

# SUSTAINABILITY

Report  
2023



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# MESSAGE FROM THE CEO

[2-22]



**MAGDA CHAMBRIARD**  
*Petrobras CEO*

It is with great pleasure that I share the results and achievements attained by Petrobras throughout 2023. It was a year of hard work and dedication, of overcoming challenges, achieving goals and records. The 2023 Sustainability Report shows our commitment to the company's transparency and responsible practices, providing detailed information about our environmental, social, and governance (ESG) practices, as well as the company's progress in relation to our strategy.

In 2023, we approved our 2024-2028+ Strategic Plan (SP 2024-28+), a historic plan aimed at preparing and strengthening the company for the future. Over the next five years we plan an investment of USD 102 billion, 31% higher compared to the previous cycle. The SP 2024-28+ reaffirmed our position on ESG issues, integrating its elements into a single vision, with a focus on four key ideas: (i) reducing carbon footprint; (ii) protecting the environment; (iii) caring for people; and (iv) acting with integrity.

We have taken important steps towards a just energy transition, taking on a leadership role in the development of low-carbon energy sources in Brazil and increasingly more sustainable products. As examples, we can mention the maritime fuel with reduced sulfur content, the new CAP Pro asphalt, which consumes less energy, reduces emissions, and has greater durability; and the new Podium gasoline, the first carbon-neutral gasoline in the Brazilian market. Furthermore, we are committed to act in an integrated way with the just and participatory energy transition agenda, particularly in reducing social inequalities, including energy poverty, in alignment with the principles of climate justice and sustainable development, while considering the rights of workers and communities.

Throughout 2023, we achieved significant results in several areas. We reduced our greenhouse gas emissions by 41% (considering 2015 as a baseline year) and injected 13 million tCO<sub>2</sub>, the largest amount injected in a single year. We also reduced our natural



gas consumption and achieved the highest total utilization rate of our refining units. These results reflect our commitment to operational efficiency and to the reduction of environmental impacts.

We invested in social and environmental projects, aiming to contribute to the sustainable development of the communities where we operate. We launched the largest public selection process in the history of the Petrobras Socioenvironmental Program, which will allocate over BRL 430 million to projects in education, sustainable economic development, ocean conservation, and forests over the next three years.

Furthermore, in 2023, through our activities, we distributed approximately BRL 378.7 billion to federal, state, and municipal governments through the payment of taxes, royalties, and special participations, financial institutions, supply chain, shareholders, and employees. Also, amounts around BRL 159 million were employed in voluntary social and environmental projects, BRL 566 million in social and environmental programs related to licensing conditions, BRL 89 million in cultural and sports projects, in addition

to donations totaling BRL 2 million, which largely supported families affected by heavy rains in São Paulo during the year.

It is worth adding that, as of 2024, due to the public calamity caused by heavy rains and floodings in Rio Grande do Sul in early May, we donated nearly BRL 10 million to assist victims. The Rio Grande do Sul state is a region where we operate, and the ongoing critical situation motivates us to dedicate efforts to activate the emergency and crisis to support the population. We express our solidarity with our local workforce and the community through actions such as providing accommodation for around 600 people in our employee association, donating fuel, and providing a helicopter for transporting supplies and boats for rescuing victims. As we conclude this report, we cannot yet determine the future or the actions that will still be necessary, but we are sure of our commitment with the reconstruction of the entire region.

In line with our full attention to people, we have approved the Diversity, Equity, and Inclusion Policy

and have created a dedicated management area for this theme. Thus, we commit to affirmative actions for underrepresented groups, as well as establishing goals and indicators for our diversity agenda, not only within Petrobras but also for suppliers and partners. The inclusion of the Diversity Clause in the terms of technological cooperation is an example of an initiative aimed at ensuring the participation of different groups. We have also set up the Petrobras Program Against Sexual Violence and the Support Channel to combat harassment and sexual violence and provide support to our employees.

Employees are one of our most important intangible assets. The ability to attract qualified and talented employees, as well as retain and nurture internal talent, is crucial to our success and sustainability. In 2023, over two thousand employees were hired through public selection processes, with 20% of the positions being reserved for Black people and 8% for people with disabilities. Additionally, the expansion of reserved positions for people with disabilities to 20% for the next technical level public selection process was approved.



We have made significant progress in our pursuit of safety excellence. In 2023, we halved the number of severe and fatal incidents compared to the previous year. Since the launch of the first Commitment to Life Program in 2016, we have seen a significant reduction in the Total Recordable Injury Rate (TRIR), from 2.15 to 0.80, still above the company's alert limit of 0.7 set for the year. Additionally, despite our zero fatality ambition, in 2023 we recorded two fatalities. These losses are regrettable and indicate that we need to persist and continue improving our practices in order to achieve absolute safety excellence.

We reinforce our commitments to environmental protection, with the reduction of water withdrawal and solid waste generation. Over the last three years, we have reduced freshwater withdrawal, which can be from rivers, aquifers, water utilities or other sources, of our operations by more than 20%. We went from approximately 150 million of cubic meters withdrawn in 2021 to about 115 million cubic meters in 2023, thus contributing to the maintenance of this relevant resource for society. Thereto, in addition of our portfolio management, actions for the reuse

and reduction of water losses were implemented. The generation of hazardous solid waste in 2023 was 27.6% below the set internal limit of 110 thousand tons for the year, and the generation of non-hazardous solid waste was 10.2% below the internally set limit of 160.2 thousand tons. In 2023, we achieved a milestone of 91% reuse and recycling of the disposed waste. Furthermore, we reached 55% of our commitment to have 100% of our facilities with a Biodiversity Action Plan by 2025.

Our previous 2022 Sustainability Report was recognized as one of the top ten reports of the year by the Reporting Matters methodology, evaluated in Brazil by the Brazilian Business Council for Sustainable Development (CEBDS). This recognition was due, among other factors, to the strong alignment between governance and business strategy for the promotion of sustainable development, as well as the thorough and in-depth presentation of the company's impacts, balanced between positive aspects and challenges. This motivates us to keep our commitment to transparency, excellence, and continuous improvement.

I invite all of you to explore said report as it reflects our responsible operation and our efforts to integrate the Ten Principles of the United Nations Global Compact into our business strategy, culture, and daily operations, contributing to the Sustainable Development Goals.

Lastly, I would like to express my sincere gratitude to all employees, suppliers, partners, and shareholders who have contributed to the success achieved in 2023. Petrobras is made up of committed and talented people who dedicate themselves daily to overcoming challenges and building an increasingly sustainable and resilient company. Let us continue together, with determination and commitment, in pursuit of a better future for Petrobras and the world.

**MAGDA CHAMBRIARD**  
*Petrobras CEO*

# ABOUT THE REPORT

[2-2] [2-3] [2-4] [2-5] [2-14]

The 2023 Sustainability Report meets the requirements of Law 13,303/16 and covers the period from January 01, 2023, to December 31, 2023 with the addition of relevant data regarding the history or facts that occurred in the initial months of 2024. When this occurs, the period is set forth in the report. Petrobras' Sustainability Report is published annually, after the Financial Statements and other specific documents (such as the Human Rights and Corporate Citizenship Supplement and the Climate Supplement) referenced in this report.

We use the Global Reporting Initiative (GRI Standards 2021) as guidelines for sustainability reporting, and we respond to indicators contained in standards from the Sustainability Accounting Standards Board (SASB), aimed at the oil and gas industry that are suitable for our organization (Exploration & Production, Midstream and Refining & Marketing). As a complementary reporting methodology, we use the International Petroleum Industry Environmental Conservation Association

(Ipieca) Sustainability Reporting Guide. The GRI and SASB Content Index can be found at the end of this report.

The scope of information includes our activities in Brazil and abroad, including data regarding subsidiaries listed in the Financial Statements, when relevant to the parent company (consolidated).

In some cases, the data considers only the parent company or the parent company and some subsidiaries that bring materiality to the indicator. In this case, the information under consideration is stated next to the indicator.

Our report is divided into initial chapters, which include the strategic breakdown for ESG (Environmental, Social and Governance) themes, based on risks and opportunities identified in the short-, medium- and long-term view, engagement with our stakeholders, as the demands of these groups are considered in our management and in our



reporting, and the economic impacts on the business, market, and value chain. Hereinbelow we present our material topics, their indicators, initiatives, and management practices, distributed in accordance with our ESG positioning published in the 2024-2028+ Strategic Plan, which are:

In addition to the chapters described above, this year we published an ESG Datasheet that brings together quantitative data, including the indicator performance.

to the mission, goals, strategies, and guidelines set forth by the Board of Directors. The report was also validated by the advisory committee to the board of directors, the Health, Safety and Environment Committee (CSMS).

 **Check out the [ESG Datasheet](#) with the quantitative contents of the [GRI](#) and [SASB](#) indicators.**

KPMG was responsible for the limited assurance service of the information within the Sustainability Report 2023, as can be seen in the chapter Auditors' limited assurance report.

Emission data disclosed on the Sustainability Report 2022 had minor adjustments due to the revision of the inventory after certification by a third-party concluded in June 2023. Safety and occupational health indicators, to know: Occupational Disease Incidence Rate, Percentage of time lost due to illness or accident and Average Lost work Days Cases (Average LWDC), that were disclosed covering the parent company, Libra, Petrobras Bolivia, Petrobras International Braspetro (Colombia office) and Transpetro, actually refer to Petrobras parent company only.

As the Board of Directors is responsible for deciding on issues set forth in the law, in the company's Bylaws or in rules approved by the Board itself, not covering the Sustainability Report, such approval was carried out by our Executive Board. The Executive Board is the highest governance body with the responsibility of managing the company's businesses according



**REDUCING THE CARBON FOOTPRINT**



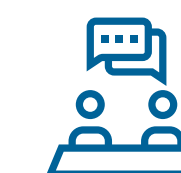
**PROTECTING THE ENVIRONMENT**



**CARING FOR PEOPLE**



**ACTING WITH INTEGRITY**



**DISCLAIMER**

This document may contain forecasts that are only a reflection of management expectations. The terms "anticipates", "believes", "expects", "forecasts", "intends", "plans", "projects", "targets", "shall", as well as other similar terms, seek to identify such forecasts, which obviously involves risks or uncertainties that we may or may not predict, and therefore are not guarantees of future results. Therefore, the future results of our operations may differ from current expectations, and the reader should not rely solely on the information contained herein. We undertake no obligation to update such forward-looking statements in light of new information or future developments in this document.

# ABOUT US

[2-1] [2-6] [11.7.4]

We are a Brazilian mixed capital company, one of the largest oil and gas producers in the world, operating mainly in the areas of exploration and production, refining, electricity generation and trading. We are also committed to being the best diversified and integrated value-generating energy company, building a sustainable world, reconciling the focus on oil and gas with diversification into low carbon businesses (including petrochemical products and fertilizers), sustainability, safety, respect for the environment and full attention to people. We are experts in exploration and production as a result of decades of development in Brazilian basins, especially in deep and ultra-deep waters, which has made us a global leader in this segment.

Our business goes beyond the scope of oil and gas production. It is a long production chain in which we transport oil and gas to our refineries and natural gas treatment units, which are equipped and constantly evolving to provide high quality products. Our oil and gas production stands out worldwide due to its low

cost, low emissions and low carbon footprint, a position resulting from the use of cutting-edge technologies. We hereby inform that there have been no significant changes to our business model in the last year.

Our main products sold in Brazil and around the world are oil, diesel, gasoline, natural gas, electric energy, aviation fuel, LPG, naphtha, asphalt, marine fuels, and fuel oil.



Information about our activities can be found in the **“Our business”** section of Form 20F.

Information about our controlling shareholders can be found in item 6.5 of the **Reference Form**.

## RESERVES

We have a large base of proved reserves and operate and produce most of Brazil’s oil and gas. The most significant part of our proved reserves is located in the adjacent offshore Campos and Santos Basins in southeast Brazil. Their proximity allows us to optimize our infrastructure and our costs of exploration, development and production. The Campos and Santos Basins are expected to remain an important source of proved reserves and oil and gas production.

## SHAREHOLDERS

We are controlled by the Federal Government, which, on December 31, 2023, directly held 50.26% of our common shares and 28.67% of our total share capital. The Federal Government also held an indirect interest of 18.48% of our preferred shares; and 7.94% of our total share capital, through the following shareholders: Brazilian National Economic and Social Development Bank (BNDES) and BNDES Participações S.A. (BNDESPAR). We do not currently have a shareholder agreement.





## OPERATIONS IN BRAZIL

We operate the majority of the refining capacity in Brazil. Our refining capacity is distributed across the Southeast, South and Northeast regions of Brazil, reaching the largest market share in these and other regions of the country through direct deliveries, pipelines and also via cabotage. We mostly meet our demand for oil products by domestic refining of crude oil, as defined in a periodic integrated operational planning process which constantly seeks to maximize value for the company. We are also involved in the production of petrochemicals and biofuels through interests in companies.

We are responsible for the largest natural gas-powered thermoelectric operation in Brazil. Our plants play an important role in the supply and monetization of our own gas and in the secure operation of the electrical system with the higher share of renewable sources. Portfolio management of the generating complex is under permanent evaluation. In relation to natural gas, we operate in the areas of production, supply, processing, transportation, import of natural gas and import of Liquefied Natural Gas (LNG), regasification of LNG, supply of gas for internal consumption and markets sales.

Natural gas can be fuel or raw material for different uses, such as transport, the transformation industry, heating or cooking in homes and commercial establishments, and the production of fertilizers, as well as for electricity generation in thermal plants.

In 2023, we reached another annual record in gas utilization, reaching 97.6% utilization in relation to the gas produced. Furthermore, it is worth mentioning that in December 2023 we reached the monthly record, with 98.2%.

Our largest gas clients are natural gas distribution companies, responsible for supplying the market made up of users in the industrial, commercial, residential and vehicle segments, as well as customers in the thermoelectric segment. We also cater to customers who act as free consumers, consisting in most cases of large industrial plants, as well as refineries and thermoelectric plants.

To serve the consumer market, we process natural gas from our onshore and offshore production (mainly from fields in the Campos, Espírito Santo, and Santos Basins), import natural gas from Bolivia and LNG through regasification terminals.

Natural gas is transported through pipelines that connect the main sources of supply (domestic production and imports) to consumers.

Brazil has an integrated transport pipeline network that extends over almost the entire Brazilian coast, from Ceará to Rio Grande do Sul, in addition to reaching more inland regions of the country in Minas Gerais, São Paulo and Mato Grosso do Sul. Brazil also has an isolated system in the Northern Region that moves natural gas production from Urucu to Manaus. The transport pipeline network is operated by different transport companies, and we maintain a shareholding in TBG and TSB.

We participate in the Brazilian electricity market mainly through our investments in gas-thermoelectric plants, renewable energy and interests in fuel oil, diesel oil and natural gas plants.



## INTERNATIONAL OPERATIONS

As of 12/31/2023, we had activities in seven countries, in addition to Brazil: Argentina, Bolivia, Colombia, United States, Netherlands and Singapore. In Latin America, these activities mainly involve hydrocarbon exploration and production operations, mainly natural gas. In Colombia, we are also present in the liquid fuel retail segment. In North America, we produce oil and gas through a minority stake in a joint venture.

The year 2023 marked the resumption of our operations on the African continent, as part of the reserve replacement strategy, with the acquisition of a stake in three exploration blocks operated by Shell, in São Tomé and Príncipe, announced to the market at the end of december.

We have subsidiaries companies in the Netherlands (Rotterdam), USA (Houston) and Singapore that carry out our logistical and financial trade activities abroad. These subsidiaries are responsible for market intelligence and trading of oil, oil products, and natural gas, in addition to storage (tankage) and chartering operations.

## PORTFOLIO MANAGEMENT

The management of our portfolio comprises the continuous and integrated analysis of our assets, aiming to generate value and competitiveness, in line with corporate strategies for the business segments. The purpose of an active portfolio management is to ensure good market opportunities, in accordance with our strategic goals, generating value for shareholders, employees, communities, customers, suppliers, society and partners.

In 2023, a strategic redirection occurred that resulted in a focus on increasing oil and gas production, while at the same time identifying value in integration with the downstream process to generate value for our business. Furthermore, we aim to create value with a just energetic transition by identifying profitable low-carbon businesses and prioritizing partnerships. Another important pillar is fiscal responsibility with indebtedness control, investments and business decisions respecting the ideal capital structure and solid project governance.

This new direction led portfolio management to consider acquisition and partnership opportunities to a greater extent. These opportunities must be aligned with the drivers of the 2024-2028+ Strategic Plan, mainly with regard to making profitable investments,

maintaining the company's long-term sustainability and capital discipline.



Information about our strategic drivers can be found in the **2024-2028+ Strategic Plan**.

During the year 2023, and up until the publication of the report, we signed three transactions and completed four transactions. We signed a sales contract for the Urugá-Tambaú Cluster, located in deep waters in the Campos Basin, in the state of Rio de Janeiro, with a value to be received of US\$ 35 million. We signed a sales contract for our stake (18.8%) in UEG Araucária (UEGA) for a value of US\$ 13.5 million. We signed a sales contract for the Cherne and Bagre dormant fields, located in shallow waters in the Campos Basin, for a value of US\$ 10 million. And we completed four transactions: Albacora Leste, Polo Norte Capixaba, Polo Potiguar (including the Guamaré industrial cluster), and Polo Golfinho e Camarupim.

# MATERIALITY

[3-1][3-2]

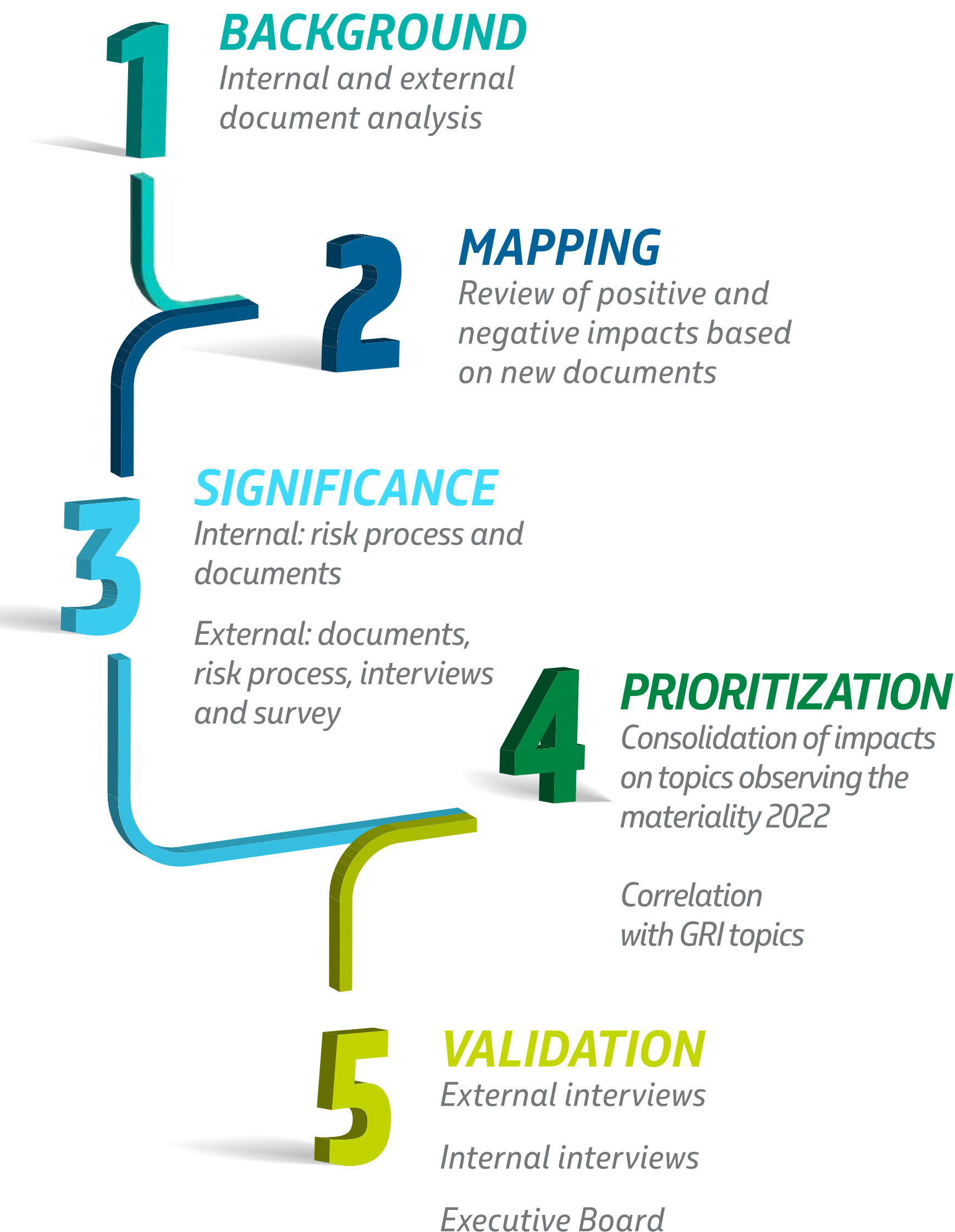
Our process of surveying material sustainability issues is based on the perspective of positive and negative real and potential impacts on people and the environment, including human rights, and on the company (positive and negative real and potential impacts, that may financially affect the company). Our materiality is reviewed every year, when we check whether there is a need to develop a new process or whether the context, business and legislation conditions remain similar, leading to a process of reviewing the previous materiality. In 2023, we found that the most appropriate option would be to review our matrix, strengthening the method for measuring our financial materiality and updating documents and data collection.

Our goal with the 2023 review was to verify:

- whether impacts related to material topics remained the same or whether new impacts could be mapped;
- whether themes considered non-material in the previous process became material based on new impacts mapped in the period.

To do so, we use as guidelines the Global Reporting Initiative (GRI) 3 – Material Topics 2021 standard and the GRI 11 sectoral supplement, focused on the oil and gas industry, in addition to the European Sustainability Reporting Standards (ESRS) 1 – General requirements. Thus, our materiality review process was based on the concept of double materiality and raised Petrobras' material issues both in relation to the impacts caused to stakeholders and the impacts received by the organization.

The following figure illustrates the steps taken:



For context analysis and mapping of real and potential impacts, we collected secondary data from company documents and external materials. The database used to verify the impacts on stakeholders included analysis of articles published in the media, demands from investors, external sustainability assessments about our company, complaints from communities, demonstrations on social networks and received by the ombudsman, image research corporate, among other materials. Documents from the industry or those that present impacts on our business were also studied, such as the World Economic Forum's risk map and the material topics from the Sustainability Accounting Standards Board (SASB). The database of impacts received by the organization was fed by our corporate risk mapping process and other internal documents, such as our Strategic Plan.

Our process for risk identification, assessment and monitoring was used both to measure impacts on people and the environment, and to measure impacts on the organization, including financial ones. Thus, we observe exposure to risks, taking into account the chance and level of consequences, when verifying the impacts associated with material topics.

To attribute the significance of the mapped impacts, we performed a frequency/relevance analysis on

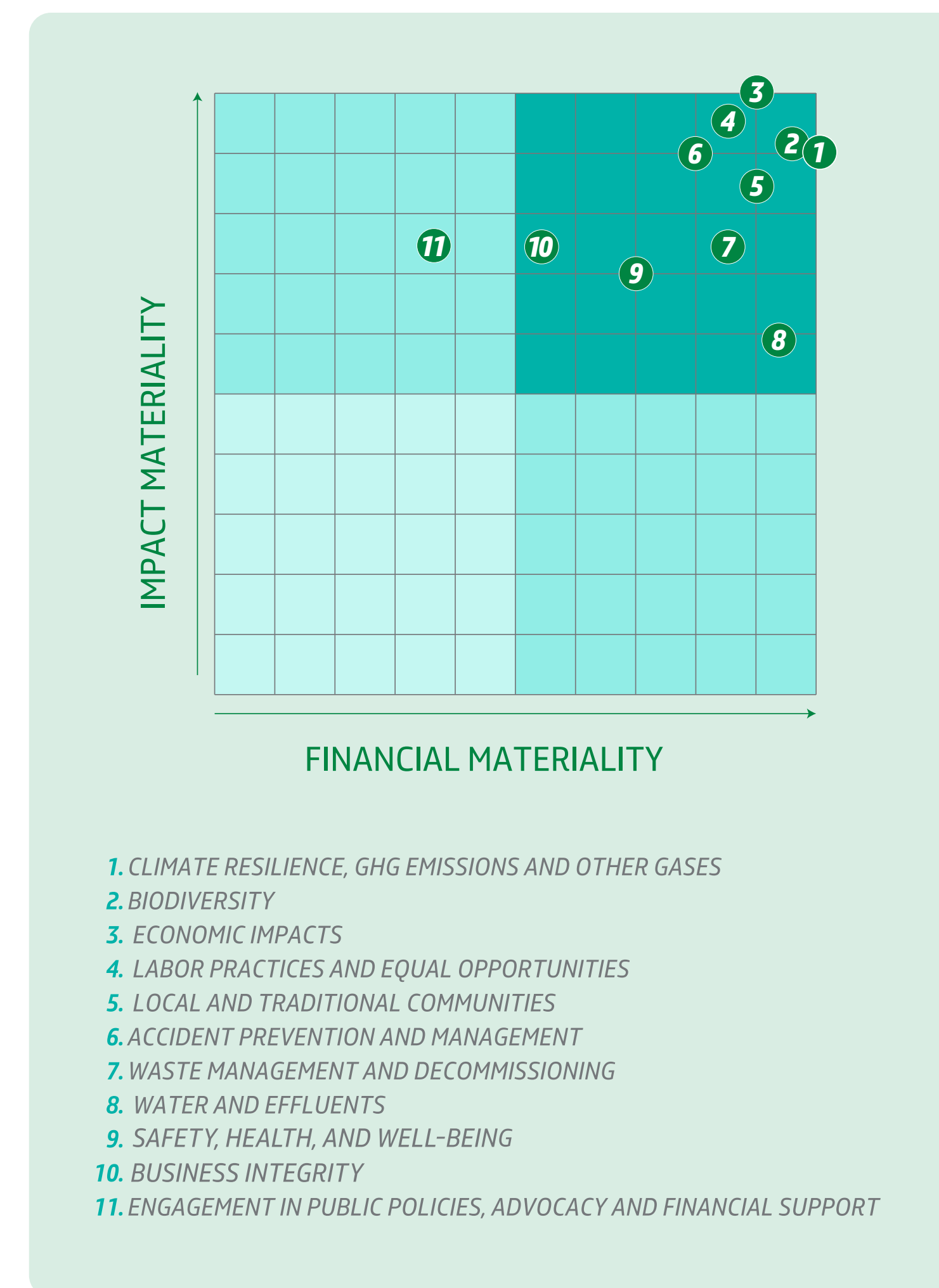
the database and produced primary data through a survey open to all audiences, in addition to interviews with customers. The collection of primary data and articulation with the corporate risk management process improved the description of our material topics.

In addition to society as a whole, the audiences specifically considered in mapping impacts and attributing significance were:

- Investors
- Clients
- Communities
- Suppliers
- Internal audience
- Consumers

The next stage consisted of prioritizing the themes raised. The impacts were compared according to the attribution of importance given by the public and normalized on a scale from zero to one. They were then correlated to material topics according to the survey process in 2022 and the GRI sector standard.

**In our 2023 matrix, our themes are positioned as follows:**





As seen in the graph above, considering only the materiality of impact axis, the order of themes, in decreasing scale of relevance, is: Economic impacts; Labor practices and equal opportunities; Biodiversity; Climate resilience, GHG emissions and other gases; Accident prevention and management; Local and traditional communities; Business integrity; Waste management and decommissioning; Engagement in public policies, advocacy and financial support; Safety, health and well-being; and Water and effluents.

Considering only the financial materiality axis, the order on a decreasing scale of relevance, is: Climate resilience, GHG emissions and other gases; Biodiversity; Water and effluents; Local and traditional communities; Economic impacts; Waste management and decommissioning; Labor practices and equal opportunities; Accident prevention and management; Safety, health, and well-being; Business integrity; and Engagement in public policies, advocacy, and financial support.

The criterion for a topic to appear as material, according to the methodology adopted, was to be at a position equal to or above 0.3 on the consolidated standard scale, the same precept used in 2022. Therefore, only the GRI themes “unfair competition” and “freedom of association and collective bargaining”

were not considered material for the company. “Forced labor and modern slavery” was integrated into the theme “Labor practices and equal opportunities” and “Rights to land and natural resources” was integrated into the theme “Local and traditional communities”. The theme “Engagement in public policies, advocacy and financial support” started to be considered material due to the acquired significance.

The last stage of the materiality review process consisted of validating the results obtained in the previous stages through interviews with external and internal experts. The detailed work was presented to our Health, Safety and Environment Committee (HSEC) of the Board of Directors (BoD), and our Executive Board. The validation aimed to test our selection of material topics, collecting experts’ impressions regarding:

- the scope of the topics raised, helping to ensure that no topic was neglected that could be material for the company and sector
- the threshold we establish to define which themes are material for the report
- alignment with the themes of the GRI 11 sector standard

As a result, the stage contributed to improving the writing of the material topics highlighted but did not question the identification of the material topics itself, the methodology or prioritization.

Since the BoD is responsible for deliberating on matters present in the law, in the Bylaws or in a rule approved by the BoD itself, not falling within this case, our materiality matrix was approved by the Executive Board on 12/15/2023. The Executive Board is the highest governance body responsible for managing the company's business under the mission, goals, strategies, and guidelines established by the BoD.

MATERIAL TOPIC  
**CLIMATE RESILIENCE, GHG EMISSIONS AND OTHER GASES**

STRATEGIC PLAN DIMENSION  
**REDUCING CARBON FOOTPRINT**

GRI THEME  
**11.1 11.2 11.3**

MOVEMENT IN RELATION TO 2022 **+ 2 posições**

Direct and indirect emissions of greenhouse gases (scope 1, 2 and 3), risks and opportunities and the company's approach to climate change and the energy transition. Adaptation of energy production to new, stricter environmental legislation. It includes management of atmospheric emissions and their impacts on ecosystems, people's health, and the well-being of local communities. It includes positive impacts from the implementation of technologies in the process to reduce the intensity of emissions, the development of products with a lower environmental impact and mitigation programs and projects. Socioeconomic impacts of the new business cycle related to the energy transition. Positive impact with the potential to reduce inequalities and improve supply and access to clean energy. Positive impact on forest preservation through actions to acquire carbon credits and other forms of preservation. Finally, the topic also covers responsibility for the supply chain, in particular actions aimed at small suppliers and expansion of local suppliers, in addition to the role of developing the industrial sector and technical innovations and chain reaction potential.

IMPACT MATERIALITY



FINANCIAL MATERIALITY



ODS



MATERIAL TOPIC  
**BIODIVERSITY**

STRATEGIC PLAN DIMENSION  
**PROTECTING THE ENVIRONMENT**

GRI THEME  
**11.4**

MOVEMENT IN RELATION TO 2022 **+ 3 posições**

It consists of managing risks and impacts on biodiversity, aiming to avoid and minimize impacts, such as changes in air, soil and water quality and loss of fauna and flora species, and, when this is not possible, recovering and/or compensating for residual impacts, in line with the mitigation hierarchy, throughout the life cycle of the projects. It includes programs and projects for environmental protection and restoration, contributing to the conservation and improvement of biodiversity and ecosystem services, especially in areas of high biodiversity value in terrestrial and especially marine environments, due to the greater activity in this biome. New frontiers of production in ecologically sensitive environments.

IMPACT MATERIALITY



FINANCIAL MATERIALITY



ODS



MATERIAL TOPIC  
**ECONOMIC IMPACTS**

GRI THEME  
**11.14 11.21**

MOVEMENT IN RELATION TO 2022 **- 2 posições**

Consequences with payments of taxes, royalties, salaries and suppliers, distribution of dividends and their consequences at local, national, and global levels, such as the multiplier effect on the economy, social transformations, and improvements in infrastructure through these payments. Includes impacts on business, market and value chain arising from vulnerability to commodity prices, variation in production and demand, adopted pricing policy and investments and divestments of companies and assets, as well as tax approach, tax compliance and payment accountability to governments. Responsibility and attention to the supply chain, especially actions aimed at small suppliers and expansion of local suppliers. Role in the development of the industrial sector and technical innovations and chain reaction potential.

IMPACT MATERIALITY



FINANCIAL MATERIALITY



ODS



MATERIAL TOPIC

## LABOR PRACTICES AND EQUALITY OF OPPORTUNITY

STRATEGIC PLAN DIMENSION 2024-28+  
CARING FOR PEOPLE

GRI THEME  
**11.10 11.11 11.12**

MOVEMENT IN RELATION TO 2022 **+ 3 posições**

Employment opportunities and positive impacts on workers due to the employment practices adopted and their influence on the supply chain. It includes impacts on employees, on their careers and development, and on the organizational environment due to the level of transparency in communication and the establishment of dialogue, especially in career advancement processes, and the company's policies and practices in relation to the promotion of non-discrimination, diversity, equity, inclusion, and equality of opportunity. Sexual harassment, moral harassment and discrimination and the company's approach to the issue. Positive impacts on workers and the organization due to the implementation of remote work. Prevention of forced labor and modern slavery, especially in the supply chain. Training and qualification of the workforce.

IMPACT MATERIALITY



FINANCIAL MATERIALITY



ODS



MATERIAL TOPIC

## LOCAL AND TRADITIONAL COMMUNITIES

STRATEGIC PLAN DIMENSION 2024-28+  
CARING FOR PEOPLE

GRI THEME  
**11.15 11.16 11.17 11.18**

MOVEMENT IN RELATION TO 2022 **+ 1 posição**

Economic and social development of communities surrounding our operations. Negative impacts on the community both in operations and in the investment and divestment process, general social disruptions, and risk of human rights violations in the community, including those caused by the supply chain and security forces. Includes direct and indirect impacts such as: production of noise, odor, soot, demographic increase, increased influx of workers and vehicle traffic, increased cost of living and impacts on Indigenous peoples and traditional communities, such as fishing communities, due to restriction zones, seismic surveys, and support vessel traffic, as well as those resulting from spills. It includes positive impacts such as security and protection for local communities through direct communication with communities and public security forces. Systematization of the human rights due diligence process. Respect for the right to land in resettlement processes and respect for the communities' right to natural resources when installing new ventures and operations.

IMPACT MATERIALITY



FINANCIAL MATERIALITY



ODS



MATERIAL TOPIC

## ACCIDENT PREVENTION AND MANAGEMENT

STRATEGIC PLAN DIMENSION 2024-28+  
PROTECTING THE ENVIRONMENT

GRI THEME  
**11.8**

MOVEMENT IN RELATION TO 2022 **- 2 posições**

Set of strategies, plans and management practices adopted by the company to promote safe operation of assets and logistics activities. Maintaining the readiness of emergency response systems to mitigate impacts on human life, the environment, infrastructure, and reputation. It includes the ability to perform integrated work with public authorities, partners, the community, and other actors in emergency situations, such as, for example, response actions for spills at sea to prevent touching the coast and in sensitive areas. Corporate security risks arising from acts of intentional interference by third parties in its pipelines and nearby areas, especially clandestine tappings of oil and oil products.

IMPACT MATERIALITY



FINANCIAL MATERIALITY



ODS



MATERIAL TOPIC

## WASTE MANAGEMENT AND DECOMMISSIONING

STRATEGIC PLAN DIMENSION 2024-28+  
PROTECTING THE ENVIRONMENT

GRI THEME  
**11.5 11.7**

MOVEMENT IN  
RELATION TO 2022 **+ 3 posições**

Waste management covers measures for the proper management of solid waste throughout the lifecycle of our businesses, including circular economy practices, which seek to prevent generation, reduce, reuse, recycle, treat hazardous and non-hazardous waste and environmentally appropriate disposal of waste in order to value materials and resources while avoiding or mitigating possible impacts to the environment and human health. Includes the decommissioning process, related to the process of dismantling, transportation and disposal of equipment, structures, and waste, in addition to risks (threats and opportunities) of decommissioning activities and the appropriate planning and execution of studies and projects, with a view to sustainability, protection of the environment, safety and care of people. Recovery of contaminated areas.

IMPACT MATERIALITY



FINANCIAL MATERIALITY



ODS



MATERIAL TOPIC

## WATER AND EFFLUENTS

STRATEGIC PLAN DIMENSION 2024-28+  
PROTECTING THE ENVIRONMENT

GRI THEME  
**11.6**

MOVEMENT IN  
RELATION TO 2022 **+ 1 posição**

Variation in the availability or quality of water in our areas of influence due to the withdrawal/or disposal of effluents associated with the company's activities, including produced water. It covers negative impacts on biodiversity and human health in the case of water scarcity for water capture or assimilation of our effluents, and positive impacts such as the return of water resources in better quality than captured or in the implementation of conservation and recovery projects for springs and riparian forest. Technological adaptation of E&P and refining activities in scenarios of permanent water scarcity.

IMPACT MATERIALITY



FINANCIAL MATERIALITY



ODS



MATERIAL TOPIC

## SAFETY, HEALTH, AND WELL-BEING

STRATEGIC PLAN DIMENSION 2024-28+  
CARING FOR PEOPLE

GRI THEME  
**11.9**

MOVEMENT IN  
RELATION TO 2022 **- 1 posição**

Company approach to achieving healthy and safe working conditions. It includes efforts to prevent physical and mental harm to workers and to promote health, seeking to avoid negative impacts such as fatalities, work accidents and occupational diseases.

IMPACT MATERIALITY



FINANCIAL MATERIALITY



ODS





MATERIAL TOPIC  
**BUSINESS INTEGRITY**

STRATEGIC PLAN DIMENSION 2024-28+  
**ACTING WITH INTEGRITY**

GRI THEME <b>11.20</b>	MOVEMENT IN RELATION TO 2022 <b>- 8 posições</b>
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Governance and compliance mechanisms covering aspects of corporate integrity, transparency in the decision-making process and management appointment policies, positioning in relation to ethics and anti-corruption, promotion of a balanced and fair environment. It includes actions to prevent, detect and remedy misconduct and harmful acts committed against the company, including those related to fraud, corruption, influence peddling, money laundering, commercial sanctions, conflict of interests, and other illicit activities against management that cause economic and reputational impacts for the company, its investors and value chain, as well as the management of contracts and availability of public information regarding them. It includes the risk of negative impacts due to a weak system, ineffective controls, or biased supervision, as well as the risk of positive impacts due to responsible business practices and integrity commitments in the value chain. Ethics in the adoption of artificial intelligence and new technologies.

IMPACT MATERIALITY ●●●●●●●●●●	FINANCIAL MATERIALITY ●●●●●●●●●●
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ODS

MATERIAL TOPIC  
**ENGAGEMENT IN PUBLIC POLICIES, ADVOCACY, AND FINANCIAL SUPPORT**

STRATEGIC PLAN DIMENSION 2024-28+  
**ACTING WITH INTEGRITY**

GRI THEME <b>11.22</b>	MOVEMENT IN RELATION TO 2022 <b>NEW THEME</b>
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Contribution to the development of public policies that promote energy security, environmental protection, and social well-being. Advocacy and impacts on subsidies, laws, and others. Engagement with stakeholders to promote a more comprehensive and sustainable approach to the oil and gas industry. Investment in research, innovation, and technology to develop environmentally efficient and socially fair solutions.

IMPACT MATERIALITY ●●●●●●●●●●	FINANCIAL MATERIALITY ●●●●●●●●●●
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ODS

**ANALYSIS**

We consider that the most relevant aspect of the review of our materiality is related to the axis of impacts on the company. If until last year our analysis of the positioning of themes consisted of the vision that the company itself had about the impacts it caused to stakeholders, in 2023, following the guidelines of the ESRS regulations, we began to consider the impacts suffered by the company and their financial repercussions in the medium and long term.

Thereto, we use our Business Risk Matrix as the main input, which has the participation of all areas of the company and establishes a scale of severity of the risks observed, in a systematized process, widely reviewed and updated (the Business Risk area coordinates biannual reviews and other areas must update risks in a timely manner). The material topics, whose relevance for society and the company are explained in this chapter, also consider the risk factors (main risk events) that are detailed in the risk management chapter.



Our impacts mapped in the licensing processes are also used to measure the impacts we suffer, as we will have to face financial repercussions if we do not address them. Both the vision of the impacts for the company, and the analysis of the stakeholders regarding the impacts caused by us to them, are inputs for the Petrobras Strategic Plan, in feedback process.

In the review process carried out in 2023, we improved the wording of our material topics, considering risks and impacts assessed by our stakeholders in the survey and validation interviews, and also the notes we make on our risk factors. Thus, we made the writing of the themes more in line with what was observed in the review, in constant improvement.

As previously described, we grouped the GRI sector themes into Petrobras themes because many of them are integrated into the same management process and it would not make sense to separate the subjects that have integrated management. Regarding the changes in the positioning of themes observed in relation to 2022, we noticed that the themes of climate resilience, GHG emissions and other gases, and biodiversity grew in importance and began to be positioned in practically the same position. This joint prioritization is explained by the expectation that climate impacts

will affect biodiversity as well as company strategies. Forced and degrading labor, which does not usually affect direct workers in the oil and gas industry as it is an industry with good employment practices, is a warning sign in the supply chain in sustainability assessments aimed at investors and customers and this can be noted in the importance acquired by this GRI theme in the review. The addition of forced and degrading labor in the material topic “Labor practices and equal opportunities” demonstrates the concern of our stakeholders and corporate analyses regarding this issue, showing how our perception is aligned with a market increasingly attentive to respect for workers throughout the value chain. Likewise, the rights to land and natural resources, which affect communities in licensing and decommissioning processes, also acquired the status of a material topic, forming the theme “Local and traditional communities”.

Engagement in public policies, advocacy and financial support also became a material topic for the company. Although the specific indicators related to this topic have always been reported by us, the increased relevance due to the creation of a new topic indicates that our company and our stakeholders recognize the mainly positive impact we have on society and our leading role in the Brazilian reality.

According to analysis, the topics considered non-material are related to issues of maturity and scope, although their importance is recognized. “Freedom of association and collective bargaining”, in a company that has a strong union and broad negotiation of labor issues with employees, may not be considered a priority because a mature relationship has been established, with its own strength that allows a focused look at more urgent issues. Unfair competition, centered on aspects such as collusion and abusive practices, was not prioritized by our stakeholders. Other items linked to this topic, such as pricing policy, are already covered in the topic “Economic impacts”.

Thus, the materiality review shows the growing concern with sustainability issues, which go beyond the economic/financial aspect, in a path that recognizes that ESG issues are fundamental to the continuity of our business.

# STAKEHOLDER ENGAGEMENT

[2-29]

We classify stakeholders as groups of individuals and organizations that share common social, political, economic, environmental, or cultural issues and needs. They establish or may establish relationships with us and have the ability to influence or be influenced by our activities, business, and reputation. The selection of stakeholders that will be engaged is done through prioritization based on the analysis of relevance and impact, in addition to the existing relationships. The criteria can be different according to each stakeholder.


Engagement actions aim at establishing a direct communication, defending interests, increasing favorability, and strengthening ties with those involved, which allows us not only to present our positions and plans, but also to better understand the doubts, needs and expectations of these audiences. This approach enables a more effective flow of information and, consequently, mutual gains over time.

