Vale's performance in 1Q23

Rio de Janeiro, April 26th, 2023. *"Our Q1 results showed stronger iron ore production, supported by S11D improved performance, thanks to our truckless system improved reliability and the new crushers. Despite the weather-related loading restrictions that impacted our sales, we remain confident in our ability to achieve our 2023 goals. Our Energy Transition Metals results were solid, with continued ramp up at Salobo III, resulting in a strong performance in copper. In Sudbury, our mines had their highest production rates since 2017. While the mining industry faces inflationary pressure, we remain focused on cost efficiency and productivity gains. We are also making progress in managing our tailings dams. In April, two geotechnical structures received their declaration of stability, which led to removing their emergency level. Since 2022, we have successfully revoked the emergency level protocols for 10 structures. We remain strongly committed to building a safer and more reliable company while delivering value to our shareholders."* commented Eduardo Bartolomeo, Chief Executive Officer.

Selected financial indicators

US$ million	1Q23	1Q22	4Q22
Net operating revenues	8,434	10,812	11,941
Total costs and expenses (ex-Brumadinho and de-characterization of dams)[1]	(5,403)	(5,124)	(7,895)
Expenses related to Brumadinho event and de-characterization of dams	(111)	(160)	(375)
Adjusted EBIT from continuing operations	**2,920**	**5,528**	**3,726**
Adjusted EBIT margin (%)	35%	51%	31%
Adjusted EBITDA from continuing operations	**3,576**	**6,214**	**4,626**
Adjusted EBITDA margin (%)	42%	57%	39%
Proforma adjusted EBITDA from continuing operations[2]	**3,687**	**6,374**	**5,001**
Net income from continuing operations attributable to Vale's shareholders	1,837	4,456	3,724
Net debt [3]	8,226	4,911	7,915
Capital expenditures	1,130	1,136	1,787

[1] Includes adjustment of US$ 35 million in 1Q23, to reflect the performance of the streaming transactions at market price.
[2] Excluding expenses related to Brumadinho.
[3] Including leases (IFRS 16).

Highlights

Business Results

- Proforma adjusted EBITDA from continued operations of US$ 3.7 billion in Q1, down US$ 2.7 billion y/y, mainly reflecting (i) lower realized prices of iron ore fines and pellets, (ii) lower sales of iron ore fines and (iii) higher costs.

- Free Cash Flow from Operations of US$ 2.3 billion, representing 62% EBITDA to cash-conversion versus 19% in 1Q22, largely explained by (i) the strong cash collection from 4Q22 sales and (ii) seasonally higher income tax paid in 1Q22.

Disciplined capital allocation

- Capital expenditures of US$ 1.1 billion in Q1, including growth and sustaining investments, in line y/y.
- Gross debt and leases of US$ 13.0 billion as of March 31, 2023, slightly higher q/q, mainly due to US$ 300 million debt issued as part of Vale's liability management.
- Expanded Net Debt of US$ 14.4 billion as of March 31, 2023, in line q/q and within the targeted leverage of US$ 10-20 billion.

Value creation and distribution

- US$ 1.8 billion in dividends paid in March 2023.
- Disbursement for the 3rd buyback program in quarter was US$ 763 million. Overall, the 3rd buyback program is 47% complete, with a disbursement of US$ 3.7 billion to repurchase 233.7 million shares[1].

Focusing and strengthening the core

- Progressing in the electric vehicles value chain:
  - PTVI and China's Zhejiang Huayou Cobalt Co. signed a definitive agreement with global automaker Ford Motor Co. for the development of the Pomalaa project in Indonesia. The three-party collaboration enables to advance more sustainable nickel production in Indonesia and help make electric vehicle batteries more affordable.
  - In February, we inaugurated the construction of the Morowali project, an integrated nickel mining and processing plant (RKEF) powered by natural gas, with an expected nickel capacity of 73 ktpy, to start-up in 2025. The project is a JV between PTVI, which will own 100% of the mine and two Chinese partners, who will hold a 51% stake in the RKEF.
- Delivering iron solutions:
  - Shipment of the first briquettes cargo for international tests in blast furnace in April. The cargo was shipped from the Port of Açu for testing at a client's blast furnace in Europe. The green briquette is an innovative product, which reduces CO_2 emissions in steelmaking by 10%.
  - Emergency plan for Torto dam was approved in March, and our expectation is to obtain the operating license by the end of Q2. The dam will enable us to increase the overall quality and volume of pellets, improving mix and average price premium.
- Advancing the project pipeline:
  - Both lines at Salobo III plant already in operation, and successfully ramping up. The project will add 30-40 ktpy of copper production to the Salobo complex and it is expected to reach full capacity in 4Q24.
  - Commissioning of Gelado project has continued to progress, using 100% electric dredges. Gelado will produce high-quality pellet feed by reusing the tailings that have been deposited in the Gelado dam.
- Responsible divestment of non-core assets is concluded with:
  - The sale of Companhia Siderúrgica do Pecém (CSP) was closed for an enterprise value of US$ 2.2 billion, used to prepay CSP's outstanding net debt balance of US$ 2.3 billion.

[1] Related to the April 2022 3rd buyback program for a total of 500 million shares.

Promoting sustainable mining

- Two geotechnical structures received declaration of stability condition in April, having their emergency level condition removed. Since the beginning of 2022, 10 structures had emergency level protocols revoked.
- Vale's ESG Risk Rating, assessed by Sustainalytics, was upgraded from 39.1 to 35.3, indicating further recognition of our efforts in building a safer and more sustainable company.
- Agreement with United States Securities and Exchange Commission ("SEC") to terminate a lawsuit filed by the SEC against the Company was signed in March 2023. Vale will make payments totaling US$ 55.9 million to the SEC.

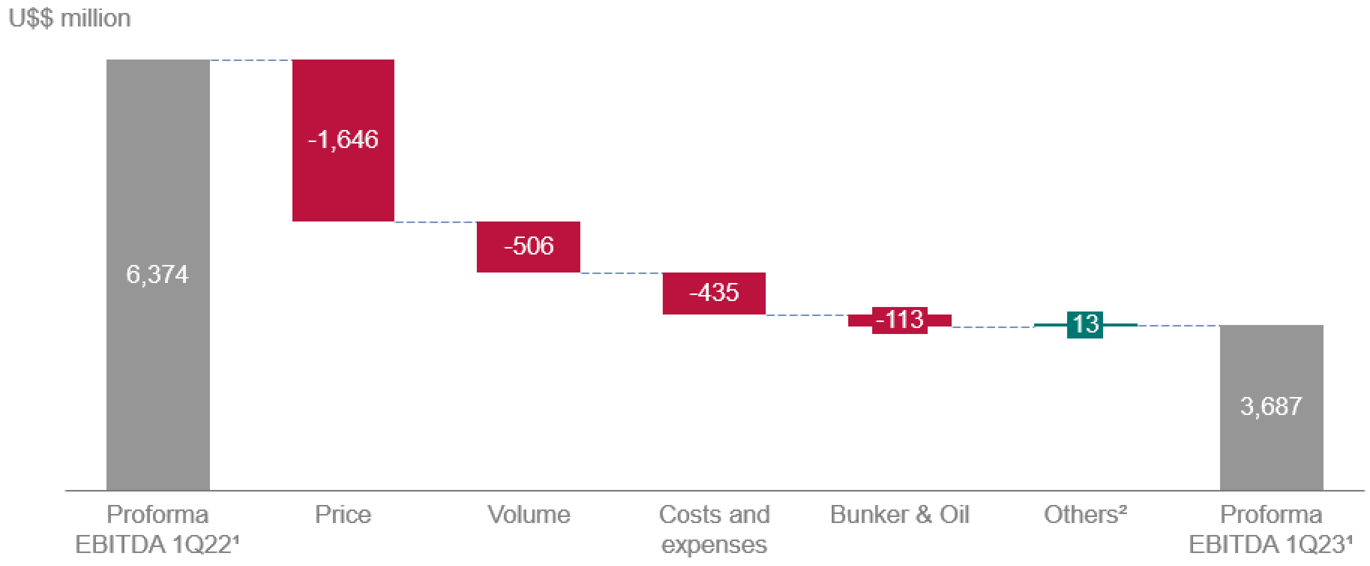
Adjusted EBITDA

Adjusted EBITDA

US$ million	1Q23	1Q22	4Q22
Net operating revenues	8,434	10,812	11,941
COGS	(4,949)	(4,622)	(7,155)
SG&A	(118)	(121)	(148)
Research and development	(139)	(121)	(218)
Pre-operating and stoppage expenses	(124)	(154)	(125)
Expenses related to Brumadinho event & de-characterization of dams	(111)	(160)	(375)
Other operational expenses[1]	(73)	(106)	(249)
Dividends and interests on associates and JVs	-	-	55
Adjusted EBIT from continuing operations	**2,920**	**5,528**	**3,726**
Depreciation, amortization & depletion	656	686	900
Adjusted EBITDA from continuing operations	**3,576**	**6,214**	**4,626**
Proforma Adjusted EBITDA from continuing operations[2]	**3,687**	**6,374**	**5,001**
Discontinued operations – Coal	-	171	-
Adjusted EBITDA total	**3,576**	**6,385**	**4,626**
Proforma Adjusted EBITDA total[2]	**3,687**	**6,545**	**5,001**

[1] Includes adjustment of US$ 35 million in 1Q23, to reflect the performance of the streaming transactions at market price.
[2] Excluding expenses related to Brumadinho.

Proforma EBITDA - 1Q23 vs. 1Q22



[1] Net of Brumadinho expenses. [2] Includes US$ 25 million of FX effect, US$ 12 million of dividends, and others.

Sales & price realization

Volume sold - Minerals and metals

'000 metric tons	1Q23	1Q22	4Q22
Iron ore fines	45,861	51,311	81,202
ROM	1,665	1,035	1,963
Pellets	8,133	7,011	8,789
Nickel	40	39	58
Copper[1]	63	50	72
Gold as by-product ('000 oz)[1]	72	62	73
Silver as by-product ('000 oz)[1]	406	341	533
PGMs ('000 oz)	74	49	54
Cobalt (metric ton)	621	415	927

[1] Including sales originated from both nickel and copper operations.

