i)</b> People Officer at Vale (since November 2017); <b>(ii)</b> member of the Deliberative Council (2019 to 2021) and Vice-President of the Deliberative Council (2013 to 2018) of the Human Resources Brazilian Association of Rio de Janeiro; and <b>(iii)</b> Vice-President for Human and Organizational Development at Raízen (January 2014 to November 2017). <b>Education:</b> She graduated in Psychology from the Pontifical Catholic University of the State of Rio de Janeiro (PUC-RJ) in 1986; MBA from Fundação Dom Cabral completed in 2003.				
<b>Rafael Jabur Bittar</b>	09/24/1980	He belongs only to the Board of Executive Officers	12/22/2022	05/26/2024
707.231.411-34	Civil Engineer	19 – Other Officers	12/28/2022	No
Member of the Business Risk Executive Committee – Operational Risks and of the Business Risk Executive Committee – Geotechnical Risks				
<b>Position(s):</b> He is Technical Executive Vice-President (since January 2023) at Vale, Coordinator of the Business Risk Committee – Geotechnical Risks (since January 2023) and Coordinator of the Business Risk Executive Committee – Operational Risks (since January 2023). <b>Main experiences in the last 5 years:</b> He has served as: <b>(i)</b> Officer for Geotechnics at Vale (September 2019 to December 2022); and <b>(ii)</b> Senior Officer for Tailings Management at Yamana Gold (August 2012 to August 2019). <b>Education:</b> He graduated in Civil Engineering from the Federal University of Ouro Preto in 2003; Master's degree in Civil Engineering – Geotechnics from the Federal University of Ouro Preto in 2006; MBA in Management from Getúlio Vargas Foundation – FGV in 2011.				
<b>Márcio de Souza</b>	05/06/1966	Fiscal council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
844.274.347-20	Banker	42 – Chairman of the Fiscal council Elected by Minority Common Shareholders	04/26/2024	No
N/A				
<b>Position(s):</b> He is Chairman (since May 2022) and member (since April 2022) of Vale's Fiscal council. <b>Main experiences in the last 5 years:</b> He has served as: <b>(i)</b> Administration Officer (since June 2018), Data Processing Officer – DPO (since March 2020) and Executive Manager for Benefits (December 2012 to May 2018) of the Banco do Brasil Employees' Pension Fund – PREVI; <b>(ii)</b> member of the Board of Directors (since August 2021) and member of the Compensation and Succession Committee (since September 2021) at Neoenergia; and <b>(iii)</b> member of the Board of Directors (April 2019 to April 2021) and member of the Audit, Risk and Ethics Committee (April 2019 to April 2021) of Embraer – Empresa Brasileira de Aeronáutica S.A. <b>Education:</b> He graduated in Law from the Catholic University of Petrópolis – UCP in 1989; MBA in Project Management from Getúlio Vargas Foundation, completed in 2009; Specialization in Executive Development from Inspier – Institute of Education and Research, completed in 2017; CPA-20 Certification from Anbima (since November 2014) and Certification as a Manager with emphasis on Administration from ICSS – Institute of Certification of Social Security Professionals (since July 2016).				
<b>Dario Carnevalli Durigan</b>	05/09/1984	Fiscal council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
330.672.408-47	Lawyer	44 – Fiscal council (Full Member) Elected by Preferred Shareholders	04/26/2024	No
N/A				
<b>Position(s):</b> Executive Secretary of the Ministry of Finance (since June/2023). <b>Main experiences in the last 5 years:</b> <b>(i)</b> Member of the Board of Directors of Banco do Brasil S.A. (since August/2023); <b>(ii)</b> Director of Public Policies at Whatsapp (2020 to 2023); <b>(iii)</b> Legal Consultant of the Union in São Paulo – Attorney General of the Union (2017 to 2019). <b>Education:</b> He graduated in Law from the University of São Paulo – USP, in 2007; Master's degree from the Faculty of Law of the University of Brasília (UnB), in 2018.				
<b>Heloísa Belotti Bedicks</b>	08/25/1960	Fiscal council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
048.601.198-43	Economist	45 – Fiscal council (Full Member) Elected by Minority Common Shareholders	04/30/2024	No
N/A				
<b>Position(s):</b> She is a full member of Vale's Fiscal council (since April 2022). <b>Main experiences in the last 5 years:</b> She has served as: <b>(i)</b> member of the Board of Directors of the Brazilian National Development Bank – BNDES (since March 2020); <b>(ii)</b> member of the Board of Directors of MAPFRE Group (since June 2019); <b>(iii)</b> member of the Fiscal council of the Boticário Foundation (since April 2020); <b>(iv)</b> Member of the Audit Committee of Brasileg (since September 2020); <b>(v)</b> a voluntary member of the UN Global Compact, GRI and Open Doors Mission (since 2020) councils; <b>(vi)</b> member of Braskem's Fiscal council (May 2020 to April 2022); <b>(vii)</b> Director General of the Brazilian Institute of Corporate Governance – IBGC (April 2001 to January 2020); and <b>(viii)</b> Board member at the Association of Supporters of the Mergers and Acquisition Committee – ACAF (B3, Anbima and IBGC) (from 2015 to 2019). <b>Education:</b> She graduated in Economics from the State University of Campinas – Unicamp in 1983; Degree in Accounting from the Pontifical Catholic University of Minas Gerais in 1985; Specialization in Corporate Governance from Yale University completed in 2003; Specialization in Board of Directors from Chicago University, completed in 2007; Master in Business Administration from Mackenzie University in 2008; IBGC Certification for Board of Directors, Fiscal Council and Audit Committee.				

<b>Paulo Clovis Ayres Filho</b>	05/19/1959	Fiscal Council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
049.925.178-46	Civil Engineer	45 – Fiscal council (Full Member) Elected by Minority Common Shareholders	04/26/2024	No
N/A				
<b>Professional experience:</b> Effective Member (since May/2023) of the Fiscal Council of Vale. <b>Main experiences in the last 5 years:</b> (i) Independent Alternate Member of the Fiscal Council of Rumo S.A. (since April 2023); (ii) several positions at British American Tobacco (Souza Cruz), in Brazil and in the United Kingdom, where he held functions from 1985 to 2019, including the financial area, controlling, treasury, investor relations, government relations and auditing, and he was also responsible for the company's entire global strategy and CEO office; (iii) he currently acts as an independent consultant and does not hold other positions on fiscal council or board of directors; and (iv) member of the deliberative board of the private pension foundation for Souza Cruz employees – FASC, Fundação Albino Souza Cruz (since April/2024). <b>Education:</b> Degree in Civil Engineering from the Polytechnic School of the University of São Paulo and in Economics from the Faculty of Economics of the University of São Paulo.				
<b>Raphael Manhães Martins</b>	02/08/1983	Fiscal council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
096.952.607-56	Lawyer	45 – Fiscal council (Full Member) Elected by Minority Common Shareholders	05/02/2024	No
N/A				
<b>Position(s):</b> He is a full member of Vale's Fiscal council (since April 2015). <b>Main experiences in the last 5 years:</b> He has served as: (i) partner and lawyer at Faoro Advogados (since April 2010); (ii) member of the Board of Directors (since April 2021) and full member of the Fiscal council (2019 to 2021) at Oi S.A.; (iii) full member of the Fiscal council of Companhia Paranaense de Energia – COPEL (since April 2021); (iv) member of the Board of Directors (April 2015 to April 2020) of Eternit S.A.; (v) member of the Board of Directors (2019 to 2020) and full member of the Fiscal council (2014 to 2019) of Light S.A.; (vi) Chairman of the Fiscal council (August 2019 to April 2020) of companies controlled by JHSF Participações S.A. <b>Education:</b> He graduated in Law from the University of the State of Rio de Janeiro – UERJ in December 2006; Certificate of Fiscal council Member from IBGC, in the CCF IBGC category.				
<b>Adriana de Andrade Solé</b>	07/27/1960	Fiscal council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
378.627.316-20	Electrical Engineer	48 – Fiscal council (Alternate Member) Elected by Minority Common Shareholders	04/26/2024	No
N/A				
<b>Position(s):</b> She is an alternate member of Vale's Fiscal council (since May 2021). <b>Main experiences in the last 5 years:</b> (i) member of the Board of Directors of SCGAS – Companhia de Gás de Santa Catarina (since July 2020); (ii) member of the Advisory Board of Editora Fórum (since January 2019); and (iii) founding partner of Tradecon Ltda. (since 1999). <b>Education:</b> She graduated in Electrical Engineering from Pontifical Catholic University of Minas Gerais in 1986; Specialization in Economic Engineering from Dom Cabral Foundation – FDC in 1996; Executive MBA in Business Management from Getúlio Vargas Foundation – FGV in 2001; Higher education diploma in Spanish from the University of Salamanca in 2003; Board member certified by IBGC since 2010.				
<b>Rafael Rezende Brigolini</b>	07/17/1982	Fiscal council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
055.693.306-07	Economist	47 – Fiscal council (Alternate Member) Elected by Preferred Shareholders	04/26/2024	No
N/A				
<b>Position(s):</b> He is an alternate member of Vale's Fiscal council (since April 2024). <b>Main experiences in the last 5 years:</b> General Coordinator in the Tax Operations Coordination (2016 to 2023) at the National Treasury. <b>Education:</b> Graduated in Economics from Universidade Estadual de Campinas (Unicamp) in December 2004.				
<b>Jandaraci Ferreira de Araujo</b>	01/05/1973	Fiscal council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
730.397.645-00	Administrator	48 – Fiscal council (Alternate) Elected by Minority Common Shareholders	04/26/2024	No
N/A				



<b>Professional experience:</b> Alternate Member of the Fiscal Council of Vale (since April 2022). <b>Main experience in the last 5 years:</b> (i) CFO of 99 Jobs.com, a startup that provides a work relationship platform (since January 2022); (ii) Head of Sustainable Development & Social Programs (between November 2020 and December 2021) at Santander Brasil, a publicly-held company with authorized capital in the banking sector; (iii) Undersecretary of Entrepreneurship, Micro, Small and Medium Enterprises (between February 2019 and October 2020) of the Government of São Paulo; (iv) Executive Director (between February 2019 and October 2020) of Banco Do Povo Paulista; (v) Founding Partner and Chief Financial Officer (between July 2015 and January 2019) of BP9 Comércio e Representações Ltda, a B2B digital retail company; (vi) Member of the Council of the Board of Trade of São Paulo (vii) Member of the advisory council of CIEE-SP (Company-School Integration Center), a non-profit civil association governed by private law (between January 2021 and February 2022); (viii) Member of the Board of Directors (since April 2021) of Kunumi S.A., a software company. <b>Education:</b> She is a technician in Metallurgy from CEFET – BA since 1994. She graduated in Marketing from Centro Universitário da Cidade in 2003; completed an Executive MBA in Business Administration from the Business School of São Paulo in 2006 and from Fundação Dom Cabral in 2019, and completed an MBA in Finance, Controllership and Auditing from Fundação Getúlio Vargas in 2013.				
<b>Ana Maria Loureiro Recart</b>	06/04/1973	Fiscal Council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
261.320.138-06	Lawyer	48 – Fiscal council (Alternate) Elected by Minority Common Shareholders	04/26/2024	No
N/A				
<b>Professional experience:</b> Alternate member of the Fiscal Council of Vale (since May/2023). <b>Main experiences in the last 5 years:</b> (i) Chief Financial and Investor Relations Officer at Gafisa S.A. (September/2018 to March/2019); (ii) Director of GWI Empreendimentos Imobiliários S.A. (January/2011 to September/2018). <b>Education:</b> Degree in Law from USP in 1998; Postgraduate MBA in Business Administration from Fundação Dom Cabral in 2007; LLM International Legal Studies at the Washington College of Law in 2003; Post-MBA Advanced Boardroom for Women at Saint Paul University in 2016; Board Diversity Program by IBGC in 2021.				
<b>Guilherme José de Vasconcelos Cerqueira</b>	03/22/1964	Fiscal Council	04/26/2024	Until the 2025 Annual Shareholders' Meeting is held
919.801.277-00	Engineer	48 – Fiscal council (Alternate) Elected by Minority Common Shareholders	04/27/2024	No
N/A				
<b>Professional experience:</b> Alternate Member (since May/2023) of Vale's Fiscal Council. <b>Main experience in the last 5 years:</b> several positions at the Shell Group, including working at Shell International Ltd., in London/UK, where he held management positions between May 2004 and April 2007. At Raízen S.A. he was responsible for the controlling area from April 2011 to April 2014, when he assumed responsibility for the financial and supply area, having remained in the position of Chief Financial and Investor Relations Officer until May 2022. of the fiscal council of Raízen S.A., since July 22, 2022. <b>Education:</b> graduated in Mechanical Engineering from the Federal University of Rio de Janeiro and in Economics from the State University of Rio de Janeiro, with an MBA from COPPEAD.				

### **Statement of Non-Conviction**

Each of the members of the Board of Directors, Executive Committee and Fiscal council have declared, for all legal purposes, that, in the last 5 years, they have not sustained any criminal conviction, (ii) any adverse judgment in administrative proceedings from the Securities and Exchange Commission (“CVM”), the Central Bank of Brazil (“BCB”) or the Superintendence of Private Insurance (“SUSEP”), or also (iii) any final and unappealable judgment, at the judicial level or subject matter of a final administrative decision, which has suspended or disqualified him/her from undertaking any professional or commercial activity.

## 7.4. Committees composition

Name	Committe type	Audit type	Position held	Date of birth	date of ownership	Term of office
CPF (Individual Taxpayer ID)	Description other committees	Profession		Election date	Start date of the first term	
Other positions/functions exercised at the issuer						
<b>Vera Marie Inkster</b>	Other Committees	Statutory Audit Committee adhering to CVM Instruction No. 308/99	Coordinator	06/27/1971	05/23/2023	Until the 2025 Annual Shareholders' Meeting is held
719.060.091-47	Audit and Risk Committee	Bachelor's degree in business administration		15/05/2023	05/23/2023	
Independent Member of the Board of Directors and Member of the Capital Allocation and Projects Committee						
<b>Manuel Lino Silva de Sousa Oliveira</b>	Other Committees	Statutory Audit Committee adhering to CVM Instruction No. 308/99	Expert Member	03/03/1952	05/25/2022	Until the 2025 Annual Shareholders' Meeting is held
717.221.071-97	Audit and Risk Committee	Economist		05/15/2022	08/01/2021	
Independent Member of the Board of Directors and Member of the Capital Allocation and Projects Committee						
<b>Paulo Cesar Hartung Gomes</b>	Other Committees	Statutory Audit Committee adhering to CVM Instruction No. 308/99	Member of the Committee (Permanent)	04/21/1957	04/16/2024	Until the 2025 Annual Shareholders' Meeting is held
698.412.417-49	Audit and Risk Committee	Economist		04/15/2024	04/16/2024	
Independent Member of the Board of Directors and Member of the Sustainability Committee						
<b>Luis Henrique Cals de Beauclair Guimarães</b>	Other Committees		Coordinator	08/10/1966	05/17/2023	Until the 2025 Annual Shareholders' Meeting is held
902.946.707-00	Capital Allocation and Projects Committee	Statistician		05/15/2023	05/17/2023	
Independent Member of the Board of Directors and Member of the People and Compensation Committee						
<b>Daniel André Stieler</b>	Other Committees		Member of the Committee (Permanent)	03/14/1965	05/18/2023	Until the 2025 Annual Shareholders' Meeting is held
391.145.110-53	Capital Allocation and Projects Committee	Accountant		05/15/2023	11/25/2021	
President of the Board of Directors and Coordinator of the Nomination and Governance Committee						
<b>Fernando Jorge Buso Gomes</b>	Other Committees		Member of the Committee (Permanent)	06/06/1956	05/23/2023	Until the 2025 Annual

						Shareholders' Meeting is held
370.624.177-34	Capital Allocation and Projects Committee	Banker		05/15/2023	04/20/2017	
Member of the Board of Directors						
<b>Manuel Lino Silva de Sousa Oliveira</b>	Other Committees		Member of the Committee (Permanent)	03/03/1952	04/19/2024	Until the 2025 Annual Shareholders' Meeting is held
807.383.469-34	Capital Allocation and Projects Committee	Economist		04/15/2024	04/19/2024	
Independent Member of the Board of Directors and Expert Member of the Audit and Risk Committee						
<b>Shunji Komai</b>	Other Committees		Member of the Committee (Permanent)	10/26/1971	04/16/2024	Until de 2025 Annual Shareholders' Meeting is held
057.477.947-79	Capital Allocation and Projects Committee	Bachelor of Art (foreign language)		04/15/2024	04/16/2024	
Member of the Board of Directors and Member of the People and Compensation Committee						
<b>Vera Marie Inkster</b>	Other Committees		Member of the Committee (Permanent)	06/27/1971	04/19/2024	Until de 2025 Annual Shareholders' Meeting is held
719.060.091-47	Capital Allocation and Projects Committee	Bachelor's degree in business administration		04/15/2024	04/19/2024	
Independent Member of the Board of Directors and Coordinator of the Audit and Risk Committee						
<b>Daniel André Stieler</b>	Other Committees		Member of the Committee (Permanent)	03/14/1965	05/25/2023	Until the 2025 Annual Shareholders' Meeting is held
391.145.110-53	Nomination and Governance Committee	Accountant		05/15/2023	11/25/2021	
President of the Board of Directors and Member of the Capital Allocation and Projects Committee						
<b>Marcelo Gasparino da Silva</b>	Other Committees		Member of the Committee (Permanent)	02/13/1971	05/16/2023	Until the 2025 Annual Shareholders' Meeting is held
807.383.469-34	Nomination and Governance Committee	Lawyer		05/15/2023	04/30/2020	
Independent Vice-President of the Board of Directors and Member of the People and Compensation Committee						
<b>Rachel de Oliveira Maia</b>	Other Committees		Member of the Committee (Permanent)	01/30/1971	04/15/2024	the 2025 Annual Shareholders' Meeting is held
143.363.438-45	Nomination and Governance Committee	Accountant		04/15/2024	04/15/2024	
Independent Member of the Board of Directors and Coordinator of the Sustainability Committee						
<b>João Luiz Fukunaga</b>	Other Committees		Coordinator	11/07/1983	05/18/2023	Until the 2025 Annual Shareholders' Meeting is held
324.445.148-90	People and Compensation Committee	Banker		05/15/2023	05/18/2023	
Member of the Board of Directors and Member of the Sustainability Committee						
<b>Luis Henrique Cals de Beauclair Guimarães</b>	Other Committees		Member of the Committee (Permanent)	08/10/1966	05/17/2023	Until the 2025 Annual



						Shareholders' Meeting is held
902.946.707-00	People and Compensation Committee	Statistician		05/15/2023	05/17/2023	
Independent Member of the Board of Directors and Coordinator of the Capital Allocation and Projects Committee						
<b>Marcelo Gasparino da Silva</b>	Other Committees		Member of the Committee (Permanent)	02/13/1971	04/15/2024	Until the 2025 Annual Shareholders' Meeting is held
807.383.469-34	People and Compensation Committee	Lawyer		04/15/2024	04/15/2024	
Independent Vice-President of the Board of Directors and Member of the Nomination and Governance Committee						
<b>Shunji Komai</b>	Other Committees		Member of the Committee (Permanent)	10/26/1971	05/19/2023	Until the 2025 Annual Shareholders' Meeting is held
057.477.947-79	People and Compensation Committee	Bachelor of Art (foreign language)		05/15/2023	05/19/2023	
Member of the Board of Directors and Member of the Capital Allocation and Projects Committee						
<b>Rachel de Oliveira Maia</b>	Other Committees		Coordinator	01/30/1971	05/22/2023	Until the 2025 Annual Shareholders' Meeting is held
143.363.438-45	Sustainability Committee	Accountant		05/15/2023	05/03/2021	
Independent Member of the Board of Directors and Member the Nomination and Governance Committee						
<b>João Luiz Fukunaga</b>	Other Committees		Member of the Committee (Permanent)	11/07/1983	05/18/2023	Until the 2025 Annual Shareholders' Meeting is held
324.445.148-90	Sustainability Committee	Banker		05/15/2023	05/18/2023	
Member of the Board of Directors and Coordinator of the People and Compensation Committee						
<b>Paulo Cesar Hartung Gomes</b>	Other Committees		Member of the Committee (Permanent)	04/21/1957	05/23/2023	Until the 2025 Annual Shareholders' Meeting is held
698.412.417-49	Sustainability Committee	Economist		05/15/2023	05/23/2023	
Independent Member of the Board of Directors and Member of the Audit and Risk Committee						
<b>Andre Viana Madeira</b>	Other Committees		Member of the Committee (Permanent)	07/04/1985	05/17/2023	Until the 2025 Annual Shareholders' Meeting is held
076.512.086-09	Sustainability Committee	Specialized mechanic		05/15/2023	05/17/2023	
Member of the Board of Directors						
<b>Denis Celso Marques Cuenca</b>	Other Committees		Coordinator	06/18/1968	07/28/2021	undetermined
114.064.938-80	Conduct and Integrity Committee	Administrator		07/28/2021	07/28/2021	
Non-statutory Director of Audit and Compliance and Responsible for Internal Audit						
<b>Alexandre Silva D'Ambrosio</b>	Other Committees		Member of the Committee (Permanent)	08/01/1962	03/19/2018	undetermined
042.170.338-50	Conduct and Integrity Committee	Lawyer		03/19/2018	03/19/2018	
Executive Vice President of Corporate and Institutional Affairs and Coordinator of the Executive Risk Committee – Compliance, Institutional Relations and Communication						
<b>Camilla dos Reis Claudio Soares</b>	Other Committees		Member of the Committee (Permanent)	11/25/1978	02/11/2020	undetermined

082.993.787-02	Conduct and Integrity Committee	Lawyer	02/11/2020	02/11/2020	
Corporate Integrity Director and Member of the Executive Risk Committee - Compliance, Institutional Relations and Communication					
<b>Marina Barrenne de Artagão Quental</b>	Other Committees		Member of the Committee (Permanent)	04/18/1964	11/17/2017 undetermined
772.073.197-20	Conduct and Integrity Committee	Psychologist		11/17/2017	11/17/2017
People Executive Vice President					
<b>Rafael Jabur Bittar</b>	Other Committees		Coordinator	09/24/1980	01/01/2023 undetermined
707.231.411-34	Executive Risk Committee - Operational	Civil engineer		01/01/2023	01/01/2023
Technical Executive Vice-President and Coordinator of the Risk Executive Committee - Geotechnical					
<b>Rodrigo Ramos Silveira</b>	Other Committees		Member of the Committee (Permanent)	04/25/1973	02/24/2023 undetermined
120.682.788-20	Executive Risk Committee - Operational	Chemical engineer		02/24/2023	08/22/2019
Director of Operational Risks, SSMA and International Operations, member of the Executive Committee of Risks - Geotechnical and member of the Executive Risk Committee - Sustainability					
<b>Claudemir Peres</b>	Other Committees		Secretary	01/19/1968	02/24/2023 undetermined
091.186.668-09	Executive Risk Committee - Operational	Industrial Chemist		02/24/2023	11/18/2019
Director of SSMA and Operational Risks, Member of the Executive Risk Committee - Geotechnical and Member of the Executive Risk Committee - Sustainability					
<b>Bruno Menegatti Esperandio</b>	Other Committees		Secretary - Alternate	12/11/1983	08/14/2023 undetermined
325.241.208-05	Executive Risk Committee - Operational	Chemical Engineer		08/14/2023	08/14/2023
Manager of Quantitative Risk Analysis and alternate member of the Executive Risk Committee - Geotechnical					
<b>Andressa Machado Duran Linhares</b>	Other Committees		Member of the Committee (Permanent)	06/04/1975	08/14/2023 undetermined
037.689.187-42	Executive Risk Committee - Operational	Economist		08/14/2023	08/14/2023
Director of Business Risk Management and secretary of the Executive Risk Committee - Strategic, Financial and Cybernetic					
<b>Bruna Paiva Maffra</b>	Other Committees		Member of the Committee (Permanent)	09/08/1982	02/24/2023 undetermined
048.495.276-55	Executive Risk Committee - Operational	Administrator		02/24/2023	02/24/2023
Director of Operational Excellence and Continuous Improvement and Member of the Executive Risk Committee - Geotechnical					
<b>Bruno Santos Ferraz</b>	Other Committees		Member of the Committee (Permanent)	11/11/1974	09/30/2019 undetermined
045.463.317-38	Executive Risk Committee - Operational	Civil engineer		09/30/2019	09/30/2019
Environmental Director and Alternate Member of the Executive Risk Committee - Sustainability					
<b>Camilla Lott Ferreira</b>	Other Committees		Member of the Committee (Permanent)	04/10/1976	08/14/2023 undetermined
043.987.797-01	Executive Risk Committee - Operational	Agronomist Engineer		08/14/2023	08/14/2023
Director of Corporate Sustainability, secretary of the Executive Risk Committee - Sustainability and member of the Executive Risk Committee - Compliance, Institutional Relations and Communication					
<b>Geraldo Paes Junior</b>	Other Committees		Member of the Committee (Permanent)	11/16/1972	02/24/2023 undetermined
026.523.527-84	Executive Risk Committee - Operational	Civil engineer		02/24/2023	02/24/2023
Director of Geotechnics and Secretary of the Risk Executive Committee - Geotechnical					
<b>Kleger Duque de Almeida Filho</b>	Other Committees		Member of the Committee (Permanent)	01/31/1966	08/14/2023 undetermined
583.594.866-20	Executive Risk Committee - Operational	Civil engineer		08/14/2023	08/22/2019
Director of Engineering, Asset Management and Reliability					
<b>Jânio João Almeida Souza</b>	Other Committees		Member of the Committee (Permanent)	07/20/1977	08/14/2023 undetermined
564.387.882-87	Executive Risk Committee - Operational	Systems Analyst		08/14/2023	08/14/2023
Director of Planning and Integration and effective member of the Executive Risk Committee - Sustainability					
<b>Samanta Pereira Murat do Pilar</b>	Other Committees		Member of the Committee (Permanent)	02/01/1973	11/02/2023 undetermined
008.819.427-23	Executive Risk Committee - Operational	Bachelor of Literature		11/02/2023	11/02/2023
Director Business Partner in Iron Mining Business, member of the Executive Risk Committee - Geotechnical and member of the Executive Risk Committee - Compliance, Institutional Relations and Communication					

<b>Tito Livio Medeiros Cardoso</b>	Other Committees		Member of the Committee (Alternate)	09/21/1968	08/14/2023	undetermined
008.819.427-23	Executive Risk Committee – Operational	Engineer		08/14/2023	08/14/2023	
Director of Asset Management						
<b>Karla Nunes Silva</b>	Other Committees		Member of the Committee (Alternate)	06/10/1976	08/14/2023	undetermined
032.058.586-70	Executive Risk Committee – Operational	Psychologist		08/14/2023	08/14/2023	
Manager of Sustainability Standardization and Performance, Alternate Secretary of the Executive Risk Committee – Sustainability and alternate member of the Executive Risk Committee – Compliance, Institutional Relations and Communication						
<b>Guilherme Alves de Melo</b>	Other Committees		Member of the Committee (Alternate)	06/04/1985	02/06/2020	undetermined
315.225.838-07	Executive Risk Committee – Operational	Environmental Engineer		02/06/2020	02/06/2020	
Operations Support Manager						
<b>Danilo Johann</b>	Other Committees		Member of the Committee (Alternate)	03/05/1980	11/02/2023	undetermined
288.179.998-14	Executive Risk Committee – Operational	Engineer		11/02/2023	11/02/2023	
General Manager of Health and Safety, Environment and Operational Risks in Projects						
<b>Leandro Luiz Santos Barbosa</b>	Other Committees		Member of the Committee (Alternate)	04/14/1973	08/14/2023	undetermined
851.799.816-20	Executive Risk Committee – Operational	Electrical engineer		08/14/2023	08/14/2023	
Director of Health, Safety, Environment and Risks for the Southern Operations and alternate member of the Executive Risk Committee – Sustainability						
<b>Leandro Rosa Sinott</b>	Other Committees		Member of the Committee (Alternate)	11/28/1976	08/07/2022	undetermined
919.088.170-20	Executive Risk Committee – Operational	Chemical engineer		08/07/2022	08/07/2022	
VPS Management Manager for the South Southeast Corridor and alternate member of the Executive Risk Committee – Geotechnical						
<b>Lucas Barros Duarte</b>	Other Committees		Member of the Committee (Alternate)	06/30/1981	01/21/2020	undetermined
049.864.816-81	Executive Risk Committee – Operational	Civil Engineer		01/21/2020	01/21/2020	
Corporate Manager of Geotechnics and Alternate Secretary of the Risk Executive Committee – Geotechnical						
<b>Renata Souza dos Santos</b>	Other Committees		Member of the Committee (Alternate)	08/30/1978	08/14/2023	undetermined
074.664.407-89	Executive Risk Committee – Operational	Accountant		08/14/2023	08/14/2023	
General Manager of Integrated Risk Management						
<b>Rafael Jabur Bittar</b>	Other Committees		Coordinator	09/24/1980	01/01/2023	undetermined
707.231.411-34	Executive Risk Committee – Geotechnical	Civil Engineer		01/01/2023	01/01/2023	
Technical Executive Vice-President and Coordinator of the Executive Risk Committee – Operational						
<b>Lucas Barros Duarte</b>	Other Committees		Secretary – Alternate	06/30/1981	11/12/2019	undetermined
049.864.816-81	Executive Risk Committee – Geotechnical	Civil Engineer		11/12/2019	11/12/2019	
Corporate Manager of Geotechnics and alternate member of the Executive Risk Committee – Operational						
<b>Adriana Bandeira dos Santos</b>	Other Committees		Member of the Committee (Permanent)	02/04/1972	02/24/2023	undetermined
021.588.037-46	Executive Risk Committee – Geotechnical	Civil Engineer		02/24/2023	02/24/2023	
Director of Decharacterization and Geotechnical Projects						
<b>Bruna Paiva Maffra</b>	Other Committees		Member of the Committee (Permanent)	09/08/1982	02/24/2023	undetermined
048.495.276-55	Executive Risk Committee – Geotechnical	Administrator		02/24/2023	02/24/2023	
Director of Operational Excellence and Continuous Improvement and Member of the Executive Risk Committee – Operational						
<b>Deni Otávio Oliveira de Souza</b>	Other Committees		Member of the Committee (Permanent)	12/12/1979	08/17/2023	undetermined
052.081.556-48	Executive Risk Committee – Geotechnical	Civil Engineer / Geotechnical Engineer		08/17/2023	08/17/2023	
Director of Geotechnics and Hydrogeology for the Northern Corridor						

<b>Felipe de Moraes Russo</b>	Other Committees		Member of the Committee (Permanent)	11/11/1977	08/17/2023	undetermined
035.784.506-42	Executive Risk Committee - Geotechnical	Civil Engineer		08/17/2023	08/17/2023	
Director of Geotechnics and Hydrogeology for the Southern Corridor						
<b>Geraldo Paes Junior</b>	Other Committees		Secretary	11/16/1972	02/24/2023	undetermined
026.523.527-84	Executive Risk Committee - Geotechnical	Civil Engineer		02/24/2023	02/24/2023	
Director of Geotechnics and Member of the Executive Risk Committee - Operational						
<b>Ludmila Lopes Nascimento Brasil</b>	Other Committees		Member of the Committee (Permanent)	12/14/1978	05/18/2022	undetermined
080.636.717-24	Executive Risk Committee - Geotechnical	Accountant		05/18/2022	05/18/2022	
Director of Energy and Decarbonization						
<b>Rodrigo Ramos Silveira</b>	Other Committees		Member of the Committee (Permanent)	04/25/1973	08/22/2019	undetermined
120.682.788-20	Executive Risk Committee - Geotechnical	Chemical engineer		08/22/2019	08/22/2019	
Director of Operational Risks, HSE and International Operations, Member of the Executive Risk Committee - Operational and Member of the Executive Risk Committee - Sustainability						
<b>Claudemir Peres</b>	Other Committees		Member of the Committee (Permanent)	01/19/1968	02/24/2023	undetermined
091.186.668-09	Executive Risk Committee - Geotechnical	Industrial Chemist		02/24/2023	01/21/2020	
Director of SSMA and Operational Risks, Secretary of the Executive Risk Committee - Operational and Member of the Executive Risk Committee - Sustainability						
<b>Bruno Menegatti Esperandio</b>	Other Committees		Member of the Committee (Alternate)	12/11/1983	08/17/2023	undetermined
325.241.208-05	Executive Risk Committee - Geotechnical	Chemical Engineer		08/17/2023	08/17/2023	
Manager of Quantitative Risk Analysis and alternate secretary of the Executive Risk Committee - Geotechnical						
<b>Jone River de Oliveira</b>	Other Committees		Member of the Committee (Alternate)	05/27/1982	08/17/2023	undetermined
965.808.951-87	Executive Risk Committee - Geotechnical	Geologist		08/17/2023	08/17/2023	
Geotechnical Manager of South Southern EFC and Port						
<b>Frank Marcos da Silva Pereira</b>	Other Committees		Member of the Committee (Alternate)	01/13/1978	01/28/2020	undetermined
032.007.006-96	Executive Risk Committee - Geotechnical	Civil Engineer		01/28/2020	01/28/2020	
Executive Manager of Dam Engineering						
<b>Leandro Rosa Sinott</b>	Other Committees		Member of the Committee (Alternate)	11/28/1976	02/24/2023	undetermined
919.088.170-20	Executive Risk Committee - Geotechnical	Chemical engineer		02/24/2023	02/24/2023	
VPS Management Manager for the South Southeast Corridor and alternate member of the Executive Risk Committee - Operational						
<b>Quintiliano Fernandes Guerra</b>	Other Committees		Member of the Committee (Alternate)	12/31/1980	08/17/2023	undetermined
049.751.306-45	Executive Risk Committee - Geotechnical	Civil Engineer		08/17/2023	08/17/2023	
Director of Geotechnics and Hydrogeology						
<b>Paulo de Tarso de Alexandria Cruz</b>	Other Committees		Member of the Committee (Alternate)	02/23/1978	02/24/2023	undetermined
695.649.731-04	Executive Risk Committee - Geotechnical	Mechanical Engineer		02/24/2023	02/24/2023	
Operation and Engineering Manager						
<b>Maria Luiza de Oliveira Pinto e Paiva</b>	Other Committees		Coordinator	07/14/1963	08/01/2022	undetermined
129.079.488-06	Executive Risk Committee - Sustainability	Psychologist		08/01/2022	08/01/2022	
Executive Vice President of Sustainability						
<b>Camilla Lott Ferreira</b>	Other Committees		Secretary	04/10/1976	08/01/2023	undetermined
043.987.797-01	Executive Risk Committee - Sustainability	Agronomist Engineer		08/01/2023	12/03/2020	
Director of Corporate Sustainability, member of the Executive Risk Committee - Operational and member of the Executive Risk Committee - Compliance, Institutional Relations and Communication						
<b>Karla Nunes Silva</b>	Other Committees		Secretary - Alternate	06/10/1976	08/01/2023	undetermined
032.058.586-70	Executive Risk Committee - Sustainability	Psychologist		08/01/2023	01/19/2022	

Manager of Sustainability Standardization and Performance, alternate member of Executive Risk Committee – Operational and alternate member of the Executive Risk Committee – Compliance, Institutional Relations and Communication						
<b>Claudemir Peres</b>	Other Committees		Member of the Committee (Permanent)	01/19/1968	08/01/2023	undetermined
091.186.668-09	Executive Risk Committee – Sustainability	Industrial Chemist		08/01/2023	08/01/2023	
Director of SSMA and Operational Risks, Secretary of the Executive Risk Committee – Operational and Member of the Executive Risk Committee – Geotechnical						
<b>Jânio João Almeida Souza</b>	Other Committees		Member of the Committee (Permanent)	07/20/1977	08/01/2023	undetermined
564.387.882-87	Executive Risk Committee – Sustainability	Systems Analyst		08/01/2023	08/01/2023	
Director of Planning and Integration and effective member of the Executive Risk Committee – Operational						
<b>Lauro Angelo Dias de Amorim</b>	Other Committees		Member of the Committee (Permanent)	08/20/1983	08/01/2023	undetermined
052.053.936-29	Executive Risk Committee – Sustainability	Lawyer		08/01/2023	08/01/2023	
Licensing Director						
<b>Ludmila Lopes Nascimento Brasil</b>	Other Committees		Member of the Committee (Permanent)	12/14/1978	08/01/2023	undetermined
080.636.717-24	Executive Risk Committee – Sustainability	Accountant		08/01/2023	08/01/2023	
Director of Energy and Decarbonization						
<b>Samanta Pereira Murat do Pilar</b>	Other Committees		Member of the Committee (Permanent)	02/01/1973	11/02/2023	undetermined
008.819.427-23	Executive Risk Committee – Geotechnical	Bachelor of Literature		11/02/2023	11/02/2023	
Director Business Partner in Iron Mining Business, member of the Executive Risk Committee – Operational and member of the Executive Risk Committee – Compliance, Institutional Relations and Communication						
<b>Marcelo da Silva Klein</b>	Other Committees		Member of the Committee (Permanent)	05/02/1968	12/08/2022	undetermined
991.737.357-87	Executive Risk Committee – Sustainability	Chemical engineer		12/08/2022	12/08/2022	
Director of Territory Management						
<b>Rodrigo Ramos Silveira</b>	Other Committees		Member of the Committee (Permanent)	04/25/1973	08/01/2023	undetermined
120.682.788-20	Executive Risk Committee – Sustainability	Chemical engineer		08/01/2023	08/01/2023	
Director of Operational Risks, HSE and International Operations, Member of the Executive Risk Committee – Operational and Member of the Executive Risk Committee – Geotechnical						
<b>Helga Paula Patrício Franco</b>	Other Committees		Member of the Committee (Permanent)	10/15/1979	03/04/2024	undetermined
722.468.631-04	Executive Risk Committee – Sustainability	Political scientist and lawyer		03/04/2024	03/04/2024	
Federal General Manager of Government Relations and Member of the Executive Risk Committee – Compliance, Institutional Relations and Communication						
<b>Ana Carolina Pantoja Alves</b>	Other Committees		Member of the Committee (Alternate)	05/17/1983	03/04/2024	undetermined
745.799.912-49	Executive Risk Committee – Sustainability	Lawyer		03/04/2024	03/04/2024	
General Manager of Institutional and Government Relations North						
<b>Luciene Cristina da Silva</b>	Other Committees		Member of the Committee (Alternate)	05/24/1978	03/04/2024	undetermined
038.395.746-09	Executive Risk Committee – Sustainability	Journalist		03/04/2024	03/04/2024	
General Manager of Internal Communication and Business						
<b>Leandro Luiz Santos Barbosa</b>	Other Committees		Member of the Committee (Alternate)	04/14/1973	11/08/2023	undetermined
851.799.816-20	Executive Risk Committee – Geotechnical	Civil Engineer		11/08/2023	11/08/2023	
Director of Health, Safety, Environment and Risks of Southern Operation, alternate Member of the Executive Risk Committee – Operational and alternate Member of the Executive Risk Committee – Geotechnical						
<b>Bruno Santos Ferraz</b>	Other Committees		Member of the Committee (Alternate)	11/11/1974	08/01/2023	undetermined
045.463.317-38	Executive Risk Committee – Sustainability	Civil Engineer		08/01/2023	12/03/2020	
Environmental Director and member of the Executive Risk Committee – Operational						