Our classification of stakeholders is shown in the following figure:




## ENGAGEMENT WITH OUR STAKEHOLDERS

Our approach for engagement with stakeholders is adapted according to the characteristics of each stakeholder, as shown below:




### CUSTOMERS

<b>WHY DO WE ENGAGE?</b>	<ul style="list-style-type: none"> <li>To contribute to strengthening the bond with our customers in the face of the challenges experienced in the oil products market, emphasizing our after-sales differential; in addition to improving interpersonal relationships.</li> </ul>
<b>HOW WE ENGAGE</b>	<ul style="list-style-type: none"> <li>Technical, management and integration events,</li> <li>Visits and meetings</li> <li>Satisfaction surveys</li> <li>Provision of relationship channels (Customer Channel Portal, Customer Service (SAC), and the Petrobras Technical Assistance Program)</li> </ul>
<b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b>	<ul style="list-style-type: none"> <li>Reliability and predictability in product supply</li> <li>Price formation</li> <li>Contract negotiations</li> <li>Measurement issues</li> <li>Customer Channel</li> <li>Regulation Milestone</li> </ul>



### SCIENTIFIC AND INNOVATION COMMUNITY

<b>WHY DO WE ENGAGE?</b>	<ul style="list-style-type: none"> <li>To establish new partnerships, to associate with the best available partners, accelerate technological deliveries and reduce the absorption time of innovations, developed from relationships with partner institutions and universities.</li> <li>To promote positive social and environmental transformations in society.</li> </ul>
<b>HOW WE ENGAGE</b>	<ul style="list-style-type: none"> <li>Technological partnerships through cooperation terms and other instruments</li> <li>Technical meetings</li> <li>Public calls for the presentation and execution of research projects,</li> <li>Promotion of internal and external workshops</li> <li>Sending communications by e-mail on strategic and interesting topics</li> <li>Voluntary environmental initiatives, through the Petrobras Socioenvironmental Program, carried out by reference institutions, and coordinated by representatives of the scientific and academic community</li> <li>Provision of scholarships and professional development opportunities for students and researchers through the Petrobras Socioenvironmental Program</li> </ul>
<b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b>	<ul style="list-style-type: none"> <li>Management and continuity of projects</li> <li>New cooperation opportunities</li> </ul>



### COMMUNITIES IN COVERAGE AREA

<b>WHY DO WE ENGAGE?</b>	<ul style="list-style-type: none"> <li>Community engagement is essential so that we can address and monitor the risks and social impacts arising from the interaction between our business, society, and the environment, allowing the construction of relationships based on continuous and transparent communication</li> <li>Finally, engagement contributes to the viability of our businesses and local development</li> </ul>
<b>HOW WE ENGAGE</b>	<ul style="list-style-type: none"> <li>Periodic carrying out socioeconomic diagnoses in the communities in our coverage area, aiming to deeply understand the local reality</li> <li>Management of social risks throughout the business life cycle</li> <li>Annual Social Responsibility Plans of the Units</li> <li>Promotion of community engagement customized to local needs, using relationship tools such as community committee meetings, newsletters on our activities in the territory, visits to communities, as well as visits by communities to our facilities, events, training, and drills to act in emergency situations</li> </ul>
<b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b>	<ul style="list-style-type: none"> <li>Interference with quality of life (odor, noise, smoke, vibration, dust, flare luminosity, among others)</li> <li>Interference with livelihoods (damage to artisanal fishing and/or tourism activities)</li> <li>Interference in local traffic dynamics and/or accidents due to the movement of heavy vehicles</li> <li>Expectation of job creation exceeding demand</li> </ul>



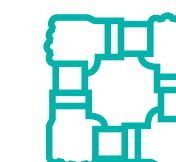
## COMPETITORS

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>To promote access to the main partnership opportunities in areas of interest to Petrobras and exchange of knowledge between companies. And position ourselves as a competitive company, and act actively in the search for reducing CO<sub>2</sub> emissions in the chain, striving to assume a leading role in the context of the energy transition</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>Monitoring the main market movements, observing trends, similarities in positioning, adapting our dynamics, and prospecting growth opportunities, always acting in an ethical, transparent, and competitive manner</li> <li>Carrying out image and reputation research that evaluates our performance in relation to the competition</li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Issues related to the energy transition</li> <li>Promotion of free competition in the national market</li> </ul>



## CONSUMERS

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>To increase our brand reputation levels.</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>Building brand positioning and strengthening communication in a consistent and coherent way with our goals, maintaining transparency as a value for the communication process</li> <li>Through our digital presence, amplifying the reach of our messages and communication lines, whether through our websites and environments, or through content shared through different social networks</li> <li>We work, through advertising, on several campaigns throughout the year with the main objective of improving our image perception and reputation indicators. The main campaign run in 2023 was to celebrate the company's 70th anniversary. In it, as a way of clarifying and reinforcing public opinion and consumers, we communicate our new brand positioning</li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Integrity and compliance in business, preventing and combating corruption</li> <li>Transparency about operations and business</li> <li>Efficient organizational management</li> </ul>



## TRADE ASSOCIATIONS

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>To help understand employees' concerns and create solutions, as well as to facilitate negotiations, reduce the occurrence of strike movements and the incidence of legal actions</li> <li>To ensure a direct communication line with trade associations of sectors to that are relevant to our operating segments, and assuring our participation in discussion forums on technologies, regulatory environment, exchange of good corporate practices, formulation of sectoral proposals, research projects, among others</li> <li>Maintain adequate relationships with communities of influence, to mitigate risks for the business and identify opportunities to act in synergy with local and regional vocations</li> <li>Advocate for policies and regulations that promote the sustainable growth of the oil and energy industry and address key issues such as energy security and climate change</li> <li>Protect the company's reputation, communicating its environmental, social and governance practices and contributions to sustainable economic and social development</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>Establishing close relationships with trade unions, industry federations and technical councils, among other business and employer associations</li> <li>Centralizing communication with trade unions in the area of Human Resources, mainly through meetings</li> <li>We have a specific email address for communicating with unions: <a href="mailto:relacoes_sindicais@petrobras.com.br">relacoes_sindicais@petrobras.com.br</a></li> <li>Investing in permanent and constructive communication line with this public, with respect for employees and their representatives</li> <li>Maintaining a dedicated and skilled team to engage in dialogue with trade associations</li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Employee mobility</li> <li>Remote Work</li> <li>Mental Health</li> <li>Health Insurance (AMS)</li> <li>Collective Labor Agreement</li> <li>Fair energy transition</li> <li>Decommissioning plan</li> <li>Opportunities for the national industry</li> <li>Development of the national supply chain, with a special focus on small and medium-sized companies</li> <li>Exploration on the equatorial margin</li> <li>Opportunities for the innovation ecosystem</li> <li>Opportunities and challenges in the new energy segment</li> </ul>



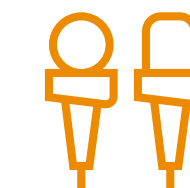
## SUPPLIERS

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>To publicize, guide and engage suppliers and other stakeholders regarding initiatives, opportunities and procedures associated with the contracting of goods and services, with the aim of increasing the competitiveness, quality, and performance of suppliers, preserving compliance requirements, and expanding the impact of strategic ESG drivers in the supply chain</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>Through actions aimed at the entire supplier base, with the <b>Supplier Channel</b> being our main relationship media</li> <li>Every year, we promote the Best Suppliers Award, as well as holding monthly meetings through live broadcasts (recordings available on the Supplier Channel)</li> <li>Offering training on ESG topics through the ESG Journey for Suppliers (online courses)</li> <li>In 2023, we implemented the Supplier Space at the Petrobras stand at OTC Brasil, as well as holding a series of in-person events across the country, seeking greater rapprochement with regional suppliers</li> <li>We implemented an ESG Questionnaire focused on mapping engagement in ESG practices, which had 400 respondents in 2023</li> <li>In October 2023, we included the Human Rights theme in the Integrity Due Diligence (DDI) Questionnaire</li> <li>Our subsidiary Transpetro interacts with suppliers through its <b>Supplier Channel</b></li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Supplier registration and certification</li> <li>Procedures for using relationship and purchasing portals</li> <li>Dynamics of Integrity Due Diligence assessment</li> <li>Supplier performance assessment</li> <li>Prior knowledge of technical specifications and contractual drafts</li> <li>Prospects for contracting goods and services</li> <li>Quality management</li> <li>ESG Agenda for Suppliers</li> </ul>



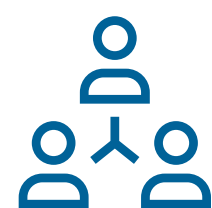
## INVESTORS

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>Seek to strengthen our relationship with investors (or potential investors), enabling greater understanding, in addition to engagement, about our activities, actions, initiatives and investment plans. Furthermore, manage market expectations about results, contributing to the construction and maintenance of the company's credibility and, consequently, increasing and preserving shareholder value in the long term. Finally, to raise the main concerns of investors to ensure that they are taken into consideration by senior management when implementing a new Strategic Planning and reviewing processes.</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>Meetings (one-on-one or group)</li> <li>Participation in conferences and roadshows</li> <li>Presentations at events such as quarterly results webcasts and Petrobras Day</li> <li>Disclosure of quarterly and annual reports, announcements, relevant facts, and news clarifications, in addition to various other financial, operational and management information, available on our website focused on investor relations</li> <li>Holding shareholder meetings</li> <li>Providing telephone, letter and email support to our investors and shareholders, in addition to the service provided by the bank that holds our shares for all shareholders</li> <li>Improving and increasing our information reporting on environmental, social and governance (ESG) topics</li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Future production curve</li> <li>Development of the pre-salt</li> <li>New exploratory frontiers, with emphasis on the Equatorial Margin</li> <li>Capital allocation</li> <li>Tax liabilities</li> <li>Strategy and goals for mitigating climate change</li> <li>Energy transition/decarbonization strategy</li> <li>Corporate governance</li> <li>Governance in project approval</li> <li>Commercial strategy</li> <li>Shareholder remuneration policy</li> <li>Diversity (mainly gender) in the workforce, especially in senior management</li> <li>Industry Supply Chain</li> <li>Biodiversity</li> <li>Paths to self-sufficiency in oil products</li> </ul>



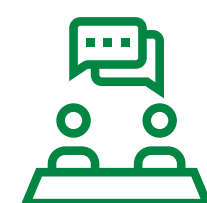
## MEDIA

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>To contribute to the construction of a solid institutional image and establish a transparent and effective communication channel with society</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>Through Petrobras' Agency (<a href="https://agencia.petrobras.com.br/en/">https://agencia.petrobras.com.br/en/</a>), where we publish information relevant to our stakeholders, including communications about business and operations; actions of responsibility in the areas of influence of our activities, reports in cases of accidents, among other releases and audiovisual content, always with the aim of informing the media and society in a transparent manner.</li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Operational and management activities of the company</li> <li>Company results</li> <li>Future plans of the company</li> </ul>



## CIVIL SOCIETY ORGANIZATIONS

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>To consolidate the relationship with this audience, supporting socio-environmental initiatives on topics relevant to the oil and gas industry, in the territories where we operate and seeking positive socio-environmental transformations. Establishing lines of communication and collaboration with civil society, promoting transparency, participation, and exchange of information with different interested parties.</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>Mainly through socio-environmental projects, which are received through two channels: Public Selection or Direct Choice</li> <li>We also participate in civil society initiatives and associations in the oil and gas industry and in social, environmental and governance issues. Together with these organizations, participation in working groups or commissions that have different objectives is frequent. These objectives include the development of manuals and standards, research, sharing of best practices, and even the establishment of joint public commitments</li> <li>We continue to carry out communication actions and strengthen relationships with civil society organizations that are partners of the company, in order to expand knowledge about our exploratory phase project in the Brazilian Equatorial Margin</li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Continuity of the company's support for socio-environmental projects</li> <li>Human rights</li> <li>Diversity</li> <li>Climate change</li> <li>Risk of biodiversity loss</li> <li>Net positive biodiversity impact</li> <li>Risk of water scarcity / water security</li> <li>Waste management and circular economy</li> <li>Exploration on the Equatorial Margin</li> </ul>



## BUSINESS PARTNERS

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>To ensure the correct operation of partnerships with the aim of sharing costs and risks, as well as ensuring the reciprocal benefit of the parties involved, based on their expertise and the improvement of technical capabilities.</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>Through joint-ventures formed for the exploration and production of hydrocarbons (E&amp;P joint-ventures). In this option, there is a governance rule that defines representatives from each company for discussions and decision-making at a technical and operational level. All impacts related to such ventures are dealt with in these forums. This same governance regulation stipulates the obligation to comply with the main laws and regulations regarding compliance and anti-corruption practices existing in the world, in addition to applicable Brazilian laws and regulations</li> <li>Through technical cooperation alliances, through private agreements, which aim to exchange experiences and good practices that can generate mutual benefits in topics of a technical-operational nature, such as maximizing the reservoir recovery factor, opportunities in renewable energy, reduction emissions, among others. Such cooperation alliances also provide for the creation of discussion and decision-making forums</li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Compliance with ANP and CNPE standards, resolutions and laws and contractual obligations provided for in E&amp;P joint-ventures</li> <li>Compliance with the obligations and governance provided for in the agreements</li> </ul>



## PUBLIC AUTHORITIES

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>To promote coordination with the Federal Executive and Legislative Branches, to defend and actively pursue our interests in key themes, through institutional relationships with the Public Authority.</li> <li>To establish partnerships and lines of communication with the Municipal and State Public Authorities with the purpose of monitoring regional public policies, establishing effective communication channels with government representatives, representing, and defending our interests, contributing to the formulation of shared goals with the Public Authority, and identify partnership opportunities aimed at the sustainable development of regions.</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>We interact in an ethical, clear, transparent, and impersonal manner, following our Ethical Conduct Guide and other internal regulations, such as the Institutional Relationship guidelines and our standard for Interactions with Public Agents</li> <li>Issues presented by public authorities are dealt with proactively or on demand through responses to information requests, explanatory technical notes, sending letters, cards and communications, meetings with public agents and participation in public hearings, forums, and sectoral committees</li> <li>Participation in working groups and programs coordinated by public bodies or by Petrobras itself, as well as meetings of collegiate bodies</li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Progress in improving the exploration and production business environment</li> <li>Development the midstream and downstream market</li> <li>Regulation of natural gas market in Brazil</li> <li>Fuel price policy</li> <li>Energy transition and security (carbon market, CCUS, biorefining, CAP Pro, wind, hydrogen, etc.)</li> <li>Exploration in the Equatorial Margin</li> <li>Development of the Gaslub Hub</li> <li>Decommissioning</li> <li>Shipbuilding</li> <li>Socio-environmental investments</li> <li>Cultural and sporting sponsorships</li> <li>Regional development</li> <li>Possibility of carrying out local tenders</li> <li>Information on the development of the refining, natural gas, and industrial processes area</li> <li>Local employability</li> </ul>



## INTERNAL PUBLIC

<p><b>WHY DO WE ENGAGE?</b></p>	<ul style="list-style-type: none"> <li>To strengthen our bond and increase workers' commitment, as well as explain strategies, policies, initiatives and our role to employees and other workers; in addition to provide tools and conditions for communication between company leadership and teams.</li> <li>To increase employee retention, sense of belonging and engagement. And foster a healthy and productive work environment, based on the values: Care for people, Integrity, Sustainability, Innovation and Commitment to Petrobras and the country.</li> </ul>
<p><b>HOW WE ENGAGE</b></p>	<ul style="list-style-type: none"> <li>Digital integration in our internal communication channels, such as intranet, social network, online communities, dissemination of messages and news, with emphasis on our internal social network - Workplace Petrobras, focusing on communication and relationships. Here, communication is carried out by groups themes, personal profiles, and an institutional profile of the company</li> <li>Holding events (in-person, virtual and hybrid) with opportunities for interaction</li> <li>Relationship actions aimed at strengthening the bond with the company, such as cultural activities and family visits</li> <li>Remodeling the employee experience upon admission, and the onboarding processes, with a focus on greater retention and engagement, in accordance with best human resources practices</li> <li>Conducting a survey, in 2023, for all employees, in partnership with Great Place to Work, in connection with the value "care for people" and seeking greater engagement from our internal audience, the survey provided important inputs for management of people and improvements to company processes and programs</li> <li>Monitoring the engagement of our employees, detailing them with profile examples, identifying good practices and opportunities for improvements in our processes and programs</li> <li>Acting continuously in the development of leaders in the subjects of leadership, people management, and teams</li> </ul>
<p><b>MAIN CONCERNS AND DEMANDS OF STAKEHOLDERS</b></p>	<ul style="list-style-type: none"> <li>Organizational changes</li> <li>Compensation and benefits</li> <li>Pension plan</li> <li>Health insurance</li> <li>Hybrid work regime</li> <li>Collective Labor Agreement (ACT)</li> <li>Portfolio management (divestments and investments)</li> <li>Diversity, Equity, and Inclusion</li> <li>Operational highlights</li> <li>Safety, Environment and Health</li> <li>Strategy, performance, and results</li> <li>Opportunity for growth, learning and development.</li> <li>Trustworthy environment</li> <li>Work with meaning and purpose</li> <li>Balance between work and personal life</li> </ul>



## MAIN INSTITUTIONAL COMMUNICATION CHANNELS

- <https://www.petrobras.com.br/en/>
- <https://nossaenergia.petrobras.com.br>
- <https://www.investidorpetrobras.com.br/en/>
- <https://www.agenciapetrobras.com.br/en/>
- <https://transparencia.petrobras.com.br>
- <https://precos.petrobras.com.br>
- <facebook.com/petrobras>
- <twitter.com/petrobras>
- <instagram.com/petrobras>
- <linkedin.com/company/petrobras>
- <youtube.com/petrobras>
- <tiktok.com/@petrobras>

### CITIZEN INFORMATION SERVICE:

<https://transparencia.petrobras.com.br/servico-informacao-cidadao>

### WHISTLEBLOWING CHANNEL:

<https://www.contatoseguro.com.br/en/petrobras>  
0800 601 6925

### REQUESTS RELATED TO LGPD PETROBRAS:

<https://petrobras.com.br/pt/privacidade-e-protecao-de-dados-pessoais/>

### SUPPLIER CHANNEL:

<https://canalfornecedor.petrobras.com.br/en/>

### PETROBRAS GENERAL OMBUDSMAN:

<https://petrobras.com.br/en/ouvidoria/>  
0800 28 28280





# RISK MANAGEMENT MODEL

We believe that integrated and proactive risk management is essential for delivering safe and sustainable results. Our Business Risk Management Policy has as its fundamental principles respect for life in all its diversity, acting ethically and in compliance with legal and regulatory requirements, as well as full alignment and coherence with our strategic plan. Risk management is integrated with the guidelines for risk response actions that consider the possible impacts on our stakeholders and aimed at adding and maintaining value for shareholders and business continuity.

## RISK MANAGEMENT

Our risk management process is coordinated by a corporate risk management area, responsible for defining a methodology based on an integrated and systemic vision, allowing for the standardization and uniformity of our analyses and the management of risk responsibilities, which are structured in accordance with the three-lines model. In this model, each group of managers that make up

the lines plays a distinct role in the governance structure. This presupposes a set of continuous and integrated activities, supported by a structure that comprises, in practice, the Board of Directors, the Executive Board, members of the general structure and all employees, service providers, and other involved parties.

The identification, assessment and treatment of risks are carried out by the organizational units, in conjunction with the Risk Management Executive Department. Strategic risks, prioritized according to their relevance to meeting the company's strategic goals, are reported quarterly to the Executive Risk Committee (CE-Riscos), the Executive Board, the Statutory Audit Committee (CAE) and the Board of Directors (BoD) and high and very high severity risks are reported monthly to the CAE. The effectiveness of the risk management process is assessed by the Internal Auditors, a body directly subordinated to the Board of Directors.

## Identification, assessment, and treatment of risks

The drafting of our Business Risk Matrix is coordinated by the corporate risk management area and involves all areas of our structure. In this process, employees with different expertises are involved so they can identify and report potential risks for our entire organization, considering any type of risks, including social, environmental, and economic risks. This process provides the identification of risks, their associated controls, their probability of occurrence and their impact assessment, in addition to propositions for the treatment thereof. The impact assessment considers four dimensions: Financial, Image/Reputation, Legal/Compliance, and Environmental/Life.

This qualitative risk analysis allows prioritizing and directing efforts related to action plans to be carried out, in order to minimize events that may adversely affect us and maximize those that may



bring us benefits. Also, it may be necessary to apply a risk analysis to support decision-making, which may include a quantitative analysis that, through numerical simulations, assesses the combined effect of identified risks and other sources of uncertainty on our goals.

The identified risks are subject to treatment actions that can be of the following types: avoid, reduce, transfer, accept, observe, research, or explore (only for opportunities) the risk.

Risk-related decisions, in addition to qualitative and quantitative analyses, consider the degree of risk aversion of decision-makers, response actions, and a cost-benefit analysis, in which the costs of response actions cannot exceed the expected benefits or avoided losses.

Business risks are the most relevant threats and opportunities for meeting the company's strategic goals and are an integral part of the Strategic Plan, ensuring adherence to risk appetite, increasing the chance of success in carrying out planning and contributing to the company's longevity. and to generate value.

In the context of the Strategic Plan, risk analyses of CAPEX, production, acquisitions/divestments, capital structure and financeability are also carried out, which contribute to the definition of the strategic drivers adopted.

Based on the identified corporate risks, we highlight, in a synthetic and non-exhaustive way, some of the main events and risk factors related to material sustainability issues that may affect our performance, including in the long term. Corporate indicators, top company metrics or indicators and goals described in the 2024-2028+ Strategic Plan related to material topics, and associated risk factors are also mentioned. The treatment actions related to these risks will be detailed throughout the report, following the organization of the chapters, as detailed below:



<b>Material topic</b>	<b>Main associated events and risk factors</b>	<b>Risk treatment (pages)</b>	<b>Corporate Indicators and Targets</b>
<b>Climate resilience, GHG emissions and other gases</b>	<p>Shifting demand from fossil products to low-carbon products</p> <p>Inefficiency in the development and use of technologies to improve operational emissions performance</p> <p>Stricter environmental regulations<sup>1</sup></p>	93 to 112	<p>GHG - E&amp;P</p> <p>GHG - Refining</p> <p>Emission of GHG Absolute</p> <p>NetZero 2050</p> <p>70% of relevant suppliers with published emissions (GHG) inventory</p>
<b>Biodiversity</b>	Risks and impacts to biodiversity related to the life cycle of our activities.	114 to 130	100% of our facilities with biodiversity action plans by 2025
<b>Economic impacts</b>	<p>Divergent interpretations of tax legislation or changes in tax law.</p> <p>Possibility of reviewing portfolio management guidelines, strategic plan and decisions related to the management of our operations and investments.</p> <p>Changes in our commercial strategy for setting fuel prices, which may have an impact on the volatility of domestic prices.</p>	30 to 42	Change in Economic Added Value(Delta EVA®).

<sup>1</sup>Risk factor that also impacts other material topics (E.g.: Biodiversity, Waste Management and Decommissioning t etc.)



<p><b>Labor practices and equality of opportunity</b></p>	<p>Risk of violation of labor legislation by our suppliers.</p> <p>Occurrence of events of human rights violations, a risk that exists in all environments where there is human interaction, including the company and suppliers.</p> <p>Impossibility of guaranteeing the selection of employees with qualifications, experience and skills previously developed in the market.</p> <p>Obligations related to participation in the cost of the health insurance and the possibility of additional contributions related to supplementary pensions.</p>	<p>181 to 198</p>	<p>Human Rights due diligence in 100% of our operations</p> <p>100% of the our workers and third parties trained in human rights</p> <p>25% of the percentage of women and 25% of Black people in leadership positions by 2030</p>
<p><b>Local and traditional communities</b></p>	<p>Communities may be negatively affected by our projects and operations, especially in relation to human rights. We operate in locations exposed to a wide range of issues related to political, social, and economic instability.</p>	<p>162 to 180</p>	<p>Provide a return to society of at least 150% of the amount invested in voluntary socio-environmental projects by 2030</p>
<p><b>Accident prevention and management</b></p>	<p>Safety, environmental and health risks in our operations and facilities, such as oil spills, product leaks, fires, and explosions.<sup>2</sup></p> <p>Intentional acts such as clandestine tapping, crime, theft, sabotage, roadblocks, and protests.</p>	<p>152 to 160</p>	<p>Oil and Oil Products Spilled Volume (VAZO)<sup>3</sup></p> <p>Zero Spill Ambition</p> <p>Commitment to People Safety Indicator (ICSP)<sup>4</sup></p>
<p><b>Waste management and decommissioning</b></p>	<p>Closure of operations and decommissioning activities can cause impacts to the environment and communities located around the asset sites.</p> <p>Differences in interpretation related to monitoring and decommissioning of assets.</p>	<p>140 to 151</p>	<p>30% reduction in process solid waste generated by 2030<sup>5</sup></p> <p>Destination of 80% of solid waste generated in processes for reuse, recycling, and recovery routes by 2030<sup>5</sup></p> <p>Hazardous Solid Process Waste Generated</p> <p>Non Hazardous Solid Process Waste Generated</p>

<sup>2</sup>The occurrence of one of these events, or other related incidents, can result in impacts on the health of the company's workforce and/or surrounding communities, fatalities, and environmental damage.

<sup>3</sup>The indicator of oil and oil products spilled volume (VAZO) can also be represented by the Environmental Commitment Indicator (ICMA). The indicator can also be related to other material topics, such as water and effluents.

<sup>4</sup>The Serious Injury Rate joined the Total Recordable Injury Rate (TRIR) metric in the Commitment to People Safety Indicator (ICSP)

<sup>5</sup>Reference year: 2021



<p><b>Water and effluents</b></p>	<p>Water scarcity events. Difficulty in obtaining or maintaining grants for the right to use water resources.</p>	<p>131 to 139</p>	<p>40%<sup>6</sup> reduction in our freshwater withdrawal by 2030<sup>6</sup> Freshwater Withdral</p>
<p><b>Safety, health, and well-being</b></p>	<p>Changes in the interpretation of environmental, health and safety regulations. Divergences between standards and laws related to environmental, health and safety issues.</p>	<p>198 to 209</p>	<p>Reach more than 50% of physically active employees by 2028 Implement 100% of commitments of the UN Global Compact Mind in Focus Movement by 2030 People Safety Commitment Indicator (ICSP)<sup>7</sup> Zero Fatality Ambition</p>
<p><b>Business integrity</b></p>	<p>Risk that executive officers, directors, employees, contractors, or anyone doing business with Petrobras may take actions that are incompatible with ethical principles and rules of conduct. Identification and management of conflicts of interest in the appointment of Petrobras directors. Violations of personal data protection laws. Legal proceedings related to Operation Car Wash in Brazil and other countries. Failures in internal controls.</p>	<p>68 to 86</p>	<p>100% of relevant suppliers trained in integrity and/or privacy by 2030 Evaluate the expansion of ESG requirements in 100% of strategic categories hiring</p>
<p><b>Engagement in public policies, advocacy, and financial support</b></p>	<p>Impossibility of ensuring that the expectations of all interested parties are met<sup>8</sup>, despite playing a proactive role in the development of public policies.</p>	<p>87 to 91</p>	<p>To be among the top three O&amp;G companies in the human rights ranking by 2030</p>

<sup>6</sup>Reference year: 2021

<sup>7</sup>The Serious Injury Rate joined the Total Recordable Injury Rate (TRIR) metric in the Commitment to People Safety Indicator (ICSP)

<sup>8</sup>Risk factor that is also related to other material topics



Information about risk factors can be found in our **Reference Form**.

# ECONOMIC IMPACTS

[2-6] [11.14.1] [11.14.2] [11.14.3] [11.14.4] [11.14.5] [11.14.6] [11.21.2] [11.21.3] [11.21.4] [11.21.5] [11.21.6] [11.21.7] [11.21.8]

Given the size of our business and of our value chain, we have a relevant economic impact, especially on the Brazilian economy.

As defined in our material topics, economic impacts are the consequences arising from payments of taxes, royalties, salaries and suppliers, distribution of dividends and their consequences at local, national, and global levels, such as the multiplier effect on the economy, social transformations, and improvements in infrastructure through these payments.

It includes business, market and value chain impacts arising from the vulnerability to commodity prices, variation in production and demand, adopted pricing policy and investments and divestments of companies and assets, as well as our tax approach, tax compliance and accountability of payments to governments. Finally, it covers responsibility for the supply chain, especially actions aimed at small suppliers and expansion of local suppliers, in addition to the role

of developing the industrial sector and technical innovations and chain reaction potential.

## INVESTMENTS AND PORTFOLIO MANAGEMENT

The O&G industry is characterized by being capital intensive. The review of the investment portfolio occurs annually within the process of preparing the Strategic Plan for the five-year period. In Petrobras' investment portfolio, disclosed in the 2024-2028+ Strategic Plan, it is noted that the company plans to invest US\$102 billion over the next five years. This volume of resources will materialize in orders for goods and services that will meet the company's need to modernize and increase its production capacity. This is what guarantees our future, with the achievement of production and efficiency targets. The resources will trigger an entire income and employment multiplier process, especially in the Brazilian economy, where a large part of the investments will be made.

Furthermore, the role that our products play as a fundamental input for economic growth must be highlighted. We produce the energy necessary for the expansion of agricultural production, our industry, and our services, as well as that which guarantees us mobility, heat, electricity, and comfort.

Our operations result in wealth generation in the societies where we operate through taxes, as well as jobs and income generation. Portfolio management is a market practice whose main purpose is to adapt the company's asset portfolio to strategic drivers, which can lead to improved operational efficiency and return on capital and reduced risks.



Information about employee management can be found in the chapter **Labor practices and equal opportunities**.

When conducting acquisition processes, partnerships and divestments, we are guided by systems based on applicable legislation, including the State Law (law no. 13,303/16) and the General Petroleum Law (law no. 9,478/98), as well as decrees 9,355/2018 and 9,188/2017, combining best market practices with the principles of public administration.

In the table below, we list the main divestment projects completed in the period from January 1, 2023 to December 31, 2023:



Information about the Divestment Plan can be found in the **Financial Statements** in Explanatory Note 31. Asset sales and other asset transactions.

### **DIVESTMENT PROJECTS**

<b>Signature Date</b>	<b>Closing Date</b>	<b>Description</b>
04/28/2022	01/26/2023	Sale of stake in the Albacora Leste field, located in the Campos Basin, north coast of the state of Rio de Janeiro.
02/23/2022	04/12/2023	Sale of the entire stake in a set of four land field concessions located in the Espírito Santo basin, in the state of Espírito Santo, jointly called Polo Norte Capixaba.
01/31/2022	06/07/2023	Sale of its entire interest (100%) in the set of 20 concessions of onshore and shallow water production fields. facilities, located in the state of Rio Grande do Norte – RN, jointly known as Polo Potiguar
06/24/2022	08/28/2023	Sale of its entire stake in the sets of maritime concessions called Polo Golfinho and Polo Camarupim, in deep post-salt waters, located in the Espírito Santo Basin.



At Transpetro, 2023 ended with 26 Brazilian-flagged ships in operation. At Transpetro International BV (TIBV), a charter contract ended in December, leaving the subsidiary with a total of nine vessels. In total, the fleet ended 2023 operating 35 ships, with an average age of 8.98 years and a total of approximately 3.4 million deadweight tons.

Safety and operational continuity, attention and respect for people are fundamental principles that we apply in all our actions. In 2023, structured actions of portfolio management projects were planned and executed, with prior presentation to union entities regarding actions to demobilize employees to other regions. The company sought to reconcile the company's needs with the interests of employees, whenever possible, offering all employees covered the opportunity to remain in the same state of residence at the time of divestment.

Furthermore, aligned with the strategic guideline of full attention to people, we improved the integrated change management journey for employees covered by collective transfers, considering business interests and the diversity of individual situations in this process. The actions carried out also include a moment of individual attention by the Health area, which aims to map exceptional cases that may impact the transfer due to

socio-family and health aspects.

The entire process is planned and communication to employees of plans related to portfolio management occurs four to six months in advance, with the offering of opportunities in the state of residence, in other states with available vacancies and the possibility of voluntary termination to those who wish. The execution includes the improvement of other actions, such as: communication, specific relocation and dismissal programs, qualification and change of emphasis of employees.

The actions of the Personnel Plans are monitored by the Change Management Committee for Portfolio Management, established as part of the agreement signed between Petrobras and the Public Labor Prosecution Office (MPT), to regulate the process of collective movement of employees.



Information about the Personnel Plan can be found in the chapter **Labor practices and equal opportunities**.

## PRICE FORMATION

On May 15, 2023, our Executive Board approved the commercial strategy for defining gasoline and diesel prices, aligned with the Pricing Guideline for Petroleum and Natural Gas Derivatives in the Internal Market (available for consultation on our **Investor Relations**), with the premise of competitive prices per sales hub, in balance with national and international markets. This strategy allows Petrobras to compete more efficiently, taking into account its market share, to optimize its refining assets, under the premise of maintaining the company's financial sustainability.

This commercial strategy uses market benchmarks such as: (a) the customer's alternative cost, as a value to be prioritized in pricing, and (b) the marginal value for Petrobras. The customer's alternative cost includes the main supply alternatives, whether suppliers of the same products or substitute products, while the marginal value for Petrobras is based on the opportunity cost given the various alternatives for the company, including production, imports, and exports of said product and/or oils used in refining.

As we are aware of the importance of our products to Brazilian society, we point out that, when setting our prices, we seek to avoid passing on the volatility of





the international market and the exchange rate, while preserving a healthy competitive environment under the terms of the current legislation.

The aforementioned guideline, approved on July 27, 2022 by our Board of Directors, reiterated the competence of the Executive Board in executing price policies, preserving, and prioritizing the company's economic result, seeking to maximize its value generation, and incorporated an additional layer of supervision by the Board of Directors itself and the Fiscal Council.

Finally, it is essential to differentiate Petrobras' sales prices for the retail companies from those perceived by the final consumer. Petrobras' sales price at refineries and terminals is just a portion of the resale price perceived by consumers at service stations. Before the fuel reaches the consumer, taxes are added, costs for the mandatory mixture of anhydrous ethanol in gasoline, and biodiesel in diesel; and costs and margins of retail companies and resellers. Each portion has its own formation dynamics, without any influence from Petrobras. Historically, the final price of fuels is highly influenced by the tax burden on these products.

### **ADDED VALUE DISTRIBUTION**

In 2023, we had an added value distribution of around BRL 378.7 billion. Through our activities we distribute value to our employees, federal, state, and municipal governments, through the payment of taxes, royalties and special participations, financial institutions, the supply chain, and our shareholders.

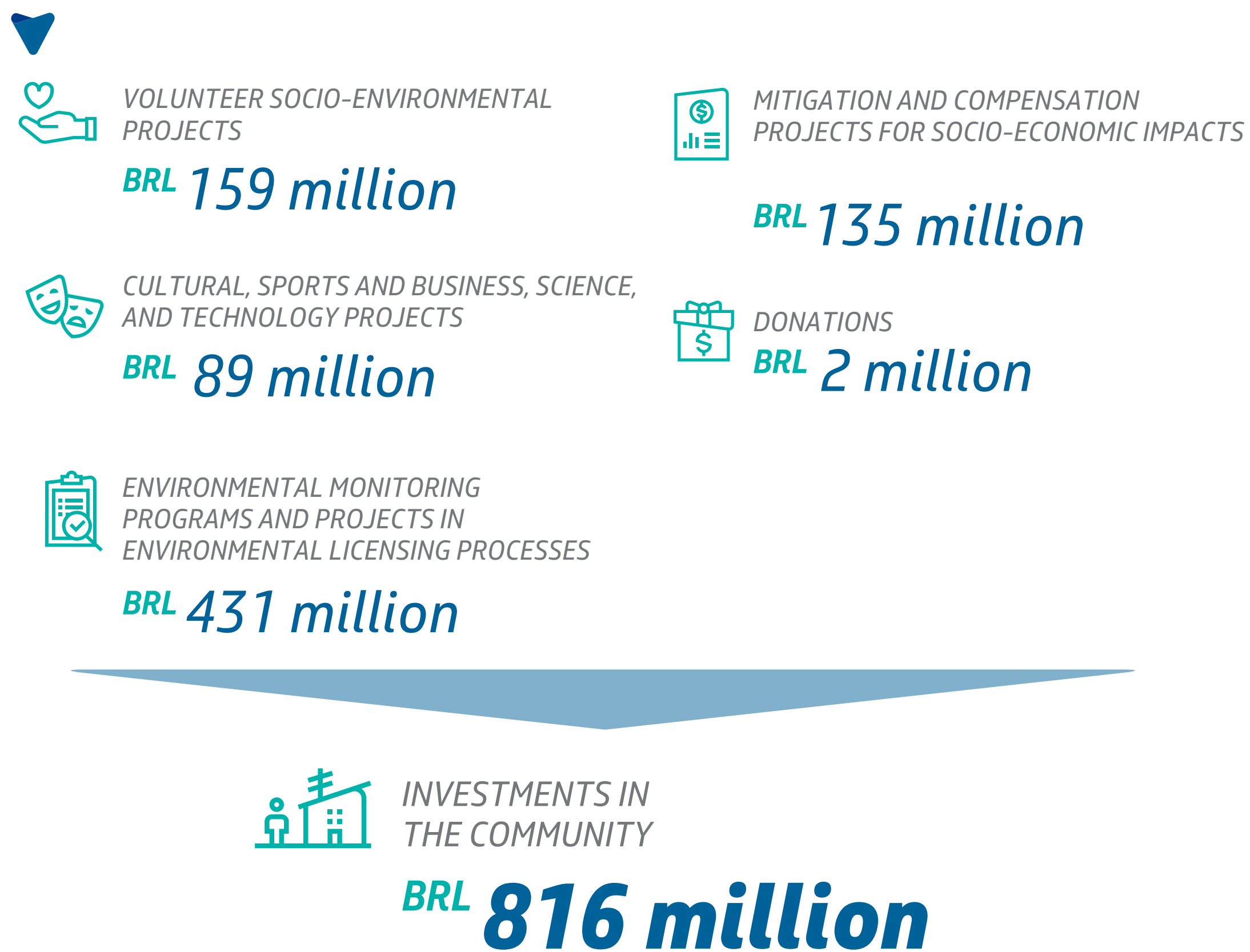
### **Added value distribution (consolidated data in BRL million)**

<b>DIRECT ECONOMIC VALUE GENERATED AND VALUE TO DISTRIBUTE</b>	<b>2023</b>
<b>AMOUNT TO DISTRIBUTE</b>	
Revenue	694,684
Inputs purchased from third parties	- 252,282
Depreciation, depletion, and amortization	- 76,020
Amount received in transfer	12,365
<b>ADDED AMOUNT TO BE DISTRIBUTED</b>	<b>378,747</b>
<b>AMOUNT DISTRIBUTED</b>	
Direct compensation (staff and administrators)	34,895
Taxes	183,700
Financial institutions and suppliers	34,986
Shareholders (including retained earnings)	125,166
<b>TOTAL VALUE ADDED DISTRIBUTED</b>	<b>378,747</b>



Details of the Additional Amount Statement can be checked in the **Financial Statements**.

In addition to other contributions to society such as voluntary socio-environmental projects, donations and environmental monitoring and impact mitigation projects, as detailed in the table below:



Information about environmental monitoring programs and projects in environmental licensing processes can be found in the **Biodiversity chapter**.

## PAYMENT OF TAXES AND ROYALTIES

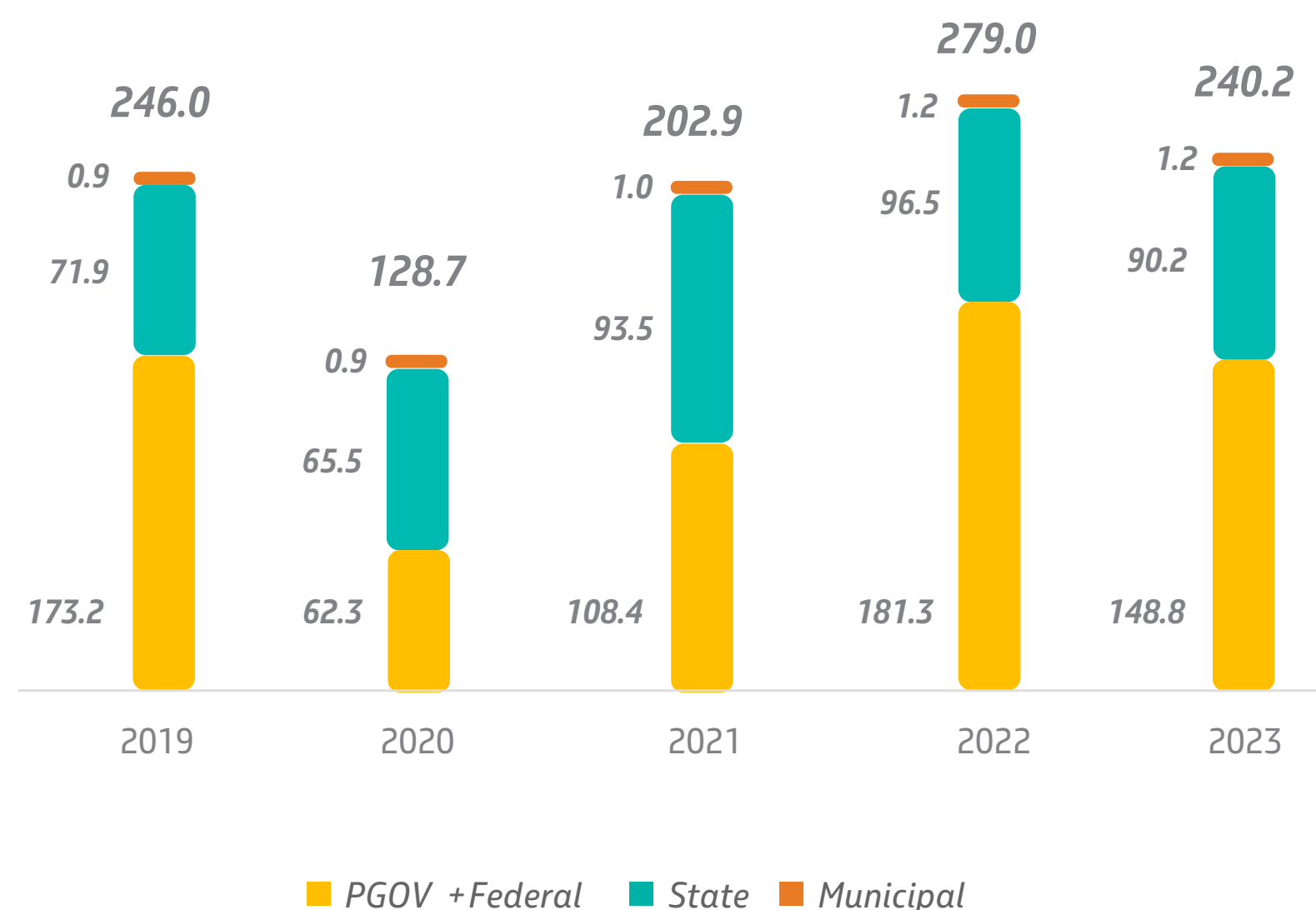
In 2023, Petrobras paid a total of BRL 240.2 billion as taxes and Government Participations (PGOV) in Brazil and US\$ 452.7 million abroad. The payment of taxes and PGOV considerably increases the availability of financial resources to states, in all spheres of government, necessary to fund the public machinery and the provision of services to society, in addition to expanding the investment capacity in terms of infrastructure and projects based on the development policies of the countries in which Petrobras operates.

### TAXES AND PGOV (data in BRL billion)




In the last five years, Petrobras has paid more than BRL 1 trillion in taxes and government contributions for the federal, state and municipal governments, providing a larger government budget for implementing public policies that serve society.

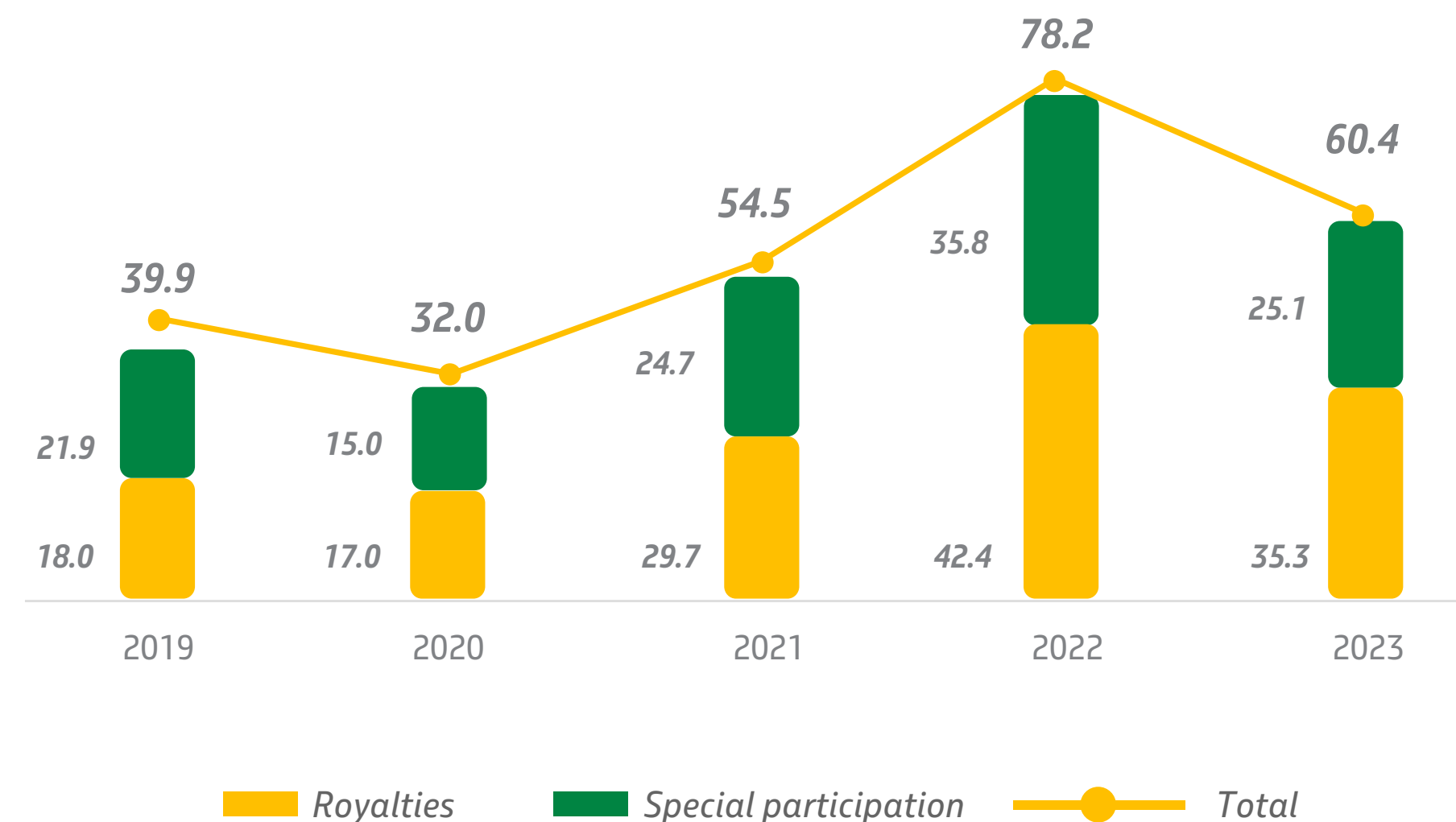
## TAXES AND PGOV PER SPHERE OF GOVERNMENT (data consolidated in BRL billion)



Additionally, we have the legal responsibility to pay the amounts due as government shares (PGOV) to the ANP. These payments are financial compensation for our oil and natural gas exploration and production activities in Brazilian territory, which aim to provide monetary retribution to society for the exploitation of non-renewable resources. They are: royalties, special participation, signature bonus and payment for the retention or occupation of contracted areas.

 Detailed information about our tax collections can be checked in our **Tax Report**.

## EVOLUTION OF ROYALTIES AND SPECIAL PARTICIPATION (data in BRL billion)



In 2023, a total of BRL 61.4 billion was paid as government contributions. The PGOV amounts paid are mainly made up of royalties (BRL 35.3 billion) and special participation (BRL 25.1 billion). In addition to these two recurring items, there was also payment for the retention or occupation of area, in the amount of BRL 0.3 billion, and the disbursement of BRL 0.7 billion in signature bonus, resulting from the acquisition of participation in three blocks: Sudoeste de Sagitário, Norte de Brava and Água Marinha.



## Financial support received from the government

As a way of promoting Petrobras' activities that contribute to the country's development, tax benefits are granted to the company, the most relevant of which are applied at the Federal level, among which we highlight:

### Government Incentives (Subsidies)

<b>REPETRO-SPED</b>	Special customs regime for the export and import of goods intended for research and mining activities in oil and natural gas deposits under computerized control of the Public Digital Bookkeeping System (SPED). This new regime, in addition to maintaining the possibility of applying temporary admission for economic use for certain goods, allows the importation of goods for permanent stay with total suspension of the payment of federal taxes.
<b>Import of natural gas from Bolivia</b>	Operation exempt from Pis and Cofins taxes.
<b>Import of products</b>	Operation with reduction of Pis and Cofins rates.
<b>SUDAM and SUDENE</b>	Incentives linked to the development of areas in the north and northeast of the country, which are previously analyzed by the Superintendencies for Development of the Amazon (SUDAM) and the Northeast (SUDENE). The benefits being used by Petrobras are the 75% reduction in IRPJ and the reinvestment of 30% of the IRPJ due.
<b>Technological Innovation</b>	Benefits linked to investments in research, development, and innovation (R, D & I). The main benefit in use by Petrobras is the additional deduction of R, D & I expenses at 60%, on the IRPJ and CSLL calculation basis.
<b>Worker Food Program (PAT)</b>	Worker Food Program (PAT) - reduces the IRPJ due, by applying the 15% rate on food expenses, as long as the limit of 4% of the tax due is respected.
<b>Incentive to culture (Rouanet Law, art. 18)</b>	Reduces the IRPJ due, according to the amount spent on projects previously approved by the Ministry of Culture, in the form of donations and sponsorship, as long as the limit of 4% of the tax due is respected.
<b>Extension of maternity and paternity leave</b>	Reduces from the IRPJ due the total of the employee's and the employee's full remuneration paid on the days of extension of their maternity leave and paternity leave.

For certain benefits, specific legislation establishes a specific period and conditions that must be met by taxpayers, such as REPETRO-SPED, for which failure to comply will result in the demand for taxes with legal increases.

In 2023, Petrobras used around BRL 7.2 billion in federal tax incentives resulting from the tax reduction in accordance with specific legislation. For tax incentives linked to taxes subject to the non-cumulative rule, such as Pis and Cofins, the collection of tax on acquisition or import without the application of tax incentives or benefits would result in a credit for the amount paid to be deducted from the tax due in subsequent operations.

### Tax management and compliance with tax legislation

The fundamental principle of Petrobras' tax policy is to ensure that tax management, which includes taxes and government holdings, adheres to the applicable legislation in Brazil and in the countries where we operate. Additionally, we manage taxes based on ethics, integrity, transparency, efficiency, and social responsibility, contributing to the social and economic development of Brazil and the countries where we operate.