Average realized prices

US$/ton	1Q23	1Q22	4Q22
Iron ore - 62% Fe reference price	125.5	141.6	99.0
Iron ore fines Vale CFR/FOB realized price	108.6	141.4	95.6
Pellets CFR/FOB (wmt)	162.5	194.6	165.6
Nickel	25,260	22,195	24,454
Copper[2]	9,298	10,619	8,337
Gold (US$/oz)[12]	1,845	1,862	1,677
Silver (US$/oz)[2]	22.07	23.47	21.88
Cobalt (US$/t)[1]	32,830	78,085	44,980

[1] Prices presented above were adjusted to reflect the market prices of products delivered related to the streaming transactions.
[2] Including sales originated from both nickel and copper operations.

Costs

COGS by business segment

US$ million	1Q23	1Q22	4Q22
Iron Solutions	3,290	3,108	5,079
Energy Transition Metals	1,620	1,334	1,965
Others	39	180	111
Total COGS of continuing operations[1]	**4,949**	**4,622**	**7,155**
Depreciation	613	645	875
COGS of continuing operations, ex-depreciation	**4,336**	**3,977**	**6,280**

[1] COGS currency exposure in 1Q23 was as follows: 50,07% BRL, 42,29% USD, 7,37% CAD and 0,27% Other currencies.

Expenses

Operating expenses

US$ million	1Q23	1Q22	4Q22
SG&A	118	121	148
Administrative	100	103	121
Personnel	45	54	45
Services	28	23	44
Depreciation	11	11	9
Others	16	15	23
Selling	18	18	27
R&D	139	121	218
Pre-operating and stoppage expenses	124	154	125
Expenses related to Brumadinho event and de-characterization of dams	111	160	375
Other operating expenses	108	106	249
Total operating expenses	**600**	**662**	**1,115**
Depreciation	43	41	25
Operating expenses, ex-depreciation	**557**	**621**	**1,090**

Brumadinho

Impact of Brumadinho and De-characterization in 1Q23

US$ million	Provisions balance 31dec22	EBITDA impact	Payments	FX and other adjustments[2]	Provisions balance 31mar23
De-characterization	3,378	-	(78)	164	3,464
Agreements & donations[1]	3,312	-	(124)	170	3,358
Total Provisions	**6,690**	**-**	**(202)**	**334**	**6,822**
Incurred expenses and others	58	111	(111)	-	58
Total	**6,748**	**111**	**(313)**	**334**	**6,880**

[1] Includes Integral Reparation Agreement, individual, labor and emergency indemnifications, tailing removal and containment w orks.
[2] Includes foreign exchange, present value and other adjustments.

Impact of Brumadinho and De-characterization from 2019 until 1Q23

US$ million	EBITDA impact	Payments	PV & FX adjust [2]	Provisions balance 31mar23
De-characterization	5,038	(1,216)	(358)	3,464
Agreements & donations[1]	8,658	(5,126)	(174)	3,358
Total Provisions	**13,696**	**(6,342)**	**(532)**	**6,822**
Incurred expenses	2,621	(2,621)	-	-
Others	180	-	-	58
Total	**16,497**	**(8,963)**	**(532)**	**6,880**

[1] Includes Integral Reparation Agreement, individual, labor and emergency indemnifications, tailing removal and containment works.
[2] Includes foreign exchange, present value and other adjustments

Cash outflow of Brumadinho & De-characterization commitments[1,2]:

US$ billion	Since 2019 until 1Q23 disbursed	2023	2024	2025	2026	2027	Yearly average 2028-2035[3]
De-characterization	1.2	0.3	0.6	0.5	0.6	0.4	0.3
Integral Reparation Agreement & other reparation provisions	5.1	1.0	1.1	0.8	0.7	0.3	0.4[4]
Incurred expenses	2.6	0.3	0.4	0.3	0.2	0.1	-
Total	**8.9**	**1.6**	**2.1**	**1.6**	**1.5**	**0.8**	**-**

[1] Estimate cash outflow for 2023-2035 period, given BRL-USD exchange rates of 5.0804.
[2] Amounts stated without discount to present value, net of judicial deposits and comprises inflation adjustments.
[3] Estimate annual average cash flow for De-characterization provisions in the 2028-2035 period is US$ 272 million per year.
[4] Disbursements related to the Integral Reparation Agreement end in 2028.

Net income

Reconciliation of proforma EBITDA to net income

US$ million	1Q23	1Q22	4Q22
EBITDA Proforma	**3,687**	**6,545**	**5,001**
Brumadinho event and de-characterization of dams	(111)	(160)	(375)
EBITDA Coal (Discontinued operation)	-	(171)	-
Adjusted EBITDA from continuing operations	**3,576**	**6,214**	**4,626**
Impairment reversal (impairment and disposals) of non-current assets, net [1]	(39)	1,072	(177)
Dividends received	-	-	(55)
Equity results and net income (loss) attributable to noncontrolling interests	(96)	189	53
Financial results	(530)	(242)	(658)
Income taxes	(418)	(2,091)	835
Depreciation, depletion & amortization	(656)	(686)	(900)
Net income from continuing operations attributable to Vale's shareholders	**1,837**	**4,456**	**3,724**

[1] Includes adjustment of US$ 35 million in 1Q23, to reflect the performance of the streaming transactions at market price

Financial results

US$ million	1Q23	1Q22	4Q22
Financial expenses, of which:	(320)	(319)	(291)
Gross interest	(180)	(161)	(149)
Capitalization of interest	5	14	7
Others	(107)	(140)	(110)
Financial expenses (REFIS)	(38)	(32)	(39)
Financial income	121	150	92
Shareholder Debentures	(47)	(249)	(99)
Financial Guarantee	-	123	2
Derivatives[1]	192	861	373
Currency and interest rate swaps	216	863	323
Others (commodities, etc)	(24)	(2)	50
Foreign Exchange	(151)	(817)	(247)
Monetary variation	(325)	9	(488)
Financial result, net	**(530)**	**(242)**	**(658)**

[1] The cash effect of the derivatives was a gain of US$ 24 million in 1Q23.

Main factors that affected net income for 1Q23 vs. 1Q22

	US$ million	
1Q22 Net income from continuing operations attributable to Vale's stockholders	**4,456**	
∆ EBITDA proforma	(2,687)	Lower iron ore and pellets realized prices and lower iron ore sales volumes
∆ Brumadinho event and de-characterization of dams	49	
∆ EBITDA Coal (Discontinued operation)	(171)	
∆ Impairment & disposal of non-current assets	(1,076)	1Q22 impacted by gains from Midwestern System sale
∆ Dividends received	-	
∆ Equity results and net income (loss) attributable to noncontrolling interests	(149)	
∆ Financial results	(288)	.
∆ Income taxes	1,673	Lower net income for Q1 2023 leading to lower income tax in the quarter
∆ Depreciation, depletion & amortization	30	
1Q23 Net income from continuing operations attributable to Vale's shareholders	**1,837**	

∆: difference between 1Q23 and 1Q22 figures

CAPEX

Growth and sustaining projects execution

US$ million	1Q23	%	1Q22	%	4Q22	%
Growth projects	**326**	**28.8**	**337**	**29.7**	**426**	**23.8**
Iron Solutions	236	20.9	182	16.0	285	15.9
Energy Transition Metals	72	6.4	67	5.9	100	5.6
Nickel	20	1.8	6	0.5	16	0.9
Copper	52	4.6	62	5.5	84	4.7
Energy and others	18	1.6	88	7.7	41	2.3
Sustaining projects	**804**	**71.2**	**799**	**70.3**	**1,361**	**76.2**
Iron Solutions	512	45.3	499	43.9	764	42.8
Energy Transition Metals	263	23.3	270	23.8	567	31.7
Nickel	204	18.1	226	19.9	480	26.9
Copper	59	5.2	44	3.9	87	4.9
Energy and others	29	2.6	30	2.6	30	1.7
Total	**1,130**	**100.0**	**1,136**	**100.0**	**1,787**	**100.0**

Growth projects

Investments in growth projects under construction totaled US$ 326 million in Q1, flat y/y, driven by the progress made in the Capanema's Maximization and Tubarão Briquette projects, partially offset by lower investments in Sol do Cerrado project after its commissioning in October 2022.

Growth projects progress indicator[2]

Projects	Capex 1Q23	Financial progress[1]	Physical progress	Comments
Iron Solutions				
Northern System 240 Mtpy *Capacity: 10 Mtpy* *Start-up: 1H23* *Capex: US$ 772 MM*	18	70%	85%[2]	For mine-plant, loading tests have started in the products stockyard, and it is in the final testing phase at the loading silo. For railway, services to complete the project's railway duplication are expected to start in Q2. For port, works are on schedule.
Capanema's Maximization *Capacity: 18 Mtpy* *Start-up: 1H25* *Capex: US$ 913 MM*	54	21%	37%	The electromechanical assembly of the primary, secondary, and tertiary circuits continued in Q1. The electromechanical assembly of the long-distance conveyor belt and the stacker/reclaimers for stockpiles has started. At the same time, the supply of the tertiary crushers has been completed.
Serra Sul 120 Mtpy[3] *Capacity: 20 Mtpy* *Start-up: 2H25* *Capex: US$ 1,502 MM*	83	37%	45%	The civil works for the mine are in progress. The electromechanical assembly packages are in the acquisition phase. The earthworks for the duplication of the long-distance conveyor belt and the civil works for the plant's expansion have started.
Briquettes Tubarão *Capacity: 6 Mtpy* *Start-up: 1H23 (Plant 1) and 2H23 (Plant 2)* *Capex: US$ 182 MM*	28	74%	86%	Mechanical completions for Plant 1 are advanced. The commissioning is in progress, with the testing of three briquetting machines, one dryer, briquetting and mixing circuit conveyors, precipitators, and additives area. Hot tests are expected to start in Q2.
Energy Transition Materials				
Salobo III *Capacity: 30-40 ktpy* *Start-up: 2H22* *Capex: US$ 1,056 MM*	51	95%	100%	The start-up was completed, and production is ramping up.
Onça Puma 2nd Furnace *Capacity: 12-15 ktpy* *Start-up: 1H25* *Capex: US$ 555 MM*	2	3%	4%	The detailed engineering, procurement of major work packages, and demolition of the second furnace are in progress.