<b>Daniel Medeiros de Souza</b>	Other Committees		Member of the Committee (Alternate)	04/23/1977	08/01/2023	undetermined
050.825.206-79	Executive Risk Committee - Sustainability	Lawyer		08/01/2023	08/01/2023	
Director of Environmental Licensing, Studies, Speleology, Health, and Safety						
<b>Leandro Luiz Santos Barbosa</b>	Other Committees		Member of the Committee (Alternate)	04/14/1973	12/08/2022	undetermined
851.799.816-20	Executive Risk Committee - Sustainability	Electrical engineer		12/08/2022	12/08/2022	
Director of Health, Safety, Environment and Risks for the Southern Operations and alternate member of the Executive Risk Committee - Operational						
<b>Luiz Henrique Medeiros dos Santos</b>	Other Committees		Member of the Committee (Alternate)	04/27/1979	08/01/2023	undetermined
013.497.286-40	Executive Risk Committee - Sustainability	Administrador		08/01/2023	08/01/2023	
Director of Southern and Southeastern Territories						
<b>Rodrigo Ribeiro de Araujo</b>	Other Committees		Member of the Committee (Alternate)	09/21/1974	08/01/2023	undetermined
031.919.477-95	Executive Risk Committee - Sustainability	Metallurgical Engineer		08/01/2023	08/01/2023	
General Manager of Pilot Implementation						
<b>Danilo Johann</b>	Other Committees		Member of the Committee (Alternate)	03/05/1980	11/10/2023	undetermined
288.179.998-14	Executive Risk Committee - Sustainability	Engineer		11/10/2023	11/10/2023	
General Manager of Health and Safety, Environment and Operational Risks in Projects and alternate member of the Executive Risk Committee - Operational						
<b>Gustavo Duarte Pimenta</b>	Other Committees		Coordinator	06/20/1978	11/01/2021	undetermined
035.844.246-07	Executive Risk Committee - Strategic, Financial and Cybernetic	Economist		11/01/2021	11/01/2021	
Executive Vice President of Finance and Investor Relations						
<b>Andressa Machado Duran Linhares</b>	Other Committees		Secretary	06/04/1975	06/06/2022	undetermined
037.689.187-42	Executive Risk Committee - Strategic, Financial and Cybernetic	Economist		06/06/2022	06/06/2022	
Director of Business Risk Management and member of the Executive Risk Committee - Operational						
<b>Marcio Felipe Milheiro Aigner</b>	Other Committees		Secretary - Alternate	04/20/1975	06/06/2022	undetermined
035.853.907-22	Executive Risk Committee - Strategic, Financial and Cybernetic	Company administrator		06/06/2022	06/06/2022	
FP&A Director, Performance and Risk Management						
<b>Eduardo Ajuz Coelho</b>	Other Committees		Member of the Committee (Permanent)	05/09/1981	06/06/2022	undetermined
220.075.508-22	Executive Risk Committee - Strategic, Financial and Cybernetic	Company administrator		06/06/2022	06/06/2022	
Treasury Director						
<b>Fabio de Souza Queiroz Ferraz</b>	Other Committees		Member of the Committee (Permanent)	11/10/1967	08/22/2019	undetermined
136.132.108-35	Executive Risk Committee - Strategic, Financial and Cybernetic	Company administrator		08/22/2019	08/22/2019	
Director of Mergers and Acquisitions						
<b>Jânio João Almeida Souza</b>	Other Committees		Member of the Committee (Permanent)	07/20/1977	11/24/2023	undetermined
877.208.929-68	Executive Risk Committee - Strategic, Financial and Cybernetic	Accountant		11/24/2023	11/24/2023	
Director of Planning and Integration						
<b>Lauro Angelo Dias de Amorim</b>	Other Committees		Member of the Committee (Permanent)	08/20/1983	11/24/2023	undetermined
011.903.586-38	Executive Risk Committee - Strategic, Financial and Cybernetic	Electric engineer		11/24/2023	11/24/2023	
Licensing Director						
<b>Murilo Muller</b>	Other Committees		Member of the Committee (Permanent)	02/17/1973	08/21/2020	undetermined
877.208.929-68	Executive Risk Committee - Strategic, Financial and Cybernetic	Accountant		08/21/2020	08/21/2020	
Accounting, Tax and Controllership Director and Member of the Executive Risk Committee - Compliance, Institutional Relations and Communication						



<b>Paulo Celso Pires</b>	Other Committees		Member of the Committee (Permanent)	08/18/1965	11/24/2023	undetermined
121.839.988-06	Executive Risk Committee - Strategic, Financial and Cybernetic	Engineer		11/24/2023	11/24/2023	
Director of Technology and Innovation						
<b>Vagner Silva de Loyola Reis</b>	Other Committees		Member of the Committee (Permanent)	09/20/1968	04/08/2020	undetermined
992.523.177-91	Executive Risk Committee - Strategic, Financial and Cybernetic	Industrial chemistry		04/08/2020	04/08/2020	
Integrated Value Chain Director						
<b>Carolina Alves de Freitas Langoni</b>	Other Committees		Member of the Committee (Alternate)	07/04/1978	06/06/2022	undetermined
078.355.577-62	Executive Risk Committee - Strategic, Financial and Cybernetic	Engineer		06/06/2022	06/06/2022	
Mergers and Acquisitions Specialist						
<b>Dan Harif</b>	Other Committees		Member of the Committee (Alternate)	10/26/1968	01/28/2020	undetermined
002.260.247-09	Executive Risk Committee - Strategic, Financial and Cybernetic	Systems Analyst		01/28/2020	01/28/2020	
Information Security Manager						
<b>Daniel Medeiros de Souza</b>	Other Committees		Member of the Committee (Permanent)	04/23/1977	11/24/2023	undetermined
050.825.206-79	Executive Risk Committee - Strategic, Financial and Cybernetic	Engineer		11/24/2023	11/24/2023	
Director Environmental Licensing Studies and Speleology Health and Safety						
<b>Eduardo Amiel Pffifer</b>	Other Committees		Member of the Committee (Alternate)	07/23/1974	01/23/2020	undetermined
029.438.037-07	Executive Risk Committee - Strategic, Financial and Cybernetic	Economist		01/23/2020	01/23/2020	
Executive Manager of Intelligence and Market Analysis at Vale						
<b>Jose Carlos Pocidonio de Moraes Junior</b>	Other Committees		Member of the Committee (Permanent)	05/05/1984	11/24/2023	undetermined
321.773.748-20	Executive Risk Committee - Strategic, Financial and Cybernetic	Engineer		11/24/2023	11/24/2023	
General Manager of Accounting and Controlling						
<b>Juan Franco Merlini</b>	Other Committees		Member of the Committee (Permanent)	10/19/1975	11/24/2023	undetermined
011.903.586-38	Executive Risk Committee - Strategic, Financial and Cybernetic	Electric engineer		11/24/2023	11/24/2023	
Director of Marketing, Intelligence & Pricing						
<b>Marcos Guilherme Ruffeil Moreira</b>	Other Committees		Member of the Committee (Alternate)	04/19/1977	04/08/2020	undetermined
599.088.312-91	Executive Risk Committee - Strategic, Financial and Cybernetic	Mechanical Engineer		04/08/2020	04/08/2020	
Production Planning and Logistics Capacity Manager						
<b>Patricia Silva Rodrigues Scheel</b>	Other Committees		Member of the Committee (Alternate)	01/02/1978	01/23/2020	undetermined
034.213.646-13	Executive Risk Committee - Strategic, Financial and Cybernetic	Engineer		01/23/2020	01/23/2020	
International Treasury Executive Manager and National Manager in the Netherlands						
<b>Alexandre Silva D'Ambrosio</b>	Other Committees		Coordinator	08/01/1962	08/22/2019	undetermined
042.170.338-50	Executive Risk Committee - Compliance, Institutional Relations and Communication	Lawyer		08/22/2019	08/22/2019	
Executive Manager of Business Risk and Secretary of the Executive Risk Committee - Strategic, Financial and Cybernetics						
<b>Gustavo Niskier</b>	Other Committees		Secretary	03/14/1977	11/28/2023	undetermined
079.590.307-31	Executive Risk Committee - Compliance, Institutional Relations and Communication	Lawyer		11/28/2023	11/28/2023	
Director of Privacy and Trade Compliance						
<b>Renata Barreto Soares de Almeida</b>	Other Committees		Secretary - Alternate	09/21/1981	07/29/2022	undetermined

088.860.467-07	Executive Risk Committee – Compliance, Institutional Relations and Communication	Systems Analyst	07/29/2022	07/29/2022	
Manager of Privacy					
<b>Leandro Fonseca Modé</b>	Other Committees		Member of the Committee (Permanent)	09/19/1974	11/28/2023 undetermined
249.561.228-88	Executive Risk Committee – Compliance, Institutional Relations and Communication	Journalist		11/28/2023	11/28/2023
Communications Director and member of the Executive Risk Committee – Sustainability					
<b>Heloisa de Oliveira Perdigão Cerqueira</b>	Other Committees		Member of the Committee (Alternate)	06/21/1982	04/25/2024 undetermined
215.627.948-92	Executive Risk Committee – Compliance, Institutional Relations and Communication	Engineer		04/25/2024	04/25/2024
General Manager of Governmental and Institutional Relations for the Southeast region					
<b>Camilla dos Reis Claudio Soares</b>	Other Committees		Member of the Committee (Permanent)	11/25/1978	08/22/2019 undetermined
082.993.787-02	Executive Risk Committee – Compliance, Institutional Relations and Communication	Lawyer		08/22/2019	08/22/2019
Corporate Integrity Director and Member of the Conduct and Integrity Committee					
<b>Marcelo Sampaio Cunha Filho</b>	Other Committees		Member of the Committee (Permanent)	12/01/1985	11/28/2023 undetermined
009.636.111-51	Executive Risk Committee – Compliance, Institutional Relations and Communication	Civil Engineer		11/28/2023	11/28/2023
Director of Regulatory Affairs					
<b>Samanta Pereira Murat do Pilar</b>	Other Committees		Member of the Committee (Permanent)	02/01/1973	11/28/2023 undetermined
023.402.307-48	Executive Risk Committee – Compliance, Institutional Relations and Communication	Bachelor of Literature		11/28/2023	11/28/2023
Director Business Partner in Iron Mining Business, member of the Executive Risk Committee – Geotechnical and member of the Executive Risk Committee – Operational					
<b>Leandro Fonseca Modé</b>	Other Committees		Member of the Committee (Permanent)	09/19/1974	11/10/2023 undetermined
249.561.228-88	Executive Risk Committee – Sustainability	Journalist		11/10/2023	11/10/2023
Communications Director and member of the Executive Risk Committee – Compliance, Institutional Relations and Communication					
<b>Camilla Lott Ferreira</b>	Other Committees		Member of the Committee (Permanent)	04/10/1976	11/28/2023 undetermined
043.987.797-01	Executive Risk Committee – Compliance, Institutional Relations and Communication	Agricultural Engineer		11/28/2023	11/28/2023
Director of Corporate Sustainability, secretary of the Executive Risk Committee – Sustainability and member of the Executive Risk Committee – Operational					
<b>Murilo Muller</b>	Other Committees		Member of the Committee (Permanent)	02/17/1973	03/10/2022 undetermined
877.208.929-68	Executive Risk Committee – Compliance, Institutional Relations and Communication	Accountant		03/10/2022	03/10/2022
Accounting, Tax and Controllership Director and Member of the Risk Executive Committee – Strategic, Financial and Cybernetics					
<b>Octavio Bulcão Nascimento</b>	Other Committees		Member of the Committee (Permanent)	05/16/1968	08/22/2019 undetermined
465.419.855-53	Executive Risk Committee – Compliance, Institutional Relations and Communication	Lawyer		08/22/2019	08/22/2019
Legal Director					
<b>Antonio Guilherme Scarance Fernandes</b>	Other Committees		Member of the Committee (Alternate)	08/01/1973	11/28/2023 undetermined



251.255.928-97	Executive Risk Committee – Compliance, Institutional Relations and Communication	Journalist		11/28/2023	11/28/2023	
General Manager of External Communication						
<b>Helga Paula Patrício Franco</b>	Other Committees		Member of the Committee (Permanent)	10/15/1979	04/25/2024	undetermined
722.468.631-04	Executive Risk Committee – Compliance, Institutional Relations and Communication	Political scientist and lawyer		04/25/2024	04/25/2024	
Federal General Manager of Government Relations and Member of the Executive Risk Committee – Sustainability						
<b>Eliane Velo Dominguez</b>	Other Committees		Member of the Committee (Alternate)	01/05/1976	03/10/2022	undetermined
034.232.097-12	Executive Risk Committee – Compliance, Institutional Relations and Communication	Accountant		03/10/2022	03/10/2022	
Tax Director						
<b>Daniella Gonçalves de Barros Silveira de Queiroz</b>	Other Committees		Member of the Committee (Alternate)	12/08/1971	11/28/2023	undetermined
020.231.327-11	Executive Risk Committee – Compliance, Institutional Relations and Communication	Engineer		11/28/2023	11/28/2023	
Director of Regulatory and Infrastructure Projects						
<b>Adriana Paula de Souza Vicente Cardoso</b>	Other Committees		Member of the Committee (Alternate)	06/05/1978	11/28/2023	undetermined
013.327.196-00	Executive Risk Committee – Compliance, Institutional Relations and Communication	Psychologist		11/28/2023	11/28/2023	
HR Manager South Corridor						
<b>Mariana Correia Pereira</b>	Other Committees		Member of the Committee (Alternate)	07/14/1977	02/05/2020	undetermined
026.667.926-92	Executive Risk Committee – Compliance, Institutional Relations and Communication	Lawyer		02/05/2020	02/05/2020	
Director of Litigation and Tax Risks						
<b>Alexandre Maya Poyastro</b>	Other Committees		Member of the Committee (Alternate)	11/18/1973	11/28/2023	undetermined
034.164.277-00	Executive Risk Committee – Compliance, Institutional Relations and Communication	Economist		11/28/2023	11/28/2023	
Manager of Risks, Controls, and Corporate Integrity Monitoring						
<b>Karla Nunes Silva</b>	Other Committees		Member of the Committee (Alternate)	06/10/1976	11/28/2023	undetermined
032.058.586-70	Executive Risk Committee – Compliance, Institutional Relations and Communication	Psychologist		11/28/2023	11/28/2023	
Manager of Sustainability Standardization and Performance, Alternate Secretary of the Executive Risk Committee – Sustainability and alternate member of the Executive Risk Committee – Operational						

## Professional experience / Independence criteria

Below are presented the information of the members of the committees, except for those already shown in item 7.3 above.

**Denis Celso Marques Cuenca** – 114.064.938-80

**Position(s):** He is a non-statutory Officer for Audit and Compliance (since July 2020) and Coordinator of Vale's Conduct and Integrity Committee (since July 2021). He holds a degree in business administration with an MBA in business management, and his main professional experiences in the last 5 years include: **(i)** Officer for Risks, Compliance and Audit at Ultrapar S/A (from February 2008 to July 2020); **(ii)** Member of the Ethics Committee at Ultrapar S/A (from May 2013 to July 2020); **(iii)** Secretary of the Fiscal Council and Audit Committee at Ultrapar S/A (from February 2008 to July 2020); and **(iv)** Governance Secretary at the Brazilian Institute of Corporate Governance (from June 2014 to March 2017).

**Camilla dos Reis Claudio Soares** – 082.993.787-02

**Position(s):** She is a non-independent member of Vale's Risk Executive Committee – Compliance, Institutional Relations and Communication (since August 2019) and Conduct and Integrity Committee (since February 2020). She also holds the position of Corporate Integrity Director at Vale (since May 2023), having already held the following positions: **(i)** Executive Manager of Corporate Integrity (from October 2019 to May 2023); **(ii)** Corporate Integrity Manager (from December 2018 to October 2019); **(iii)** Technical Specialist in Competition and Anti-Corruption (from May 2014 to December 2018). She graduated in Law from the Federal University of Rio de Janeiro in December 2002 and completed postgraduate studies in Business Law with emphasis on Intellectual Property at the Getúlio Vargas Foundation in 2007.

**Rafael Jabur Bittar** – 707.231.411-34

**Cargo(s):** He is Technical Executive Vice-President (since January/2023) of Vale, Coordinator of the Business Risk Committee – Geotechnical (since January/2023) and Coordinator of the Business Risk Executive Committee – Operational (since January/2023). Main experiences in the last 5 years: Acted as: **(i)** Director of Geotechnics at Vale (September/2019 to December/2022); and **(ii)** Senior Director of Tailings Management at Yamana Gold (August/2012 to August/2019). Education: Degree in Civil Engineering from the Federal University of Ouro Preto in 2003; Master in Civil Engineering – Geotechnics from the Federal University of Ouro Preto in 2006; MBA in Management from Fundação Getúlio Vargas – FGV in 2011.

**Rodrigo Ramos Silveira** – 120.682.788-20

**Position(s):** He is a non-independent member of the Executive Risk Committee – Sustainability (since August 2023), the Business Risk Executive Committee – Geotechnical Risks and the Business Risk Executive Committee – Operational Risks. His main professional experiences in the last 5 years include: **(i)** Health, Safety and Environment Executive Officer (from 2016 to 2018) at Dow Chemical, a chemical products company in the USA and Canada; and **(ii)** Operations Executive Officer (from 2012 to 2016) at Dow Brasil S.A., a publicly-held company in the chemical industry. He graduated in Chemical Engineering from UFBA (January 1995) and completed a Master's Degree in Business Administration at UFBA (June 2004).

**Helga Paula Patrício Franco** – 722.468.631-04

**Position(s):** She is a non-independent member of the Executive Risk Committee – Sustainability (since March 2024) and a non-independent member of the Executive Risk Committee – Compliance, Institutional Relations and Communication (since April 2024) at Vale, where she also holds the position of Federal General Manager of Government Relations (since January 2024). Her main professional experiences in the last 5 years include: **(i)** Senior Director of Corporate Affairs at Mondelēz International (from May 2022 to September 2023); **(ii)** Executive Director of Corporate Affairs at CNN BRASIL (from May 2021 to May 2022); and **(iii)** Executive Director of Government and Institutional Relations at Nestlé (from July 2016 to May 2021). Her professional experience also includes **(i)** Member of the Advisory Board of ABDIB – Associação Brasileira da Infraestrutura e Indústrias de Base (since January/2024); **(ii)** Member of the Board of Directors (alternate) and of the Government Relations Committee of IBRAM – Instituto Brasileiro de Mineração (since January/2024); **(iii)** Member of the Mining Thematic Council (COMIN) of CNI – Confederação Nacional da Indústria (since January/2024); and **(iv)** Member of the Institutional working group of ABIAPE – Associação Brasileira dos Investidores em Autoprodução de Energia (since January/2024). Graduated in Political Science from Universidade de Brasília – UNB (July/2023) and in Law from Centro Universitário de Brasília – UniCEUB (August/2003); completed a master's degree in Public Policy Management from Fundação Getúlio Vargas (December/2023); completed postgraduate studies in Public Law from Instituto Brasileiro de Ensino, Desenvolvimento e Pesquisa – IDP (December/2009) and in Public Administration from Fundação Getúlio Vargas (December/2005).

**Ana Carolina Pantoja Alves** – 745.799.912-49

**Position(s):** She is an alternate member of the Executive Risk Committee – Sustainability (since March 2024) at Vale, where she also holds the position of General Manager of Institutional and Government Relations North (since November 2023). Her main professional experiences in the last 5 years include: **(i)** Manager of Government Relations at Vale (March/2021 to December/2023); **(ii)** Legal and Governance Manager at Biopalma da Amazônia S.A (June/2014 to November/2020); and **(iii)** Environmental Legal Coordinator at Silveira, Athias, Soriano de Mello, Guimarães, Pinheiro e Scaff Advogados Associados (June/2006 to November/2020). Her professional experience also includes: **(i)** Vice-President of Simineral – Sindicato das Indústrias Minerárias do Estado do Pará (since July/2023). Graduated in Law from Universidade Federal do Pará (June/2006); specialization in Business Management from Fundação Dom Cabral (December/2017); Master's degree in Law from Universidade Federal do Pará (September/2014).

**Luciene Cristina da Silva** – 038.395.746-09

**Position(s):** She is an alternate member of the Executive Risk Committee – Sustainability (since March 2024) at Vale, where she also holds the position of General Manager of Internal Communication and Business (since February 2024). Her main professional experiences in the last 5 years include: **(i)** Communication Manager – Minas Gerais, Mato Grosso do Sul, Bahia (MG, MS and BA) at Vale (May/2019 to March/2024). Graduated in Social Communication/Journalism from Universidade Federal de Minas Gerais (December/1999); completed a postgraduate course in Corporate Communication at PUC Minas (December/2002); completed a specialization course in Communication Management at PUC Minas (December/2007).

**Claudemir Peres** – 091.186.668-09

**Position(s):** He is a non-independent member of Vale's Executive Risk Committee – Geotechnical Risks (since February 2023, alternate member since January 2020), non-independent secretary of Vale's Executive Risk Committee – Operational Risks (since February 2023, alternate secretary since November 2019), and Member of the Executive Risk Committee – Sustainability (since August 2023) of Vale, where he holds the position of Director of HSSE (Health, Safety, Security, and Environment) and Operational Risks. His professional experience in the last 5 years include: **(i)** Operational Risk and Process Safety Executive Manager (from August 2019 to March 2023) of Vale; **(ii)** Partner at Veneto Gastronomia Italiana Ltda., a company in the gastronomy sector (since August 2019), **(iii)** Partner at Clínica Veterinária Amado Bicho, a company in the veterinary medicine sector (since April 2017); and **(iv)** Industrial Executive Manager at Oxitenio S.A. Indústria e Comércio (Ultrapar) (from 2015 to 2019). He graduated in Industrial

Chemistry from Higher School of Chemistry Oswaldo Cruz in December 1993. He completed a specialization course in Quality and Productivity at University of São Paulo / Vanzolini Foundation in December 1994, and an Executive MBA at INSPER/IBMEC in December 2007.

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**Bruno Menegatti Esperandio** – 325.241.208-05

**Position(s):** Non-independent alternate secretary of the Executive Risk Committee – Operational (since August 2023) and alternate member of the Executive Risk Committee – Geotechnical (since August 2023) at Vale, where he is also Manager of Quantitative Risk Analysis (since September 2019). His main professional experiences in the last 5 years include: (i) Corporate Manager of Industrial Risks (from August 2008 to August 2019) at Air Liquide, chemical industry. He graduated in Chemical Engineering from Universidade de São Paulo (USP) in December 2008, and completed a specialization in Process Safety at Fundação Vanzolini in December 2013.

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**Adriana Bandeira dos Santos** – 021.588.037-46

**Position(s):** Non-independent member of the Executive Risk Committee – Geotechnical at Vale, where she also holds the position of Decharacterization and Geotechnical Projects Director (since March 2023). Her main professional experiences in the last 5 years include: (i) Executive Manager of Engineering and Project Management (September 2020 to March 2023) at Vale; and (ii) TechnipFMC, a company in the Oil & Gas and Energy sector (between January 2000 and August 2020), the last position being Director of Subsea Operations. She graduated in Civil Engineering from UFRJ – Federal University of Rio de Janeiro in December 1996 and completed a Master's Degree in Civil Engineering – Geotechnics from the Alberto Luiz Coimbra Institute of Graduate Studies and Engineering Research (COPPE) / Federal University of Rio de Janeiro (UFRJ) in December 2000.

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**Bruna Paiva Maffra** – 048.495.276-55

**Position(s):** Non-independent member of the Executive Risk Committee – Operational (since February/2023) and the Executive Risk Committee – Geotechnical (since February/2023) at Vale, where she also holds the position of Director of Operational Excellence (since February 2022). Her main professional experiences in the last 5 years include: (i) Executive Manager of Operational Excellence at Vale (between September 2019 and January 2023 and (ii) Operational Excellence General Manager Base Metals at Vale (between May 2017 and August 2019). She graduated in Administration at IBMEC – Instituto Brasileiro de Mercado de Capitais in December 2004, having completed an Executive MBA at IBMEC – Instituto Brasileiro de Mercado de Capitais in 2007 and specialization in LEAN Manufacturing in Michigan in 2014.

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**Bruno Santos Ferraz** – 045.463.317-38

**Position(s):** He is a non-independent member of the Business Risk Executive Committee – Operational Risks at Vale (since September 2019) and alternate member of the Business Risk Executive Committee – Sustainability (since August 2023, member since December 2020) at Vale, where he also holds the position of Environmental Director (since May 2022), having already held the following positions: (i) Environmental Management Executive Manager (between September 2019 and May 2022) (ii) General Manager for Environmental Technology (between 2011 and 2015 and between 2017 and 2019); (iii) General Manager for Integrated Management System, HSE – Health, Safety and Environment (between 2017 and 2019); and (iv) Sustainability Manager (between 2009 and 2011). His main professional experiences in the last 5 years also include: (i) Member (since June 2019) of the Sustainability Committee of MRN, a Vale's affiliate. He graduated in Civil Engineering from the Federal University of Rio de Janeiro in December 1998. He completed an Executive MBA in Finance at IBMEC-RJ in December 2006 and postgraduate studies in Occupational Safety Engineering at IPETEC-RJ in June 2017.

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**Daniel Medeiros de Souza** – 050.825.206-79

**Position(s):** He is a non-independent member of the Business Risk Executive Committee – Sustainability (since August 2023), and Non-independent alternate member of Vale's Executive Risk Committee – Strategic, Financial and Cyber (since November 2023) at Vale, where he also holds the position of Director of Environmental Licensing, Studies, Speleology, Health, and Safety (since May 2023), having already held the position of: (i) Executive Manager of Environmental Licensing, Studies, Speleology, Health, and Safety (December 2022 to May 2023). His main professional experience in the last 5 years also includes: (i) General Manager of Sustainability (December 2019 to December 2022) at Samarco Mineração; and (ii) General Manager of Sustainability (September 2018 to December 2019) at Bahia Mineração. He graduated in Law from Pontifícia Universidade Católica de Minas Gerais ("PUC MG") in July 2000; and completed Specialization in Diffuse and Collective Rights from PUC MG, in December 2001.

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**Kleger Duque de Almeida Filho** – 583.594.866-20

**Position(s):** He is a non-independent member of Vale's Executive Risk Committee – Operational Risks (since August 2023, alternate secretary from March 2023 to August 2023), where he also holds the position of Director of Engineering, Asset Management, and Reliability (since March 2023). His main professional experiences in the last 5 years include: (i) Vale's Capital Projects Executive Officer (from November 2012 to April 2014); (ii) Vale's Non-Ferrous Metal Projects and Project Management Executive Officer (from June 2014 to December 2016); (iii) Vale's Project Development and Implantation Executive Manager (from January 2017 to March 2019); and (iv) Vale's Asset Management Officer (from August 2019 to March 2023). He graduated in Civil Engineering from the Federal University of Minas Gerais in July 1989, completed MBA in Business Management from Dom Cabral Foundation in 1997, postgraduate degree in Economics, Finance and Business from Getúlio Vargas Foundation in 1999, and in Project Management from Technical Education Institute (IETEC) in 2002.

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**Tito Livio Medeiros Cardoso** – 008.819.427-23

**Position(s):** He is a non-independent alternate member of Vale's Executive Risk Committee – Operational (since August 2023), where he also holds the position of Director of Asset Management (since April 2023). His professional experience in the last 5 years include: (i) Executive Manager of Infrastructure and Superstructure Management at Vale (May 2019 to April 2023); (ii) Director at Berkeley Research Group – BRG, a consulting services company (January 2017 to April 2019). He graduated in Mechanical Engineering from Universidade Santa Úrsula in December 1993. He completed a master's degree in Materials Science from IME – Instituto Militar de Engenharia in December 1995.

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**Guilherme Alves de Melo** – 315.225.838-07

**Position(s):** He is a non-independent alternate member of Vale's Business Risk Executive Committee – Operational Risks (since February 2020), where he also holds the position of Operations Support Manager (since October 2019); he has also held the positions in the last 5 years of: (i) Vale's Environmental Analyst (from October 2011 and May 2018); and (ii) Environment Specialist (from May 2018 to November 2019). He graduated in Environmental Engineering from Faculdades Oswaldo Cruz in December 2008, and completed his master's degree in Industrial Chemical Processes at Technological Research Institute – IPT in June 2012.

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**Leandro Fonseca Modé** – 249.561.228-88

**Position(s):** He is a non-independent member of the Executive Risk Committee – Sustainability (since November 2023) and of the Executive Risk Committee – Compliance, Institutional Relations and Communication (since November 2023) at Vale, where he also holds the position of Communications Director (since September 2023). His professional experiences over the last 5 years include: (i)

Superintendent of Corporate Communications (January 2028 to August 2023) at Itaú Unibanco; **(ii)** Executive Director at FSB Comunicação (May 2013 to December 2017) and **(iii)** Editor, reporter and broadcaster at Jornal O Estado de S. Paulo S.A. (July 2006 to April 2013). He graduated in Social Communication – Journalism from Faculdade Cásper Líbero in December 1996; completed an MBA in Economic–Financial Information for Journalists from FIA in March 2002.

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**Leandro Rosa Sinott** – 919.088.170–20

**Position(s):** He is a non-independent alternate member of the Executive Risk Committee – Operational (since August 2022) and Executive Risk Committee – Geotechnical (since February 2023) at Vale, where he also holds the position of VPS Management Manager for the South–Southeast Corridor (since July 2019), and in the last 5 years, he held the following position, joining Vale in 2012: Operational Excellence Manager for the Southeast Corridor – Minas Gerais (from December 2017 to July 2019). He graduated in Chemical Engineering from the Federal University of Rio Grande Foundation – RS, in January 2001, and holds a postgraduate degree in Business Management from the Federal University of Pelotas, completed in June 2002.

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**Renata Souza dos Santos** – 074.664.407–89

**Position(s):** She is a non-independent alternate member of the Executive Risk Committee – Operational (since August 2023) at Vale, where she also holds the position of General Manager of Integrated Risk Management (since July 2022). Her professional experience in the last 5 years includes: **(i)** Controllership Manager (November 2015 to June 2022) at Vale. She graduated in Accounting Sciences from Universidade do Estado do Rio de Janeiro (UERJ) in June 2001; completed a post-graduate degree in Business Administration from Insead and Tsinghua University in June 2022.

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**Samanta Pereira Murat do Pilar** – 023.402.307–48

**Position(s):** She is a non-independent member of the Executive Risk Committee – Operational (since November 2023), member of the Executive Risk Committee – Geotechnical (since November 2023), and member of the Executive Committee – Compliance, Institutional Relations and Communication (since November 2023) at Vale, where she also holds the position of Director Business Partner Iron Ore Business (since March 2023). Her professional experience in the last 5 years includes: **(i)** Executive Manager / Business Partner for Corporate Vice Presidencies, Executive Manager for Coal, Executive Manager of the Special Office for the Brumadinho Repair at Vale (between July 2018 and February 2023); **(ii)** Director of Organizational Development (July 2016 to July 2018) at Oi Telecomunicações. She graduated in Literature / Full Degree from Universidade Federal do Rio de Janeiro in July 1994; completed a post-graduate degree in Education and Human Resources Development from Universidade Federal do Rio de Janeiro in December 1998 and specialized in Strategic management from Fundação Getúlio Vargas in December 2003, and has a master's degree in Administrative management from Universidade Federal do Rio de Janeiro in December 2026.

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**Danilo Johann** – 288.179.998–14

**Position(s):** He is a non-independent alternate member of the Executive Committee for Risks – Operational (since November 2023) at Vale, where he also holds the position of General Manager of Health and Safety, Environment and Operational Risks in Projects (since August 2023). His professional experiences over the last 5 years include: **(i)** QHSE Director (March 2021 to July 2023) at Perenco – Petróleo e Gás, HS Manager (February 2021 to March 2021) and QHSE Manager (June 2026 to February 2021). He graduated in Production Engineering from the Federal University of São Carlos – UFSCar in July 2003; completed a postgraduate degree in Occupational Safety Engineering from Uninove in June 2022, and in Environmental Management from the Federal University of São Carlos –UFSCar in April 2011, in addition to a master's degree in Management Systems from the Universidade Federal Fluminense – UFF in August 2011. 2020.

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**Lucas Barros Duarte** – 049.864.816–81

**Position(s):** He is an alternate member of Vale's Executive Risk Committee – Operational (since January 2020) and alternate secretary of Vale's Executive Risk Committee – Geotechnical (since November 2019), where he also holds the position of Geotechnics Corporate Manager (since September 2019). His professional experience in the last 5 years includes: **(i)** Geotechnical Engineer at WSP Canada Inc. (from March 2017 to September 2019); and **(ii)** Geotechnical Engineer at Amec Foster Wheeler (from October 2014 to February 2017). He graduated in Civil Engineering from the Federal University of Minas Gerais in August 2006 and got a master's degree in geotechnics from the Federal University of Minas Gerais in August 2012.

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**Deni Otávio Oliveira de Souza** – 052.081.556–48

**Position(s):** He is a non-independent member of Vale's Executive Risk Committee – Geotechnical since August 2023, where he also holds the position of Director of Geotechnics and Hydrogeology for the Northern Corridor (since May 2023). He graduated in Civil Engineering from Universidade Fundação Mineira de Educação e Cultura in December 2009. He completed a specialization in Geotechnical Engineering, Foundations, and Earthworks at Universidade Cidade de São Paulo in December 2016 and a master's degree in Dam Engineering and Environmental Management at Universidade Federal do Pará in December 2018. His professional experiences in the last 5 years include positions as: **(i)** Executive Manager of Geotechnics and Hydrogeology for the Northern Corridor at Vale (March 2021 to May 2023); **(ii)** Manager of Geotechnics and Hydrogeology for Serra Norte, Serra Leste, and Manganese at Vale (August 2020 to March 2021); **(iii)** Manager of Hydrogeology and Geotechnics for the Northern Corridor at Vale (February 2019 to August 2020); and **(iv)** Geotechnical Engineer at Vale (September 2010 to February 2019).

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**Felipe de Moraes Russo** – 035.784.506–42

**Position(s):** He is a non-independent member of Vale's Executive Risk Committee – Geotechnical (since August 2023), where he also holds the position of Director of Geotechnics and Hydrogeology for the Southern Corridor (since May 2023). His professional experience in the last 5 years includes: **(i)** Executive Manager of Geotechnics and Hydrology for the Southern Corridor (August 2019 to May 2023) at Vale; **(ii)** Director and Associate Professor at Centro Federal de Educação Tecnológica – CEFET Minas Gerais, an education and consulting company (February 2014 to August 2019). He graduated in Civil Engineering from Universidade Federal de Minas Gerais in February 2002. He completed a Ph.D. in Geotechnical Engineering from Universidade de Brasília in April 2007.

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**Geraldo Paes Junior** – 026.523.527–84

**Position(s):** Non-independent member of the Executive Committee of Risks – Operational (since February/2023) and secretary of the Executive Committee of Risks – Geotechnical (since February/2023) of Vale, where he also holds the position of Director of Geotechnics. His main professional experiences in the last 5 years include: **(i)** Manager Impoundments Americas (between January 2020 and December 2021) at Alcoa Alumínio / AWA Alcoa World Alumina, **(ii)** Director Joint–Ventures Business of Mining (between June 2018 and December 2019) at Alcoa Alumínio / AWA Alcoa World Alumina and **(iii)** Global Manager Projects Capital Mining Business (between April 2015 and May 2018) at Alcoa Alumínio / AWA Alcoa World Alumina. He graduated in Civil Engineering from Universidade Federal Fluminense in January 1997, having concluded an International Executive MBA from Fundação Getúlio Vargas in September 2003.

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**Ludmila Lopes Nascimento Brasil** – 080.636.717–24

**Position(s):** She is a non-independent member of the Business Risk Executive Committee – Geotechnical Risks (since May 2022) and of the Executive Risk Committee – Sustainability at Vale, where she also holds the position of Director of Energy and Decarbonization (since March 2023) and has held the following positions over the last 5 years, joining Vale in 2003: **(i)** Executive Manager for Electric Power (from January 2022 to March 2023); **(ii)** Chief Executive Officer (from June 2019 to January 2022) at Tecnored (a Vale's subsidiary focused on developing a low-carbon pig iron process); **(iii)** Market Segmentation Manager – Value Proposition (from September 2017 to June 2019); and **(iv)** General Manager for Governance and Corporate Strategy (from May 2015 to September 2017). She graduated in Accounting from UFRJ – Federal University of Rio de Janeiro in October 2002. She holds a postgraduate degree in Corporate Finance from FGV – Getúlio Vargas Foundation, completed in August 2004, a Master's Degree in Administration from IBMEC, completed in July 2010, and specialization course in Business Models (ideas to market) from Stanford University, completed in July 2021.

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**Frank Marcos da Silva Pereira** – 032.007.006-96

**Position(s):** He is a non-independent alternate member of Vale's Executive Risk Committee – Geotechnical (since January 2020), where he also holds the position of Director of Engineering, Geotechnics, and Projects (since May 2023). His professional experience in the last 5 years includes: **(i)** Dam Engineering Executive Manager (May 2019 to May 2023); **(ii)** Dam Project Manager at Companhia Siderúrgica Nacional (from June 2018 to May 2019). He graduated as an Electronics Technician from Padres do Trabalho Municipal Technical School in December 1996. He graduated in Civil Engineering from the Federal University of Ouro Preto in January 2004. He completed a Master's Degree in Geotechnics at the Federal University of Ouro Preto in December 2019 and is a doctoral student at the Federal University of Ouro Preto.

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**Quintiliano Fernandes Guerra** – 049.751.306-45

**Position(s):** He is a non-independent alternate member of Vale's Executive Risk Committee – Geotechnical (since August 2023), where he also holds the position of Director of Geotechnics and Hydrogeology (since April 2023); he also held the following positions in the last 5 years: **(i)** General Manager for Resource Development, Long-Term Planning and Continuous Improvement – Coal at Vale Mozambique (from July 2014 to July 2017); **(ii)** Executive Manager for Planning, Programming, Maintenance Engineering and Projects – Coal at Vale Mozambique (from July 2017 to January 2018); and **(iii)** Executive Manager for Planning and Coal Projects at Vale Mozambique (from January 2018 to March 2019). He graduated in Mining Engineering from the University of New South Wales in 2002, and completed a Master's Degree in Finance from the University of New South Wales in 2004, a Master's Degree in Mining Engineering from the University of New South Wales in 2006, and a Master's Degree in Mining Geomechanical Engineering from the University of New South Wales in 2011.

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**Paulo de Tarso de Alexandria Cruz** – 695.649.731-04

**Position(s):** Non-independent alternate member of Vale's Executive Risk Committee – Geotechnicians, where he also holds the position of Operations and Engineering Manager. His main professional experiences in the last 5 years include: **(i)** Director of Operations at Aliança Geração de Energia (between August 2019 and October 2022); **(ii)** Sitting Member of the Board of Directors of the Igarapava Consortium (until October 2022); **(iii)** Chairman of the Candonga Consortium Board of Directors (until October 2022); **(iv)** Chairman of the Board of Directors of the UHE Porto Estrela Consortium (until October 2022); and **(v)** Chairman of the Board of Directors of the Capim Branco Energia Consortium (until October 2022). He graduated in Mechanical Engineering at the University of Brasília in December 2002, completed an Executive Business MBA at Fundação Dom Cabral in April 2013, a Master's Degree in Mechanical Sciences at the University of Brasília in July 2006 and an MBA in Finance at IBMEC – Instituto Brasileiro de Mercado de Capitais in April 2021.