We comply with the tax legislation in Brazil and in the countries where we operate, defining our strategy based on the technical interpretation of norms, standards, and processes, aligned with our Business Purpose and Tax Risk Management.

Following the guidelines of our tax policy, we are committed to not hold equity interests in jurisdictions recognized as tax havens, as defined by Brazilian legislation, as well as to observe the Transfer Pricing rules provided for in Brazil and in the countries where we operate, with respect to all transactions with related or unrelated parties, when required by law.

Petrobras' only corporate interest in a jurisdiction with favorable taxation, as defined by Brazilian legislation, is Braspetro Oil Services Company - BRASOIL, domiciled in the Cayman Islands, currently without operational and financial activity and whose closure is in progress, as approved by the Board of Directors on 12/21/2022.

As one of the largest taxpayers in Brazil, Petrobras is exposed, to a high degree, to the full complexity of the national tax system. In order to carry out all activities inherent to the calculation and settlement of taxes in the most efficient and assertive way possible, the

company has robust internal processes and controls, supported by a strong technological base resulting from our strategic initiative of digital transformation, and, mainly, by an expert team trained to face the daily challenges arising from the large amount of new legislation published annually by all spheres of government.

Petrobras maintains a good relationship with government entities, always preserving ethics and transparency in its actions. The company assumes sustainable tax positions, based on technical analyses, in accordance with applicable legislation and best market practices.

Due to the relevance of the company in its operating context, we were chosen as representatives in the oil and gas segment in the test of procedures for the fiscal cooperative compliance program, established by the Federal Revenue of Brazil, named CONFIA. The objective of the program is to improve the relationship between the tax authorities and the taxpayer, bringing greater legal certainty to the taxation process.

We are also certified in the Authorized Economic Operator program of the Federal Revenue Service and

holders of several awards related to the transparency and technical quality of our financial statements.

Another effect derived from the significant share from Petrobras in the collection of Brazilian taxes is our exposure to constant inspection by all levels of government, which impose a strong and routine follow-up tax audits, through specialized tax offices for large taxpayers.

We operate in complex market segments, which involve oil exploration, production, import and refining, in addition to the sale of products throughout the country, assessing our own and third-party taxes. In view of the various tax rules that can sometimes generate legal uncertainties, we do thorough monitoring of our tax litigation, given the need to enter into legal disputes searching for the legal interpretation to apply to each fact under review.

We use productivity and quality indicators (Key Performance Indicators) to measure and monitor performance in the tax function, seeking continuous process improvement. Additionally, we point out that information about our Tax Policy, tax strategy, and management of tax litigation are available in our Tax

Report, published quarterly, in Form 20-F (SEC) and in the Reference Form (CVM), as well as in our financial statements, with emphasis on the explanatory tax notes: 17 and 19.3.1

We also issue several reports such as Country-by-Country Reports, Mandatory Disclosure Rules (DAC 6), Master File and Local Files, documents that clarify our policies and positions regarding income tax, in compliance with the Based Erosion Profit Shifting (BEPS) Project guidelines of the OECD, in particular Actions 12 and 13, which aim precisely to promote greater fiscal transparency and avoid non-taxation of commercial or financial operations (anti-abuse rules).

**Taxes abroad**

We also state the results and taxes paid by jurisdiction, regarding any Petrobras equity interests abroad, as shown in the table below.

Country	Income Tax	Indirect Taxes Withheld	Taxes Recovered	Total tax payments (USD)
<b>ARGENTINA</b>	2,954,877.00	756,559.00	-	3,711,436.00
<b>BOLIVIA</b>	-	183,013.75	-	183,013.75
<b>SINGAPORE</b>	14,338,818.91	24,627,708.43	-	38,966,527.34
<b>COLOMBIA</b>	1,940,758.30	43,881,669.73	7,890,082.29	37,932,345.74
<b>SPAIN</b>	105,151.72	9,243.62	-	114,395.35
<b>UNITED STATES</b>	-	2,709,070.00	-	2,709,070.00
<b>NETHERLANDS</b>	373,660,847.34	312,840.70	5,058,373.70	368,915,314.34
<b>URUGUAY</b>	16,498.71	181,214.08	-	197,712.79
<b>VENEZUELA</b>	-	7,005.20	-	7,005.20
	<b>393,016,951.98</b>	<b>72,668,324.51</b>	<b>12,948,455.98</b>	<b>452,736,820.51</b>



Information about taxes paid abroad can be found in our **Tax Report**.



In external relations, in matters of taxation and government holdings (PGOV), we seek, whenever possible, to develop cooperative relations with tax authorities, based on mutual respect, transparency and trust, and observing the strategies defined by us and our System of Integrity. Thus, we are committed to complying with tax legislation in all locations where we operate, as well as optimizing payment using current tax incentives, with tax enforcement monitored by internal auditing and reviewed by an external audit.

In our interactions with public agents, we also follow the guidelines contained in our Guide of Ethical Conduct and standards, in particular:

(a) we adopt formal and documented means to express our position in the relationship with government authorities;

(b) we have adopted mechanisms that allow the traceability of interactions with public agents in order to guarantee their transparency, in compliance with the applicable corporate rules;

(c) we always have at least one other employee provide company when we interact with stakeholder

representatives, inside and outside our facilities;

(d) we ensure that the confidentiality of the information is maintained, and that the disclosure only occurs in a timely manner and in accordance with the legal provisions and our rules.

### Supply chain

Our businesses generate jobs and income, not only because of the direct impacts of our activities, but also because of our indirect impact on the production chain. The purchase of goods and services by the company will become income for suppliers, who, in their production processes, will pay for new inputs, suppliers and labor in the production chain, driving the economy.

As for the profile of the contracted goods and services, there were no significant changes in 2023 compared to the previous year, with the main contracted categories being:

**Parent company:** Chartering of production platforms, chartering of rigs, well services, Engineering, Procurement, Construction, and Installation - EPCI,

underwater operations, flexible lines, valves, tubes, aerial chartering, chartering of ships and special vessels, chemicals and catalysts, geophysical services, Engineering, Procurement and Construction (EPC) services, and equipment maintenance.

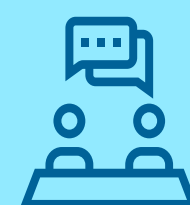
**Transpetro:** Operational support services, infrastructure maintenance, logistics, inspection, docking and complementary services, such as transportation and property security.

**Petrobras Biocombustível:** Regarding the profile of contracting for goods and services, there were no significant changes in 2023 compared to the previous year, with the main categories contracted being national manufacturers and traders of vegetable oils (soybean, cotton, palm, residual oils, and fats), animal fats (from cattle, pigs, fish, and poultry), in addition to methanol and sodium methylate, which are the main inputs used in the industrial process. Also, to maintain the concessions to use the Social Biofuel Seal (SBS) of the Biodiesel Plants, the subsidiary makes agreements with cooperatives of family producers to provide raw materials and technical assistance services.

In procurement, we have a complex supply chain, with thousands of suppliers and the need for permanent availability of materials for our various operations. At the same time, we have the challenge of avoiding a shortage of materials at the units, while simultaneously preventing expenses inherent to possible excessive or untimely inventories.

Petrobras, as a certified member of ASCM (Association for Supply Chain Management) since 2019, has been implementing the most modern inventory management practices in the E&P, Gas and Refining areas, having stood out for developing initiatives using technology, focusing balancing the supply chain and optimizing inventories.

During 2023, we achieved a significant inventory optimization for MRO (Maintenance, Repair and Operations), a fact that allowed us to save BRL 5.9 billion as cash for the company. This amount represents real savings, resulting from the improvement in the way we manage our stocks and materializes our commitment to operational efficiency and maximizing resources, reaffirming our commitment to the sustainability and long-term success of Petrobras.



### **CONDUCT ADJUSTMENT AGREEMENT (TAC) TO OFFSET LOCAL CONTENT FINES**

Petrobras entered into a TAC with the ANP to compensate fines for non-compliance with the local content clause related to 11 concessions, located in the Espírito Santo, Recôncavo, Santos and Sergipe-Alagoas basins.

The TACs were established in accordance with ANP Resolution No. 848/2021 and provide for the conversion of local content fines from these concessions into new investment commitments in Exploration and Production in Brazil.

These commitments focus on the acquisition of goods and services for production development activities in Round Zero, Land and Maritime Decommissioning areas, which did not have local content obligations.

Under these agreements, Petrobras undertakes to invest approximately BRL 1.681 billion in local content by 12/31/2027, which made it possible to reduce the liability for fines in the amount of BRL 264 million in Petrobras' financial statements in 2023.

The total investments forecast in the 2024-2028+ Strategic Plan, US\$ 102 billion, have the capacity to support 280,000 direct and indirect jobs per year.



Information about the management of our suppliers can be checked in our **Human Rights and Corporate Citizenship Supplement**.



## Supply chain promotion programs

In order to support the supply chain and promote the improvement of contract performance, we provide two incentive programs for the oil and gas industry: Progress and More Value Program.

### SUPPLY CHAIN PROMOTION PROGRAMS



#### PROGREDIR PROGRAM

In 2012, we launched ProgreDir Program, which aims at facilitating the offer of credit in competitive conditions and volume for our supply chain, with the definition of relationship rules between credit providers and borrowers that minimize risks. Through a digital platform, suppliers that enter into contracts with Petrobras can finance themselves through participating financial institutions.

ProgreDir currently has more than 80 financial institutions and 1,860 registered suppliers, providing Petrobras suppliers with an efficient way of accessing resources in a more competitive way and playing an important role in supporting the growth of the oil and gas industry in the country.

This program was reformulated at the end of 2020 and, since then, BRL12.2 billion in financing has been signed until December 2023.

In 2023 alone, there were BRL4.8 billion, an amount 130% higher than in 2022.



#### MAIS VALOR PROGRAM

In order to complement actions to promote the supply chain, in 2020 we launched the Mais Valor Program, which allows suppliers to advance invoices with Petrobras. Registered companies check invoices for goods delivered and services provided and have the option of anticipating receipt using a digital platform. In the program, there are currently around 40 financial institutions that participate daily in a reverse rate auction that takes place on the platform, where the lowest rate offered is considered for operations.

The Mais Valor program closed three years with BRL22.3 billion in credit granted to Petrobras suppliers. During this period, there were around 170,000 advance invoices and 2,801 registered suppliers.

The supplier who chooses to receive payment in advance will have the amount received on the same day in their checking account. This solution expanded companies' access to resources at more competitive rates with financial institutions, using Petrobras' payment risk (drawn risk).

In 2023, there were more than BRL 6.2 billion in operations. Mais Valor is an important company initiative that allows national suppliers to access working capital at a lower cost and more efficiently.

## INVESTMENTS IN INFRASTRUCTURE AND SERVICES

In addition to our direct and indirect impacts on jobs and income generation, we also invest in infrastructure and services with significant impacts on the communities located in our business coverage area.

We develop several socio-environmental projects and sponsorships with the aim of responding to the demands of communities in the territories where we operate and of achieving positive socio-environmental transformations, as presented in the chapter on Local and traditional communities.



Information about our socio-environmental projects can be found in the chapter **Local and traditional communities and in our Human Rights and Corporate Citizenship Supplement.**

We also make investments in infrastructure within the scope of environmental compensation projects. These investments are agreed during the environmental licensing processes and seek to directly benefit the communities impacted by our projects.



In 2023, we invested BRL 566 million in compulsory programs and projects resulting from environmental conditions, including: BRL 431 million in compulsory environmental monitoring programs and projects in licensing processes; and BRL 135 million in compulsory socio-environmental programs and projects for mitigating and compensating socioeconomic impacts.

In 2023, we highlight the following investments in infrastructure and services:

INVESTMENTS IN INFRASTRUCTURE AND SERVICES
Conservation Units (UTE-CAN) in Rio Grande do Sul and UTE – TRI in Rio de Janeiro
Air Quality Monitoring Stations (GNL – TRBGUA, Reduc, UTE-BF, UTE-SRP, UTE-TRI, APCAB, UTE-TMA, Cenpes, APITB, Regap, UTGCA, Replan, Refap, Repar, Temoceará, RNEST, UTE-TLG).
Support for fishing communities: Ilha da Conceição (Niterói/RJ), Barra Seca (São Mateus/ES), Perocão (Guarapari/ES), Marobá (Presidente Kennedy/ES), Olhos D´Água e Jatobá (Barra dos Coqueiros/SE), Água Boa (Itaporanga D´Ajuda/SE), Rita Cacete (São Cristovão/SE) e Taíba (São Gonçalo do Amarante/CE).

Our subsidiary Transpetro extended an agreement with Angra dos Reis (PMAR) city government with the intervention of the State Institute of the Environment (Inea) for the Execution of the Project to Complement the Sanitary Sewage System in the Monsuaba District, which began in June 2019, but due to the need for an amendment requested by PMAR, the most significant advances were made in 2022, with most of the sewage collection network and the structural base of the new sewage treatment station already built, with completion forecast for mid-2024.



# SUSTAINABILITY STRATEGY

[2-24]

Our 2024-2028+ Strategic Plan aims to prepare Petrobras for the future and strengthen the company, starting a process of integration of energy sources essential for a fair and responsible energy transition. In this context, the new Plan will be implemented with full attention to people, safety and respect for the environment, perpetuating value for future generations, focusing on capital discipline and the commitment to keeping the company's debt under control.

Oil and natural gas will continue as critical value drivers, with economic and environmental resilience, financing the fair transition. Profitable low-carbon investments gain relevance for long-term value generation. Governance will be respected in all decision-making and project evaluation processes, ensuring sustainability and profitability, with greater transparency.

At the beginning of 2023, our company established new strategic drivers to be considered in Strategic

Planning, in compliance with current governance practices, the commitment to generating value and the company's long-term financial sustainability:

- 1) Full attention to people, with priority placed the development, retention, and requalification of talent t in order to provide the company with a technical staff that is increasingly inclusive, diverse, and qualified to meet the dynamic demands of the market, especially the energy transition;
- 2) Focus on profitable exploration and production assets, with increasing decarbonization of the company's operations and those of our suppliers;
- 3) Emphasis on adapting and improving the current refining facilities through efficiency gains y and the combination of renewable raw materials in the development of resilient industrial processes and sustainable products;
- 4) Search for a fair energy transition, in line with

similar international companies, primarily through partnerships of technical excellence and social responsibility programs that mitigate the externalities of the company's operations and promote local production chains;

5) Utilization of of Brazil's different potentialities as a country with continental dimensions and energy capabilities that favor sustainable development, through the regionalization of the company's activities based on production chains and local operational units;

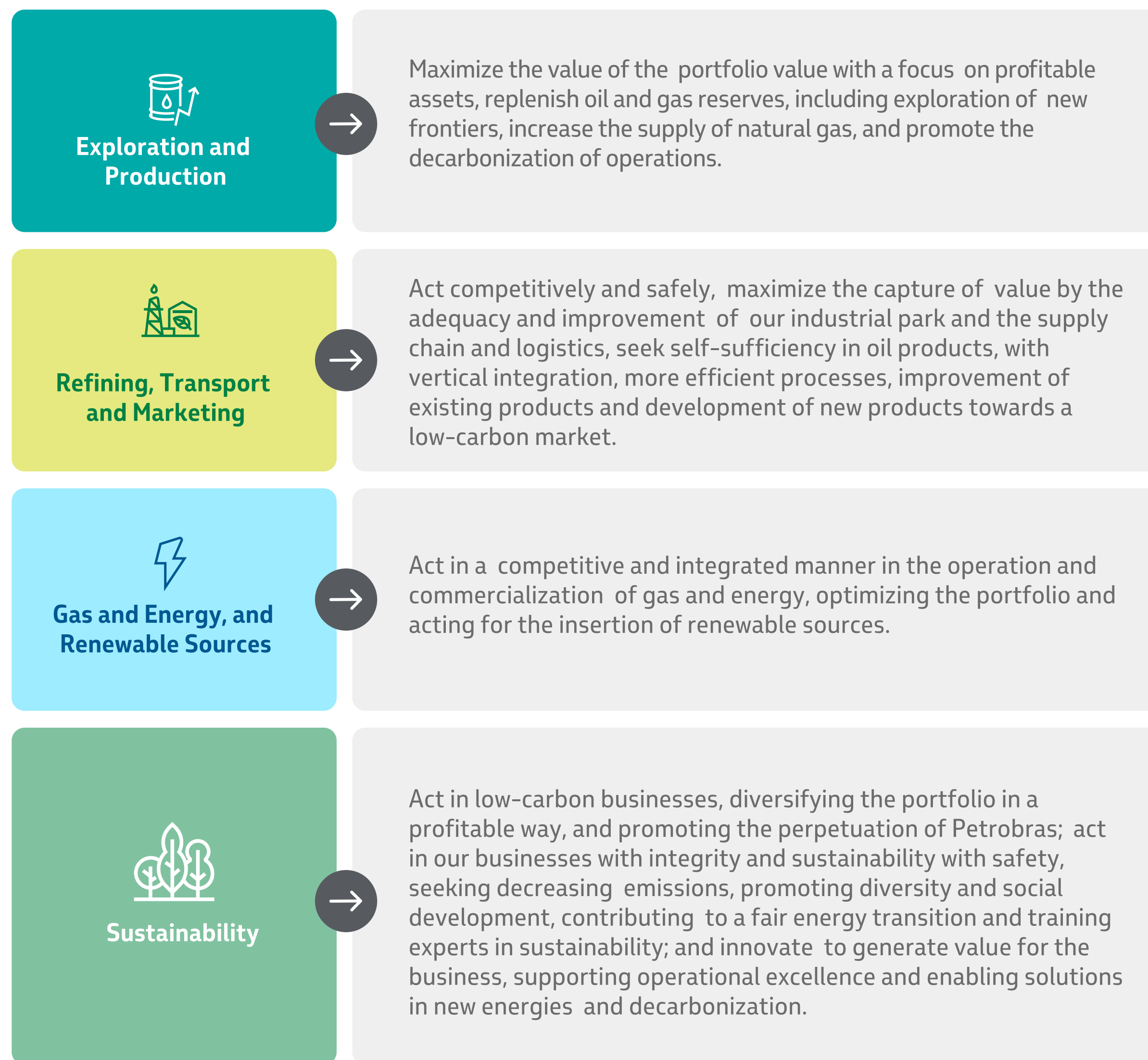
6) Strengthening access to markets and seek global vanguard in the energy transition, through international performacen through technological and operational partnerships.

With the vision “to be the best diversified and integrated energy company in generating value, building a more sustainable world, reconciling the focus on oil and gas with diversification in low carbon

businesses (including petrochemical products and fertilizers), sustainability, safety, respect for the environment, and full attention to people” we defined our values in the 2024-28+ Strategic Plan:

- Care for people
- Integrity
- Sustainability
- Innovation
- Commitment to Petrobras and the country

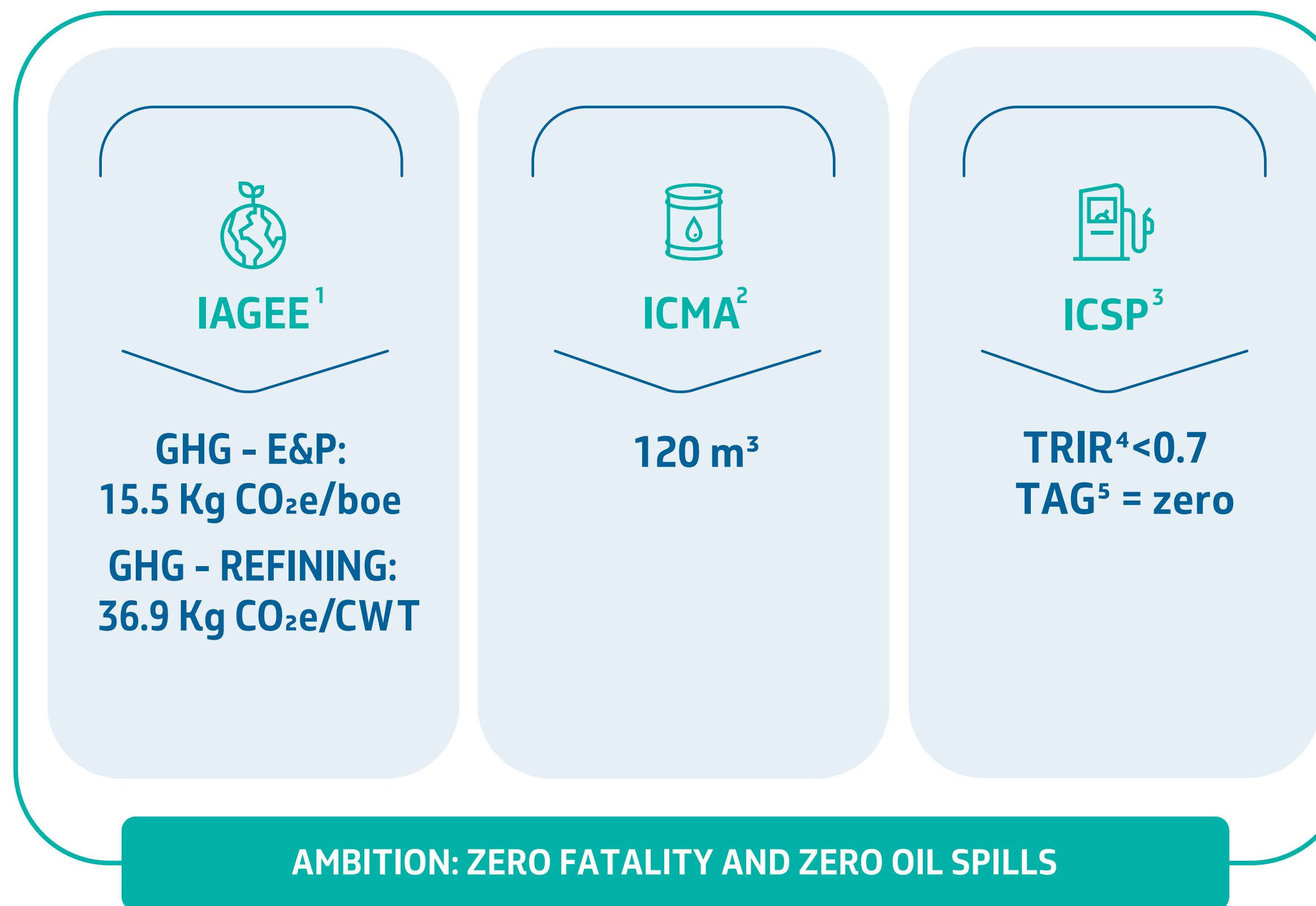
A set of Strategies aimed at an effective contribution by Petrobras to a prosperous and sustainable future was established in the 2024-2028+ Strategic Plan:



Within the 2024-28+ Strategic Plan, to be aligned with the market, we made specific adjustments in the way we communicate the value metric, which had its name changed from DELTA EVA® to DELTA VALOR, and the sustainability metric associated with spills - VAZO (oil and products spilled volume), which had its name changed to ICMA - Environmental Commitment Indicator. We also included the Serious Injury Rate (TAG) metric, which joins the Total Recordable Injury Rate (TRIR) metric in the People Safety Commitment Indicator (ICSP). Therefore, Petrobras continues with four top metrics:

- Greenhouse Gas Emission Intensity Achievement Index (IAGEE)
- Environmental Commitment Indicator (ICMA)
- Delta Valor (DELTA VALOR)
- People Safety Commitment Indicator (ICSP)

In the following infographic, we illustrate the metrics related to Environmental, Social and Governance (ESG) and commitment to people themes, with their reference values for the year 2024.



<sup>1</sup> IAGEE: Greenhouse Gas Emission Intensity Achievement Index

<sup>2</sup> ICMA: Environmental Commitment Indicator

<sup>3</sup> ICSP: People Safety Commitment Indicator

<sup>4</sup> TRIR: Total Recordable Injury Rate

<sup>5</sup> TAG: Serious Accident Rate

Our Commitment to life is a non-negotiable value and our recognized safety culture continues to be reinforced every day to strengthen operational and people safety. Therefore, we also maintained the ambition of zero fatalities and zero spills in our plan.

The 2024-2028+ Strategic Plan reaffirms its position related to ESG themes, integrating its elements into a single vision, highlighting four key ideas:

- reduce carbon footprint
- protecting the environment
- caring for people
- acting with integrity

For each of these driving ideas, a set of relevant drivers was identified that support and guide our actions, projects, programs, and related commitments.



The commitments related to each of the diagram's four key ideas were consolidated into a single list, aligned with the concept of integrated ESG:

**REDUCING CARBON FOOTPRINT**

**AMBITION: Neutralizing emissions (scopes 1 and 2) in activities under Petrobras' control by 2050 and influencing partners to achieve the same ambition in non-operated assets<sup>6</sup>**

- Reduction of total absolute operational emissions by 30%<sup>7</sup> by 2030 (54.8 MM ton/year)
- Zero routine flaring by 2030
- Reinjection of 80 million tCO<sub>2</sub> by 2025 in CCUS projects
- GHG intensity in the E&P segment: achieve portfolio intensity of 15 kgCO<sub>2</sub>e/boe by 2025, maintained at 15 kgCO<sub>2</sub>e/boe by 2030
- GHG intensity in the Refining segment: achieve intensity of 36 kgCO<sub>2</sub>e/CWT by 2025 and 30 kgCO<sub>2</sub>e/CWT by 2030
- Reduction in the methane emissions intensity in the upstream segment by 2025, reaching 0.25 t CH<sub>4</sub>/thousand THC and reaching 0.20 t CH<sub>4</sub>/thousand THC in 2030

**PROTECTING THE ENVIRONMENT**

**AMBITION: Zero spill**

- Reduction of 40%<sup>8</sup> in our freshwater withdrawal by 2030 (91 MM m<sup>3</sup>/year)
- 30%<sup>8</sup> reduction in process solid waste generated by 2030 (195,000 ton/year)
- Destination of 80% of solid waste generated in processes for RRR<sup>9</sup> routes by 2030
- Achieve biodiversity gains by 2030, with a focus on forests and oceans
- 100% of our facilities with biodiversity action plans by 2025
- Net positive impact on vegetated areas by 2030
- 30% increase in biodiversity conservation efforts

<sup>6</sup> Ambition refers to emissions in Brazil, where more than 97% of the company's operational emissions occur. For the other emissions, we also aim for neutrality within a period compatible with the Paris Agreement, in line with local commitments and international organizations.

<sup>7</sup> Reference year: 2015

<sup>8</sup> Reference year: 2021

<sup>9</sup> Reuse, Recycling, and recovery.



**CARING FOR PEOPLE**

**AMBITION: Zero fatality**

Provide a return to society of at least 150% of the amount invested in voluntary socio-environmental projects<sup>10</sup> (by 2030)

To be among the top three O&G companies in the Human Rights ranking by 2030<sup>11</sup>

Diversity:

- Women in leadership: 25% by 2030
- Black people in leadership: 25% by 2030

Implement 100% of the commitments of the UN Global Compact Mind in Focus Movement by 2030

Achieve more than 50% of physically active employees, contributing to a healthier and more productive life by 2028



**ACTING WITH INTEGRITY**

**AMBITION: Be a benchmark in ethics, integrity, and transparency**

Promoting diversity in Petrobras' nominations for our subsidiaries:

- Achieve 30% of women on the Board of Directors, Executive Board and Fiscal Council by 2026
- Increase the number of appointments of Black people to the Board of Directors, Executive Board and Fiscal Council by 10% by 2030

Conclude sexual violence investigations within an average period of 60 days by 2024

100% of relevant suppliers trained in Integrity and/or Privacy and Personal Data Protection by 2030

Conduct Human Rights Due Diligence in 100% of our relevant suppliers by 2030

Evaluate, the expansion of ESG requirements in 100% of strategic categories hiring

Establish that 70% of relevant suppliers have their emissions inventory (GHG) published

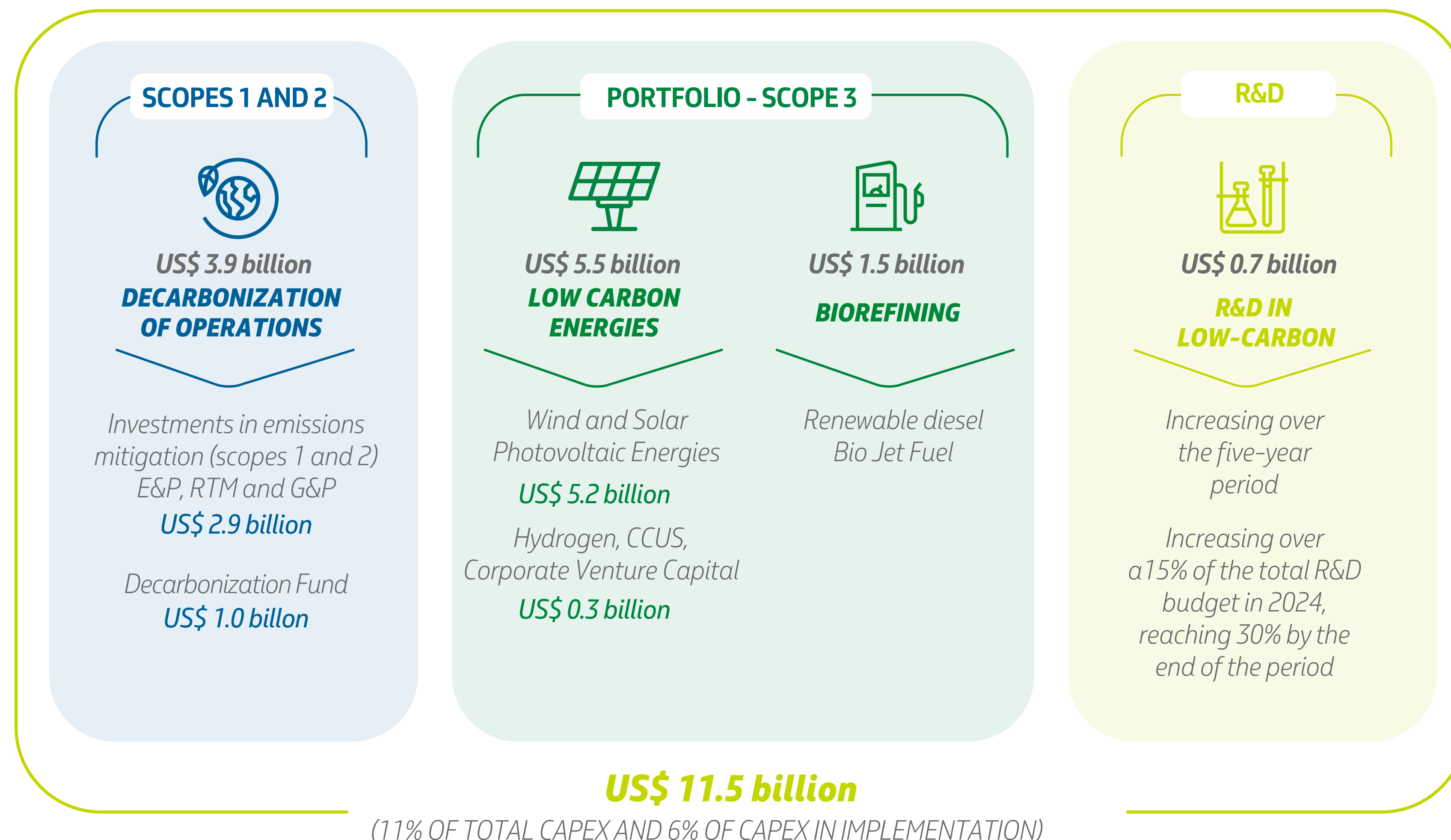
<sup>10</sup> Per project, measurable (3 years).

<sup>11</sup> In the Corporate Human Rights Benchmark (CHRB).



Petrobras will allocate up to US\$11.5 billion to low-carbon projects over the next five years, considering transversal investments in different business segments. This includes initiatives and projects to decarbonize operations, as well as the maturing and development of businesses in the low-carbon energy segment, with emphasis on biorefining; wind; solar; carbon capture, utilization, and storage (CCUS) and hydrogen.

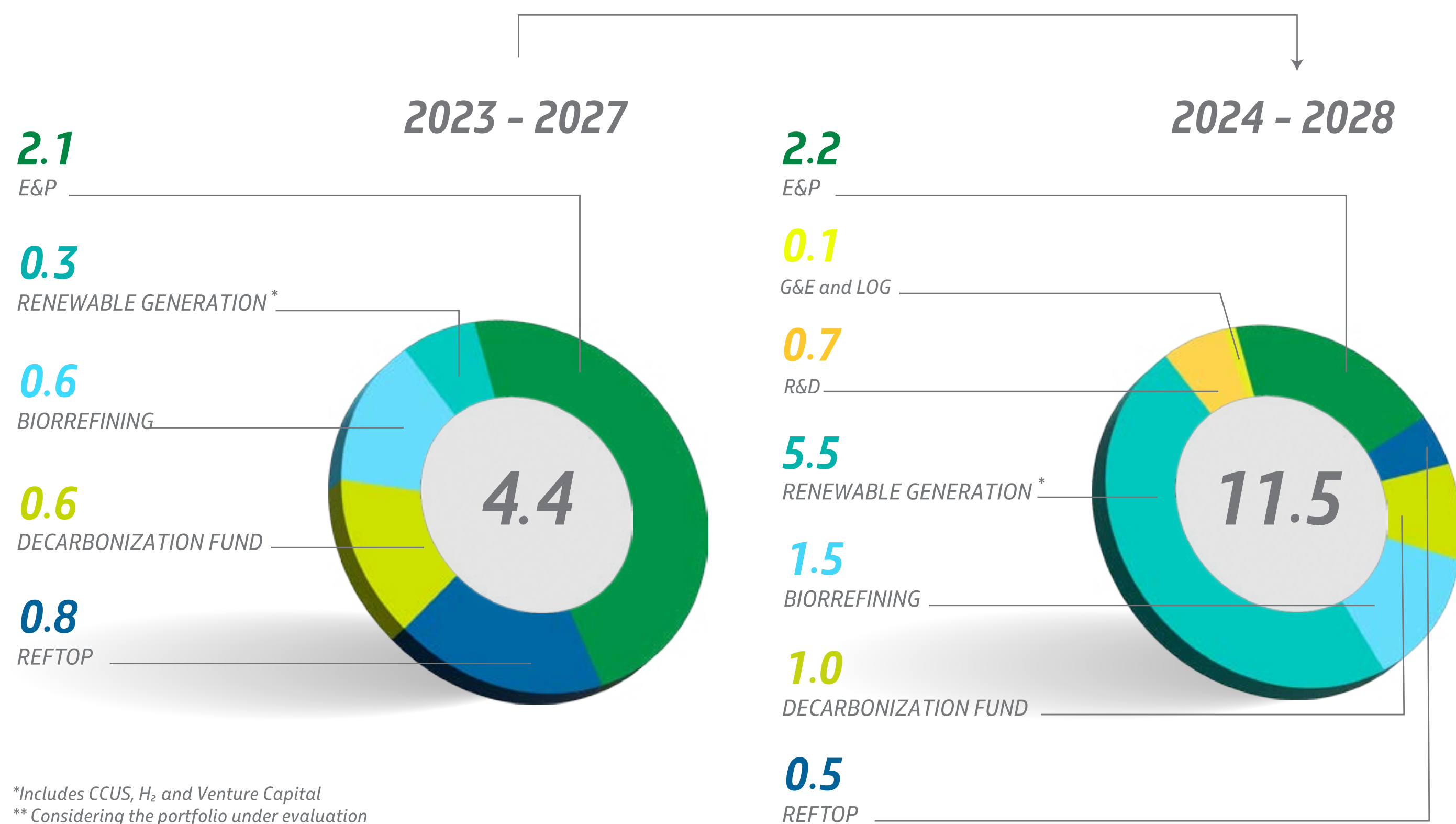
In this context, it is important to highlight the focus on profitable projects, with prioritization of partnerships to reduce risk and share learning. With this new front, the company will also develop Brazil's regional competitive advantages.



Note: Expenses classified as Capex (capital expenditure) can be allocated as Opex (operational expenditure) for the amounts related to the decarbonization fund and expenditure on research and development (R&D). The planned expenses for the low carbon portfolio correspond to 10% of the total R&D budget, which depends on the legal obligation.

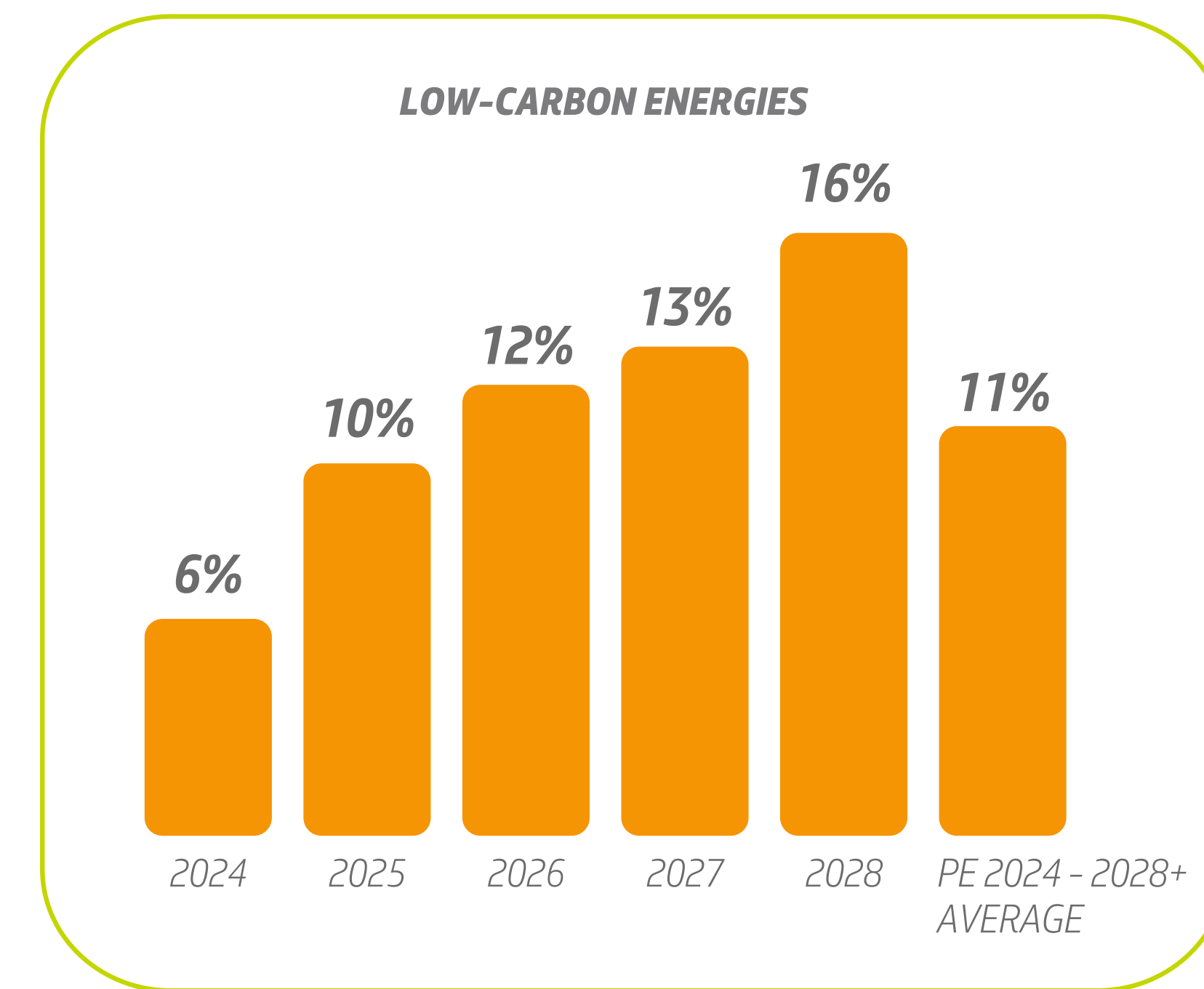
In the 2024-28 average, low carbon investment represents 11% of Petrobras' total investment, indicating progress in the company's current position in relation to its market peers. The forecast is that low carbon investment will gradually gain ground in the company's portfolio over the period, reaching 16% in 2028.

**Low carbon capex  
US\$ billion**



\*Includes CCUS, H<sub>2</sub> and Venture Capital  
\*\* Considering the portfolio under evaluation

**% CAPEX IN LOW-CARBON\*\***





Following the major transformations in the world, mainly in the energy, digital, social, and environmental segments, Petrobras is going through a phase of changes and new perspectives, aiming to prepare for the energy transition and a fair, inclusive low-carbon economy, with changes in energy use patterns, evaluating and minimizing social impacts for all parties: employees, communities, and the entire supply chain.

### Main sustainability metrics<sup>12</sup> (consolidated)

INDICATOR	2023 ACHIEVEMENT	TARGET OR MAXIMUM ADMISSIBLE LIMIT (LMA) FOR 2023	2023 PERFORMANCE	TARGET OR LMA FOR 2024
Fatalities	2	LMA: Zero	Actual results below zero fatality ambition	Ambition: Zero
TRIR	0.80	LMA <0.7	Achievement 14% higher than the warning limit projected for the year	< 0.7
VAZO <sup>13</sup>	16.9m <sup>3</sup>	Ambition: Zero LMA: 120 m <sup>3</sup>	Actual result was 95% below the volume spilled in 2022 (218.03 m <sup>3</sup> ) and 86% below the warning limit established for 2023.	Ambition: Zero LMA: 120 m <sup>3</sup>
GHG <sup>14</sup> E&P	13.8 kgCO <sub>2</sub> e/boe	15.0 kgCO <sub>2</sub> e/boe	Actual result 8.4% lower than the emission intensity goal established for 2023	Note <sup>15</sup>
GHG <sup>14</sup> Refining	36.8 kgCO <sub>2</sub> e/CWT	37.8 kgCO <sub>2</sub> e/CWT	Actual result 2.6% lower than the emission intensity goal established for 2023	36.9 kgCO <sub>2</sub> e/CWT

<sup>12</sup>Data on fatalities and Total Recordable Injury Rate (TRIR) include the parent company Petrobras, Libra, Petrobras Bolivia S.A. (PEB), Petrobras International Braspetro B.V. - Sucursal Colombia (PIB-COL), Transpetro, Araucária Nitrogenados (ANSA), Petrobras Colombia Combustibles S.A. (PECOCO), TERMOMACAÉ, and TERMOBAHIA. Data on VAZO includes the parent company Petrobras, LIBRA, PEB, PIB-COL, and Transpetro. Emissions data includes all companies in which we have operational control.

<sup>13</sup>Oil and Oil Products Spilled Volume. The volumes of oil and oil products spilled related to our operations (excluding clandestine diversions) are recorded for all incidents with a spilled volume above one barrel (0.159 m<sup>3</sup>) that have affected water bodies or non-impermeable soil.

<sup>14</sup>Greenhouse Gas Emission Intensity.

<sup>15</sup>The top metric for the E&P segment in 2023 was the intensity of greenhouse gas emissions (IGEE) from the already implemented units, meaning those that were already in operation in January 2023, with their commissioning period completed. For the year 2024, the top metric will again be the GHG E&P for the total portfolio, related to our sustainability history and commitment, with a target of 15.5 kgCO<sub>2</sub>e/boe. Monitoring the performance in greenhouse gas emissions solely from new units (GHG E&P New Units) will be maintained to provide transparency on the E&P segment's performance with the monitoring of metrics. In 2023, the GHG E&P for the total portfolio achieved a result of 14.2 kgCO<sub>2</sub>e/boe.



In 2023, Petrobras verified and confirmed compliance with the basic sustainability goals of the previous year, having issued the certificate validated by the certifying Holding Company RINA SpA, established in the Sustainability-Linked Loan (SLL) credit line, contracted in 2022, in the amount of US\$ 1.25 billion and due in July 2027.

The agreement was signed with Bank of China, MUFG and The Bank of Nova Scotia, presenting competitive costs compared to market benchmarks, and counting on incentive mechanisms to achieve sustainability commitments, based on GHG intensity indicators in E&P and Refining; and in the methane intensity indicator in the upstream segment.

In December 2023, we launched the new **Social Responsibility Policy**, built on a process of broad listening. The document establishes guidelines for our actions in ESG, and in the environmental dimension, as we highlight the commitment to act in alignment with the principles of sustainable development and climate justice. The policy also defines as guidelines the consolidation of our role as a reference in ocean conservation, recognizing its extreme relevance for the global ecological

balance, for coastal communities and for business, as well as the promotion of conservation, recovery, and sustainable use of forests, strengthening the importance of nature-based solutions as a contribution to mitigating climate change and halting biodiversity loss.



## Highlights and awards



We achieved the classification Leadership (A-) in CDP Climate Change 2023.

We obtained the Gold Standard seal, granted by the "Oil and Gas Methane Partnership" (OGMP 2.0) initiative, in recognition of our plan for quantifying, reporting, and managing methane emissions, compatible with industry best practices.

We achieved the Gold seal from the Brazilian GHG Protocol Program, for the 2022 emissions inventory.

We launched carbon-neutral Petrobras Podium gasoline, the first on the Brazilian market to have GHG emissions from its entire life cycle, from well to wheel, compensated through the acquisition and retirement of high-quality carbon credits, generated in forest preservation of Brazilian biome.

FCC S.A. received the award for Best volunteering practices in companies, in the "Best management of volunteering programs in companies" category.

Petrobras University was highlighted in the Personnel Management Category, being awarded the Highlight Award from the Brazilian Association of Training and Development - ABTD for the Case of the "Laboratory of Learning Experiences with Disruptive Methodologies (EXPAMD Lab)".

We signed the first hybrid support vessel (Mr. Chafic) contract. The vessel has battery bank technology, which reduces greenhouse gas emissions and saves on diesel oil.



Our New Employee Onboarding Program was recognized with the Think Work Flash Innovation 2023 awards and the Companies that Best Communicate with Employees Award. Petrobras' onboarding has a 96% favorability rate in evaluations carried out with employees and has already become a benchmark in the country.

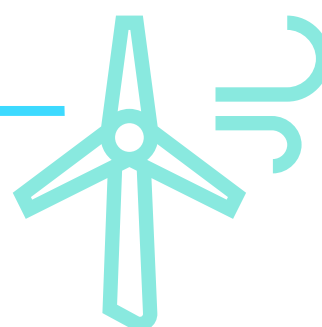


We received the Quasi Sovereign Bond Deal of the Year award for the global bond issuance carried out in July. The award was received at the Bonds & Loans Awards event, promoted by GFC Media Group.

Petrobras, Shell Brasil, TotalEnergies, CNPC and CNOOC and the Federal University of Rio Grande do Sul (UFRGS) began a series of offshore wind measurements, in the pre-salt region. The first data collection takes place in Campo de Búzios, in the Santos Basin and, this year, will be expanded to Campo de Mero. The purpose is to collect unprecedented and high-quality data on the behavior of the region's winds to support future offshore wind projects in the pre-salt areas.

We won the Distinguished Achievement Award 2024, awarded by the Offshore Technology Conference (OTC) to the Revitalization of the Marlim Field and the Campos Basin, which boosted the development of pioneering technologies for mature fields in deep waters, allowing a significant reduction in gas emissions of effect.

PIB-COL - "Corazón Verde" Award - for supporting the implementation of conservation measures for six endangered animal species, granted by the Corporación Autónoma Regional del Magdalena - CORPAMAG awarded on 12/14/2023.