[1] CAPEX disbursement until end of 1Q23 vs. CAPEX expected.
[2] Considering physical progress of mine, plant and logistics.
[3] The project consists of increasing the S11D mine-plant capacity by 20 Mtpy.

[2] Pre-operating expenses included in the total estimated capex information, in line with Vale's Board of Directors approvals.

Sustaining projects

Investments in sustaining our operations totaled US$ 804 million in Q1, flat y/y, driven by higher maintenance disbursements in iron ore operations, which was offset by lower investments in tailings filtration after the start-up of our four plants.

Sustaining projects progress indicator[3]

Projects	Capex 1Q23	Financial progress[1]	Physical progress	Comments
Iron Solutions				
Gelado *Capacity: 10 Mtpy* *Start-up: 2H22* *Capex: US$ 428 MM*	14	83%	100%	The project progressed on production commissioning. The Gelado project capacity is 5 Mtpy in the initial years, as it requires Usina 1 conversion to dry processing to achieve full capacity (10 Mtpy).
Compact Crushing S11D *Capacity: 50 Mtpy* *Start-up: 2H26* *Capex: US$ 755 MM*	10	5%	7%	The earthworks related to the primary crusher were completed, and the civil works are expected to start in Q2.
Energy Transition Metals				
Voisey's Bay Mine Extension *Capacity: 45 ktpy (Ni) and 20 ktpy (Cu)* *Start-up: 1H21[2]* *Capex: US$ 2,690 MM*	67	78%	83%	Electromechanical assembly continues to advance on the surface works. The paste system commissioning is ongoing, and the first assets will be delivered in Q2. For underground works, the Reid Brook bulk material handling system is near ready for commissioning. The lateral development advancement for the Eastern Deeps and the initial infrastructure works remain the priority.

[1] CAPEX disbursement until end of 1Q23 vs. CAPEX expected.
[2] In 2Q21, Vale achieved the first ore production of Reid Brook deposit, the first of two underground mines to be developed in the project. Eastern Deeps, the second deposit, has started to extract development ore from the deposit and is scheduled to start the main production ramp-up in the second half of 2023.

Sustaining capex by type - 1Q23

US$ million	Iron Solutions	Energy Transition Materials	Energy and others	Total
Enhancement of operations	263	136	2	401
Replacement projects	18	88	-	106
Filtration and dry stacking projects	28	-	-	28
Dam management	26	2	-	28
Other investments in dams and waste dumps	39	8	-	47
Health and Safety	43	18	1	62
Social investments and environmental protection	51	5	-	56
Administrative & Others	44	6	26	76
Total	**512**	**263**	**29**	**804**

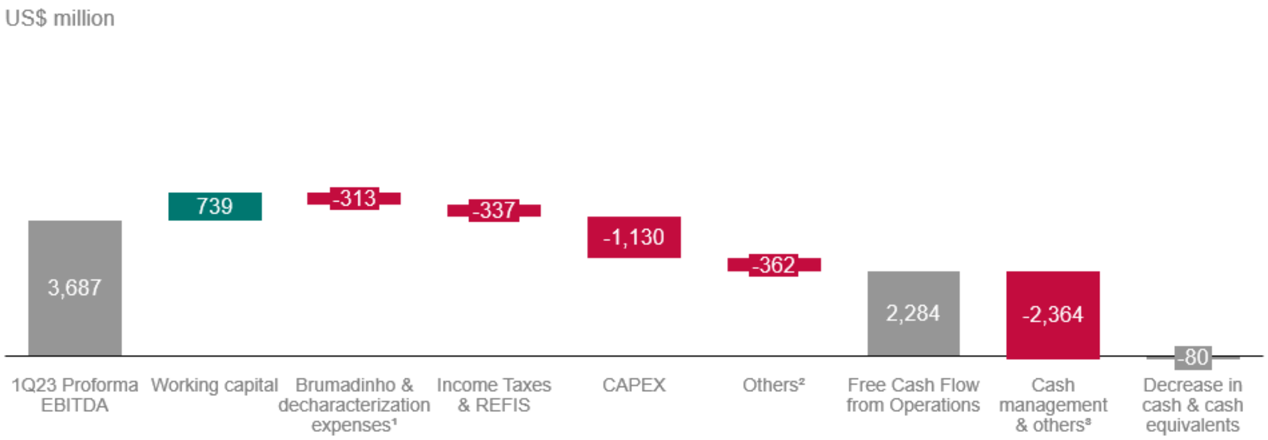
[3] Pre-operating expenses included in the total estimated capex column, in line with Vale's Board of Directors approvals.

Free cash flow

Free Cash Flow from Operations reached US$ 2,284 million in 1Q23, representing 62% cash-conversion. The robust cash-conversion is due to a positive working capital variation, largely explained by the strong cash collection from 4Q22 sales. This was partially offset by inventory build-up and seasonal disbursements related to profit sharing in the first quarter.

In 1Q23, Vale distributed US$ 1,795 million to shareholders and repurchased US$ 763 million of shares. Cash & cash equivalents position decreased by US$ 80 million in the quarter.

Free Cash Flow 1Q23



[1] Includes US$ 202 million of disbursement of Brumadinho and de-characterization provisioned expenses and US$ 111 million of Brumadinho incurred expenses.
[2] Includes interest on loans, derivatives, leasing, dividends paid to noncontrolling interest, shareholders debentures, payments to Renova and others.
[3] Includes US$ 763 million of share buyback, US$ 1,795 million of dividends, US$ 261 million of debt repurchased and US$ -67 million from the sale of CSP.

Debt

Debt indicators

US$ million	1Q23	1Q22	4Q22
Gross debt [1]	**11,464**	**12,349**	**11,181**
Lease (IFRS 16)	1,520	1,666	1,531
Gross debt and leases	**12,984**	**14,015**	**12,712**
Cash, cash equivalents and short-term investments	4,758	9,104	4,797
Net debt	**8,226**	**4,911**	**7,915**
Currency swaps[2]	(421)	(89)	(211)
Brumadinho provisions	3,358	4,192	3,312
Samarco & Renova Foundation provisions[3]	3,196	3,411	3,124
Expanded net debt	**14,359**	**12,425**	**14,140**
Average debt maturity (years)	8.4	8.5	8.7
Cost of debt after hedge (% pa)	5.3	4.9	5.5
Total debt and leases / adjusted LTM EBITDA (x)	0.8	0.5	0.6
Net debt / adjusted LTM EBITDA (x)	0.5	0.2	0.4
Adjusted LTM EBITDA / LTM gross interest (x)	27.1	46.5	32.3

[1] Does not include leases (IFRS 16).

[2] Includes interest rate swaps.

[3] Does not include provision for de-characterization of Germano dam in the amount of US$ 203 million in 1Q23, US$ 197 million in 4Q22 and US$ 238 million in 1Q22 .

Gross debt and leases totaled US$ 13 billion as of March 31, 2023, slightly higher q/q mainly due to US$ 300 million debt issued as part of Vale's liability management.

Expanded net debt reached US$ 14.4 billion as of March 31, 2023, in line q/q and within the target leverage of US$ 10-20 billion.

The average debt maturity was 8.4 years, slightly lower than the 8.7 years on December 31, 2022. After currency and interest rate swaps, the average cost of debt was 5.34% per annum.

Performance of the business segments

Proforma Adjusted EBITDA from continuing operations, by business area

US$ million	1Q23	1Q22	4Q22
Iron Solutions	**3,320**	**5,802**	**4,721**
Iron ore fines	2,638	4,934	3,955
Pellets	667	837	743
Other Ferrous Minerals	15	31	23
Energy Transition Metals	**573**	**751**	**775**
Nickel	353	525	610
Copper	220	226	165
Others	**(206)**	**(179)**	**(495)**
Total	**3,687**	**6,374**	**5,001**

Segment information 1Q23

		Expenses				
US$ million	Net operating revenues	Cost[1]	SG&A and others[1]	R&D[1]	Pre operating & stoppage[1]	Adjusted EBITDA
Iron Solutions	**6,411**	**(2,918)**	**(41)**	**(43)**	**(89)**	**3,320**
Iron ore fines	4,982	(2,197)	(29)	(39)	(79)	2,638
Pellets	1,322	(648)	(2)	-	(5)	667
Others ferrous	107	(73)	(10)	(4)	(5)	15
Energy Transition Metals[2]	**2,033**	**(1,382)**	**(23)**	**(52)**	**(3)**	**573**
Nickel[3]	1,509	(1,112)	(17)	(27)	-	353
Copper[4]	524	(270)	(6)	(25)	(3)	220

[1] Excluding depreciation, depletion and amortization.
[2] Includes adjustment of US$ 35 million in 1Q23, to reflect the performance of the streaming transactions at market price.
[3] Including copper, by-products from our nickel operations and marketing activities.
[4] Including by-products from our copper operations.

Iron Solutions

Selected financial indicators - Iron Solutions

US$ million	1Q23	1Q22	4Q22
Net Revenues	6,411	8,734	9,330
Costs[1]	(2,918)	(2,723)	(4,561)
SG&A and Other expenses[1]	(41)	(52)	94
Pre-operating and stoppage expenses[1]	(89)	(121)	(102)
R&D expenses	(43)	(36)	(84)
Dividends and interests on associates and JVs	-	-	44
Adjusted EBITDA	**3,320**	**5,802**	**4,721**
Depreciation and amortization	(403)	(416)	(535)
Adjusted EBIT	**2,917**	**5,386**	**4,186**
Adjusted EBIT margin (%)	**45.5**	**61.7**	**44.9**

[1] Net of depreciation and amortization

Iron Solutions EBITDA Variation 1Q23 vs 1Q22

		Drivers				
US$ million	1Q22	Volume	Prices	Others	Total variation	1Q23
Iron ore fines	4,934	(574)	(1,470)	(252)	(2,296)	2,638
Pellets	837	132	(244)	(58)	(170)	667
Other	31	5	(4)	(17)	(16)	15
Iron Solutions	**5,802**	**(437)**	**(1,718)**	**(327)**	**(2,482)**	**3,320**

The 43% decrease in EBITDA is explained mainly by (i) lower realized prices, driven by an 11% lower benchmark average price (US$ 1,718 million), (ii) 5.5 Mt lower iron ore fines sales (US$ 574 million), and (iii) higher all-in unit costs, mainly driven by higher C1 cash costs (included on “Other” US$ 327 million in the table above).