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**Maria Luiza de Oliveira Pinto e Paiva** – 129.079.488-06

**Position(s):** She is Chief Sustainability Officer (since March 2021) and non-independent Coordinator of the Business Risk Executive Committee – Sustainability, Institutional Relations and Reputation (since August 2022) at Vale. Her main professional experiences in the last 5 years include: **(i)** Chief Sustainability Officer at Suzano S.A. (from January 2019 to February 2021), a publicly-held company in the forestry sector – pulp and paper; **(ii)** Member of the Board of Directors of Global Compact Network Brazil, a third-sector entity (from January 2020 to March 2021); **(iii)** Member of the Board of Directors of the Brazilian Business Council for Sustainable Development, a third-sector entity (from August 2019 to March 2021); **(iv)** Chief Sustainability Officer at Fibria S.A. (from March 2015 to January 2019), a publicly-held company in the forestry sector – pulp. She graduated in Psychology from the Pontifical Catholic University of the State of São Paulo (PUC-SP) in December 1986.

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**Camilla Lott Ferreira** – 043.987.797-01

**Position(s):** Non-independent secretary of the Executive Risk Committee – Sustainability (since August 2023, non-independent member since December 2020), non-independent member of the Executive Risk Committee – Operational (since August 2023) and non-independent member of the Executive Risk Committee – Compliance, Institutional Relations and Communication (since November 2023) at Vale, where she also holds the position of Director of Corporate Sustainability (since March 2023), having already held the following positions: **(i)** Executive Manager for Social Management (from October 2017 to March 2023); **(ii)** Lead Negotiation Specialist regarding HSEC – Health, Safety, Environment and Community (from October 2013 to October 2017); **(iii)** General Manager for Capital Project Sustainability (from February 2013 to October 2013); **(iv)** General Manager for Project Management (PMO) and Chief Executive Officer at Vale Foundation in Mozambique (from February 2011 to January 2013); **(v)** Sustainability Manager at Vale Foundation in Mozambique (from January 2010 to January 2011); **(vi)** Environment Manager at Vale in Mozambique (from January 2006 to December 2009); and **(vii)** Engineer at Department of Environmental and Territorial Management (from June 2001 to December 2005). Her main professional experiences in the last 5 years also include: **(i)** member of the Board of Directors at Biopalma da Amazônia S.A. (since May 2018); and **(ii)** Member of the Board of Trustees at Renova Foundation, a non-profit organization responsible for managing and performing programs to redress the damage caused by the breach of the Fundão tailings dam, owned by Samarco Mineração S.A., in Mariana (MG), of which Vale is a subsidiary funding entity (since July 2019). She graduated in Agronomic Engineering at UFV in January 2000; completed postgraduate studies in Business Management at Dom Cabral Foundation, in December 2005; and completed MBA at Federal University of Rio de Janeiro in December 2004.

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**Jânio João Almeida Souza** – 564.387.882-87

**Position(s):** He is a non-independent member of the Executive Risk Committee – Sustainability (since August 2023) and the Executive Risk Committee – Operational (since August 2023), and Non-independent alternate member of Vale's Executive Risk Committee – Strategic, Financial and Cyber (since November 2023) at Vale, where he also holds the position of Director of Planning and Integration (since March 2023), having held the following positions in the last 5 years: **(i)** Executive Manager of Information Technology – Business Solutions (from March 2020 to March 2023) at Vale and **(ii)** Executive Manager of Information Technology – Services (from November 2017 to March 2020) at Vale. He graduated in Data Processing Technology from Centro de Ensino Superior do Pará – CESUPA, in February 1998. He postgraduated in Specialization in Project Management (lato sensu) from IETEC – Instituto

de Educação Tecnológica, completed in November 2001; and MBA in Business Management from Dom Cabral Foundation – FDC, completed in August 2006.

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**Marcelo Sampaio Cunha Filho** – 009.636.111-51

**Position(s):** He is a non-independent member of the Risk Executive Committee – Compliance, Institutional Relations and Communication (since November 2023) at Vale, where he is also Director of Regulatory Affairs (since January 2023). His main professional experience in the last 5 years includes: **(i)** Coordination and teaching of classes in the Postgraduate Lato Sensu course "Infrastructure Management and Governance" at Instituto Presbiteriano Mackenzie (since November 2022); **(ii)** Minister of State at Ministry of Infrastructure (from March 2022 to December 2022); **(iii)** Executive Secretary at Ministry of Infrastructure (from January 2019 to March 2022) and **(iv)** Deputy Chief of Public Management at Presidency of the Republic – Subchief of Articulation and Monitoring of the Civil House (from February 2017 to December 2018). He graduated in Civil Engineer from Universidade de Brasília in September 2008; post graduated in Public Management from AVM Faculdades Integradas in March 2016; completed specialization in Public Sector Economics at Faculdade Unyleya in December 2018 and completed a master's degree in Transportation in August 2014.

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**Lauro Angelo Dias de Amorim** – 052.053.936-29

**Position(s):** He is a non-independent member of the Risk Executive Committee – Sustainability (since August 2023), and and Non-independent Member of the Executive Risk Committee – Strategic, Financial and Cyber (since November 2023) of Valeat Vale, where he also holds the position of Licensing Director (since May 2023). His main professional experience in the last 5 years includes: **(i)** Vice President – Sustainability and Corporate Affairs (February 2022 to April 2023); **(ii)** Sustainability Director (December 2019 to December 2021); and **(iii)** Senior Manager of Licensing and Regulatory Affairs (August 2015 to December 2019) at AngloGold Ashanti Córrego do Sítio Mineração S.A. He graduated in Law from Faculdade de Direito Milton Campos ("FDMC") in July 2007; completed specialization in Legal Regime of Mineral Resources at FDMC in December 2009; and completed Executive MBA from Fundação Dom Cabral in December 2018.

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**Marcelo da Silva Klein** – 991.737.357-87

**Position(s):** He is a non-independent member of the Executive Risk Committee – Sustainability at Vale, where he also holds the position of Director of Territory Management, and has held, for the last 5 years, the following positions, joining Vale in May 1992: **(i)** non-independent member of the Risk Executive Committee – Compliance, Institutional Relations and Communication (from July 2022 to November 2023); **(ii)** Officer for Reparation and Territorial Development (from April 2019 to March 2023); and **(iii)** Operational Excellence Executive Manager (from February 2013 to March 2019). He graduated in Industrial Chemistry from the Pontifical Catholic University of Rio de Janeiro – PUC-RJ, in December 1988, and in Chemical Engineering from the Federal University of Rio de Janeiro – UFRJ, in December 1990. He holds a postgraduate degree in Chemical Engineering from Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering – COPPE/UF RJ, completed in December 1991; Master's Degree in Materials Engineering from the Federal University of Ouro Preto – UFOP and Federal University of Minas Gerais – UFMG, completed in December 2002; and specialization course in Corporate Finance from IBMEC/RJ, completed in December 2004.

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**Jone River de Oliveira** – 965.808.951-87

**Position(s):** He is a non-independent alternate member of the Executive Risk Committee – Geotechnical (since August 2023) at Vale, where he is also Geotechnical Manager of South Southern EFC and Port (since March 2022). His main professional experiences in the last 5 years also include: **(i)** Senior Geotechnical Geologist (November 2011 to June 2020) at Yamana Gold Inc / Aurea Mineral Inc / Leagold Mining Corporation – Underground and Open Pit Mining; **(ii)** Railway and Port Geotechnical Manager (July 2020 to July 2021) at Vale. He graduated in Geology from Universidade Federal do Mato Grosso in April 2007, completed a postgraduate degree in Project Management from Fundação Getúlio Vargas in August 2009 and completed specialization in Geotechnical Engineering – Foundations and Earthworks at Universidade de São Paulo in November 2014.

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**Karla Nunes Silva** – 032.058.586-70

**Position(s):** Non-independent alternate secretary of the Executive Risk Committee – Sustainability since August 2023 (non-independent alternate member since January 2022), non-independent alternate member of the Executive Risk Committee – Operational (since August 2023) and non-independent alternate member of the Executive Risk Committee – Compliance, Institutional Relations and Communication (since November 2023) at Vale, where she is also Manager of Sustainability Standardization and Performance (since April 2023), and has held the following position in the last 5 years: **(i)** Manager for Socioeconomics and Environmental Education (from July 2018 to April 2023) and **(ii)** Master Environmental Analyst (from May 2015 to June 2018). She graduated in Psychology from Centro de Ensino Superior de Juiz de Fora in July 2000, and completed postgraduate studies in Psychoanalysis and Mental Health at Centro Universitário do Leste de Minas Gerais in February 2004.

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**Leandro Luiz Santos Barbosa** – 851.799.816-20

**Position(s):** He is a non-independent alternate member of the Executive Risk Committee – Sustainability (since December 2022) and of the Executive Risk Committee – Operational at Vale (since August 2023), where he also holds the position of Director of Health, Safety, Environment and Risks for the Southern Operations (since May 2023), having already held the following positions, joining Vale in May 2006: **(i)** Executive Manager for Health, Safety, Environment, Risks and Emergency for the Southern Corridor (from April 2022 to May 2023); **(ii)** Executive Manager for Engineering – South (from January 2020 to April 2022); **(iii)** Executive Manager for Engineering – Coal (from April 2018 to December 2019); and **(iv)** Manager for Logistics Planning in Mozambique (from January 2014 to March 2018). His main professional experiences in the last 5 years also include: Chief Operating Officer at Nacala Logistics (from April 2017 to April 2018), a company that was part of Vale's economic group until 2021. He graduated in Electrical Engineering from the Federal University of Minas Gerais in December 1995. He has a postgraduate degree in Maintenance Engineering from the Federal University of Espírito Santo, completed in December 2000; specialization course in Telecommunications Engineering from the Federal University of Minas Gerais, completed in December 2002; and a master's degree in Business Administration from Dom Cabral Foundation/Pontifical Catholic University of Minas Gerais – PUC-MG, completed in December 2007.

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**Luiz Henrique Medeiros dos Santos** – 013.497.286-40

**Position(s):** Non-independent alternate member of the Business Risk Executive Committee – Sustainability (since August 2023) at Vale, where he also holds the position of Director of Southern and Southeastern Territories (since May 2023). In the last 5 years, he also held the following positions at Vale or companies in its economic group: **(i)** Member of the Sustainability Committee of Samarco (Jan/2022 to present); **(ii)** Executive Manager of Community Relations for South/Southeast and Future Use Brazil (May/2022 to Apr/2023); **(iii)** Executive Manager of Reparation of Evacuated Territories and RC Brumadinho (Apr/2009 to Dec/2021); and **(iv)** Senior Manager of Global Operational Excellence (Jan/2018 to Apr/2019). He graduated in Administration with International Trade Emphasis from the Centro Universitário UNA in June 2006. He holds an MBA in Finance from IBMEC-MG, completed in October 2008.

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**Rodrigo Ribeiro de Araujo** – 031.919.477-95

**Position(s):** He is a non-independent alternate member of the Business Risk Executive Committee – Sustainability (since August 2023) at Vale, where he also holds the position of General Manager of Pilot Implementation (since May 2023), having already held the following positions: **(i)** Executive Manager of Decarbonization, Technology, and Innovation (from November 2022 to May 2023); **(ii)** CEO of Vale Malaysia Minerals (from October 2019 to October 2022); **(iii)** Executive Manager of Pelletizing Engineering (from October 2017 to September 2019); and **(iv)** General Manager of Pelletizing Planning, Development, and Integrated Management (from November 2008 to September 2017). He graduated in Metallurgical Engineering from the Universidade Federal de Ouro Preto – UFOP in August 1997, completed an MBA in Business Management at Fundação Dom Cabral – FDC in June 2009, and completed Specialization in Production Engineering at Universidade Federal do Espírito Santo – UFES in August 2000.

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**Andressa Machado Duran Linhares – 037.689.187-42**

**Position(s):** She is non-independent secretary of the Executive Risk Committee – Strategic, Financial and Cyber Risks (since June 2022, having already held the position of deputy secretary since June 2020) and non-independent member of the Executive Risk Committee – Operational (since August 2023) at Vale, where she also holds the position of Director of Business Risk Management (since June 2022). Her experiences in the last 5 years include: **(i)** Non-independent secretary of Vale's Risk Executive Committee – Compliance Risks (from July 2022 to November 2023, having already held the position of deputy secretary since June 2020); **(ii)** Corporate Operational Safety Manager (from December 2018 to June 2020); **(iii)** Internal Audit Manager – Operational, Financial, Tax and Compliance (from September 2014 to November 2018); **(iv)** Manager for Integrated Business Risk Management at Vale (from July 2020 to May 2022); and **(v)** effective member of the Audit and Compliance Risks Committee of Samarco Mineração S.A. (from August 2020 to March 2022). She graduated in Law from the Federal University of Rio de Janeiro – UFRJ in July 1997 and completed postgraduate studies in Corporate Finance at IBMEC in July 2007.

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**Marcio Felipe Milheiro Aigner – 035.853.907-22**

**Position(s):** He is a non-independent deputy secretary of the Risk Executive Committee – Strategic, Financial and Cyber Risks at Vale (since June 2022, and he has been a full member of this committee since August 2019), where he also holds the position of Officer for Business Risk Planning and Management (since February 2022). His main professional experiences in the last 5 years include: **(i)** Member of the Board of Directors of VLI – Valor da Logística Integrada (from January 2019 to April 2019); **(ii)** Executive Officer at Salobo Metais S.A. (since May 2018); **(iii)** Executive Officer at Vale Overseas Ltd. (from June 2018 to December 2020); **(iv)** Member of the Board of Directors of Vale Internacional S.A. (since August 2018); **(v)** Member of the Deliberative Board of Vale do Rio Doce Social Security Foundation – Valia (since April 2018); **(vi)** Alternate Member of the Board of Directors of VLI – Valor da Logística Integrada (from April 2019 to April 2022); and **(vii)** Treasury and Corporate Finance Officer at Vale (from April 2018 to January 2022). He graduated in Business Administration from Faculdade Souza Marques in December 1995, completed postgraduate studies in Financial Administration at COPPEAD in December 1999 and an MBA in Business Management at Dom Cabral Foundation in December 2006.

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**Eduardo Ajuz Coelho – 220.075.508-22**

**Position(s):** He is a non-independent member of the Risk Executive Committee – Strategic, Financial and Cyber Risks (since June 2022) at Vale, where he also holds the position of Treasury and Corporate Finance Officer (since February 2022) and held the position of Executive Treasury Manager at Vale (from July 2019 to January 2022). His main professional experiences in the last 5 years include: **(i)** Treasury Officer at Oi S.A., a company in the telecommunications industry (from May 2015 to June 2019), and **(ii)** Director at Aliança Energia S.A. (since January 2020). He graduated in Business Administration from Armando Alvares Penteado Foundation – FAAP in December 2002 and completed postgraduate studies in Business Management at Dom Cabral Foundation – FDC in December 2014.

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**Fabio de Souza Queiroz Ferraz – 136.132.108-35**

**Position(s):** He is a non-independent member of Vale's Risk Executive Committee – Strategic, Financial and Cybernetic Risks. His main professional experiences in the last 5 years include: **(i)** Head of Corporate & Investment Banking at Banco Pine (from April 2013 to 2016); **(ii)** Head of Corporate & Investment Banking at Banco Haitong (from 2016 to 2018); **(iii)** Merger and Acquisitions Officer at Vale (since March 2018); **(iv)** Officer and Partner at Hanalei (Brasil) Family Office (since 2016); **(v)** Officer and Partner at Montecito – (BVI) Family Office (since 2016); and **(vi)** Officer and Partner at Montecito – CorbetsVentures Ltd – BVI Director Family Office (since 2016). He graduated in Business Administration from Getúlio Vargas Foundation – São Paulo (FGV/SP) in March 1990, and completed an MBA at the University of Michigan in May 1994.

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**Murilo Muller – 877.208.929-68**

**Position(s):** He is a non-independent member of the Executive Risk Committee – Strategic, Financial and Cyber Risks (since August 2020) and the Executive Risk Committee – Compliance, Institutional Relations and Communication (since March 2022) at Vale, where he also holds the position of Director of Accounting, Tax, and Controlling (since March 2023), and held the following positions: **(i)** Controllership Officer (from August 2017 to March 2023); **(ii)** Controllership Project Manager (from August 2013 to April 2015), and **(iii)** Controllership Executive Manager (from April 2015 to August 2017). His main professional experiences in the last 5 years include: **(i)** Member of the Board of Directors at MRS Logística S.A. (since April 2023); and **(ii)** Member of the Board of Directors of CSI Steel, a company in the steel processing industry (from July 2020 to January 2022). He graduated in Accounting Science from the Federal University of Paraná in June 2001.

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**Paulo Celso Pires – 121.839.988-06**

**Position(s):** Non-independent member of Vale's Executive Risk Committee – Strategic, Financial and Cyber, where he also holds the position of Director of Technology and Innovation. His main professional experiences in the last 5 years include: **(i)** Executive Operational Manager of Industrial Technology at Vale (between January 2021 and April 2023), **(ii)** Director of Industrial Technology at Vale (between May 2023 and August 2023), and **(iii)** Director of Manufacturing Engineering at Embraer S.A. (between November 2019 and January 2021). He graduated in metallurgical engineering at the Polytechnic School of the University of São Paulo – USP, in December 1998, having completed a specialization in project management at the Vanzolini Foundation – University of São Paulo – USP, in November 2001 and a master's degree at the Polytechnic School of University of São Paulo – USP, in December 1999.

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**Vagner Silva de Loyola Reis – 992.523.177-91**

**Position(s):** He is a non-independent member of the Risk Executive Committee – Strategic, Financial and Cyber Risks at Vale (since April 2020), where he also holds the position of Officer for the Ferrous Metals Value Chain (since August 2017). His experience in the last 5 years include: **(ii)** Member of the Board of Directors at Samarco Mineração S.A. (since July 2019); **(ii)** Internal Planning Executive Manager at Vale (from May 2015 to August 2017); and **(iii)** Ferrous Metals Planning and Production Officer at Vale (from June 2013 to May 2015). He graduated in Industrial Chemistry from PUC/RJ in December 1990 and completed a specialization course in Business Management at Dom Cabral Foundation in October 1992.

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**Carolina Alves de Freitas Langoni – 078.355.577-62**

**Position(s):** She is a non-independent alternate member of the Risk Executive Committee – Strategic, Financial and Cyber Risks at Vale (since June 2022), where she also holds the position of Mergers and Acquisitions Specialist (since April 2015). She graduated in Civil Engineering with emphasis on Production from the Pontifical Catholic University of Rio de Janeiro in July 2003 and completed an MBA in Finance from COPPEAD in Rio de Janeiro in December 2007.

**Dan Harif** – 002.260.247-09

**Position(s):** He is a non-independent alternate member of the Risk Executive Committee – Strategic, Financial and Cyber Risks (since January 2020) at Vale, where he also holds the position of Information Security IT Manager (since July 2016), and he has also held, in the last 5 years, the position of Manager for the Information Technology Center (from August 2014 to July 2016). He holds a degree as Data Processing Technician from Pontifical Catholic University of Rio de Janeiro, completed in December 1993.

**Eduardo Amiel Pfiffer** – 029.438.037-07

**Position(s):** He is a non-independent alternate member of the Risk Executive Committee – Strategic, Financial and Cyber Risks at Vale (since January 2020), where he also holds the position of Executive Manager for Market Intelligence and Analysis (since October 2019) and held the position of General Manager for Market Intelligence in the last 5 years (from October 2011 to September 2019). He graduated in Economics from the Federal University of Rio de Janeiro (UFRJ) in April 1996 and in Law from Fluminense Federal University in July 2020, and completed a course on Finance at Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering (COPPE/UFRJ) in December 1998 and holds a Master's Degree in Business Administration from the Pontifical Catholic University of Rio de Janeiro, completed in December 2004.

**Eliane Velo Dominguez** – 034.232.097-12

**Position(s):** She is a non-independent alternate member of the Executive Risk Committee – Compliance, Institutional Relations and Communication (since March 2022) at Vale, where she also holds the position of Tax Director (since May 2023), and has held the following positions: **(i)** Executive Manager Consolidation Accounting Brazil Asia (from August 2022 to May 2023); **(ii)** Controllership and Global Consolidation Manager (from October 2018 to August 2022); **(iii)** Manager for Consolidation, Results and Consolidated Reports (from April 2016 to September 2018); and **(iv)** Accounting, Regulation and Support Manager (from April 2014 to March 2016). Her main professional experiences in the last 5 years also include: member of the Fiscal Council at Renova Foundation (from April 2020 to April 2023), a non-profit organization responsible for managing and executing programs to redress damage caused by the breach of the Fundão dam, owned by Samarco Mineração S.A., in Mariana (MG), of which Vale is a subsidiary funding entity. She graduated in Accounting Sciences from the State University of Rio de Janeiro (UERJ), in June 1997, completed postgraduate studies in Finance and Corporate Management at Candido Mendes University in November 2000 and completed an MBA in Controllership and Finance at Fluminense Federal University (UFF) in June 2005.

**Jose Carlos Pocidonio de Moraes Junior** – 321.773.748-20

**Position(s):** Non-independent alternate member of Vale's Executive Risk Committee – Strategic, Financial and Cyber (since November 2020), where he also holds the position of General Manager of Accounting and Controlling (since April 2023). His experiences in the last 5 years include: **(i)** Controllership Manager at Vale S.A. (between February 2021 and March 2023); and **(ii)** Controller (between February 2020 and February 2021). He graduated in Accounting Sciences from PUC Campinas in December 2007 and completed a postgraduate degree in Finance and Controllership from Saint-Paul in December 2014.

**Juan Franco Merlini** – 011.903.586-38

**Position(s):** He is a non-independent member of Vale's Risk Executive Committee – Strategic, Financial and Cybernetic Risks (since November 2023, having held the position of alternate member since June 2022 and full member of this committee since August 2019), where he also holds the position of Marketing, Intelligence, and Pricing Director (since July 2023). His main professional experiences in the last 5 years include: **(i)** Director of Marketing and Sales for Basic Metals at Vale (from October 2020 to June 2023); and **(ii)** Director of Finance and Business Development – Basic Metals (from July 2018 to October 2020). He graduated in Electrical Engineering from the Pontifical Catholic University of Minas Gerais in December 1998, and completed postgraduate studies in Business at Getúlio Vargas Foundation (FGV/RJ) in December 1999 and an MBA in Corporate Finance at the Brazilian Institute of Capital Markets (IBMEC) in December 2001.

**Marcos Guilherme Ruffeil Moreira** – 599.088.312-91

**Position(s):** He is a non-independent alternate member of Vale's Risk Executive Committee – Strategic, Financial and Cyber Risks (since April 2020), where he also holds the position of Production Planning and Logistics Capacity Manager (since February 2020). His experiences in the last 5 years include: **(i)** Strategic Planning Manager – Ferrous Metals at Vale S.A. (from January 2018 to January 2019); and **(ii)** Strategic Planning and Coal Performance Manager at Vale Mozambique (from January 2013 to December 2017). He graduated in Mechanical Engineering from the Federal University of Pará in December 1999 and completed a Master's Degree in Production Engineering at PUC-RJ in March 2005.

**Patricia Silva Rodrigues Scheel** – 034.213.646-13

**Position(s):** She is a non-independent alternate member of Vale's Risk Executive Committee – Strategic, Financial and Cyber Risks (since January 2020), where she also holds the positions of International Treasury Executive Manager and Vale's Country Manager in the Netherlands (since December 2019); in the last 5 years, she has also held the positions of: **(i)** Corporate Finance Executive Manager (from April 2018 to December 2019); **(ii)** Mergers, Acquisitions and Divestments Executive Manager (from June 2016 to April 2018); **(iii)** Mergers, Acquisitions and Divestments Manager (from April 2015 to June 2016); and **(iv)** M&A Evaluations Manager (from June 2013 and April 2015). She graduated in Aeronautical Infrastructure Engineering from the Technological Institute of Aeronautics (ITA) in December 2000, and received a Master's Degree in Finance from the London Business School in June 2005.

**Gustavo Niskier** – 079.590.307-31

**Position(s):** He is a non-independent Secretary of Vale's Executive Risk Committee – Compliance, Institutional Relations and Communication (since November 2023), where also holding the position of Director of Privacy and Trade Compliance (since March 2023), having also held, in the last 5 years, the positions of: **(i)** Executive Manager of Privacy and International Sanctions / Rio de Janeiro – (between March 2021 and March 2023); **(ii)** Head of Legal, Compliance, Ethics (ombudsman), Governance, and Corporate Secretary (Vale Indonesia, Jakarta) (between March 2019 and March 2021); and **(iii)** General Manager of Civil Litigation / Environment / Criminal / Labor (Rio de Janeiro) (between March 2016 and March 2019). His experiences in the last 5 years include: **(i)** Elected Director / board of Directors of American Sanctions and Export Control Society – Washington / USA from July 2023 to current; and **(ii)** Vice President of Associação Kinderland from January 2022 to current. Graduated in Law from Pontifícia Universidade Católica do Rio de Janeiro – PUC/Rio in June 2002, completed postgraduate studies in Environmental Law from Pontifícia Universidade Católica do Rio de Janeiro – PUC/Rio in December 2003, specialization in Human Rights Law from the American University / Washington College of Law (USA) in June 2015, and a master's degree in Environmental Engineering from Pontifícia Universidade Católica do Rio de Janeiro – PUC/Rio in June 2016.



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**Renata Barreto Soares de Almeida** – 088.860.467-07

**Position(s):** She is a non-independent deputy secretary of Vale's Executive Risk Committee – Compliance, Institutional Relations and Communication (since July 2022), where she also holds the position of Manager of Privacy (since May 2023), and has held the following positions in the last 5 years: **(i)** Technical Specialist for Data Protection and Sanctions (from May 2021 to May 2023); **(ii)** Master Information Technology Analyst (from August 2017 to May 2021); and **(iii)** Senior Systems Analyst (from January 2012 to August 2017). She graduated in Computer Technology from University Center of the City of Rio de Janeiro – UniverCidade in July 2007.

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**Heloisa de Oliveira Perdigão Cerqueira** – 215.627.948-92

**Position(s):** She is a non-independent alternate member of Vale's Executive Risk Committee – Compliance, Institutional Relations and Communication (since April 2024, interim member since November 2023), also holding the position of General Manager of Governmental and Institutional Relations for the Southeast region (since October 2022). Over the last 5 years, she has held the following roles: **(i)** Executive Manager of Future Use & Risks and Emergency (March 2021 to October 2022); **(ii)** Executive Manager of Mariana Complex (August 2019 to March 2021); and **(iii)** Manager of Beneficiation at Mariana Complex (September 2018 to July 2019). She graduated in Mining Engineering from Escola de Minas de Ouro Preto – UFOP in June 2006, completed an Executive MBA at Fundação Dom Cabral in September 2023, and obtained a specialization in Business Strategy from HEC Paris in May 2023.

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**Octavio Bulcão Nascimento** – 465.419.855-53

**Position(s):** He is a non-independent member of Vale's Executive Risk Committee – Compliance, Institutional Relations and Communication. He is Vale's Legal Director (since March 2023), where he also held the position of Vale's Tax Director (from April 2013 to March 2023). His professional experiences also include the position of Full Member Advisor at Instituto Brasileiro de Mineração – IBRAM (since January 2023). He graduated in Law from the Catholic University of Salvador (UCSAL/BA) in December 1992, and got a Master's degree in Tax Law from the Pontifical Catholic University of São Paulo (PUC/SP) in July 1999.

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**Antonio Guilherme Scarance Fernandes** – 251.255.928-97

**Position(s):** He is a non-independent alternate member of Vale's Executive Risk Committee – Compliance, Institutional Relations and Communication (since November 2023), and also holds the position of General Manager of External Communication (since June 2018), having also held, in the last 5 years, the position of: **(i)** External Communication Manager (from December 2022 to May 2023); and **(ii)** Relationship and Digital Media Manager (from June 2018 to December 2022). He graduated in Social Communication with a specialization in Journalism from Faculdade de Comunicação Cásper Líbero in December 1995.

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**Adriana Paula de Souza Vicente Cardoso** – 013.327.196-00

**Position(s):** She is a non-independent alternate member of Vale's Executive Risk Committee – Compliance, Institutional Relations and Communication (since November 2023), where she also holds the position of HR Manager South Corridor (since October 2022), having also held, in the last 5 years, the position of: **(i)** HR Manager Ferrous North (October 2020 to September 2022); and **(ii)** HR Manager South Range (April 2019 to September 2020). She graduated in Psychology from Universidade Federal de Minas Gerais – UFMG in August 2003, completed a postgraduate degree in Business Management from Fundação Comunitária de Ensino Superior de Itabira – FUNCESI in December 2004, as well as a specialization in People Management from Fundação Dom Cabral in December 2012.

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**Mariana Correia Pereira** – 026.667.926-92

**Position(s):** She is a non-independent alternate member of Vale's Executive Risk Committee – Compliance, Institutional Relations and Communication (since February 2020), where she also holds the position of Director of Litigation and Tax Risks (since May 2023); in the last 5 years, she held the following position: **(i)** Tax Risks and Guidance Manager (from June 2018 to February 2021); **(ii)** Executive Manager of Tax Risk Guidance and Management (from February 2021 to May 2023); and **(iii)** Lawyer and Legal Manager at Vale (from August 2004 to April 2016). Her professional experience also includes: **(i)** Tax Manager at Arcelor Mittal Brasil (from April 2016 to June 2018). She graduated in Law from the Federal University of Minas Gerais in July 2000, and received a Master's Degree in Tax Law from the Federal University of Minas Gerais in March 2005.

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**Alexandre Maya Poyastro** – 034.164.277-00

**Position(s):** He is a non-independent alternate member of Vale's Executive Risk Committee – Compliance, Institutional Relations and Communication (since November 2023), where he also holds the position of Manager of Risks, Controls, and Corporate Integrity Monitoring (since June 2023), and has also held the positions of: **(i)** Corporate Integrity Specialist (from June 2018 to June 2023); and **(ii)** Master Analyst of Supply (from May 2011 to June 2018). He graduated in Economics from Pontifícia Universidade Católica – PUC – Rio de Janeiro in December 1996; completed an MBA in Finance from Instituto Brasileiro de Mercado e Capitais – IBMEC – Rio de Janeiro in December 1999; and obtained a specialization in Risk University from Klynveld Peat Marwick Goerdeler – KPMG in October 2020.

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**Daniella Gonçalves de Barros Silveira de Queiroz** – 020.231.327-11

**Position(s):** She is a non-independent alternate member of Vale's Executive Risk Committee – Compliance, Institutional Relations and Communication (since November 2023), where she also holds the position of Director of Regulatory and Infrastructure Projects (since July 2023). In the last 5 years, she has also held the positions of: **(i)** Executive Manager of Regulatory Affairs, Mining, and Infrastructure (from November 2020 to April 2023); and **(ii)** Executive Manager of Leases and Concessions (from January 2019 to October 2020). Her experiences in the last 5 years also include: **(i)** Alternate Counsel representing Vale at IBRAM – Brazilian Mining Institute (since November 2019). She graduated in Mechanical Engineering from Universidade Federal do Espírito Santo (UFES) in December 1994; completed an MBA in Business Management at Fundação Dom Cabral in December 2006; specialized in International Business, Marketing, and Leadership at Kellogg School of Management in December 2006; and a master's degree in Production Engineering/Transport Systems from Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio) in September 1997.

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## **Statement of Non-Conviction**

Each of the members of the Board of Directors, Executive Committee and Fiscal council have declared, for all legal purposes, that, in the last 5 years, they have not sustained any criminal conviction, **(ii)** any adverse judgment in administrative proceedings from the Securities and Exchange Commission ("**CVM**"), the Central Bank of Brazil ("**BCB**") or the Superintendence of Private Insurance ("**SUSEP**"), or also **(iii)** any final and unappealable judgment, at the judicial level or subject matter of a final administrative decision, which has suspended or disqualified him/her from undertaking any professional or commercial activity.

## **7.5. Family relation**

### **Justification for not completing the table:**

All members of Vale's Board of Directors, Executive Committee and Fiscal council have stated individually and for all legal purposes that there is no marital relationship, common-law marriage or kinship up to the second degree between them and (i) the other directors of Vale; (ii) directors of the direct or indirect subsidiaries of Vale; (iii) direct or indirect controlling shareholders of Vale; and (iv) the directors of Vale's direct and indirect controlling companies.

Moreover, all members of the Board of Directors, Executive Committee and Fiscal council of the direct and indirect subsidiaries of Vale have declared, individually and for all legal purposes, that there is no marital relationship, common-law marriage or kinship up to the second degree between them and direct or indirect controllers of Vale.

## 7.6. Relationship of subordination, service provision or control

**2023**

Identification	CPF/CNPJ Individual / Corporate Taxpayer ID)	Type of relationship the Director has with the related person	Type of related person
<b>Position/Function</b>			
Fiscal Year 12/31/2023			
<b>Issuer Manager</b>			
João Luiz Fukunaga	324.445.148-90	Subordination	
Member of the Board of Directors, Coordinator of the People and Compensation Committee and Member of the Sustainability Committee			
<b>Related person</b>			
Caixa de Previdência dos Funcionários do Banco do Brasil – PREVI.	33.754.482/0001-24		
<b>Note</b>			
Mr. João Luiz Fukunaga has held, since February/2023, the position of President of the Banco do Brasil Employees Pension Fund – PREVI, which is a shareholder of the Company and is considered a Reference Shareholder of Vale.			

**2022**

Identification	CPF/CNPJ Individual / Corporate Taxpayer ID)	Type of relationship the Director has with the related person	Type of related person
<b>Position/Function</b>			
Fiscal Year 12/31/2022			
<b>Issuer Manager</b>			
Daniel André Stieler	391.145.110-53	Subordination	
Member of the Board of Directors			
<b>Related person</b>			
Caixa de Previdência dos Funcionários do Banco do Brasil – PREVI.	33.754.482/0001-24		
<b>Note</b>			
Mr. Daniel André Stieler held the position of President of the Caixa de Previdência dos Trabalhadores do Banco do Brasil – PREVI, which holds a direct stake in the Company and is considered a Reference Shareholder of Vale.			

Indentification	CPF/CNPJ Individual / Corporate Taxpayer ID)	Type of relationship the Director has with the related person	Type of related person
<b>Position/Function</b>			
Fiscal Year 12/31/2022			
<b>Issuer Manager</b>			
João Luiz Fukunaga	324.445.148-90	Subordination	
Member of the Board of Directors			
<b>Related person</b>			
Caixa de Previdência dos Funcionários do Banco do Brasil – PREVI.	33.754.482/0001-24		
<b>Note</b>			
Mr. João Luiz Fukunaga has held, since February/2023, the position of President of the Caixa de Previdência dos Trabalhadores do Banco do Brasil – PREVI, which is a shareholder of the Company and is considered a Reference Shareholder of Vale.			

Indentification	CPF/CNPJ Individual / Corporate Taxpayer ID)	Type of relationship the Director has with the related person	Type of related person
<b>Position/Function</b>			
Fiscal Year 12/31/2022			
<b>Issuer Manager</b>			
Eduardo de Oliveira Rodrigues Filho	442.810.487-15	Provision of service	
Membro do Conselho de Administração			
<b>Related person</b>			
CWH Consultoria em Gestão Empresarial	26.703.816/0001-75		

**Note**

Mr. Eduardo de Oliveira Rodrigues Filho is a Managing Partner at CWH Consultoria em Gestão Empresarial, which has a contract to provide consulting services to Mitsui & Co., Ltd., which in turn is a shareholder of the Company and is considered a Reference Shareholder.

**2021**

Identification	CPF/CNPJ (Individual / Corporate Taxpayer ID)	Type of relationship the Director has with the related person	Type of related person
<b>Title/Role</b>			
Fiscal Year 12/31/2021			
<b>Issuer Manager</b>			
Daniel André Stieler	391.145.110-53	Subordination	
Member of the Board of Directors			
<b>Related person</b>			
Banco do Brasil Employees' Pension Fund - PREVI.	33.754.482/0001-24		
<b>Note</b>			
Mr. Daniel André Stieler is President of Banco do Brasil Employees' Pension Fund - PREVI, which holds a direct interest in the Company and is considered a Reference Shareholder.			

## 7.7. Administrator agreements/insurance

### D&O

Vale holds a global civil liability insurance coverage for Officers and Directors (D&O), procured from a group of insurers and reinsurers led by Zurich Minas Brasil Seguros S/A, upon the payment of a premium in the amount of US\$ 12,585,773.40, in effect from October 31, 2022 to October 31, 2023, representing the total indemnity limit corresponding to US\$ 75 million. This insurance extends to the members of the Board of Directors, Executive Committee, Fiscal council and any other statutory body, as well as some employees at strategic/managerial levels, both of the Company and its subsidiaries ("Insured").

The purpose of the insurance is to pay financial losses arising from claims against the Insured due to reckless acts or omissions that may occur in the performance of his/her duties. Said policy, in addition to comprising the redress of damages caused to third parties, to Vale and its subsidiaries by charges made by government agencies, also covers agreements previously authorized by the insurer with the purpose of ending administrative or judicial proceedings. The coverage of the policy also extends to the payment of defense costs of the Insured, as and when due. In addition to the aforementioned coverage, the insurance provides additional guarantees for cases of liability that may affect spouses, heirs, successors, legal representatives and people appointed by Vale to act as Management Members of external entities.

The policy also guarantees coverage for fines and civil and administrative penalties, liability for environmental damages, freeze of assets and online attachment, and also exclusive coverage for executives from claims in the stock market. Other limitations and exclusions applied are consistent with current market conditions.

Fines covered by the D&O policy refer to civil and administrative proceedings.

As for the agreements, the coverage provided for is to end proceedings, and all amounts provided for therein are subject to coverage in the policy, provided that the agreements have been previously approved by the insurer.

### *Indemnity Agreement*

In support to D&O, Vale has also entered into Indemnity Agreements with members of the Board of Director, from members of the Advisory Committees to the Board of Directors, and members of Executive Committee ("Management Members"). By means of such agreements, the Company has committed to guarantee and bear (i) the reasonable expenses that said Management Members have proven to incur; and (ii) the amounts they are ordered to pay, as a result of an investigation, administrative, arbitration and/or judicial proceedings due to an act or omission practiced exclusively in the exercise of their duties at Vale and/or any of its subsidiaries/affiliates, as the case may be, provided that the Management Member has performed such act or omission in good faith and in Vale's best interest. The indemnity includes, but is not limited to, all legal and/or administrative expenses, as well as any amounts due as damages, interest and pecuniary penalties.

Vale's Indemnity Policy, approved by the Board of Directors on April 9, 2020 and reviewed on July 28, 2021, sets forth principles, guidelines, limits and procedures for granting indemnity, including the draft Indemnity Agreement to be formalized with the beneficiaries. As provided for in the Indemnity Policy, Vale shall keep the beneficiaries free of any expenses that are proven to incur or for amounts that are imposed on them due to investigations, administrative, arbitration and/or judicial proceedings that are instituted or brought against them, for collection of corporate debts or obligations of Vale and/or as a result of any act or omission arising directly from regular management acts or the performance of their duties at Vale and/or its subsidiaries/affiliates and/or in an entity in which Vale holds direct or indirect interest, provided that the beneficiaries have performed such act or incurred such omission in good faith and aiming at Vale's best interest.