Transpetro received, for the second consecutive year, maximum score for its Transparency Portal, evaluated by the Office of the Federal Controller General (CGU). The Petrobras Transparency Portal, for the third consecutive year, also achieved the highest score in the CGU ranking, among the 306 federal bodies and entities evaluated by the control body.

The case about the Petrobras whistleblowing channel, managed by the General Ombudsman's Office, was one of the winners of the 100% Transparency Movement, an initiative of the UN Global Compact in Brazil, with the goal of 100% transparency on whistleblowing channels.



The Coari Terminal (AM) won first place in the Environmental Performance Index (IDA) category of the 6th edition of the Antaq Award, promoted by the National Waterway Transport Agency (Antaq). The award recognizes initiatives that contribute to improving the provision of water transport services to society. In 2023, the theme was ESG Best Practices and Innovation.

We received the award for best investor relations team from Institutional Investor. Furthermore, we were recognized by this institution as top 3 in the following areas: investor relations program, event for investors and analysts and composition of the Board of Directors.

We received the OTC Distinguished Achievement Award Brasil 2023, in recognition of the development of the Anchored BOP with real-time riser analysis. The two associated technologies enable the use of dynamic positioning probes in shallower water wells, reducing the affected anchoring area on the seabed by 99% and the emission of greenhouse gases by 10%.

We received the 2023 Valor Inovação award: first place in the Oil and Gas and Petrochemical category and second place in the general ranking. The award is given by newspaper Valor Econômico and Strategy& - PwC's strategic consulting firm, presenting the ranking of the 150 most innovative companies in Brazil.

We were recognized by the MIT Technology Review of the Massachusetts Institute of Technology (MIT) as one of the 20 most innovative companies in Brazil.

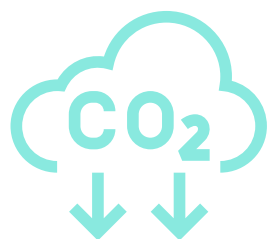
We won the 2023 ANP Technological Innovation award, with recognition in 4 of the 5 award categories:

- in category II (Oil and Gas Production) with the development of PACI 3, which enabled an intelligent completion architecture in open wells in 3 zones;
- in category III (transport, pipelines, refining, supply, and biofuels) with the development and implementation of an experimental and computational framework for predicting and monitoring the performance of asphalt materials;
- in category IV (Environment, energy transition and decarbonization) with the innovative methodology for hydrocarbon speciation;
- in category V (Subsea Technologies) with HISEP - Technological risk reduction - development and construction of an underwater centrifugal pump in Brazil and tests with dense gas (rich in CO<sub>2</sub>).

We were recognized by the NGO Shipbreaking Platform as a benchmark in sustainable recycling practices for end-of-life vessels due to the adoption of new guidelines for sustainable disposal. The new policy was applied in 2023 to the decommissioning of platforms P-32 and P-33, which inaugurated a new stage in the decommissioning industry in Brazil.

We were the only company awarded in the five categories of the 1st Best Practices Award of the 100% Transparency Movement, of the United Nations (UN) Global Compact in Brazil. The award recognizes and encourages actions by companies committed to corporate transparency in the country, aiming to comply with the UN 2030 Agenda.

We received the award in the IX Contest of Good Practices in Ethics Management promoted by the Public Ethics Commission (CEP) for the practice "Petrobras Journey for Integrity: the trail of disseminating ethics in operational areas", which aims to provide content on Ethics and Integrity to workforce assigned to the company's operational areas.



We acquired international certification that guarantees that 100% of the electricity used in our industrial and office operations in Brazil is generated by renewable sources.

We received unprecedented recognition from the "Carbon Sequestration Leadership Forum" (CSLF), for our contribution to the development of CO<sub>2</sub> capture and storage (CCUS) technology. It is the first time that a Latin American company has won this award, that highlighted how important the CCUS project is for world industry, that it demonstrated the safety of geological storage and the contribution for the the technology necessary to implement such projects.

The two Petrobras Biocombustível (PBio) plants in operation obtained international seals for the production of vegetable oils (cotton, palm, and soy). ISCC (International Sustainability Carbon & Certification) is one of the most traditional certifications on the market.



We obtained 94% adherence to the CBGC report from the Brazilian Institute of Corporate Governance (IBGC).

We received the Excellence Gold Certification in the National Quality of Life Award (PNQV) 2023 from the Brazilian Association of Quality of Life (ABQV).

We received the "36th edition of Biggest & Best in Transport 2023" award, granted by OTM Editoria, classified as the best in the Oil and Products category, based on an analysis of the 2022 financial statement.

We received the OTC Distinguished Achievement Award Brasil 2023, in recognition of the development of the Anchored BOP with real-time riser analysis. The two associated technologies enable the use of dynamic positioning probes in shallower water wells, reducing the affected anchoring area on the seabed by 99% and the emission of greenhouse gases by 10%.



We were recognized for leadership (A rating) in the Supplier Chain Engagement criterion of the CDP assessment called Supplier Engagement Rating (SER).

We received the Schneider Electric Sustainability Impact Awards 2023 (Regional Winner - South America) for demonstrating sustainability leadership in the decarbonization of our operations.

We have achieved 7th position in the industry in the Supplier Engagement requirement of the World Benchmarking Alliance.



# ***ACTING WITH INTEGRITY***

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# CORPORATE GOVERNANCE

[2-9] [2-10] [2-11] [2-12] [2-13] [2-16] [2-17] [2-18][2-23] [2-24]

In April 2023, our Board of Directors (BoD) approved the creation of the company's Energy Transition and Sustainability Executive Office, which began to coordinate decarbonization, climate change, new technologies and sustainability activities and will incorporate Petrobras' natural gas marketing activities. This is an important milestone for us to follow the best market practices, thinking about a more sustainable company and aligned with the growing demand for renewable energy.

In October 2023, our Executive Board approved the restructuring of the Governance and Compliance Executive Office (DGC), which became more robust and now has four executive managers and two general managers. The new structural design creates the executive department of Disciplinary Accountability and the general department of Strategic Information and Monitoring of the Integrity System. The Disciplinary Accountability area will act as an internal affairs department, having, among

its responsibilities, responsibility for deviations and non-conformities, including those of third parties, such as suppliers and other legal entities that have relationships with Petrobras. The new area will make the company's process of applying the Anti-Corruption Law (Law no. 12,846/2013) even more robust. The Strategic Information and Monitoring of the Integrity System area uses advanced technology and data intelligence to analyze compliance incidents and quickly identify irregularities. This area is also responsible for the continuous monitoring of indicators, processes, controls, projects, and initiatives, aiming to constantly improve the Integrity System and achieve our strategic goals.

In the same restructuring, an area was created, led by a woman, to specifically deal with complaints related to violence at work (sexual violence, moral harassment, retaliation, and discrimination). Changes to the organizational structure can be seen in our General Organization Chart.

Also in 2023, the Board of Directors approved, within the scope of the 2024-2028+ Strategic Plan, the ESG (Environmental, Social and Governance) Driver "Acting with Integrity", which is committed to promoting gender and racial diversity in Petrobras appointments for statutory positions of its shareholdings in the following ways:

- Reaching 30% of women in the Board of Directors, Executive Board and Fiscal Council by 2026; and
- Increase the appointment of Black people to the Board of Directors, Executive Board and Fiscal Council by 10% by 2030.

In the same Strategic Plan, we established a commitment to conclude the investigation of cases of sexual violence in our facilities within an average period of 60 days, ensuring the quick and effective investigation of cases, providing a safe and respectful work environment for all employees.



Another important initiative was the approval by the Board of Directors, on September 21, of the **Diversity, Equity, and Inclusion Policy**, which is currently in the process of being implemented within the controlled shareholdings, thus maintaining the strategic alignment of the Petrobras System.

We are committed to ensuring that 100% of relevant suppliers are properly trained on integrity and/or privacy, in addition to carrying out Human Rights Due Diligence on all relevant suppliers by 2030. This involves training and promoting ethical and responsible practices in its operations.

Another established commitment is to evaluate, in 100% of contracts in strategic categories, the expansion of requirements related to sustainability, social responsibility and corporate governance, aiming to promote more sustainable and responsible practices in our supply chain operations.

Finally, we set a target for 70% of relevant suppliers to have their greenhouse gas (GHG) emissions inventory published by 2028. This demonstrates our commitment to promoting transparency and sustainable management of supplier emissions, aiming to reduce environmental impacts, and adopting

more sustainable practices along the chain.

With the annual approval of the Strategic Plan by the Board of Directors, the Executive Board and technical bodies must manage the company's business, in accordance with the vision, purpose, values, strategies and positions established by the BoD. This includes applying the guidelines for making investment and divestment decisions, in line with the strategic elements defined for the plan. These strategic elements are used to evaluate projects' adherence to the plan and, combined with the commitment to generating value and long-term financial sustainability, support decisions to include new projects in the investment portfolio or withdraw existing projects.

Our Internal governance plays a key role in this decision-making process. Profitability is one of the main premises for prioritizing investments, and projects must be viable from both a technical and economic stand point. The greater the value of the investment, the greater the requirement for technical analyses and governance procedures, including technical opinions and committee reviews, until the final investment decision is made.

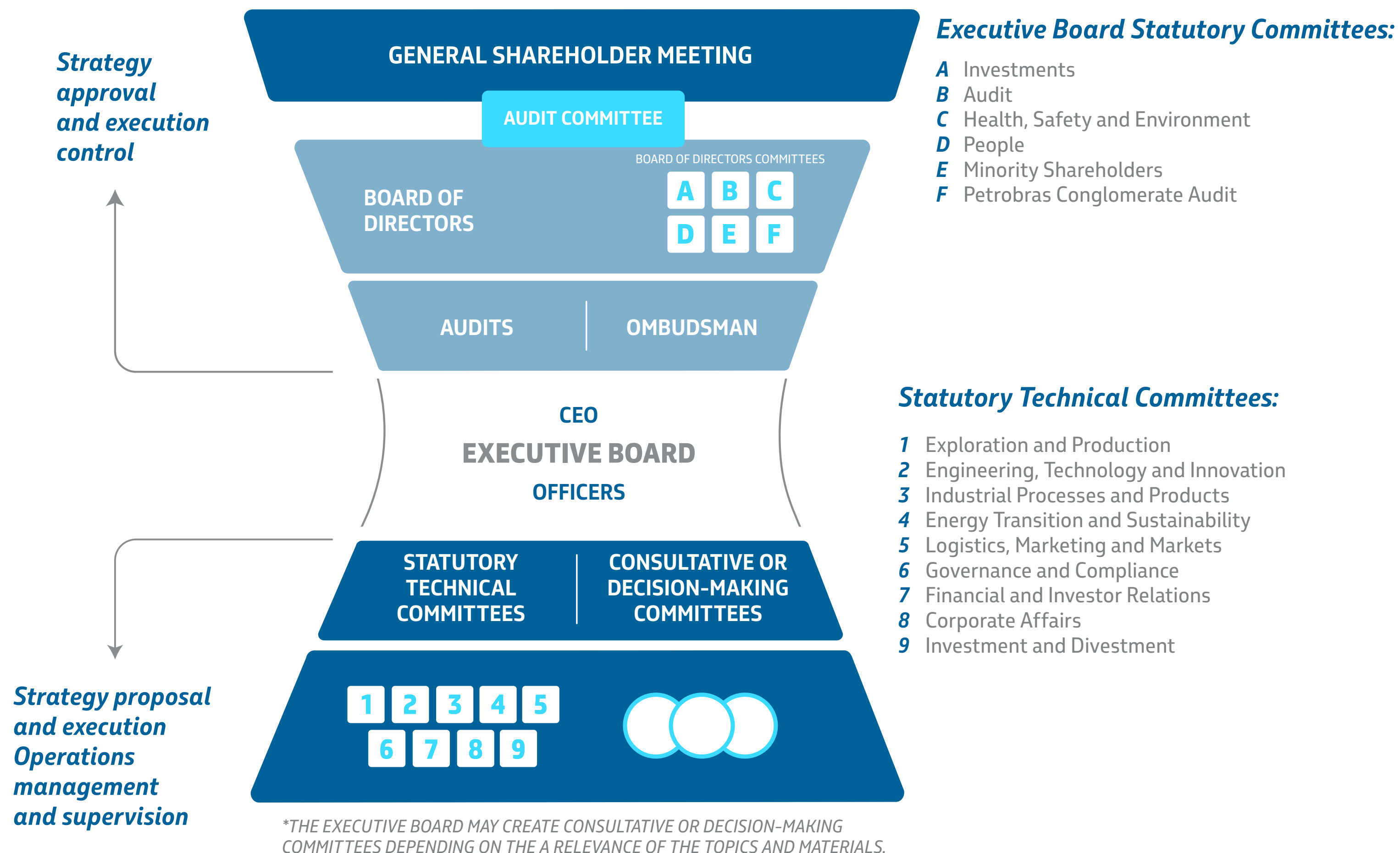
In the governance structure, we have the Statutory Technical Committee for Investment and Divestment, which has the participation of several executive managers of the company, with different areas of activity and expertise. This transversal model allows for a complementary view of investment processes. Within the scope of their manifestations, executive managers who are members of the committee have the same responsibilities and obligations provided for in corporate legislation for administrators.

## **GOVERNANCE STRUCTURE**

Our governance structure is comprised of: General Shareholders' Meeting, Fiscal Council, Board of Directors (BoD) and its committees (BoD Committees), Audits, General Ombudsman, Executive Board, and its committees (Statutory Technical Committees and Executive Committees).



## GOVERNANCE STRUCTURE



Under our Bylaws, the Board of Directors is made up of a minimum of 7 and a maximum of 11 members and is responsible for, among other things, establishing the general direction of the company's business, defining mission, strategic goals, and guidelines.

The BoD must be comprised only of external members, with no current statutory or employment ties with the company, except our president and the member elected by employees. The composition of the BoD must comply with a minimum of 40% independent members, as provided for in our Bylaws. Additionally,, the roles of chairman of the BoD and CEO of Petrobras cannot be performed by the same person, in line with the best corporate governance practices. Our statute also provides that the term of office of board members is two years, allowing a maximum of three consecutive re-elections.

In April 2023, our new organizational structure was approved, which came into effect in May, receiving additional adjustments throughout the year. The new composition of areas consists of the President's Office; Energy Transition and Sustainability; Engineering, Technology, and Innovation; Industrial



Processes and Products; Logistics, Trading and Markets; Corporate Affairs; Financial and Investor Relations; Exploration and Production; Governance and Compliance. The new structure aimed to prepare the company for the energy transition with the creation of an area focused on the topic; bringing together engineering, technology, and innovation activities, strengthening project development areas with research and development efforts; in addition to concentrating corporate activities in an area focused on company management, strengthening synergies between processes. The change can be seen on our **organizational chart**.

### **Statutory committees of the board of directors<sup>1</sup>**

<b>Committee</b>	<b>Main attributions</b>
Health, Safety, and Environment Committee (HSEC)	Advise the Board of Directors in establishing policies and guidelines related to ESG, including strategic HSE management, climate change, transition to a low-carbon economy, social responsibility, among other issues. This committee also monitors HSE indicators and image and reputation surveys, suggesting actions when necessary.
Investments Committee (COINV)	Advise the Board of Directors in defining our strategic guidelines, the strategic plan, the annual business plan, among other strategic and financial matters. The committee also assists the Board of Directors in the analysis of business opportunities, investments and/or divestments, mergers, incorporations, and spin-offs in which Petrobras is involved and which are the responsibility of the Board of Directors. In addition, COINV advises the Board of Directors in the analysis of our annual financing program.
Statutory Audit Committee (CAE)	Advising the Board of Directors on the analysis of the annual and quarterly consolidated financial statements, prepared in accordance with accounting practices adopted in Brazil and with the international financial reporting standards (IFRS); advise the Board regarding the establishment of global policies related to risk assessment and management; evaluate and monitor our risk exposure; receive, forward and monitor internal and external complaints, including confidential ones, in matters related to the scope of its activities; analyze the reports about internal controls related to financial, accounting, operational, legal and ethical aspects, prepared by the internal audit and by the units responsible for evaluating these controls, and verify compliance with the recommendations contained in these reports; supervise the activities of the areas responsible for internal controls, internal audit and the Ombudsman's Office; be aware of governance and compliance activities; ; evaluate and monitor, together with management and the internal audit if the actions to prevent and combat fraud and corruption are appropriate; ensure the adoption, maintenance and improvement of good practices of legal compliance and integrity, reporting to the Board when deemed necessary; and evaluate the following reports to be published as needed on our website and filed with the CVM: Annual Letter of Public and Corporate Governance Policies and Report on the Brazilian Corporate Governance Code - Publicly Traded Companies.

<sup>1</sup>Monthly reports are submitted to the CA



<p>Conglomerate Statutory Audit Committee (CAECO)</p>	<p>It is responsible for being the audit committee of companies in the Petrobras conglomerate that do not have a local audit committee. Created to meet the requirements of Law no. 13,303/16, which provides for the possibility for subsidiaries to share the costs and structures of their respective parent companies. It also works in advising the Petrobras Board of Directors in issuing guidance to the conglomerate's companies in relation to the matters provided for in its internal regulations.</p>
<p>People Committee (COPE)</p>	<p>Assist the Board in aspects related to the management of human resources in senior management, including, but not limited to: compensation (fixed and variable), nominations and succession policies, as well as selection and eligibility. The Personnel Committee acts, in accordance with law no. 13,303/16 and decree No. 8,945/16, as an eligibility committee and, when exercising this function, its statements will be intended, in addition to the Board of Directors, to assist shareholders in appointing members to the Board of Directors and Fiscal Council of Petrobras and verifying the compliance of the evaluation process of the company's directors and audit committee members, not being limited in these cases to being an advisory body to the Board of Directors. COPE also advises the Board of Directors on the possible application of a consequence system measure to members of senior management and external members of the Board of Directors committees, in addition to evaluating appeals on disciplinary measures for termination of employment contracts, when the Petrobras Integrity Committee does not decide by consensus. The committee also monitors image and reputation surveys, recommending actions when appropriate.</p>
<p>Minority Shareholder Committee (COMIN)</p>	<p>Advise the Board of Directors in transactions with related parties involving the Federal Government, its agencies and foundations and federal state-owned companies, as long as they are outside the normal course of the company's business. COMIN also provides advice to shareholders, issuing an opinion on certain matters within the jurisdiction of the General Meeting, pursuant to article 30, paragraph 4 of our Bylaws.</p>

The following table shows the composition of our senior governance bodies:

**Composition of the board of directors and fiscal council<sup>2</sup> (parent company)**

Forum	Members <sup>3</sup>	Executive function <sup>4</sup>	Independent	Women	Under-represented <sup>5</sup>
Board of Directors	11	2	55%	9%	18%
External members of the Board of Directors committees <sup>5</sup>	9	0	100%	11%	33%
Fiscal Council <sup>6</sup>	10	N/A	70%	20%	10%

 Information about the responsibilities and duties of our Board of Directors can be found in the **Bylaws and Internal Regulations on our Investor Relations website**.

Information related to the composition of our Board of Directors and Audit Committee can be verified in our **Reference Form – Composition and Professional Experience of the Directors and Audit Committee Members**.

<sup>2</sup> Snapshot on 02/05/2024.

<sup>3</sup> Subsequent changes to this date will be published through a market announcement.

<sup>4</sup> CEO and employee representative.

<sup>5</sup> By currently underrepresented social groups, we understand political minorities related to race/ethnicity, LGBTQIA+ individuals, persons with disabilities, and gender identity.

<sup>6</sup> The committees are composed of Board of Directors members and external members. Each board member may be part of more than one committee.

<sup>7</sup> Includes both regular and alternate members.

**Selection and appointment of the Board of Directors**

The selection and appointment processes of the Board of Directors, our highest governance body, including its committees, follow the guidelines set out in the Bylaws and the Policy for Nomination of Members of senior management and the Fiscal Council.

The Nomination Policy upholds the strengthening of principles such as transparency, equity, accountability, corporate responsibility, independence, focus on results, and diligence in relation to the nominee’s selection, appointment, and eligibility assessment processes, which must be observed together with the legislation and our Bylaws.

Thus, the guidelines, procedures, minimum requirements, and impediments established in the legislation, the Bylaws, and in this policy must be observed by all those who exercise the right to be appointed, whether they are employees or shareholders, regardless of whether they are majority or minority shareholders, or are holders of common or preferred shares.



The Nomination Policy states that those responsible for nominations must consider, in the best interest of society: (i) the profile compatible with the function to be performed; (ii) the succession plans established for the role; (iii) the variety of skills and experiences, training and qualifications recommended for each collegiate body; and (iv) the nominee's track record with respect to integrity and performance assessments.

Also in accordance with the policy, one should seek to achieve diversity in the composition of the Board and complementarity of experiences and qualifications, such as: (i) experience as an executive or director; (ii) knowledge of finance and accounting; (iii) specific knowledge of the energy sector; (iv) general knowledge of the national and international market; (v) knowledge of compliance, internal controls and risk management; (vi) strategic vision and knowledge of good corporate governance practices; and (vii) time availability.

Regarding the appointment of the board member elected by the employees, in addition to the guidelines applicable to all appointed board members, it must comply with the rules contained in Law 12,353/10 and in electoral regulations approved by the board.

The company's shareholders, gathered in a meeting, are responsible for judging the convenience and opportunity of electing or not each of the nominees for the company's Board of Directors and Fiscal Council, as well as evaluating all the skills necessary to perform the position.



Information about the Nomination Policy can be checked at **Petrobras Code of Best Practices**

### ***Decisions related to sustainable development***

The decision-making process on topics related to sustainable development involves several structures of our corporate governance, including the Board of Directors and the Executive Board.

The Health, Safety and Environment Committee (CSMS), which supports the Board of Directors on ESG issues, is made up of directors and external members. The Executive Committee for Health, Safety and Environment (CE-HSE), one of the committees that advise our Executive Board regarding these aspects, is made up of executives from the corporate and operational areas.

In the executive decision-making sphere, we highlight the following executive management areas with specific responsibilities associated with the management of topics related to sustainable development in 2023, including the impacts caused in each sphere as a result of the activities we carry out: Finance; Investor Relations; Social Responsibility; Institutional Relations; Health, Safety and Environment; Gas and Energy; Climate Change and Decarbonization; Renewable Energy; Integrated Management of Energy Transition and Human Resources.

The responsibility hierarchy unfolds as the managers report to the Executive Board, who in turn, follow the guidelines of the Board of Directors, both advised by their respective committees.

Our main decisions are taken collectively (Board of Directors and the Executive Board) or are shared, requiring at least two managers to approve the act. This decision model is based on the four-eyes principle, which increases transparency and control of our decision-making process.

We have taken a firm step towards strengthening our integrity policies to promote human rights. Since October 2023, the topic, a priority for the company's current management, has become part of the



analyses carried out in our supply chain. In practice, to be fully able to provide services to the company, companies that are part of the supplier registry will need to demonstrate that they are committed to respecting, raising awareness and promoting human rights.

Our supplier integrity analyses - a process technically called Integrity Due Diligence (DDI) - will observe whether any suppliers have actions related, for example, to preventing work analogous to slavery; the eradication of child labor, as well as the sexual exploitation of children and adolescents; combating moral or sexual harassment and discrimination in all its forms; guaranteeing freedom of association and collective bargaining; and the promotion of diversity, equity, and inclusion.

We adopted the supplier DDI in 2015. This type of compliance mechanism is applied to companies that have a commercial relationship with us. The DDI requires suppliers to demonstrate the existence and functioning of governance, compliance and internal audit structures and mechanisms proportional to the size, complexity, and criticality of their operations. After carrying out the analysis, the supplier receives an Integrity Risk Degree (GRI), which can be low, medium,

or high. Suppliers classified with a high GRI are restricted from doing business with us. In the last eight years, more than 32,000 suppliers received the GRI as a result of applying the DDI procedure.

The incorporation of requirements to prevent human rights violations into the DDI procedure adds to other initiatives that we have put into practice in recent years, such as the launch of the Guide to Ethical Conduct for Suppliers, the implementation of the Human Rights Track and Companies in partnership with the UN Global Compact, and the publication of the Human Rights and Corporate Citizenship Supplement. These actions reinforce our commitment and coherence with international treaties and conventions ratified by the Brazilian State, such as the International Bill of Human Rights and the Declaration of the International Labor Organization (ILO) on Fundamental Principles and Rights at Work.

The GRI is an important support for our decision-making and is part of the entire supply chain, from lower value contracts, carried out by our own staff, as well as higher value contracts, which are carried out by senior management, involving executive managers or the Executive Board.

In addition to the GRI, we carry out due diligence related to human rights, in pilot format, since December 2023. This activity is part of the Human Rights Commission's Action Plan, accompanied by the CSMS on a fixed agenda that includes the ESG commitments established in the Strategic Plan.

In 2023, in addition to the statutory advisory committees of the Board of Directors and the Energy Transition and Sustainability Executive Office, we have operational, tactical, and strategic forums that make up our HSE governance, climate change and social responsibility, so that issues are addressed and unfolded in all levels of the company, as detailed below:



## Sustainability forums

Forum	Main attributions
HSE Executive Committee	Advise the Executive Board in defining strategies, policies, and guidelines for HSE, climate change and social responsibility. Analyze and issue recommendations to Executive Board regarding objectives, targets, and investment plans for the development of the strategy; performance monitoring and recommendation of improvement actions to our units and corporate holdings; audit recommendations; proposals for projects and improvement actions and requirements of the HSE Committee of the Board of Directors.
HSE Commission	Advise the manager of the "Manage HSE macroprocess" with the standardization, integration, development, and critical analysis of the unfolded processes of the macroprocess, seeking continuous improvement of HSE performance at Petrobras.
Thematic HSE committees (Safety Committee, Process Safety Committee, Environment Committee, Health Committee and Contingency Committee)	Advise the HSE Commission in the definition of HSE strategies, guidelines, standard procedures and norms; monitor the implementation of HSE strategies, guidelines, programs, projects and actions in the various areas of the company and its subsidiaries; periodically monitor and report on HSE performance; to deliberate or forward to the HSE Committee proposals for programs, projects and actions for improvement in the HSE area presented by the thematic forums; approving the update of the training grid for the topic; and propose and/or monitor ICT and digital transformation solutions for the topic.
Climate Committee	Advise the macroprocess manager in the standardization, integration, development, and critical analysis of the unfolded processes of the Manage Climate Change macroprocess, aiming at the continuous improvement of our performance in atmospheric emissions, energy efficiency and climate change.
Human Rights Committee	Promote debates, disseminate content, advise, and guide human rights issues and practices in the company. Coordinate the implementation of Petrobras' human rights action plan, which is periodically monitored by the HSE Committee. Unfold the human rights commitments established in Petrobras' Strategic Plan. Coordinate the three subcommittees linked to it: the Human Rights Training Subcommittee, the Human Rights Due Diligence Subcommittee and the Diversity, Equity, and Inclusion Subcommittee.
Community Committees	Spaces coordinated by Petrobras, with the participation of community leaders and other social actors, normally quarterly. The purpose of these committees is to maintain a permanent communication line with the communities neighboring the operations, discussing issues related to our activities and actions to increase the positive impacts and minimize the negative impacts generated by them.



## Defining Strategies and Policies

Our Bylaws define that the Board of Directors is responsible, among other things, for establishing the general orientation of our business, defining our mission, our strategic goals, and our guidelines. It is also responsible for approving, as proposed by the Executive Board, the strategic plan, and its respective multi-annual plans, as well as annual plans and programs for expenditures and investments, promoting annual analysis regarding the achievement of goals and results in the execution of said plans, and must publish their conclusions and communicate them to the National Congress and the Federal Audit Court.

The Board of Directors is also responsible for setting our global policies, including those for managing commercial strategy, financial, risk, investments, the environment, information disclosure, dividend distribution, transactions with stakeholders, spokespeople, human resources, social responsibility, and minority interests, in compliance with the provisions of art. 9, Paragraph 1 of Decree No. 8,945, of December 27, 2016.

The list of policies that guide our ESG activities can be found on our **Investors website**.

Every policy, including those of sustainability, is a common corporate rule and applies to the controlling company and all companies that make up the Petrobras System. When we launch a new policy associated with sustainability content, we disclose it to our employees through publications aimed at different audiences, such as notice to markets, publications on social media and on the external website, in addition to a press release, and targeted communications, such as notes on the internal portal, weekly newsletter sent by email and posting on the workplace, the internal social network.

The main documents that establish parameters for the relationship with our suppliers are the Petrobras Compliance Program, the Guide to Ethical Conduct for Suppliers, the Compliance Policy, the Petrobras Code of Ethical Conduct, the Quality Guide for Suppliers, and the Petrobras Social Responsibility. These documents are disclosed to our suppliers and potential suppliers in our **Supplier Channel**.

Additionally, seeking to establish direct and frequent

communication, as well as share relevant information about our procurement processes and other topics related to the supply chain, we promote monthly meetings through live broadcasts, with recordings of these events made available on the Supplier Channel, where we also offer training on ESG topics through distance learning programs (ESG Journey for Suppliers), such as the online course – Guide to Ethical Conduct for Suppliers.

Also according to our Bylaws, the Executive Board is responsible for, among other duties, evaluating, approving, and submitting for approval to the Board of Directors the bases and guidelines for the preparation of the strategic plan, as well as the annual programs and multi-annual plans, including expenditures and investments with the respective projects. The Executive Board and its members are responsible for managing our business, in accordance with the mission, objectives, strategies and guidelines established by the Board of Directors.

As provided for in our Bylaws and our Internal Regulations, the Board of Directors must meet, ordinarily, at least every month and, extraordinarily, whenever necessary. In 2023, our Board of Directors





met 25 times, 12 of which were ordinary meetings and 13 extraordinary meetings.

Through the annual programming of permanent agendas, the Board of Directors and its advisory committees evaluate the agendas relating to their duties, requesting additional information and complementary documents from the competent technical areas, as necessary. Furthermore, it is up to the units to evaluate the convenience and opportunity of forwarding other relevant matters to the Board of Directors and committees that have not been scheduled in the body's annual calendar of permanent agendas.

The communication of critical ESG issues to the Board of Directors is carried out through periodic reports from the Statutory Audit Committee and the Health, Safety and Environment Committee, which are aware of the critical topics forwarded by our different areas. The following table presents, in a non-exhaustive manner, the main critical issues and the frequency with which they were brought to the attention and deliberation of the aforementioned committees in 2023:

Directors and members of the Fiscal Council, upon

Critical issues	Frequency
Monitoring critical accidents	15
Governance Newsletter	12
Monitoring of social initiatives aimed at families in situations of social vulnerability, to contribute to access to essential inputs, focusing on LPG, with respective financial dimensioning	14
Monitoring the Internal Controls and Fraud and Corruption Risk Matrix	9
Monitoring of indicators and research on Petrobras' image and reputation, related to sustainability themes	2
Reporting environmental, life, reputation, and cybersecurity risks	22
Monitoring work to investigate complaints, internal protocols, and administrative accountability processes	4
Private session for high-risk and very high-risk reports	4
Stakeholders Transactions Report	4
Commitment to Life Program	2


Critical issues	Frequency
Strategic planning and monitoring of commitments related to sustainability topics	13
Annual Letter on Public Policies and Corporate Governance and Report on the Brazilian Code of Corporate Governance	2
Integrated Report of the Ombudsman General	2
Planning internal audits and results of internal and external HSE audits	1
Environmental licensing and environmental litigation	13
Presentation of the Integrity report, including privacy and General Personal Data Protection Law "LGPD" topics	5
Guidelines and policies for Health, Safety and Environment, Diversity, Equity, and Inclusion, Social Responsibility and Human Rights in force at the company	4
Report of recommendations from independent auditors to improve internal controls Monitoring of processes and activities of the Ethics Committee	1



Information on complaints received by the Ombudsman and taken to the Board of Directors can be consulted in the **Business Integrity** chapter.

Information about our Bylaws and main governance instruments can be found on our **Investor Relations** website.

investiture and annually, participate in the Mandatory Training for Statutory Employees (TOPE). The TOPE addresses topics on corporate and capital market legislation; dissemination of information; internal control; code of conduct, Anti-Corruption Law (Law no. 12,846/2013) and other matters related to our activities. Board members and Fiscal Council members who have not participated in annual training in the past two years cannot be re-appointed. Upon inauguration, TOPE seeks to enable a broad understanding of the challenges, duties and responsibilities relating to positions and to provide material for reading, consultation and learning about the company's main governance instruments, in addition to management reports. In the 2023 cycle of TOPE, the following themes were presented, among others: Code of Ethical Conduct; governance model and decision-making process; compliance, internal controls, and stakeholders transactions; Risk management; business performance; Brazilian anti-corruption legislation, prevention and combat against discrimination, moral harassment, and sexual violence; and business continuity management.

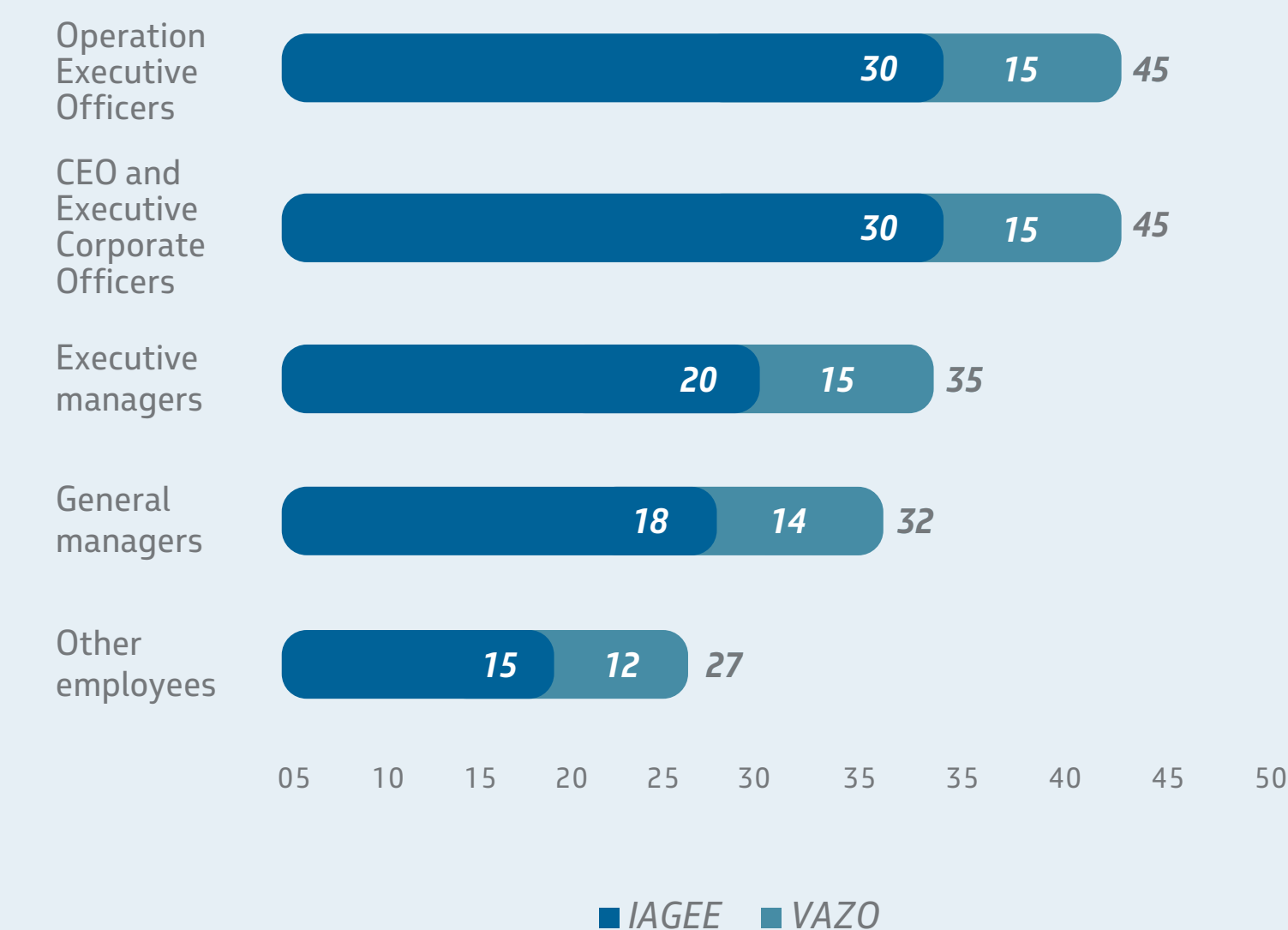
 **Information about training can also be found in the chapter Labor practices and equal opportunities.**

### **Compensation associated with sustainability objectives**

In the 2023-27 Strategic Plan, we presented four top metrics, three of which were used in 2023 for variable remuneration for all our employees (IAGEE, VAZO and Delta EVA®). These metrics are elements that translate and quantify the attributes of our vision and provide more explicit guidance regarding the main objectives of the company, in order to ensure that activities are aligned with the main commitments established in the plan. It is worth noting that the IAGEE indicators (Greenhouse Gas Emission Intensity Achievement Index) and VAZO (oil and products spilled volume indicator) are related to the ESG theme, committing the entire company to these goals.

As detailed in this supplement, in the Sustainability Strategy chapter, we made specific adjustments in the way we communicate the top metrics for 2024-2028+ Strategic Plan, but we will continue with four top metrics and using three for variable remuneration for all our employees, where two are related to the ESG theme.

### **Minimum variable remuneration linked to emissions and spills targets in 2023 (%)**



Performance analysis takes place through the Performance Management (GD) process, which assesses competencies and goals. In the Performance Management process, goals are based on specific metrics, broken down from top management scorecards into unit scorecards, seeking to ensure that individual and shared goals are shared by leadership to teams and employees, contributing to the achievement of our main metrics.



Regarding the evaluation of senior management, we clarify that there is a division of responsibilities in the company.

- Annual individual assessment of the CEO and executive officers, with coordination of the Human Resources unit under the supervision of the People (COPE);
- Annual collective assessment of the Executive Board, under the coordination of the Governance unit;
- Collective assessment of the performance of the Board of Directors (BoD) and the Board of Directors' advisory committees, carried out internally or by a specialized external company, with the coordination of the General Secretariat of Petrobras under the supervision of the chairperson of the Board of Directors and;
- Individual evaluation of the board members and members of the Board of Directors advisory committees, with the coordination of the General Secretariat under the supervision of the chairperson of the Board of Directors.

Under the Human Resources coordination, the individual performance assessment of the members of the Executive Board consists of an assessment in three dimensions: skills, management, and results. In the skills and management dimensions, the assessment is carried out in a multidimensional way,

with input from self-assessment, peers, and the chairperson. The results dimension is the result of the top metrics and specific scorecard metrics, which are determined by the Executive Department of Business Performance.

### **Assessment of the Board of Directors and its advisory committees**

The performance evaluation of the BoD and its advisory committees, as collegiate bodies, and of each of its members, individually, as well as that of its advisory committees, as collegiate bodies, occurs annually and is provided for in the Bylaws, in the Corporate Governance Guidelines of the company and the Internal Regulations of the Board of Directors.

The current performance assessment occurs through diagnosis by a specialized consulting company, hired through a bidding process, which uses its own methodology and forms for evaluating the BoD and its committees, respecting the requirements and dimensions present in the service specification prepared by the company.

The results of the evaluations are forwarded to the Board of Directors in order to identify possible opportunities for improvement, with no

expected impact of the performance evaluation on the compensation of the members of the Board of Directors and their committees, since the compensation received by them is fixed.

According to article 29, IV, of the company's Bylaws, the BoD is responsible for "evaluating, annually, individual, and collective performance results of directors and members of the Board committees, with the methodological and procedural support of the People Committee, subject to the following minimum requirements: a) exposure of the management acts carried out regarding the legality and effectiveness of the management position and administrative action; b) contribution to the results of the year; and c) achievement of the goals established in the business plan and compliance with the long-term strategy referred to in article 37, §1 of Decree No. 8,945, of December 27, 2016."

### **Assessment of the Executive Board**

The Board of Directors must annually evaluate the performance of the Executive Board, based on a methodology defined by it, which consists of evaluating the scope of metrics defined by the board and the qualitative assessment of four criteria: strategy, decision-making process, structure, and identity.



# BUSINESS INTEGRITY

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The best corporate governance and compliance practices constitute a pillar for our business. Our activity is guided by ethics, integrity, and transparency. Additionally, considering our operations in increasingly competitive markets, it is important that our governance model ensures a balance between efficiency and control to guarantee us agile and safe operations at the same time, in addition to encouraging the adoption of practices related to environmental, social and governance (ESG) with our stakeholders.

The business integrity material topic includes governance and compliance mechanisms, covering aspects of corporate integrity, transparency in the decision-making process and policies for appointing officers, positioning in relation to ethics and anti-corruption, promotion of a balanced and fair environment. It includes actions to prevent, detect and remedy misconduct and harmful acts committed against the company, including those related to fraud,

corruption, influence peddling, money laundering, commercial sanctions, conflict of interests, and other illicit activities against management that cause economic and reputational impacts for the company, its investors and value chain, as well as the management of contracts and availability of public information regarding them. It includes the risk of negative impacts due to a weak system, ineffective controls, or biased supervision, as well as the risk of positive impacts due to responsible business practices and integrity commitments in the value chain.

This year, in our materiality review process, the material topic began to include ethics in the adoption of artificial intelligence and new technologies as an impact. Our business purpose is “to provide energy that ensures prosperity in an ethical, fair, safe and competitive way” and we reaffirm our positioning related to ESG, integrating its elements into a single vision, highlighting four key ideas: reduce carbon footprint; protect the environment; care for people;

and act with integrity.

In order to act ethically and with integrity, we consider four relevant topics:

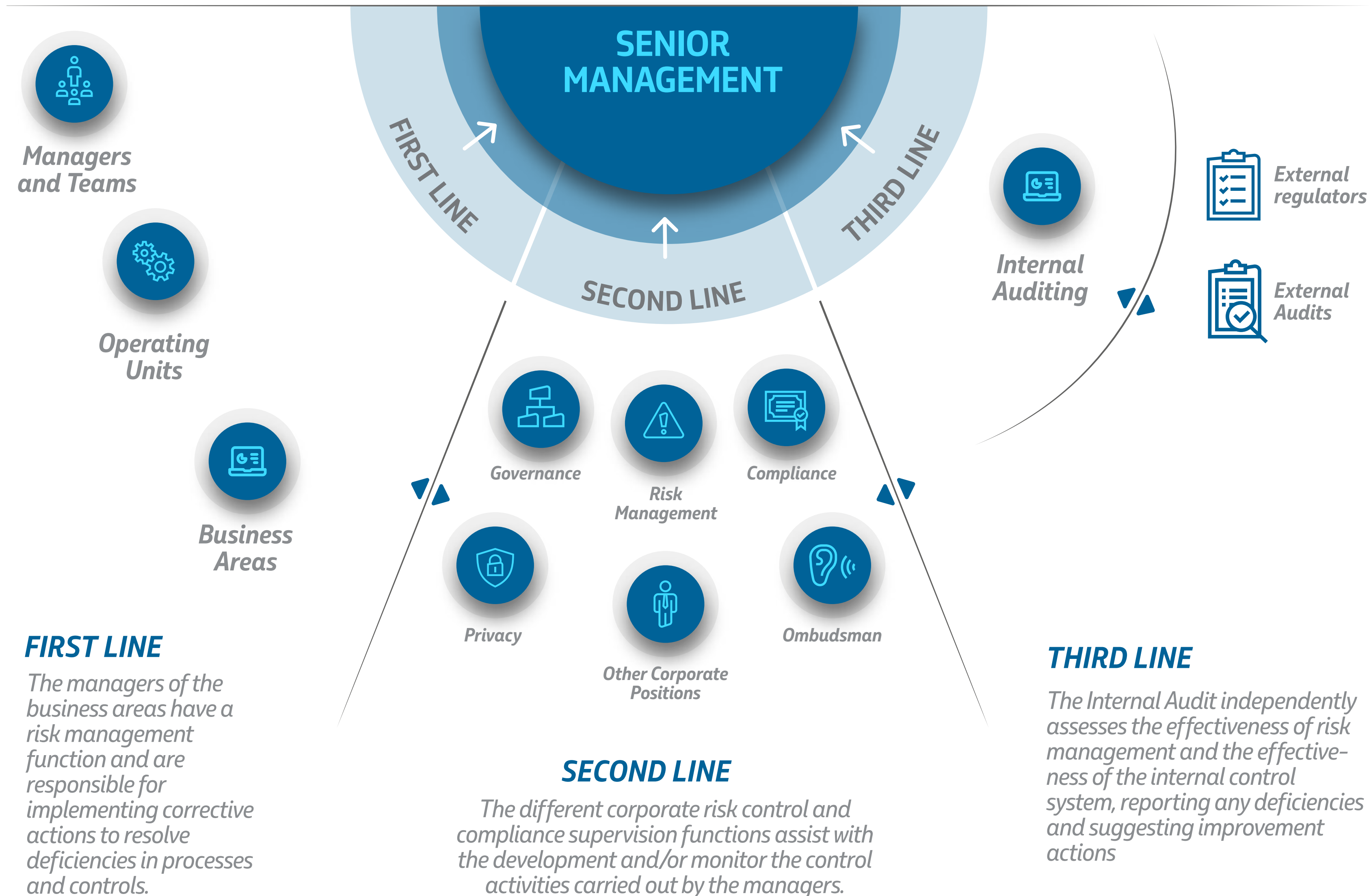
- Consolidation of the culture of integrity in the organizational culture;
- Commitment to transparency;
- Governance focused on efficiency and control;
- Promotion of the ESG theme among our stakeholders.

Our commitment to transparency is expressed in the values that support the Code of Ethical Conduct and guide our Strategic Plan. This commitment is recognized externally and, in 2023, for the seventh consecutive time, Petrobras was elected one of the ten companies with the most transparent financial statements in Brazil, in the category of companies with net revenue exceeding BRL 20 billion by the National Association of Executives of Finance, Administration and Accounting (ANEFAC).

## INTEGRITY SYSTEM

Petrobras' integrity system is a set of governance structures, standards and management and control instruments that aim to prevent the materialization of compliance risks. Comprised of the Compliance Program and the areas that deal with compliance risks, its goal is to guarantee a just integral corporate environment for business, with transparency, ethics and a direct communication line with our employees, partners, and customers.

The performance model of the integrity system is structured according to the three lines of the Institute of Internal Auditors (IIA). In this model, each group that makes up the lines plays a distinct role in the governance structure. This presupposes a set of continuous and integrated activities, supported by the structure, as shown in the figure below:





## Compliance Program

Our Compliance Program is a set of mechanisms designed to prevent, detect and remedy misconduct and harmful acts committed against the company. It was built based on the principles and guidelines established in our **Compliance Policy** and in our **Code of Ethical Conduct**, with the purpose of fostering and maintaining an environment of integrity.

The program is aimed at our various stakeholders, including: senior management, the Petrobras System workforce, customers, suppliers, investors, partners, public authorities, and all those who relate to and/or represent the company's interests in its business relations. Petrobras' Governance and Compliance Board is responsible for our Compliance Program and acts as the guardian of the integrity system.