Revenues

Iron Solutions' volumes, prices, premiums and revenues

	1Q23	1Q22	4Q22
Volume sold ('000 metric tons)			
Iron ore fines	45,861	51,311	81,202
ROM	1,665	1,035	1,963
Pellets	8,133	7,011	8,789
Share of premium products[1] (%)	76%	84%	83%
Average prices (US$/t)			
Iron ore - 62% Fe reference price	125.5	141.6	99.0
Iron ore - Metal Bulletin 62% low alumina index	128.7	146.6	99.8
Iron ore - Metal Bulletin 65% index	140.3	170.2	111.4
Provisional price at the end of the quarter	126.0	158.1	116.3
Iron ore fines Vale CFR reference (dmt)	121.7	156.2	107.4
Iron ore fines Vale CFR/FOB realized price	108.6	141.4	95.6
Pellets CFR/FOB (wmt)	162.5	194.6	165.6

contd.

Iron Solutions' volumes, prices, premiums and revenues (contd.)

	1Q23	1Q22	4Q22
Iron ore fines and pellets quality premium (US$/t)			
Iron ore fines quality premium	(1.4)	4.4	1.6
Pellets weighted average contribution	3.5	4.7	3.8
Total	2.1	9.1	5.4
Net operating revenue by product (US$ million)			
Iron ore fines	4,982	7,255	7,767
ROM	26	23	22
Pellets	1,322	1,364	1,456
Others	81	92	85
Total	**6,411**	**8,734**	**9,330**

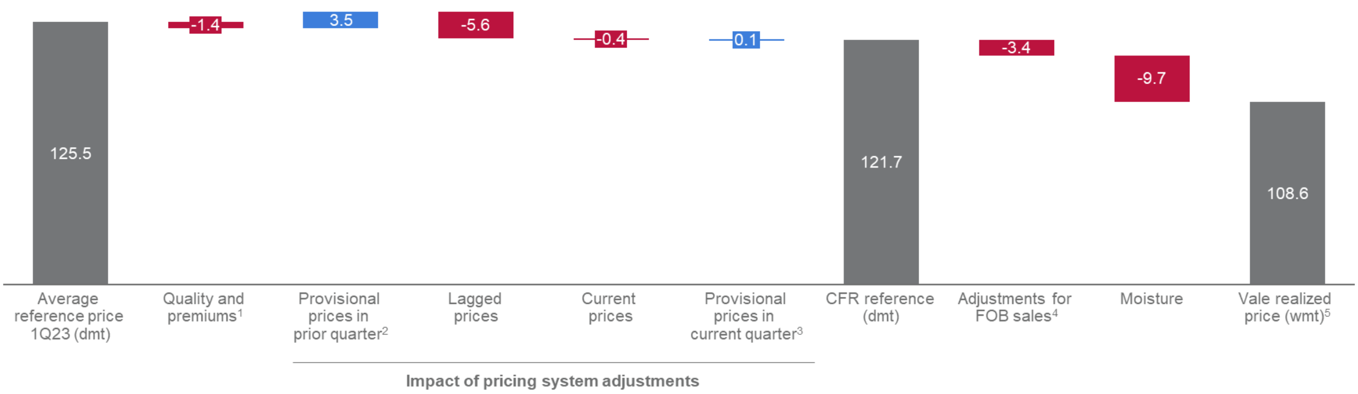
[1] Pellets, Carajás (IOCJ), Brazilian Blend Fines (BRBF) and pellet feed.

The share of premium products in total sales totaled 76% in Q1. All-in premium totaled US$ 2.1/t (vs. US$ 9.1/t in 1Q22), driven by (i) higher sales mix of high-silica products, taking advantage of strong relative prices for this product which, despite the positive margins, reduce average premiums; (ii) lower share of IOCJ and BRBF in the sales mix, due to port restrictions at Ponta da Madeira Terminal; and (iii) lower market premiums for pellets.

Iron ore fines, excluding Pellets and ROM

Revenues & price realization

Price realization iron ore fines – US$/t, 1Q23



[1] Includes quality (US$ -1.0/t) and premiums/discounts and commercial conditions (US$ -0.4/t).
[2] Adjustment as a result of provisional prices booked in 4Q22 at US$ 116.3/t.
[3] Difference between the weighted average of the prices provisionally set at the end of 1Q23 at US$ 126.0/t based on forward curves and US$ 125.5/t from the 1Q23 average reference price.
[4] Includes freight pricing mechanisms of CFR sales freight recognition.
[5] Vale's price is net of taxes.

Iron ore fines realized price was US$ 108.6/t, US$ 32.8/t lower y/y, mainly due to (i) lower benchmark prices (US$ 16.1/t lower y/y); (ii) a negative effect of pricing adjustment mechanisms (US$ 12.6/t lower y/y), mainly related to a lower positive effect from provisional prices in prior quarter (US$ 11.5/t in 1Q22); and (iii) lower fines premiums (US$ 5.8/t lower y/y).

Iron Ore fines pricing system breakdown (%)

	1Q23	1Q22	4Q22
Lagged	19	18	12
Current	62	59	57
Provisional	19	23	31
Total	**100**	**100**	**100**

Costs

Iron ore fines cash cost and freight

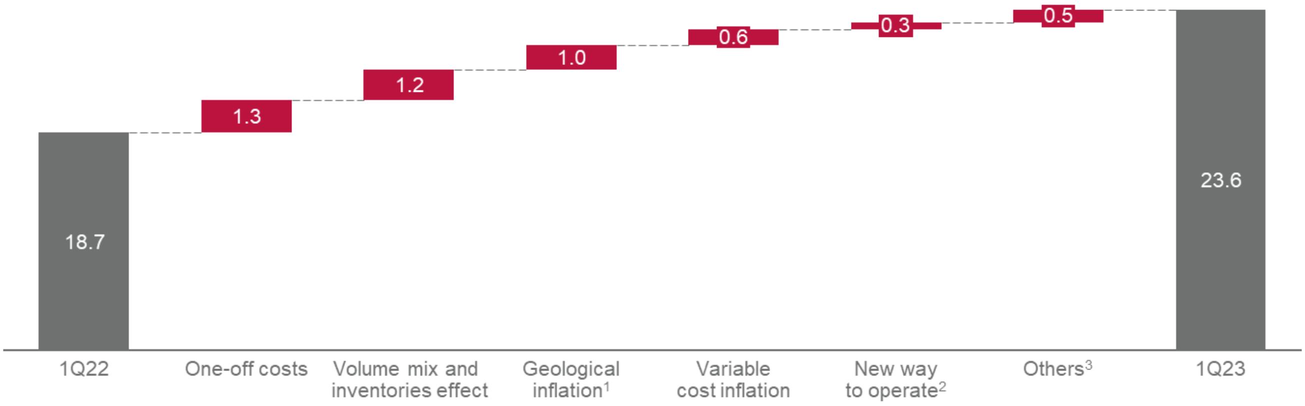
	1Q23	1Q22	4Q22
Costs (US$ million)			
Vale's iron ore fines C1 cash cost (A)	1,222	1,088	1,759
Third-party purchase costs[1] (B)	222	181	274
Vale's C1 cash cost ex-third-party volumes (C = A – B)	1,000	907	1,485
Sales Volumes (Mt)			
Volume sold (ex-ROM) (D)	45.9	51.3	81.2
Volume sold from third-party purchases (E)	3.5	2.7	5.1
Volume sold from own operations (F = D – E)	42.3	48.6	76.2
Iron ore fines cash cost (ex-ROM, ex-royalties), FOB (US$ /t)			
Vale's C1 cash cost ex-third-party purchase cost (C/F)	23.6	18.7	19.5
Average third-party purchase C1 cash cost (B/E)	62.8	67.0	54.2
Vale's iron ore cash cost (A/D)	26.7	21.2	21.7
Freight			
Maritime freight costs (G)	622	733	1,312
% of CFR sales (H)	76%	79%	86%
Volume CFR (Mt) (I = D x H)	34.9	40.5	69.8
Vale's iron ore unit freight cost (US$/t) (G/I)	17.8	18.1	18.8

[1] Includes logistics costs related to third-party purchases

Iron ore fines COGS - 1Q22 x 1Q23

		Drivers				
US$ million	1Q22	Volume	Exchange rate	Others	Total variation	1Q23
C1 cash costs	1,088	(116)	6	244	134	1,222
Freight	733	(100)	-	(11)	(111)	622
Distribution costs	87	(9)	-	69	60	147
Royalties & others	211	(22)	-	17	(5)	206
Total costs before depreciation and amortization	**2,119**	**(247)**	**6**	**319**	**78**	**2,197**
Depreciation	266	(28)	1	6	(21)	245
Total	**2,385**	**(275)**	**7**	**325**	**57**	**2,442**

C1 cash cost variation (excluding 3rd party purchases) – US$/t (1Q23 x 1Q22)



[1] Including cost effects from average haulage distance, strip ratio and others.
[2] Including tailings filtration plants ramp-up, health & safety, dam management, geotechnics, risk and sustainability costs.
[3] Including FX, energy costs, demurrage costs and others.

Vale's C1 cash cost, ex-third-party purchases, increased US$ 4.9/t y/y, mainly driven by (i) one-off cost effects, including anticipation of maintenance activities, taking advantage of the lower impact in volumes in the first semester, (ii) negative effect from volume mix, as result of lower production from Northern System, and consumption of inventories from the previous quarter with higher costs, (iii) higher mining costs mainly due to higher haulage distances, in line with mining plan, (iv) inflationary pressures on diesel and materials, and (v) higher costs associated with the implementation of our new way to operate, including the costs of our tailings filtration plants which started during 2022.