Vale's Indemnity Policy, approved by the Board of Directors on April 9, 2020 and revised on July 28, 2021, establishes principles, guidelines, limits and procedures for granting indemnity, including the draft Indemnity Agreement to be formalized with beneficiaries. As provided for in the Indemnity Policy, Vale will keep beneficiaries indemnified for any expenses that they prove to incur or for amounts that are imposed on them as a result of investigations, administrative, arbitration and/or judicial proceedings that are instituted or filed against them, to collection of corporate debts or obligations of Vale and/or due to any act or omission that arises directly from regular management acts or from the performance of their duties at Vale and/or its subsidiaries/affiliates and/or at an entity in which Vale holds direct or indirect participation, provided that the beneficiaries have performed such act or committed such omission in good faith and aiming at the best interest of Vale.

In order to trigger the indemnity agreement, the beneficiaries must notify Vale of a decision that determines the payment or reimbursement provided for in the Indemnity Agreement, by means of communication to Vale's Executive Vice-President for Corporate and Institutional Affairs, who must verify that the act of the Administrator is eligible for coverage under the terms of the Policy and/or the Indemnity Agreement, including whether it is unequivocally framed in any exclusion, as will be detailed below.

The Executive Vice-President of Corporate and Institutional Affairs may also submit the request for analysis and deliberation: (i) by the Executive Committee, when the Administrator is the Executive Vice-President of Corporate and Institutional Affairs or former General Consultant; or (ii) to the Board of Directors, in cases where the Manager is a member of the Board of Directors, President, Executive Vice-President or member of the Advisory Committee to the Board of Directors of Vale or member of the Audit Committee, observing the procedures to avoid conflicts of interest, as provided for in the Related Party Transactions and Conflict of Interests Policy.

The Indemnity Policy provides for exclusionary hypotheses, which, when configured, lead to the non-application of the protections provided for in the Indemnity Policy to Administrators. The exclusions are: (i) active or passive conduct of the beneficiary that constitutes bad faith, gross fault or through fraud, misuse of purpose, disclosure of strategic and confidential information against Vale's interests, or outside the sphere of competence of the position for which they were elected or of the function exercised; (ii) willful act classified as a willful crime in a final, judicial or administrative decision; (iii) act in self-interest or in the interest of third parties, to the detriment of Vale's interests; (iv) act outside the exercise of duties as a director or employee or representative, as the case may be; (v) action for damages filed by Vale against the director or any lawsuit filed by Vale against the employee or representative; (vi) legal proceedings or arbitration proceedings filed by the beneficiary against Vale, except to the extent that such proceedings filed by the beneficiary are intended to enforce the terms of the Policy and/or the respective Indemnity Agreement and is deemed valid in favor of the beneficiary by a final unappealable court decision or arbitration award that has not been annulled by a later decision, in which case Vale will only indemnify the beneficiary after the final unappealable decision or arbitration award; and (vii) the practice of (a) an act of serious and repeated indiscipline or insubordination or those that have given rise to the commitment to indemnify; or (b) abandonment of position.

Specifically for the indemnity contracts that Vale entered into with the members of the Extraordinary Independent Advisory Committee for Dam Safety, Independent Extraordinary Advisory Committee for Investigation and Independent Extraordinary Advisory Committee for Support and Reparation ("CIAEs"), the analysis on the inclusion of any of the exclusions mentioned above will be up to the Board of Directors

The Company's Indemnity Policy also provides for the Specific Indemnity Commitment, with annual global coverage of up to US\$200,000,000.00 applicable to the set of beneficiaries, through which Vale undertakes to sponsor, with its own lawyers or third parties chosen and contracted by it, the defense: (i) of employees allocated in the geotechnical area and/or who act attesting to the stability of geotechnical structures in its operations or those of its subsidiaries globally; (ii) employees responsible for declaring Vale's mineral resources and reserves ("competent" or "qualified person" before the Securities and Exchange Commission); and (iii) the persons appointed by Vale or its subsidiaries to the position of administrator, member of the Fiscal Council and/or member of the advisory committee in entities in which Vale has direct or indirect participation, who are subject to a liability action directly related to the regular exercise of the functions of the position they hold; as well as providing logistical support and support necessary for their participation in administrative and judicial investigations.

## 7.8. Other relevant information

### Politically exposed person

With the exception of the persons listed below, each of the members of the Board of Directors, Executive Committee and Fiscal Council listed in item 7.3, declared that they are not politically exposed persons, as defined in the applicable regulations:

- I. Daniel André Stieler declared himself a politically exposed person due to his position as Statutory Controlling Director of Banco do Brasil S.A. (July/2019 to January/2021).
- II. Marcelo Gasparino da Silva declared himself a politically exposed person due to his position as (i) Member of the Board of Directors of CEMIG (April/2016 to July/2022); (ii) Member of the Board of Directors (April/2021 to May/2021 and since August/2021) and Member of the Fiscal Council (May/2019 to April/2021) of Petrobras; (iii) Member of the Board of Directors of CELESC (April/2018 to April/2019); and (iv) Member of the Board of Directors of Eletrobras (April/2016 to April/2017).
- III. Paulo Cesar Hartung Gomes declared himself a politically exposed person, as defined in the applicable regulations, due to having held the position of governor of the State of Espírito Santo (January/2015 to December/2018).
- IV. André Viana Madeira declared himself a politically exposed person due to his position as (i) Councilor in the city of Itabira – Minas Gerais – between 2017 and 2020; and (ii) President of the Metabase Union of Itabira (MG) and region.
- V. Rachel de Oliveira Maia declared herself a politically exposed person due to her position as Member of the Board of Directors of Banco do Brasil (from May 2021 to April 2023).
- VI. Jandaraci Ferreira de Araújo declared herself a politically exposed person, due to her holding the positions of Undersecretary for Entrepreneurship, Micro, Small and Medium Enterprises and Executive Director of Banco do Povo Paulista – Government of the State of São Paulo (February/2019 to November/2020).
- VII. Dario Carnevalli Durigan declared himself a politically exposed person due to his position as Executive Secretary of the Ministry of Finance (since June/2023).

### Joint meetings

In 2022, there were 5 joint meetings of the Audit and Risk Committee and other advisory committees. No joint meetings are planned for 2023.

### Information on quorum for installation of meetings

<b>Date</b>	04/28/2023
<b>Type of General Meeting</b>	Ordinary and Extraordinary General Meeting
<b>Second call facilities</b>	No
<b>Installation quorum</b>	The ordinary and extraordinary meetings were installed on first call with the presence of shareholders representing 86.25% and 86.30% of the shares issued by the Company, respectively.

<b>Date</b>	12/21/2022
<b>Type of General Meeting</b>	Extraordinary General Meeting
<b>Second call facilities</b>	No
<b>Installation quorum</b>	The extraordinary meeting was installed on first call with the presence of shareholders representing 84.92% of the shares issued by the Company.

<b>Date</b>	04/29/2022
<b>Type of General Meeting</b>	Ordinary and Extraordinary General Meeting
<b>Second call facilities</b>	No
<b>Installation quorum</b>	The ordinary and extraordinary meetings were installed on first call with the presence of shareholders representing 77.01% and 85.10% of the shares issued by the Company, respectively.

<b>Date</b>	04/30/2021
<b>Type of General Meeting</b>	Ordinary and Extraordinary General Meeting
<b>Second call facilities</b>	No
<b>Installation quorum</b>	The ordinary and extraordinary meetings were installed on first call with the presence of shareholders representing 80.6% and 80.93% of the shares issued by the Company, respectively.

<b>Date</b>	03/12/2021
<b>Type of General Meeting</b>	Extraordinary General Meeting
<b>Second call facilities</b>	No
<b>Instalation quorum</b>	The meeting was installed on first call with the presence of shareholders representing 77.26% of the shares issued by the Company, respectively.

<b>Date</b>	09/21/2020
<b>Type of General Meeting</b>	Extraordinary General Meeting
<b>Second call facilities</b>	No
<b>Instalation quorum</b>	The meeting was installed on first call with the presence of shareholders representing 31.7% of the shares issued by the Company, respectively.

<b>Date</b>	04/30/2020
<b>Type of General Meeting</b>	Ordinary and Extraordinary General Meeting
<b>Instalação em segunda convocação</b>	No
<b>Quórum de instalação</b>	The ordinary and extraordinary meetings were installed on first call with the presence of shareholders representing 76.7% and 78.6% of the shares issued by the Company, respectively.

### Non-statutory advisory body to the Board of Directors

Em 2021, foi criado o Comitê de Inovação, dedicado a analisar novas tecnologias e outras iniciativas de negócios. Em 2022, o Comitê de Inovação passou a ser um comitê não estatutário e não permanente.

Under the terms of its internal regulations, the Innovation Committee is responsible for evaluating and recommending to the Board of Directors:

- (i) the strategic guidelines related to the Company's digital transformation, research, development and innovation, with the Committee responsible for monitoring their respective implementation;
- (ii) the strategic direction related to new technologies and new products, aiming at the Company's competitiveness and sustainability;
- (iii) targeting strategic return indicators in Vale's research, development and innovation projects;
- (iv) Vale's strategic projects and investment proposals from the perspective of Innovation, according to the competence of the Board of Directors involved, must withdraw, including physically, from any discussions, under the terms of the Company's internal policies and rules;
- (v) the global budget dedicated to digital transformation, research, development and innovation;
- (vi) the hiring of independent external specialists to assist the Committee in the Board of Directors on the subject. For more information on the Related Party Transactions Policy, see section 11 Performing your duties;
- (vii) the Committee's annual work plan; and
- (viii) the annual report on its performance.

The current internal regulations of this Committee were approved by the Board of Directors at the meeting held on December 22, 2022 and are available for consultation on the Company's website ([www.vale.com/pt/web/esg/conselho-lideranca#membersofthecommittees](http://www.vale.com/pt/web/esg/conselho-lideranca#membersofthecommittees)).

### Management member training programs

The Company regularly promoted an integration and training program for the Board of Directors and its Advisory Committees. As of the mandate that began in 2023, Vale's Board of Directors and Fiscal Council have an Onboarding and Continuing Education Program aimed at providing information and tools to boost their integration into the business context, Vale's culture and the dynamics of its governance and, therefore, to catalyze the performance as Director of the Company, covering the following dimensions: Business Vision; Valley Strategy; Ethics and Governance; Security, Risk and VPS; and Purpose and Cultural Transformation.

The first stages of the Onboarding Program provide Board members with content related to Vale and the context in which it operates and the scheduling of meetings and interactions, of the collegiate bodies as a whole, to better get to know the main executives of the Company and discuss strategic topics most relevant for Vale.

The following stages of the Onboarding Program include visits by Directors to the Company's main facilities, providing direct contact with local leaders and challenges specific to the business. Additionally, as part of the Continuing Education Program, content from Vale's Executive Education Portfolio is made available.



The Corporate Governance Board is responsible for leading the integration of Directors into Vale and acts as an inducer of the aforementioned Onboarding and Continuing Education Program, constituting the main point of dialogue with the Company.

Regarding the Executive Committee, members participate in several sessions during the year to address issues related to leadership, team development, cultural transformation, Diversity, Equity and Inclusion, with internal and external professionals. Emerging technical topics are also discussed in forums with the participation of specialists. In addition, Executive Committee members have access to mentors and coaches, when deemed necessary.

Vale also encourages the continuous development of skills and abilities of the members of the Executive Committee and Board Members for the performance of their functions, offering the opportunity to structure specific modules of Continuing Education, according to its own demands, aligned with its performance.

#### **Extension of the current President's mandate**

On March 8, 2024, the Board of Directors decided to extend the current mandate of Eduardo Bartolomeo, Vale's President, until December 31, 2024, and decided that he will support the transition to the new leadership in early 2025, acting as an advisor for the Company until December 31, 2025.

#### **Resignation of a member of the Board of Directors**

On March 11, 2024, Mr. José Luciano Duarte Penido delivered a letter of resignation as a member of Vale's Board of Directors, in which he expressed his concerns about the President succession process. Vale's internal policies require that a new President be selected by the Board of Directors, with the support of the People and Compensation Committee, from a list of three names recommended by an international search firm with recognized expertise in selecting global executives.

## 8. Management Compensation

### 8.1. Compensation policy or practice

#### **a. objectives of the policy or compensation practice, informing if the compensation policy was formally approved, the body responsible for its approval, the date of approval and, if the issuer discloses the policy, places in the worldwide web where the document can be found**

As a global Company, Vale S.A. (“Vale” or “Company”) knows that attracting the best professionals, retaining talents, motivating and involving leaders who occupy strategic positions, especially members for the Executive Board (a body that, in Vale, is referred to as “Executive Committee”), members of the Board of Directors, the Fiscal Council and the Advisory Committees, is a critical challenge for the Company's success at all times. The market is always a reference within a global perspective. Therefore, Vale takes into account the policies and practices of executive compensation adopted by major mining companies and other large global companies of industries and similar sectors, as well as other elements, aligning the Company's long-term success to the policies and compensation practices of its administration.

In addition to market practices, the strategy and annual compensation packages of members of administration are prepared based on the responsibilities and scope of each member, their competence and performance presented, the value of their services, besides their alignment with the Company's short- and long- term strategies, the sustainability of its business and the return to shareholders. The compensation strategy also aims at the attraction of experienced executives with wide experience and international recognition, as well as with skills identified as criticism and knowledge absolutely relevant to face the challenges of the Company.

The Executive Committee's Compensation Policy was approved at a meeting of the Vale's Board of Directors on September 25th, 2019, and is available for consultation on the websites of the Securities Exchange Commission (“CVM”) ([www.gov.br/cvm](http://www.gov.br/cvm)) and the Company's ([www.vale.com/web/esg/policies-and-corporate-documents](http://www.vale.com/web/esg/policies-and-corporate-documents)).

#### **b. practices and procedures adopted by the board of directors to define the individual compensation of the board of directors and the executive board**

Proposals and compensation policies are prepared with the support of the People and Remuneration Committee (“CPR”) and Nomination and Governance Committee (“CIG”).

CPR evaluates and recommends the compensation strategy of the Executive Committee and the proposal of distribution of the overall annual funds for the compensation of the administrators, and the CIG is in charge of assessing the proposal regarding the compensation of the Board of Directors and its Advisory Committees. It is incumbent upon the Board of Directors to submit the compensation proposal for the evaluation and annual approval of shareholders in the General Meetings of Shareholders, as provided in article 10, paragraph 4 of the Company's Bylaws, and, once approved, the Board of Directors approves individual proposals of the administrators with the support of said committees.

In recent years, significant advances have been made in alignment of administrators' compensation to best governance practices and future value generation. The Malus and Clawback (for more information, see item 8.1.c.i below) rules were adopted for the Executive Committee, so that, upon facts or events of exceptional severity, variable compensation may be eliminated, reduced or even returned by the member of the Executive Committee to the Company. The minimum stock position requirement for members of the Executive Committee was also implemented. There was also the inclusion of Environmental, Social and Governance goals (“ESG” or “ASG”) for all participants of Vale Stock Plan (“VSP”) one of the long-term compensation plans based on shares.

Moreover, the total compensation package has been revisited to proportionally increase the weight of long-term value generation elements. The metrics related to variable compensation have become a greater weight in critical elements to achieve business strategies, namely: risk management, safety, fixed expenditure, operational discipline through the implementation of the Vale's sustainability, diversity and inclusion management model.

#### **i. the issuer's bodies and committees participating in the decision-making process, identifying how they participate**

CPR and CIG, which advise Vale's Board of Directors, participate in the decision-making process and are responsible for evaluating all definitions and strategies related to the compensation of members of the Executive Committee, the Board of Directors and its Advisory Committees, respecting their respective competences under the terms of their Internal Regulations.

After technical evaluation of the market research is received, and considering individual performance evaluations in the case of members of the Executive Committee, which are made annually, CPR and CIG prepare a compensation proposal that is sent to resolution of the Board of Directors and, subsequently, to the Annual Shareholders' Meeting, as established in the Company's Bylaws, respecting their respective competences under the terms of their Internal Regulations.

It bears emphasizing that the Company's Executive Committee is not responsible for approving its compensation, nor for setting goals and parameters for the purpose of determining its variable compensation.

**ii. criteria and methodology used to set individual compensation, indicating whether studies are used to check market practices, and, if so, the comparison criteria and the scope of these studies**

Regarding the methodology used to set the individual compensation of administrators, the Company uses studies to check market practices, supported by one or more specialized consulting companies, in which the behavior of benefit granting for similar companies is observed.

The market is always a reference, within a perspective of global competition and Vale considers, for the purpose of determining the compensation of its administration, the policies and practices of compensation adopted by the main mining companies, and other large global companies of industries in similar sectors.

**iii. how often and how the Board of Directors assesses the adequacy of the issuer's compensation policy**

The adequacy of the methodology, practices and procedures used to set out the individual compensation of administrators is made with observations of practices and trends of the global mining market and similar sectors, with the aid of external consulting companies specialized and focused on C-Level, which occurs at least on an annual basis, when preparing the global compensation proposal. The update of the compensation policy is reviewed every 3 (three) years. Any alteration of variable compensation plans, compensation policies of the members of the Executive Committee and/or individual granting and adjustments of compensation are, necessarily, approved by the Company's Board of Directors, observing the total amount of compensation annually submitted to the approval of shareholders in Annual Shareholders' Meeting.

**c. compensation composition, indicating:**

**i. Description of the many elements that make up the compensation, including, in relation to each one of them, their objectives and alignment with the issuer's short-, mid- and long-term interests**

The Company's compensation is based on its performance and commitment to safety and sustainability, according to the strategic planning established in the short-, mid- and long-term, and in line with the return to shareholders.

**Board of Directors**

**Fixed Compensation**

*Base Salary:* The compensation consists exclusively of the payment of a fixed monthly amount (fee), with the aim of remunerating the services of each member of the Board of Directors of the Company, within the scope of the responsibility assigned to its members. The Company has a single alternate member of the Board of Directors, a vacancy occupied by a member elected by Vale employees, as provided for in its Bylaws. Said alternate member is compensated at 50% of the compensation assigned monthly to the effective member for each meeting he attends, limiting his monthly fee to the ceiling of 100% of the effective member's fees, regardless of the number of participations in meetings in the month.

*Direct and Indirect Benefits:* Members of the Board of Directors are not entitled to direct and indirect benefits, except for life insurance.

*Participation in Committees:* Members of the Board of Directors who are also members of Advisory Committees receive, in addition to their remuneration as members of the Board of Directors, the monthly remuneration attributed to members of the Committees.

### **Variable Compensation, Benefits and Others**

Members of the Board of Directors are not entitled to other types of remuneration or benefits, including bonuses, profit sharing, remuneration for participation in meetings, commissions, post-employment benefits, benefits motivated by the termination of the exercise of the position and share based compensation. Members of the Board of Directors are entitled to reimbursement of travel and subsistence expenses necessary for the performance of their duties.

### **Executive Committee**

#### **Fixed Compensation**

*Base Salary:* Members of the Executive Committee receive a monthly fixed fee, which aims to attract and retain executives with experience and capacity compatible with the scope and responsibility of the position assigned to them in the Company's management. These components are fixed and therefore are not associated with the results and performance of the Vale or the Executive Committee member.

*Direct and indirect benefits:* Members of the Executive Committee are entitled to a benefit package compatible with local market practices, such as meal vouchers, medical and dental care, hospital care, complementary private pension, life insurance and use of vouchers owned car with service of driver, among others.

For information about the Complementary Pension Plan (Valia), see item 8.14 of this Reference Form.

*Participation in Committees:* Members of the Executive Committee are not entitled to any compensation or benefits for participation in committees.

#### **Variable Compensation, Benefits and Others**

*Bonus:* It is the variable short-term compensation, which remunerates the member of the Executive Committee according to the performance achieved in view of the challenges for the year, with goals and weights defined and approved annually by the Board of Directors ("Annual Bonus" or "Bonus"). The value of the bonus is defined based on the results of the Company and the achievement of goals of different nature, collective and specific, derived from strategic planning and annual budget. Bonus payment calculation considers the following elements:

- Multiple of fixed fees (plan target);
- Result achieved in the goal panel of the year (0 to 1.50);
- Company's global performance metric (maximum 1.33); and
- Performance Behavioral Factor ("FCD") according to individual executive performance evaluation.

The Bonus program has as its main objectives: (a) to stimulate the delivery of strategic priorities, (b) to ensure the competitiveness of the Company, (c) to focus on social and environmental issues, and (d) to recognize the role of the Executive Committee member in Vale's performance. The annual, collective and specific goals are an important management tool and define the expectation of performance on finance, health and safety, risk, sustainability, diversity, equity and inclusion, Vale Production System or Vale Management Model ("VPS"), and strategic themes, in addition to the Company's overall result, measured by cash generation, individual performance of each member of Executive Committee.

The short-term compensation has been in line with Vale's ambition to be a leader in sustainable mining and includes the Risk Management element for all of the Company's employees, giving greater relevance to the Health, Safety and Sustainability goals. Since 2020, the Health, Safety, Geotechnics, Remediation and Compliance areas have not presented financial and production results in their goal panel, representing Vale's focus on Risk Management as a priority. Furthermore, Safety-related indicators may have deals/penalizers in achieving goals in case of fatalities.

The Company remains engaged in the responsibility and commitment to act based on Environmental, Social and Governance ("ESG") goals (both general and specific), with direct impact on the short-term compensation of the members of the Executive Committee.

*Others:* They are not entitled to profit sharing, compensation for participation in meetings and commissions, except for possible extraordinary mechanisms for attraction, retention and/or incentives to relevant deliveries and other initiatives that bring differentiated value to Vale, which can generate extraordinary bonuses by approval by the Board of Directors, on the recommendation of the CPR, observing the total amount of compensation of the administration approved at Annual Shareholders' Meeting by the Company's shareholders.

### **Post-Employment Benefits**

Members of the Executive Committee may enjoy medical and hospital-dental assistance to the Company up to 12 months after their dismissal, including dependents, so that they can look for alternatives outside the corporate plane.

### **Benefits Motivated by the Cessation of the Exercise of the Position**

The members of the Executive Committee are not entitled to benefits motivated by the termination of the position. For any indemnity arising from the termination or non-renewal of the employment contract with the Company, provided that these events occur at the Company's initiative. For more information, see item 8.16 of this Reference Form.

### **Share-based Compensation**

#### *Vale Stock Plan ("VSP")*

It is one of the long-term variable compensation programs, in the Performance Shares modality, with 3-year cycles, which directs the efforts and encourages management performance in the creation of Vale's sustainable and long-term value, aligning executives' focus to shareholders' vision and encouraging retention and performance.

In this program, compensation is linked to the Company's relative performance against other large mining companies and similar peers) related to the health, safety and sustainability areas, including the to eliminate the main divergences between the Company's practices ESG-related compared to the best market practices.

As approved by the Annual and Special Shareholders' Meeting held on April 30, 2021, the program will make its awards using real issuance shares of the Company, from the year 2024. In addition, also with payment as of 2024, the plan will make payments equivalent to virtual dividends or interest under equity that are distributed to shareholders during the cycle period.

Recently, the Board of Directors for inclusion, in the grant of 2024, of the return on the invested capital ("ROIC"), with 25% weight. After initially applying this metric, the relative Total Shareholder Return ("TSR"), which measures the positioning of Vale against even companies) will rise from 75% to 50% weight in VSP. These adjustments bring even more aligned from Vale's VSP to international market practices.

For more information about VSP, see item 8.4 of this Reference form.

#### *Matching Program*

It is one of the long-term variable compensation plans, in the Restricted Shares modality, and the participation therein by the members of the Executive Committee is mandatory throughout the duration of the cycle, while they continue active in the Company. To comply with the program, members of the Executive Committee must make available their own resources for investment in the plan (either through the purchase of shares issued by Vale, or by the use of available shares it already has, detached from current cycles) and maintain such shares in his possession during at least the 3-year cycle.

After the 3 years of cycle, members of the Executive Committee who are still in the Company and hold these shares receive the program awards, corresponding to at least the same number of shares originally acquired.

The member of the Executive Committee must also observe the rule of SOG, described below in this item and item 8.4 of this Reference Form.

For more information about the matching program, see item 8.4 of this reference form.

### **Malus and Clawback Clauses**

In 2019, the Malus rule was implemented and in 2021 the Clawback rule was implemented, as a complement to Malus. The adoption of such rules allows, through facts or events of exceptional gravity, the Board of Directors to decide to eliminate, reduce or even obtain the return, in whole or in part, the variable compensation provided for payment or installments already paid to the members of the Executive Committee.

- **Malus:** Possibility of eliminating or reducing, in whole or in part, the variable compensation already provided for payment.
- **Clawback** Possibility to request the member of the Executive Committee, in whole or in part, the return of the variable compensation already paid.

Facts or events of exceptionally serious, with obvious adverse impacts on the market value and/or reputation of Vale: (i) illegal fraud or conduct by the Executive Committee member; (ii) catastrophic events in environmental or health and safety issues that affect the reputation of Vale or the Vale Management model; (iii) any extraordinary events, resulting from Vale's shares and with negative impact on the market value of shares by more than 15%; and (iv) non-approval or republishing of financial statements due to the deliberation of an Annual Meeting of Shareholders.

Malus and Clawback rules are applicable only to members of the Vale Executive Committee.

### Stock Ownership Guidelines (“SOG”)

Members of the Executive Committee must observe the SOG rule, which determines the maintenance of a minimum stock position: (i) in relation to Vale’s Chief Executive Officer, at least 36 times the monthly base fee; and (ii) in relation to the other members of the Executive Committee, at least 24 times the monthly base fee. Members of the Executive Committee can achieve these positions throughout their term, through long-term plans arranged by the Company, namely, Matching and VSP, and are prohibited from trading any shares that are in their possession before the minimum shareholding position is reached.

### Individual Performance Evaluation

The Individual Performance Evaluation process has assessments carried out 100% online and in an anonymous format, a broad concept (360° for Chief Executive Officer and 180° for other members of the Executive Committee) and includes the definition of the Behavioral Performance Factor (“FCD”) individually, with direct impact on the Annual Bonus, being able to leverage or reduce the amount to be paid, based on the performance presented by the member of the Executive Committee the year.

As unfolding of the evaluations, in addition to the reducing/lever factor of the annual Bonus, individual meritocracy actions and differentiation of executives who present better performances can be implemented, with direct impact on their compensation (*pay for performance*).

### Compensation Distribution

The compensation *mix* for members of the Executive Committee is adjusted based on the interests of shareholders, the consequences of the annual individual performance evaluation process and the profile and compensation values of the international executive market, which has greater focus and relevance in compensation components long-term variable.

Based on the elements of the compensation applicable to the members of the Executive Committee presented in the previous item (Fixed Fees, Bonuses, Matching and VSP), the distribution of compensation is presented considering the achievement of target performance (target / fair value) compensation <sup>6</sup>:

Evolution of the compensation mix	Chief Executive Officer				Other members of the Executive Committee			
	2023E	2022	2021	2020	2023E	2022	2021	2020
Fixed Compensation	11%	12%	11%	19%	25%	28%	29%	31%
Annual Bonus	19%	20%	19%	24%	25%	28%	29%	31%
Long-term Incentives	70%	68%	70%	57%	49%	45%	42%	38%

<sup>6</sup> This is the expected distribution according to the designed model (compensation policy) assuming the achievement of the target performance. Thus, the information of this item does not correspond to the information of the tables presented in item and 8.2, which reflects the effective results of each fiscal year.

Vale has given greater weight to long-term incentives (share-based variable compensation), aimed at encouraging long-term sustainable results and the return of value to our shareholders, aligned with the compensation profile of the international market.

### **Other compensation practices applicable to the Executive Committee**

In the last years, significant advances have been made in aligning executive compensation with the best governance practices and in generating future value. Examples of these improvements are listed below:

- Implementation of a broad and more complete process of individual performance evaluation by members of the Executive Committee, with impacts on pay for performance.
- Annual review of the total compensation package, in order to align our total compensation and the compensation mix of members of the Executive Committee to the median practices of the international market.
- The inclusion of ESG goals not only in the short term but also in one of the share-based long-term programs for all program participating leaders.
- More weight in metrics related to variable compensation, related to critical elements for the achievement of business strategies, namely: risk management, safety, fixed expenditure, operational discipline through the implementation of the Vale Management Model, Sustainability, Diversity and Inclusion.

### **Non-Statutory Board of Executive Officers**

They are employees of the Company with employment and may be responsible for global, regional or local corporate functions, business units, or operating areas or operating systems in the Company's various businesses.

#### **Fixed Compensation**

*Base salary:* The Non-Statutory Officers are entitled to receive a monthly fixed amount, defined on the basis of the Company structure of positions, which is aligned to the market practices and the purpose of which, according to the employment agreement signed with each Non-Statutory Officers, is to remunerate the services provided within the scope of responsibility assigned to each one in the different activities of the Company.

*Direct and indirect benefits:* Non-Statutory Officers are entitled to a benefits package compatible with local market practices, such as meal vouchers, medical and dental care, hospital care, supplementary private pension, and life insurance, among others.

For more information about the Complementary Pension Plan (Valia), see item 8.14 of this Reference Form.

*Participation in Committees:* The Non-Statutory Officers are not entitled to compensation for participation in Committees.

#### **Variable Compensation**

*Profit sharing ("PLR"):* The Non-Statutory Officers are entitled to the annual variable portion based on the Company's results and defined through objective indicators and targets, derived from the strategic planning and annual budget approved by the Board of Directors, which are broken down from the goals of the members of the Executive Committee. The PLR has as its main objectives (i) to ensure the competitiveness of compensation with the market and the retention of talents, (ii) to ensure the alignment with the interests of the Company's shareholders, focusing on social and environmental issues and (iii) to recognize the participation of executive in the Company's performance. The methodology for calculating the Non-Statutory Board of Executive Officers variable compensation is described in detail in item 8.1.c.i.

*Others:* They are not entitled to bonuses, compensation for participation in meetings and commissions.

#### **Post-Employment Benefits**

Non-Statutory Officers may enjoy medical-hospital-dental assistance to the Company after their dismissal, for a period of 6 months after forecast of the notice, so that they can seek alternatives outside the corporate plane.

#### **Benefits motivated by the cessation of the exercise of the position**

Non-Statutory Officers may receive an individual outplacement service (career transition coaching) from the specialized company indicated by Vale.

### **Share-based Compensation**

#### *Vale Stock Plan (“VSP”)*

The rules and conditions of the VSP offered to the Non-Statutory Officers are the same applicable to the members of the Executive Committee, as described above, in this same item.

For more information about VSP, see item 8.4 of this Reference form.

#### *Matching Program*

The rules and conditions of the Matching offered to the Non-Statutory Officers are the same applicable to the members of the Executive Committee, as previously described, in this same item of the Reference Form, except for: (i) conditions of Mandatory Participation and Permanence until the end of the cycle, for the plan is voluntary for Non-Statutory Officers; and (ii) the SOG rule, which is not applicable to Non-Statutory Officers.

For more information about matching, see item 8.4 of this reference form.

### **Additional Clarifications**

The information described earlier in “Other compensation practices applicable to the Executive Committee”, which applicable to the Executive Committee, do not apply to Non-Statutory Officers.

### **Fiscal Council**

#### **Fixed Compensation**

*Base Salary:* The compensation consists exclusively of the payment of a fixed monthly amount (fees), with the objective of remunerating the services of each member of the Fiscal Council, within the scope of the responsibility assigned to the Fiscal Council. The compensation of the Fiscal Council corresponds to 10% of the fixed average remuneration attributed to the members of the Company's Executive Committee on a monthly basis.

In case of vacancy, the effective member of the Fiscal Council is not compensated. In turn, the alternate member is compensated only in cases where he/she performs the activities of a member of the Fiscal Council due to the vacancy, impediment or absence of the respective effective member.

*Direct and Indirect Benefits:* Members of the Fiscal Council are not entitled to direct and indirect benefits.

*Participation in Committees:* Members of the Fiscal Council are not entitled to representation or remuneration for participating in Committees.

#### **Variable Compensation, Benefits and Others**

Members of the Fiscal Council are not entitled to other types of remuneration or benefits, including bonuses, profit sharing, remuneration for participation in meetings, commissions, post-employment benefits, benefits motivated by the termination of the exercise of the position and share-based compensation. Members of the Fiscal Council are entitled to reimbursement of travel and subsistence expenses necessary for the performance of their duties.

### **Advisory Committees**

#### **Fixed Compensation**

*Base Salary:* The compensation of members of Advisory Committees consists, exclusively, of the payment of a fixed monthly amount (fees), with the purpose of compensating the services rendered, within the scope of the responsibility assigned to the Fiscal Council. The compensation of the members of the Advisory Committees is defined by the Board of Directors.



*Direct and indirect benefits:* Members of the Advisory Committees are not entitled to direct and indirect benefits, except for receiving life insurance.

### Variable Compensation, Benefits and Others

Members of the Advisory Committees are not entitled to other types of compensation or benefits, including bonuses, profit sharing, compensation for participation in meetings, commissions, post-unemployment benefits, benefits motivated by the cessation of the exercise of office and share-based compensation.

### Non-statutory Committees

The Company also has six Non-Statutory Committees, namely: (i) Executive Committee for Operational Risks, (ii) Executive Committee for Geotechnical Risks; (iii) Executive Committee for Strategic, Financial and Cyber Risks; (iv) Executive Committee for Compliance Risks; (v) Executive Committee for Sustainability and Reputation Risks; and (vi) the Conduct and Integrity Committee. Only the external members of Conduct and Integrity Committee receive a monthly fee as compensation for commitment to Non-Statutory Committees.

### Proportion of each element in the total compensation for the last 3 years

Year ended December 31, 2022					
	Board of Directors	Fiscal Council	Executive Committee	Non-Statutory Board <sup>(1)</sup>	Committees
<b>Monthly fixed compensation</b>					
Salary or fee	65.45%	100%	15.27%	34.09%	100%
Direct or indirect benefits	-	-	4.07%	6.00%	-
Participation in Committees	34.55%	-	-	-	-
Others (2)	-	-	-	-	-
<b>Variable compensation</b>					
Bonus	-	-	22.21%	-	-
Participation in Results	-	-	-	39.43%	-
Participation in meetings	-	-	-	-	-
Committees	-	-	-	-	-
Others (2)	-	-	7.21%	-	-
<b>Post-Employment Benefits</b>					
Termination of the exercise of the position	-	-	5.00%	-	-
<b>Share-based compensation</b>					
	-	-	46.24%	20.48%	-
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

(1) Amounts related to the termination of office have not been considered in the Non-Statutory Board.

(2) Considers the additional payments made in 2022, such as contractual renewal bonuses, recognition payment and hiring bonuses, as a form of attraction, retention, merit and compensation of losses. Does not include charges for 2022.

Year ended December 31, 2021					
	Board of Directors	Fiscal Council	Executive Committee	Non-Statutory Board <sup>(1)</sup>	Committees
<b>Monthly fixed compensation</b>					
Salary or fee	71.76%	100.00%	14.51%	31.21%	100.00%
Direct or indirect benefits	-	-	3.60%	6.11%	-
Participation in Committees	28.24%	-	-	-	-
Others (2)	-	-	-	-	-
<b>Variable compensation</b>					
Bonus	-	-	19.19%	-	-
Participation in Results	-	-	-	38.34%	-
Participation in meetings	-	-	-	-	-
Committees	-	-	-	-	-
Others (2)	-	-	6.89%	-	-
<b>Post-Employment Benefits</b>					
Termination of the exercise of the position	-	-	9.64%	-	-
<b>Share-based compensation</b>					
	-	-	46.17%	24.34%	-
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

(1) Amounts related to the termination of office have not been considered in the Non-Statutory Board.

<sup>(2)</sup> Considers the additional payments made in 2021, such as contractual renewal bonuses, recognition payment and hiring bonuses, as a form of attraction, retention, merit and compensation of losses. Does not include charges for 2021.

<b>Year ended December 31, 2020</b>					
	<b>Board of Directors</b>	<b>Fiscal Council</b>	<b>Executive Committee</b>	<b>Non-Statutory Board<sup>(1)</sup></b>	<b>Committees</b>
<b>Monthly fixed compensation</b>					
Salary or fee	65.53%	83.33%	13.54%	26.01%	86.61%
Direct or indirect benefits	-	-	4.07%	8.77%	-
Participation in Committees	18.60%	-	-	-	-
Others (2)	15.87%	16.67%	2.71%	6.96%	13.39%
<b>Variable compensation</b>					
Bonus	-	-	22.14%	-	-
Participation in Results	-	-	-	21.47%	-
Participation in meetings	-	-	-	-	-
Committees	-	-	-	-	-
Others (2)	-	-	5.87%	4.29%	-
<b>Post-Employment Benefits</b>					
Termination of the exercise of the position	-	-	23.86%	-	-
Share-based compensation	-	-	27.80%	32.50%	-
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

<sup>(1)</sup> Amounts related to the termination of office have not been considered in the Non-Statutory Board.

<sup>(2)</sup> Payments related to payroll charges under responsibility of VALE - INSS and other types of bonuses paid.

For information related to the Company adopted reporting methodology, see item 8.20 of this Reference Form.

### **Calculation and readjustment methodology**

The annual global amount of the compensation of the members of the Board of Directors, the Executive Committee, the members of the Fiscal Council and the members of the Advisory Committees is fixed at the Annual Shareholders' Meeting and distributed by the Board of Directors, with the recommendation of the CPR and CIG, respecting their respective competences provided for in their Internal Regulations.

#### **Board of Directors**

The definition of the amounts that make up the fees for effective and alternate members occurs according to the practice of national and international markets, checked at least biannual by performing reference research developed by specialized companies, in which the behavior of the compensation to be observed to similar companies.

#### **Executive Committee**

Fixed fees are defined from market practice, in a survey conducted annually by a specialized consulting firm, in which the compensation profile practiced in similar international companies, which are part of the Company's compared panel.

The fees for the Executive Committee members are revisited annually, along with the other elements of the compensation mentioned below, by CPR (with subsequent deliberation by the Board of Directors), and adjusted for inflation as required, based on the references of the international executive market and the individual assessments of executives' performance.

The direct and indirect benefits to which they are entitled are calculated according to local market practice (Brazil), in research conducted every 2 years by a specialized consulting firm, in which practices and benefit concession profile are determined in national organizations of similar size. Moreover, the benefits are evaluated by CPR and approved by the Board of Directors in case of adjustments.

The bonus component is calculated based on the Company's profit/loss, and may vary between 0% and 200% of the target established as a reference in the market, depending on the defined goals (collective and/or specific) and the generation of Company's cash for each reporting year, in addition to the impact of the individual performance behavioral factor ("FCD"), as described in item 8.1.c, which can typically vary between 0.80 and 1.20.

The components of share-based compensation (VSP and Matching) are defined based on a specific multiple of the monthly fixed installment to the level which the participant occupies and the locality in which he/she operates in the Company, as well as possible ILP levers (multiplier factor or deflator according to performance) for adequacy of the compensation mix to the international market profile.

- (i) VSP uses the average quotation of the Company's ordinary issuance shares in the last 60 trading sessions for the previous year to calculate the units of granted shares, and makes payments conditional on the performance of Vale in the ranking of peer companies, measured by accumulated TSRs (considering initial and final 30 days) from Vale and companies in the period and, for cycles started as of 2020. Said payments also have the impact of ESG metrics.
- (ii) Matching uses the average purchase quotation of the Company's common shares, at the time of the cycle granting, using the executive own resources to buy their own available shares.

For more information regarding the manner of calculation of share-based compensation, see item 8.4 of this Reference Form.

All components of the Executive Committee's compensation package, as well as the adjustment methodologies of amounts, are evaluated by CPR and approved by the Board of Directors.