## Governance and Compliance Board

We have a Governance and Compliance Executive Office (DGC) comprised of the Governance, Compliance, Corporate Integrity, Strategic Information and Integrity System Monitoring, Disciplinary Accountability, and Privacy units. The executive office is led by an independent director, with an express provision in the Bylaws regarding the possibility of

direct reporting to the Board of Directors. Since 2014, the Executive Director of Governance and Compliance has been elected from a list of professionals that were pre-selected by a specialized third-party firm.

The Governance and Compliance Executive Office operates as the second line of defense for Petrobras' integrity system and in the processes for managing compliance risks, advising on the development, and monitoring of control activities carried out by the company's managers. Our Basic Organization Plan, referenced in our Bylaws, highlights the responsibilities of the DGC, which include, among others, activities linked to the prevention of compliance incidents, including fraud, corruption and money laundering, internal controls and integrity analysis of managers and counterparties, in addition to investigative processes and disciplinary deliberations, also responsible for activities related to Petrobras' corporate governance model and corporate governance, management of the decision-making process and compliance with the General Data Protection Law (LGPD).

One of the duties of the DGC is to analyze and issue opinions regarding the procedural compliance of guidelines submitted to the Executive Board. In the

event of an unfavorable opinion, the agenda item will not be sent to the Executive Board to decide on and must return to its issuer to meet compliance requirements.

Governance and compliance activities are reported at least quarterly to the Statutory Audit Committee and Fiscal Council, and annually to the Executive Board and Board of Directors.

In addition to the structure responsible for compliance actions, we have around 300 professionals from different areas acting as Integrity Agents, with the objective of contributing to the multiplication of information and the for the strengthening of the of integrity in the various areas of our company.



## **Privacy and protection of personal data**

There is a structure dedicated to the topic, the General Privacy General Management Area, responsible for coordinating compliance with the General Personal Data Protection Law “LGPD” (Law 13,709/2018). We adopt an efficient governance model, in compliance with the business and relevant legislation, with preventive action that adequately addresses and responds to risks related to the protection of personal data, promoting awareness among stakeholders with a primary focus on the data subjects.

During 2023, 172 advisories were issued with the purpose of aligning our processes with the LGPD. We trained more than 29,000 employees on the topic, promoted 27 knowledge dissemination actions and improved internal regulations to highlight the importance of the subject. We also strengthened the Privacy by Design culture in different areas, aiming at the appropriate processing of personal data from conception in projects, processes, systems, and resources developed in the organization, especially in the areas of Procurement, ICT, Human Resources, HSE and Communication. We implemented an active monitoring process to detect and prevent the leakage of personal data in critical processes in the processing of this data through a Data Loss Prevention (DLP) technological solution.

It is also worth noting that since October 2023, the Integrity Due Diligence (DDI) applied to third parties began to include issues of privacy and protection of personal data for some contracting families, in addition to promoting good practices in our supply chain.

## **Ethics in adopting artificial intelligence and new technologies**

We recognize that artificial intelligence (AI) has the potential to transform several aspects of our operations, but we are committed to ensuring that this transformation occurs in an ethical, transparent, and responsible manner. Before implementing any new technology, we conduct a thorough analysis of its potential impacts, considering not only the operational benefits but also the associated ethical and social risks. Additionally, we are discussing internal guidelines and policies to govern the use of AI, ensuring it is used in a way that respects human rights, data privacy and equity. Thus, we ensure that our adoption of new technologies is always aligned with our ethical values and our commitment to sustainability.

## **Ethics Committee**

Our Ethics Committee seeks to promote the ethics management, acting as a forum for maturing and

deepening ethics related issues. It was established in compliance with Decree No. 1171/1994, Decree No. 6029/2007, and Resolution No. 10/2008 of the Public Ethics Committee.

The members of the Petrobras Ethics Committee, with the support of the Executive Secretariat of the Ethics Committee, act as an advisory body on issues related to the principles, duties and commitments of conduct established in the Code of Ethical Conduct and other instruments that make up the Petrobras Ethics Management System.

In addition, the Ethics Committee oversees compliance with the Code of Conduct of the Senior Federal Administration and forwards situations to the Public Ethics Committee that may constitute non-compliance with its rules.

The full and deputy members are expert professionals in the topics related to the duties of the Ethics Committee, with extensive experience in the functions they occupy, seeking gender diversity and representation of the operational areas.

For more information, we provide the email **[comissaodeetica@petrobras.com.br](mailto:comissaodeetica@petrobras.com.br)**.



## Policies and procedures

### Code of Ethical conduct

Our Code of Ethical Conduct follows the best practices of business integrity and represents another step towards strengthening an environment of integrity for business. In January 2023, we launched the new edition of the Code of Ethical Conduct, which incorporated and improved guidance on topics and issues related to ESG, privacy and data protection, bringing important advances in the chapter relating to human rights.

In order to maintain strategic alignment and good governance practices in the Petrobras System, the new version of the Code of Ethical Conduct was rolled out to the controlled corporate shareholdings and adopted by 100% of them.

The code defines the ethical principles that guide our actions and conduct commitments, both institutional and of our senior management and employees, explaining the ethical meaning of our mission, our vision, and our Strategic Plan. Its principles include respect for life, people, and the environment and, among its conduct commitments, reputation, and transparency.

In accordance with the provisions of our code, in item 4.2, we have the duty to respect, raise awareness, prevent violations, and promote human rights in our activities and act in accordance with human rights protected by international treaties and conventions, in addition to remediate possible losses or losses resulting from damage caused under our responsibility to people or communities impacted by our activities, with maximum agility. This compliance must also be applied in the company's internal and external online environments and channels. In item 4.8. of the code, we emphasize our commitment to promoting integrity in the public and private business environment and repudiate any and all forms of fraud and corruption, including bribery, money laundering or trading with privileged information, at all our hierarchical levels.

We also emphasize that, among the duties of our employees, is to restrain, not practice or connive with any type of aggressive behavior or physical and psychological violence, including moral or sexual harassment. Furthermore, it is everyone's duty to provide proper assistance to any person who reports being a victim of such practices.

The Code of Ethical Conduct can be accessed on our internal page and in our external electronic website.

We provide employees with an electronic system for periodic signing of the code awareness agreement, especially when new documents or new content versions are released.

### Up until 2023, 99.17% of employees signed the informed consent agreement of the Code of Ethical Conduct.

In relation to business partners and other external organizations, such as our suppliers, we have a "standard clause" in our contract model, which requires them to be aware of and comply with the guidelines of our Code of Ethical Conduct.



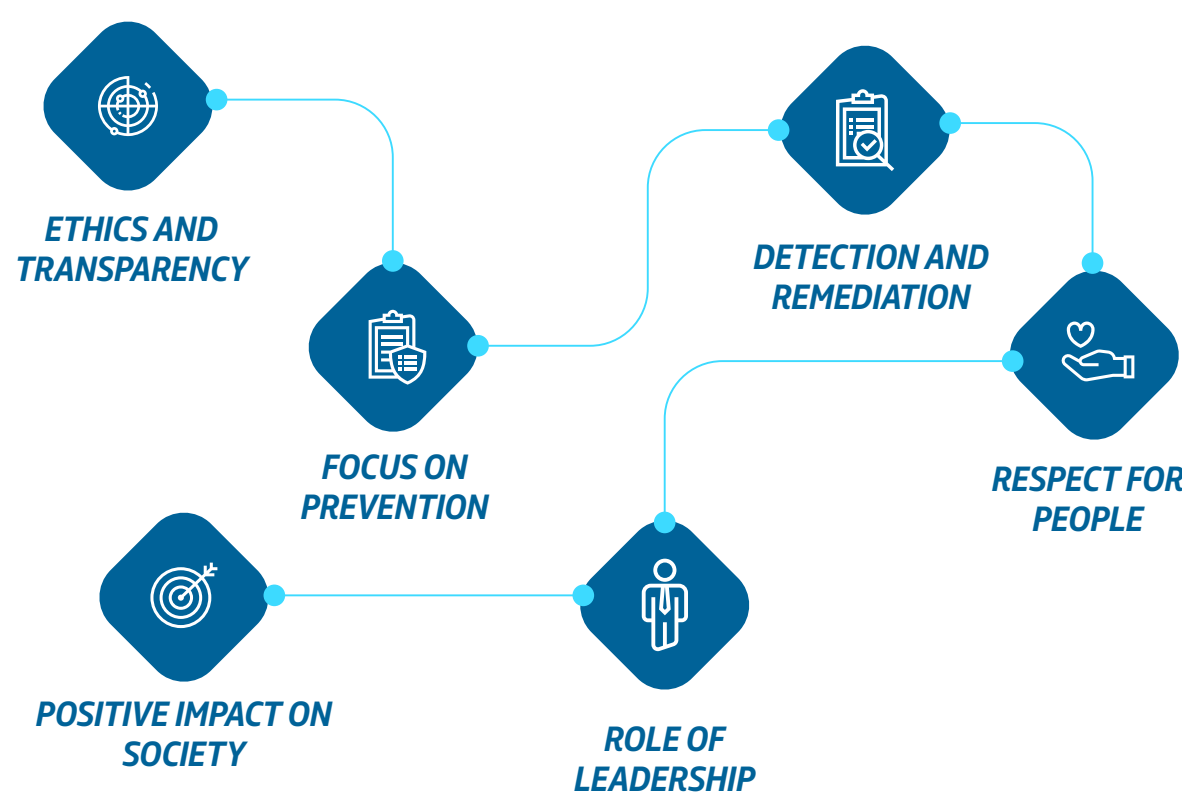
**POLITICAL CONTRIBUTIONS**

In accordance with the provisions of our Code of Ethical Conduct, we are committed to refusing to support and contributions to political parties or political campaigns of candidates for elected office, and there were no identified complaints or incidents reported related to political donations or contributions in 2023.

**Compliance Policy**

Our Compliance Policy has principles and guidelines that aim to describe and disclose the commitments we make in relation to promoting ethical values, integrity, and transparency in the carrying out of our business, providing a safe environment for decision-making.

We seek to reinforce the company's commitment to strengthening the culture of integrity, guided by the following principles:



**Guide to Ethical Conduct for Petrobras Suppliers**

Our **Guide to Ethical Conduct for Suppliers** provides guidance on expected ethical values and behaviors. The guide reaffirms our zero tolerance for any and all forms of fraud and corruption, recommending the same stance to our supply chain.

Thus, our suppliers must provide safe working conditions, treat their workers with dignity and respect, act with integrity and ethics and be in full compliance with applicable regulations and laws. This obligation is provided for both in our draft contract and in our Guide to Ethical Conduct for Suppliers.

Based on these documents and internal standards with guidelines for monitoring contracts for goods and services, we verify compliance with the execution of contractual clauses regarding aspects related to safety, the environment and health, as well as social responsibility, including labour-related obligations.

Furthermore, we evaluate the performance and quality of our suppliers and, when necessary, we apply our consequences system, as set forth in our Quality Guide for Suppliers, what can result in the application of fines and other penalties provided for

in contracts, up to the establishment of a Commission for Analysis and Application of Sanctions (CAASE), in compliance with articles 83 and 84 of Law no. 13,303/16, making it possible to institute CAASE in cases of labor, social security or HSE non-compliance, contract abandonment, unreasonable withdrawal from the bidding process, non-compliance with the Guide to Ethical Conduct for Suppliers, among other conduct considered severe. With regard to sanctioning processes related to non-conformities in labor practices, eight companies were sanctioned in 2023 among the total of 31 sanctioned companies.

**Antitrust Compliance Guideline**

Our Antitrust Compliance Guideline embodies our commitment to strict compliance with Brazilian competition legislation and the foreign jurisdictions in which we conduct business. Compliance with the guidelines set forth in this guideline is essential to avoid the occurrence of violations, as well as preventing the company from suffering from antitrust practices carried out by other agents.



## Transparency Portal

In 2023, our Transparency Portal ranked first in the active transparency ranking of the Office of the Federal Controller General (CGU) for the third consecutive year, among more than 300 federal bodies and entities evaluated.

In November, we signed a contract with the Office of the Federal Controller General (CGU) to grant a license to use our Personal Data Labelling System.

The system allows the identification and automatic hiding of personal data contained in documents, adapting the processing of personal data to the provisions of the General Data Protection Law. With the concession, CGU will make the personal data processing tool available to all federal, state, and municipal bodies in the country that use the Fala. BR Ombudsman and Information Access platforms. The forecast is that there will be a drop of more than 15% in denials of access to information. This initiative is a great contribution by Petrobras to public transparency at a national level.

In December, we expanded the dissemination of information on the Transparency Portal, such as, for example, the inclusion of subsections on the

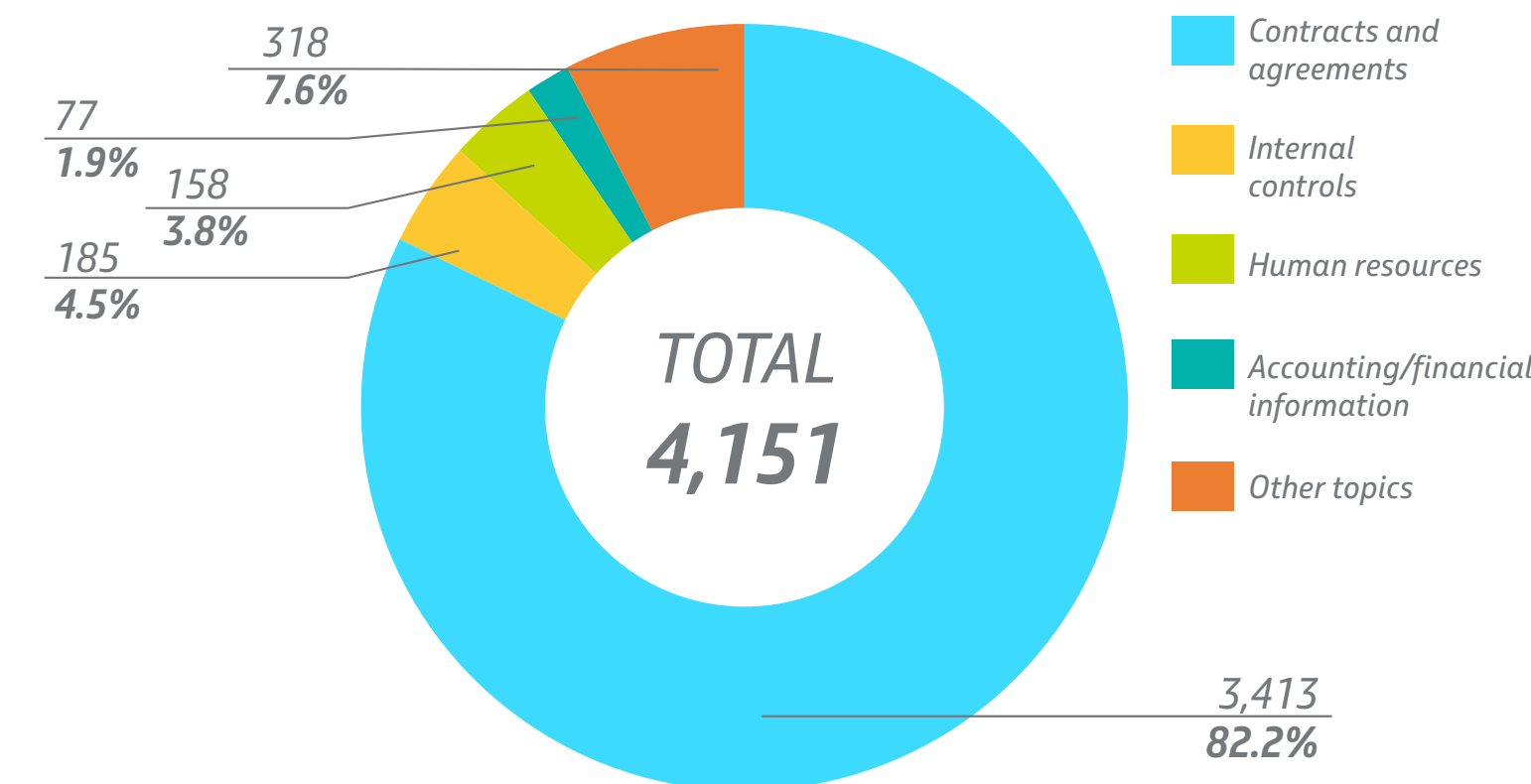
Connections for Innovation Program, as well as the publication of the Annual Report of the General Ombudsman's Office

We also started updating the sections and subsections of the Transparency Portal, in compliance with the new CGU Active Transparency Guide.

In 2023, we registered 592,742 views of the Transparency Portal and analyzed 4,151 requests for access to information, with an average response time of 15.49 days, being the 5th most requested body in Brazil.

On the portal, we disclose institutional information, expenses and revenues, audits, and accountability, in compliance with the Access to Information Law (LAI), the State Law (Law no. 13,303/2016) and the Conflict-of-Interest Law (Law no. 12,813 /2013). In addition, we also disclose the agenda of authorities, the salary table for employees, manager compensation, list gifts and hospitality, among other information of relevant interest for society.st.

## Requests for information access 2023



Of the requests for information received about contracts and agreements, the majority refer to access to information about tenders. With regard to human resources, most demands are information on the number of employees, compensation, and selection processes.



Information about our associations and external entities can be found in the annex to this report, at **Participation in associations**.

### **Training and communication**

The disclosure of policies, rules and procedures related to ethics and integrity is carried out to all our stakeholders through campaigns and internal and external actions in the various communication channels. These actions are planned based on our compliance risk analysis and are combined with specific training actions.

Training actions are also designed based on the prioritization of themes and stakeholders. We carry out an annual integrity training for our entire workforce, including senior management. Also, employees and counterparties periodically receive content on integrity topics, as well as audiences who work in areas more exposed to compliance risks, including fraud, corruption, and antitrust violations.

### **Of our total employees, 97.6%<sup>1</sup> were trained in preventing and combating discrimination, moral harassment, and sexual violence, with 39,235 employees participating.**

We have a solid commitment to promoting a respectful, safe, and violence-free work environment. To achieve this mission, in 2023, we made a new online training available to the entire workforce. With the title “Preventing and Fighting Discrimination, Moral Harassment and Sexual Violence”, the online training addresses these topics through practical cases staged by actors, questions and answers related to the cases presented, in addition to a complete conceptual basis, including information on how to act in the face of these situations and the consequences for victims, harassers and the organization. This training is mandatory for all our own employees and failure to complete it may have an impact on the annual professional progression program.

We also hold lectures on preventing and combating discrimination, moral harassment, and sexual violence

at work. This initiative aims to inform our entire workforce about these forms of violence and how they are harmful to the work environment. Raising awareness of each person's duty to be attentive towards their day-to-day behaviors and attitudes, the initiative is carried out in person or remotely, aiming to contribute to a healthy work environment free from harassment and discrimination. In 2023, 88 lectures were held, reaching an audience of more than 13,000 participants, including employees from office and operational areas, such as refineries and platforms.

We offer two other new training courses, both online: “Prevention of Money Laundering and Terrorist Financing”, focusing on professionals who work in processes with greater exposure to this risk; and “Internal Controls and SOx Certification”, which makes up the Risks and Internal Controls Program track.

We offer a permanent portfolio of training that is available for employees who did not take it at the time or who want to revisit the content.

<sup>1</sup> When considering the target audience for the training (which includes requested professionals from other corporate holdings and external entities), excluding employees on long-term leave and those seconded to other companies within the Petrobras System and external entities, the achievement rate reached was 99.4%.



In 2023, 20 training courses on topics related to ethics, integrity and transparency were accessed in the permanent portfolio, totaling 52,472 conclusions in the period.

**TRAINING**

The Petrobras Journey for Integrity initiative aims to take the topic of ethics and integrity to the offshore segment, considering the particularities of this environment, such as intense work routines, geographic isolation and confined environments, limited access to technological communication tools, shift regime, among others. In 2023, the initiative consolidated its actions and concluded the thematic cycles planned for the 2022-23 season. The pilot project was carried out in 2021 at the P-74 unit and, in 2022, there was expansion to other 12 platforms belonging to the Búzios, UN-ES and UN-BS assets, impacting more than 5,000 employees.

**Petrobras Integrity Talks**

In December 2023, we held the annual event “Petrobras Integrity Talks”. The purpose of the event, organized into two panels – “Fair Culture and the Organization that Learns” and “Compliance from People to People” – was to promote discussions on practices that strengthen integrity at all levels in organizations and society, highlighting and debate the importance of the topic in these contexts, address the challenges we face and discuss how to encourage society and organizations to build a fairer future.

**100% Transparency Movement**

As participants in the UN Global Compact, we have been engaged, since 2021, in the “100% Transparency Movement” initiative of the Global Compact Brazil Network, which aims to contribute to achieving the Sustainable Development Goals of the 2030 Agenda. Participating companies commit to adopting measures that go beyond their legal obligations, strengthening transparency and integrity mechanisms.

The movement proposes five goals to be achieved gradually by 2030 by its participants:

- 100% transparency in interactions with the Public Administration;
- 100% integrity in top management compensation;
- 100% of the high-risk value chain trained on integrity;
- 100% transparency of the Compliance and Governance structure; and
- 100% transparent whistleblowing channels.

In December 2023, we were awarded in all five categories, being the only company to receive recognition in all of them. This award is a reflection of our efforts to increase transparency in our activities and strengthen our governance and compliance structure.

**Compliance Risk Management**

Our risk management guides our integrity actions and strengthens our internal controls and governance. Our Corporate Risk Management Policy defines, in one of its clauses, that this management is part of our commitment to act ethically and in compliance with the legal and regulatory requirements established in the jurisdictions where we operate.

We define compliance risks as those related to our integrity system, covering compliance with legislation and regulations applicable to our business and operations, compliance with internal policies and procedures, and compliance with values, ethical principles, and guidelines for conduct. Each job we carry out is part of a macroprocess, that is, a group of activities focused on one of the company's objectives. The Petrobras value chain is the integration between the macroprocesses of all areas, whether business macroprocesses, management macroprocesses and corporate services. The macroprocesses unfold into processes that are transversal to the company's operations. Annually, we review the list of most exposed processes, revalidate the existing compliance risk matrices for these processes and prepare matrices for processes that have not yet been evaluated.



## In 2023, all company processes were reevaluated<sup>2</sup> based on risk factors related to fraud and corruption.

Our integrity system is subject to the risk that managers, employees, contractors, or anyone doing business with us may engage in fraudulent activities, corruption, or bribery, circumvent, or override its internal controls and procedures, or misappropriate or manipulate its assets for their personal benefit or that of a third party, against our interests. In this sense, one of the objectives of the integrity system is the prevention and treatment of these risks.

We continuously monitor our business processes to identify potential compliance deviations. Our efforts on monitoring and control are based on our compliance risk assessment. Whenever we identify an incident, we carry out a cause analysis to improve the business process and/or its respective controls, alerting those responsible for the failure to execute. Our monitoring is continuously evaluated in relation to the effectiveness of the results obtained, in order to allow the development of new types of monitoring and implement the necessary changes in processes, controls, information technology systems, and training, among others. Our senior management has tools to

mitigate risks such as fraud, corruption, and ethical misconduct in general, among which we highlight compliance risk monitoring and operational work in the area of Internal Audit, as well as those within the scope of SOx certification, which are carried out in an integrated manner with the Compliance Executive Department through the execution of control tests. The Internal Audit, certified by IIA Brasil (Institute of Internal Auditors), makes operational audit reports available to executive officers, executive managers, and unit managers, in addition to, quarterly, presenting its results to the Statutory Audit Committee, the Executive Board and the Board of Directors so that the executives monitor the implementation of improvements across areas.

### ***Integrity mechanisms in the value chain***

#### ***Integrity Due Diligence***

We conduct Integrity Due Diligence (DDI) of counterparties in order to know and assess the integrity risks inherent in our relationship with suppliers of goods and services; customers in the sale of oil products and oil; institutions in sponsorship projects and agreements related to Communication and Social Responsibility; parties to cooperation agreements and other types of partnerships; shipowners and brokers; and

companies interested in asset divestment processes and/or in equity interests, strategic and operational partnerships.

Among the verifications carried out during the DDI procedure are the identification of final beneficiaries of the legal entity, the use of intermediaries in business with Petrobras, and the existence and application of integrity mechanisms by the legal entities evaluated.

The DDI result is expressed by the Integrity Risk Level (GRI) in high, medium, and low categories, and is considered by managers in our decision-making process.

## **In 2023, the Compliance team assigned 2,370 GRIs to our suppliers.**

<sup>2</sup> Considering the configuration of process standards in the company's hierarchy, all level 2 processes have been reassessed.



Reinforcing our commitment to the topic of human rights, in October 2023, the topics Human Rights and Personal Data Protection were included in the Integrity Due Diligence Questionnaire. The information collected on these topics will be used for preventive action within our supply chain.

Also in relation to our suppliers, we have developed evaluation mechanisms that aim to guarantee that they have adequate technical, economic-financial, legal and HSE practices, in addition to having an ethical profile in their relationship with society and the environment.

Therefore, we keep our supplier base active, with the objective of evaluating, prior to the signing of the contract, the companies in terms of meeting the technical, economic-financial, legal, integrity risk degree and HSE requirements. Our supplier evaluation has been continuously optimized and simplified, seeking to generate more value for the process. In 2023, we evaluated 797 companies on technical grounds; 6,680 companies on economic and financial grounds; 10,570 companies regarding legal requirements; and 236 companies regarding HSE requirements.

### ***Integrity Background Check***

The Integrity Background Check (BCI) is an integrity mechanism that aims to support managers and senior management in making decisions regarding the appointment of candidates for key positions, through the analysis of legal requirements and compliance with our Bylaws and our Director Appointment Policy.

### **In 2023, we carried out 5,342 Integrity Background Check assessments.**

### ***Prevention of Conflicts of interest***

In addition to complying with article 115 §1 of the Corporation Law (Law no. 6,404/1976), the Conflict-of-Interest Law (Law no. 12,813/2013) and the State-Owned Companies Law (Law no. 13,303/2016), we have continuously improved instruments that deal with the identification and management of potential conflicts of interest relating to our managers and other employees.



## Instruments for the prevention of conflicts of interest

INSTRUMENT	MECHANISM TO PREVENT CONFLICTS OF INTEREST	INSTRUMENT	MECHANISM TO PREVENT CONFLICTS OF INTEREST
<b>Bylaws</b>	Prohibits appointees for management positions from having a conflict of interest with the Federal Government or with us; conflicts of interest after the end of management of the managers and members of the Fiscal Council; and composition and operating rules for the committees that advise the Board of Directors.	<b>Integrity Background Check</b>	It consists of an integrity assessment procedure that encompasses the risk of conflict of interests, related to the duties and responsibilities of candidates for key positions in the Petrobras System, including the verification of share ownership and family relationships with public and political agents.
<b>Corporate Governance Guidelines</b>	Define that the Board of Directors is to monitor and manage potential conflicts of interest between shareholders and senior management members.	<b>Ethics Committee</b>	It acts as an advisory body to the Compliance area, in relation to the assessment of identified situations of conflict of interest, as well as in the definition of mitigating or remedial actions.
<b>Code of Ethical Conduct</b>	Determines that employees must not be directly or indirectly involved in any activity that is in conflict with Petrobras interests, and that they must report the occurrence of conflict-of-interest situations that they become aware of through the Whistleblowing Channel.	<b>Compliance Program</b>	It is the set of mechanisms designed to prevent, detect, and remedy misconduct and harmful acts committed against the company, including those related to conflicts of interest.
<b>Guide to Ethical Conduct for Suppliers</b>	It determines that suppliers must refrain from performing any act that may put our employees or public agents from other public bodies and institutions in a situation of either real or potential conflict of interest.	<b>Code of Best Practices</b>	It states that it is necessary that both our managers and our employees guide their conduct in accordance with the highest ethical standards, avoiding any conflict of interest or impropriety when trading securities issued by us.
<b>Guideline for the Prevention of Conflicts of Interest</b>	In addition to the guidelines contained in the Code of Ethical Conduct, the guideline presents the concept and types of conflicts of interest, the prevention mechanisms we use, the roles and responsibilities of the areas involved, as well as the legislation and other regulations applicable.	<b>Policy for the Appointment of Senior Management and Fiscal Council Members.</b>	Establishes the minimum requirements and guidelines for appointing members of senior management and the Fiscal Council of Petrobras and its shareholdings.
<b>Guideline for the Prevention of Conflicts of Interest regarding members of the Board of Directors, Executive Board and functions equivalent to DAS-6 and 5</b>	In addition to the guidelines contained in the Code of Ethical Conduct, the Guideline presents the concept and types of conflict of interests, the roles and responsibilities of the areas involved, the concept of functions equivalent to DAS-6 and 5 in the company and details the other obligations inherent in Law 12,813/13 applicable to the target audience of the regulation.	<b>Policy for Transactions with Related Parties</b>	Establishes the principles that guide us and our employees when entering into transactions with related party and in situations where there is a potential conflict of interest in these operations.

Our employees must consult potential conflicts of interest through the Prevention of Conflicts of Interest Electronic System (SeCI), a system developed by the Office of the Federal Controller General (CGU) in compliance with the Conflict-of-Interest Law. These queries are received by the General Ombudsman and forwarded for analysis by the Compliance area. The other agents covered by art. 2 of the law must carry out consultations regarding potential conflicts of interest with the CEP.

If potential conflicts of interest are identified, the company's manager or employee must recuse themselves and abstain from participating in the decision, negotiation, structuring, and decision-making process related to the transaction, in order to guarantee the sole interest of the company.

**In 2023, considering the 162 consultations carried out, approximately 4% indicated a potential conflict of interest, generating recommendations and guidelines.**

Among the categories responsible for the highest number of queries/authorization requests in 2023, the demands involving the exercise of teaching activities



and demands related to entrepreneurship stand out. We emphasize that we have a Policy for Transactions with Related Parties and mechanisms for periodic reporting to a Statutory Audit Committee, but no conflicts of interest were identified in transactions with related parties in 2023.

### **Compliance procedures in sponsored projects**

To ensure the efficient and compliant application of resources related to the projects we sponsor, project proposals go through different analysis processes - technical, documentary, and budgetary - prior to the start of contracting, ensuring that governance and compliance procedures are followed and seeking to prevent conflicts of interests.

Proposals for socio-environmental projects, and cultural, sports, business, science, and technology sponsorships are received via public selection or direct choice.

The public selection of projects corresponds to a broad and transparent process, with its own regulations, national dissemination, and collegiate selection committees to choose which projects to develop.

With direct selection, Petrobras analyzes proposals or opportunities that are forwarded directly to us, using

our own project management systems, which must meet criteria for analysis and suitability for contracting, as well as their relevance to achieving our goals.

The proposals submitted undergo prior analysis and – if they meet the criteria and are considered relevant – are forwarded to the Statutory Technical Committee for Corporate Affairs (CTE-CORP) so that it can recommend to the CEO the approval of the sponsorship portfolio in the Communication area.

In addition, Integrity Due Diligence (DDI) of the counterparties is conducted to learn about and assess the integrity risks inherent in our relationship with holders of sponsorship or partnerships opportunities. The DDI result is expressed by the Integrity Risk Level. Additionally, sponsorship projects also undergo analysis and verification of prior compliance by the Secretariat of Social Communication – SECOM – of the Brazilian President's Office.

### **Internal Audit**

Based on a methodology approved by senior management, manual and automated control activities are tested by the Internal Audit. Thus, it is assessed, for example, whether the controls for preparing

financial reports are satisfactory. Issues such as segregation of duties, authority limits, and registration and custody of assets are also considered.

The Internal Audit professionals involved in the assessment of controls undergo periodic training to maintain the skills and develop other skills necessary for the performance of their individual responsibilities, in addition to having solid knowledge of the main fraud and corruption risks. The Internal Audit team monitors their activities using the indicator Perception of Audit Work by areas.

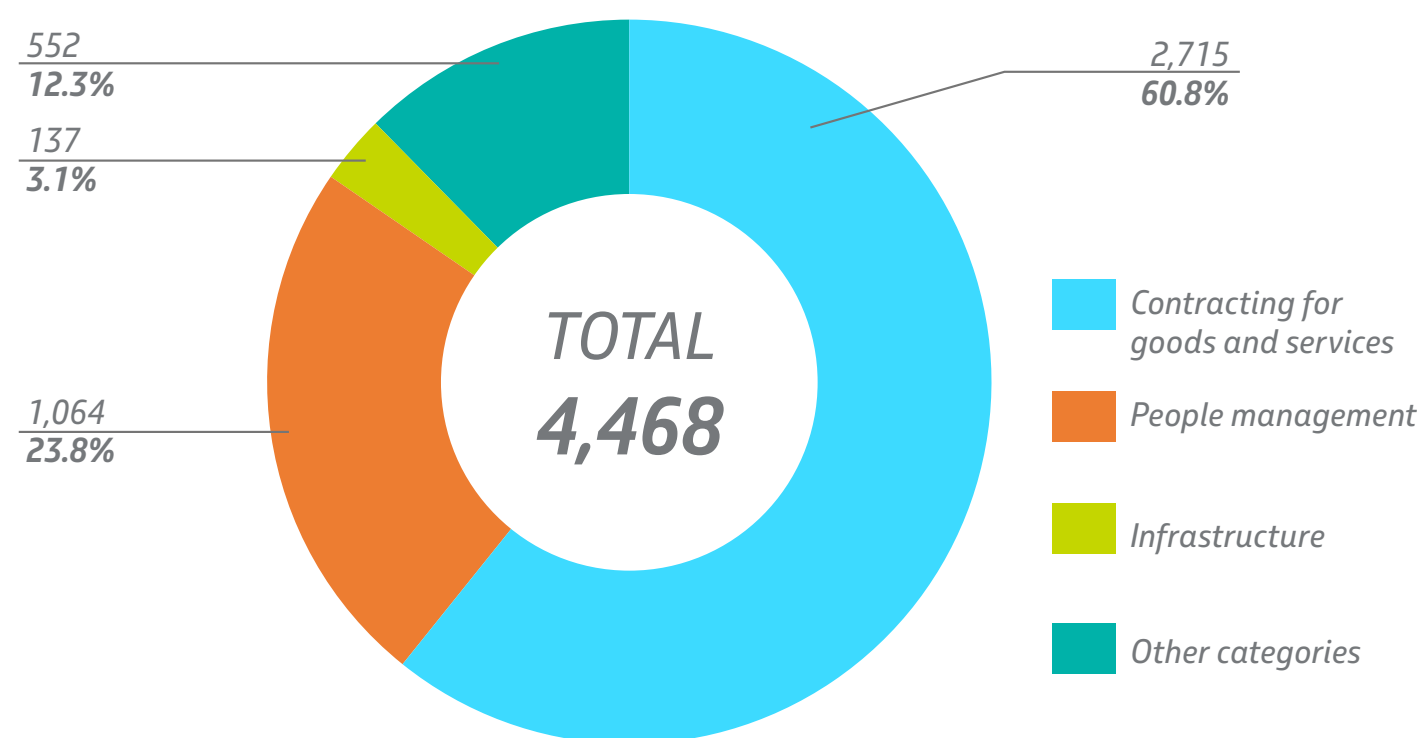
### **Mechanisms for handling requests and complaints**

We have several channels for receiving requests and complaints that allow greater transparency with our stakeholders and to provide adequate treatment. As examples, we can mention the General Ombudsman's Office, the Whistleblowing Channel, the Customer Service, the Citizen Information Service, among others.

For statements classified as complaints, requests, compliments and suggestions, the Ombudsman works as a second level reporting channel. In 2023, we received 4,468 complaints from Petrobras and Transpetro, as shown in the percentages in the following graph:



## Complaints



Of the complaints about contracting goods and services, most were regarding labor irregularities in contracted companies, such as late payment of salaries, severance pay and food vouchers. These reports provide inputs for the inspection of contracts and allow immediate action to be taken in relation to the supply chain. In turn, complaints about people management do not exactly point out irregularities or illegalities, but rather errors or non-conformities in relation to corporate processes or decisions.

## Whistleblowing channel

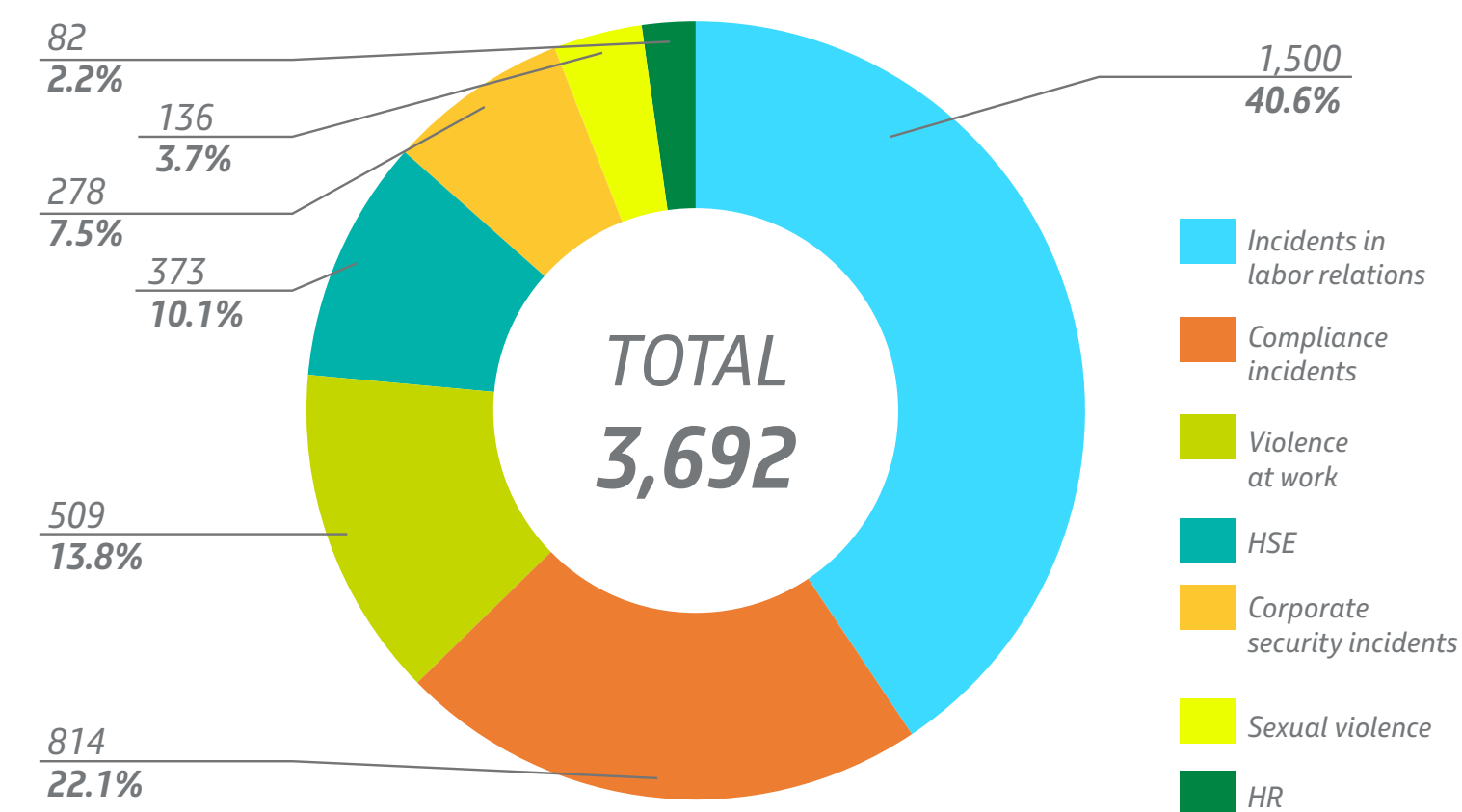
Our Whistleblowing Channel is available by telephone and on the website, 24-7, in Portuguese, English and Spanish for external and internal audiences at Petrobras and its subsidiaries. All information is received by a contracted and specialized company, which registers the report for due treatment by the Ombudsman's Office. In 2023, we received 3,692 reports (61.9% via the website, 30% by telephone and 8.1% by other means), which represents 1.9 reports for every 100 employees (considering employees, service providers, accredited, nominees, young apprentices, and interns). For the safety of these reporting parties, who may choose to remain anonymous, the IPs of their computers are not shared, and their calls are not tracked. In 2023, 75.3% of the reports were anonymous and 24.7% were identified. In addition, the treatment of reports preserves their secrecy and confidentiality, whether identified or anonymous. In situations where it is necessary to identify the reporting, as occurs in some cases of workplace violence, the treatment of the complaint continues only with their consent, always observing information privacy and confidentiality.

To ensure its integrity, the process for handling these reports is subject to specific internal controls. In

addition, we have a Whistleblower Protection Guideline that establishes measures to protect people who make good faith reports about non-compliance in company operations, or who have unequivocally disclosed their intention to do so.

The graph below shows the number and percentage number number of reports received, presented in large groups according to their similarity.

## Reports





The majority of reports of incidents in labor relations were about abusive management and intimidation. In reports of compliance incidents, issues of irregularity in contractual execution and favoritism stood out. In relation to violence at work, reports of moral harassment and discrimination stand out. In the other groups of complaints, the most recurrent themes were Golden Rules, Incidents and Deviations (HSE), Theft (Corporate Security Incidents), Sexual Harassment (Sexual Violence) and Personnel Management (HR).

Of the 2,908 complaints handled in 2023, 458 were confirmed or partially confirmed, 1,126 were not confirmed and 1,324 were archived. Of the archived cases, 81% refer to the lack of feedback from the reporting parties to the Whistleblowing Channel to complement their reports that lack sufficient information. In addition, reports presented by third parties and in which the potential victim does not agree to deal with the demand are also dismissed.

In accordance with article 24, §2 of Law no. 13,303/2016, the General Ombudsman's Office must report quarterly to the CAE and the Statutory Audit Committee of Subsidiaries (CAECO) all reports received of very high and high risk Compliance Incidents, as well as the results of their investigations.

Furthermore, all high and very high-risk complaints and those involving members of senior management are presented monthly to the Petrobras Statutory Audit Committee, which monitored 165 complaints in 2023.

Quantitative and qualitative information on demands received by the General Ombudsman's Office are reported every six months to the CAE and the Executive Board and, annually, to the Board of Directors.

### **Investigations**

Reports related to compliance incidents and workplace and sexual violence are investigated by Corporate Integrity, an area dedicated to dealing with these issues in the company.

In 2023, we maintained the reduction in the average time of ongoing investigations related to these topics, although there was a 19% increase in the logging of investigation protocols, resulting from a greater volume of received cases compared to previous years.

The reduction in the average time of ongoing investigations demonstrates our commitment to quickly investigating reported situations and, together with other measures, contributes to the effectiveness

of our integrity system, to the identification of possible irregularities and to the implementation of corrective actions and process improvement.

It is worth highlighting the creation of a new executive management department to conduct the disciplinary accountability process, including the administrative accountability process provided for in the Anti-Corruption Law, segregating the investigation activity from the accountability activity.

### **Sanctions for individual and corporate entities**

In 2023, we applied 72 disciplinary measures to employees at different hierarchical levels at Petrobras parent company, including 5 contract terminations with cause, 30 suspensions and 37 written warnings.

The cases refer to misconduct such as non-compliance or omission of internal regulations, negligence in the performance of functions, insubordination, among others.

Among the complaints closed in 2023, the investigations did not show the existence of minimal elements that characterized cases of corruption by Petrobras employees. However, a case of gifts received improperly



by a service provider that has already been terminated and no longer operates with Petrobras was identified.

It should be noted that pre-procedural investigations of facts that occurred prior to 2019 are ongoing, within the scope of the competent external bodies. On the other hand, in the legal sphere, we received formal confirmation regarding 13 unappealable final court decisions, referring to reports made between 2014 and 2022, regarding Operation Car Wash. In the criminal sphere, in addition to the cases reported in the Operation Car Wash item, mentioned later on, our Legal Department follows five lawsuits arising from the Dutch company SBM Offshore, two of which are split-offs and another three criminal proceedings involving corruption crimes. However, it is not possible to speak technically about confirmed cases, since there was no final judgment of these cases.

Regarding sanctions against legal entities, in 2023, there was a 17% growth in productivity related to the completion of the procedural phase of the Administrative Accountability Processes (PAR) compared to 2022, which has allowed Petrobras to maintain its first position in the ranking of Public Administration entities that applied sanctions based on the Clean Company Law.

It should be noted that this occurred in a context of growth in the number of demands received for treatment through the PAR in relation to 2022, a result, in particular, of the improvement of the company's managers' ability to detect illicit acts and the simplification of the flow of reporting possible illicit acts. In other words, even with a significant increase in demands to be analyzed, we have managed to increase our productivity and improve the quality of the work performed.

During the period, we maintained our outstanding performance in the National Register of Punished Companies (CNEP), maintained by the Office of the Federal Controller General (CGU), as one of the main bodies that applies the system of consequences provided for in the Business Anti-Corruption Law (Law no. 12,846/ 2013). This register presents the list of sanctioned companies and works as an important instrument of control by society, by providing transparency about punishments.

**Within the scope of the Administrative Accountability Procedures, 41 were concluded, of which 34 resulted in the**

**holding of 41 legal entities responsible for the practice of harmful acts in accordance with the Corporate Anti-Corruption Law.**

### Operation Car Wash

In March 2014, Operation Car Wash (Operação Lava Jato - OLJ) began, an investigation conducted by the Brazilian Federal Police and the Federal Prosecution Office with the aim of investigating irregularities in contracts for the supply of goods and services to Petrobras and other entities of the Federal Public Administration. The investigations uncovered evidence of improper payments to political parties, political agents, and others, including some former Petrobras executives and employees, who were arrested and/or reported for money laundering and passive corruption.

In criminal and administrative improbity lawsuits in which former Petrobras employees were or still are defendants for corruption related to Operation Car Wash, the company has been recognized by the Federal Prosecution Office and the Federal Union as a victim of criminal and improper conduct in discussion. In cases where the allegations are judged to be valid, the Judiciary, as a rule, has also recognized Petrobras as a victim of the irregularities found.



As investigations related to Operation Car Wash result in leniency agreements with the investigated companies or collaboration agreements with individuals who agree to return funds received, Petrobras may be entitled to receive a portion of the refunded amounts. Therefore, the approximate amount of BRL 7.281 billion has returned to the company's cash flow so far, as compensation for damages provided for in leniency agreements, collaboration agreements and repatriations, until the end of 2023.

To date, several criminal lawsuits arising from Operation Car Wash have resulted in the defendants being sentenced to pay compensation to Petrobras for losses resulting from criminal practices. After the criminal conviction has become final, this compensation, which must be executed in the civil sphere, represents the minimum amount (minimum damage) to be reimbursed to the company, which can be increased by the Civil Court, if it is proven that the actual loss was higher than the minimum damage established in the criminal action.

Currently, the minimum compensation definitively fixed in favor of Petrobras (with final judgment) in criminal matters amounts to BRL 528 million.

Petrobras has monitored and collaborated with the work of the Federal Police, Federal Prosecution Office, Judiciary, Federal Audit Court, Federal Comptroller General and Administrative Council for Economic Defense related to acts of corruption. Furthermore, the company has cooperated with investigations promoted by international bodies related to Operation Car Wash.

It should also be mentioned that the company acts as a joint plaintiff, together with the Prosecution Office and/or Federal Government, in 33 administrative improbity lawsuits.

Aiming to reinforce its right to compensation for crimes proven to have been committed against it, Petrobras chose to join 106 criminal lawsuit related to Operation Car Wash as an interested third party or assistant to the prosecution. Of these lawsuits, 20 have already become final and unappealable for the defense and prosecution.