The effect of third-party purchases on costs increased as third-party volumes represented a higher share in Vale's total sales y/y.

Vale's maritime freight cost was US$ 17.8/t in 1Q23, US$ 0.3/t lower y/y, largely explained by lower spot freight costs and lower bunker fuel costs. CFR sales totaled 34.9 Mt in Q1, totaling 76% of total iron ore fines sales.

Expenses

Expenses - Iron Ore fines

US$ millions	1Q23	1Q22	4Q22
SG&A	15	13	21
R&D	39	34	83
Pre-operating and stoppage expenses	79	113	92
Other expenses	14	42	(114)
Total expenses	147	202	82

Iron ore pellets

Pellets – EBITDA

US$ million	1Q23	1Q22	4Q22	Comments
Net revenues / Realized prices	1,322	1,364	1,456	Realized prices were US$ 162.5/t, US$ 32.1/t lower y/y, mainly due to (i) lower benchmark prices, and (ii) the net effect of lower market premiums.
Dividends from leased pelletizing plants	0	0	30	
Cash costs (Iron ore, leasing, freight, overhead, energy and other)	(648)	(526)	(735)	Mainly due to higher pellet feed production costs. FOB sales were 69% of total sales.
Pre-operational & stoppage expenses	(5)	(5)	(5)	
Expenses (Selling, R&D and other)	(2)	4	(3)	
EBITDA	**667**	**837**	**743**	
EBITDA/t	**82**	**119**	**85**	

Iron ore fines and pellets cash break-even landed in China[4]

Iron ore fines and pellets cash break-even landed in China

US$/t	1Q23	1Q22	4Q22
Vale's C1 cash cost ex-third-party purchase cost	23.6	18.7	19.5
Third party purchases cost adjustments	3.1	2.5	2.2
Vale's iron ore cash cost (ex-ROM, ex-royalties), FOB (US$ /t)	26.7	21.2	21.7
Iron ore fines freight cost (ex-bunker oil hedge)	17.8	18.1	18.8
Iron ore fines distribution cost	3.2	1.7	1.9
Iron ore fines expenses[1] & royalties	7.6	8.0	7.2
Iron ore fines moisture adjustment	5.0	4.4	4.3
Iron ore fines quality adjustment	1.4	(4.4)	(1.6)
Iron ore fines EBITDA break-even (US$/dmt)	**61.7**	**49.0**	**52.3**
Iron ore fines pellet adjustment	(3.5)	(4.7)	(3.8)
Iron ore fines and pellets EBITDA break-even (US$/dmt)	**58.2**	**44.3**	**48.5**
Iron ore fines sustaining investments	9.4	8.9	8.7
Iron ore fines and pellets cash break-even landed in China (US$/dmt)	**67.6**	**53.2**	**57.2**

[1] Net of depreciation and includes dividends received. Including stoppage expenses.

[4] Measured by unit cost + expenses + sustaining investment adjusted for quality. Does not include the impact from the iron ore fines and pellets pricing system mechanism.

Energy Transition Metals

Energy Transition Metals EBITDA overview – 1Q23

US$ million	Sudbury	Voisey's Bay & Long Harbour	PTVI (site)	Onça Puma	Sossego	Salobo	Others	Subtotal Energy Transition Metals	Marketing activities	Total Energy Transition Metals
Net Revenues	979	233	363	81	147	377	(335)	1,845	188	2,033
Costs	(731)	(209)	(185)	(60)	(85)	(185)	236	(1,219)	(163)	(1,382)
Selling and other expenses	(5)	1	(1)	(2)	(3)	(2)	(11)	(23)	-	(23)
Pre-operating and stoppage expenses	-	-	-	-	-	(3)	-	(3)	-	(3)
R&D	(17)	(4)	(4)	-	(7)	(1)	(19)	(52)	-	(52)
EBITDA	**226**	**21**	**173**	**19**	**52**	**186**	**(129)**	**548**	**25**	**573**

Nickel operations

Selected financial indicators, ex- marketing activities

US$ million	1Q23	1Q22	4Q22
Net Revenues	1,321	1,198	1,795
Costs[1]	(949)	(679)	(1,138)
SG&A and other expenses[1]	(17)	(8)	(20)
Pre-operating and stoppage expenses[1]	-	-	(1)
R&D expenses	(27)	(16)	(42)
Adjusted EBITDA	328	495	594
Depreciation and amortization	(203)	(165)	(272)
Adjusted EBIT	125	330	322
Adjusted EBIT margin (%)	9.5	27.6	17.9

[1] Net of depreciation and amortization.

EBITDA variation - US$ million (1Q23 x 1Q22), ex-marketing activities

		Drivers					
US$ million	1Q22	Volume	Prices	By-products	Others	Total variation	1Q23
Nickel excl. marketing	495	5	123	(23)	(272)	(168)	328

EBITDA by operations, ex-marketing activities

US$ million	1Q23	1Q22	4Q22	1Q23 vs. 1Q22 Comments
Sudbury[1]	226	260	192	Higher third-party feed consumption and maintenance costs, partially offset by a higher nickel realized price.
Voisey's Bay & Long Harbour	21	113	65	Production 42.7% lower due to continued transition to the two underground mines and higher third-party feed consumption, partially offset by higher nickel realized price.
PTVI	173	116	95	Higher nickel sales and realized price, despite higher fuel cost.
Onça Puma	19	37	101	Lower price realization resulting from higher discounts for Class II products.
Others[2]	(111)	(31)	141	Higher prices and volumes of intragroup sales.
Total	**328**	**495**	**594**	

[1] Includes the Thompson operations and Clydach refinery.
[2] Includes Japanese operations, intercompany eliminations, purchase of finished nickel. Hedge results have been relocated to each nickel business operation.

Revenues & price realization

Revenues & price realization

	1Q23	1Q22	4Q22
Volume sold ('000 metric tons)			
Nickel	40	39	58
Copper	20	16	27
Gold as by-product ('000 oz)	11	8	11
Silver as by-product ('000 oz)	236	215	355
PGMs ('000 oz)	74	49	54
Cobalt (metric ton)	621	415	927
Average realized prices (US$/t)			
Nickel	25,260	22,195	24,454
Copper	8,928	10,139	7,610
Gold (US$/oz)	1,915	1,750	1,750
Silver (US$/oz)	22	23	24
Cobalt	32,830	78,085	44,980
Net revenue by product - ex marketing activities (US$ million)			
Nickel	1,013	866	1,422
Copper	174	164	205
Gold as by-product[1]	21	14	20
Silver as by-product	5	5	9
PGMs	75	110	87
Cobalt[1]	20	32	42
Others	12	7	10
Total	**1,321**	**1,198**	**1,795**

[1] Revenues presented above were adjusted to reflect the market prices of products delivered related to the streaming transactions.

Breakdown of nickel volumes sold, realized price and premium

	1Q23	1Q22	4Q22
Volumes (kt)			
Upper Class I nickel	23.9	20.0	28.9
- of which: EV Battery	1.6	1.3	1.8
Lower Class I nickel	4.1	5	7.0
Class II nickel	8.1	9	17.8
Intermediates	4.1	5	4.5
Nickel realized price (US$/t)			
LME average nickel price	25,983	26,395	25,292
Average nickel realized price	25,260	22,195	24,454
Contribution to the nickel realized price by category:			
Nickel average aggregate premium	(60)	(110)	(250)
Other timing and pricing adjustments contributions[1]	(663)	(4,090)	(588)
Premium/discount by product (US$/t)			
Upper Class I nickel	1,550	1,250	1,520
Lower Class I nickel	1,340	550	670
Class II nickel	(2,770)	90	(2,370)
Intermediates	(5,560)	(6,480)	(4,750)

[1] Comprises (i) the Quotational Period effects (based on sales distribution in the prior three months, as well as the differences between the LME price at the moment of sale and the LME average price), with a negative impact of US$ 893/t , (ii) fixed-price sales, with a negative impact of US$ 112/t (iii) the effect of the hedging on Vale's nickel price realization, with a positive impact of US$ 348/t in the quarter and (iv) other effects with a negative impact of US$ 6/t.
Note: The nickel realized price for 1Q23 was impacted by a settlement price in the quarter of circa US$ 26,079/t. The average strike price for the complete hedge position was flat at US$ 34,929/t.

Nickel realized price in 1Q23 increased by 14% increase y/y, despite relatively flat average LME prices. This was mainly due to the positive effect of Class I premiums and our hedge position, partially offset by the negative effect of (i) net PPAs, due to a decreasing average forward curve price, (ii) fixed-price sales and (iii) higher discounts for Class II.

Product type by operation

% of source sales	North Atlantic	PTVI	Onça Puma	Total 1Q23	Total 1Q22
Upper Class I	81.0	-	-	59.0	50.0
Lower Class I	14.0	-	-	10.0	12.6
Class II	3.0	37.0	100.0	20.0	28.5
Intermediates	2.0	63.0	-	10.0	8.9

[1] Including sales originated from Matsusaka refinery.

Costs

Nickel COGS, excluding marketing activities - 1Q23 x 1Q22

		Drivers				
US$ million	1Q22	Volume	Exchange rate	Others	Total variation	1Q23
Nickel operations	679	19	(36)	287	270	949
Depreciation	165	5	(7)	40	38	203
Total	**844**	**24**	**(43)**	**327**	**308**	**1,152**

Unit cash cost of sales by operation, net of by-product credits

US$/t	1Q23	1Q22	4Q22	1Q23 vs. 1Q22 Comments
Sudbury[1,2]	16,328	9,697	16,435	Lower by-product revenues per ton and higher volumes of third-party feed purchased.
Voisey's Bay & Long Harbour[2]	24,170	9,021	17,797	Continued transition to underground, higher third-party feed consumption, maintenance cost and operational materials and services.
PTVI	11,030	8,792	12,150	Higher fuel cost, due to rising prices.
Onça Puma	12,284	11,919	10,412	Higher diesel prices.