### **Non-Statutory Board**

The fixed compensation of Officers, with employment relationship, is represented by the payment of monthly fixed amounts. Every year, Vale's Human Resources department acquires compensation surveys conducted by specialized companies to evaluate the competitiveness of the Company's compensation against its competitive market for labor. The comparison is made with national and multinational companies from different sectors, and the equalization of the comparison takes place through a scoring system. This system is based on points assessment system, which is used by world-class companies and assesses the weight of positions based on their complexity, allowing the global ranking of positions.

There is no predefined percentage or frequency for fixed salary readjustment, and when wage revisions occur, they are based on the market movement and the performance of the Non-Statutory Director (meritocracy).

The direct and indirect benefits to which they are entitled are defined in accordance with local market practice (Brazil), verified by reference surveys carried out by specialized companies, which observe the behavior of granting benefits to companies of different segments or of similar size.

The profit sharing (PLR) component is calculated based on the company's results, ranging from 0% to 200% of the market-established target, depending on the targets set and Company cash generation for each reporting year.

Share-based compensation (VSP and Matching) has the same calculation methodology as described above in the item regarding the compensation of members of the Executive Committee and item 8.4 of this Reference Form.

The readjustment of the fixed compensation resulting from inflation or other forms of merit reflects directly in the other elements of the compensation, since they use as a basis the fixed compensation.

### **Fiscal Council**

The amounts that make up the fees for effective members have as reference the value of 10% (ten percent) of the fixed compensation that, on average, is attributed to (not counting the benefits, representation budgets, profit sharing or any other payment or award that may be part of the compensation package of those stakeholders).

### **Advisory Committees**

Fixed monthly compensation (fees) is defined from market practice, verified by conducting reference research conducted by specialized companies, in which the behavior of compensation for similar size companies in addition is evaluated, with other elements of the compensation of the committees, by CIG (with subsequent evaluation by the Board of Directors), being readjusted as needed.

**Main performance indicators taken into consideration, including, if applicable, indicators linked to ESG issues**

The main performance indicators taken into account in determining the compensation are those related to the Company's performance, such as measures for cash generation and relative TSR, and general goals of productivity, sustainability, risk management, in addition to the individual performance of the member of the Executive Committee evaluated annually, based on key behaviors for leadership, among others.

In any case, as of 2020 the indicators related to the theme ESG were implemented as parameters of the definition of compensation within the scope of the short- and long-term variable compensation plans. Among others, the following indicators are considered in the variable compensation of the members of the Executive Committee: (i) Health & Safety, with the indicator of records with High Potential (N2), that is, incidents that can generate fatalities and/or injuries with High Potential, with the goal of zeroing incidents N2 by 2025, as shown in the curve presented to market in 2020; (ii) sustainability, with metrics based on 2030 commitments, among them the reduction of greenhouse gas emissions and Vale's commitment in meeting the social requirements of the main external evaluations of the Dow Jones Sustainability Index ("DJSI") index; and (iii) People, where it seeks to increase the total number of women and the number of blacks in leadership positions, in line with the Vale's strategy of Diversity, Equity and Inclusion.

The definition of targets of executives' performance and commitment to safety and sustainability and those related to ESG themes for structuring the payment of short-term variable compensation is derived from the strategic planning and budget approved by the Board of Directors and reviewed each year to support the goals and expected results for the Company.

The performance indicators taken into account in determining the compensation derived from the share-based compensation plan are the quotation of the Company's shares in the market and, specifically for the VSP, the Company's ranking among a group of other companies with characteristics similar to those of Vale (peer group) and ESG metrics (these from 2020).

It bears emphasizing that in VSP cycles that start in 2023 (including), ESG metrics will have even more impact on payment, and the TSR trigger is extinguished. And for cycles started in 2024 (including), VSP cycles will also have the ROIC metric with the purpose of the most compliance with the market.

For more information, see item 8.4 of this Reference Form.

**ii. reasons justifying the composition of the compensation**

The composition of the compensation encourages maximization of shareholders' returns, improves management, enhances performance, and retains the Company's executives, aiming at gains through the commitment to the Company's short-term performance and long-term results, in particular the appreciation of common shares, the performance of the relative TSR and the achievement of ESG commitments. Regarding the members of the Executive Committee and Non-Statutory Officers, Vale uses a compensation composition model that concentrates a significant portion of the total compensation on long-term variable compensation components, as part of the policy of sharing risks and results with the main executives of the Company.

**iii. Existence of members not remunerated by the issuer and the reason therefor**

Except for the external member of the Conduct and Integrity Committee (see item 8.1.c.i.), the other members of the Non-Statutory Risk Committees are not remunerated for exercising such function, since they already receive remuneration as executives or employees of the Company.

**d. existence of compensation supported by subsidiaries, controlled companies or direct or indirect controllers**

There are no administrators of the Company, on the date of this Reference Form, which is supported by subsidiaries, controlling companies or direct or indirect controllers, due to the positions exercised by them in the Company.

**e. existence of any compensation or benefit linked to the occurrence of a particular corporate event, such as disposal of the controlling interest of the issuer**

At the date hereof, there is no provision for compensation or benefit linked to the occurrence of a certain corporate event.

However, it should be noted that there may occur any awards, bonuses or other payments or compensation increments approved by the Company's Board of Directors, in line with the performance presented by the executives deriving from future challenges, and with the Compensation Policy of the executive, may be paid to the members of the Executive Committee.

**8.2. Total compensation per body**

<b>Forecast for the current reporting year (2023)</b>				
	<b>Board of Directors</b>	<b>Executive Committee</b>	<b>Fiscal Council</b>	<b>Total</b>
Total number of members	13.50	9.06	5.00	<b>27.56</b>
Number of compensated members	13.50	9.06	5.00	<b>27.56</b>
<b>Annual fixed compensation</b>				
Salary or pro-labore	17,548,230.18	30,384,220.30	1,676,833.20	<b>49,609,283.68</b>
Direct and indirect benefits	-	7,659,028.34	-	<b>7,659,028.34</b>
Participations in Committees	4,052,266.67	-	-	<b>4,052,266.67</b>
Others	-	-	-	-
Description of other fixed compensation	-	-	-	-
<b>Variable compensation</b>				
Bonus	-	46,617,592.39	-	<b>46,617,592.39</b>
Profit sharing	-	-	-	-
Participation in meetings	-	-	-	-
Committees	-	-	-	-
Others	-	19,013,042.36	-	<b>19,013,042.36</b>
Description of other variable compensations	-	Comment (4)	-	-
<b>Post-employment</b>				
Termination of position	-	9,247,219.68	-	<b>9,247,219.68</b>
Share-based, including options	-	88,700,956.23	-	<b>88,700,956.23</b>
<b>Comments</b>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP. The "Total number of members" field covers the effective members and the alternate members of the Board of Directors.</p> <p>2. The compensation for participation in Committees includes the participation of sitting members only.</p> <p>3. The figures presented consider the accrual basis and do not include charges.</p>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP.</p> <p>2. The "Termination of position" field covers severance payments made to Executive Officers who have left the company in 2022 and 2023.</p> <p>3. The amounts take into consideration amounts recognized in the reporting year according to rules of the annual circular letter 2023 CVM/SEP.</p> <p>4. Amount intended for bonuses linked to the strategy for hiring and retaining key people for the company, aiming at competitive</p>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP.</p> <p>2. The effective members (5 members) of the Fiscal Council are considered.</p> <p>3. The figures presented consider the accrual basis and do not include charges.</p>	

		recognition and aligned with the market, if necessary.		
<b>Total compensation</b>	<b>21,600,496.85</b>	<b>201,622,059.30</b>	<b>1,676,833,20</b>	<b>224, 899,389.35</b>
<b>Year ended December 31, 2022</b>				
	<b>Board of Directors</b>	<b>Executive Committee</b>	<b>Fiscal Council</b>	<b>Total</b>
Total number of members	13.42	9.59	5.00	<b>28,01</b>
Number of compensated members	13.42	9.59	5.00	<b>28.01</b>
<b>Annual fixed compensation</b>				
Salary or pro-labore	11,810,245.59	31,297,472.70	1,633,972.55	<b>44,741,690.84</b>
Direct and indirect benefits	-	8,339,270.13	-	<b>8,339,270.13</b>
Participations in Committees	6,235,544.05	-	-	<b>6,235,544.05</b>
Others	-	-	-	-
Description of other fixed compensation	-	-	-	-
<b>Variable compensation</b>				
Bonus	-	45,527,161.57	-	<b>45,527,161.57</b>
Profit sharing	-	-	-	-
Participation in meetings	-	-	-	-
Committees	-	-	-	-
Others	-	14,779,564.81	-	<b>14,779,564.81</b>
Description of other variable compensations	-	Comment (4)	-	-
<b>Post-employment</b>				
<b>Termination of position</b>	-	10,252,402.09	-	<b>10,252,402.09</b>
<b>Share-based, including options</b>	-	94,795,496.86	-	<b>94,795,496.86</b>
<b>Comments</b>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP. The "Total number of members" field covers the effective members and the alternate members of the Board of Directors.</p> <p>2. The compensation for participation in Committees includes the participation of sitting members only.</p> <p>3. The figures presented consider the accrual basis and do not include charges.</p>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP.</p> <p>2. The "Termination of position" field covers severance payments made to Executive Officers who have left the company in 2020 and 2022.</p> <p>3. The amounts take into consideration amounts recognized in the reporting year according to rules of the annual circular letter 2023 CVM/SEP.</p> <p>4. Amount intended for bonuses linked to the strategy for hiring and retaining key people for the</p>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP.</p> <p>2. The effective members (5 members) of the Fiscal Council are considered.</p> <p>3. The figures presented consider the accrual basis and do not include charges.</p>	

		company, aiming at competitive recognition and aligned with the market, if necessary.		
<b>Total compensation</b>	<b>18,045,789.64</b>	<b>204,991,368.16</b>	<b>1,633,972.55</b>	<b>224.671.130.35</b>

<b>Year ended December 31, 2021</b>				
	<b>Board of Directors</b>	<b>Executive Committee</b>	<b>Fiscal Council</b>	<b>Total</b>
Total number of members	13.25	8.61	5.00	<b>26.86</b>
Number of compensated members	13.25	8.61	5.00	<b>26.86</b>
<b>Annual fixed compensation</b>				
Salary or pro-labore	11,233,740.06	26,723,539.06	1,572,552.90	<b>39,529,832.02</b>
Direct and indirect benefits	-	6,638,797.07	-	<b>6,638,797.07</b>
Participations in Committees	4,421,432.02	0.00	-	<b>4,421,432.02</b>
Others	-	0.00	-	-
Description of other fixed compensation	-	-	-	
<b>Variable compensation</b>				
Bonus	-	35,350,518.41	-	<b>35,350,518.41</b>
Profit sharing	-	0.00	-	
Participation in meetings	-	0.00	-	
Committees	-	0.00	-	
Others	-	12,686,182.44	-	<b>12,686,182.44</b>
Description of other variable compensations	-	Comment (4)	-	
<b>Post-employment</b>	-	0.00	-	-
<b>Termination of position</b>	-	17,759,883.29	-	<b>17,759,883.29</b>
<b>Share-based, including options</b>	-	85,051,105.52	-	<b>85,051,105.52</b>
<b>Comments</b>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP. The "Total number of members" field covers the effective members and the alternate members of the Board of Directors.</p> <p>2. The compensation for participation in Committees includes the participation of sitting members only.</p> <p>3. The figures presented consider the cash basis and do not include charges.</p>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP.</p> <p>2. "Termination of position: severance payments made to Executive Officers who have left the company in 2019 and 2020.</p> <p>3. The figures presented consider the cash basis and do not include charges.</p> <p>4. Amount intended for bonuses linked to the strategy for hiring and retaining key people for the</p>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP.</p> <p>2. The effective members (5 members) of the Fiscal Council are considered.</p> <p>3. The figures presented consider the cash basis and do not include charges.</p>	



		company, aiming at competitive recognition and aligned with the market, if necessary.		
<b>Total compensation</b>	<b>15.655.172.08</b>	<b>184,210,025.79</b>	<b>1,572,552.90</b>	<b>201.437.750.77</b>

<b>Year ended December 31, 2020</b>				
	<b>Board of Directors</b>	<b>Executive Committee</b>	<b>Fiscal Council</b>	<b>Total</b>
Total number of members	13.25	6.35	4.75	<b>24.35</b>
Number of compensated members	13.25	6.35	4.75	<b>24.35</b>
<b>Annual fixed compensation</b>				
Salary or pro-labore	9,541,887.60	22,404,890.44	1,680,907.88	<b>33,627,685.92</b>
Direct and indirect benefits	-	6,730,673.70	-	<b>6,730,673.70</b>
Participations in Committees	2,707,977.62	-	-	<b>2,707,977.62</b>
Others	2,310,506.52	4,480,978.09	336,181.58	<b>7,127,666.19</b>
Description of other fixed compensation	INSS on fixed fees	INSS on fixed fees	INSS on fixed fees	
<b>Variable compensation</b>				
Bonus	-	36,629,008.34	-	<b>36,629,008.34</b>
Profit sharing	-	-	-	-
Participation in meetings	-	-	-	-
Committees	-	-	-	-
Others	-	9,709,809.10	-	<b>9,709,809.10</b>
Description of other variable compensations		Other charges paid on compensation		
<b>Post-employment</b>	-	-	-	-
<b>Termination of position</b>	-	39,473,868.92	-	<b>39,473,868.92</b>
<b>Share-based, including options</b>	-	45,992,204.06	-	<b>45,992,204.06</b>
<b>Comments</b>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP. The "Total number of members" field covers the effective members and the alternate members of the Board of Directors.</p> <p>2. The compensation for participation in Committees includes the participation of sitting members only.</p> <p>3. The amounts presented consider the cash basis and include charges.</p>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP.</p> <p>2. It includes the Bonus that was due for payment in 2019 (which was suspended due to the accident), in addition to the Bonus due for payment in 2020.</p> <p>3. Severance payments made to Executive Officers who have left the company in 2018, 2019 and 2020.</p> <p>4. It includes the Matching that was due for payment in 2019 (which was</p>	<p>1. The total number of members was established according to 2023 Annual Circular Letter CVM/SEP.</p> <p>2. The effective members (5 members) of the Fiscal Council are considered.</p> <p>3. The amounts presented consider the cash basis and include charges.</p>	

		suspended due to the accident), in addition to the Matching and VSP due for payment in 2020. 5. The amounts presented consider the cash basis and include charges.		
<b>Total compensation</b>	<b>14,560,371.74</b>	<b>165,421,432.65</b>	<b>2,017,089.46</b>	<b>181,998,893.85</b>

### 8.3. Variable compensation

<b>Forecast for the current reporting year (2023)</b>				
	<b>Board of Directors</b>	<b>Executive Committee</b>	<b>Fiscal Council</b>	<b>Total</b>
<b>Total number of members</b> <sup>(1)</sup>	13.50	9.06	5.00	<b>27.56</b>
<b>Number of Members Receiving Compensation</b> <sup>(2)</sup>	-	9.06	-	<b>9.06</b>
<b>Bonus</b> <sup>(3)</sup>				
Minimum Amount Forecast in the Compensation Plan	-	-	-	-
Maximum Amount Forecast in the compensation plan <sup>(4)</sup>	-	84,103,295.99	-	<b>84,103,295.99</b>
Amount Estimated in the compensation plan, if the targets are met ("Target") <sup>(5)</sup>	-	35,043,040.08	-	<b>35,043,040.08</b>
<b>Profit sharing</b>				
Minimum Amount Forecast in the Compensation Plan	-	-	-	-
Maximum Amount Forecast in the compensation plan	-	-	-	-
Amount Forecast in the compensation plan, if the targets are met	-	-	-	-

(1) Estimate of the annual average of the number of members of said body verified monthly pursuant to item 8.2.

(2) Estimated number of members, as applicable, who are expected to be assigned variable compensation recognized in the issuer's income for the year, as set forth in Annual Official Circular Letter 2023 CVM/SEP.

(3) It only considers installments referring to short-term variable compensation plan (annual bonus).

(4) Value corresponding to 200% of the target established with reference to the market, considering the statutory members eligible to the bonus in 2023, according to the panel of targets and other 2022 results.

(5) Value corresponding to the target established with reference to the market, considering the statutory members eligible to the bonus in 2023, according to the panel of target and other 2022 results.

<b>Year ended December 31, 2022</b>				
	<b>Board of Directors</b>	<b>Executive Committee</b>	<b>Fiscal Council</b>	<b>Total</b>
<b>Total number of members</b> <sup>(1)</sup>	13.42	9.59	5.00	<b>28.01</b>
<b>Number of Members Receiving Compensation</b> <sup>(2)</sup>	-	9.59	-	<b>9.59</b>
<b>Bonus</b> <sup>(3)</sup>				
Minimum Amount Forecast in the Compensation Plan	-	-	-	-
Maximum Amount Forecast in the compensation plan <sup>(4)</sup>	-	84,729,984.86	-	<b>84,729,984.86</b>
Amount Estimated in the compensation plan, if the targets are met ("Target") <sup>(5)</sup>	-	35,304,160.45	-	<b>35,304,160.45</b>
Value effectively recognized in the income for the reporting year <sup>(6)</sup>	-	45,527,161.57	-	<b>45,527,161.57</b>
<b>Profit sharing</b>				
Minimum Amount Forecast in the Compensation Plan	-	-	-	-
Maximum Amount Forecast in the compensation plan	-	-	-	-
Amount Forecast in the compensation plan, if the targets are met	-	-	-	-
Amount effectively recognized in the income for the reporting year	-	-	-	-

(1) Annual average of the number of members of said body verified monthly pursuant to item 8.2.

(2) Number of members, as applicable, who were assigned variable compensation as recognized in the issuer's income for the year, as set forth in Annual Official Circular Letter 2023 CVM/SEP.

(3) It only considers installments referring to short-term variable compensation plan (annual bonus).

(4) Value corresponding to 200% of the target established with reference to the market, considering the statutory members eligible to the bonus in 2021, according to the panel of targets and other 2020 results.

(5) Value corresponding to the target established with reference to the market, considering the statutory members eligible to the bonus in 2021, according to the panel of target and other 2020 results.

(6) Value referring to the result calculated in the reporting year, regarding the annual bonus program, linked to the results and targets for the 2020 reporting year, for payment in 2021.

<b>Year ended December 31, 2021</b>				
	<b>Board of Directors</b>	<b>Executive Committee</b>	<b>Fiscal Council</b>	<b>Total</b>
<b>Total number of members</b> <sup>(1)</sup>	13.25	8.61	5.00	<b>26.86</b>
<b>Number of Members Receiving Compensation</b> <sup>(2)</sup>	-	8.61	-	<b>8.61</b>
<b>Bonus</b> <sup>(3)</sup>				
Minimum Amount Forecast in the Compensation Plan	-	-	-	-
Maximum Amount Forecast in the compensation plan <sup>(4)</sup>	-	43,921,935.48	-	<b>43,921,935.48</b>
Amount Estimated in the compensation plan, if the targets are met ("Target") <sup>(5)</sup>	-	21,960,967.74	-	<b>21,960,967.74</b>
Value effectively recognized in the income for the reporting year <sup>(6)</sup>	-	35,350,518.41	-	<b>35.350.518,41</b>
<b>Profit sharing</b>				
Minimum Amount Forecast in the Compensation Plan	-	-	-	-
Maximum Amount Forecast in the compensation plan	-	-	-	-
Amount Forecast in the compensation plan, if the targets are met	-	-	-	-
Amount effectively recognized in the income for the reporting year	-	-	-	-

(1) Annual average of the number of members of said body verified monthly pursuant to item 8.2.

(2) Number of members, as applicable, who were assigned variable compensation as recognized in the issuer's income for the year, as set forth in Annual Official Circular Letter 2023 CVM/SEP.

(3) It only considers installments referring to short-term variable compensation plan (annual bonus).

(4) Value corresponding to 200% of the target established with reference to the market, considering the statutory members eligible to the bonus in 2021, according to the panel of targets and other 2020 results.

(5) Value corresponding to the target established with reference to the market, considering the statutory members eligible to the bonus in 2021, according to the panel of target and other 2020 results.

(6) Value referring to the result calculated in the reporting year, regarding the annual bonus program, linked to the results and targets for the 2020 reporting year, for payment in 2021.

<b>Year ended December 31, 2020</b>				
	<b>Board of Directors</b>	<b>Executive Committee</b>	<b>Fiscal Council</b>	<b>Total</b>
<b>Total number of members</b> <sup>(1)</sup>	13.25	6.35	4.75	<b>24.35</b>
<b>Number of Members Receiving Compensation</b> <sup>(2)</sup>	-	6.35	-	<b>6,35</b>
<b>Bonus</b> <sup>(3)</sup>				
Minimum Amount Forecast in the Compensation Plan	-	0.00	-	<b>0.00</b>
Maximum Amount Forecast in the compensation plan <sup>(4)</sup>	-	42,667,926.48	-	<b>42,667,926.48</b>
Amount Forecast in the compensation plan if the targets are reached ("Target") <sup>(5)</sup>	-	21,333,963.24	-	<b>21,333,963.24</b>
Value effectively recognized in the income for the reporting year <sup>(6)</sup>	-	19,048,646.32	-	<b>19,048,646.32</b>

<b>Profit sharing</b>				
Minimum Amount Forecast in the Compensation Plan	-	-	-	-
Maximum Amount Forecast in the compensation plan	-	-	-	-
Amount Forecast in the compensation plan, if the targets are reached ("Target")	-	-	-	-
Amount effectively recognized in the income for the reporting year	-	-	-	-

(1) Annual average of the number of members of said body verified monthly pursuant to item 8.2.

(2) Number of officers and directors, as applicable, who were assigned variable compensation as recognized in the issuer's income for the year, as set forth in Annual Official Circular Letter 2023 CVM/SEP.

(3) Considers only the portions of the short-term variable compensation plan. It does not consider other bonuses that have been recognized in the reporting year.

(4) Value corresponding to the target established with reference to the market, considering the statutory members eligible to the bonus in 2020, according to the panel of target and other 2019 results.

(5) Value corresponding to the target established with reference to the market, considering the statutory members eligible to the bonus in 2020, according to the panel of target and other 2019 results.

(6) Refers to the annual bonus program, linked to the results and targets of the 2019 reporting year, paid in 2020. This amount does not consider the bonus paid in 2020 linked to the 2018 reporting year, whose payment was suspended in 2019 due to the accident (the amount was R\$ 17.580.362,02).

## 8.4. Share-based compensation

The Company has two share-based compensation plans for the Executive Committee and the Non-Statutory Board (VSP and Matching), not extended to members of the Board of Directors. None of the plans include the Company's stock options.

The main objectives of stock-based compensation plans are: (i) focusing on management efforts in the creation of value and wealth for Vale, (ii) aligning interests of executives and shareholders, (iii) reinforcing the culture of sustainable performance, (iv) serve as an executive retention lever and (v) encourage the “feeling of owner”.

Share-based compensation plans are responsible for aligning in the long-term the interests of shareholders and members of the Company's Executive Committee and Non-Statutory Officers, as they ensure that there are only gains for executives when there are also gains for the Company.

Thus, the plans contribute to the sustainability and maintenance of a level of competitiveness appropriate to the Company's business and the retention of qualified professionals. Share-based compensation plans are designed with support from a specialized consulting firm and take into account the transactions of the national and international market.

The design of the share-based compensation plans incorporates the Company's performance factor, the variation of its shares over the three-year year period and, still, in the case of the VSP, the Company's relative performance compared to a group of companies with characteristics similar to Vale, and, since 2020, comprises the Company's main strategic deliveries (via ESG metrics).

### a. general terms and conditions

#### Vale Stock Plan (“VSP”)

According to the VSP definition in item 8.1.c.i, it is applied applies to members of the Executive Committee and Non-Statutory Officers.

For the purposes of calculating the number of units to be granted to each participant of the program at the beginning of the cycle, the following is considered: (a) the fee at the end of the year before the beginning of the cycle, (b) the reference value for the program, according to the level and location of the participant in the previous year and (c) the historical price of the shares issued by Vale in the last 60 trading sessions of the year prior to the beginning of the cycle, weighted by the volume of traded shares.

**Cycle started in 2020:** full payment after three years of cycle; in cash, tied to the value of the shares; conditioned to the performance factor, composed of 80% TSR and 20% ESG.

**Cycle started in 2021:** full payment after three years of cycle; in shares; conditioned to the performance factor, composed of 80% TSR and 20% ESG; provides for additional payment (virtual dividends) at the end of the cycle.

**Cycle started in 2022:** full payment after three years of cycle; in shares; conditioned to the performance factor, composed of 75% TSR and 25% ESG; provides for additional payment (virtual dividends) at the end of the cycle.

**Cycle started in 2023:** full payment after three years of cycle; in shares; conditioned to the performance factor, composed of 75% TSR and 25% ESG; provides for additional payment (virtual dividends) at the end of the cycle.

In addition to the TSR metric, ESG Performance Metric was included in the Company in 2020, with indicators from Health & Safety and Sustainability, applicable to the whole Company, globally.

As approved by the Annual and Special Shareholders' Meeting of 2021, the award at the end of the cycle, conditioned to the performance of the performance factor, from the cycles started in 2021, will be made through the delivery of common issuance shares after the Company after cycle closure.

In addition to the regular awards, the additional payment referring to virtual dividends, equivalent to dividends/JCP distributed by the company, considering the actions not received by participants (unvested), to be paid at the end of the cycle and based on the following calculation: (i) the amount to be paid by action in the

distribution of dividends or interest under equity by the Company to its shareholders during the duration of the cycle; and (ii) the number of shares to which the participant will be entitled to in the award program, after applying the performance parameters (as described in item 8.4).

### **Matching Program**

Matching Program is a long-term compensation incentive, in the form of Restricted Shares, based on the expected performance of the Company reflected in its market value and share price, and which works as a deferral of the annual Bonus, converting part of the amount of the bonus paid in the year. Matching applies to members of the Executive Committee and Non-Statutory Officers, and voluntary adhesion for this second group.

In this program, the participation of the members of the Executive Committee is mandatory<sup>7</sup> during the full duration of the cycle while they remain active in the Company. To comply with it, they must use their own resources to acquire common shares issued by the Company (through purchases in the market or the use of shares already owned by the participant, detached from current cycles) and keep them in your possession for at least the 3-year cycle.

For the purposes of calculating the number of shares to be granted to each participant at the beginning of the cycle, the following criteria are considered: (i) the participant's fee at the end of the year prior to the beginning of the cycle; (ii) the reference value for matching, according to the participant level and locality at the end of the previous year; and (iii) the average purchase price of shares in the market, on the effective date of the purchase.

After the 3-year cycle, participants who are still in the Company and hold these shares receive the award of the program, corresponding to at least the same number of actions originally acquired, plus the amount of Withholding Income Tax, which is borne by the Company for the executive.

In addition to the awards at the end of each cycle, the Matching program has been carrying out additional payments during the cycles through virtual dividends, equivalent to dividends/JCP distributed by the company, considering the shares not received by participants (unvested). The following are considered as calculation basis: (a) the amount to be paid by action in the distribution of dividends or interest under equity by Vale to their shareholders during the duration of the cycle and (b) the number of shares to which the Participant will be entitled to in the program award.

### **Stock Ownership Guidelines (“SOG”)**

In 2019, the SOG rule as indicated in item 8.1.C.I hereof was implemented, which determines the maintenance of a minimum equity position: (a) in relation to the President of the Executive Committee, at least 36 times the monthly base fee; and (b) in the case of other members of the Executive Committee, at least 24 times the monthly base fee. This level of participation can be achieved throughout the mandates, and no shares that are in their possession may be traded before the minimum shareholding position is reached. This obligation does not apply to Non-Statutory Officers.

#### **b. approval date and responsible body**

Vale's Board of Directors is responsible for resolving on the proposed adjustments, if any, to the Company's share-based compensation plans. Such adjustments shall be submitted to the approval of shareholders at Vale's General Meeting whenever necessary.

The most recent of the Matching and VSP plans were made by the Board of Directors on November 29, 2018, and December 22, 2022, respectively.

#### **c. maximum number of shares covered**

In VSP, the number of common shares granted as a reference under the plan varies according to the basic compensation of each executive, reference multiplier of the program (according to his/her level and location) and with the average price of the common shares issued by Vale in a number of trading sessions prior to the grant. The maximum number is directly related to the reference multiple.

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<sup>7</sup> For specific years where the net Annual Bonus effectively paid is not enough for participation in the Matching program, the obligation of participation is limited to 50% of the net Bonus effectively paid.

In Matching, the number of shares granted as a reference in said plan varies according to the base compensation of each executive, the program's reference multiplier (according to the participant level and location) and the purchase price of shares in the market. The maximum number is directly related to the reference multiple.

**d. maximum number of options to be granted**

Not applicable. There is no granting of stock purchase options under the Company's stock-based compensation plans.

**e. conditions for acquisition of shares**

Not applicable. Share-based compensation plans do not grant officers with options to acquire Company shares.

**f. criteria for setting the acquisition price or reporting year**

As the plans do not contemplate the granting of stock options, there is no need to mention the determination of the purchase price or option exercise.

Considering the Company's current plans:

- i. in the VSP, for the definition of the reference price to be considered at the beginning of the cycle (for the purposes of calculating the number of shares granted), it is considered the history of prices of the shares issued by Vale of the last 60 trading sessions of the year before the beginning of the respective cycle, weighted by the volume of shares traded in each of these trading sessions. To define the reference price to be considered at the end of the cycle (for award purposes), it is considered, for cycles started by 2020 (including) (with awards in virtual shares), the price history of the shares issued by Vale of the last 60 trading sessions of the year of end of the cycle, weighted by the volume of shares traded in each of these trading sessions; and, for cycles beginning from 2021 onwards (which will be awards in actual shares), the average purchase price of Vale's shares issued in the market, at the end of the cycle; and
- ii. in Matching, in order to define the reference price to be considered at the beginning of the cycle (for the purpose of calculating the quantity of shares acquired), the average purchase price of Vale's shares is held on the market, at the beginning of the cycle. To set out the reference price to be considered at the end of the cycle (for award purposes), the average purchase price of Vale's shares is issued in the market, at the end of the cycle, is considered.

**g. criteria for setting the acquisition term or reporting year**

Not applicable. The share-based compensation plans do not contemplate the granting of stock options, consequently there is no term for the exercise.

In the VSP, since 2019, the cycles have a duration of three years and with full awards (100% at the end of the cycle, without gradual payments).

In the Matching Program, the reward occurs at the end of the 3-year cycle, and as of 2019 there may also be gradual payments through virtual dividends, whenever there is distribution of dividends or interest on capital by Vale to its shareholders.



**h. settlement form**

Matching is awarded with the same number of shares initially acquired by the executive, at the end of the three-year cycle, if they remain active in the Company.

In addition to the final award, the Matching program provides for partial payments related to virtual dividends, which will be made whenever there is a distribution of dividends or interest on capital to its shareholders, over the duration of the cycle, and will be paid throughout the cycle.

The VSP, until the 2020 reward, the executive receives cash at the end of the 3-year cycle. After approval by the 2021 Annual and Special Shareholders' Meeting of Shareholders, as of the cycle started in 2021, the VSP will be awarded in the form of shares issued by the Company, in at least the same number of shares initially granted to the participant, multiplied by the performances at the end of the program.

In addition to the awards, the VSP provides for payment related to virtual dividends, which will be due whenever there is the distribution of dividends or interest under equity to its shareholders, over the duration of the cycle, and will be paid in an accrued manner at the end of the cycle.

**i. restrictions on the transfer of shares**

In the Matching, if the participant trades, transfers or sells any of the shares issued by the Company linked to the Plan within the period of three years, he/she loses the right to the reward at the end of the cycle. This does not apply to the VSP, as the beneficiary will only have access to the shares at the end of 3 years.

Operations involving derivatives, which set up positions sold in Vale's shares, as well as the lease of shares owned by the participant to third parties are prohibited, even if such shares were acquired outside the scope of the plan, considering that one of the purposes of Matching is to expose the executive to the value of shares issued by the Company during the period of each cycle and while the executive is active in the Company.

Members of the Executive Committee must also observe the SOG rules, which are described in item 8.1.C.I hereof.

**j. criteria and events that, when verified, will cause the suspension, alteration or extinction of the plan**

In the Matching program, any transfer, trade or sale of the shares issued by Vale linked to the plan by the participant before the end of the three-year cycle, leads to the cancellation of any rights related to the program. This does not apply to the PAV, as the beneficiary will only have access to the shares at the end of 3 years.

In addition to observing the SOG rule for members of the Executive Committee, rules of which are described in item 8.1.c.i hereof and in case of resignation or dismissal for just cause.

**k. effects of the departure of the officer from the issuer's bodies on his/her rights under the share-based compensation plan**

As these are retention mechanisms, in case of departure on its own initiative, the participant loses the right to receive any awards from the plans. In case of termination or non-renewal of the contract by the Company, the participant receives the amounts to which he/she has already become entitled, in proportion to the period worked, as follows:

- (i) for members of the Executive Committee, they will be made only at the end of the cycles and based on the official results (share price and performance metrics) that are determined at the end of the cycles; and
- (ii) for other participants, they will be made at the time of termination by the company and based on partial results (stock price and performance metrics) that are calculated in the month prior to the termination.

In the Matching program and in the VSP, the voluntary termination by the officer leads to the extinction of any future rights related to the plans.

Additionally, for members of the Executive Committee, there may still be the application of the Rules of Malus and/or Clawback, which are described in item 8.1.c.i hereof.

### **8.5. Share-based compensation (stock options)**

Not applicable. Vale's share-based compensation plans, described in item 8.4 hereof, do not comprise the grant of stock purchase options.

## **8.6. Granting of stock options**

Not applicable. Vale's share-based compensation plans, described in item 8.4 hereof, do not comprise the grant of stock options.

## **8.7. Open stock options**

Not applicable. Vale's share-based compensation plans, described in item 8.4 hereof, do not comprise the grant of stock options.

### **8.8. Options exercised and shares obtained**

Not applicable. Vale's share-based compensation plans, described in item 8.4 hereof, do not comprise the grant of stock options.

## 8.9. Potential dilution by granting shares

<b>Forecast for the current reporting year (2023)</b>		
	<b>Board of Directors</b>	<b>Executive Committee</b>
<b>Total number of members <sup>(1)</sup></b>	13.50	9.06
<b>Number of compensated members <sup>(2)</sup></b>	-	9.06
<b>Potential dilution in case of granting all actions to beneficiaries</b>	N/A	N/A

<b>Year ended December 31, 2022</b>		
	<b>Board of Directors</b>	<b>Executive Committee</b>
<b>Total number of members <sup>(1)</sup></b>	13.42	9.59
<b>Number of compensated members <sup>(2)</sup></b>	-	9.59
<b>Potential dilution in case of granting all actions to beneficiaries</b>	N/A	N/A

<b>Year ended December 31, 2021</b>		
	<b>Board of Directors</b>	<b>Executive Committee</b>
<b>Total number of members <sup>(1)</sup></b>	13.25	8.61
<b>Number of compensated members <sup>(2)</sup></b>	-	8.61
<b>Potential dilution in case of granting all actions to beneficiaries</b>	N/A	N/A

<b>Year ended December 31, 2020</b>		
	<b>Board of Directors</b>	<b>Executive Committee</b>
<b>Total number of members <sup>(1)</sup></b>	13.25	6.35
<b>Number of compensated members <sup>(2)</sup></b>	-	6.35
<b>Potential dilution in case of granting all actions to beneficiaries</b>	N/A	N/A

(1) The total number of members corresponds to the annual average of the number of members of said administrative body verified monthly, under the terms of item 8.2.

(2) Corresponds to the number of executive officers and advisors linked to the Matching program, as provided for in Annual Circular Letter 2023 CVM/SEP.

For further information, see item 8.4 of this Reference Form.

## 8.10. Grant of shares

Forecast for the current reporting year (2023)		
	Board of Directors <sup>(5)</sup>	Executive Committee
Total number of members <sup>(1)</sup>	13.50	9.06
Number of compensated members <sup>(2)</sup>	-	9.06
Grant date	N/A	03/30/2023
Number of shares granted	N/A	299,676
Maximum deadline for delivery of shares	N/A	3 years
Term of restriction on the transfer of shares	N/A	N/A
Fair value of shares on the date of the grant <sup>(3)</sup>	N/A	94.00
Multiplication of the number of shares granted by the fair value of the shares on the date of the grant <sup>(4)</sup>	N/A	28,169,544.00

Year ended December 31, 2022		
	Board of Directors	Executive Committee
Total number of members <sup>(1)</sup>	13.42	9.59
Number of compensated members <sup>(2)</sup>	-	9.59
Grant date	N/A	03/30/2022
Number of shares granted	N/A	170,730
Maximum deadline for delivery of shares	N/A	3 years
Term of restriction on the transfer of shares	N/A	N/A
Fair value of shares on the date of the grant	N/A	96,0330
Multiplication of the number of shares granted by the fair value of the shares on the date of the grant	N/A	16,395,714.09

Year ended December 31, 2021		
	Board of Directors	Executive Committee
Total number of members <sup>(1)</sup>	13.25	8.61
Number of compensated members <sup>(2)</sup>	-	8.61
Grant date	N/A	03/29/2021
Number of shares granted	N/A	132,140
Maximum deadline for delivery of shares	N/A	3 years
Term of restriction on the transfer of shares	N/A	N/A
Fair value of shares on the date of the grant	N/A	96.5561
Multiplication of the number of shares granted by the fair value of the shares on the date of the grant	N/A	12,891,063.05

Year ended December 31, 2020		
	Board of Directors	Executive Committee
Total number of members <sup>(1)</sup>	13.25	6.35
Number of compensated members <sup>(2)</sup>	-	6.35
Grant date	N/A	03/23/2020
Number of shares granted	N/A	349,169
Maximum deadline for delivery of shares	N/A	3 years
Term of restriction on the transfer of shares	N/A	N/A
Fair value of shares on the date of the grant	N/A	34.3355
Multiplication of the number of shares granted by the fair value of the shares on the date of the grant	N/A	11,988,892.20

(1) The total number of members corresponds to the annual average of the number of members of said administrative body verified monthly, under the terms of item 8.2.

(2) Corresponds to the number of executive officers and advisors linked to the Matching program, as provided for in Annual Circular Letter 2023 CVM/SEP.

(3) Estimated value on the grant date, March 30, 2023 (date of acquisition by the executive of the shares issued by Vale).

(4) Average share price.

(5) Board of Directors' fees do not include variable compensation items and, therefore, there is no grant of shares.

For further information, see item 8.4 of this Reference Form.

## 8.11. Shares yielded

Year ended on December 31st, 2022		
	Board of Directors	Executive Committee
<b>Total number of members</b> <sup>(1)</sup>	13.42	9.59
<b>Number of members receiving compensation</b> <sup>(2)</sup>	–	9.59
<b>Number of shares</b> <sup>(3)</sup>	0.00	335,585
<b>Weighted average purchase price</b> <sup>(4)</sup>	0.00	R\$105.07
<b>Weighted average market price of the stock purchased</b> <sup>(5)</sup>	0.00	R\$105.07
<b>Multiplication of the total shares acquired by the difference between the weighted average acquisition price and the weighted average market price of the stock purchased</b>	0.00	–

(1) The total number of members corresponds to the annual average of the number of members of said administrative body verified monthly, under the terms of item 8.2.

(2) Corresponds to the number of members, as applicable, linked to the pension plan, as provided for in Annual Circular Letter 2023 CVM/SEP.