The strategy of joining as an assistant to the prosecution in these cases was guided by the opinion of the Federal Prosecution Office regarding the presence of sufficient evidence of crimes committed against the company, combined with the existence of collaboration agreements in which those under

investigation confessed to criminal practices against Petrobras.

We are currently part of a class action filed in the Netherlands and another in Argentina, an arbitration proceeding in Argentina and legal and arbitration proceedings initiated in Brazil. In each case, the lawsuit was filed by investors (or entities claiming to represent investor interests) who purchased shares in the company traded on B3 or other securities issued by the company outside the United States, alleging damages related to facts discovered in Operation Car Wash.

In Argentina, we are defendants in two criminal lawsuits. The first lawsuit alleges failure to comply with the obligation to disclose to the Argentine market a class action proposed by the Consumidores Financieros Asociación Civil para su Defensa before the Commercial Courts, in accordance with the provisions of Argentine capital market legislation, being worth noting that we were never mentioned in the scope of said collective action. The second criminal lawsuit alleges an supposed fraudulent securities offering compounded by allegedly false information included in the company's financial



statements issued prior to 2015.

In addition, EIG Management Company, and certain affiliated funds (collectively, "EIG") filed a lawsuit against Petrobras on February 23, 2016 before the United States District Court for the District of Columbia. The plaintiffs allege that our company committed fraud by inducing them to invest in Sete Brasil Participações S.A. ("Sete"), through communications that would have failed to reveal an alleged corruption scheme involving Petrobras and Sete. EIG is seeking damages of at least USD 221 million.

On April 29, 2022, a Closing Agreement (TEP) was entered into between, on the one hand, Petrobras and one of its affiliates, and on the other hand, Novonor S.A. (current name of Odebrecht S.A.) and some of its affiliates, with the purpose of definitively ending four contractual disputes, three of which are under discussion in arbitration proceedings.

The Closing Agreement seeks to regulate the effects for Petrobras and Novonor resulting from the Leniency Agreement entered into in 2018, by

companies of the Novonor Group with the Federal Comptroller General and the General Counsel for the Federal Government. Petrobras will proceed with administrative misconduct actions against Novonor Group companies, seeking full compensation for the losses identified as a result of the illegal acts disclosed by Operation Car Wash, but to comply with the Leniency Agreements, while they are in force, it will not seek sanctions or precautionary measures, among others, against these companies. The Closing Agreement also does not exempt Novonor Group companies from submitting to the process of evaluating the requirements to be included in the supplier register or to participate in Petrobras' competitive contracting procedures, including integrity, in accordance with the applicable rules and in a timely manner, respecting the principles of isonomy and impersonality.

It is also worth mentioning that in events that occurred in Singapore, six former executives of Keppel Offshore & Marine Limited were investigated by the Corrupt Practices Investigation Bureau - "CPIB") for their roles in paying bribes to approximately US\$ 55 million to employees of Petróleo Brasileiro S.A. – Petrobras, relating to rig

construction contracts that Petrobras and/or its related companies had awarded to Keppel.

Due to lack of sufficient evidence, in consultation with the Attorney-General's Chambers ("AGC"), on 11 January 2023, the CPIB decided to issue strict warnings to the six individuals rather than prosecute them for offenses punishable under the Corruption Prevention Law.

In accordance with the global resolution led by the United States Department of Justice and involving Brazil and Singapore, a conditional warning in lieu of prosecution was issued to Keppel for offenses punishable under the Prevention of Corruption Act. Keppel paid a total fine of US\$422 million and complied with all obligations set out in the conditional warning.

According to an official statement from CBIP, the case is complex and transnational, involving several authorities and witnesses from several countries, so that there are evidentiary difficulties inherent in cases of this nature. Many of the documents are located in different jurisdictions. Furthermore, key witnesses are located outside of Singapore

and cannot be compelled to give evidence in that country. The decision to prosecute the six individuals for criminal offenses must take into account all relevant factors, such as the culpability of each individual, the available evidence and what is appropriate in the circumstances.





# ENGAGEMENT IN PUBLIC POLICIES, ADVOCACY AND FINANCIAL SUPPORT

[11.22.1]

Due to its size and relevance in the Brazilian economy, Petrobras can impact the development of public policies that promote energy security, environmental protection, and social well-being, including engagement with stakeholders in order to promote a more comprehensive and sustainable approach to the oil and gas industry. The material topic includes advocacy actions and impacts on subsidies, laws, and others, as well as investment in research, innovation, and technology to develop environmentally efficient and socially fair solutions.

Our company has played an important role in supporting and implementing public policies related to the energy transition in Brazil, seeking to align its strategies and investments with global goals and commitments to reduce greenhouse gas emissions and promote cleaner and renewable energy sources.

One of our main contributions is in the effort to diversify the Brazilian energy mix, through

investments in renewable energies, as foreseen in the 2024-2028+ Strategic Plan, with an emphasis on onshore/offshore wind, solar, biorefining and low-carbon hydrogen, in addition to promoting research into advanced technologies, such as the production of second-generation biofuels from lignocellulosic biomass.

These investments contribute to reducing greenhouse gas emissions and promoting more sustainable energy sources. Additionally, we develop partnerships with research institutions, universities, and companies to promote a more comprehensive and sustainable approach to the oil and gas industry, driving innovation, technological development, operational efficiency, and mitigation of the industry's environmental and social impacts.

The Brazilian government is heavily involved in defining climate and development policies that support the country's transition to a low-carbon

economy in a sustainable and inclusive way. This, we seek to contribute to technical discussions that aim to strengthen the premises and definitions of the legal and regulatory framework relating to instruments and mechanisms to enable technologies and businesses that contribute to the mitigation and adaptation of climate change. Through direct representatives or technical representatives of the associations to which we are linked, we participate in events, such as public hearings held at the National Congress, and meetings with representatives of the executive branch with the aim of discussing the regulation of activities and businesses such as the carbon, carbon capture and storage, hydrogen production and offshore wind power generation.

We also highlight the fundamental role we play in ensuring Brazil's energy security, contributing to the supply of oil products, natural gas, and other essential products for society.



Regarding public policies in the area of energy security, we contribute to the country on different fronts, for example, by allocating the majority of our oil and gas production to the domestic market and developing exploration and production and infrastructure projects that enable the increase in the supply of natural gas to the country.

Of the 2.2 million barrels of oil per day that we currently produce, around 70% are used to meet national demand. As for the supply of natural gas, our expectation is for growth as early as 2024, with the Rota 3 project expected to come into operation, a pipeline for transporting pre-salt gas that will allow an increase of 18 million m<sup>3</sup>/day for processing at Gaslub. Furthermore, for 2028, we have planned the start of operation of the SEAP project, in the Northeast of the country, whose gas pipeline will come into operation in 2029 and will increase gas delivery capacity by another 18 million m<sup>3</sup>/day, and the Raia Project, in the Southeast, partnered with operator Equinor, with a gas pipeline delivery capacity of 16 million m<sup>3</sup>/day. In total, there will be more than 50 million m<sup>3</sup>/day of natural gas that can be directed to the various uses of gas, such as supplying thermoelectric plants, industries, homes, and other sectors of the national market. We also highlight our expertise and infrastructure in the production

of gray hydrogen, from natural gas, which are of great importance for studies and investments in the production of green and blue hydrogen, through which we can contribute to the National Hydrogen Policy.

In addition to contributing with resources and technical excellence to public policies, we also frequently monitor laws, rules and regulations that may affect our sector. Our work takes place through the identification of relevant topics under discussion in the Legislative and Executive branches and other related entities, raising opportunities in processes of potential relevance, related to the industry and transversal corporate themes. We plan and promote actions to improve business image, which include carrying out relationship and outreach actions with entities linked to public authorities, participation in visits, events, and other initiatives. We evaluate the legislative scenario and the political situation to define a uniform position aligned with the Strategic Plan. We monitor federal regulatory proposals that are of interest to the company for possible treatment or mitigation of risks.

We also promote engagement with stakeholders to promote a more comprehensive and sustainable approach to the oil and gas industry.

As part of the life cycle of offshore oil exploration and production projects, there is the final stage of decommissioning, when the operation of a production unit is definitively interrupted. With a portfolio of 26 platforms to be decommissioned over the next five years, Petrobras has been developing sustainable destination strategies for these units through partnerships.

One of them was the agreement signed with Porto do Açu (RJ), which provides for the provision of docks for temporary docking of production units undergoing decommissioning, until the final destination of the unit is defined, in accordance with the best international practices of green recycling and sustainability (ESG). With a term of three years, the contract with Porto do Açu, located in the city of São João da Barra (RJ), also determines the provision of support services to the units and electricity supply, among others.



For more information on the sustainable platform allocation model, see the chapter "**Waste management and decommissioning**".





Our investment in research, innovation and technology is increasingly working to develop environmentally efficient and socially fair solutions.

We have entered into cooperation agreements with strategic partners, such as Shell and Repsol, which have enabled us to exchange experiences, knowledge, and technologies, aiming to continuously improve our processes and services. When it comes to technology, we must also mention the initiatives we have developed to monitor long-haul trips, with a focus on reducing consumption and improving energy efficiency; the pilot using ROV (Remote Operated Vehicles) to inspect vessel hulls, to assess fouling and the impact on consumption; the efficient use of the TCP fleet in docking returns, with return freight; and improving the governance of the DP Trial process, with the creation of a control panel and a vessel criticality heat map.

The Petrobras Connections for Innovation program covers our open innovation initiatives, promoting partnerships and placing the company at the center of a true innovation ecosystem, made up of researchers, students, institutes, companies, and startups from Brazil and abroad. All of them seek to develop and implement solutions to our challenges

and opportunities. The result is that today we have a network of more than 180 different innovation partners, more than 9,000 researchers collaborating inside and outside the country and more than 800 partnerships in progress. The program is a way to accelerate technological deliveries and reduce the absorption time of these innovations, deepening our relationship with partner institutions and universities.

We developed a CCS (Carbon, Capture and Storage) pilot project in Rio de Janeiro, with the capacity to capture 100,000 tons of CO<sub>2</sub> per year at the Cabiúnas terminal, in the north of the state, and inject it into a saline reservoir, avoiding emissions of these gases into the atmosphere. The project is still in study phase and implementation still depends on further analyses. This initiative is a first step towards subsequently establishing a large-scale CCS hub. The pilot project will contribute not only to technically testing CCS solutions, but also to help the country build a regulatory framework that encourages this type of project, building pillars for the decarbonization of other industrial sectors.

We actively participate in CCUS actions at OGCI. The CCUS Value, Deployment Challenges and Opportunities for Brazil study was coordinated by

Petrobras on behalf of OGCI and developed by the consulting company S&P Global, to accelerate actions to mitigate greenhouse gas emissions and promote the energy transition to a low-carbon economy. The study, which includes a glossary to facilitate understanding, points to the Southeast region of Brazil as having the greatest potential (66%) for the establishment of CCUS hubs, in addition to identifying seven industrial sectors that could be covered in capture hubs and large-scale storage in the country (iron/steel, bioenergy/ethanol, gas processing, cement, ammonia/methanol, refining/hydrogen, electricity generation).

In addition to our investments in oil and gas industry policies and innovation actions, we contribute to public policies in the social area.



Our socioenvironmental investment is structured in the Petrobras Socioenvironmental Program, which has guidelines that include the contribution to achieving the SDGs and the search for synergy with public policies. The projects supported by the program are implemented through Petrobras' own and incentivized resources and executed by civil society organizations, contributing from the preparation, through the implementation of strategic actions, to the evaluation of public policies and national plans for implementing these policies. We highlight a few forms of collaboration, distributed across the program's themes:

- **Sustainable Economic Development:**

Its scope includes actions related to selective collection and waste management of recyclable materials, which include environmentally correct disposal, prevention and reduction in waste generation and its impacts, as well as integrated recycling. In this sense, it uses as a reference the National Solid Waste Policy and the Diogo de Sant'Ana Pró-Catadoras e Pró-Catadores Program, working to strengthen associations, cooperatives, and other collectives in the recyclable materials chain and to encourage the selective collection of solid waste, reuse, recycling, reverse logistics and environmental education.

Another scope of the Sustainable Economic Development line comprises actions aimed at food security, promotion of production models based on the sustainable use of natural resources, income generation, adding value to products and the development of structured markets, promotion of sustainable family farming in the environment rural and urban and artisanal fishing and aquaculture activities. These are actions that are aligned with policies to fight hunger, food security and solidarity economy, such as the National School Food Program – PNAE and the Family Farming Food Acquisition Program – PAA.

- **Education:** The Early Childhood Legal Framework brings important advances in protecting the rights of Brazilian children up to 6 years of age and, therefore, is one of the benchmark policies in the Education line, whose scope includes actions aimed at integral child development and appreciation of educational strategies that prioritize playing, children in nature, interactions, and playful activities as main dimensions of the learning process, in addition to parental education initiatives;

Also in the Education line, actions are developed aimed at children and adolescents, from 6 to 17 years of age, complementarily to to school, in activities aimed

at improving learning and integral development and promoting continued training for educators, public managers and civil society organizations that work in public education and in strengthening the System for Guaranteeing the Rights of Children and Adolescents. This scope contributes to improving the quality of education for these audiences, in accordance with the guidelines of the National Education Plan and is aligned with the Statute of the Child and Adolescent.

- **Ocean:** preparation and implementation of national biodiversity conservation plans and programs, in particular the National Action Plans for the Conservation of Endangered Species, also including the executive coordination of these plans and participation in technical advisory groups, as articulators or in the execution of its strategic actions. In recent years, three target species of supported projects were removed from Brazil's red book of endangered species. Furthermore, many projects aim to support the creation or strengthening of marine and coastal Conservation Units.

- **Forests:** support for the National Policy on Climate Change and other national and regional policies to reduce greenhouse gas emissions through changes in land use; strengthening Indigenous peoples,

contributing to the National Policy for Territorial and Environmental Management of Indigenous Lands and ILO Convention No. 169 on Indigenous and Tribal Peoples; support for the implementation of national plans and programs for the sustainable use of resources, through the promotion of sustainable activities and structuring of socio-biodiversity chains, directly linked to the National Plan for the Promotion of Socio-biodiversity Product Chains (PNPSB) and the implementation of the National Program of School Meals (PNAE) and the Food Acquisition Program (PAA), generating as a direct result the income generation of communities and their food security.



Our list of associations and contribution amounts are in our **ESG Datasheet**.

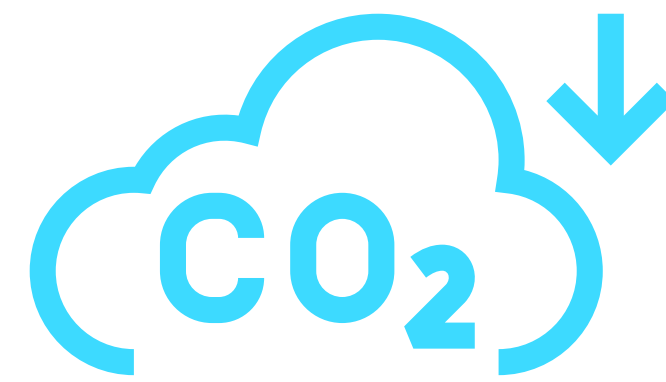


For more information about our socioenvironmental investment, see the **2023 Human Rights and Corporate Citizenship Supplement**

We also support sectoral associations that correspond to entities considered strategic for Petrobras' business (both national or international), through which the company and its representatives can exert influence and/or acquire relevant information and knowledge on various topics of interest by participating of debates, technical groups, projects, commissions, events, exchange of best

practices, among other forms of participation. These entities may or may not contain a formal member of Petrobras in their governance structure.





# **REDUCING THE CARBON FOOTPRINT**

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# CLIMATE RESILIENCE, GHG EMISSIONS AND OTHER GASES

[11.1.1] [11.1.2] [11.1.3] [11.1.4] [11.1.5] [11.1.6] [11.1.7] [11.1.8] [11.2.1] [11.2.2] [11.2.3] [11.3.1] [11.3.2] [11.3.3]

The impacts related to the material topic climate resilience, GHG emissions and other gases correspond to direct and indirect emissions of greenhouse gases (scope 1, 2 and 3), the risks and opportunities and the company's approach to climate change and energy transition, including the socioeconomic impacts of the new business cycle related to the transition. It also covers the adaptation of energy production to new, more restrictive environmental legislation and the management of atmospheric emissions and their impacts on ecosystems, people's health, and the well-being of local communities. It includes positive impacts from the implementation of technologies in the process to reduce the intensity of emissions, the development of products with less environmental impact and mitigation programs and projects with the potential to reduce inequalities, improve supply and access to clean energy and preserve forests.

The 28th United Nations Climate Change Conference (COP28) highlighted important gaps in the

implementation of climate commitments and indicated the urgency of reducing greenhouse gas emissions and transforming energy systems.

The IPCC Sixth Assessment Report indicates multiple paths to achieving the goals of the Paris Agreement. These paths involve the implementation of all available energy sources and technological solutions, including oil and gas, renewable fuels, and negative emissions technologies.

The energy industry is expected to contribute to minimizing the effects of climate change, increasing the share of renewable sources, and improving the efficiency of fossil fuels, through investments and measures that reduce and offset their emissions.

In turn, the oil and gas industry must seek to decarbonize its operations, given the relevance and materiality of its emissions, estimated at 5GtCO<sub>2</sub>

e (equivalent to 9% of global emissions), meet the growing demand for low-carbon products, providing affordable and reliable energy, essential for economic growth. In addition to carrying out a fair transition and contributing to achieving the United Nations (UN) Sustainable Development Goals (SDGs), reducing, or avoiding the worsening of local, regional, and inter-country inequalities.

## PILLARS FOR CARBON MANAGEMENT AND CLIMATE CHANGE

Our positioning, actions and results related to carbon management and climate change are supported by three fundamental pillars:

### TRANSPARENCY, CARBON MANAGEMENT, AND A FAIR TRANSITION

TRUST IN INFORMATION, PROCESSES, AND DECISIONS

*Our climate change and energy transition risk management governance is structured in such a way that all levels of the company, including senior management, are involved in the topic.*

*We work to ensure that carbon risks and opportunities are adequately captured in scenarios, quantified, and considered in our choices and decision-making processes, seeking the sustainability of our business, and generating value for all interested parties.*

*The variable remuneration of all employees incorporates performance elements linked to carbon intensity commitments in our operations, engaging the workforce in achieving expected results.*

### O&G COMPETITIVENESS

RESILIENCE AND VALUE OF THE FOSSIL PORTFOLIO IN THE FACE OF TRANSITION

*In our understanding, companies will become more competitive in the long-term market the more they are able to produce at low costs and with lower greenhouse gas emissions, thriving in scenarios of low oil prices, carbon pricing and possible practices of oil differentiation based on the intensity of carbon emissions in its production.*

*We seek to keep our operations with a decreasing emissions trajectory and with a lower carbon intensity than the main companies in the industry, safeguarding the competitiveness of our oils in global markets in a scenario of slowdown and subsequent retraction in demand.*

*We focus on supplying oil and gas in a competitive and environmentally responsible manner, aiming to meet the persistent demand for oil in line with scenarios compatible with the goals of the Paris Agreement.*

### LOW CARBON AND SCOPE 3 BUSINESSES

PORTFOLIO CARBON EXPOSURE

*We recognize that the goals of the Paris Agreement require deep reductions in greenhouse gas emissions and the transformation of energy supply. Our scenarios point to an unequivocal energy transition, albeit at an uncertain pace.*

*We are anchored in the balance between oil and gas production compatible with society's decarbonization scenarios and the progressive development of new low-carbon businesses.*

*Our strategy foresees the diversification of our portfolio as leverage for decarbonization and value generation in the face of the transition, through profitable initiatives that use our technological and project management capabilities as differentiators to explore Brazil's regional competitive advantages.*



## RISKS RELATED TO CLIMATE CHANGE AND ENERGY TRANSITION

Climate change and the transition to a low-carbon economy represent new challenges and opportunities for our business. With climate change worsening and advancements in agreements and regulations, if we do not prepare for new global challenges, we could be subject to financial, reputational, and legal impacts. We have a track record of analyzing and managing risks related to climate change. Our risk management process is integrated, which allows for the standardization of analysis and effective corporate management of all identified risks:

Category	Risk	Description	Time horizon <sup>2</sup>
Transition risks	Market	Global: increased demand for energy and products with lower carbon intensity, leading to a reduction in the oil demand and a consequent drop in the prices of fossil products. Preference for fossil products with lower Greenhouse Gas (GHG) intensity in production processes.  In Brazil: the demand for our products may be affected especially by the increase in demand for alternative fuels, also stimulated by Public Policies such as the RENOVABIO <sup>1</sup> program.	Medium to long term
	Technological	Loss of competitiveness due to non-implementation or implementation of ineffective or non-cost-effective technologies to reduce emissions from our operations and products.	Medium to long term
	Regulatory	Increased requirements for controlling GHG emissions in licensing processes, which may cause operational restrictions and financial penalties for our activities.  Complementation of regulation for the adoption of a carbon pricing instrument in Brazil, considering its various aspects and possible formats.	Medium to long term
	Legal and Reputation	Litigation and/or loss of reputation for non-compliance with climate commitments.	Medium term
Physical hazards	Water scarcity	Reduction of water availability affecting onshore facilities.	Medium to long term
	Meteoceanographic changes	Changes in patterns of winds, waves and ocean currents may alter the operating conditions of our assets.	Long term

<sup>1</sup>National Biofuels Policy, aiming to increase the production and use of biofuels in the Brazilian energy mix.

<sup>2</sup>Criteria adopted for the time horizon: short term (1 year), medium term (between 1 and 5 years) and long term (after 5 years)



More detailed information on managing the risks and opportunities of climate change, adaptation actions and resilience assessment can be consulted in our **Climate Supplement**.

### FINANCIAL RESILIENCE ANALYSIS

We carried out simulations of the net present value of our portfolio in the Negotiation scenario, using sensitivity to the Brent price and the carbon price of the external reference scenarios (STEPS, APS and NZE).

In Explanatory Note number 5 of the Financial Statements, for the year ending December 2023, we address the effects of climate risks on accounting estimates. In this context, the explanatory note includes quantitative analyses of the following items: value in use in asset recoverability tests, dismantling of areas, “highly probable future exports” used in export cash flow hedge accounting and the life cycles of their assets.



Detailed information on portfolio resilience analysis and accounting estimates can be found in our **Climate Supplement** and in Explanatory Note number 5 (Climate Change) of the **Financial Statements**.

### AMBITIONS AND COMMITMENTS TO REDUCE THE CARBON FOOTPRINT AND LOW CARBON INVESTMENTS

Our long-term ambition is to neutralize emissions in activities under our control (Scopes 1 and 2) by 2050 and influence partners to achieve the same ambition in non-operated assets<sup>3</sup>.

We joined the initiative “Aim for zero methane emissions” promoted by the Oil and Gas Climate Initiative (OGCI) and we aim to achieve “near zero methane emissions” in 2030.

Our six commitments to reduce the carbon footprint with a focus on climate change mitigation cover 100% of emissions under our operational control (scopes 1 and 2), bringing targets for the 2025 and 2030 timeframe, as detailed in the table:

<sup>3</sup> Our ambition refers to emissions in Brazilian territory, where more than 98% of our operational emissions take place. For other emissions, we aim to achieve neutrality within a period compatible with the Paris Agreement, in line with local commitments and international organizations.





				TARGET 2025	TARGET 2030
	<b>OPERATIONAL ABSOLUTE EMISSIONS</b>	Ambition not to exceed the 2022 level between 2024-28	million tCO <sub>2</sub> e	NA	<b>-30%<sup>4</sup></b>
	<b>ROUTINE FLARING</b>	100% of new projects adopt zero routing flaring concept	million m <sup>3</sup>	NA	<b>ZERO</b>
	<b>REINJECTION IN CCUS PROJECTS</b>	World's largest offshore CO <sub>2</sub> reinjection program	million tCO <sub>2</sub> (accumulated)	<b>80</b>	<b>NA</b>
	<b>GHG INTENSITY IN E&amp;P SEGMENT</b>	Operational excellence and energy efficiency	kgCO <sub>2</sub> e/boe	<b>15</b>	<b>15</b>
	<b>GHG INTENSITY IN REFINING SEGMENT</b>	Optimization and improvements in energy performance	kgCO <sub>2</sub> e/ CWT	<b>36</b>	<b>30</b>
	<b>UPSTREAM METHANE EMISSIONS INTENSITY</b>	Consolidation of 62% reduction	tCH <sub>4</sub> /thousand t HC	<b>0.25</b>	<b>0.20 expanded target</b>

In the 2024-2028+ Strategic Plan, we added a new ambition to consolidate the already achieved 40% reduction in our absolute operational emissions, maintaining the current level of emissions throughout the five-year period, despite the increase in production planned for the coming years with the coming into operation of 14 FPSOs (floating oil production, storage, and transfer units).

The methane emission intensity commitment has been revised to a more challenging outcome. The revision of the target from 0.29 tCH<sub>4</sub>/thousand tHC to 0.25 tCH<sub>4</sub>/thousand tHC in 2025 and the addition of a new target for the year 2030 of 0.20 tCH<sub>4</sub>/thousand tHC are in line with several industry initiatives, such as the Oil and Gas Methane Partnership 2.0 (OGMP 2.0) initiative, which we joined in January 2023, and the Near Zero Methane Ambition, of which we are signatories.

To support our commitments and reinforce our low-carbon positioning, our Board of Directors approved under the 2024-28+ Strategic Plan a Capex of US\$ 11.5 billion for actions on the topic, more than double the investment planned in relation to the last strategic plan. Of this amount, US\$ 5.5 billion were allocated for low-carbon energy. It is important to highlight that there were no investments planned for these new energy sources

<sup>4</sup> Compared to 2015.

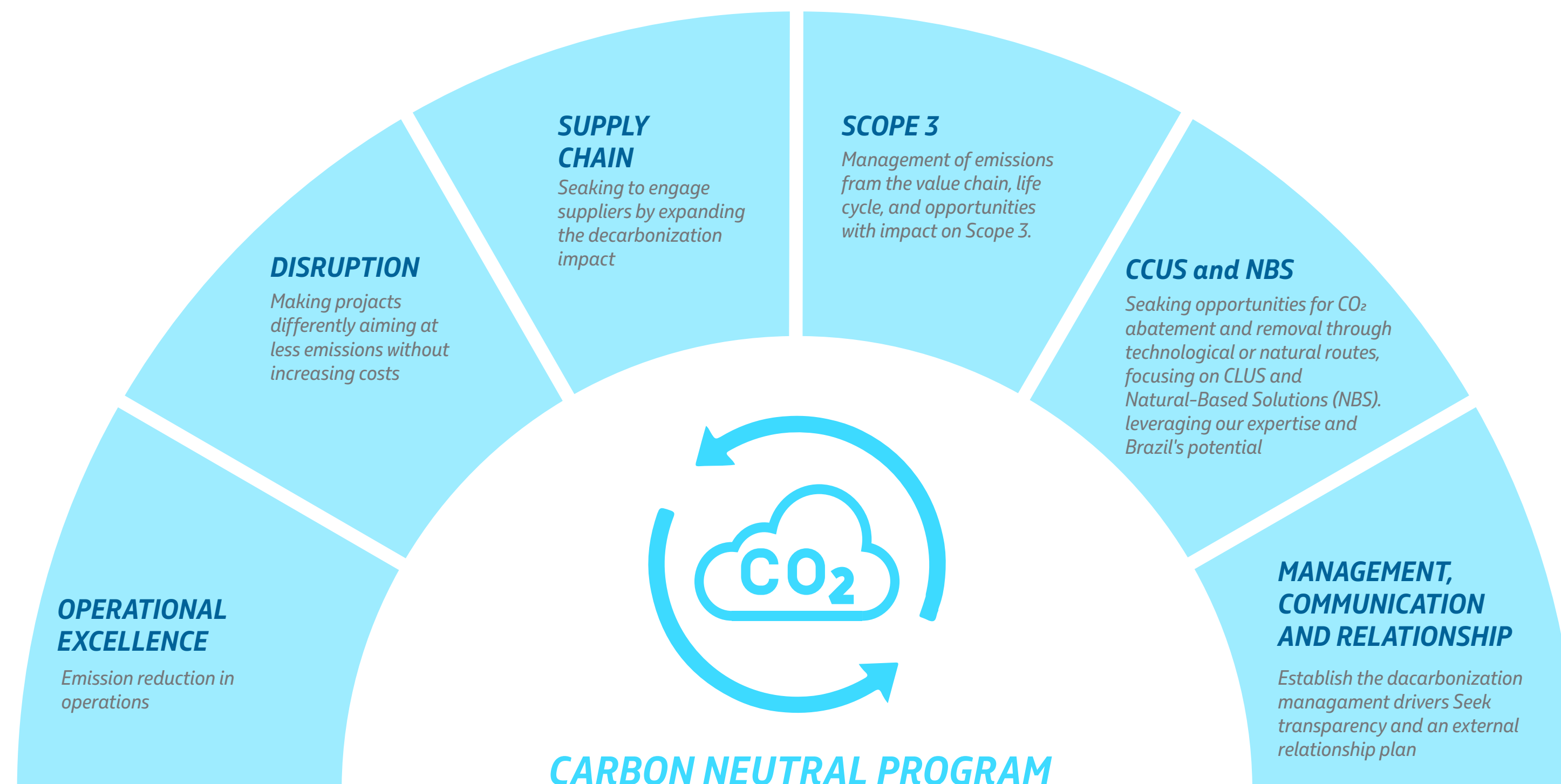
<sup>5</sup> Thirteen of which are operated by us, and one is operated by third parties.

in the previous strategic plan. Planned investments in decarbonization of operations (Scopes 1 and 2), biorefining and research and development for new low-carbon skills were also expanded.

## DECARBONIZATION INITIATIVES

In view of our six commitments relating to carbon issues and the ambition of emissions neutrality, we systematically map out opportunities for mitigating GHG gases. Since 2021, we have organized the set of opportunities to mitigate operational GHG emissions in all segments in which we operate, using the methodology of the Marginal Abatement Cost Curve (MACC).

The challenge of achieving operational emissions neutrality involves the need to make the technologies that will support this commitment technically and financially feasible. To overcome this challenge, the Carbon Neutral Program was structured aiming to strengthening our current position in low carbon, as well as accelerating and reducing the costs of decarbonization solutions, bringing greater competitiveness to the company. It is the transversal instrument that seeks the integrated corporate vision of all our initiatives, developed by different business areas.



This program has the following areas of action: The Carbon Neutral Program has a Decarbonization Fund aimed at accelerating the decarbonization of operations (scopes 1 and 2), aiming to meet climate commitments and net zero ambition. The fund has a specific budget, currently US\$1.0 billion for the five-year period (2024-2028).

In the first quarter of 2024, the portfolio of projects approved for use of the fund includes 30

decarbonization opportunities, with a committed amount of approximately U\$S 400 million, with a mitigation potential of 1.4 million tCO<sub>2</sub>e/year when implemented.



Detailed information about the Carbon Neutral Program and decarbonization initiatives can be found in our **Climate Supplement**.



## GOVERNANCE AND INCENTIVES

Our governance for climate change and energy transition is structured so that these issues are addressed at all levels of the company. We count on the active supervision of the Health, Safety and Environment (HSE) committee of the Board of Directors, with executive committees that advise the Executive Board (HSE Executive Committee, Risks) and with commissions at the tactical level in all segments. The integration of the topic across the different levels of the company is carried out by the Executive Management Department of Climate Change and Decarbonization dedicated to the topic of emissions, climate and energy performance and linked to the Executive Energy Transition and Sustainability Executive Board. This executive board was created in 2023 and is responsible for governing our processes and projects related to energy transition and sustainability.

The Greenhouse Gas Emission Intensity Achievement Index (IAGEE), which represents the consolidation of meeting the greenhouse gas intensity targets for our E&P and Refining segments, is one of our top metrics, and impacts variable compensation of all employees, including senior management.

## EMISSIONS PERFORMANCE

We believe that operational emissions performance is one of the strategic requirements for our long-term resilience. Thus, we developed metrics to manage emissions and monitor our commitments related to climate and energy efficiency. We have maintained teams dedicated to the issue of emissions and climate change for over 20 years and we inventory all assets under operational control.

### Our emissions inventory

As a basis for monitoring our emissions performance, since 2002 we have had proprietary software to manage our emissions inventory, the Atmospheric Emissions Management System (SIGEA®). This computerized system consolidates our inventory through the monthly processing of information from around 10,000 sources in 2023. It calculates GHG emissions: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>) and hydrofluorocarbons (HFCs), in addition to emissions of

atmospheric pollutants: NO<sub>x</sub>, SO<sub>x</sub>, CO, MP, COVs e THC.

Our emissions inventory is prepared according to the technical specifications of the Brazilian GHG Protocol Program, in alignment with guidelines from the “A Corporate Accounting and Reporting Standard (GHG Protocol)” of the Greenhouse Gas Protocol -, developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) and with the specific guidelines published by IPIECA in the Petroleum industry Guidelines for Reporting Greenhouse Gas Emissions.

The scope of our inventory includes all activities under our operational control in Brazil and abroad. Therefore, we include all assets where we have implemented our policies and guidelines in operations. The organizational limits therefore cover the emissions of the companies Petrobras, Transpetro, TBG (Transportadora Brasileira Gasoduto Bolivia-Brasil S.A.), Petrobras Biocombustíveis, Petrobras Bolivia and Petrobras Colombia.

**Information about our sustainability strategy and details about senior management remuneration can be found in the chapter Sustainability strategy.**



In our inventory, we adopted the detailed methodology, that is, source by source, known as “bottom-up”. Therefore, the total result is made up of the sum of emissions from each emission source. Emissions calculations are based on international references, such as the American Petroleum Institute Compendium, the US Environmental Protection Agency's Compilation of Air Pollutant Emission Factors (US-EPA AP-42) and the calculation tools of the Brazilian GHG Protocol Program.

Our inventory has been voluntarily published since 2002 and is annually verified by a third party.

We are also founding members of the Brazilian GHG Protocol Program and publish our inventory in its Public Emissions Registry, having received the Gold Seal classification in 2023<sup>6</sup> for the sixth consecutive year, a standard of excellence in data quality and availability.

### **Reduction of greenhouse gas emissions**

Between 2015 and 2023, our absolute operational GHG emissions fell by 41%. Compared to 2022, the 2023 result was also a reduction in emissions, accounting for 46 million tons of GHG in the year, therefore a total approximately 4% lower than the 48 million tCO<sub>2</sub>

registered in the previous year. It is important to note that the low thermoelectric dispatch has positively affected our absolute emissions results. Actions resulting in efficiency gains and reduced losses implemented in the operating segments, as well as some divestments throughout 2022, were also drivers for lower GHG emissions in 2023.

As in 2022, we chose to neutralize our Scope 2 emissions in Brazil through the purchase of Renewable Energy Certificates (I-REC). These certificates guarantee that 100% of the electricity purchased for use in our industrial and office operations in Brazil is generated by renewable sources. We neutralized 128,000 tCO<sub>2</sub>, equivalent to 3.37 million MWh of purchased renewable electricity. This initiative reinforces our carbon sustainability commitments, stimulating and contributing to Brazil's mostly renewable electricity mix. Abroad, our Scope 2 emissions totaled 150 tCO<sub>2</sub>, representing just 0.0003% of our absolute operational emissions in 2023.

Our goal of reducing absolute operational emissions by 30% by 2030, compared to 2015, is aligned with the progressive reduction of our operational emissions, already considering the expected increase in production in the period, and is supported by a set of systemic

actions to be implemented in the coming years.

We also monitor operational emissions from our oil and gas activities in isolation, whose calculation of operational emissions does not include emissions arising from our operations in the thermoelectricity market. Thus, we can verify the results of our efforts to reduce absolute emissions without the influence of the thermoelectric dispatch requested by the ONS (National System Operator).

Total operational emissions (Scopes 1 and 2) from our oil and gas activities have shown a continuous downward trend over the last few years, reaching a reduction of 24% between 2015 and 2023. The E&P and Refining segments account for the most significant portion of our total absolute operational emissions. Our top IAGEE metric is made up of the GHG emissions intensities of these two segments and have shown a reduction trajectory in recent years.

<sup>6</sup>Gold seal awarded in 2023 for our inventory for 2022 published on the platform of the Public Emission Registry of the Brazilian GHG Protocol Program.



## E&P GHG emissions intensity

We monitor our performance in terms of intensity of GHG emissions in the oil and gas production segment, with outstanding results in the pre-salt fields. Our goal is to produce oil and gas in our E&P segment in 2025 with a maximum GHG emissions intensity of 15.0 kgCO<sub>2</sub>e/boe, maintaining this intensity until 2030.

Between 2009 and 2023, we achieved a 54% reduction in the intensity of GHG emissions in E&P activities, reaching 14.2 kgCO<sub>2</sub>e/boe. This result is the result of actions related to improvements in energy efficiency, reduction of losses and greater use of gas with reduced flaring, in addition to improvements in accounting, emissions inventory and portfolio management.

We also highlight that the main pre-salt oil streams that we produce have a carbon intensity that is even lower than the average value of our operations.

Together, the Tupi and Búzios streams represented around 50% of our total production in 2023 and have a GHG emissions intensity of 9.9 kgCO<sub>2</sub>e/boe and 10.2 kgCO<sub>2</sub>e/boe, respectively.

## Intensity of GHG emissions in Refining

In the Refining segment, the intensity of GHG emissions maintained the downward trend of recent years, reaching a result of 36.8 kgCO<sub>2</sub>e/CWT in 2023, a reduction of 3% compared to 2022 and 14% compared to 2015. The improvement observed in the indicator is mainly due to the implementation of projects to increase energy recovery in refining processes, the significant reduction in steam and condensate losses, the significant reduction in gas deliveries to the flare and the maintenance of energy efficiency in the process ovens. The 2023 result, when compared to 2022, represents a reduction in emissions of 535,000 tons of CO<sub>2</sub>e, equivalent to a reduction of burning of 490,000 m<sup>3</sup>/day of natural gas.

We also highlight that actions to reduce the intensity of GHG emissions bring gains in reducing the intensity of emissions of other pollutants, such as particulate matter, sulfur oxides and nitrogen oxides.

## Upstream methane emissions

Our segment carbon intensity targets incorporate all greenhouse gases, including methane. However, given the characteristics of this GHG, whose warming potential is very high in the short term, we monitor this gas with specific metrics. In the 2024-2028+

Strategic Plan, we extend our commitment to reduce methane emissions in the upstream segment by revising our 2025 public methane intensity commitment to a target value of 0.25 tCH<sub>4</sub> /thousand tHC. We also added a commitment to reach 0.20 tCH<sub>4</sub> /thousand tHC in 2030, in line with the “Aiming for Zero Methane Emissions” promoted by the Oil and Gas Climate Initiative (OGCI), of which Petrobras has been a signatory since 2022.

In the period from 2015 to 2023, our reduction in upstream methane emissions intensity reached 66%. This result is mainly due to the reduction in the volume of gas sent to the flare with a consequent increase in the rate of use of associated gas, the optimization of estimates of ventilation emissions and flaring.

In January 2023 we joined the OGMP 2.0 initiative – Oil and Gas Methane Partnership reinforcing its



commitment to the methane issue. The OGMP 2.0 is a global initiative coordinated by the UN dedicated to quantifying, reporting, and managing methane emissions, with a focus on mitigating climate change in the O&G industry. Recognized as the most relevant in the industry in terms of transparency and credibility in providing data on methane emissions, the OGMP 2.0 brings together more than 100 companies in the oil and gas industry.

In the same year that we joined the initiative, OGMP awarded us the Gold Standard in recognition of our plan to implement methane emissions management in upstream, midstream, and downstream gas, compatible with industry best practices. For the first time we were part of the International Methane Emissions Observatory, released during the United Nations Annual Climate Meeting (COP28), which took place in Dubai.

### **Zero Routine Flaring**

In 2018, we announced our support for the initiative Zero Routine Flaring by 2030 of the World Bank, and meeting its criteria is one of our public commitments.

We work on mapping and reducing routine flaring volumes in our E&P assets in operation and in new

asset projects. We incorporate the concept of zero routine flaring in our engineering guidelines and in the design bases for new oil and gas production units, so that all of our new projects are already operational in compliance with the commitment. As an example, we can mention the Flare Gas Recovery Units (FGRUs) installed in our new units, in addition to gas recovery from cargo tanks, closed drainage systems and glycol regeneration, actions that reduce methane emissions.

We emphasize that we already have a high rate of average use of gas produced in E&P, reaching 97.6% in 2023.

### **CCUS projects in E&P**

In 2023 alone, we injected 13 million tCO<sub>2</sub>, the highest amount injected in a single year. Since the beginning of our CO<sub>2</sub> capture, use and geological storage program, which began as a pilot in the Tupi field in 2008, we have already reached an accumulated volume of 53.7 million tCO<sub>2</sub>.

Our public commitment is to achieve a cumulative reinjection total of 80 million tons of CO<sub>2</sub> by 2025, which will contribute to technological evolution, cost reduction and demonstration of the safety of CCUS technology for application in the oil and gas industry and other sectors.

We currently operate 23 pre-salt platforms that incorporate CCUS technology associated with Enhanced Oil Recovery (EOR), with constantly evolving performance. CO<sub>2</sub> reinjection in production fields, associated with the EOR, will continue to play an important role in reducing the intensity of greenhouse gas emissions in oil and gas production.

### **GHG emissions from the value chain**

In the oil and gas value chain, most emissions occur at the stage of use by end consumers. Therefore, to know the real impact of our products, it is necessary to calculate our Scope 3 emissions.

To calculate Scope 3, we mainly use two categories according to the GHG Protocol: indirect emissions from the processing of sold products (Category 10) and indirect emissions referring to the use of sold products



(Category 11), which are the most relevant in our value chain. As of 2022, our operational emissions (scopes 1+2) will represent less than 10% of total value chain emissions: 9.8% in 2022 and 9.5% in 2023.

In 2023, we continued the CDP Supply Chain initiative with the goal of mapping the emissions of a sample of our main suppliers, selected based on criteria of financial representativeness and critical role for our operations. In this second year, there was the effective participation of more than 250 suppliers, who shared information about their GHG emissions, of which 18% reported for the first time, 67% reported using some climate scenario in their business strategy and 85% engaged its own suppliers on the topic.

We highlight that we were recognized for leadership (A rating) in the “Supplier Chain Engagement” criterion of the CDP assessment called Supplier Engagement Rating (SER).

In 2024 we will carry out the third cycle of the CDP Supply Chain on Climate Change, and for the second time we will include the topic of Water Security. We provide a direct channel for our suppliers to indicate their interest in participating in CDP Supply Chain through the email address:

cc-suprimentosesg@petrobras.com.br.

### **Other significant atmospheric emissions**

In addition to GHG emissions, in our inventory we also monitor emissions of other pollutants: sulfur oxides (SOx), nitrogen oxides (NOx), particulate matter (PM), carbon monoxide (CO), volatile organic compounds (VOCs) and total hydrocarbons (THC).

The concepts described for our GHG inventory, including the source-to-source methodology and operational control approach, as well as the use of SIGEA® software, also apply to the inventory of these pollutants. In addition, the annual third-party verification process also includes these emissions.

There was a 6% decrease in NOx emissions, mainly due to the reduction in maritime transport movement.

The 2023 result for CO was 57% higher than in 2022. This was due to a lower operational factor of the CO boilers of some FCC (Fluid Catalytic Cracking) units in Refining.

SOx emissions are most significant in the Refining segment, which corresponded to 78% of the company's total emissions of this pollutant in

2023. For about 20 years, the indicator of absolute SOx emissions has been monitored internally with alert limits established for each refinery. In 2023, the total SOx emissions from our refining assets were approximately 4% lower than the alert limit established for the year. Considering the company's total SOx emissions, stability was observed between 2022 and 2023.

VOC emissions increased by 20% compared to 2022, mainly due to measurements that affected the calculation of emissions from oil storage in the E&P segment.

In addition to the inventory, we monitor emissions by sampling stacks, in order to verify compliance with legal limits. We also monitor the air quality around our refining and thermoelectric generation activities with owned monitoring stations or which are operated by local environmental agencies.



The information obtained from these follow-ups is considered in our operations and in the licensing of new units.

In our industrial processes we prioritize the reduction of the generation of pollutants by increasing energy efficiency and reducing fuel consumption in comparison with measures to treat emissions already generated, known as “end-of-pipe” solutions.

In 2022, we resumed work on the atmospheric emissions abatement unit (SNOx) at the Abreu e Lima Refinery, which seeks to reduce sulfur oxides (SOx) and nitrogen (NOx) emissions. The unit's start-up is scheduled for the second half of 2024.

In the first quarter of 2023, we stopped selling fuel oil with a maximum sulfur content of 2%, known as OCA1, and began exclusively offering OCB1, a product with a maximum sulfur content of 1%. This measure will help customers in the industrial segment to reduce their sulfur oxide emissions.

In terms of unused hydrocarbons in our operations, we have historically observed a reduction in volumes burned in flares or directly dissipated into the atmosphere. Compared to 2018, the volume of flared

gas in 2023 was 38% lower. As already reported in previous items, this reduction in flaring is mainly related to better use of gas in E&P operations. With regard to hydrocarbons dissipated directly into the atmosphere, we observe the continuity of the reduction in 2023, mainly associated with improvements in the inventory process and reduction of losses in our units.

### **ENERGY CONSUMED**

In 2023, we consumed 634,000 TJ of energy and sold 100,000 TJ of electrical power and 5,000 TJ of steam, resulting in a balance of 562,000 TJ of total energy consumption within the organization. Domestic consumption in 2023 is equivalent to 300,000 barrels of oil equivalent per day (boed) of energy and decreased by 8% compared to the previous year. This reduction directly reflects the energy efficiency improvements and optimization, which resulted in a reduction in fuel consumption in our processes, as well as the low activity of thermal power generation in 2023. We highlight that we supply society, in terms of fuel sold, a total of 5.9 million TJ of energy.

Improving energy efficiency of our processes is essential to our path towards reducing GHG emissions. Since we have a wide range of operational activities

and products, we manage energy performance based on the analysis of energy consumption and production results separately, in addition to emissions intensity indicators.

More specifically in the Refining segment, we internally monitor an indicator that represents the intensity of our energy consumption in this segment, considering the relationship between the total primary energy consumption of a refinery and a standard energy consumption that takes into account the throughput volume, the quality of the cargo the complexity and severity of the process units. This indicator has had a continuous reduction since 2015, reaching a value 11% lower in 2023.

In the E&P segment, we have implemented the Energy and Carbon Panel on more than 35 platforms,





allowing real-time monitoring of energy generation, consumption, and emissions, in addition to facilitating the identification of operational opportunities that will increase energy efficiency and reduce unit emissions.

Considering our production of oil, gas and oil products for the foreign and domestic markets, which will be used as an energy source by our customers, in 2023 we sold a total equivalent to 5.9 million terajoules (TJ) in energy products.<sup>7</sup> In terms of energy consumption, the use of our energy products, including liquid products and electricity, for various purposes such as transporting people and cargo to industrial production processes, is of the utmost importance in our supply chain, similarly to emissions related to the burning of our fuels sold on the market.