[1] Sudbury figures include Thompson and Clydach costs.
[2] A large portion of Sudbury, including Clydach, and Long Harbour finished nickel production is derived from intercompany transfers, as well as from the purchase of ore or nickel intermediates from third parties. These transactions are valued at fair market value.

EBITDA break-even

EBITDA break-even

US$/t	1Q23	1Q22	4Q22
COGS ex. 3rd-party feed	22,434	16,798	18,660
COGS[1]	23,653	17,410	19,577
By-product revenues[1]	(7,687)	(8,501)	(6,390)
COGS after by-product revenues	15,966	8,909	13,187
Other expenses[2]	1,117	609	1,017
Total Costs	**17,083**	**9,518**	**14,204**
Nickel average aggregate (premium) discount	**60**	**110**	**250**
EBITDA breakeven[3]	**17,143**	**9,628**	**14,454**

[1] Excluding marketing activities.
[2] Includes R&D, sales expenses and pre-operating & stoppage.
[3] Considering only the cash effect of streaming transactions, nickel operations EBITDA break-even would increase to US$ 17,383/t.

Costs ex. 3rd-party feed increased by US$ 5,636/t compared to 1Q22 mainly explained by (i) change in sale mix ($1,702/t), most notably, an increase of nickel sales from Sudbury operations; and (ii) other factors ($3,934/t), mostly related to the impact of Voisey's Bay transition to underground mining, inflationary pressures, and rising fuel costs.

Copper operations – Salobo and Sossego

Selected financial indicators - Copper operations, ex-marketing activities

US$ million	1Q23	1Q22	4Q22
Net Revenues	524	474	498
Costs[1]	(270)	(227)	(279)
SG&A and other expenses[1]	(6)	6	(16)
Pre-operating and stoppage expenses[1]	(3)	(2)	(5)
R&D expenses	(25)	(25)	(33)
Adjusted EBITDA	220	226	165
Depreciation and amortization	(37)	(33)	(34)
Adjusted EBIT	183	193	131
Adjusted EBIT margin (%)	34.9	40.7	26.3

[1] Net of depreciation and amortization

EBITDA variation - US$ million (1Q23 x 1Q22)

		Drivers					
US$ million	1Q22	Volume	Prices	By-products	Others	Total variation	1Q23
Copper	226	(35)	(51)	11	69	(6)	220

EBITDA by operation

US$ million	1Q23	1Q22	4Q22	1Q23 vs. 1Q22 Comments
Salobo	186	260	142	Higher unit cost and lower copper realized prices.
Sossego	52	(15)	51	Lower costs following the extended SAG mill maintenance in 1Q22.
Others copper[1]	(18)	(19)	(28)	
Total	**220**	**226**	**165**	

[1] Includes US$ 18 million in research expenses related to the Hu'u project in 1Q23.

Revenues & price realization

Revenues & price realization

US$ million	1Q23	1Q22	4Q22
Volume sold (000 metric tons)			
Copper	43	34	45
Gold as by-product	61	54	62
Silver as by-product	170	126	178
Average prices (US$/t)			
Average LME copper price	8,927	9,997	8,001
Average copper realized price	9,465	10,848	8,774
Gold (US$/oz)[1]	1,832	1,879	1,663
Silver (US$/oz)	22	24	18
Revenue (US$ million)			
Copper	409	370	392
Gold as by-product[1]	111	101	103
Silver as by-product	4	3	3
Total	**524**	**474**	**498**

[1] Revenues presented above were adjusted to reflect the market prices of products delivered related to the streaming transactions.

Price realization – copper operations

US$/t	1Q23	1Q22	4Q22
Average LME copper price	8,927	9,997	8,001
Current period price adjustments[1]	228	(95)	514
Copper gross realized price	9,155	9,902	8,514
Prior period price adjustments[2]	829	1,402	736
Copper realized price before discounts	**9,983**	**11,304**	**9,250**
TC/RCs, penalties, premiums and discounts[3]	(518)	(456)	(470)
Average copper realized price	**9,465**	**10,848**	**8,780**

[1] Current-period price adjustments: at the end of the quarter, mark-to-market of open invoices based on the copper price forward curve. Includes a small number of final invoices that were provisionally priced and settled within the quarter.
[2] Prior-period price adjustment: based on the difference between the price used in final invoices (and in the mark-to-market of invoices from previous quarters still open at the end of the quarter) and the provisional prices used for sales in prior quarters
[3] TC/RCs, penalties, premiums, and discounts for intermediate products.

Vale's copper products are sold on a provisional pricing basis during the quarter, with final prices determined in a future period, generally one-to-four months forward.

The positive effects of the prior-period price adjustments of US$ 829/t and the current-period price adjustments US$ 228/t[5] were mainly due to the forward price increase in the quarter. Average TC/RCs discount was US$ 518/t in the quarter, representing an increase in discount of 14% y/y, already reflecting higher benchmark TC/RCs for 2023.

Costs

COGS - 1Q23 x 1Q22

		Drivers				
US$ million	1Q22	Volume	Exchange rate	Others	Total variation	1Q23
Copper operations	227	125	1	(83)	43	270
Depreciation	33	22	-	(20)	2	35
Total	**260**	**147**	**1**	**(103)**	**45**	**305**

Copper operations – unit cash cost of sales, net of by-product credits

US$/t	1Q23	1Q22	4Q22	1Q23 vs. 1Q22 Comments
Salobo	2,856	1,624	3,644	Higher maintenance and operational services cost.
Sossego	5,233	13,917	4,409	Higher fixed costs dilution after the extended SAG Mill maintenance and higher by-product revenue.

[5] On March 31st, 2023, Vale had provisionally priced copper sales from Sossego and Salobo totaling 41,650 tons valued at weighted average LME forward price of US$ 8,898/t, subject to final pricing over the following months.

EBITDA break-even – copper operations

US$/t	1Q23	1Q22	4Q22
COGS	6,256	6,661	6,264
By-product revenues	(2,664)	(3,055)	(2,372)
COGS after by-product revenues	**3,592**	**3,606**	**3,892**
Other expenses[1]	782	611	1,201
Total costs	**4,374**	**4,217**	**5,093**
TC/RCs penalties, premiums and discounts	518	456	476
EBITDA breakeven	**4,892**	**4,673**	**5,569**
EBITDA breakeven ex-Hu'u[2]	**4,464**	**4,105**	**4,938**

[1] Includes sales expenses, R&D, pre-operating and stoppage expenses and other expenses
[2] Considering only the cash effect of streaming transactions, copper operations EBITDA break-even would increase to US$ 6,114/t.

The realized price to be compared to the EBITDA break-even should be the copper realized price before discounts (US$ 9,983/t), given that TC/RCs, penalties, and other discounts are already part of the EBITDA break-even build-up.

WEBCAST INFORMATION

Vale will host a webcast on Thursday, April 27, 2023, at 11:00 a.m. Brasilia time (10:00 a.m. New York time; 3:00 p.m. London time). Internet access to the webcast and presentation materials will be available on Vale website at www.vale.com/investors. A webcast replay will be accessible at www.vale.com beginning shortly after the completion of the call. Interested parties may listen to the teleconference by dialing in:

Brazil: +55 (11) 4090 1621 / 3181-8565

U.K: +44 20 3795 9972

U.S (toll-free): +1 844 204 8942

U.S: +1 412 717 9627 / 1-844-200-6205.

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Further information on Vale can be found at: vale.com

Investor Relations

Vale.RI@vale.com
Ivan Fadel: ivan.fadel@vale.com
Luciana Oliveti: luciana.oliveti@vale.com
Mariana Rocha: mariana.rocha@vale.com
Samir Bassil: samir.bassil@vale.com

Except where otherwise indicated, the operational and financial information in this release is based on the consolidated figures in accordance with IFRS. Our quarterly financial statements are reviewed by the company's independent auditors. The main subsidiaries that are consolidated are the following: Companhia Portuária da Baía de Sepetiba, Vale Manganês S.A., Minerações Brasileiras Reunidas S.A., Salobo Metais S.A, Tecnored Desenvolvimento Tecnológico S.A., PT Vale Indonesia Tbk, Vale Holdings B.V, Vale Canada Limited, Vale International S.A., Vale Malaysia Minerals Sdn. Bhd., Vale Oman Pelletizing Company LLC e Vale Oman Distribution Center LLC.

This press release may include statements about Vale's current expectations about future events or results (forward-looking statements). Many of those forward-looking statements can be identified by the use of forward-looking words such as „anticipate," „believe," „could," „expect," „should," „plan," „intend," „estimate" "will" and „potential," among others. All forward-looking statements involve various risks and uncertainties. Vale cannot guarantee that these statements will prove correct. These risks and uncertainties include, among others, factors related to: (a) the countries where Vale operates, especially Brazil and Canada; (b) the global economy; (c) the capital markets; (d) the mining and metals prices and their dependence on global industrial production, which is cyclical by nature; and (e) global competition in the markets in which Vale operates. Vale cautions you that actual results may differ materially from the plans, objectives, expectations, estimates and intentions expressed in this presentation. Vale undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information or future events or for any other reason. To obtain further information on factors that may lead to results different from those forecast by Vale, please consult the reports that Vale files with the U.S. Securities and Exchange Commission (SEC), the Brazilian Comissão de Valores Mobiliários (CVM) and, in particular, the factors discussed under "Forward-Looking Statements" and "Risk Factors" in Vale's annual report on Form 20-F.

The information contained in this press release includes financial measures that are not prepared in accordance with IFRS. These non-IFRS measures differ from the most directly comparable measures determined under IFRS, but we have not presented a reconciliation to the most directly comparable IFRS measures, because the non-IFRS measures are forward-looking and a reconciliation cannot be prepared without unreasonable effort.