(3) This is the number of shares delivered by the Company to the members of the Executive Committee, as the award of the Matching program started in 2019.

(4) Refers to the price of the share issued by the Company, acquired for purposes of the Matching award, cycle 2019/2022.

(5) Considering that the shares issued by the Company were acquired in the market, the average price is equal to the previous line.

Year ended on December 31st, 2021		
	Board of Directors	Executive Committee
<b>Total number of members</b> <sup>(1)</sup>	13.25	8.61
<b>Number of members receiving compensation</b> <sup>(2)</sup>	–	8.61
<b>Number of actions</b> <sup>(3)</sup>	0.00	296,314
<b>Weighted average purchase price</b> <sup>(4)</sup>	0.00	R\$ 101.60
<b>Weighted average market price of the stock purchased</b> <sup>(5)</sup>	0.00	R\$101.60
<b>Multiplication of the total shares acquired by the difference between the weighted average acquisition price and the weighted average market price of the stock purchased</b>	0.00	–

(1) The total number of members corresponds to the annual average of the number of members of said administrative body verified monthly, under the terms of item 8.2.

(2) Corresponds to the number of members, as applicable, linked to the pension plan, as provided for in Annual Circular Letter 2023 CVM/SEP.

(3) This is the number of shares delivered by the Company to the members of the Executive Committee, as the award of the Matching program started in 2018.

(4) This is the price of the share issued by the Company, at the end date of the 2018 Matching cycle, for awards in 2021.

(5) Considering that the shares issued by the Company were acquired in the market, the average price is equal to the previous line.

Year ended December 31, 2020		
	Board of Directors	Executive Committee
<b>Total number of members</b> <sup>(1)</sup>	13.25	6.35
<b>Number of members receiving compensation</b> <sup>(2)</sup>	–	6.35
<b>Number of actions</b> <sup>(3)</sup>	0.00	432,920
<b>Weighted average purchase price</b> <sup>(4)</sup>	0.00	R\$44.06
<b>Weighted average market price of the stock purchased</b> <sup>(5)</sup>	0.00	R\$44.06
<b>Multiplication of the total shares acquired by the difference between the weighted average acquisition price and the weighted average market price of the stock purchased</b>	0.00	–

(1) The total number of members corresponds to the annual average of the number of members of said administrative body verified monthly, under the terms of item 8.2.

(2) Corresponds to the number of executive officers and advisors linked to the Matching program, as provided for in Annual Circular Letter 2023 CVM/SEP.

(3) That is a total of 132,157 shares related to the Matching cycle started in 2016 (whose payment was suspended in 2019 and happened only in 2020) and 300,763 shares related to the cycle started in 2017 (with payment originally scheduled for 2020).



(4) This is the simple average between the weighted average price of the 2016 cycle (whose payment was suspended in 2019 and happened only in 2020), which was R\$ 46,35 and the weighted average price of the 2017 cycle (with payment originally scheduled for 2020), which was R\$41,47.

(5) Considering that the shares issued by the Company were acquired in the market, the average price is equal to the previous line.

## 8.12. Stock and option pricing methods

Item not applicable compared to items 8.5 to 8.8 hereof, considering that Vale's share-based compensation plans do not include the grant of stock options.

Nevertheless, for the purposes of items 8.9 to 8.11, it bears emphasizing that, for the reporting years of 2020, 2021 and 2022, and the forecast for 2023, the amounts paid and the shares delivered to the Company's share-based variable compensation plans were considered (Matching and VSP), for which the applicable performance prices and performance factors were considered, according to the policy of the programs.

Therefore, to provide the benefits of the Matching program, the Company may purchase shares directly in the market or in its treasury. For the VSP, only shares will be delivered from the cycle started in 2021, and award of which will take place in 2024, for which the Company may also purchase shares directly in the market or in its treasury.

Information on the number of shares delivered and weighted average price, reported in item 8.11, consists of the total number of shares that were awarded by the Company to the members of the Executive Committee in the year in question, according to the price established in the policy of the programs, described in item 8.4 hereof.

### 8.13. Shares, quotas and other securities convertible in shares or quotas, held by members of the board of directors, the statutory board of executive officers or the fiscal council

Shareholders as of December 31, 2022	ON
<b>Board of Directors</b> <sup>(1)</sup>	98,007
<b>Executive Committee</b> <sup>(2)</sup>	2,151,292
<b>Fiscal Council</b>	9,635
<b>Total</b> <sup>(3)</sup>	<b>2,258,934</b>

<sup>(1)</sup> Includes 790 shares in American Depositary Receipts (“ADRs”), on the New York Stock Exchange, issued by Vale.

<sup>(2)</sup> Includes 134,919 shares in the form of ADRs, on the New York Stock Exchange, issued by Vale.

<sup>(3)</sup> Includes 135,709 shares in ADRs, on the New York Stock Exchange, issued by Vale.

## 8.14. Pension plans

According to a contractual clause, the Company pays the amounts of the employer and the executive, up to 9% of the fixed remuneration, into Valia – Fundação Vale do Rio Doce de Seguridade Social (“Valia”), or in another supplementary pension plan at the choice of the member of the Executive Committee.

In Valia, the minimum age for applying for retirement income is 45, after a minimum period of five years of grace with contributions.

Valia	Board of Directors	Executive Committee	Total
Number of members <sup>(1)</sup>	-	10 members	-
Name of the Plan	Benefit Plan Vale Mais		
Number of administrators who qualify for retirement	-	5, of whom (i) 2 per Normal Retirement Income and (ii) 3 per Early Retirement Income.	-
Conditions for early retirement	-	<ul style="list-style-type: none"> <li>▪ be at least 45 years of age;</li> <li>▪ to have at least 5 years of uninterrupted enrollment with VALIA, counted from the initial date of the last enrollment of the participant in the Vale Mais Plan (except for participants who migrated from the Defined Benefit Plan – already extinct – to the Vale Mais Plan);</li> <li>▪ have terminated the employment contract with the sponsor or have lost the status of manager.</li> </ul>	-
Updated amount of accumulated contributions in the pension plan until the end of the last reporting year, minus the portion related to contributions made directly by the administrators	-	R\$ 15,792,885.69 <sup>(2)</sup>	-
Accumulated total amount of contributions made during the last reporting year, minus the portion related to contributions made directly by the administrators	-	R\$ 2,787,256.89 <sup>(3)</sup>	-
Possibility of early redemption and conditions	-	<p>The active participant who, on the date of termination of his employment contract with the sponsor, or on the date he loses his manager status, does not elect to become a self-sponsored payer or co-participant, or opt for the portability and is not using the benefit of the Vale Mais Plan shall be eligible to receive the redemption.</p> <p>The redemption value will be equal to 100% of the participant's account + 1% of the sponsor's account per month of ordinary contribution paid by the participant to the Vale Mais Plan, up to a maximum of 80% of that account.</p>	-

(1) Corresponds to the number of directors and officers, as applicable, linked to the retirement plan, as provided for in Annual Circular Letter 2023 CVM/SEP.

(2) Amount corresponding to the sum of the Sponsor Accounts of the participants, determined on 12/31/2022.

(3) Amount corresponding to the sum of the ordinary contributions made by the sponsor on behalf of each participant in the reporting year of 2022.

**8.15. Minimum, average and maximum remuneration**

Board of Directors	Total number of members	Number of members receiving compensation	Amount of the highest individual compensation (R\$)	Amount of the lowest individual annual compensation (R\$)	Average amount of the individual annual compensations (R\$)
2022 <sup>(1)</sup>	13.42	13.42	2,578,118.67	759,315.96	1,345,027.80
2021 <sup>(1)</sup>	13.25	13.25	2,042,308.16	765,011.50	1,181,522.42
2020 <sup>(1)</sup>	13.25	13.25	1,515,887.77	697,332.64	924,518.13

(1) The members of the Board of Directors with the highest and lowest individual compensations were compensated for twelve months in the period. It does not consider charges and considers participation in committees for effective members.

Executive Committee	Total number of members	Number of members receiving compensation	Amount of the highest individual compensation (R\$)	Amount of the lowest individual annual compensation (R\$)	Average amount of the individual annual compensations (R\$)
2022 <sup>(1)(2)</sup>	9.59	9.59	59,948,669.98	7,351,596.64	21,375,533.70
2021 <sup>(1)(3)</sup>	8.61	8.61	55,144,333.69	11,309,940.55	21,394,892.66
2020 <sup>(1)(4)</sup>	6.35	6.35	31,517,607.55	6,668,017.46	23,836,572.62

(1) Amounts without charges.

(2) The lowest individual remuneration refers to a member with 12 months of activity, in view of the guidance to exclude members who have exercised the function for a shorter period in 2022.

Average compensation refers to the total amount paid to Executive Committee members divided by the count of active members, as per guidance.

The highest individual remuneration refers to a member with 12 months of activity in the company in 2022.

The company reminds that from 2022 the values are reported according to the new methodology, on an accrual basis and no longer on a cash basis, that is, values according to accounting provisions and no longer the payments actually made in the year.

(3) The lowest individual compensation refers to a member with 12 months of activity, in view of the orientation of excluding members who have worked for a shorter period in 2021.

The average compensation refers to the total paid to member of the Executive Committee divided by the number of active members, according to guidelines in the Annual Official Circular Letter 2023 CVM/SEP.

The highest individual compensation refers to a member with 12 months of activity in the company in 2021.

The Company clarifies that the maximum individual compensation for the year 2021 was affected by the positive results of the Company in that year, as 87% of the maximum compensation reported referred to payments connected to the Company's performance, the main ones referring to: (i) Matching Program: having paid a share price of R\$ 101.60, higher than the original estimate, (ii) bonuses for the year 2020: which had the results of its calculation above the target amount, both in reaching collective goals and individual performance, as well as overall performance in the Company; and (iii) virtual dividends: which were paid in line to the communications and amounts disclosed by the Company to distribute dividends and/or interest under the capital of its shareholders in 2021.

(4) The highest individual compensation refers to a member with 12 months of activity in the company in 2020.

The lowest individual compensation refers to a member with 12 months of activity, in view of the orientation of excluding members who have worked for a shorter period in 2020.

The average compensation refers to the total paid to member of the Executive Committee divided by the number of active members, according to guidelines in the Annual Official Circular Letter 2023 CVM/SEP.

Fiscal Council	Total number of members	Number of members receiving compensation	Amount of the highest individual compensation (R\$)	Amount of the lowest individual annual compensation (R\$)	Average amount of the individual annual compensations (R\$)
2022 <sup>(1)</sup>	5.00	5.00	326,794.51	326,794.51	326,794.51
2021 <sup>(1)</sup>	5.00	5.00	314,510.58	314,510.58	314,510.58
2020 <sup>(2)</sup>	4.75	4.75	348,453.88	263,834.86	331,530.08

(1) Amounts without charges. The members of the Fiscal Council with the highest and lowest individual compensation were compensated for 12 months in the period.

(2) Amounts without charges. The members of the Fiscal Council with the highest individual compensation were compensated for 12 months in the period, while the member with smallest individual compensation was compensated for 9 months in the period.

## 8.16. Mechanisms for compensation/indemnification

The contracts entered into with the Company's Executive Committee contain indemnification and non-competition (period of unavailability) clauses for cases of termination, non-renewal of the contract and retirement.

Until the 2020 reporting year, the indemnification and non-competition values were fixed based on a multiple of the officer's monthly base salary.

At the end of 2020, the severance package for the Company's Executive Committee was reviewed, to be implemented as of 2021, in the following terms:

- i. establishment of a range varying from zero to the current multiple of the officer's monthly of the base salary, being the final value to be defined for each officer for indemnification for the period of unavailability (non-competition clause) to be appreciated by the Board of Directors. The adjustments allow the Company to establish indemnity funds compatible with the complexity of the position, maturity of the executive in the function and performance in the conduct of results, replacing the previously defined fixed and previously defined multiples in the same way for all; and
- ii. changes in the payment format of long-term variable compensation programs that are in force at the time of termination of the officer, which will be paid only at the moment of the vesting of the cycles and based on the official results obtained (share price and performance metrics), and no longer at the time of termination based on partial results.

Vale do not sign with the members of the Board of Directors and members of the Fiscal Council any other contractual arrangements, insurance policies or other instruments that structure compensation or indemnification mechanisms in case of removal from office, which are not described herein.

**8.17. Percentage related parties in compensation**

	<b>2023 (forecast)</b>	<b>2022</b>	<b>2021<sup>(1)</sup></b>	<b>2020</b>
Board of Directors	N/A	N/A	17.9%	32.6%
Executive Committee	N/A	N/A	-	-
Fiscal Council	N/A	N/A	-	-

(1) On November 9, 2020, the Vale's Shareholders' Agreement entered into on August 14, 2017 was extinguished and Vale no longer has controlling shareholders. The effect of the extinction of the Shareholders' Agreement on the remuneration of the members of the Board of Directors occurred at the time of Vale's Annual General Meeting in April 2021 and, therefore, the percentage presented for the year 2021 represents the respective remuneration until April 2021.

### **8.18. Compensation - Other functions**

There was no payment in the last 3 social years, and there is no provision for payment for the current reporting year, compensation for members of the Board of Directors, the Executive Committee or the Fiscal Council for any reason other than the functions they hold.



**8.19. Recognized remuneration of the controlling shareholder**

Not applicable. In the event that members of the Board of Directors, Executive Committee or Fiscal Council of Vale perform any activity in companies under common control or controlled by Vale, any fees proposed to the appointed member are waived, considering that the management function has already been it is part of their initial attributions as employees of Vale, therefore, there should be no accumulation of remuneration.

## 8.20. Other relevant information

The Company clarifies that the reporting methodology used to disclose its compensation was changed to the accrual basis as of the fiscal year relating to 2022, with the purpose of aligning the compensation amounts with the estimates of the amounts subject to provision in the financial statements.

Due to this fact, the Company presents in the table below:

- (i) the proposed compensation for the 2023 fiscal year according to the accrual basis, which will be subject to approval at the Annual and Extraordinary General Meeting to be held on April 28, 2023; and
- (ii) for exclusively informational and comparability purposes only, the compensation amounts paid in fiscal years 2022, 2021 and 2020, according to the accrual basis:

<i>Accrual basis</i>	<b>Forecast 2023</b>	<b>Actual 2022</b>	<b>Actual 2021 (Proforma)</b>	<b>Actual 2020 (Proforma)</b>
<b>Board of Directors</b> <sup>(1)</sup>	21,600,497	18,045,790	15,685,551	12,285,410
<b>Advisory Committees</b> <sup>(2)</sup>	200,000	1,961,746	5,492,869	10,956,965
<b>Fiscal Council</b>	1,676,833	1,633,972	1,572,553	1,680,578
	<b>23,477,330</b>	<b>21,641,508</b>	<b>22,750,973</b>	<b>24,922,953</b>
<b>Executive Committee</b>				
Annual fixed compensation				
Salary or fee	30,384,220	31,297,473	26,723,539	22,840,769
Benefits	7,659,028	8,339,270	6,578,055	6,744,215
	<b>38,043,249</b>	<b>39,636,743</b>	<b>33,301,594</b>	<b>29,584,984</b>
Variable compensation				
Bonus	46,617,592	45,527,162	42,959,956	32,436,700
Others	19,013,042	14,779,565	12,686,182	6,324,696
	<b>65,630,635</b>	<b>60,306,726</b>	<b>55,646,138</b>	<b>38,761,396</b>
<b>Termination of the exercise of the position</b>	9,247,220	10,252,402	7,909,251	33,940,774
<b>Shared based compensation</b>	88,700,956	94,795,497	66,887,193	62,974,675
	<b>97,948,176</b>	<b>105,047,899</b>	<b>74,796,444</b>	<b>96,915,449</b>
<b>Total</b>	<b>225,099,389</b>	<b>226,632,877</b>	<b>186,495,148</b>	<b>190,184,782</b>

(1) Includes compensation due to members of the Board of Directors for participation in committees.

(2) Includes the remuneration of external members and alternate members of the Board of Directors who participate in committees.

## 9. Auditors

### 9.1/9.2. Identification and compensation

<b>Name/Company name</b>	PricewaterhouseCoopers Independent Auditors Ltda (“PwC”)								
<b>CVM code</b>	2879								
<b>CPF/CNPJ</b>	61.562.112/0001-20								
<b>Date of contracted services</b>	02/15/2019								
<b>Start date of the provision of services</b>	02/15/2019								
<b>Description of the service provided</b>	<p>Provision of professional services related to the audit of financial statements, both for local and international purposes, and work to certify internal controls for the fiscal years from 2019 to 2023, as described below:</p> <p>i. Audit and quarterly review of financial statements. Comprises the contracted service for issuing the audit report on the individual and consolidated financial statements of Vale S.A. (“Vale” or “Company”), including the review of the quarterly financial information. It also includes auditing the individual financial statements of Vale's subsidiaries;</p> <p>ii. Audit – Sarbanes-Oxley Act. Comprises the certification of internal controls (compliance with Section 404 of the Sarbanes-Oxley Act of 2002);</p> <p>iii. Audit related services. Additionally, the scope of the works also includes the provision of other services related to the auditing, such as the issuing of reports for the procedures previously agreed according to NBC TSC 4400. These services are mostly contracted for periods of less than one year.</p> <p>The Company has not contracted any service from its independent auditor that is not related to the audit of financial statements of Vale or its subsidiaries.</p>								
<b>Justification of replacement</b>	Not applicable.								
<b>Reason presented by the auditor in case of disagreement with the justification of the issuer for their replacement</b>	Not applicable.								
<b>Total amount of the independent auditors compensation detailed per service</b>	<p>The services contracted with the auditors referred to the reporting year ended on December 31, 2022, for the Company and its controlled companies were the following:</p> <hr/> <p><i>In thousands of R\$</i></p> <table> <tr> <td>i. Audit and quarterly review of financial statements</td> <td style="text-align: right;">24.632</td> </tr> <tr> <td>ii. Audit – Sarbanes-Oxley Act</td> <td style="text-align: right;">3.444</td> </tr> <tr> <td>iii. Audit-related services</td> <td style="text-align: right;">359</td> </tr> <tr> <td></td> <td style="text-align: right;"><u>28.435</u></td> </tr> </table>	i. Audit and quarterly review of financial statements	24.632	ii. Audit – Sarbanes-Oxley Act	3.444	iii. Audit-related services	359		<u>28.435</u>
i. Audit and quarterly review of financial statements	24.632								
ii. Audit – Sarbanes-Oxley Act	3.444								
iii. Audit-related services	359								
	<u>28.435</u>								

### **9.3. Auditors independence and conflict of interest**

#### **Policy of Vale for the Contracting of Independent Auditors (“Policy for Independent Auditors”)**

The Policy for Independent Auditors was approved in the meeting of the Vale Board of Directors, held on September 10, 2020, which has the purpose of establishing the guidelines and principles for the contracting of auditing services, whether related or not related to the auditing of the consolidated financial statements of the Company and of its controlled companies, in compliance with the requirements provided in the applicable legislation.

The Policy for Independent Auditors establishes the specific internal procedures for the initial contracting of independent auditors, as well as the subsequent contracting of other services with the independent auditing company, based on principles that preserve the independence of the auditor.

All contracting is evaluated by the Audit and Risks Committee, which is responsible for recommending the contracting of independent auditors for approval by the Board of Directors, as defined in the Company’s Articles of Incorporation. The Policy for Independent Auditors also contains the list of specific services that are forbidden for the independent auditor, even if he/her declares themselves independent for the service.

The Independent Auditors Policy is available for consultation on the websites of the CVM ([www.gov.br/cvm](http://www.gov.br/cvm)) and the Company ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos)).

## **9.4. Other relevant information**

### **Renovation of the contract with the Vale global external independent auditor**

In the meeting held on December 1st, 2022, the Vale Board of Directors, with the favorable recommendation of the Audit Committee, approved the renovation of the contract with PwC for the provision of independent external auditing services of the Vale consolidated financial statements, and of the individual financial statements of the Vale subsidiaries, for the reporting years from 2024 up to 2028, as well as other auditing services.

## 10. Human Resources

### 10.1. Describe the human resources

a. number of employees (total, by groups based on the activity performed, geographical location and diversity indicators), within each hierarchical level of the issuer.

Per declared gender	2022				
	Female	Male	Non-binary	Others	Prefers not to answer
Leadership	1,109	4,246	-	-	-
Non-leadership	13,133	46,026	-	-	2
<b>Total = 64,516</b>	<b>14,242</b>	<b>50,272</b>	<b>-</b>	<b>-</b>	<b>2</b>

Per declared color or race	2022						
	Yellow	White	Black	Brown	Indigenous person	Others	Prefers not to answer
Leadership	78	1,956	270	1,287	4	1,707	53
Non-leadership	1,047	14,756	6,126	27,038	185	9,468	541
<b>Total= 64,516</b>	<b>1,125</b>	<b>16,712</b>	<b>6,396</b>	<b>28,325</b>	<b>189</b>	<b>11,175</b>	<b>594</b>

Per age group	2022		
	Under 30	From 30 to 50 years	Over 50
Leadership	102	4,215	1,038
Non-leadership	7,817	43,874	7,470
<b>Total = 64,516</b>	<b>7,919</b>	<b>48,089</b>	<b>8,508</b>

Per geographical location	2022					
	North	Northeast	Central-West	Southeast	South	Abroad
Leadership	1,010	363	5	2,270	-	1,707
Non-leadership	15,497	6,223	32	27,941	-	9,468
<b>Total = 64,516</b>	<b>16,507</b>	<b>6,586</b>	<b>37</b>	<b>30,211</b>	<b>-</b>	<b>11,175</b>

Per geographical location and gender	2022				
	Female	Male	Non-binary	Others	Prefers not to answer
North	3,787	12,720	-	-	-
Northeast	1,252	5,334	-	-	-
Central-West	18	19	-	-	-
Southeast	7,535	22,676	-	-	-
South	-	-	-	-	-
Abroad	1,650	9,523	-	-	2
<b>Total = 64,516</b>	<b>14,242</b>	<b>50,272</b>	<b>-</b>	<b>-</b>	<b>2</b>

Per geographical location and color or race	2022						
	Yellow	White	Black	Brown	Indigenous person	Others	Prefers not to answer
North	429	3,291	1,871	10,740	87	-	89
Northeast	97	1,471	870	4,124	11	-	13
Central-West	1	17	4	15	-	-	-
Southeast	598	11,933	3,651	13,446	91	-	492
South	-	-	-	-	-	-	-
Abroad	-	-	-	-	-	11,175	-

<b>Total = 64,516</b>	<b>1,125</b>	<b>16,712</b>	<b>6,396</b>	<b>28,325</b>	<b>189</b>	<b>11,175</b>	<b>594</b>
<i>Per geographical location and age group</i>	<b>2022</b>						
	<b>Under 30</b>		<b>From 30 to 50 years</b>		<b>Over 50</b>		
North	3,309		12,038		1,160		
Northeast	911		5,060		615		
Central-West	5		28		4		
Southeast	2,816		23,624		3,771		
South	-		-		-		
Abroad	878		7,339		2,958		
<b>Total = 64,516</b>	<b>7,919</b>		<b>48,089</b>		<b>8,508</b>		

<i>Per business area</i>	<b>2022</b>	
Iron Solutions	41,816	
Energy Transition Metals	13,318	
Corporate	9,382	
<b>Total</b>	<b>64,516</b>	

The information provided above covers the employees of Vale S.A. ("Vale" or "Company") and its subsidiaries on December 31, 2022.

The self-declared classifications of color or race above are applicable to employees in Brazil and are in accordance with the classification of the Brazilian Institute of Geography and Statistics – IBGE and the best practices adopted in Brazil. Data referring to employees abroad were classified as "Other".

There are no other diversity indicators that the Company considers relevant in addition to those already reported above.

**b. number of outsourced employees (total, per groups based on the activity performed and per geographic location)**

<i>Per business area</i>	<b>2022</b>	
Iron Solutions	59,373	
Energy Transition Metals	18,901	
Corporate	72,557	
<b>Total</b>	<b>150,831</b>	

<i>Per geographical location</i>	<b>2022</b>	
Brazil	136,467	
South America	173	
North America	4,633	
Europe	194	
Asia	9,358	
Oceania	6	
<b>Total</b>	<b>150,831</b>	

**c. turnover rate**

The turnover rate of the Company's employees and its subsidiaries for the fiscal year ended 2022 was 8.13%. The turnover rate is calculated based on the data from Vale S.A. and its subsidiaries in the following countries: Brazil, Canada, Indonesia, Australia, the United States of America, China, Peru, Chile, the United Arab Emirates, the Netherlands, India, Japan, Malaysia, Oman, the United Kingdom, Singapore, Switzerland and Argentina, and considers the dismissals in that year. The turnover rate is equal to the percentage of dismissals in the year, i.e. of every 100 active employees at Vale and its subsidiaries in 2022, 8 employees were dismissed.

## 10.2. Relevant changes

In 2022, there was a 11% reduction in total of their own employees, from 72,266 by 2021 to 64,516 in 2022, as a result of the sale of coal operations.

The number of outsourced employees in 2021 was adjusted from a total of 141,147 to 188,314, reflecting the expansion of the concept of “outsourced”, which, in 2022, began to include outsourced employees with eventual, short-term performance in Brazil. Under the same classification, the total number of outsourced in 2022 suffered a reduction of about 20% against the total in 2021, mainly verified in support in corporate functions.



### 10.3. Employees compensation policies and practices

Vale's remuneration is designed to be competitive in markets where it operates and allows it to be able to attract and retain talent compatible with its needs.

#### a. variable remuneration and salary policy

##### Fixed Remuneration

**Base salary:** fixed monthly installment, defined from the Company's position structure, which is aligned with market practices and aims to remunerate the services provided within the scope of responsibility attributed to each employee in the different activities of the Company.

Vale negotiates clauses related to wages and benefits with various unions in different countries. Vale celebrates collective agreements with union employees in its operations in Brazil, Canada, Indonesia, Oman and the United Kingdom.

In Brazil, Vale enters into collective agreements at national level and specific local agreements with unions representing 100% of the Company's employees in that country. In the 2022 Collective Labor Agreement, a wage adjustment of 6.46% was granted, from November 2022, to all employees who do not exercise management positions in the Company.

In Canada, Vale also negotiates clauses related to salaries and benefits for its unionized employees through collective agreements of local coverage, lasting between 4 and 5 years. For non-unionized employees, Vale Canada Ltd. undertakes an annual review of wages and benefits.

##### Variable Compensation

**Profit sharing ("PLR"):** annual variable portion based on the company's results and defined through objective indicators and goals, derived from strategic planning. PLR aims to (i) aligning the interests of employees and the shareholders and; (ii) directing the focus on social and environmental issues, and (iii) recognizing employee participation in the Company's performance.

Certain employees who are part of Vale's management team may, depending on the eligibility of each plan, also participate in the long-term incentives, such as:

- (i) **Matching:** For more information on the Matching, see item 8.4 of this Reference Form.
- (ii) **Vale Shares Program – VSP** For information on the VSP, see item 8.4 of this Reference Form.

The variable compensation and salary policy attributed to non-statutory Officers is described in item 8.1.c.i of this Reference Form.

#### b. benefit policy

Wages and benefits provided by Vale and its subsidiaries are usually defined considering issues related to them such as location, competitiveness and other. The Company's benefit policy is in line with its strategy of attraction and retention, following the applicable legislation and the market practice in the countries where Vale operates. The Company provides an attractive and competitive benefit package, which ensures health, well-being, protection and quality of life. The main benefits offered to the employees are medical and dental care, life insurance, private pension fund, and short-term and long-term disability benefits.

With regard to pension plans, Vale recommends offering a model of the type of contribution defined at the locations where the financial market allows the management of long-term resources in a financially sustainable manner.

Vale's Brazilian employees and most of its Brazilian subsidiaries may participate in pension plans managed by Valia. The majority of participants in Valia's plans participate in a plan called "Vale Mais", created in 2000. This plan is above all a defined contribution plan with a defined benefits, including cover leave of absence due to sickness, disability retirement, retirement and financial protection to dependents in case of death. Valia also operates a fixed benefit plan, closed to new participants since May 2000, with benefits based on years of service, wage, and social security benefits. This plan covers retired participants and their beneficiaries, as well

as a very small number of employees who did not want to migrate to the “Vale More” plan when it was established in May 2000.

**c. characteristics of share-based compensation plans of non-management employees, identifying (i) group of beneficiaries; (ii) conditions for the exercise; (iii) exercise prices; (iv) terms of exercise; and (v) the number of shares committed by the plan.**

The share-based compensation plans described in item 8.4 of this Reference Form are extended to non-statutory Officers of the Company, and to other levels of leadership, according to the eligibility rules of each plan. The main characteristics of the referred to plans are described in item “8.4” of this Reference Form.

**d. reason between (i) the highest individual compensation (considering the composition of the remuneration with all items described in field 8.2.d) recognized in the outset outlet in the last reporting year, including the compensation of statutory administrator, if applicable; and (ii) the median of the individual compensation of employees of the issuer in Brazil, disregarding the highest individual compensation, as recognized in its result in the last reporting year**

As described in item 8 of this Reference Form, Vale has solid governance in its Remuneration Strategy, with the support of global consulting firms. For the success of the business the Company guarantees its attraction and competitiveness strategy, as well as its consistency in accordance with the geographic scope and performance of each position. The ratio between the highest individual compensation and the median individual compensation of Vale employees in Brazil is 574 times, according to the accrual accounting view as required by CVM. This multiplier is influenced by the company's results, since 70% of the CEO's remuneration is variable and is related to the Company's short and long-term goals. Vale reinforces that its operations are global and that the reason requested, only at the Brazilian level, compares non-comparable remuneration strategies, depending on the scope of the position, representativeness of the Brazilian currency, GDP per capita, among others. It should be noted that in the last Compensation analysis carried out, using the Living Wage methodology, Vale is a reference and is positioned, on average, 26.85% above the references mapped in Brazil. The Company also points out that its dismissal rate is 1.74%, below the sector which has 3.3% as a voluntary rate and 9.4% as an involuntary rate, according to a survey carried out by Willis Towers Watson.

#### **10.4. Relations between the issuer and unions**

Vale maintains healthy and constructive relationships with employees representatives around the world. We seek to resolve any conflicts directly with the unions, through dialog permanent meetings and forums. Until the date of this reference form, there are 12 unions in Brazil and 15 unions in the rest of the world.

In Brazil, there were, in the last 3 social exercises, strikes or stoppages in the activities of the company or its subsidiaries, accordingly to the criteria of Global Reporting Initiative – GRI.

In Canada, in 2021, a strike at operations held in the municipality of Sudbury, lasting 2 months. A five-year collective agreement with the Local United Steelworkers (“USW”) 6500 was ratified by voting, ending the work shutdown.

### **10.5. Other relevant information**

There is no other relevant information that has not been disclosed in the above items.

## 11. Related-party transactions

### 11.1. Rules, policies and practices

The Policy for Related-Party Transactions and Conflict of Interests of Vale (“Policy”) was approved by the Board of Directors of Vale S.A. (“Vale” or “Company”) on January 28, 2021. The Policy sets principles and rules that must be adopted in related-party transactions and situations of potential conflict of interests involving Vale and/or its subsidiaries.

In line with the best practices of corporate governance and for the purpose of preserving Vale's interests, the Policy provides that these transactions must be conducted on an arm's length basis. It also provides that people with interests potentially conflicting with the Company's interests should not participate in the decision-making process of these transactions.

The Policy applies to Vale and its subsidiaries, and must be observed by its managers and employees, especially key management personnel (members of the Board of Directors, Fiscal council, Advisory Committees and Executive Committee, Officers who report directly to the President of Vale and the executives who report directly to the Company's Board of Directors) and their close family members (spouse, partner, child, stepchild and dependents of the person, their spouse or partner).

The Policy also applies to reference shareholders, that is, shareholders who are known to exercise effective influence over the Company. The reference shareholders are identified by the Executive Vice-Presidency for Finance and Investor Relations at least once a year, considering (i) their effective influence in the Company, (ii) the existence of common managers with the shareholder or a company that is part of its group, and (iii) the existence of managers who are employees or occupy positions in the shareholder or its group (“Reference Shareholder”). This classification is evaluated annually by the Audit and Risk Committee.

In order to identify conflicting and related parties (“List of Related Parties”), key management personnel must complete and update a questionnaire, indicating close family members, informing whether they have a professional relationship with Vale or its subsidiaries, as well as indicating legal entities that control or are controlled by their family members. In turn, the Reference Shareholders must complete a questionnaire informing their key management personnel, in addition to the legal entities that their group controls, without prejudice to the discretion that the Reference Shareholders bring to the attention of the Risks and Audit Committee the cases in which they consider that there is a conflict of interests.

The List of Related Parties is periodically updated. In the first 90 days of each year, the Corporate Governance Department must consolidate the information received and disclose the List of Related Parties on the governance portal and send it to the Boards of Controllershship, Compliance, Business Risks, and Internal Controls and Investor Relations at Vale. The Compliance Executive Board may carry out consultations in order to validate or complement the data provided, as well as any updates thereof.

The Policy classifies Related-Party Transactions into: (i) prohibited transactions; (ii) exempt transactions; (iii) non-qualifying transactions; and (iv) qualifying transactions.

Prohibited transactions are those that are strictly prohibited, such as (i) loans in favor of related parties (except Vale's subsidiaries or affiliates), and (ii) transactions not on an arm's length basis, among others.

Exempt transactions are those that, due to their lesser relevance, can be approved jointly by two members of the Executive Committee, one of whom must be the Vice President for Finance and Investor Relations, such as transactions for the establishment of management compensation, transactions between Vale and its subsidiaries, among others.

Non-qualifying transactions are those that in principle would need to be approved by the Board of Directors, but whose approval has been delegated by the Board of Directors for approval by the Executive Committee, such as for example financial debt transactions, including, but not limited to: (i) import financing; (ii) export financing; (iii) financing with international or Brazilian development or multilateral agencies; (iv) bilateral or syndicated direct financial loan, and (v) leasing operations.

Finally, qualifying transactions are those that are most relevant and, consequently, are the sole responsibility of the Board of Directors.

Monitoring of exempt and/or non-qualifying transactions is carried out by the Controller's Office, which must prepare a report to be submitted: (i) quarterly to the Risks and Audit Committee; and (ii) annually to the Capital Allocation and Projects Committee, for subsequent submission to the Board of Directors.

During any contracting process involving Vale and/or its subsidiaries, regardless of the nature or amount, the List of Related Parties must be consulted in order to check whether or not it is a transaction with a related party. If so, the transaction will be submitted for approval by the relevant governance body.

In addition, transactions must comply with other formal aspects provided for in the Policy, in order to ensure the commutability of the transaction and the adoption of market conditions, such as the indication of the reasons why the transaction meets Vale's interests, the comparison with other options available on the market, impossibility of carrying out this comparison, carrying out a previous bidding process with other market agents, among others.

In order to assure the commutativity of transactions, the Company analyzes the financial feasibility of each operation vis-à-vis similar operations in the market between unrelated parties, taking into account comparative methods of analysis. Related-Party Transactions of the Company may be divided between: (i) transactions of an operational nature; and (ii) financial transactions.

As part of its operating activities, Vale carries out a substantial volume of transactions with its affiliate, subsidiaries and jointly controlled companies with third parties, in view of its policy of integrating activities in the production and commercial chain. In addition to the exploitation of minerals, Vale invests in transportation, logistics and energy activities, services and input necessary to achieve its social purpose. In this context, several operating contracts are entered into between Vale and its member companies, always taking care to observe commutative conditions and avoid discrepancies with market conditions.

With regard to financial transactions, Vale always seeks, in a dynamic way, the best options for capturing and applying existing resources in the local and international market. Financial investments are carried out in a way that keeps the liquidity of the Company available for its capital expenditures, combined with a conservative policy regarding the credit risk taking of the counterparties, seeking the maintenance of its resources in first-tier banks.

The Policy also provides for mechanisms to identify and resolve conflicts of interest:

Any person involved in the contracting process, evaluating or approving the transaction, including, but not limited to, key management personnel, who has a potential conflict of interest with the decision to be taken, must declare himself/herself impeded.

Similarly, the shareholder or representative of the shareholder, member of Vale's Board of Directors or Executive Committee who is in a situation of conflict of interest shall express it immediately. If this is not done, another person may express the conflict.

In this regard, as soon as the conflict of interests is identified in relation to a specific topic, the member involved shall not receive any document or information on the matter and shall leave, even physically, from the discussions. The statement of conflict of interests, abstention and temporary removal should be recorded in the minutes.

If Vale's managers and employees become aware of a transaction with a related party that has not been submitted for approval by the competent governance body, they must report the transaction to the Audit and Compliance Board, so that it can act to ensure that the procedures established in the Policy are observed.

To ensure the transparency of its related-party transactions to investors and the market, Vale discloses information about related-party transactions through this reference form, its financial statements, its annual reports and/or its notices on related party transactions.

Pursuant to the Articles of Incorporation, the Risks and Audit Committee is responsible for evaluating, monitoring and recommending corrections or improvements of the Policy to management, while the Board of Directors is responsible for approving changes and updates to the Policy.

Vale's policy and practices regarding related-party transactions comply with the guidelines of the Brazilian Code of Corporate Governance.

The Related-Party Transactions Policy and Conflict of Interests can be found on Company website ([www.vale.com](http://www.vale.com)), in the section Investor Relations ([www.vale.com/pt/web/esg/politicas-documentos-corporativos](http://www.vale.com/pt/web/esg/politicas-documentos-corporativos)) and the CVM website.

## 11.2. Related party transactions

Related party	Transaction date	Amount involved (BRL)	Applied balance (BRL)	Amount of the related party	Duration	Loan or other type of debt	Interest rate charged
Banco Bradesco S.A.	14/08/2019	13,838,906,500.00	11,896,018,434.00	13,838,906,500.00	12/15/2028	No	N/A
<b>Relationship with the issuer</b>	Banco Bradesco S.A. and Bradespar S.A. (Vale's Reference Shareholder) are companies that have the same controlling group.						
<b>Contract matter</b>	<b>subject</b>	79 hedge operations with an initial notional value of BRL 13.8 billion. Additional information: there are several hiring dates and expiration dates; the "transaction date" field shows the contracting date of the first open contract on the base date of 31/12/2022; the "duration" field displays the maturity of the longest contract; the "amount involved" field considers the accumulated value of financial operations entered into in the year 2022, and operations started in previous years with a balance in force on 31/12/2022. Base date of the reported position: 31/12/2022.					
<b>Warrants and insurance</b>	<b>and</b>	None.					
<b>Termination or extinction conditions</b>	<b>or</b>	None.					
<b>Nature and reasons for the operation</b>	Hedging operations were contracted for the purpose of protecting against exchange variation and applied financial indices in the Company's debts and obligations in reais.						
<b>Contractual position of the issuer</b>	Creditor						
<b>Specify</b>	Not applicable.						
<b>Measures taken to address conflicts of interests</b>	Quotations are made with more than 3 banks for the desired financial operation, the bank that offers the best financial conditions is chosen. All actions related to the Policy for Related Party Transactions and Conflict of Interests of Vale are observed.						
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	The trading of financial operations is carried out with benchmarking of the conditions practiced by the market. Vale establishes guidelines for the preservation of capital and possible financial risks in these operations.						
Related party	Transaction date	Amount involved (BRL)	Applied balance (BRL)	Amount of the related party	Duration	Loan or other type of debt	Interest rate charged
Banco Bradesco S.A.	18/01/2022	BRL 12,830,548,245.28	BRL 1,084,620,241.66	BRL 12,830,548,245.28	21/11/2024	No	101.65%
<b>Relationship with the issuer</b>	Banco Bradesco S.A. and Bradespar S.A. (Vale's Reference Shareholder) are companies that have the same controlling group.						
<b>Contract matter</b>	<b>subject</b>	359 financial investments readily convertible into cash and with daily liquidity, contracted by Vale and its subsidiaries, in bank deposit certificates (CDB) and committed operations. Additional information: the "transaction date" field shows the date of the oldest open transaction on the base date of 12/31/2022. The "amount involved" field considers the accumulated value of financial operations entered into in 2022 and operations started in previous years with a balance in effect on 31/12/2022. The "duration" field considers the last maturity date of the financial investments to which the subject matter of the agreement refers. The "interest rate" field presents the annual rate of return on the contracted financial investments.					
<b>Warrants and insurance</b>	<b>and</b>	None.					