## **LOWER CARBON PRODUCTS AND BUSINESSES**

The energy transition increases interest in low-carbon products and services and brings opportunities to business, potentially leading to revenue diversification and reduced carbon exposure. The 2024-2028+ Strategic Plan brought new movements that materialize the transformations that have been designed to prepare us for the future, reconciling

the current focus on oil and gas with the search for portfolio diversification in low-carbon businesses.

To meet society's growing demand for low-carbon products, and in order to advance the discussion of scope 3, we aim to expand the supply of renewable fuels, with the potential to increase biofuel production capacity by up to four times by 2030. In the renewable electrical power generation segment, we see a potential to balance, by 2030, the generation capacity from renewable sources with the generation capacity in thermoelectric plants, seeking the integration of different energy sources and energy efficiency and security. Considering this potential, we can reduce the emissions intensity of our portfolio by up to 3% by 2030.

The BioRefino Program provides projects for the production of a new generation of fuels that are more modern and sustainable, such as Diesel R, a diesel oil with renewable content that is already available on the market.

The renewable portion of diesel R is chemically similar to diesel oil of mineral origin (derived from crude oil). With the use of renewable raw materials, the reduction in GHG emissions associated with the renewable portion is at least 60% compared to mineral diesel and may be

even greater depending on the raw material used.

The co-processing of renewable raw materials in existing refineries is the fastest and most economical way to offer fuels with renewable content to the market, contributing to the decarbonization journey of our products.

The Presidente Getúlio Vargas Refinery (REPAR) already co-processes refined soybean oil and diesel in our HDT (hydrotreatment) unit. A second HDT unit was adapted in 2023, being able to produce Diesel R, so that the current capacity is 40,000 bpd. Diesel R has the characteristic of being drop-in, that is, it is a product that can be used in systems designed for diesel oil without the need for any modifications to the engines and logistics infrastructure. Thus, Diesel R5 is already being marketed and the refinery has the capacity to increase the concentration of renewable content to a content of up to 10%.

<sup>7</sup>The energy consumption of these fuels sold can occur at different points in the chain, such as in the transport of people and goods. We highlight, however, that we have great integration across the segments of the oil and gas industry, therefore, the energy consumption in operations controlled by us is already included in the table "ENERGY CONSUMPTION WITHIN THE ORGANIZATION (TJ)" in the **ESG Datasheet**.



We carried out the Life Cycle Assessment of the product, which supported the international certification process for the renewable content of Diesel R in one of REPAR's HDT units. This process was successfully completed, with the award of ISCC Plus and ISCC EU RED certification.

We carried out industrial tests in 2023 for co-processing at the Presidente Bernardes Cubatão Refinery (RPBC), Duque de Caxias Refinery (REDUC), Duque de Caxias Refinery (REDUC) and Paulínia Refinery (REPLAN) units and we are assessing production in other refineries.

Technologies for the production of renewable diesel and sustainable aviation fuel (SAF) have also been evaluated and developed. Our 2024-2028+ Strategic Plan includes the construction of dedicated biorefining plants for the production of SAF and renewable diesel at RPBC with a capacity of 15,000 bpd and at Gaslub Hub with a capacity of 19,000 bpd, both scheduled to start operations after 2028. The implementation of dedicated plants will allow us to contribute to the decarbonization of the road and air transport segments, while diversifying our portfolio with products with lower carbon intensity.

In addition to the use of renewable streams in hydrogen treatment units (hydrotreatment), we concluded, in November 2023, an industrial-scale test aimed at obtaining sustainable products from the processing of 100% vegetable oil in the fluid catalytic cracking (FCC) unit of Refinaria Riograndense, in Rio Grande (RS), a partner in this challenge, together with Braskem and Grupo Ultra. In the test, which was successful, fuel gas, LPG, naphtha with a high content of bioaromatics (BTX – benzene, toluene, and xylene, to be used in the petrochemical industry) and heavy oil, entirely composed of renewable content, were produced.

The process technology and catalysts used in the test at the Refinaria Riograndense were developed from the laboratory to a large pilot unit on the premises of the Petrobras Research Center (Cenpes).

Based on the results, a study to adapt the FCC unit at Refinaria Riograndense, enabling it to the continuous processing of renewable load, at nominal flow rates will be carried out. The success of the test is a milestone for biorefining in Brazil.

In 2024, the unit will also undergo new adaptations to allow the execution of a second test with renewable raw materials, scheduled to take place in the second

half of 2024. This new test aims to co-process biomass pyrolysis oil with the usual load from Refinaria Riograndense. The expected results of co-processing have the potential to provide crucial information to boost advancements in the company's biorefining.

The increase in the renewable content in fuels, with the aim of reducing greenhouse gas emissions, is evaluated taking into account the equipment and compatibility with the circulating fleet, in order to guarantee the safety and durability of vehicles and the emissions compliance.

In September 2023, we launched the new carbon neutral Petrobras Podium Gasoline to the market, the first in the Brazilian market to have its greenhouse gas (GHG) emissions fully offset. In this product, we offset GHG emissions generated throughout the gasoline life cycle, from origin to use, through carbon credits generated by forest preservation actions in national biomes.



In addition to being the first fuel with fully offset emissions in the country, Petrobras Podium Gasoline has quality advantages, such as the highest octane rating and the lowest sulfur content on the market, which improves the vehicle's performance. We also launched a new premium gasoline, with a lower sulfur content (30 mg/kg) compared to the regulated limit of 50 mg/kg, and a higher octane rating (100), compared to the specified limit (97).

In September 2022, we began, in a pioneering effort in the country, testing the supply of bunker with renewable content for the maritime sector. This work continued in 2023 and, throughout the year, three field tests were carried out on cabotage routes on the Brazilian coast using marine fuel with lower carbon intensity. The results of all three tests were positive. Additionally, in tests with 24% biodiesel, potential GHG emission reductions varied between around 17% and 20%, compared to 100% mineral bunker, depending on the origin of the biodiesel raw material.

We also started marketing marine gasoil with a maximum sulfur content of 1000 mg/kg (LSMGO – Low Sulfur Marine GasOil), in the port of Santos. This content is significantly lower than the regulated limit of 5000 mg/kg.

In 2023, we launched a portfolio of new asphalt products, the CAP Pro line, which brings lower greenhouse gas emissions to the chain and greater reuse of paving waste, enabling more sustainable application. We developed CAP Pro AP, a high penetration asphalt with rejuvenating capacity, ideal for hot recycling services for damaged asphalt coatings. CAP Pro AP is more sustainable than traditional products as it allows greater use of recycled content (RAP – reclaimed asphalt pavement) without the need for rejuvenating agents. We also developed CAP Pro W 30/45, an asphalt cement that can be machined and applied at temperatures up to 40 °C lower than usual, generating energy savings, lower GHG and vapor emissions, resulting in gains for workers and the environment when using the product.

Ensuring product quality throughout the entire process, from production in refineries to its use by our consumers, covering the transportation, transfer, and storage phases, is a primary requirement considered during research, development, and innovation (RD&I) projects.

We comply with national and international standards for health and safety impacts, in addition to explaining to our suppliers the need to comply.

Our products go through stages of risk assessment for health and safety, with a view to protecting workers, neighboring communities, and the final consumer. The results of the assessments, HSE guidelines and recommendations are presented in Material Safety Data Sheets (MSDS) and Safety Data Sheets (SDS) of our products and inputs sold in Brazil and abroad. In cases where we act as suppliers, we provide the updated MSDS to our users, which contain the main information on these chemical substances related to health, safety, and the environment. Currently, our Chemical Product Data Sheet System (SFPQ) provides the FISPQ of around 300 of the company's products and around 1,600 inputs for consultation.



Information about our products can be found in our website about **Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)**.



### **Collaborations and Strategic Partnerships**

Additionally, we work in national and international partnerships with other companies and organizations, in order to participate in actions related to improving air and fuel quality. Among these partnerships, we can highlight our participation in the Oil and Gas Climate Initiative (OGCI). The OGCI has the participation of the companies BP, Chevron, CNPC, ENI, Equinor, Exxon Mobil, OXY, REPSOL, Saudi Aramco, Shell and Total, in addition to Petrobras. This initiative seeks cooperation between the participants in order to reduce the carbon footprint of the energy production chain, accelerate solutions for a low carbon economy, and make a circular carbon (CO<sub>2</sub>) model feasible. At OGCI, we actively participate in the group called “Transportation Working Stream,” which focuses on the development of specific actions to reduce CO<sub>2</sub> emissions in the transportation segments, including the road, sea, and air segments. In the group, actions for the use of liquid fuels with a low carbon footprint stand out, including mixtures with biofuels and the use of renewable hydrogen, as well as actions for the capture of CO<sub>2</sub> aboard in vessels, among other actions.

### **LOW CARBON INNOVATION**

Our strategy is to “Innovate to generate value in our

businesses, today and in the future, and achieve our decarbonization goals”. Some of the decarbonization opportunities have considerable technological challenges, which require research, development, and innovation (RD&I) to be overcome throughout our entire value chain.

Technological innovation has been the basis for our pioneering spirit throughout our 70 years and will drive the construction of the future to enable decarbonization trajectories, which take into account the social aspect of the cost of energy. We believe that the competitiveness of renewable electrical power generation technologies, liquid fuels with a lower carbon footprint, less energy-intensive processes, hydrogen, CCUS, subsea CO<sub>2</sub> separation, will be essential for the creation of new energy paradigms based on low carbon, with generation of value to society.

We are committed to investing in low-carbon research, development, and innovation (RD&I). The development of low-carbon solutions will be allocated 15% of the total RD&I budget in 2024, reaching 30% in 2028.

Our research portfolio explores opportunities in the oil and gas chain and in renewables. We have

been developing and evaluating technologies that contribute to achieving the established decarbonization targets, reducing emissions in internal processes and adding greater sustainability to our products, but also aiming at long-term diversification.

Are main R&D initiatives in low carbon are:

- Energy efficiency
- CCUS (carbon capture, utilization, and geological storage)
- Subsea CO<sub>2</sub> separation
- Mitigation of methane emissions
- Low carbon products
- Clean hydrogen
- Wind and Solar Generation



In 2023, we invested BRL 67.9 million in R&D in Brazil in the low-carbon products segment (referring to the development of Renewable Diesel, BioQAv, bunker with renewable content and Bioaromatics) and BRL 88.7 million in renewable energy, aiming to increase technological and commercial maturity. The total amount invested in R&D on these topics, of BRL 156.6 million, represents approximately 4.35% of our total investment in R&D activities. Our technology deliveries reflect our strategy for the transition to a low carbon economy.

Transpetro has a portfolio of projects for the energy efficiency of ships with an expected investment of BRL 54 million by 2028. We have already implemented hydrodynamic appendages, trim (difference between aft and forward draft optimization software), and high-performance paint, on part of the fleet, and they will be implemented over the next few years. These projects allow us to reduce the vessel's resistance to forward motion, promoting energy efficiency. There are also investments in projects to optimize the combustion of the main combustion engine, responsible for the ship's propulsion, in addition to projects for course control and cruise control.

## NATURE-BASED SOLUTIONS AND CARBON CREDITS

We believe that emissions offsets from carbon credits can be used as a complementary tool in our decarbonization trajectory. These credits can be nature-based, taking advantage of the potential of forests, soils, oceans, and seaweed, or obtained through technological solutions. While we expect offset use, these initiatives should be thought of as additional contributions to intrinsic mitigation efforts and do not replace the society's need to supply less carbon-intensive energy.

Our operating assets are mostly installed in Brazil, and we are responsible for supplying a large part of the energy consumed in the country. We prioritize the acquisition of nature-based credits that include Afforestation, Reforestation, and Revegetation (ARR) credits and credits for Reducing Emissions from Deforestation and Degradation (REDD) as a contribution to mitigating national GHG emissions, of which 38% arise from changing the use of land and forests (MCTI, 2023). Thus, we have included offsets in our strategy as a possibility for achieving even more ambitious results than those possible with the intrinsic decarbonization of our operations, while at the same time contributing to the preservation of Brazilian ecosystems.

We seek high-quality credits in order to ensure that they are actually bringing climate, socioeconomic and environmental benefits, taking advantage of the Brazilian potential in generating highly competitive nature-based credits. We are committed to disclosing the origin and use of our carbon credits in a transparent and traceable way.

In 2023, we made our entry into the voluntary carbon credits market, acquiring 175,000 credits from the Envira Amazônia REDD project – developed in the municipality of Feijó, in Acre. Located in the Arco do Desmatamento region, Feijó is the 24th Brazilian municipality with the highest rate of deforestation between 2019 and 2022, with growth of 40% in the period, according to the Annual Report on Deforestation in Brazil, prepared by MapBiomas. The credits are from the 2019, 2020 and 2021 harvests and certified according to Verra's VCS (Verified Carbon Standard), the largest certifier of the voluntary carbon market in the world and have gold level certification for the aspects of Adaptation to Climate Change, Biodiversity and Community according to the Climate, Community & Biodiversity (CCB) standard. The credits acquired in this initiative were used to offset emissions from the new Podium Carbon-Neutral Gasoline.



## Socio-environmental investment in forests

Our Social Responsibility Policy presents as a guideline to promote the conservation, recovery, and sustainable use of forests, strengthening the importance of developing and implementing nature-based solutions that contribute to mitigating climate change, halting the loss of biodiversity and for the well-being of life among Indigenous peoples and traditional communities. Thus, through the Petrobras Socioenvironmental Program, in 2023 we voluntarily supported 24 projects focused on forest areas recovery and conservation, in which BRL 31 million were invested in that year.

The projects in force in 2023 worked on the direct recovery or conservation of more than 358,000 hectares of forests and natural areas in the Atlantic Forest, Amazon, Caatinga and Cerrado, contributing to the mitigation of GHG emissions. The estimated net incremental benefit of the work carried out so far by these projects is around 2 million tCO<sub>2</sub>e, and considers the net removal and avoided emissions by actions that prevent deforestation.

The projects also worked to strengthen the management of around 28 million hectares of protected areas<sup>8</sup> This includes actions such as

monitoring fires, biodiversity, and sustainable management with income generation through socio-biodiversity products in Indigenous lands and quilombola territories. These initiatives also work to monitor endangered land species. This is the case of the Corredor Caipira project, carried out by the Luiz de Queiroz Agricultural Studies Foundation (FEALQ), which works to form ecological corridors in the region where the largest primate in the Americas occurs - the Muriqui (*Brachyteles arachnoides*), and the No Clima da Caatinga Project, which works to preserve areas where the three-banded armadillo lives (*Tolypeutes tricinctus*), a species exclusive to Brazil.

The 2023 Public Selection of the Petrobras Socio-Environmental Program has had its first stage completed and will incorporate into the portfolio seven new projects from the Forests line of action, in which around BRL30 million will be invested over the next three years, including a flagship initiative for the Cerrado, which will promote the recovery of areas to establish ecological corridors and carry out actions to preserve endangered fauna species. The second stage involves the selection of four more projects focusing on forests, with a total value of BRL 20 million, including one that will operate in the Pantanal.

By establishing, in 2023, a partnership with the Institute of Cultural and Environmental Studies, which will work with Indigenous peoples to preserve the Atlantic Forest and Pampa in the Air, Water and Land Project, we will reach, in 2024, a portfolio of projects with in all biomes in Brazil.

To strengthen our operations in the Forests line, in the Amazon and in the transition region between this biome and the Cerrado, we resumed, in 2023, partnerships with Biodiverso and Berço das Águas projects. The projects have had previous editions supported by Petrobras and aim to strengthen the management of Indigenous Lands: Erikpatsa, Escondido, Japuira, Apiaká do Pontal and Isolados, Aripuanã, Arara do Rio Branco, in addition to the Guariba-Roosevelt State Extractive Reserve, in the state of Mato Grosso.

<sup>8</sup> Value referring to the area covered by the set of projects in force in 2023. The profile of the projects and type of action affect this value and reflect the composition of the portfolio, whose dynamics may lead to annual variations.



The Biodiverso Project covers more than 1.4 million hectares of forest, and its main objective is to promote the sustainable use of socio-biodiversity with Indigenous peoples and traditional communities. The initiative aims to mitigate climate change through the conservation of standing forests, seeking to involve Indigenous people and rubber tappers in sustainable development and maintenance of the carbon stocks that the forest houses, with support for the development of value chains for forestry non-timber products and subsistence agriculture. Thereto, the project will provide support, inputs and technical advice for the management, transportation, and distribution of these products, in addition to strengthening the system for selecting, drying, and storing nuts in the territories. It also intends to strengthen environmental, territorial, and social management instruments in the territories for greater autonomy of communities to access, build or monitor public policies addressed for production, income generation and environmental conservation, such as PNAE, PAA, PGPMBio, PRONAF and others.

The Berço das Águas Project intends to develop and implement Territorial and Environmental Management Plans on the Indigenous Lands worked on. These plans will establish priority actions that

allow the protection of areas, the strengthening of traditional and sustainable management of natural resources, the generation of economic alternatives and the maintenance of Indigenous culture, contributing to the conservation of biodiversity and climate regulation in the region. In addition to that, it will carry out actions to support surveillance and monitoring systems for areas and conservation through sustainable management and commercialization of nuts, in addition to developing bases for community-based tourism in the region.

The set of supported Indigenous Lands total more than 1.3 million hectares, which guarantee the maintenance of significant carbon storage, in addition to preserving a region of significant importance due to the richness of species, the occurrence of rare species and the high endemism of species of fish and birds, not to mention the great sociocultural diversity.

With the purpose of increasing our contributions to a more diverse portfolio of projects that involve nature-based solutions and follow the path of high-quality carbon credits, we consolidated our partnership with the National Bank for Economic and Social Development through the Floresta Viva matchfunding, managed by the Brazilian Biodiversity Fund (FUNBIO).

Within the scope of Floresta Viva, in 2023, we released the results of the first call for proposals, “Manguezais do Brasil”, with the selection of eight projects, with a total value of BRL47.3 million over the next 4 years, to be carried out in mangrove and restinga areas in the North, Northeast, Southeast and South of Brazil, with a forecast recovery of 1,757 hectares. The notice was based on the National Action Plan for the Conservation of Endangered and Socioeconomically Important Species of the Mangrove Ecosystem, prepared by ICMBio - Chico Mendes Institute for Biodiversity Conservation.

At Climate COP 28, still in 2023, we launched the second call for proposals of the initiative, the “Biodiversity Corridors”, which will allocate BRL 42 million to up to 9 projects, with at least 200 hectares each, focusing on 10 corridors in areas of Cerrado and Pantanal, in the states of Bahia, Minas Gerais, Goiás, Federal District, Mato Grosso and Mato Grosso do Sul, including the Upper Paraguai Basin region. Considering the high biodiversity and the relevance of the two biomes for the maintenance of ecosystem services and the subsistence of human populations within and outside their borders, the call for proposals aims to support ecological restoration actions and strengthen the restoration production

chain in the region, considering biodiversity corridors which distributed in the states of Bahia, Minas Gerais, Goiás, Mato Grosso and Mato Grosso Sul. The section includes a portion of the Cerrado where native vegetation coverage is reduced, with a large part of the regions preserved within Quilombola Territories and Indigenous Lands, constantly threatened by expansion and deforestation pressure.







# ***PROTECTING THE ENVIRONMENT***



# BIODIVERSITY

[11.4.1] [11.4.2] [11.4.3] [11.4.4] [11.4.5]

The material topic consists of managing risks and impacts on biodiversity, aiming to avoid and minimize impacts, such as changes in air, soil and water quality and loss of fauna and flora species, and, when this is not possible, recover and/or offset residual impacts, in line with the mitigation hierarchy, throughout the life cycle of the projects. It includes programs and projects for environmental protection and restoration, contributing to the conservation and improvement of biodiversity and ecosystem services, especially in areas of high biodiversity value in land and especially marine in environments, due to the greater activity in this biome. The theme also covers environmental management in new production frontiers in ecologically sensitive areas.

The global recognition of the relevance of the biodiversity theme can be illustrated by the World Economic Forum's 2024 Global Risks Report, which points to the loss of biodiversity and the collapse of ecosystems as the third biggest risk for the next 10

years. The report highlights, however, a divergence among those interviewed regarding their view of the urgency of environmental risks, with younger people tending to rank these risks in a higher position over a shorter time horizon, compared to older age groups. The private sector highlights these risks as main long-term concerns, in contrast to civil society or government respondents, who prioritize these risks in shorter terms. The document considers that this dissonance in perceptions of urgency among the main decision-makers implies suboptimal alignment and decision-making, increasing the risk of missing key moments of intervention. This reinforces the need to adopt more robust measures by the business sector within shorter periods of time.

In this context, the business sector, and Petrobras in particular, has been incorporating biodiversity requirements in line with national and international stakeholder trends. Careful biodiversity management is essential, especially because our operations are

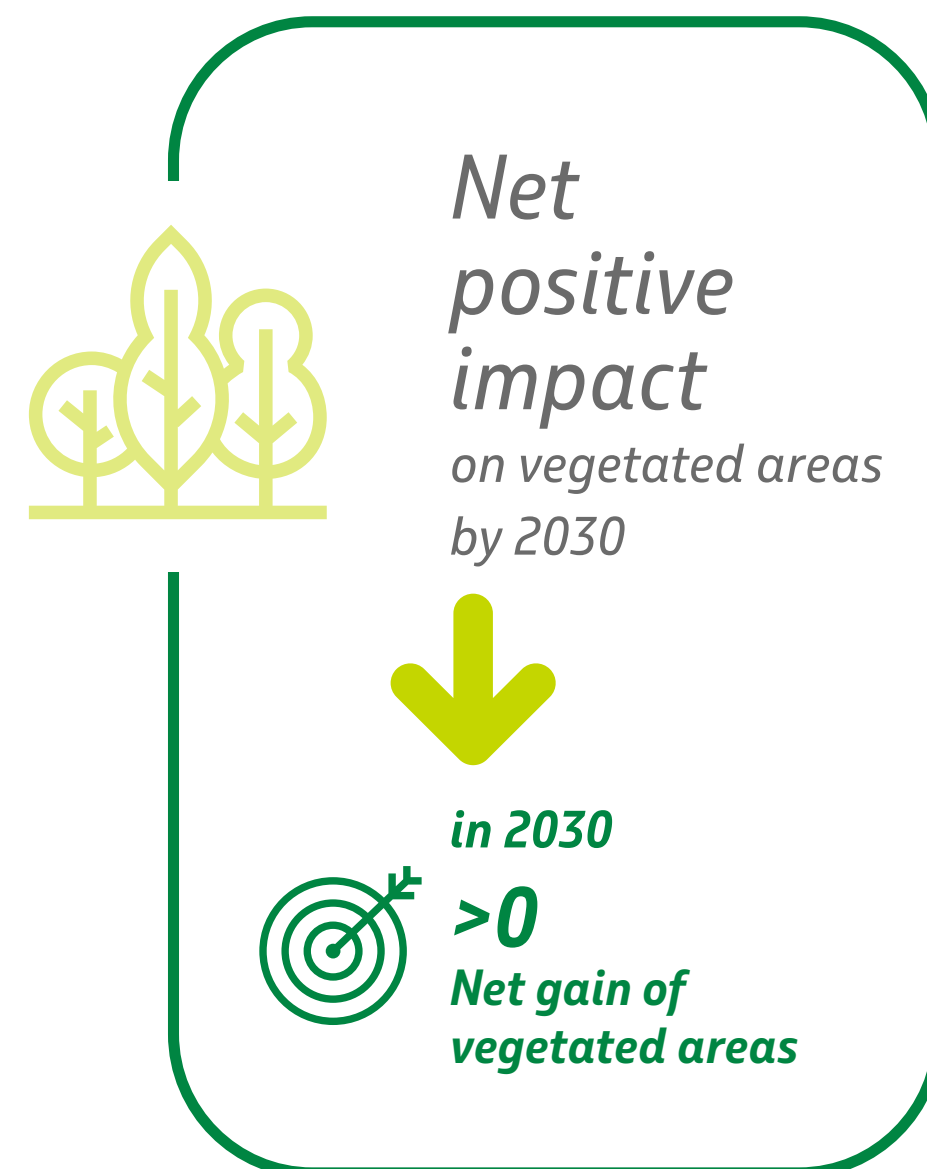
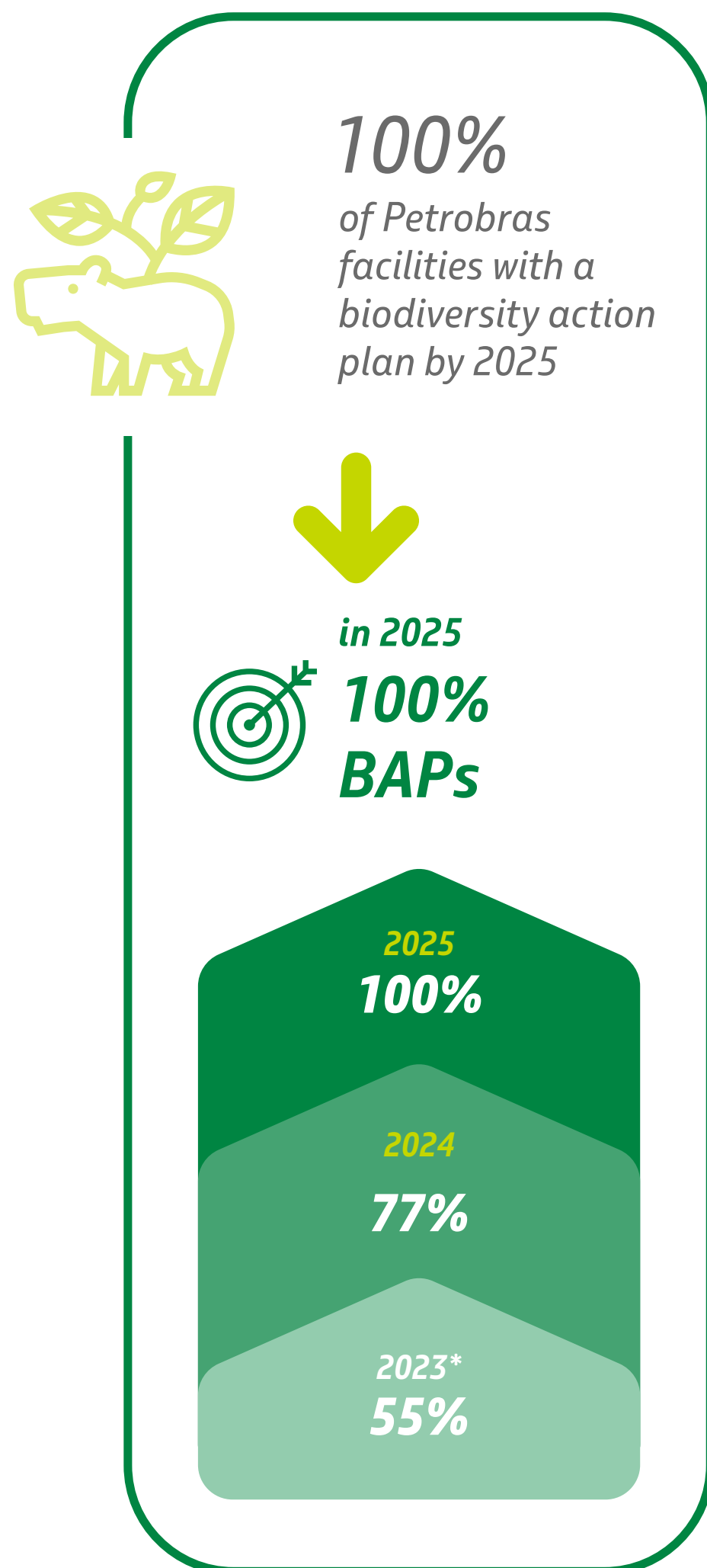
carried out primarily in Brazil, where there are many protected areas, endemic and threatened species in different biomes, and there may be interfaces between our facilities and these aspects of biodiversity.

Therefore, within the scope of our 2024-2028+ Strategic Plan, one of our ESG guidelines is

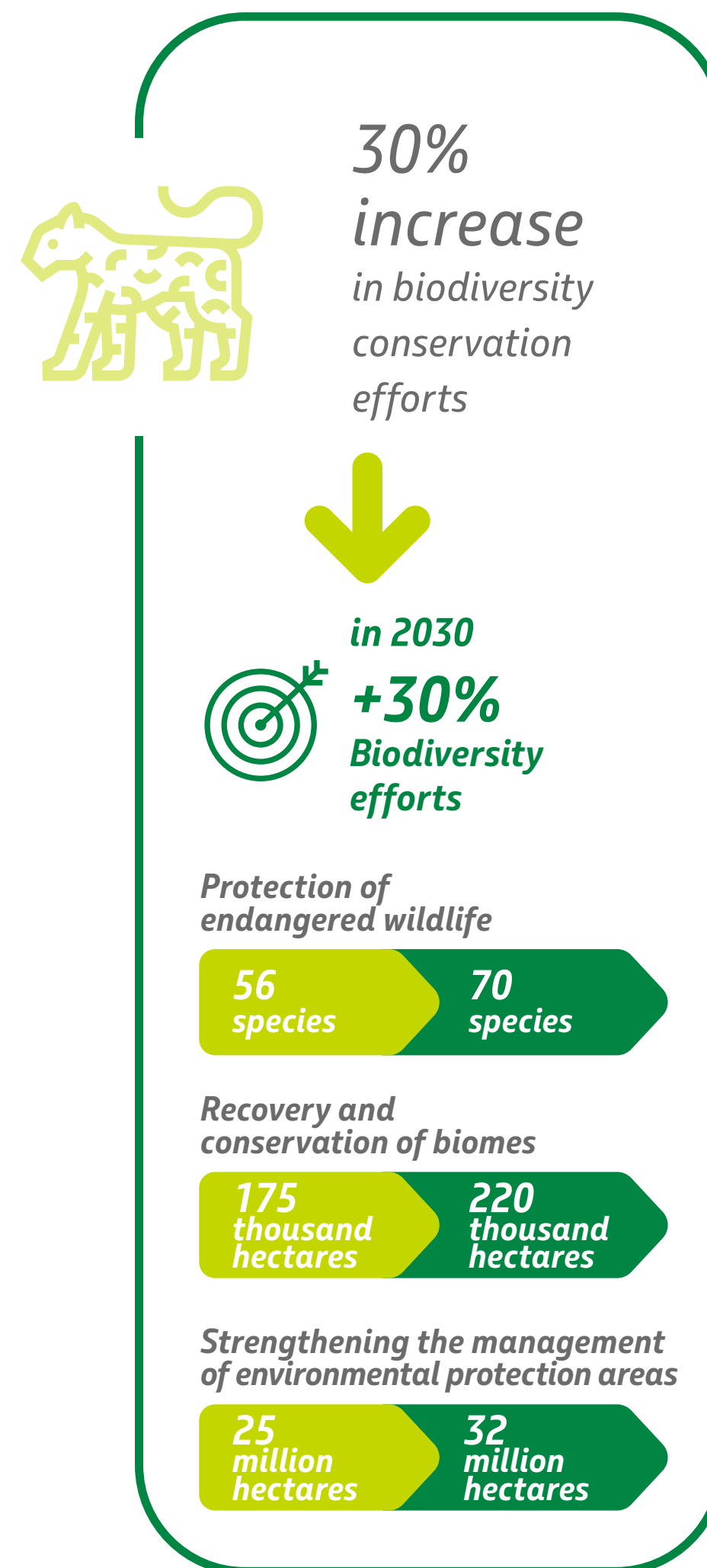
**“Promoting conservation, restoration and gains in biodiversity, seeking a net positive impact in the regions in which we operate”.**

In this sense, we are committed to achieving biodiversity gains by 2030, with a focus on forests and oceans, as illustrated in the following figure.

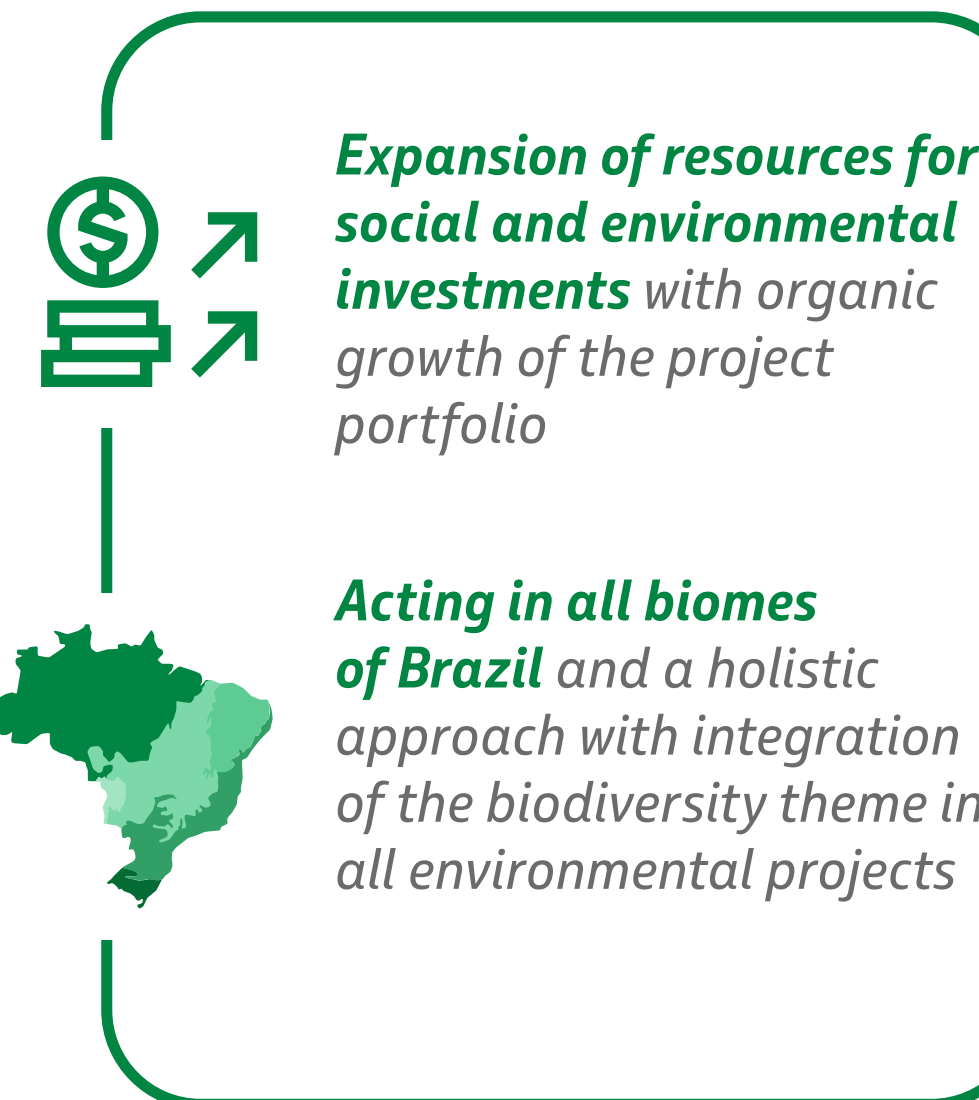
## Gains in biodiversity



\*There has been a revision in the percentage of facilities with biodiversity action plans planned for 2023 compared to what was presented in our Strategic Plan 2024-2028+ due to the inclusion of units that were previously planned for divestment processes.



ACHIEVE BIODIVERSITY GAINS BY 2030, WITH A FOCUS ON **FORESTS AND OCEANS**





Thus, we highlight that we have already reached 55% of the commitment to prepare BAPs (biodiversity action plans) for the company's units, having developed, to date, BAPs for 42 units and facilities located in land and marine environments. In addition, aiming to implement specific fauna management actions, preventing and mitigating risks and impacts to fauna, human health and operational safety, Wildlife Management Plans were prepared for 40 units and facilities, as well as a Good Practices Manual of Wildlife Management at Petrobras Onshore Units.

As one of the voluntary measures implemented, we can mention the BAP of the Gaslub Hub, integrated with the Itaboraí Gas Treatment Unit, located at the hub, where the Guapiaçu socio-environmental project stands out, carried out by ASA - Instituto de Ação Socioambiental, in the municipalities of Cachoeiras de Macacu, Itaboraí, Magé and Maricá (RJ), with excellent results. From 2022 to 2023, the initiative restored 20 hectares of a target of 40 hectares of third-party areas, priority for mixed ombrophilous forest corridors, accompanied by monitoring of endangered mammals (jaguar, paca, southern muriqui and tapir). To date, 23,608 photographic records have been made of 21 native and four domestic species. Of the total records, the tapirs (*Tapirus terrestris*) were the most photographed,

followed by pumas (*Puma concolor*). Images of giant anteaters, otters, wild cats, pacas, armadillos, among others, were also recorded. The project reintroduced nine new tapirs into the Três Picos State Park and the Guapiaçu Ecological Reserve, in Cachoeiras de Macacu, which will join the only tapir population in the state of Rio de Janeiro. Another relevant result of the project was the recovery of 5 hectares of mangroves in the Guanabara Bay region, in the municipality of Magé, having exceeded its target (3.15 hectares).

Furthermore, it is worth highlighting that we have formalized an R&D project conducted by our Research Center (Cenpes), with the theme "Metrics for assessing the net impact of biodiversity", with a term until 2027. In this project, two public opportunities for partnerships with research institutions were launched. One of the opportunities refers to the "Adaptation of metrics to assess the net impact of biodiversity in land environments", with the selection process completed and in the contracting phase, and another with a specific focus on marine environments, also in the contracting phase. The two lines of research will be operational as of 2024.

From 2023 onwards, the actions related to achieving our ESG Commitment on biodiversity were

incorporated into the Commitment to Life Program (PCV), which brings together our most relevant actions in Health, Safety and Environment (HSE), being accompanied by several organizational levels, culminating in the evaluation of the Executive Board and HSE Committee of the Board of Directors.

Still within the scope of the ESG Commitment, it is highlighted that investments in socio-environmental projects will be expanded, covering all biomes in Brazil, with an integrated approach in all environmental projects. With the implementation of all these actions, a concrete contribution is expected to be made to the Decade on Ecosystem Restoration, decreed by the United Nations (UN), and in the search for a positive balance in nature, advocated by the new Global Biodiversity Framework.

It is also relevant to mention a commitment to increase efforts in biodiversity conservation by 30% in relation to the number of threatened, protected, or monitored fauna species, areas to be recovered and conserved, and the strengthening of protected areas through supported projects by the Petrobras Socio-Environmental Program until 2030. The stipulated target sought alignment with two of the 23 targets defined in the Kunming-Montreal agreement,



established in 2022, by the Convention on Biological Diversity, which proposes that, by 2030, at least 30% of degraded land areas, continental waters, coastal and marine areas are subject to restoration and, in the same proportion, are conserved and effectively managed.

Still in line with our ESG Commitment on biodiversity, we made progress in implementing actions to meet the Brazilian Business Commitment to Biodiversity, established by the Brazilian Business Council for Sustainable Development (CEBDS), updating the progress of the three goals to which we adhere:

- Apply the mitigation hierarchy throughout the life cycle of projects;
- Develop and encourage studies, research projects, technology and innovation that contribute to the conservation of biodiversity and ecosystem services;
- Be familiar with the biological diversity of the company's areas of activity and, whenever possible, monitor and measure impacts and dependencies.

In December 2023, we launched the new Social Responsibility Policy, built on a process of broad listening. The document establishes guidelines for our actions in ESG, and in the environmental dimension,

as we highlight the commitment to act in alignment with the principles of sustainable development and climate justice. The policy also defines as guidelines the consolidation of our role as a reference in ocean conservation, recognizing its extreme relevance for the global ecological balance, for coastal communities and for business, as well as the promotion of conservation, recovery, and sustainable use of forests, strengthening the importance of nature-based solutions as a contribution to mitigating climate change and halting biodiversity loss.

Further to the biodiversity commitments defined in 2024-2028+ Strategic Plan, which represent a corporate direction, our management of risks and impacts related to biodiversity features a well-established governance, corporate and area-specific guiding documents, georeferenced systems, a process of systematic monitoring of national and international trends on the topic, research actions and development of a voluntary nature and associated with environmental licensing processes, establishment of partnerships with interested parties, training actions and other activities to disseminate information and raise awareness about biodiversity for the workforce.

The governance of the biodiversity issue permeates

all our hierarchical levels, with a Biodiversity Thematic Forum, comprised of our experts, which reports to the Environment Commission. This commission, in turn, reports to the HSE Committee, linked to the HSE Executive Committee, which reports to the company's Board of Directors. As a result, biodiversity issues are the subject of a well-established flow in the various decision-making bodies.

Regarding internal guidelines on biodiversity, we have technical standards and norms guiding management and strictly technical aspects, highlighting the standards Manage Risks and Impacts on Biodiversity, Manage Degraded Areas, and Implement Fauna Management, in addition to the standard Biodiversity Characterization and Monitoring, among several others, such as the recently revised. Manage HSE in Investment Projects standard, which presents specific biodiversity requirements.

In the Manage Risks and Impacts on Biodiversity standard, the application of the mitigation hierarchy is recommended, aiming to avoid or minimize impacts on biodiversity and, when this is not possible, recover and/or offset residual impacts. The table below highlights some initiatives and projects that demonstrate the application of the mitigation hierarchy.

## Initiatives and projects aiming to minimize impacts on biodiversity

### INITIATIVES AND PROJECTS



**AVOID**

Geophysical mapping of the southern and southeastern sedimentary basins, and establishment of a georeferenced base of sensitive marine environments mapped through the use of Remote Operated Vehicles (ROVs), used to support the projects, aiming at less interference on critical marine habitats.

Marine Biota Monitoring Project (PMBM) and Passive Acoustic Monitoring Project (PMAP), which aim to avoid the possible impacts of marine seismic surveys on marine animals. In the Marine Biota Monitoring Project, observers on board the seismic vessel monitor the presence or proximity of turtles and marine mammals during the period of seismic acquisition activity, while in the Passive Acoustic Monitoring Project, monitoring is done by acoustic detection. Whenever mammals are sighted or acoustically detected at a distance less than or equal to 1,000 m from the seismic source, the activity is interrupted. In 2023, six seismic research activities took place, one in the Campos Basin (Albacora Leste and Roncador), and five in the Santos Basin (Tupi-Iracema, Itapu, Aram, Iara and Sapinhoá Monitor).



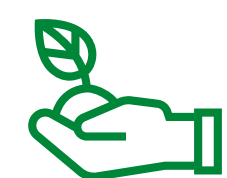
**MINIMIZE**

We carry out 10 Projects for Monitoring the Impacts of Platforms and Vessels on Birdlife (PMAVE), which manage birds that arrive at maritime units and vessels associated with Exploration & Production activities. More than a thousand birds have already been recorded by the projects, including endangered species, such as *Numenius hudsonicus* (Hudsonian whimbrel), *Procellaria aequinoctialis* (white-chinned petrel), *Sterna hirundinacea* (South American tern). The majority is of land origin and arrive in the platform region along with different types of vessels, such as fishing vessels. Weakened birds begin treatment on board, with guidance from veterinary support on land, and the use of capture equipment, transport and food boxes that are part of the PMAVE Kit, available in each maritime unit. Birds found alive and carcasses of dead birds are landed for rehabilitation or necropsy at onshore veterinary facilities.



**RESTORE**

Forest restoration project at Gaslub Hub, which 3 years after its implementation, managed to reach the ecological parameters foreseen for the settlement in accordance with resolution no. 143/2017 of the State Institute of the Environment (INEA). In the maintenance phase, the project includes a total area under recovery of around 465 hectares distributed along the Permanent Preservation Area of the Macacu River, forming an important forest corridor for the region. To date, more than 300,000 seedlings, of around 80 species native to the Atlantic Forest, have been planted, some of which are threatened with extinction, with emphasis on: jequitibã-rosa (*Cariniana legalis*), jequitibã-açu (*Cariniana ianeirensis*), brazilwood (*Paubrasilia echinata*), Bahia rosewood (*Dalbergia nigra*), juçara palm heart (*Euterpe edulis*) and braúna (*Melanoxylon brauna*).



**OFFSET**

Reforestation of the Jataí Ecological Station (São Paulo), which consists of the reforestation of 390 hectares of native vegetation arising from the compensation of CO<sub>2</sub> emissions from the long-term test in the Tupi area, in the Santos Basin pre-salt complex. Portion 1 has already been completed with 136 hectares and 79,844 seedlings planted, Portion 2 with 87 hectares and 97,966 seedlings planted and, in Portion 3, the last cycle in progress with 42,248 seedlings with approximately 25 hectares. Therefore, more than 70% of the seedlings foreseen in the project have already been planted. Monitoring of soil cover with native vegetation is being carried out in sample plots, measuring 25m long and 4m wide. After five monitoring campaigns, we can say that all plots presented satisfactory coverage, with some of them reaching a maximum coverage of 100%. It is currently the largest forest restoration carried out within Conservation Units in the state of São Paulo.



Our management of risks and impacts on biodiversity is continuously improved, and our actions are integrated into a georeferenced system that consolidates data and information from all our facilities. This system forms the basis of our Annual Biodiversity Report, which brings together corporate biodiversity actions and indicators, and is updated annually.

Aiming at providing systematic monitoring of national and international trends and share experiences on biodiversity, we participate in external forums, such as:

- CEBDS Thematic Chamber on Biodiversity and Biotechnology;
- National Confederation of Industry (CNI) Biodiversity Network;
- Ipieca's Biodiversity and Ecosystem Services Working Group (BESWG);
- Working Group on Biodiversity of the International Chamber of Commerce (ICC).

Among the several relevant events that we participated in 2023, it is worth highlighting our participation in the Business and Biodiversity Workshop, held in Belém (PA) and organized within the scope of the Global Partnership for Business and Biodiversity of the secretariat of the Convention on Biological Diversity

(CDB) and the Brazilian Business and Biodiversity Initiative (IBNBIO), where we presented our biodiversity strategy, focusing on the public commitments made and the actions underway to achieve them.

Whenever possible, we seek to support public bodies in actions related to biodiversity. In 2023, the period of dry rivers and high temperatures in the state of Amazonas caused intense effects on the environment and the riverside population, leading to hundreds of river dolphin deaths in the Tefé and Coari lakes at the peak of the dry season, and to the shortages and isolation of local communities. The Chico Mendes Institute of Biodiversity (ICMBio) established the Incident Command System (SCI), which initiated Botos Tefé and Coari Emergency Operation, with the technical support of the Mamirauá Institute for Sustainable Development (IDSM), several research institutions, non-governmental organizations, companies, and volunteers. We provided logistical support to ICMBio to carry out a helicopter flight over the Coari lakes, with the participation of 14 SCI professionals, accompanied by a veterinarian and a biologist, professionals who work at Petrobras. The goal of the overflight was to investigate new locations with potential occurrence of mortality and

mass strandings of river dolphins. No new animal carcasses were seen during the overflight and the operation in this region was terminated by ICMBio.