Annexes

Simplified financial statements

Income Statement

US$ million	1Q23	1Q22	4Q22
Net operating revenue	**8,434**	**10,812**	**11,941**
Cost of goods sold and services rendered	(4,949)	(4,622)	(7,155)
Gross profit	**3,485**	**6,190**	**4,786**
Gross margin (%)	41.3	57.3	40.1
Selling and administrative expenses	(118)	(121)	(148)
Research and development expenses	(139)	(121)	(218)
Pre-operating and operational stoppage	(124)	(154)	(125)
Other operational expenses, net	(219)	(266)	(624)
Impairment reversal (impairment and disposals) of non-current assets, net	(4)	1,072	(177)
Operating income	**2,881**	**6,600**	**3,494**
Financial income	121	150	92
Financial expenses	(320)	(319)	(291)
Other financial items, net	(331)	(73)	(459)
Equity results and other results in associates and joint ventures	(55)	211	72
Income before income taxes	**2,296**	**6,569**	**2,908**
Current tax	(218)	(253)	(72)
Deferred tax	(200)	(1,838)	907
Net income from continuing operations	**1,878**	**4,478**	**3,743**
Net income (loss) attributable to noncontrolling interests	41	22	19
Net income from continuing operations attributable to Vale's shareholders	**1,837**	**4,456**	**3,724**
Discontinued operations			
Net income (Loss) from discontinued operations	-	2	-
Net income from discontinued operations attributable to noncontrolling interests	-	-	-
Net income (Loss) from discontinued operations attributable to Vale's shareholders	**-**	**2**	**-**
Net income	**1,878**	**4,480**	**3,743**
Net income (Loss) attributable to Vale's to noncontrolling interests	41	22	19
Net income attributable to Vale's shareholders	**1,837**	**4,458**	**3,724**
Earnings per share (attributable to the Company's shareholders - US$):			
Basic and diluted earnings per share (attributable to the Company's shareholders - US$)	0.41	0.93	0.82

Equity income (loss) by business segment

US$ million	1Q23	%	1Q22	%	4Q22	%
Iron Solutions	(96)	109	16	62	65	90
Energy Transition Metals	-	-	2	8	-	-
Others	8	(9)	8	30	7	10
Total	**(88)**	**100**	**26**	**100**	**72**	**100**

Balance sheet

US$ million	3/31/2023	12/31/2022	3/31/2022
Assets			
Current assets	**14,508**	**15,526**	**19,465**
Cash and cash equivalents	4,705	4,736	9,061
Short term investments	53	61	43
Accounts receivable	2,687	4,319	3,123
Other financial assets	381	342	268
Inventories	4,992	4,482	5,038
Recoverable taxes	1,345	1,272	832
Others	345	314	291
Non-current assets held for sale	-	-	809
Non-current assets	**14,785**	**14,394**	**15,181**
Judicial deposits	1,255	1,215	1,455
Other financial assets	393	280	390
Recoverable taxes	1,143	1,110	1,157
Deferred income taxes	10,799	10,770	11,192
Others	1,195	1,019	987
Fixed assets	**58,254**	**56,974**	**58,503**
Total assets	**87,547**	**86,894**	**93,149**
Liabilities			
Current liabilities	**12,977**	**13,891**	**14,668**
Suppliers and contractors	4,464	4,461	3,446
Loans, borrowings and leases	543	489	1,103
Other financial liabilities	1,581	1,672	2,362
Taxes payable	672	470	927
Settlement program (REFIS)	388	371	387
Provisions	722	1,036	750
Liabilities related to associates and joint ventures	2,133	1,911	2,361
Liabilities related to Brumadinho	1,122	944	1,385
De-characterization of dams and asset retirement obligations	785	661	646
Dividends payable	-	1,383	-
Others	567	493	845
Liabilities associated with non-current assets held for sale	-	-	456
Non-current liabilities	**35,689**	**35,645**	**39,992**
Loans, borrowings and leases	12,441	12,223	12,912
Participative shareholders' debentures	2,846	2,725	4,299
Other financial liabilities	2,805	2,843	2,348
Settlement program (REFIS)	1,856	1,869	2,247
Deferred income taxes	1,379	1,413	1,830
Provisions	2,548	2,446	2,782
Liabilities related to associates and joint ventures	1,266	1,410	1,288
Liabilities related to Brumadinho	2,236	2,368	2,807
De-characterization of dams and asset retirement obligations	6,462	6,520	7,610
Streaming transactions	1,636	1,612	1,683
Others	214	216	186
Total liabilities	**48,666**	**49,536**	**54,660**
Shareholders' equity	**38,881**	**37,358**	**38,489**
Total liabilities and shareholders' equity	**87,547**	**86,894**	**93,149**

Cash flow

US$ million	1Q23	1Q22	4Q22
Cash flow from operations	**4,280**	**5,531**	**2,902**
Interest on loans and borrowings paid	(169)	(179)	(135)
Cash received (paid) on settlement of Derivatives, net	38	(76)	(65)
Payments related to Brumadinho event	(124)	(64)	(287)
Payments related to de-characterization of dams	(78)	(69)	(102)
Interest on participative shareholders debentures paid	-	-	(136)
Income taxes (including settlement program)	(337)	(2,577)	(265)
Net cash generated by operating activities from continuing operations	**3,610**	**2,566**	**1,912**
Net cash generated by operating activities from discontinued operations	**-**	**41**	**-**
Net cash generated by operating activities	**3,610**	**2,607**	**1,912**
Cash flow from investing activities			
Short term investiment	(55)	2	39
Capital expenditures	(1,130)	(1,136)	(1,787)
Additions to investment	(7)	-	-
Dividends received from joint ventures and associates	-	65	55
Proceeds (payments) from the sale of investments, net	(67)	437	-
Other investment activities, net	(67)	-	(171)
Net cash used in investing activities from continuing operations	**(1,326)**	**(632)**	**(1,864)**
Net cash used in investing activites from discontinued operations	**-**	**(38)**	**-**
Net cash used in investing actitivies	**(1,326)**	**(670)**	**(1,864)**
Cash flow from financing activities			
Loans and financing:			
Loans and borrowings from third parties	300	425	500
Payments of loans and borrowings from third parties	(39)	(395)	(24)
Payments of leasing	(47)	(41)	(78)
Payments to shareholders:			
Dividends and interest on capital paid to shareholders	(1,795)	(3,480)	-
Dividends and interest on capital paid to noncontrolling interest	(3)	(3)	(2)
Share buyback program	(763)	(1,788)	(966)
Net cash used in financing activities from continuing operations	**(2,347)**	**(5,282)**	**(570)**
Net cash used in financing activities from discontinued operations	**-**	**(11)**	**-**
Net cash used in financing activities	**(2,347)**	**(5,293)**	**(570)**
Reduction in cash and cash equivalents	**(63)**	**(3,356)**	**(522)**
Cash and cash equivalents in the beginning of the period	4,736	11,721	5,182
Effect of exchange rate changes on cash and cash equivalents	32	707	76
Cash and cash equivalents from subsidiaries sold, net	-	(11)	-
Cash and cash equivalents at the end of period	**4,705**	**9,061**	**4,736**
Non-cash transactions:			
Additions to property, plant and equipment - capitalized loans and borrowing costs	5	14	7
Cash flow from operating activities			
Income before income taxes	**2,296**	**6,569**	**2,908**
Adjusted for:			
Provisions related to Brumadinho	-	-	133
Provision for de-characterization of dams	-	37	-
Equity results and other results in associates and joint ventures	55	(211)	(72)
Impairment and disposals (impairment reversal) of non-current assets, net	4	(1,072)	177
Depreciation, depletion and amortization	656	686	900
Financial results, net	530	242	658
Change in assets and liabilities			
Accounts receivable	1,686	877	(2,107)
Inventories	(363)	(304)	940
Suppliers and contractors	(105)	(672)	(435)
Other assets and liabilities, net	(479)	(621)	(200)
Cash flow from operations	**4,280**	**5,531**	**2,902**

Reconciliation of IFRS and “non-GAAP” information

(a) Adjusted EBIT

US$ million	1Q23	1Q22	4Q22
Net operating revenues	8,434	10,812	11,941
COGS	(4,949)	(4,622)	(7,155)
Sales and administrative expenses	(118)	(121)	(148)
Research and development expenses	(139)	(121)	(218)
Pre-operating and stoppage expenses	(124)	(154)	(125)
Brumadinho event and dam de-characterization of dams	(111)	(160)	(375)
Other operational expenses, net[1]	(73)	(106)	(249)
Dividends received and interests from associates and JVs	-	-	55
Adjusted EBIT from continuing operations	**2,920**	**5,528**	**3,726**

[1] Includes adjustment of US$ 35 million in 1Q23, to reflect the performance of the streaming transactions at market price.

(b) Adjusted EBITDA

EBITDA defines profit or loss before interest, tax, depreciation, depletion and amortization. The definition of Adjusted EBITDA for the Company is the operating income or loss plus dividends received and interest from associates and joint ventures, and excluding the amounts charged as (i) depreciation, depletion and amortization and (ii) impairment reversal (impairmaint and disposals) of non-current assets. However, our adjusted EBITDA is not the measure defined as EBITDA under IFRS and may possibly not be comparable with indicators with the same name reported by other companies. Adjusted EBITDA should not be considered as a substitute for operational profit or as a better measure of liquidity than operational cash flow, which are calculated in accordance with IFRS. Vale provides its adjusted EBITDA to give additional information about its capacity to pay debt, carry out investments and cover working capital needs. The following tables shows the reconciliation between adjusted EBITDA and operational cash flow and adjusted EBITDA and net income, in accordance with its statement of changes in financial position.
The definition of Adjusted EBIT is Adjusted EBITDA plus depreciation, depletion and amortization.