<b>Termination or extinction conditions</b>	None.							
<b>Nature and reasons for the operation</b>	Financial investments were contracted for the purpose of remunerating the company's cash, protecting it from devaluation over time.							
<b>Contractual position of the issuer</b>	Creditor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	Financial investment operations contracted by the Company are considered ordinary and recurring cash management and treasury operations. They are carried out within the range of the tariff tables published by the contracted financial institutions and/or carried out through a competitive process. This competitive process includes quotes from at least 3 banks, choosing the bank that offers the best financial conditions. Within the scope of Vale, financial investment operations with Banco Bradesco S.A. were approved by members of the Executive Committee, in accordance with the authority limits established by the Board of Directors. There was no participation of anyone involved in the process of contracting, evaluating or approving the transaction, which has a potential conflict of interest with the decision taken.							
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	Transaction conditions for financial operations are determined through comparative price assessments, based on market prices and market price studies. The Company is committed to ensuring that all its transactions with related parties are fair and transparent and in line with the best market practices, with negotiations based on commutative conditions. Vale establishes guidelines for the preservation of capital and possible financial risks of these operations, keeps complete and accurate records of all transactions with related parties and discloses all necessary information in the annual reports.							
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied (BRL)</b>	<b>balance</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>
Banco do Brasil S.A., New York Branch	22/08/2022	BRL 7,826,550,000.00	BRL 0.00		BRL 7,826,550,000.00	31/08/2022	No	2.36%
<b>Relationship with the issuer</b>	Banco do Brasil S.A. is the sponsor of Previ (Vale Reference Shareholder). 4 financial investments in Time Deposit contracted by Vale and its subsidiaries.							
<b>Contract matter subject</b>	Additional information: the "transaction date" field shows the date of the oldest contracted transaction on the year of 2022. The "amount involved" field considers the accumulated value of Time Deposit operations entered into in 2022 and operations started in previous years with a balance in effect on 31/12/2022. The operations were contracted in US\$ and converted into reais for the purposes of this form by Ptax (BRL 5.2177). The "duration" field considers the last maturity date of the financial investments to which the subject matter of the agreement refers. The "interest rate" field presents the annual rate of return on the contracted financial investments.							
<b>Warrants and insurance</b>	None.							
<b>Termination or extinction conditions</b>	None.							
<b>Nature and reasons for the operation</b>	Financial investments were contracted for the purpose of remunerating the company's cash, protecting it from devaluation over time.							
<b>Contractual position of the issuer</b>	Creditor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	Financial investment operations contracted by the Company are considered ordinary and recurring cash management and treasury operations. They are carried out within the range of the tariff tables published by the contracted financial institutions and/or carried out through a competitive process. This competitive process includes quotes from at least 3 banks, choosing the bank that offers the best financial conditions. Within Vale, financial investment operations with Banco do Brasil S.A., New York Branch were approved by members of the Executive Committee, in accordance with the authority limits established by the Board of Directors. There was no participation of anyone involved in the process of contracting, evaluating or approving the transaction, which has a potential conflict of interest with the decision taken.							
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	Transaction conditions for financial operations are determined through comparative price assessments, based on market prices and market price studies. The Company is committed to ensuring that all its transactions with related parties are fair and transparent and in line with the best market practices, with negotiations based on commutative conditions. Vale establishes guidelines for the preservation of capital and possible financial risks of these operations, keeps complete and accurate records of all transactions with related parties and discloses all necessary information in the annual reports.							

<b>compensatory payment</b>							
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied balance (BRL)</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>
Banco do Brasil S.A.	01/01/2022	BRL 18.808.023.757,81	BRL 0.00	BRL 18.808.023.757,81	29/12/2022	No	0.00%
<b>Relationship with the issuer</b>	Banco do Brasil S.A. is the sponsor of Previ – Caixa de Previdência dos Funcionários do Banco do Brasil (“Previ”) (Vale Reference Shareholder).						
<b>Contract matter</b>	<b>subject</b>	Settlement of 283 foreign exchange operations contracted by Vale and its subsidiaries in 5 different foreign currencies. Additional information: the “transaction date” field shows the date of the oldest exchange transaction on the base date of 12/31/2022. The “amount involved” field considers the sum of the amount provided for in exchange agreements. The field “duration” considers the date of the last due date of open transactions on 31/12/2022.					
<b>Warrants insurance</b>	<b>and</b>	None.					
<b>Termination or extinction conditions</b>	None.						
<b>Nature and reasons for the operation</b>	Exchange operations are contracted for the purpose of bringing income from abroad to accounts in Brazil to cover the company's operating costs.						
<b>Contractual position of the issuer</b>	Creditor						
<b>Specify</b>	Not applicable.						
<b>Measures taken to address conflicts of interests</b>	The foreign exchange operations contracted by the Company are considered ordinary and recurring cash management and treasury operations. They are carried out within the range of the tariff tables published by the contracted financial institutions and/or carried out through a competitive process. This competitive process includes quotes from more than one bank, choosing the bank that offers the best financial conditions. Within Vale, foreign exchange transactions with Banco do Brasil S.A. were approved by members of the Executive Committee, in accordance with the authority limits established by the Board of Directors. There was no participation of anyone involved in the process of contracting, evaluating or approving the transaction, which has a potential conflict of interest with the decision taken.						
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	Transaction conditions for financial operations are determined through comparative price assessments, based on market prices and market price studies. The Company is committed to ensuring that all its transactions with related parties are fair and transparent and in line with the best market practices, with negotiations based on commutative conditions. Vale establishes guidelines for the preservation of capital and possible financial risks of these operations, keeps complete and accurate records of all transactions with related parties and discloses all necessary information in the annual reports.						
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied balance (BRL)</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>
Banco do Brasil	30/05/2022	BRL 7,369,160,526.51	BRL 2,939,260,200.44	BRL 7,369,160,526.51	09/01/2023	Yes	1.28%
<b>Relationship with the issuer</b>	Banco do Brasil S.A. is the sponsor of Previ – Caixa de Previdência dos Funcionários do Banco do Brasil (“Previ”) (Vale Reference Shareholder).						
<b>Contract matter</b>	<b>subject</b>	4 working capital operations contracted by Vale S.A. Additional information: the “transaction date” field shows the date of the oldest transaction. The “amount involved” field considers the total amount. The field “duration” considers the date of the last due date of the transactions. The “interest rate” field displays the interest rate used in the last transaction.					
<b>Warrants insurance</b>	<b>and</b>	None.					
<b>Termination or extinction conditions</b>	None.						
<b>Nature and reasons for the operation</b>	Working capital operations were contracted for the purpose of advancing future customer receivables, thus bringing more liquidity to cash.						

<b>Contractual position of the issuer</b>	Debtor						
<b>Specify</b>	Not applicable.						
<b>Measures taken to address conflicts of interests</b>	The working capital operations contracted by the Company are considered ordinary and recurring cash management and treasury operations. They are carried out within the range of the tariff tables published by the contracted financial institutions and/or carried out through a competitive process. This competitive process includes quotes from more than one bank, choosing the bank that offers the best financial conditions. Within Vale, working capital operations with Banco do Brasil S.A. were approved by members of the Executive Committee, in accordance with the authority limits established by the Board of Directors. There was no participation of anyone involved in the process of contracting, evaluating or approving the transaction, which has a potential conflict of interest with the decision taken.						
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	Transaction conditions for financial operations are determined through comparative price assessments, based on market prices and market price studies. The Company is committed to ensuring that all its transactions with related parties are fair and transparent and in line with the best market practices, with negotiations based on commutative conditions. Vale establishes guidelines for the preservation of capital and possible financial risks of these operations, keeps complete and accurate records of all transactions with related parties and discloses all necessary information in the annual reports.						
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied balance (BRL)</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>
Baovale Mineração S.A. ("Baovale")	10/10/2001	BRL 1,067,635,964.76	BRL 32,657,363.81	BRL 1,067,635,964.76	20/08/2024	Yes	0.00%
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.						
<b>Contract subject matter</b>	Leasing of mining rights for the Água Limpa Mine Complex, as well as equipment, vehicles and other movable assets necessary for mining operations, in addition to fixed facilities (industrial buildings, warehouses, and buildings in general). Additional information: the "amount involved" field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to fixed payments until its closure.						
<b>Warrants and insurance</b>	None.						
<b>Termination or extinction conditions</b>	The agreement may be terminated at any time, by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, if certain cases are identified, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) non-compliance with the Agreement, not remedied within the cure period or (iv) material non-compliance with applicable legislation on occupational health, safety or environment.						
<b>Nature and reasons for the operation</b>	Lease for mining operation and iron ore processing. Baovale was set up by Vale and Baosteel (a Chinese steel mill company) to mine and process iron ore of the Água Limpa mine.						
<b>Contractual position of the issuer</b>	Debtor						
<b>Specify</b>	Not applicable.						
<b>Measures taken to address conflicts of interests</b>	The organization of Baovale, the execution of the shareholders' agreement between Vale and Baosteel, the execution of the lease agreement indicated in this item, and the execution of the commercial agreement for the sale of iron ore from Vale to Baosteel must be considered together, as parts of a single trading between Vale and Baosteel. The execution of the lease agreement between Vale and Baovale, within Vale, was approved by the Board of Directors. It should be mentioned that Baovale's share capital did not exist, at the time the lease agreement was entered into, and on the date of this Reference Form, there is no participation of former direct or indirect controllers of Vale, current reference shareholders, or its managers or persons linked to them.						
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	Baovale is a joint venture formed by the association between Vale, one of the largest miners and producers of iron ore in the world, and Baosteel, one of the largest steel companies and producers of steel mill in the world. Based on the expertise of each party in their areas of activity, the joint venture aims, in addition to generating value for its shareholders, at developing a mining project together, through which Baosteel would have a long-term, stable and competitive procurement of high quality iron ore, and Vale would increase the share of its products in the Chinese market. Thus, Baovale was organized as a result of trading between independent parties, Vale and Baosteel, its shareholders. On the one hand, through the lease agreement indicated in this item, Vale leased and acquired the right to operate and sell the production mined at the mine. On the other hand, through a commercial agreement entered into between Vale and Baosteel, Baosteel committed to purchase an annual quantity of iron ore from Vale.						

Related party	Transaction date	Amount involved (BRL)	Applied balance (BRL)	Amount of the related party	Duration	Loan or other type of debt	Interest rate charged
Companhia Hispano Brasileira de Pelotização – Hispanobrás	16/05/2012	BRL 2,415,889,381.84	BRL 101,983,000.00	BRL 2,415,889,381.84	31/12/2023	Yes	0.00%
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.						
<b>Contract matter</b>	<b>subject</b>	Leasing of the Hispanobrás pelletizing plant by Vale. Additional information: the “amount involved” field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to fixed payments until its closure.					
<b>Warrants and insurance</b>	<b>and</b>	None.					
<b>Termination or extinction conditions</b>	<b>or</b>	The agreement may be terminated by either party, upon notice at least 6 months in advance before the end of the term in force. The agreement may be terminated at any time, by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, in certain cases, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) non-compliance with the agreement, not remedied within the cure period or (iv) material non-compliance with applicable legislation on occupational health, safety or environment.					
<b>Nature and reasons for the operation</b>	Lease for exploration, production and sale of iron ore pellets. Hispanobrás was organized by Vale and Arcelor Mittal (a steel mill company and steel producer) for the process and sale of iron ore pellets.						
<b>Contractual position of the issuer</b>	Debtor						
<b>Specify</b>	Not applicable.						
<b>Measures taken to address conflicts of interests</b>	The organization of Hispanobrás, the execution of the shareholders' agreement, and the execution of the lease agreement indicated in this item must be considered together, as parts of a single trading between Vale and Arcelor Mittal. The execution of the lease agreement between Vale and Hispanobrás, within Vale, was approved by the Board of Directors. It should be mentioned that Hispanobrás' share capital did not exist, at the time the agreement was entered into, and on the date of this Reference Form, there is no participation of former direct or indirect controllers of Vale, current reference shareholders, or its managers or persons linked to them.						
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	Hispanobrás is a joint venture formed by the association between independent parties, Vale, one of the largest miners and producers of iron ore in the world, and Arcelor Mittal, one of the largest steel companies and producers of steel mill in the world, for the production and sale of iron ore pellets. Hispanobrás shareholders also decided to enter into a lease agreement as of 2012, whereby Vale leases the Hispanobrás pellet plant, considering that (i) Vale has expertise in the production of pellets – and already produced before the lease agreement in owned and third-party plants, (ii) the Hispanobrás pellet plant is located in an operating complex that belongs to Vale, and (iii) the leasing model captures synergies and reduces inefficiencies, ensuring better profitability and return to shareholders. Under the lease agreement, all pellets produced at the Hispanobrás plant are owned by Vale, which, in turn, pays a lease fee for the plant, consisting of a fixed portion to cover minimum asset depreciation and a variable portion based on the actual performance of the plant, which considers: (i) the production volume of pellets and iron ore used in the operating plant on a monthly basis and in dry metric tons; (ii) the monthly selling PTAX exchange rate disclosed by the Central Bank; (iii) the monthly Interbank Deposit Certificate (CDI) rate to adjust the amount to be paid within the year; (iv) the price of iron ore and pellets based on the Metal Bulletin – market price index and other adjustments practiced in the market; (v) premium for pellets agreed between the parties and in line with what is sold in the market; (vi) monthly operating costs considering the variable costs of specific consumption of inputs necessary for pellet production and their respective market prices and fixed costs mainly related to personnel, materials and services; (vii) real depreciation of the operating plant; and (viii) taxes established by Brazilian legislation, mainly PIS, COFINS, ICMS, CSLL and IR.						
Related party	Transaction date	Amount involved (BRL)	Applied balance (BRL)	Amount of the related party	Duration	Loan or other type of debt	Interest rate charged
Companhia Nipo Brasileira de Pelotização – Nibrasco	30/04/2008	BRL 8,397,574,638.16	BRL 887,118,000.00	BRL 8,397,574,638.16	31/12/2025	Yes	0,00%
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.						
<b>Contract matter</b>	<b>subject</b>	Leasing of Nibrasco's pelletizing plants by Vale.					

	Additional information: the “amount involved” field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to fixed payments until its closure.							
<b>Warrants and insurance</b>	None.							
<b>Termination or extinction conditions</b>	The agreement may be terminated by either party, upon notice at least 1 year in advance before the end of the term in force. The agreement may be terminated at any time, by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, as a result of certain cases, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) non-compliance with the agreement, not remedied within the cure period or (iv) material non-compliance with applicable legislation on occupational health, safety or environment.							
<b>Nature and reasons for the operation</b>	Lease for exploration, production and sale of iron ore pellets. Nibrasco was organized by Vale and Nippon Steel, Kobe Steel, JFE Steel and Sojitz Corporation (steel producers) for the process and sale of iron ore pellets.							
<b>Contractual position of the issuer</b>	Debtor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	The organization of Nibrasco, the execution of the shareholders’ agreement and the lease agreement must be considered together, as parts of a single trading between Vale and the group of Japanese companies. The execution of the lease agreement between Vale and Nibrasco, within Vale, was approved by the Board of Directors. It should be mentioned that Nibrasco’s share capital did not exist, at the time the agreement was entered into, and on the date of this Reference Form, there is no participation of former direct or indirect controllers of Vale, current reference shareholders, its managers or persons linked to them.							
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	Nibrasco is a joint venture formed by the association between independent parties, Vale, one of the largest miners and producers of iron ore in the world, and a group of Japanese companies, currently made up of Nippon Steel, JFE Steel, Kobe Steel and Sojitz, the largest steel producers in the world, for the process and sale of iron ore pellets. The shareholders also decided to enter into a lease agreement as of 2008, whereby Vale leases the Nibrasco pelletizing plants, considering that (i) Vale has expertise in the production of pellets – and already produced before the lease agreement in owned and third-party plants, (ii) the Nibrasco pelletizing plants are located in an operating complex that belongs to Vale, and (iii) the leasing model captures synergies and reduces inefficiencies, ensuring better profitability and return to shareholders. Under the lease agreement, all pellets produced at the Nibrasco plant are owned by Vale, which, in turn, pays a lease fee for the plants, consisting of a fixed portion to cover minimum asset depreciation and a variable portion based on the actual performance of the plant, which considers: (i) the production volume of pellets and iron ore used in the operating plant on a monthly basis and in dry metric tons; (ii) the monthly selling PTAX exchange rate disclosed by the Central Bank; (iii) the monthly Interbank Deposit Certificate (CDI) rate to adjust the amount to be paid within the year; (iv) the price of iron ore and pellets based on the Metal Bulletin – market price index and other adjustments practiced in the market; (v) premium for pellets agreed between the parties and in line with what is sold in the market; (vi) monthly operating costs considering the variable costs of specific consumption of inputs necessary for pellet production and their respective market prices and fixed costs mainly related to personnel, materials and services; (vii) real depreciation of the operating plant; and (viii) taxes established by Brazilian legislation, mainly PIS, COFINS, ICMS, CSLL and IR.							
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied balance (BRL)</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>	
Companhia Coreano Brasileira de Pelotização – Kobrasco	06/05/2008	BRL 6,370,175,914.98	BRL 625,958,000.00	BRL 6,370,175,914.98	31/08/2033	Yes	0,00%	
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.							
<b>Contract subject matter</b>	Leasing of the Kobrasco pelletizing plant by Vale. Additional information: the “amount involved” field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to fixed payments until its closure.							
<b>Warrants and insurance</b>	None.							
<b>Termination or extinction conditions</b>	The agreement may be terminated by either party, upon notice at least 1 year in advance before the end of the term in force. The agreement may be terminated at any time, by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, as a result of certain cases, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) non-compliance with the Agreement, not remedied within the cure period or (iv) material non-compliance with applicable legislation on occupational health, safety or environment.							

<b>Nature and reasons for the operation</b>	Lease for exploration, production and sale of iron ore pellets. Kobrasco was organized by Vale and POSCO (an iron producer) for the production process and sale of iron ore pellets.							
<b>Contractual position of the issuer</b>	Debtor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	The organization of Kobrasco, the execution of the shareholders' agreement and the lease agreement must be considered together, as parts of a single trading between Vale and POSCO. The execution of the lease agreement between Vale and Kobrasco, within Vale, was approved by the Board of Directors. It should be mentioned that Kobrasco's share capital did not exist, at the time the agreement was entered into, and on the date of this Reference Form, there is no participation of former direct or indirect controllers of Vale, current reference shareholders, its managers or persons linked to them.							
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	Kobrasco is a joint venture formed by the association between independent parties, Vale, one of the largest miners and producers of iron ore in the world, and POSCO, one of the largest steel companies and producers of steel mill in the world, for the production process and sale of iron ore pellets. The shareholders also decided to enter into a lease agreement as of 2008, whereby Vale leases the Kobrasco pellet plant, considering that (i) Vale has expertise in the production of pellets – and already did it before the lease agreement in owned and third-party plants, (ii) the Kobrasco pellet plant is located in an operating complex that belongs to Vale, and (iii) the leasing model captures synergies and reduces inefficiencies, ensuring better profitability and return to shareholders. Under the lease agreement, all pellets produced at the Kobrasco plant are owned by Vale, which, in turn, pays a lease fee for the plant, consisting of a fixed portion to cover minimum asset depreciation and a variable portion based on the actual performance of the plant, which considers: (i) the production volume of pellets and iron ore used in the operating plant on a monthly basis and in dry metric tons; (ii) the monthly selling PTAX exchange rate disclosed by the Central Bank; (iii) the monthly Interbank Deposit Certificate (CDI) rate to adjust the amount to be paid within the year; (iv) the price of iron ore and pellets based on the Metal Bulletin – market price index and other adjustments practiced in the market; (v) premium for pellets agreed between the parties and in line with what is sold in the market; (vi) monthly operating costs considering the variable costs of specific consumption of inputs necessary for pellet production and their respective market prices and fixed costs mainly related to personnel, materials and services; (vii) real depreciation of the operating plant; and (viii) taxes established by Brazilian legislation, mainly PIS, COFINS, ICMS, CSLL and IR.							
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied balance (BRL)</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>	
Companhia Italo Brasileira de Pelotização – Itabrasco	30/09/2008	BRL 4,074,475,786.23	BRL 470,720,000.00	BRL 4,074,475,786.23	30/06/2024	Yes	0,00%	
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.							
<b>Contract subject matter</b>	Leasing of the Itabrasco pelletizing plant by Vale. Additional information: the "amount involved" field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to fixed payments until its closure.							
<b>Warrants and insurance</b>	None.							
<b>Termination or extinction conditions</b>	The agreement may be terminated by either party, upon notice at least 6 months in advance before the end of the term in force. The agreement may be terminated at any time, by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, in certain cases, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) non-compliance with the Agreement, not remedied within the cure period or (iv) material non-compliance with applicable legislation on occupational health, safety or environment.							
<b>Nature and reasons for the operation</b>	Lease for exploration, production and sale of iron ore pellets. Itabrasco was organized by Vale and ILVA (an iron ore producer and miner) for the production process and sale of iron ore pellets.							
<b>Contractual position of the issuer</b>	Debtor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	The organization of Itabrasco, the execution of the shareholders' agreement and the lease agreement must be considered together, as parts of a single trading between Vale and ILVA. The execution of the lease agreement between Vale and Itabrasco, within Vale, was approved by the Board of Directors. It should be mentioned that Itabrasco's share capital did not exist, at the time the agreement was entered into, and on the date of this Reference Form, there is no participation of former direct or indirect controllers of Vale, current reference shareholders, its managers or persons linked to them.							

<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	<p>Itabasco is a joint venture formed by the association between independent parties, Vale, one of the largest miners and producers of iron ore in the world, and ILVA, at the time of the execution of the agreement one of the largest steel mill companies and producers of steel in the world, for the production process and sale of iron ore pellets. The shareholders also decided to enter into a lease agreement as of 2008, whereby Vale leases the Itabasco pellet plant, considering that (i) Vale has expertise in the production of pellets – and already did it before the lease agreement in owned and third-party plants, (ii) the Itabasco pellet plant is located in an operating complex that belongs to Vale, and (iii) the leasing model captures synergies and reduces inefficiencies, ensuring better profitability and return to shareholders. Under the lease agreement, all pellets produced at the Itabasco plant are owned by Vale, which, in turn, pays a lease fee for the plant, consisting of a fixed portion to cover minimum asset depreciation and a variable portion based on the actual performance of the plant, which considers: (i) the production volume of pellets and iron ore used in the operating plant on a monthly basis and in dry metric tons; (ii) the monthly selling PTAX exchange rate disclosed by the Central Bank; (iii) the monthly Interbank Deposit Certificate (CDI) rate to adjust the amount to be paid within the year; (iv) the price of iron ore and pellets based on the Metal Bulletin – market price index and other adjustments practiced in the market; (v) premium for pellets agreed between the parties and in line with what is sold in the market; (vi) monthly operating costs considering the variable costs of specific consumption of inputs necessary for pellet production and their respective market prices and fixed costs mainly related to personnel, materials and services; (vii) real depreciation of the operating plant; and (viii) taxes established by Brazilian legislation, mainly PIS, COFINS, ICMS, CSLL and IR.</p>						
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied balance (BRL)</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>
Ferrovias Norte Sul S.A.	01/01/2015	BRL 5,751,121,694.90	BRL 2,807,606.43	BRL 5,751,121,694.90	29/07/2057	No	0,00%
<b>Relationship with the issuer</b>	Subsidiary by VLI S.A., which is an affiliate of Vale and Mitsui & Co. Ltd (Vale Reference Shareholder).						
<b>Contract subject matter</b>	Performance of mutual traffic operations and/or right of way by EFC – Estrada de Ferro Carajás. Additional information: the “amount involved” field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to payments until its closure.						
<b>Warrants and insurance</b>	None.						
<b>Termination or extinction conditions</b>	The agreement may be terminated by either party, upon judicial or extrajudicial order or notification, at least 30 days in advance, only for non-compliance with the Agreement, not remedied within the cure period, after receiving prior notice. In the event of termination, the parties shall proceed in accordance with the legislation in force.						
<b>Nature and reasons for the operation</b>	Sharing of railway infrastructure with the establishment of criteria and conditions for carrying out and developing joint railroad operations and exchange of undercarriage.						
<b>Contractual position of the issuer</b>	Creditor						
<b>Specify</b>	Not applicable.						
<b>Measures taken to address conflicts of interests</b>	The execution of the agreement, within the scope of Vale, was approved by the Board of Directors. Members of Vale's Board of Directors related to Mitsui (Vale's reference shareholder and VLI shareholder) have not received any document or information related to the agreement for the purpose of recommending or deciding on this matter in the competent corporate bodies at Vale.						
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	<p>The execution of the agreement derives from an obligation arising from the Concessions of Estrada de Ferro Carajás and Ferrovias Norte e Sul. The obligation was regulated by ANTT Resolution 3695/2011, by which all utility company must maintain interchange agreement for carrying out transactions shared between utility companies that have railroad networks connected to each other. Vale's Brazilian railroad business operates according to concession agreements with the Federal Government, and its railroad concessions are subject to the regulation and supervision of the Ministry of Infrastructure and the National Agency of Land Transport (ANTT). The fees charged vary according to the distance travelled, the type of product transported and other criteria, subject caps and limits of dispersion established in the respective concession agreements, and are regulated by the National Agency of Land Transport (ANTT). ANTT regulations require utility companies to grant rights of way to other railroad operators, make investments in the railroad network and meet certain productivity and safety requirements, among other obligations.</p>						
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied balance (BRL)</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>

VLI Multimodal S.A.	09/08/2013	BRL 48,206,282,349.97	BRL 51,932,928.99	BRL 48,206,282,349.97	30/06/2057	No	0,00%
<b>Relationship with the issuer</b>	Subsidiary by VLI S.A., which is an affiliate of Vale and Mitsui & Co. Ltd (Vale Reference Shareholder).						
<b>Contract subject matter</b>	Provision of railroad transport services. Additional information: the “amount involved” field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to payments until its closure.						
<b>Warrants and insurance</b>	The agreement provides for indemnity for theft, loss or damage to the goods.						
<b>Termination or extinction conditions</b>	The agreement may be terminated at any time, by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, as a result of usual conditions for similar instruments of this nature, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) non-compliance with the Agreement, not remedied within the cure period or (iv) material non-compliance with applicable legislation on occupational health, safety or environment.						
<b>Nature and reasons for the operation</b>	Railroad transport that aims at ensuring capacity to serve the general cargo market in multimodal railroad-based operations.						
<b>Contractual position of the issuer</b>	Creditor						
<b>Specify</b>	Not applicable.						
<b>Measures taken to address conflicts of interests</b>	The execution of the agreement, within the scope of Vale, was approved by the Board of Directors. At the time of execution thereof, VLI was a subsidiary of Vale, without the participation of a Vale reference shareholder in its corporate structure.						
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	This agreement was entered into as part of the restructuring of Vale's general cargo business, which gave rise to the creation of VLI. It allows for the expansion and effective provision of the public railroad freight transport service, and assured VLI of the capacity to serve the general cargo market in multimodal railroad-based operations and making investments in railroad assets for the expansion of service capacity. Vale's Brazilian railroad business operates according to concession agreements with the Federal Government, and its railroad concessions are subject to the regulation and supervision of the Ministry of Infrastructure and the National Agency of Land Transport (ANTT). The services provided are remunerated in BRL/metric ton, as per proof of budget previously approved by the parties, and by the reserve of capacity intended for the provision of services. Both the prices practiced between Vale and VLI, as well as the prices practiced by VLI with users shall always be limited to the tariff ceiling established by the Public Authority.						
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied balance (BRL)</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>
VLI Multimodal S.A.	01/07/2012	BRL 5,576,655,867.54	BRL 13,504,611.17	BRL 5,576,655,867.54	26/09/2039	No	0,00%
<b>Relationship with the issuer</b>	Subsidiary by VLI S.A., which is an affiliate of Vale and Mitsui & Co. Ltd (Vale Reference Shareholder).						
<b>Contract subject matter</b>	Provision of port cargo handling services and related services by Vale at the Praia Mole Private Mixed-Use Terminal and at the Liquid Bulk Terminal. Additional information: the “amount involved” field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to payments until its closure.						
<b>Warrants and insurance</b>	Not applicable.						
<b>Termination or extinction conditions</b>	The agreement may be terminated at any time, by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, as a result of usual conditions for similar instruments of this nature, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) non-compliance with the Agreement, not remedied within the cure period or (iv) material non-compliance with applicable legislation on occupational health, safety or environment. The termination fine in the amount of BRL 80,615,659.69 is subject to the IGPM update and applicable in the situations listed above.						
<b>Nature and reasons for the operation</b>	The agreement aims at efficiency, excellence and enhancement of the relationships and services offered jointly, with an increase of volume handled at the terminals and consequent increase of profits.						



<b>Contractual position of the issuer</b>	Creditor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	The execution of the agreement, within the scope of Vale, was approved by the Board of Directors. At the time of execution thereof, VLI was a subsidiary of Vale, without the participation of a Vale reference shareholder in its corporate structure.							
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	This agreement was entered into as part of the restructuring of Vale's general cargo business and port operation activities, which gave rise to the creation of VLI. Under the agreement, Vale maintains control of port operations and VLI maintains the commercial and contractual relationship with final customers of general cargo, as well as the burdens related to capital investments for port expansion. The services provided are remunerated by direct and indirect costs, as per proof of budget previously approved by the parties, and by the remuneration of assets intended for the provision of port services. Port operations in Brazil are subject to regulation and supervision by the National Agency for Ports and Navigation (ANTAQ), the federal agency responsible for maritime transport services, and the Ministry of Infrastructure, through the National Secretariat of Ports and Waterway Transport (SNP), the purpose of which is to formulate policies and guidelines.							
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied balance (BRL)</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>	
MRS Logística S.A. ("MRS")	01/01/2011	BRL 32,754,000,000.00	BRL 298,654,585.69	BRL 32,754,000,000.00	30/11/2026	Yes	0,00%	
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.							
<b>Contract subject matter</b>	Provision of iron ore railroad transport services, from the iron ore loading terminals located in the State of Minas Gerais to the terminals located in the States of Rio de Janeiro and Minas Gerais. Additional information: the "amount involved" field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to payments until its closure.							
<b>Warrants and insurance</b>	During the term of the agreement, Vale assures MRS of the minimum payment of 85% of the budgeted volume in the year (take or pay). The agreement requires that MRS takes out Optional Civil Responsibility Insurance for personal and material damage caused to third parties.							
<b>Termination or extinction conditions</b>	The agreement may be terminated at any time, by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, in certain cases, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) non-compliance with the Agreement, not remedied within the cure period or (iv) material non-compliance with applicable legislation on occupational health, safety or environment.							
<b>Nature and reasons for the operation</b>	Railroad transport de iron ore in MRS. Contract with guaranteed minimum volume of 85% of the budgeted volume in the year (Take or pay).							
<b>Contractual position of the issuer</b>	Debtor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	The execution of the railroad service provision agreement between Vale and MRS, within Vale, was approved by the Board of Directors. It should be mentioned that MRS' share capital did not exist, at the time the agreement was entered into, and on the date of this Reference Form, there is no participation of former direct or indirect controllers of Vale, current reference shareholders, its managers or persons linked to them.							
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	The agreement sets an annual transport plan that is carried out at the current annual rate approved by the National Agency of Land Transport ("ANTT"). Pricing is calculated using the MRS Tariff Model, the purpose of which is to ensure fairness and equality in tariffs for transport flows entered into with related parties. This tool was built with the support of external consultancy service and is annually submitted for validation by the Technical Group formed by MRS and representatives of MRS shareholders. MRS is the only railroad that accesses the mining complexes in the south of Minas Gerais operated by Vale, thus allowing the transport of iron ore from loading terminals located in the State of Minas Gerais to the terminals located in the State of Rio de Janeiro and Minas Gerais. Therefore, considering that MRS is the only railroad to carry out the necessary journey to transport Vale's products, it is not possible to carry out market quotations or compare with similar contracts with third parties. Furthermore, it should be noted that, due to the volume of products produced and the applied infrastructure around the production area, the adoption of road transport is not a viable option, mainly due to the high cost associated with this alternative. Thus, the proposed execution of a long-term railroad transport agreement with MRS guaranteed, on							

the one hand, the demand that MRS needed to maintain its railroad operations and, on the other hand, the cost parameters that guaranteed the feasibility of the business for Vale.								
Related party	Transaction date	Amount involved (BRL)	Applied balance (BRL)	Amount of the related party	Duration	Loan or other type of debt	Interest rate charged	
Norte Energia S.A.	10/12/2012	BRL15,796,627,702.70	BRL 59,613,805.63	BRL15,796,627,702.70	26/08/2045	Yes	0,00%	
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.							
<b>Contract matter subject</b>	Provision of electric power to Vale's operations in the States of MA, ES, RJ, MG and PA. Additional information: the "amount involved" field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to payments until its closure.							
<b>Warrants and insurance</b>	Collateral.							
<b>Termination or extinction conditions</b>	The agreement may be terminated by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, as a result of usual conditions for similar instruments of this nature, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) material non-compliance with applicable legislation on occupational health, safety or environment.							
<b>Nature and reasons for the operation</b>	Provision of electric power for Vale's operations in Brazil.							
<b>Contractual position of the issuer</b>	Debtor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	Agreements between related parties are approved by the Board of Directors. Within Norte Energia, the contract was approved at the General Meeting, and the shareholder linked to the related party will be prevented from participating in the meeting and voting upon resolution on such agreement.							
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	This contract was entered into for the purpose of supplying electricity. The purchase of electricity dealt with in this contract is based on the provisions of the specific legislation, on resolutions of the National Electric Energy Agency ("ANEEL"), on the commercialization rules and on the procedures of the Electric Energy Commercialization Chamber ("CCEE"), in the network procedures of the National System Operator "ONS" and others that may succeed them. The contractual draft, as well as the MW/h value, were pre-defined in Norte Energia's Shareholders' Agreement and are readjusted annually by the IPCA variation, or another index that may replace it. Additionally, when Vale became a shareholder of the Company, such conditions were already defined.							
Related party	Transaction date	Amount involved (BRL)	Applied balance (BRL)	Amount of the related party	Duration	Loan or other type of debt	Interest rate charged	
Aliança Geração de Energia S.A.	27/02/2015	BRL 9,641,553,346.88	BRL 140,240.12	BRL 9,641,553,346.88	09/07/2036	Yes	0,00%	
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.							
<b>Contract matter subject</b>	Provision of electric power for Vale's operations in the States of Maranhão, Espírito Santo, Rio de Janeiro, Minas Gerais and Pará. Additional information: the "amount involved" field corresponds to the historical value performed since the beginning of the agreement, plus the estimated value referring to payments until its closure.							
<b>Warrants and insurance</b>	None.							
<b>Termination or extinction conditions</b>	The agreement may be terminated by either party, upon notice, without the right to any complaints, indemnity or compensation by the party receiving the notice, as a result of usual conditions for similar instruments of this nature, including, but not limited to (i) default of payment, (ii) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization of the other party, (iii) material non-compliance with applicable legislation on occupational health, safety or environment.							

<b>Nature and reasons for the operation</b>	Agreement for the supply of electric power to Vale's operations in the States of MA, ES, RJ, MG and PA.							
<b>Contractual position of the issuer</b>	Debtor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	The execution of the contract, within the scope of Vale, was approved by the Board of Directors. Within the scope of Aliança Geração de Energia, the contract was approved by the Board of Directors (rule provided for in the Shareholders' Agreement), and the shareholders linked to the related party did not receive any document or information related to the contract for the purpose of recommending or deliberating on this matter in the competent corporate bodies at Vale.							
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	This contract was entered into for the purpose of supplying electricity. The purchase of electricity dealt with in this contract is based on the provisions of specific legislation, ANEEL resolutions, commercialization rules and CCEE procedures, NOS network procedures and others that may succeed them. The contractual draft, as well as the value of the MW/h were pre-defined in the documents of the association/creation of the joint venture and is readjusted annually by the variation of the IPCA, or another index that may replace it. Revised in the Shareholders' Agreement that any and all transactions involving shareholders and Aliança, or any of its affiliates, must be carried out under commutative market conditions (arm's length basis).							
<b>Related party</b>	<b>Transaction date</b>	<b>Amount involved (BRL)</b>	<b>Applied (BRL)</b>	<b>balance</b>	<b>Amount of the related party</b>	<b>Duration</b>	<b>Loan or other type of debt</b>	<b>Interest rate charged</b>
Samarco Mineração S.A.	03/08/2016	BRL 4,591,377,250.29	BRL 0.00		BRL 4,591,377,250.29	31/01/2023	No	0,00%
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.							
<b>Contract matter</b>	<b>subject</b>	Private issues of 2,950,126,343 simple debentures, not convertible into shares, at unit par value of BRL 1.00. In April 2021, Samarco filed a request for judicial reorganization. The debentures are listed as bankruptcy debts in the list of creditors and their payment will be subject to the Judicial Reorganization Plan to be approved. Additional information: the "transaction date" field shows the date of the oldest open transaction on the base date of 12/31/2022. The "amount involved" field considers the amount provided for in the private issuances referred to by the subject matter of the agreement. The "applied balance" field considers that the recoverable amount of these debentures recognized in Vale's consolidated financial statements for the fiscal year ended 12/31/2022 is equivalent to zero. The "duration" field considers the last maturity date of the private issues referred to in the agreement. The applicable interest rate is Libor + 1.15% p.a.						
<b>Warrants and insurance</b>	<b>and</b>	None. However, the debentures shall be converted to the "collateral" type, whichever occurs first, between (i) within 90 days from the obtaining of the last necessary license for the resumption of Samarco's operating activities; or (ii) jointly with the creation of a guarantee for the benefit of any of its bank creditors.						
<b>Termination or extinction conditions</b>	<b>or</b>	The debentures are subject to early maturity, as a result of the usual conditions for similar instruments of this nature, subject to materiality, exceptions and cure periods, as applicable, including, but not limited to (i) payment default, (ii) non-compliance with pecuniary obligations and financial agreements, (iii) non-compliance with the Agreement, not remedied within the cure period, (iv) provision of false or incorrect statements in the debenture deed, and (v) request or declaration of insolvency, bankruptcy or judicial or extrajudicial reorganization.						
<b>Nature and reasons for the operation</b>	Due to Samarco's cash restriction with the interruption of its operations after the Fundão tailings dam breach, in November 2015, its controlling shareholders (Vale and BHP Billiton Brasil) have provided financial support through the issuance of debentures from the second half of 2016 to the first half of 2021. The conditions relating to the issues are applicable to both shareholders.							
<b>Contractual position of the issuer</b>	Creditor							
<b>Specify</b>	Not applicable.							
<b>Measures taken to address conflicts of interests</b>	Vale's Governance Agents at Samarco do not participate in the joint venture's decision-making in matters where Vale is a related party. All actions related to the Policy for Related-Party Transactions and Conflict of Interests of Vale and Samarco Antitrust Policy are observed. It should be mentioned that the share capital of Samarco Mineração S.A. did not exist, at the time of execution of the agreement, and does not exist, on the date of this Reference Form, participation of former direct or indirect controllers of Vale, current reference shareholders, its managers or persons related to them.							
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	The issuance of debentures was necessary to finance the company's working capital, while it was non-operating. The conditions of remuneration of the debentures of both shareholders are equivalent. Definitions and reviews of debenture conditions observed the rates practiced by Vale at the time.							

Related party	Transaction date	Amount involved (BRL)	Applied balance (BRL)	Amount of the related party	Duration	Loan or other type of debt	Interest rate charged
Companhia Siderúrgica do Pecém – CSP	07/02/2018	BRL 5,745,626,675.77	BRL 475,490,854.23	BRL 5,745,626,675.77	31/01/2036	No	0,00%
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.						
<b>Contract subject matter</b>	Provision of minimum annual amounts iron ore and pellets. Additional information: the “amount involved” field corresponds to the total amount of the transaction provided for in the agreement. The prices charged vary throughout the term of the agreement because they are defined based on the market conditions and the specifics of the pricing agreed with CSP.						
<b>Warrants and insurance</b>	None.						
<b>Termination or extinction conditions</b>	The agreement may be terminated in certain cases, such as (i) non-compliance with contractual obligations by either party, (ii) bankruptcy, (iii) force majeure for a period longer than 180 consecutive days, (iv) termination of the Shareholders’ Agreement in effect regarding Vale, or (v) Vale ceases to own at least 10% of CSP shares.						
<b>Nature and reasons for the operation</b>	CSP is an integrated steel plate plant in the state of Ceará, created as a result of the partnership of Vale with Dongkuk Steel Mill Co. and Posco – two of South Korea’s largest steel producers. The annual production capacity of CSP is 3.0 million metric tons.						
<b>Contractual position of the issuer</b>	Creditor						
<b>Specify</b>	Not applicable.						
<b>Measures taken to address conflicts of interests</b>	The execution of the iron ore and pellet supply agreement between Vale and CSP was approved by the Board of Directors. It should be mentioned that CSP’s share capital did not exist, at the time the agreement was entered into, and on the date of this Reference Form, there is no participation of former direct or indirect controllers of Vale, current reference shareholders, its managers or persons linked to them.						
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	Maximum percentage of pellets and pricing of inputs delivered follow market indices based on Platts and/or Metal Bulletin quotations, with final prices being adjusted as market practice, by parameters such as quality, iron grade and moisture. In case of late payment, charges indexed to the SELIC rate are charged.						
Related party	Transaction date	Amount involved (BRL)	Applied balance (BRL)	Amount of the related party	Duration	Loan or other type of debt	Interest rate charged
Companhia Siderúrgica do Pecém – CSP	22/04/2015	BRL 4,328,525,000.00	BRL 6,595,700,696.78	BRL 4,328,525,000.00	30/09/2031	No	0,00%
<b>Relationship with the issuer</b>	Joint venture jointly controlled by Vale.						
<b>Contract subject matter</b>	Financial guarantee granted by Vale for the financing of CSP in proportion to its 50% shareholding. Additional information: the operations were contracted in US\$ and converted into reais for the purposes of this form by PTAX (BRL 5.2177). Amount involved considers the contracted value of the proportion guaranteed by Vale of 50%. Applied balance considers the outstanding balance of the guarantee, with the exchange rate updated on 31/12/2022.						
<b>Warrants and insurance</b>	Not applicable.						
<b>Termination or extinction conditions</b>	Case of activation of the guarantee: CSP (beneficiary) does not pay the financial charges or the principal amount on the dates of their respective due dates under debt agreements.						
<b>Nature and reasons for the operation</b>	Guarantee provided by Vale of 50% of third-party debt to support the implementation of the CSP project.						

<b>Contractual position of the issuer</b>	Debtor
<b>Specify</b>	Not applicable.
<b>Measures taken to address conflicts of interests</b>	The concession of a guarantee by Vale to CSP, within the scope of Vale, was approved by the Board of Directors. It should be mentioned that CSP's share capital did not exist, at the time the agreement was entered into, and on the date of this Reference Form, there is no participation of former direct or indirect controllers of Vale, current reference shareholders, its managers or persons linked to them.
<b>Demonstration of the strictly commutative nature of the agreed conditions or the due compensatory payment</b>	The guarantees were provided by shareholders in proportion to their equity interest in CSP – so that the guarantee provided by Vale corresponds to 50% of the debt contracted by CSP.

### **11.3. Other relevant information**

#### **Additional information to item 11.2**

##### **Materiality Criteria**

Related Party Transactions disclosed in item 11.2 complied with the materiality criterion equal to or greater than BRL 4,000 million for individual transactions or a set of related transactions.

In addition, without prejudice to the materiality criterion highlighted above, other related-party transactions that are relevant were also included, in other respects, regardless of the amount involved in such transaction.

## 12. Share capital and securities

### 12.1. Information on share capital

Authorization or approval date	Capital value (in Reais)	Term of payment	Number of common	Number of preferred	Total number of shares
<b>Type of capital</b>	Issued Capital				
28/07/2022	77,300,000,000.00	Not	4,778,889,251	12	4,778,889,263
<b>Share capital by share class</b>					
<b>Preferred share class</b>	<b>Number of shares (Units)</b>				
Preferred Class E	12				
<b>Type of capital</b>	Subscribed Capital				
28/07/2022	77,300,000,000.00	Not	4,778,889,251	12	4,778,889,263
<b>Share capital by share class</b>					
<b>Preferred share class</b>	<b>Number of shares (Units)</b>				
Preferred Class E	12				
<b>Type of capital</b>	Paid-in Capital				
28/07/2022	77,300,000,000.00	Not	4,778,889,251	12	4,778,889,263
<b>Share capital by share class</b>					
<b>Preferred share class</b>	<b>Number of shares (Units)</b>				
Preferred Class E	12				
<b>Type of</b>	Remaining Limit of				
27/06/2017	0.00		7,000,000,000	0	7,000,000,000

## **12.2. Foreign issuers – Rights and rules**

Not applicable.



### 12.3. Other securities issued in Brazil

Security	Debentures
Identification of securities	8 <sup>th</sup> Issue of Debentures
Date of issue	15/01/2014
Quantity (Units)	1,000,000
Overall nominal value (Reais)	R\$ 1,000,000,000.00
Debtor balance outstanding on the closing date of the last reporting period	R\$ 626,036,336.90
Restricted circulation	No
Convertibility into shares or a right to subscribe or purchase shares of the issuer	No
Possibility of redemption	Yes
Hypothesis and calculation of the redemption value	<p>In case it is legally permitted to early redeem the Bonds, under the terms of the applicable legislation, including by virtue of the regulation, by the National Monetary Council, on the possibility of redemption provided by Law 12,431, the Company may, at its exclusive discretion, make an optional early redemption offer, total or partial, for the Bonds in circulation, generally or by series, with the cancellation of such Bonds, which shall be addressed to all Bondholders in equal conditions.</p> <p>Since January 1, 2021, with the edition of CVM Instruction 620 ("ICVM 620"), later replaced by CVM Resolution 77 ("RCVM 77"), issuing companies are allowed to purchase bonds of their own issue in an amount higher than the nominal value. This mechanism may be performed by the Company at its sole discretion.</p>
Characteristics of the securities	<p>Simple, registered and book-entry unsecured bonds, in 4 series, as follows:</p> <p>(i) the 1<sup>st</sup> series: 600,000 bonds Adjustment by IPCA, remuneration interest: 6.46% p.a. Date of maturity: 15/01/2021;</p> <p>(ii) 2<sup>nd</sup> series: 150,000 bonds Adjustment by IPCA, remuneration interest: 6.57% p.a. Maturity date: 15/01/2024</p> <p>(iii) 3<sup>rd</sup> series: 100,000 bonds, Adjustment by IPCA, remuneration interest of 6.71% p.a. Maturity date: 15/01/2026</p> <p>(iii) 4<sup>th</sup> series: 150,000 bonds Adjustment by IPCA, remuneration interest of 6.78% p.a. Maturity date: 15/01/2029</p> <p>Early maturity: Usual conditions for similar instruments of this nature, subject to materiality, exceptions and remedy periods, as applicable, including, but not limited to: (i) payment default, (ii) cross-acceleration with other creditors, (iii) misrepresentations, (iv) breach of covenants, among others.</p> <p>Any restrictions imposed on the issuer in relation to:</p> <p>(i) the distribution of dividends: None. (ii) the disposal of certain assets: Vale may not dispose of all or substantially all of its assets or mining properties. Exception hypotheses: (a) prior authorization by Bondholders representing, at least, the majority of outstanding Bonds; or (b) if the Bondholders who wish so have been assured, subject to the terms and time limits of the Indenture, the redemption of the Bonds they hold; or (c) if all the requirements set forth in the Indenture are met and fulfilled, which include, but are not limited to, the consent to and fulfillment of all obligations contained in the Indenture by the company receiving the assets; (iii) the contracting of new debts: None. (iv) the issuance of new securities: None. (v) entering into corporate transactions involving the issuer, its holding or subsidiary companies: consisting of early maturity events: (a) reduction of the Company's share capital, except if previously authorized by the bondholders, (b) conversion of the Company's corporate type from a corporation to a limited liability</p>

	<p>company, (c) spin-off, consolidation, merger (only when the Company is the absorbed company) or merger of the Company's shares (only when shares issued by the Company are absorbed); except upon approval by the Bondholders or under the terms set forth in the Indenture; (d) change of the Company's corporate purpose, provided that, as a result, the Company ceases to undertake mining activities.</p> <p>Trustee: Pentágono S.A. Distributor of Bonds and Securities. Main contractual obligations: (i) to monitor the frequency in the provision of mandatory information, alerting the Bondholders to any omissions or untruths contained in such information; (ii) to issue an opinion on the adequacy of the information on the proposed changes to the terms of the Bonds; (iii) to request, when necessary, an extraordinary audit at the Company; and (iv) to convene, when necessary, a general meeting of Bondholders.</p>
<b>Conditions for changing the rights guaranteed by such securities</b>	Any modifications to the main conditions of the bonds shall depend on the approval of the bondholders who represent, at least, 90% of the Bonds in circulation.
<b>Other relevant features</b>	The bonds were subject to a public offering made by the Company in Brazil, under the terms of CVM Instruction 400.

<b>Security</b>	<b>Debentures</b>
<b>Identification of securities</b>	6 <sup>th</sup> Issue Participating Debentures (CVRDA6)
<b>Date of issue</b>	08/07/1997
<b>Quantity (Units)</b>	388,559,056
<b>Overall nominal value (Reais)</b>	R\$ 3,885,590.56
<b>Debtor balance outstanding on the closing date of the last reporting period</b>	R\$ 14,217,814,217.88
<b>Restricted circulation</b>	No
<b>Convertibility into shares or a right to subscribe or purchase shares of the issuer</b>	No
<b>Possibility of redemption</b>	Yes
<b>Hypothesis and calculation of the redemption value</b>	<p>On March 19, 2021, through the General Meeting of Bondholders, the Company amended the indenture and thereby began to allow the purchase of participating bonds, provided that the provisions of article 55, paragraph 3, of Law 6,404/76 and the applicable regulations of the CVM are observed.</p> <p>The bonds acquired by the issuer may, at its discretion, be canceled, remain in treasury or be placed on the market again. Bonds held in treasury shall not be entitled to vote at General Meetings of Bondholders or to cash proceeds, provided that, if and when they are placed back on the market, they shall be entitled to the same economic and political rights applicable to the other bonds. Companies controlled by the Company may purchase the bonds on the market.</p> <p>Since January 1, 2021, with the edition of ICVM 620, later replaced by <u>RCVM 77</u>, issuing companies are allowed to purchase bonds of their own issue in an amount higher than the nominal value. This mechanism may be performed by the Company at its sole discretion.</p>
<b>Characteristics of the securities</b>	<p>Single series. Book-Entry, Not to Bearer. Update of the nominal value according to the IGP-M variation. Participating bonds have been traded on the secondary market with the SND – National Bonds System, administered by ANBIMA – Brazilian Association of Financial and Stock Market Entities and operationalized by CETIP since October 2002. The CETIP tickers of the bonds are CVRDA6. The ISIN number of the bonds is BRVALEDBS028.</p> <p>Maturity: in the case of total extinction of the mining rights subject matter of the indenture.</p> <p>Main Events of Automatic Early Maturity: The Trustee may declare to be early matured those obligations included in the indenture, regardless of: (i) notice, (ii) notification or (iii) written request of performance, whether judicial or extrajudicial, and (iv) demand from Vale the immediate payment of the par value of the bonds, in the event of Vale's adjudication of bankruptcy.</p> <p>Main Events of Non-Automatic Early Maturity: It may not redeem the bonds, whether in whole or in part.</p> <p>on net revenue for each mineral product:</p> <p>(i) Iron ore: 1.8%;</p>

	<p>(ii) Gold e Copper e By-products: 2.5%; and (iii) other Minerals: 1%.</p> <p>Premiums due: paid on March 31<sup>st</sup> and September 30<sup>th</sup> of each year. Interest: Nominal value adjusted from the date of their issuance according to the variation of the General Price Index – IGP–M. Warranty: None.</p> <p>No warranty: Credit is unsecured or subordinated: Subordinate, according to the provisions of paragraph 4 of article 58 of Law no. 6,404/76.</p> <p>Any restrictions imposed on the issuer in relation to: (i) the distribution of dividends: None. (ii) the disposal of certain assets: None. (iii) the contracting of new debts: None. (iv) the issuance of new securities: None. (v) entering into corporate transactions involving the issuer, its controllers or subsidiaries: None.</p> <p>Trustee: GDC Partners Serviços Fiduciários DTVM Ltda. The main contractual duty of the trustee is to call, whenever needed, a general meeting of Bondholders.</p>
<b>Conditions for changing the rights guaranteed by such securities</b>	Any modifications to the conditions of the bonds shall depend on the approval of the bondholders who represent the absolute majority of the bonds in circulation. The maturity of the bonds shall occur in the case of extinction of the whole mining rights subject matter of the Indenture, including by reason of the depletion of the mineral reserves listed or those that may replace them. In this case, the Issuer (Vale) undertakes to proceed with the liquidation of the bonds that are in circulation at their updated par value according to the provisions of the Indenture, with no premium.
<b>Other relevant features</b>	At the time of the first stage of the Company privatization in 1997, the Company issued participation bonds to the then-existing shareholders. The terms of the bonds were established so as to ensure that the shareholders from before the privatization, among which the Brazilian government, would participate with the Company in the future financial benefits that would derive from exploiting certain mineral resources that were not taken into account when determining the minimum purchase price of shares in the privatization. In accordance with the participation bonds indenture, their holders have the right to receive biannual payments equal to a determined percentage of the net revenues of the Company (revenues less value-added tax, transportation fee and insurance expenses related to the trading of the products) from certain identified mineral resources owned by the Company at the time of the privatization, provided that the Company exceeded defined thresholds of sales volume relating to certain mineral resources, and from the sale of the mineral rights that the Company owned at that time. The obligation of the Company to make payments to the holders of such participation bonds shall cease when the relevant mineral resources are exhausted, sold or disposed of by the Company.

<b>Security</b>	<b>Debentures</b>
<b>Identification of securities</b>	BNDSPAR Debentures – 3 <sup>rd</sup> Issue
<b>Date of issue</b>	09/06/2011
<b>Number</b>	35,490 bonds
<b>Overall nominal value</b>	R\$ 357,120,000.00
<b>Debtor balance outstanding on the closing date of the last reporting period</b>	R\$ 137,778,971.25
<b>Restricted circulation</b>	No
<b>Convertibility into shares or a right to subscribe or purchase shares of the issuer</b>	No
<b>Possibility of redemption</b>	Yes
<b>Hypothesis and calculation of the redemption value</b>	<p>I. Redemption hypotheses: Vale shall early redeem the entirety (and no less than the entirety) of the bonds in circulation within 30 days counted from the occurrence of the following events:</p> <p>a) termination of the sub-concession contract entered into between Vale Engenharia, Construções e Ferrovias S.A., a government company, under the form of a corporation, linked</p>

	<p>to the Ministry of Transportation, and the FNS for the administration and exploration of the public railroad cargo transportation service in the Northern and Southern Railroad – FNS, resulting from caducity, nationalization, termination, settlement between the parties, annulment of the sub-concession or concession or declaration of the nullity of the administrative bidding procedure; and</p> <p>b) intervention, by the Government, in the sub-concession or in the concession for the administration and exploration of the public railroad cargo transportation service in the Northern and Southern Railroad – FNS granted upon the FNS.</p> <p>II. Formula for calculating the redemption value:  On the redemption payment date, Vale shall liquidate the bonds that are still in circulation, at their unitary non-amortized par value, added by the non-amortized capitalized amount, as well as the compensatory interest biannually capitalized on the 15<sup>th</sup> day of the months of June and December of each year for the grace period of 4 years counted from the date of issue and not yet amortized and the compensation at the amount of 0.8% per year above the TJLP, incident up to such date (the “Redemption Value”).  The Redemption Value shall be added by a percentage of 20% (twenty percent) in case (i) the termination mentioned in item “a” above results from the caducity of the concession or the sub-concession or also (ii) when the annulment of the aforementioned concession or sub-concession results from an act attributable to Vale Logistics or the FNS, as determined by an administrative proceeding.  Since January 1, 2021, with the edition of ICVM 620, later replaced by <u>RCVM 77</u>, issuing companies are allowed to purchase bonds of their own issue in an amount higher than the nominal value. This mechanism may be performed by the Company at its sole discretion.</p>
<p><b>Characteristics of the securities</b></p>	<p>Bonds issued by Vale S.A., privately, which were fully subscribed by BNDES Participações S.A. The operation is intended to finance the expansion project of Ferrovia Norte Sul.  Date of Maturity: 17/12/2027  Early maturity provided for in articles 39, 40 and 47-A of the provisions applicable to BNDES contracts, in addition to the usual conditions for similar instruments of this nature, subject to materiality, exceptions and remedy periods, as applicable, including, but not limited to: (i) payment default, (ii) cross-acceleration with other creditors, (iii) misrepresentations, (iv) breach of covenants, among others.  Interest: TJLP + 0.8% p.a.  Warranty: None.  In the absence of a warranty, if the credit is unsecured or subordinate: Unsecured.  Any restrictions imposed on the issuer in relation to:  (i) the distribution of dividends: None.  (ii) the disposal of certain assets: Vale may dispose of any assets if, at its discretion, this act is desirable for the conducting of its business and does not adversely affect Vale's ability to honor its obligations under the terms of the Indenture.  (iii) the contracting of new debts: None.  (iv) the issuance of new securities: None.  (v) entering into corporate transactions involving the issuer, its controllers or subsidiaries: only with regard to those that also consist of hypotheses of early maturity.  Trustee: None.</p>
<p><b>Conditions for changing the rights guaranteed by such securities</b></p>	<p>Any modifications to the conditions of the Bonds in this issuance shall depend on the approval of the bondholders who represent, at least, 50% plus 1 Bond of the Bonds in circulation. For the purposes of establishing a quorum, any bonds that may be owned by Vale shall be excluded from the number of Bonds.</p>
<p><b>Other relevant features</b></p>	<p>VALE and BNDESPAR entered into, on June 23, 2015, an amendment to said indenture, so as to exclude (i) the possibility to exchange the Bonds for shares issued by the VLI, as well as excluding the entirety of obligations of the VLI and FNS included in said indenture, granting on BNDESPAR, free of charge, options to purchase a given quantity</p>

	of common shares issued by the VLI and owned by Vale. The option was fully exercised in December 2020.
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<b>Security</b>	<b>Debentures</b>
<b>Identification of securities</b>	BNDESPAR Debentures – 2 <sup>nd</sup> Issue
<b>Number</b>	38,565 bonds
<b>Overall nominal value</b>	R\$ 385,200,000.00
<b>Debtor balance outstanding on the closing date of the last reporting period</b>	R\$ 166,260,453.27
<b>Date of issue</b>	15/10/2009
<b>Restricted circulation</b>	No
<b>Convertibility into shares or a right to subscribe or purchase shares of the issuer</b>	No
<b>Possibility of redemption</b>	Yes
<b>Hypothesis and calculation of the redemption value</b>	<p>I. Redemption hypotheses:  Vale shall early redeem the entirety (and no less than the entirety) of the bonds in circulation within 30 days counted from the occurrence of the following events:</p> <ol style="list-style-type: none"> <li>termination of the sub-concession contract entered into between Vale Engenharia, Construções e Ferrovias S.A., a government company, under the form of a corporation, linked to the Ministry of Transportation, and the FNS for the administration and exploration of the public railroad cargo transportation service in the Northern and Southern Railroad – FNS, resulting from caducity, nationalization, termination, settlement between the parties, annulment of the sub-concession or concession or declaration of the nullity of the administrative bidding procedure; and</li> <li>intervention, by the Government, in the sub-concession or in the concession for the administration and exploration of the public railroad cargo transportation service in the Northern and Southern Railroad – FNS granted upon the FNS.</li> </ol> <p>II. Formula for calculating the redemption value:  On the redemption payment date, Vale shall liquidate the bonds that are still in circulation, at their unitary non-amortized par value, added by the non-amortized capitalized amount, as well as the compensatory interest biannually capitalized on the 15<sup>th</sup> day of the months of June and December of each year for the grace period of 4 years counted from the date of issue and not yet amortized and the compensation at the amount of 0.8% per year above the TJLP, incident up to such date (the “Redemption Value”).  The Redemption Value shall be added by a percentage of 20% (twenty percent) in case (i) the termination mentioned in item “a” above results from the caducity of the concession or the sub-concession or also (ii) when the annulment of the aforementioned concession or sub-concession results from an act attributable to Vale Logistics or the FNS, as determined by an administrative proceeding.  Since January 1, 2021, with the edition of ICVM 620, later replaced by <u>RCVM 7Z</u>, issuing companies are allowed to purchase bonds of their own issue in an amount higher than the nominal value. This mechanism may be performed by the Company at its sole discretion.</p>
<b>Characteristics of the securities</b>	<p>Bonds issued by Vale S.A., privately, which were fully subscribed by BNDES Participações S.A. The operation is intended to finance the expansion project of Ferrovia Norte Sul.  Date of Maturity: 17/12/2027  Early maturity provided for in articles 39, 40 and 47-A of the provisions applicable to BNDES contracts, in addition to the usual conditions for similar instruments of this nature, subject to materiality, exceptions and remedy periods, as applicable, including, but not limited to: (i) payment default, (ii) cross-acceleration with other creditors, (iii) misrepresentations, (iv) breach of covenants, among others.  Interest: TJLP + 0.8% p.a.  Warranty: None.  In the absence of a warranty, if the credit is unsecured or subordinate: Unsecured.  Any restrictions imposed on the issuer in relation to:</p>

	<p>(i) the distribution of dividends: None.</p> <p>(ii) the disposal of certain assets: Vale may dispose of any assets if, at its discretion, this act is desirable for the conducting of its business and does not adversely affect Vale's ability to honor its obligations under the terms of the Indenture.</p> <p>(iii) the contracting of new debts: None.</p> <p>(iv) the issuance of new securities: None.</p> <p>(v) entering into corporate transactions involving the issuer, its controllers or subsidiaries: only with regard to those that also consist of hypotheses of early maturity.</p> <p>Trustee: None.</p>
<b>Conditions for changing the rights guaranteed by such securities</b>	Any modifications to the conditions of the Debentures in this issuance shall depend on the approval of the bondholders who represent, at least, 50% plus 1 Bond of the Bonds in circulation. For the purposes of establishing a quorum, any bonds that may be owned by Vale shall be excluded from the number of Debentures.
<b>Other relevant features</b>	VALE and BNDESPAR entered into, on June 23, 2015, an amendment to said indenture, so as to exclude (i) the possibility to exchange the Bonds for shares issued by the VLI, as well as excluding the entirety of obligations of the VLI and FNS included in said indenture, granting on BNDESPAR, free of charge, options to purchase a given quantity of common shares issued by the VLI and owned by Vale. The option was fully exercised in December 2020.

<b>Security</b>	<b>Debentures</b>
<b>Identification of securities</b>	BNDESPAR Bonds - 1 <sup>st</sup> Issue
<b>Date of issue</b>	17/12/2007
<b>Number</b>	66,384
<b>Overall nominal value</b>	R\$ 650,510,000.00
<b>Debtor balance outstanding on the closing date of the last reporting period</b>	R\$ 326,245,137.81
<b>Restricted circulation</b>	No
<b>Convertibility into shares or a right to subscribe or purchase shares of the issuer</b>	No
<b>Possibility of redemption</b>	Yes
<b>Hypothesis and calculation of the redemption value</b>	<p>I. Redemption hypotheses:  Vale shall early redeem the entirety (and no less than the entirety) of the bonds in circulation within 30 days counted from the occurrence of the following events:</p> <p>a) termination of the sub-concession contract entered into between Vale Engenharia, Construções e Ferrovias S.A., a government company, under the form of a corporation, linked to the Ministry of Transportation, and the FNS for the administration and exploration of the public railroad cargo transportation service in the Northern and Southern Railroad - FNS, resulting from caducity, nationalization, termination, settlement between the parties, annulment of the sub-concession or concession or declaration of the nullity of the administrative bidding procedure; and</p> <p>b) intervention, by the Government, in the sub-concession or in the concession for the administration and exploration of the public railroad cargo transportation service in the Northern and Southern Railroad - FNS granted upon the FNS.</p> <p>II. Formula for calculating the redemption value:  On the redemption payment date, Vale shall liquidate the bonds that are still in circulation, at their unitary non-amortized par value, added by the non-amortized capitalized amount, as well as the compensatory interest biannually capitalized on the 15<sup>th</sup> day of the months of June and December of each year for the grace period of 4 years counted from the date of issue and not yet amortized and the compensation at the amount of 0.8% per year above the TJLP, incident up to such date ("Redemption Value").  The Redemption Value shall be added by a percentage of 20% in case (i) the termination mentioned in item "a" above results from the caducity of the concession or the sub-concession or also (ii) when the annulment of the aforementioned concession or sub-</p>

	<p>concession results from an act attributable to Vale Logistics or the FNS, as determined by an administrative proceeding.</p> <p>Since January 1, 2021, with the edition of ICVM 620, later replaced by RCVM 77, issuing companies are allowed to purchase bonds of their own issue in an amount higher than the nominal value. This mechanism may be performed by the Company at its sole discretion.</p>
<b>Characteristics of the securities</b>	<p>Bonds issued by Vale S.A., privately, which were fully subscribed by BNDES Participações S.A. The operation is intended to finance the expansion project of Ferrovia Norte Sul.</p> <p>Date of Maturity: 17/12/2027</p> <p>Early maturity provided for in articles 39, 40 and 47-A of the provisions applicable to BNDES contracts, in addition to the usual conditions for similar instruments of this nature, subject to materiality, exceptions and remedy periods, as applicable, including, but not limited to: (i) payment default, (ii) cross-acceleration with other creditors, (iii) misrepresentations, (iv) breach of covenants, among others.</p> <p>Interest: TJLP + 0.8% p.a.</p> <p>Warranty: None.</p> <p>In the absence of a warranty, if the credit is unsecured or subordinate: Unsecured.</p> <p>Any restrictions imposed on the issuer in relation to:</p> <p>(i) the distribution of dividends: None.</p> <p>(ii) the disposal of certain assets: Vale may dispose of any assets if, at its discretion, this act is desirable for the conducting of its business and does not adversely affect Vale's ability to honor its obligations under the terms of the indenture.</p> <p>(iii) the contracting of new debts: None.</p> <p>(iv) the issuance of new securities: None.</p> <p>(v) entering into corporate transactions involving the issuer, its controllers or subsidiaries: only with regard to those that also consist of hypotheses of early maturity.</p> <p>Trustee: None.</p>
<b>Conditions for changing the rights guaranteed by such securities</b>	<p>Any modifications to the conditions of the Bonds in this issuance shall depend on the approval of the bondholders who represent, at least, 50% plus 1 Bond of the Bonds in circulation. For the purposes of establishing a quorum, any bonds that may be owned by Vale shall be excluded from the number of Bonds.</p>
<b>Other relevant features</b>	<p>VALE and BNDESPAR entered into, on June 23, 2015, an amendment to said indenture, so as to exclude (i) the possibility to exchange the Bonds for shares issued by the VLI, as well as excluding the entirety of obligations of the VLI and FNS included in said indenture, granting on BNDESPAR, free of charge, options to purchase a given quantity of common shares issued by the VLI and owned by Vale. The option was fully exercised in December 2020.</p>

#### 12.4. Number of holders of each type of security

Security	Number of holders
9 <sup>th</sup> Issue of Debentures	5,476
8 <sup>th</sup> Issue of Debentures	4,267
6 <sup>th</sup> Issue Participating Debentures (CVRDA6)	18,628



## **12.5. Brazilian trading markets**

The trading market of common shares with no par value of the Company is B3, being traded in the segment of Novo Mercado, under the ticker VALE3.

The Company's bonds are registered for trading in the secondary market through (i) NoMe - Novo Mercado system, in CETIP UTVM segment, and (ii) PUMA Trading System - Unified Multi Asset Platform; both administered and operationalized by B3.

## 12.6. Trading in foreign markets

<b>Security</b>	Common Shares
<b>Identification of securities</b>	XVALO
<b>Country</b>	Spain
<b>Security market</b>	LATIBEX
<b>Market managing entity</b>	Madrid Stock Exchange
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	0.01%
<b>Date of admission to trading</b>	08/02/2000
<b>Start date of listing</b>	08/02/2000
<b>Trading segment</b>	Yes
<b>Description of Trading Segment</b>	Stock Market
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	Yes
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	Each XVALO corresponds to one common share issued by the Company.
<b>Depositary bank</b>	No
<b>Description of the Depositary Bank</b>	N/A
<b>Custodian institution</b>	No
<b>Description of the Custodian Institution</b>	N/A
<b>Security</b>	Bonds
<b>Identification of securities</b>	VALE26 (reopening)
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	06/02/2017
<b>Start date of listing</b>	06/02/2017
<b>Trading segment</b>	No
<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depositary bank</b>	Yes
<b>Description of the Depositary Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York
<b>Security</b>	Bonds
<b>Identification of securities</b>	VALE26
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	10/08/2016
<b>Start date of listing</b>	10/08/2016
<b>Trading segment</b>	No

<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depository bank</b>	Yes
<b>Description of the Depository Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York
<b>Security</b>	Bonds
<b>Identification of securities</b>	VALE42
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	11/09/2012
<b>Start date of listing</b>	11/09/2012
<b>Trading segment</b>	No
<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depository bank</b>	Yes
<b>Description of the Depository Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York
<b>Security</b>	Bonds
<b>Identification of securities</b>	VALE39 (reopening)
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	15/09/2010
<b>Start date of listing</b>	15/09/2010
<b>Trading segment</b>	No
<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depository bank</b>	Yes
<b>Description of the Depository Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York
<b>Security</b>	Bonds
<b>Identification of securities</b>	CVRD39

<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	10/11/2009
<b>Start date of listing</b>	10/11/2009
<b>Trading segment</b>	No
<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depository bank</b>	Yes
<b>Description of the Depository Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York
<b>Security</b>	Bonds
<b>Identification of securities</b>	CVRD36
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	21/11/2006
<b>Start date of listing</b>	21/11/2006
<b>Trading segment</b>	No
<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depository bank</b>	Yes
<b>Description of the Depository Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York
<b>Security</b>	Bonds
<b>Identification of securities</b>	CVRD34B (reopening)
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	02/11/2005
<b>Start date of listing</b>	02/11/2005
<b>Trading segment</b>	No
<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No

<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depository bank</b>	Yes
<b>Description of the Depository Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York
<b>Security</b>	Bonds
<b>Identification of securities</b>	CVRD34
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	15/01/2004
<b>Start date of listing</b>	15/01/2004
<b>Trading segment</b>	No
<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depository bank</b>	Yes
<b>Description of the Depository Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York
<b>Security</b>	Bonds
<b>Identification of securities</b>	Vale Canada2032
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	23/09/2002
<b>Start date of listing</b>	23/09/2002
<b>Trading segment</b>	No
<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depository bank</b>	Yes
<b>Description of the Depository Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York
<b>Security</b>	American Depositary Shares (ADSs) / American Depositary Receipts (ADRs)
<b>Identification of securities</b>	VALE
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange

<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	54.01%
<b>Date of admission to trading</b>	15/03/2000
<b>Start date of listing</b>	15/03/2000
<b>Trading segment</b>	Yes
<b>Description of Trading Segment</b>	Stock Market
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	Yes
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	Each ADS VALE corresponds to one common share issued by the Company.
<b>Depositary bank</b>	Yes
<b>Description of the Depositary Bank</b>	Citibank N.A.
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Banco Bradesco S.A.
<b>Security</b>	Bonds
<b>Identification of securities</b>	VALE30
<b>Country</b>	USA
<b>Security market</b>	New York Stock Exchange
<b>Market managing entity</b>	Securities Exchange Commission – SEC
<b>Percentage of trading volume abroad in relation to the total trading volume of each class and type in the last accounting year</b>	100%
<b>Date of admission to trading</b>	08/07/2020
<b>Start date of listing</b>	08/07/2020
<b>Trading segment</b>	No
<b>Description of Trading Segment</b>	N/A
<b>Proportion of certificates of deposit abroad in relation to each class and type of shares</b>	No
<b>Description of the proportion of certificates of deposit abroad in relation to each class and type of shares</b>	N/A
<b>Depositary bank</b>	Yes
<b>Description of the Depositary Bank</b>	Bank of New York
<b>Custodian institution</b>	Yes
<b>Description of the Custodian Institution</b>	Bank of New York

## 12.7. Securities issued abroad

<b>Security</b>	<b>Securities Deposit Certificates</b>
<b>Identification of securities</b>	ADS (American Depositary Shares) VALE
<b>Jurisdiction</b>	United States
<b>Date of issue</b>	15/03/2002
<b>Due date</b>	12/31/9999
<b>Quantity (Units)</b>	1,286,543,896
<b>Overall nominal value (Reais)</b>	112,138,902,775.59
<b>Restricted circulation</b>	No
<b>Debtor balance outstanding on the closing date of the last reporting period</b>	0.00
<b>Convertibility</b>	Yes
<b>Condition of convertibility and effects on share capital</b>	1 ADS VALE corresponds to one common share issued by the Company, and the conversion does not have any effect on the share capital.
<b>Possibility of redemption</b>	No
<b>Hypothesis and calculation of the redemption value</b>	None.
<b>Characteristics of the debt securities</b>	-
<b>Conditions for changing the rights guaranteed by such securities</b>	None.
<b>Other relevant features</b>	<p>The ADS VALE are traded at the New York Stock Exchange (NYSE), with the ticker VALE. The ADS are represented by ADR (American Depositary Receipts) issued by the depositary, Citibank N.A.</p> <p>Each ADS VALE corresponds to one common share issued by the Company.</p> <p>In the field "Quantity" above, the outstanding ADSs were considered as of December 31, 2022.</p> <p>The "Overall Nominal Value" above was determined considering the number of ADSs informed, the closing price of the ADS on December 29, 2022, observing the average rate for conversion to reais in the 2022 fiscal year (5.20 BRL/USD exchange rate and price of US\$ 16.88).</p>

## **12.8. Allocation of resources from public offerings**

Not applicable, considering that the Company did not carry out a public offering for the distribution of securities in the last three fiscal years.



## **12.9. Other relevant information**

There is no other relevant information that has not been disclosed in above items.

### 13. Identification

#### 13.1. Statement by the President and Executive Vice President of Finance and Investor Relations

Name of the person responsible for the content of the form	Position of the person in charge
Eduardo de Salles Bartolomeo	Chief Executive Officer
Gustavo Duarte Pimenta	Executive Vice-President of Finance and Investor Relations
<b><u>The aforementioned officers state that:</u></b>	
a. they reviewed the Reference Form;  b. all the information contained in the Reference Form comply with the provisions of CVM Resolution no. 80/22, particularly arts. 15 through 20;  c. the set of information contained therein is a true, accurate and complete portrait of the activities of the issuer and the risks inherent to its activities.	

**STATEMENT OF THE CHIEF EXECUTIVE OFFICER  
FOR THE PURPOSES OF ITEM 13.1 OF THE REFERENCE FORM**

**Eduardo de Salles Bartolomeo**, Brazilian, married, engineer, holder of the Identity Card IFP/RJ no. 053253845, enrolled in the CPF/ME under no. 845.567.307-91, resident in the city and state of Rio de Janeiro, with business address at Torre Oscar Niemeyer, Praia de Botafogo, no. 186, , district of Botafogo, ZIP Code 22250-145, in the city and state of Rio de Janeiro, in the capacity of Chief Executive Officer of **Vale S.A.**, a corporation, with headquarters in the city and state of Rio de Janeiro, at Torre Oscar Niemeyer, Praia de Botafogo, nº 186, suite 1101, 1601, 1701 and 1801, district of Botafogo, ZIP Code 22250-145, enrolled in the CNPJ/ME under no. 33.592.510/0001-54 the ("Company"), for the purposes of item 13.1 of the Company's Reference Form, declares that:

- a. he reviewed the Company's Reference Form;
- b. all the information contained in the Reference Form comply with the provision of the Resolution no. 80, of March 29, 2022, of the Federal Securities Commission, as amended, particularly in arts. 15 through 20; and
- c. the set of information contained therein is a true, accurate and complete portrait of the activities of the issuer and the risks inherent to its activities.

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**Eduardo de Salles Bartolomeo**  
Chief Executive Officer

**STATEMENT OF THE EXECUTIVE VICE-PRESIDENT OF FINANCE AND INVESTOR RELATIONS  
FOR THE PURPOSES OF ITEM 13.1 OF THE REFERENCE FORM**

**Gustavo Duarte Pimenta**, Brazilian, married, economist, holder of the Identity Card SSP/MG no. M5.762.765, enrolled in the CPF/ME under no. 035.844.246-07, resident in the city of Rio de Janeiro, state of Rio de Janeiro, with business address at Torre Oscar Niemeyer, Praia de Botafogo, no. 186, suite 1101, 1601, 1701 and 1801, district of Botafogo, ZIP Code 22250-145, in the city and state of Rio de Janeiro, in the capacity of Executive Vice-President of Finance and Investor Relations of **Vale S.A.**, a corporation, with headquarters in the city and state of Rio de Janeiro, at Torre Oscar Niemeyer, Praia de Botafogo, nº 186, suite 1101, 1601, 1701 and 1801, district of Botafogo, ZIP Code 22250-145, enrolled in the CNPJ/ME under no. 33.592.510/0001-54 the ("Company"), for the purposes of item 13.1 of the Company's Reference Form, declares that:

- a. he reviewed the Company's Reference Form;
- b. all the information contained in the Reference Form comply with the provision of the Resolution no. 80, of March 29, 2022, of the Federal Securities Commission, as amended, particularly in arts. 15 through 20; and
- c. the set of information contained therein is a true, accurate and complete portrait of the activities of the issuer and the risks inherent to its activities.

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**Gustavo Duarte Pimenta**  
Executive Vice-President of Finance and Investor Relations

**13.2. Statement of the new Chief Executive Officer or Investor Relations Officer**

Item not applicable.