Reconciliation between adjusted EBITDA and operational cash flow

US$ million	1Q23	1Q22	4Q22
Adjusted EBITDA from continuing operations	**3,576**	**6,214**	**4,626**
Working capital:			
Accounts receivable	1,686	877	(2,107)
Inventories	(363)	(304)	940
Suppliers and contractors	(105)	(672)	(435)
Provisions for Brumadinho	-	-	133
Provision for de-characterization of dams	-	37	-
Others	(514)	(621)	(255)
Cash flow from continuing operations	**4,280**	**5,531**	**2,902**
Income taxes paid (including settlement program)	(337)	(2,577)	(265)
Interest on loans and borrowings paid	(169)	(179)	(135)
Payments related to Brumadinho event	(124)	(64)	(287)
Payments related to de-characterization of dams	(78)	(69)	(102)
Interest on participative shareholders' debentures paid	-	-	(136)
Cash received (paid) on settlement of Derivatives, net	38	(76)	(65)
Net cash generated by operating activities from continuing operations	**3,610**	**2,566**	**1,912**
Net cash generated by operating activities from discontinued operations	**-**	**41**	**-**
Net cash generated by operating activities	**3,610**	**2,607**	**1,912**

Reconciliation between adjusted EBITDA and net income (loss)

US$ million	1Q23	1Q22	4Q22
Adjusted EBITDA from continuing operations	**3,576**	**6,214**	**4,626**
Depreciation, depletion and amortization	(656)	(686)	(901)
Dividends received and interest from associates and joint ventures	-	-	(55)
Impairment reversal (impairment and disposals) of non-current assets,net[1]	(39)	1,072	(177)
Operating income	**2,881**	**6,600**	**3,493**
Financial results	(530)	(242)	(658)
Equity results and other results in associates and joint ventures	(55)	211	72
Income taxes	(418)	(2,091)	835
Net income from continuing operations	**1,878**	**4,478**	**3,743**
Net income (loss) attributable to noncontrolling interests	41	22	19
Net income attributable to Vale's shareholders	**1,837**	**4,456**	**3,724**

[1] Includes adjustment of US$ 35 million 1Q23, to reflect the performance of the streaming transactions at market price.

(c) Net debt

US$ million	1Q23	1Q22	4Q22
Gross debt	11,464	12,349	11,181
Leases	1,520	1,666	1,531
Cash and cash equivalents[1]	(4,758)	(9,104)	(4,797)
Net debt	**8,226**	**4,911**	**7,915**

[1] Including financial investments

(d) Gross debt / LTM Adjusted EBITDA

US$ million	1Q23	1Q22	4Q22
Gross debt and leases / LTM Adjusted EBITDA (x)	0.8	0.5	0.6
Gross debt and leases / LTM operational cash flow (x)	0.7	0.5	0.7

(e) LTM Adjusted EBITDA / LTM interest payments

US$ million	1Q23	1Q22	4Q22
Adjusted LTM EBITDA / LTM gross interest (x)	27.1	46.5	33.7
LTM adjusted EBITDA / LTM interest payments (x)	22.1	49.5	25.2

(f) US dollar exchange rates

R$/US$	1Q23	1Q22	4Q22
Average	5.1963	5.2299	5.2554
End of period	5.0804	4.7378	5.2177

Revenues and volumes

Net operating revenue by destination

US$ million	1Q23	%	1Q22	%	4Q22	%
North America	**653**	**7.7**	**479**	**4.4**	**613**	**5.1**
USA	511	6.1	313	2.9	433	3.6
Canada	142	1.7	166	1.5	180	1.5
South America	**1,067**	**12.7**	**1,307**	**12.1**	**913**	**7.6**
Brazil	919	10.9	1,128	10.4	829	6.9
Others	148	1.8	179	1.7	84	0.7
Asia	**4,726**	**56.0**	**7,067**	**65.4**	**8,484**	**71.0**
China	3,407	40.4	5,389	49.8	7,072	59.2
Japan	689	8.2	861	8.0	803	6.7
South Korea	312	3.7	255	2.4	310	2.6
Others	318	3.8	562	5.2	299	2.5
Europe	**1,563**	**18.5**	**1,462**	**13.5**	**1,109**	**9.3**
Germany	428	5.1	508	4.7	321	2.7
Italy	183	2.2	182	1.7	153	1.3
Others	952	11.3	772	7.1	635	5.3
Middle East	**238**	**2.8**	**242**	**2.2**	**317**	**2.7**
Rest of the World	**187**	**2.2**	**255**	**2.4**	**505**	**4.2**
Total	**8,434**	**100.0**	**10,812**	**100.0**	**11,941**	**100.0**

Volume sold by destination – Iron ore and pellets

'000 metric tons	1Q23	1Q22	4Q22
Americas	**10,151**	**8,624**	**9,659**
Brazil	8,749	7,761	8,904
Others	1,402	863	755
Asia	**38,058**	**43,366**	**74,370**
China	28,295	33,560	64,172
Japan	5,545	5,436	5,473
Others	4,218	4,370	4,725
Europe	**5,168**	**5,019**	**3,403**
Germany	964	980	698
France	1,080	1,085	587
Others	3,124	2,954	2,118
Middle East	**1,240**	**1,079**	**1,654**
Rest of the World	**1,042**	**1,270**	**2,868**
Total	**55,659**	**59,358**	**91,954**

Net operating revenue by business area

US$ million	1Q23	%	1Q22	%	4Q22	%
Iron Solutions	**6,411**	**76%**	**8,734**	**81%**	**9,330**	**78%**
Iron ore fines	4,982	59%	7,255	67%	7,767	65%
ROM	26	0%	23	0%	22	0%
Pellets	1,322	16%	1,364	13%	1,456	12%
Others	81	1%	92	1%	85	1%
Energy Transition Metals	**1,998**	**24%**	**1,932**	**18%**	**2,549**	**21%**
Nickel	1,013	12%	866	8%	1,422	12%
Copper	583	7%	534	5%	597	5%
PGMs	75	1%	110	1%	87	1%
Gold as by-product[1]	97	1%	115	1%	123	1%
Silver as by-product	9	0%	8	0%	12	0%
Cobalt[1]	21	0%	33	0%	42	0%
Others[2]	200	2%	266	2%	266	2%
Others	**25**	**0%**	**146**	**1%**	**62**	**1%**
Total of continuing operations	**8,434**	**100%**	**10,812**	**100%**	**11,941**	**100%**

[1] Exclude the adjustment of US$ 35 million in 1Q23, related to the performance of streaming transactions at market price.
[2] Includes marketing activities.

Projects under evaluation and growth options

Copper		
Alemão	**Capacity: 60 ktpy**	**Stage: FEL3**
Carajás, Brazil	Growth project	Investment decision: 2023
Vale's ownership: 100%	Underground mine	115 kozpy Au as byproduct
South Hub extension	**Capacity: 60-80 ktpy**	**Stage: FEL3[1]**
Carajás, Brazil	Replacement project	Investment decision: 2023
Vale's ownership: 100%	Open pit	Development of mines to feed Sossego mill
Victor	**Capacity: 20 ktpy**	**Stage: FEL3**
Ontario, Canada	Replacement project	Investment decision: 2024
Vale's ownership: N/A	Underground mine	5 ktpy Ni as co-product; JV partnership under discussion
Hu'u	**Capacity: 300-350 ktpy**	**Stage: FEL2**
Dompu, Indonesia	Growth project	200 kozpy Au as byproduct
Vale's ownership: 80%	Underground block cave	
North Hub	**Capacity: 70-100 ktpy**	**Stage: FEL1**
Carajás, Brazil	Growth project	
Vale's ownership: 100%	Mines and processing plant	
Nickel		
Sorowako Limonites	**Capacity: 60 ktpy**	**Stage: FEL3**
Sorowako, Indonesia	Growth project	Investment decision: 2023
Vale's ownership: N/A[2]	HPAL plant	8 kpty Co as by-product
Pomalaa	**Capacity: 120 ktpy**	**Stage: Definitive feasibility study**
Kolaka, Indonesia	Growth project	Investment decision: 2023 (mine)
Vale's ownership: N/A[2]	Mine	15 ktpy Co as by-product
Creighton Ph. 5	**Capacity: 20-24 ktpy**	**Stage: FEL3**
Ontario, Canada	Replacement project	Investment decision: 2023-2024
Vale's ownership: 100%	Underground mine	17-20 ktpy Cu as by-product
CCM Pit	**Capacity: 12-15 ktpy**	**Stage: FEL3**
Ontario, Canada	Replacement project	Investment decision: 2023
Vale's ownership: 100%	Underground mine	7-9 ktpy Cu as by-product
CCM Ph. 3	**Capacity: 7 ktpy**	**Stage: FEL3**
Ontario, Canada	Replacement project	9 ktpy Cu as by-product
Vale's ownership: 100%	Underground mine	
CCM Ph. 4	**Capacity: 9 ktpy**	**Stage: FEL3**
Ontario, Canada	Replacement project	9 ktpy Cu as by-product
Vale's ownership: 100%	Underground mine	
Iron ore		
Dry concentration plant	**Capacity: 8 Mtpy DR pellet feed**	**Stage: FEL3**
Oman	Replacement project	Investment decision: 2023
Vale's ownership: N/A	Cleaner to produce DR pellet feed	
Green briquette plants	**Capacity: Under evaluation**	**Stage: FEL3 (two plants)**
Brazil and other regions	Growth project	Investment decision: 2023-2029
Vale's ownership: N/A	Cold agglomeration plant	8 plants under engineering stage, including co-located plants in clients' facilities
Serra Leste expansion	**Capacity: +4 Mtpy (10 Mtpy total)**	**Stage: FEL2**
Northern System (Brazil)	Growth project	
Vale's ownership: 100%	Open pit mine	
S11C	**Capacity: Under evaluation**	**Stage: FEL2**
Northern System (Brazil)	Growth project	
Vale's ownership: 100%	Open pit mine	

Contd.

Iron ore (contd.)		
Serra Norte N1/N2[3]	**Capacity: Under evaluation**	**Stage: FEL2**
Northern System (Brazil)	Replacement project	
Vale's ownership: 100%	Open pit mine	
Mega Hubs	**Capacity: Under evaluation**	**Stage: Prefeasibility Study**
Middle East	Growth project	
Vale's ownership: N/A	Industrial complexes for iron ore concentration and agglomeration and production of direct reduction metallics	Vale signed three agreements with Middle East local authorities and clients to jointly study the development of Mega Hubs

[1] Refers to the most advanced projects (Bacaba and Cristalino).
[2] Indirect ownership through Vale's 44.34% equity in PTVI. PTVI will own 100% of the mine and has the option to acquire up to 30% of the plant as part of the JV agreement.
[3] Project scope is under review given permitting constraints.