**Information about the Biodiversity Supplement can be found in the Biodiversity tab on our website.**

We invest approximately BRL72.98 million in research projects and development of technological solutions, and methodologies aimed at promoting improved biodiversity management associated with our operations, increasing knowledge about the environment in which we operate as a basis for conservation and maintenance of the ecosystem services provided. The ongoing projects include environmental characterizations, mitigations, or the reduction of effects on biodiversity, as well as the recovery of degraded environments through reforestation projects, restoration of native species, such as:

- Recovery of impacted aquatic ecosystems: provision of technologies based on monitoring natural regeneration as an efficient measure to mitigate direct or indirect environmental damage caused by activities related to the oil industry;



- Ecological risk assessment in impacted areas: development of a methodology aimed at understanding the contamination pathways of soils and surface and groundwaters in the areas of influence;
- Ecological aspects and interactions of the sun coral: development of scientific knowledge and methodologies for monitoring and identifying sun coral occurrences;
- Revitalization of degraded land environments: development of innovative, sustainable, highly effective, and low-cost solutions for protecting the environment in the land ecosystems where we operate;
- Use of molecular techniques (metagenomics) to collect information from strategic environments seeking greater knowledge of biological communities: marine sediment from coastal areas of the Santos Basin, mangrove sediment in Bay of All Saints and water and sediment from the Santos Basin were evaluated, with samples collected at depths greater than 2,000 meters.

In 2023, Cenpes developed the document “Vision of the Future in Biodiversity”, which defined, from

the present until the condition beyond 15 years, the metrics, areas of knowledge and technologies considered priorities for RD&I investment, according to the mitigation hierarchy concept. In the avoid line, it was proposed to generate a proactive environmental protocol, covering everything from diagnosis and monitoring of biodiversity to modeling for decision-making with intensive use of digital technologies. In the minimize line, it was recommended to advance in techniques for mitigating impacts in land and marine environments on habitats, ecosystems, and biodiversity. In the restore line, advances in high-resolution techniques, models and simulators, robotics and remote methods, several products were considered, as well as the application of metrics to evaluate the performance of the strategies adopted for recovery. Finally, in the offset line, alternatives for offsetting impacts were highlighted, including the areas of recovery and restoration, the indication of new areas for conservation and avoided losses.

In addition to all the projects, studies, and management tools, we are recognized for supporting voluntary projects for the conservation of habitats and species, in line with public policies for the conservation of biodiversity. The Petrobras Socio-Environmental Program structures our socio-

environmental investments and includes, in the environmental dimension, the Forests and Ocean lines of action, which contribute to the conservation and recovery of biodiversity in several biomes. In 2023, 44 environmental projects were supported, operating in the Amazon, Caatinga, Cerrado and Atlantic Forest biomes, in addition to coastal and marine environments.

Reinforcing the Program's national performance, in the public selection of socio-environmental projects in 2023, opportunities were launched on the Forests theme aimed at initiatives that have a relevant role in the conservation or recovery of the Pantanal and Cerrado biomes and their biodiversity. We have also established a partnership with the Institute of Cultural and Environmental Studies, which works with Indigenous peoples in the Pampa region, through which we will reach a portfolio of projects operating in all biomes in Brazil. Also, with the aim of contributing to the goal of increasing efforts in biodiversity conservation, in the aforementioned public selection, we included an opportunity focused on the conservation of endangered species and reinforced at every opportunity with a focus on forests, the expected result of contribution to the maintenance and improvement of biodiversity and ecosystem services,





as well as, in some cases, the desire for these projects to include fauna protection actions. The opportunities in the Forests line also aim to help increase the number of areas preserved and recovered with our support.

In the Ocean line of action, most projects collaborate with the National Action Plans for the Conservation of Endangered Species, whether through support for the preparation of plans, carrying out planned strategic actions or, even, through the executive coordination of these plans in partnership with ICMBio. Since 2006, we have been an important supporter of the Albatross Project, which, together with the National Center for Research and Conservation of Wild Birds (CEMAVE/ICMBio), plays a crucial role in the executive coordination of the National Action Plan for Albatrosses and Petrels (PLANACAP). The partnership between these institutions not only strengthens the theoretical and technical bases that support the successful implementation of PLANACAP, but also expands the execution of actions in favor of the development of public policies aimed at the conservation of these birds, which are among the most threatened in our planet.

We also work to disseminate information and raise awareness about biodiversity among the workforce.

In this sense, the Knowledge Track on Biodiversity and Degraded Areas was established, which includes a list of specific courses related to critical topics in biodiversity. The trail aims to be a training itinerary, helping employees to focus on their topic of interest, such as biodiversity, based on the offers available during the year.

The following table highlights some courses, including courses on the Biodiversity and Degraded Areas Trail, and other training related to the topic. The training involved, in total, 30,983 representatives of our workforce.





### **Courses related to biodiversity taken by employees<sup>1</sup> in 2023**

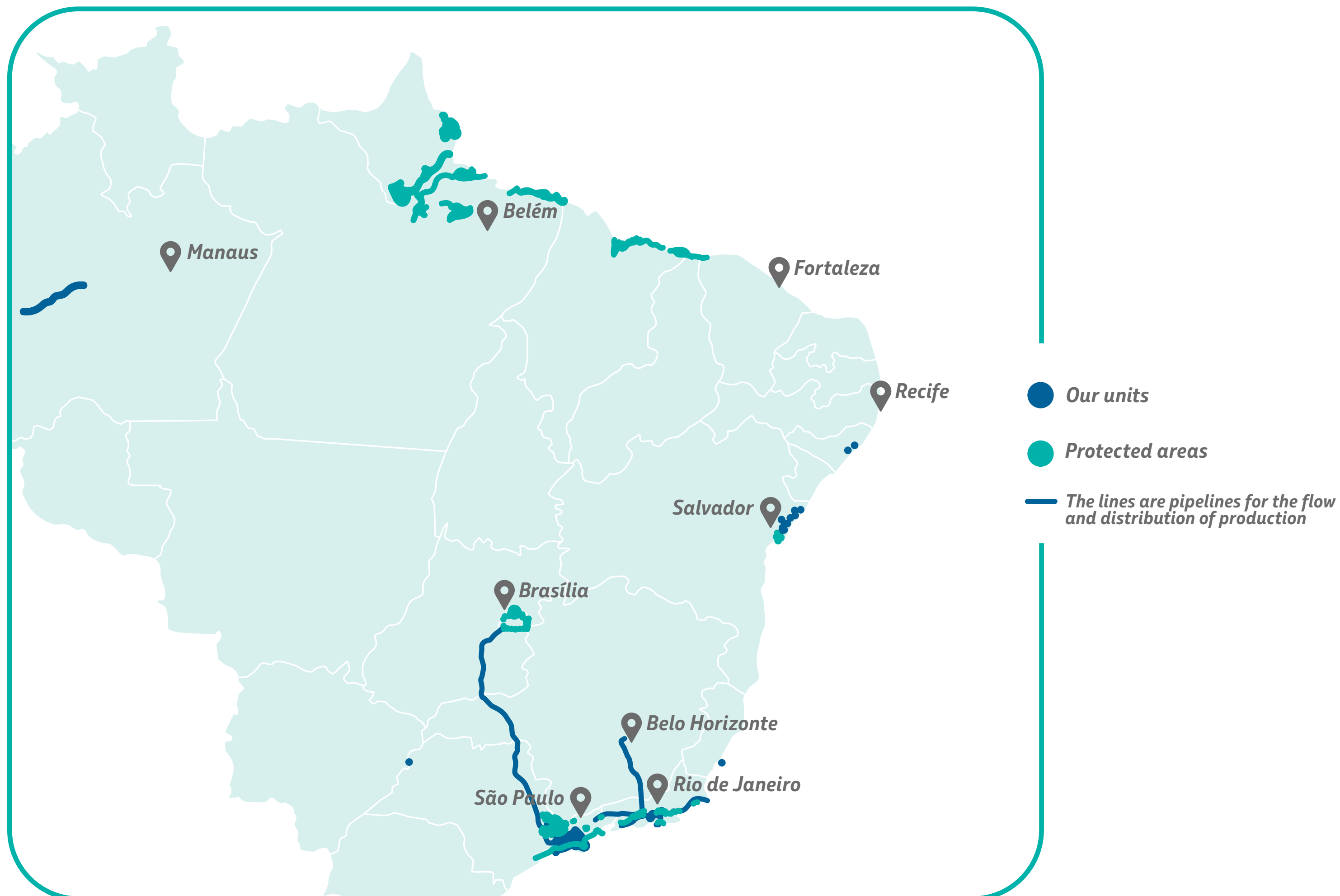
<b>Course</b>	<b>Participations</b>
Environmental Education Project for Workers - PEAT Continued Course	11,568
Environmental Education Project for Workers - PEAT Basic Course	10,404
Environmental Education Project for Workers - PEAT Basic Course	5,113
Project For Monitoring The Impacts of Platforms and Vessels on Birdlife - PMAVE	1,602
Workers' Environmental Education Project - PEAT Continuing Course	580
Environmental Education Project for Workers - PEAT Offshore Drilling (Wells) – 2023 Cycle / Module I	551
Environmental Education Project for Workers - PEAT Offshore Drilling (Wells) – 2023 Cycle / Module II	504
Environmental Education Project for Workers - PEAT Basic Course – Production Phase	147
5 <sup>th</sup> Biodiversity Technical Meeting	76
Environmental Impacts Assessment at Petrobras	74

### **PROTECTED AREAS**

The spatial distribution and variety of our operations make it frequent to interface with areas relevant to biodiversity, especially considering that our operations primarily take place in Brazil, a megadiverse country where there are many protected areas. The identification of these areas supports actions to prevent and mitigate associated risks and impacts and allows us to evaluate partnership opportunities, carried out by crossing information from our facilities with data from the World Database of Protected Areas, made available by the World Monitoring Center of Conservation of the United Nations Environment Program.

<sup>1</sup> The data includes both own and outsourced workers, in Brazil and abroad.

### Location of facilities with intersection with protected areas<sup>2</sup> (consolidated)



In 2023, we supported 120 protected areas, in compliance with license conditions that deal with the Law of the National System of Nature Conservation Units (SNUC), through contributions to the ICMBio Environmental Compensation Fund and the Special Expense Fund for the Preservation of Biodiversity and Natural Resources – FPBRN, from the government of the state of São Paulo. The amount allocated to these conservation units was BRL268.9 million.

<sup>2</sup> Consolidated data from Petróleo Brasileiro S.A. and units operated by Transpetro



## Equatorial Margin

As disclosed in 2024-28+ Strategic Plan, we plan to invest around BRL 15 billion in the Brazilian Equatorial Margin, which represents 41.5% of Exploratory Capex, over the next five years, with the expectation of drilling 16 exploratory wells in the region. Located in the north and northeast of the country, between the states of Amapá and Rio Grande do Norte, extending for more than 2,200 km, the Equatorial Margin is considered an important exploratory frontier in deep and ultra-deep waters.



See more at: [Equatorial Margin: a new offshore frontier | Petrobras](#)

On 10/02/2023, we obtained the issuance of an operating license from IBAMA for drilling two exploratory wells, in the BM-POT-17 and POT-M-762\_R15 concessions, in deep waters of the Potiguar Basin, on the Brazilian Equatorial Margin. All requirements and procedures requested by IBAMA were met, in compliance and with care for the rigor that this type of environmental licensing requires, thus corroborating its commitment to the Equatorial Margin, meeting the requirements of licensing and regulatory bodies in the exercise of their activities.

To obtain this license, a pre-operational assessment (APO) was carried out to prove the capacity to respond to incidents with oil spills, presented in the Individual Emergency Plan. The exercise simulated the touching of oil on beaches, environmental preservation areas (APA) and fauna, on the coast of Ceará, covering the municipalities of Beberibe, Fortim, Aracati and Icapuí. The drill was attended by more than 900 people, including our employees, service providers and the community, over three days, being evaluated by an IBAMA team both at the company's headquarters and in the field.

Therewith, reinforcing the history of almost 3,000 wells drilled in deep and ultra-deep-water environments without any complications, we reached another important milestone by drilling the Pitu Oeste Well, located in the Potiguar Basin, on the Equatorial Margin, which resulted in an operational and security success.

Through strict security protocols and investments in cutting-edge technology, we aim to ensure excellence in our operations, minimizing risks and maximizing efficiency. We are committed to following the highest safety and sustainability standards, always seeking to improve our practices and contribute to the

responsible development of the industry, operating in any region in which we are present.

We reaffirm that we are prepared to carry out activities on the Equatorial Margin with full responsibility, where we intend to employ all our operational knowledge and the necessary technologies to guarantee a safe operation.

In relation to the FZA-M-59 exploratory block, located in ultra-deep waters in the state of Amapá, approximately 175 km from the coast and 560 km from the mouth of the Amazon River, in a water depth of more than 2,800 meters, we are seeking together with the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA), an authorization to make a pre-operational assessment viable and, subsequently, obtaining the license for drilling an exploratory well, called Morpho.

Petrobras is currently awaiting a response to the reconsideration request made to the environmental agency, following the proposal to expand the entire emergency response structure and adjustments to logistical operations in the municipality of Oiapoque-AP.



Between 2022 and 2023, in conjunction with the Brazilian Ministry of Foreign Affairs, meetings were held with several authorities from French Guiana, Suriname, Guyana, Trinidad and Tobago and Barbados, with the aim of preparing a possible cross-border offshore response, in the event of an eventual and remote oil spill incident at sea during the exploratory campaign in block FZA-M-59.

As a result of these cross-border coordination actions, we established official emergency contact channels with authorities in each of these countries and communication flows in the event of an emergency.

It is worth mentioning the direct line of communication with directors of the Caribbean Disaster Emergency Management Agency (CDEMA), the entity responsible for disaster response in the Caribbean region, in addition to also mentioning the collaboration with us from external entities dedicated to promoting cross-border cooperation in the region, such as Regional Marine Pollution Emergency, Information and Training Center (REMPEITC) and the Association of Oil, Gas and Biofuels Sector Companies in Latin America and the Caribbean (ARPEL).

It is also important to highlight that we are an active

member of Oil Spill Response Limited (OSRL), the main oil spill emergency response entity at a global level, which is part of the Caribbean Islands Regional Oil Pollution Response and Cooperation Plan – OPRC PLAN.

We have made every effort to obtain the aforementioned license, evaluating that we have met all the studies and requirements demanded by IBAMA, within the scope of environmental licensing, as well as being open to incorporating new requests that may be necessary.

The development of this block is our commitment to the ANP, and we remain committed to the development of the Brazilian Equatorial Margin, recognizing the importance of new frontiers to ensure the country's energy security and the necessary resources for a fair and sustainable energy transition. To satisfy Brazil's future demand for oil, the country will have to look for new sources, in addition to the pre-salt.

**We reinforce our commitment to establish a line of dialogue, ethics and transparency in communication and community relationship actions, as well as concern for**

## **the protection of people, the environment and safety in operations.**

In February 2023, we held a meeting with members of the Council of Chiefs of the Indigenous Peoples of Oiapoque and other Indigenous leaders, in which the intended exploratory activities in the region were presented, as well as doubts resolved. Following the process of active listening to Indigenous peoples, we confirmed that the routes of the aircrafts that would travel between Oiapoque and the offshore drilling rig were changed, moving them away from Indigenous villages and minimizing possible noise. We are also ready to participate in a working group to define projects and compensation for the benefit of these peoples.

Reinforcing our commitment to promoting the generation of knowledge and preservation of biodiversity, some projects to meet the licensing of drilling activities in the Amapá Deep Waters region, in order to expand data generation for this region of the Brazilian Equatorial Margin were executed and maintained.

Below is a summary of the main results of each project:

- Space-time Census of Birds of Coastal and Migratory Ecosystems (Avifauna Census) started in February 2022: carried out in three conservation units in Amapá, it consisted of bird sighting campaigns, every three months, and tagging birds with satellite transmitters. More than 200 species were observed, and 55 birds were tagged.

- Sea Turtle Nesting Monitoring Project (PMDTM), started in June 2022: consists of monitoring seven beaches, one in Amapá and the other six in Pará, for a total of 57.3 km of beaches monitored daily. Until November 2023, an area of 30,538 km was covered, with 995 hatchlings being monitored, 37 turtles were banded, and five turtles were tagged with a satellite transmitter.

- Dedicated Integrated Monitoring Project (PMID), started in August 2022: comprised oceanographic cruises, every three months, from Belém to the FZA-M-59 block area, with sightings of mammals, birds and sea turtles and recording of underwater acoustic landscape, aiming to identify the sound of vocalizations of cetaceans. Until November 2023, there were 106 days of cruises in eight campaigns, leading to more than 7500 nautical miles of visual effort, more than 340 hours of underwater acoustic

landscape recording and seasonal monitoring of mammals and birds in a little-known region, with species rarely observed in the South Atlantic (beaked whales).

### **IMPACTS ON BIODIVERSITY**

We have identified and assessed impacts in order to help define avoidance, minimizing, and offsetting measures during the installation, operation, and deactivation phases of our projects. Depending on the life cycle stage, the types of operations, environmental factors, legal requirements, environmental agency requirements (when there are license restrictions), among other factors, we develop several studies and projects in order to assess biodiversity risks and establish action plans.

Despite all our efforts, in 2023 we recorded seven events involving oil and oil products spills with a volume greater than one barrel (which is equivalent to 159 liters). Of these spills, five occurred in an offshore environment, and two occurred in land environments.

No significant impacts were observed resulting from the spills, which were local and temporary in scope. None of the spills reached sensitive areas from a biodiversity point of view.

For all events, immediate contingency measures after the Emergency Response Plan was activated were taken, and an later assessment was done to analyze the overarching causes to prevent further occurrences. Events were communicated to public bodies in accordance with applicable legislation.



**Information on spills can be found in the chapter Accident Prevention and Management.**

We carry out environmental risk assessments within the scope of environmental studies prepared in the environmental licensing processes for all offshore drilling and production activities. In these assessments, accidental scenarios that result in the release of hydrocarbons and chemical products into the sea are identified, and their causes, probability of occurrence, severity and risks are analyzed. For each identified risk, preventive measures (Maintenance and Inspection Plans, compliance with operational safety procedures, and the respective training of workers, among others) and mitigation measures (Emergency Plans and respective Plans for the Protection of Fauna and Vulnerable Areas) are defined, according to the environmental risk assessment for each activity.



In 2023, the portfolio of projects voluntarily supported through the Petrobras Socio-Environmental Program included projects that worked on the direct recovery or conservation of approximately 358 thousand hectares of forests and natural areas of the Atlantic Forest, Amazon, Caatinga and Cerrado. These projects contribute to the net reduction and mitigation of greenhouse gas (GHG) emissions, and collaborate, in particular, with the Sustainable Development Goals (SDG) 13 – Action against global climate change, and 15- Life of land. In addition, the projects worked to strengthen 27.7 million hectares of protected areas, including surveillance and monitoring actions by environmental agents of the traditional communities and Indigenous peoples, monitoring of biodiversity and sustainable management of socio-biodiversity products to maintain the standing forest.

The environmental restoration process, developed over 35 years of oil and natural gas production in the Amazon, has already produced and planted more than 1,400,000 seedlings. In 2023, we planted 11,540 seedlings in areas undergoing recovery in the Amazon, with emphasis on the location area of the permanently abandoned well LCB-1, sited in a remote area, at approximately 26 km from Urucu, with a rustic nursery installed in the site and more than

5,000 seedlings cultivated and planted. In particular, the process included the installation of two forests of species protected by law (chestnut tree, rubber tree, andiroba and copaíba) bringing together approximately 20,000 seedlings, in order to contribute to reducing endangerment of these species.

Our operations are concentrated in Brazil, and due to the fact it is a megadiverse country, there are species categorized as endangered in all types of environments, both natural and man-made. The potential occurrence of these species and the associated risks are mapped and managed by the company, through various conservation projects and management practices, and compliance with environmental licensing conditions. Since this species survey is intrinsically complex and extensive, the process is continually refined, and our databases are permanently increased.

We executed a set of important regional projects to increase knowledge, mitigate and monitor the impacts and risks identified in environmental studies. These projects sought to conserve endangered marine species and biodiversity in our areas of operation, a commitment made for federal environmental licensing from Ibama for offshore exploration and production

activities. In 2023, we invested approximately BRL 384 million in more than 50 environmental monitoring programs and projects dedicated to assessing the health of the marine environment using various methodological approaches and including different groups of fauna (cetaceans, birds, turtles, among others) and other environmental components.

Among these projects, the “Satellite monitoring of the olive ridley sea turtle” developed on the Sergipe coast, in northeastern Brazil, the main nesting area for the olive ridley sea turtle (*Lepidochelys olivacea*) stands out. This project is developed as part of the environmental licensing process conducted by IBAMA, aiming to expand knowledge about the behavior of these animals, evaluate possible interactions with oil activities developed in the region and contribute to the conservation of the species, considered vulnerable by the Ministry of the Environment. The project consists of capturing individual olive sea turtles, in reproductive activity on the beaches, for the placement of a small transmitter in their shells. The equipment emits signals captured by satellite and makes it possible to geolocate the animals, in addition to collecting information such as water temperature, diving time and depth, transmitted in real time each time the animal comes to the surface. The data generated in the two



previous campaigns are being analyzed and indicate that, after nesting, the turtles spend a few days in the area, before migrating to other areas in the Atlantic Ocean, both inside and outside Brazil.

We also carried out four continuous and regional in the Santos (PMP-BS), Campos and Espírito Santo (PMP-BC/ES), Sergipe-Alagoas (PMP-SEAL) and Potiguar Basins (PMP-BP) Beach Monitoring Projects (PMPs), along 3,000 km of the coast of ten states, with the objective of evaluating the interference of our E&P activities on birds, turtles, and marine mammals, by monitoring beach strandings.

In 2023, the PMP played a relevant role in the early identification and communication to health authorities of suspected cases of Highly Pathogenic Avian Influenza (HPAI) in migratory marine fauna registered in the project. In addition to this “sentinel” role for detecting HPAI in their areas of execution, the PMP adopted a series of preventive measures to protect technical teams and animals in rehabilitation at veterinary facilities. These measures include the establishment of quarantine areas for animals of the veterinary species of interest for this infection. These actions are fundamental to controlling the health emergency and preventing its spread.

## MAIN INVESTMENTS AND SOCIO-ENVIRONMENTAL RESULTS

Within the scope of voluntary socio-environmental investments, we support projects carried out by civil society organizations, aiming to boost the production of knowledge relevant to the business and promote positive social and environmental transformations in society and nature.

Through the Petrobras Socio-Environmental Program, initiatives focused on the ocean and forests are supported, which provide, in addition to environmental conservation and recovery, benefits such as job creation and increased income, food security, quality education and social development.

Among the main accumulated results of the environmental projects portfolio in force in 2023, we can highlight:

- More than 510 researchers participating in project activities and over 580 publications, including articles, books, booklets, and publications in technical and scientific events.
- Involvement of more than 99,000 direct participants in the actions carried out continuously by the projects.

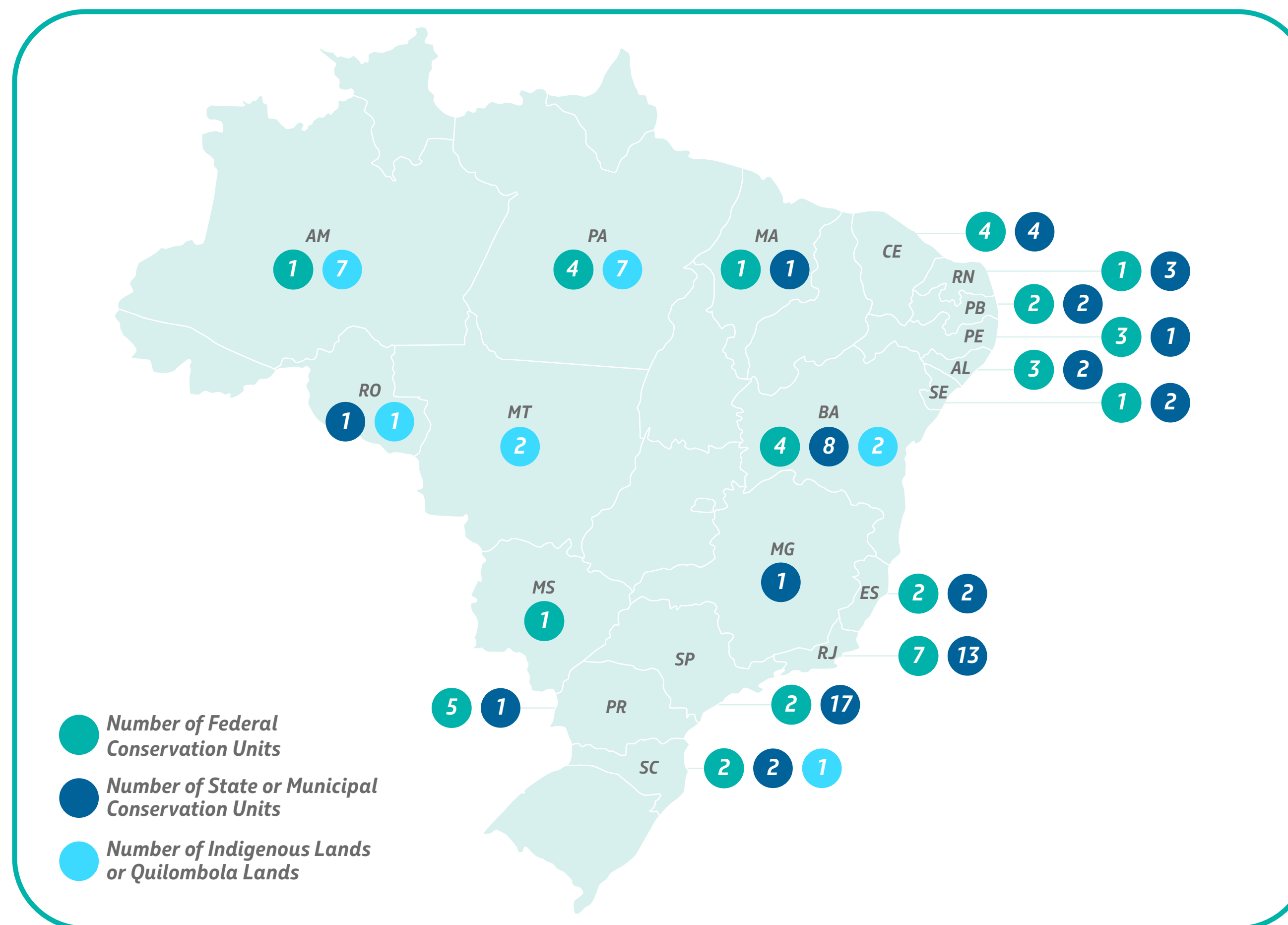
- More than 570 species of fauna are monitored, studied, or protected, of which 82 are endangered, including the puma, tapir, three-banded armadillo, southern muriqui, in addition to species of whales, corals, birds, fish and turtles.
- More than 350 species of flora in protection, monitoring, research actions or even in planting and seed collection actions, of which 17 are threatened with extinction, such as the Amazon cherry tree (*Amburana acreana*), a species systematically exploited in all accessible areas where it occurs and already extinct, or almost extinct, in the areas with the greatest exploratory pressure.
- More than 2.3 million participants in awareness-raising actions and more than 88,000 benefited from training actions.
- More than 83 tons of waste collected in cleaning actions on beaches and rivers.
- Recovery or direct conservation of around 358 thousand hectares of forests and natural areas of the Atlantic Forest, Amazon, Caatinga and Cerrado and actions to strengthen protected areas in around 27.7 million hectares.



These initiatives covered 100 land and marine conservation units, including categories such as National Parks, Sustainable Development Reserves, Extractive Reserves, Ecological Stations, Environmental Protection Areas, among others, in addition to 20 Indigenous Lands and Quilombola Lands.

The following figure illustrates the distribution of protected areas covered by our socio-environmental investment in force in 2023, by state.

### Map of protected areas covered by socio-environmental projects<sup>3</sup>



<sup>3</sup>Map illustrating the number of protected areas covered by our socio-environmental investment in effect in 2023. It is noteworthy that the same project can cover several protected areas, just as the same protected area can cover more than one state of the Federation.



With the aim of expanding our investments in a portfolio of projects focused on nature-based solutions, in alignment with our strategic goals and commitments, we are working in partnership with the National Bank for Economic and Social Development (BNDES), through the Living Forest matchfunding. The initiative is aligned with the UN SDGs, in addition to contributing to the global goals for combating and mitigating the effects of climate change and the goals established by the Convention on Biological Diversity, within the scope of the Kunming-Montreal Global Biodiversity Framework.

Aimed at gathering joint financial support for reforestation projects of native species in Brazilian biomes, we intend to follow the path of generating carbon credits. By 2026, we will invest BRL 50 million in the initiative, which has the Brazilian Biodiversity Fund (FUNBIO) as a managing partner, with the role of making selections, contracting, and monitoring the implementing projects.

Within the scope of Floresta Viva, in 2023, we released the results of the Mangroves of Brazil call for proposals, the first of the initiative. We selected eight projects that will cost BRL 47.3 million for actions to recover native vegetation in mangrove and restinga

areas in Brazil and which should reach more than 1,750 hectares. We believe in the importance of this investment as an advancement in this frontier of knowledge, especially in Brazil, which has one of the largest mangrove areas in the world. This initiative will reinforce our socio-environmental investments in blue carbon.

In December 2023, we launched at Climate COP 28, the second public selection of Floresta Viva, which will support ecological restoration and strengthening the restoration production chain in biodiversity corridors for the conservation of the Cerrado and Pantanal biomes. BRL 42 million will be invested in these initiatives, which will take place over the next four years. The definition of the corridors that make up the area covered by the notice was based on a study<sup>4</sup> which defined biodiversity corridors for the Cerrado based on agglomerations of key biodiversity areas (KBAs), also taking into account the connectivity between remnants of native vegetation and their protection by conservation units, Indigenous lands or Quilombola lands. Proposals must take into account the socioeconomic and cultural context of the region, reconciling the ecological benefits and maintenance of ecosystem services with the generation of employment, income, water, and food

security. Additionally, proposals must seek alignment with public instruments and policies related to the recovery of native vegetation in the region.

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<sup>4</sup> Ecological Profile: Biodiversity hotspot of the Cerrado. Sawyer, D., Mesquita, B., Coutinho, B., de Almeida, F. V., Figueiredo, I., & Eloy, L. Ed. SuperNova, pp. 280, 2018. Available at <[https://cepcerrado.iieb.org.br/wpcontent/uploads/2021/08/VERSAOFINALWEB\\_Sumario\\_PT\\_maio19-1.pdf](https://cepcerrado.iieb.org.br/wpcontent/uploads/2021/08/VERSAOFINALWEB_Sumario_PT_maio19-1.pdf)>



# WATER AND EFFLUENTS

[11.6.1] [11.6.2] [11.6.3]

The availability of water quantity and quality is essential for our operations. We use water directly for our oil, gas and products production and processing units; for steam generation; cooling and human consumption, among others uses. As a result, practically all of our activities generate domestic and industrial effluents, such as produced water.

Understanding the strategic relevance of this resource for the sustainability of our business throughout the production chain (upstream and mid/downstream), whether in onshore or offshore operations, we make efforts to continuously improve the management of water resources and effluents, considering our value of respect for life and the integrity of our facilities.

The material topic of water and effluents includes variations in the availability or quality of water in our areas of influence due to the withdrawal/or discharge of effluents associated with the company's activities, including produced water. It covers negative impacts

on biodiversity and human health in the case of water scarcity for water withdrawal or assimilation of our effluents, and positive impacts such as the return of water resources in better quality than withdrawn or in the implementation of conservation and recovery projects for springs and riparian forest, as well as technological adaptation of E&P and refining activities in scenarios of permanent water scarcity.

Potential impacts related to water and effluents may occur through our activities, both onshore and offshore.

Onshore, the main possible impacts are: freshwater withdrawal from surface or underground sources in a situation of temporary water criticality, which may contribute to compromising the availability for multiple uses in society, or the integrity and ecological functions of such water bodies;

- impacts related to the discharge of effluents that are not included in the legal discharge parameters or

that are not compatible with the supporting capacity of the receiving body, and thus can cause water pollution; and

- occasional spills of oil or oil products in water bodies.

Offshore, the impacts are related to:

- effluent discharges that may be non-compliant, causing maritime pollution;
- any spills of oil or oil products.

If they occur, such impacts may affect the environment, people - including compromising the universal human right to access water in adequate quality and quantity - and economic activities (agriculture, livestock, industry, etc.) in impacted river basins. For these reasons, it is very important to guarantee proper management mechanisms for water resources and effluents, in addition to objectives for continuous improvement in this area.



In addition to our direct activities, possible impacts may eventually arise from our supply chain. In 2023, as a result of our adherence to the CDP Supply Chain initiative, we were able to engage 76 of our main suppliers to respond to the questionnaire on water security, regarding their management mechanisms, their performance, possible impacts, and risks related to the topic. Of these organizations, 55% said they internalized water issues in their business strategies, 70% said they assessed water-related risks, especially the risk of droughts, and 41% reported having goals related to their water withdrawal.

## **MANAGEMENT OF WATER RESOURCES AND EFFLUENTS**

Our water resources management has as its basic principle the constant search for the rationalization of water use, which allows both to guarantee the necessary supply for our activities, and to contribute to its conservation (quantity and quality) and availability in the areas of influence of our facilities. Thus, we seek the adoption of low-intensity water use technologies, the minimization of its use in operations and processes, and the reuse and the identification of alternative sources of supply, always considering the local water availability and the technical-economic and environmental feasibility of the activities.

With regard to the generated effluents, we seek to minimize discarded polluting substances, through segregation, treatment, and adequate discharge of streams, also observing aspects related to the assimilation capacity of the receiving water bodies and the technical-economic feasibility of the measures, with the objective of avoiding or mitigating possible environmental impacts.

We use several tools for the management of water resources and effluents, the results of which are monitored by senior management. We develop process standards and specific technical guidelines, which establish requirements that must be observed and deployed by all our business areas and serve as a reference for our other companies.

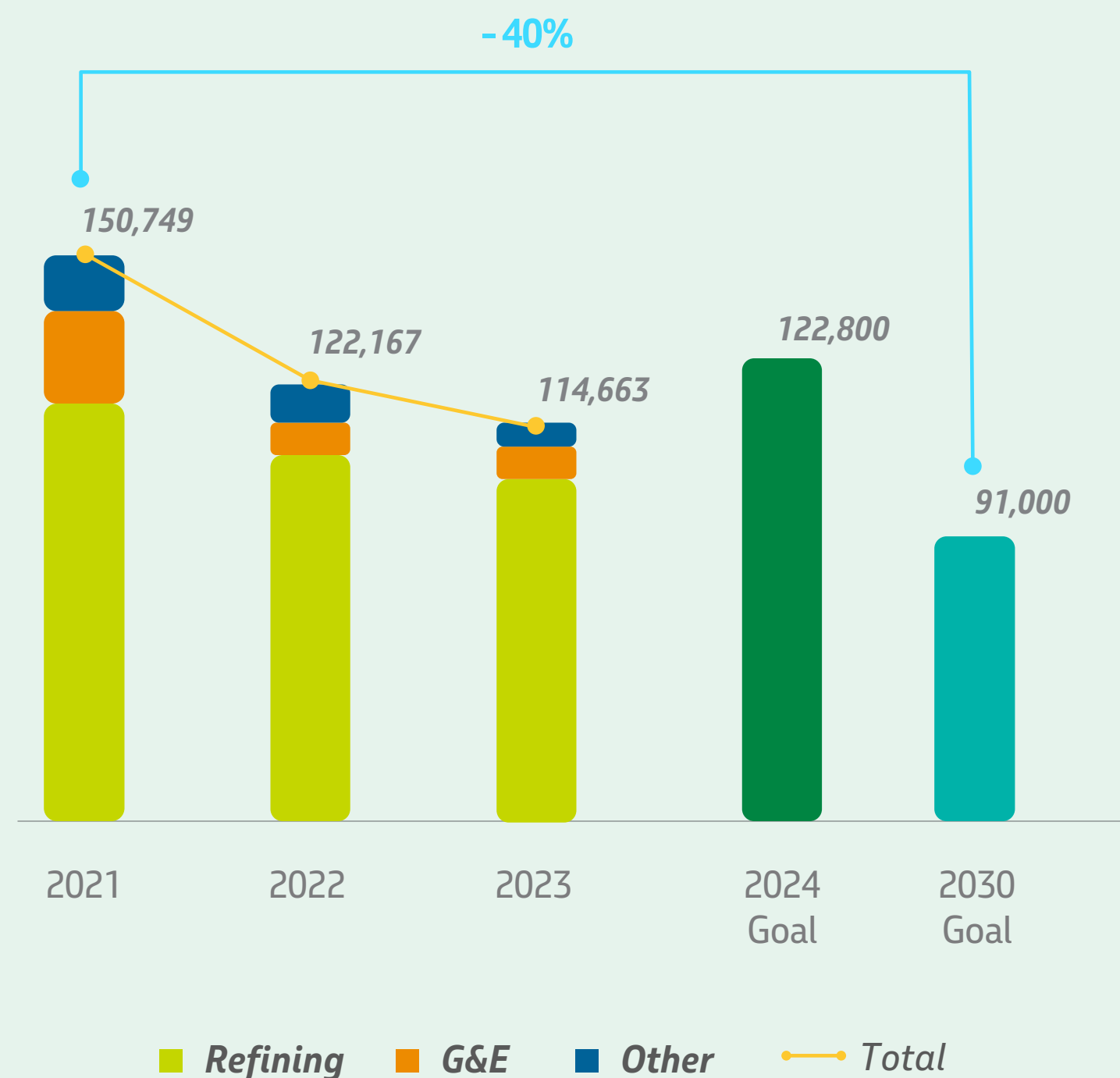
Regarding the systematization of information, we have a corporate database in which information related to the management of water resources and effluents is recorded, consulted, and processed. It is through this system that we annually carry out our inventory, which, in 2023 included 290 facilities that use water and generate effluents.

Also, we have invested approximately BRL 17 million in research and development projects related to the

management of water resources and effluents, through internal research and in partnership with universities and technological institutes. These studies and lines of research sought to optimize our effluent treatment processes, bringing greater reliability and efficiency, in addition to enabling the reinjection of water produced in offshore units.

We are committed to water security and one of our ESG drivers is to be “Water Positive” in the areas of water criticality where we operate, by reducing freshwater withdrawal and improving local water availability, contributing to water security. Thus, we made, and publicly reaffirmed in our 2024-2028+ Strategic Plan, the commitment to reduce our freshwater withdrawal by 40% by 2030, compared to 2021.

## Freshwater withdrawal<sup>1</sup> (consolidated data in megaliters)



To achieve the commitment, we have a portfolio currently made up of around 58 actions and projects, focused on reuse, measures to reduce water losses and the adoption of alternative water sources. Its evolution is periodically monitored by our governance structure in Health, Safety and Environment (HSE) and by the executive board.

So far, 23 portfolio actions have been implemented, representing a potential reduction in freshwater withdrawal of up to approximately 4,600<sup>2</sup>megaliters (4.6 million m<sup>3</sup>), depending on the operating conditions of the facilities involved, such as greater or lesser dispatch of thermoelectric plants, or volume of oil load processed in refineries.

In addition to this portfolio, the socio-environmental projects supported by the company that involve recovery of springs and riparian forests contribute to the achievement of the commitment.

<sup>1</sup>The data includes the parent company and the subsidiaries Petrobras Biofuels, Petrobras Bolivia, Petrobras Colombia Combustibles e Transpetro

Based on the commitment, we established our annual goals for the freshwater withdrawn indicator. The achievement of such goals influences the variable remuneration of the company's executive manager (HSE) and the Profit Sharing (PLR)<sup>3</sup> of our employees.

As mechanisms for receiving complaints for possible matters involving water resources and effluents, we have our Ombudsman's Office, which is easily accessible via our website. The content of any

complaints is analyzed and directed to our specific technical areas that have the capacity to assist, resolve and answer the claimant.

We routinely evaluate our environmental performance in water resources and effluents through the calculation, and monthly monitoring of three corporate indicators<sup>4</sup>: Volume of Freshwater Withdrawn; Volume of Reused Water (VAR) and Volume of Discharged Wastewater Effluent (EHD). Critical analyses of the ADC and VAR indicators are monitored by our senior management.

<sup>1</sup> The data includes the parent company and the companies Petrobras Biocombustível, Petrobras Bolivia, Petrobras Colombia Combustibles S.A. (PECOCO), and Transpetro.

<sup>2</sup> The calculation of the reduction potential has been revised compared to the previous year's report.

<sup>3</sup> For the purpose of profit-sharing specifically, the demand from thermoelectric power plants is not included in the indicator due to its significant variability based on the needs of the National Interconnected Electricity System.

<sup>4</sup> Although water is essential for use in our operations, our products do not incorporate significant amounts of this resource in their composition. In our activities, the main water consumption (volumes that are extracted and not returned to the sources) occurs through evaporation in cooling systems. Therefore, in our internal management, water consumption is not systematically monitored as an indicator.



Annually, we outline actions related to these topics in the Commitment to Life Program, in order to improve specific points in our management system and in our performance. The execution of the actions of this program is also measured and monitored by senior management. Our management system and our governance structure periodically evaluate the effectiveness of our actions in different forums, from the technical level to the top management level, in order to critically analyze the results obtained and incorporate the lessons learned in future planning cycles.

The governance of water resources and effluents permeates all of our spheres, with a Thematic Forum, comprised of company experts, which reports to the Environment Committee. This committee, in turn, reports to the HSE Committee, linked to the HSE Executive Committee, which reports to our Board of Directors. As a result, water and effluent issues are subject to a well-established flow in the various decision-making bodies.



Information about our governance structure can be found in the chapter **Corporate governance**.

### **Water as a shared resource**

We withdraw water from shallow sources (rivers, lakes, etc.), underground sources (phreatic or artesian wells), receive water from third parties (public utilities or other companies), and generate water produced when we extract oil and gas from their formations.

In Brazil, the maximum limits for freshwater withdrawal from the environment are established by public bodies responsible for the management of water resources and consider hydrological criteria and the multiple human and ecological uses of water within a hydrographic basin. It is legally forbidden to withdraw more water than authorized by the competent body. We also continuously invest in assessment of the impacts of our activities, observing protected and sensitive areas mapped in the regions influenced by our units, based on a specific and standardized internal process for this purpose. In 2023, we did not identify significant quantitative or qualitative impacts on water sources resulting from our direct water withdrawal processes.

The main types of discharge include industrial effluents (generated in the most varied activities of the oil and gas industry), sanitary effluents (in significantly lower amounts) and discarded produced water (main effluent from the oil production process). It should

be noted that effluents are subject to the discharge standards established in environmental legislation. Such effluents can be discharge of in shallow water sources, underground environments (e.g.: septic tanks, for sanitary effluents), sent to utility companies or third parties, or reinjected (in the case of produced water) in oil and gas reservoirs for the purposes of secondary recovery.

The discharged effluents were previously treated in order to meet the quality standards for discharge established in the environmental legislation. In 2023, we did not identify any significant quantitative or qualitative impacts on the sources where our effluents are discharged.

We work continuously to minimize all socio-environmental impacts of our activities, including water related impacts. When intending to develop new operations, we go through the Environmental Licensing process, which can occur at the municipal, state, or federal level. In this process, several studies are required so that the activity can be developed while mitigating impacts, such as those related to water use and effluent discharge. In these studies (the most broad and complex example of which is the Environmental Impact Study/Environmental Impact



Report - EIA/RIMA), we identified and evaluated the socio-environmental damage throughout the life cycle of the projects in order to support the definition of preventive, mitigating, and compensatory measures in their phases of installation, operation, and deactivation. When licensed by Brazilian environmental agencies, are subject to a series of conditions (license conditions) established by licensing agencies in order to ensure the minimization or compensation of such impacts, as well as the prevention of damage. Compliance with these conditions is monitored periodically by environmental agencies.

In addition, all of our new development projects undergo several review rounds where environmental criteria are evaluated, such as water use; generation, treatment, and discharge of effluents; possible impacts on water sources; and mitigation, prevention, and potential compensation measures.

For the continuity of our operations, as well as for society and stakeholders, it is extremely important that we manage the risks of water scarcity. We assess such risks using different tools, such as:

- World Resources Institute (WRI) Aqueduct Water Risk Atlas;

- Water Scarcity Risk Index (internal and specific tool that we developed in partnership with the Federal University of Rio de Janeiro, used in the company since 2016)
- Studies to assess water availability and alternative sources for strategic hydrographic basins (carried out by the company since 2002).

The Water Scarcity Risk Index considers the susceptibility of operational units to water scarcity and other factors, such as the vulnerabilities of the hydrographic basins where they are located and their internal resilience actions. The last round of Water Scarcity Risk Index application took place in 2023, covering 37 facilities, which correspond to approximately 96% of the freshwater withdrawal of our operating units in Brazil. The results of the index make it possible to understand and compare water risk levels for different facilities, as well as to identify the most important sites and facilities to target with detailed local water availability studies, in addition to mitigation and risk management actions.

Any environmental impacts that may occur to water bodies due to our activities will receive the resources and efforts for maximum damage mitigation, and if necessary, in conjunction with the public authorities. As

an example of our readiness to minimize impacts, we can mention the existence of our Environmental Defense Centers (CDAs), which are ready to act in case of oil, oil products or chemicals spills in bodies of water.

By understanding that water is a shared resource, our engagement activities with stakeholders on the subject are an important subsidy for us to understand the main demands of society, how we should position ourselves, and what requirements we should incorporate in our water and effluent management so that we can act harmoniously with the needs of multiple actors. Among the relationship activities with stakeholders, we can highlight:



### **Engagement with the industry and business sector in strategic forums:**

We are a member of the Water Thematic Chamber of the Brazilian Business Council for Sustainable Development (CEBDS), the Water Resources Network of the National Confederation of Industry (CNI) and the Water Working Group of Ipieca (global oil and gas association to promote performance environmental and social issues during the energy transition), forums in which we can coordinate with other large water users, evaluate trends and synergies, discuss best practices on the topic, standardize positions, anticipate and resolve potential conflicts;

### **Engagement with local communities and civil society organizations through investment in socio-environmental initiatives and local environmental education programs:**

for over 40 years we have supported civil society initiatives aimed at environmental protection and the promotion of ecological awareness, to create a conciliatory dialogue with society. The water theme has been present since 2003, when socio-environmental investments were structured into corporate programs, both in support of the conservation and recovery of springs and riparian forests, and directly of water bodies in Brazil.

In 2023, through the Petrobras Socioenvironmental Program, we supported 24 projects aimed at the conservation and recovery of forests and natural areas that contributed to the preservation of water, through actions to reverse the degradation of springs, sources and watercourses, restoration of riparian forests and management of river basins, in addition to initiatives aimed at strengthening resilience and the ability to adapt to water scarcity and extreme events.

Among these initiatives, there are projects carried out in important river basins for the company, such as the award-winning Semeando Água, sponsored by us since 2013 and carried out by the Ecological Research Institute (IPÊ). Operating in nine municipalities in São Paulo and Minas Gerais, in the Cantareira System region, it aims to promote the creation of multifunctional landscapes, with nature-based solutions, which reconcile sustainable development with environmental conservation. The actions have already resulted in the conversion of more than 200 hectares between restorations and the implementation of sustainable production systems, with the planting of more than 200,000 seedlings and the involvement of more than 23,000 students in educational actions. In 2023, we highlight an education and mobilization initiative carried out by the project, through which

around 100 young students in the final years of primary and secondary education participate in socio-environmental collectives from five state schools in Nazaré Paulista, in São Paulo, sharing learning and deepening knowledge about climate issues through workshops. Named “I COP of Local Climate”, the initiative is part of IPÊ’s “Climate Schools”, in partnership with IAMAR – Instituto Alair Martins and AWS (Amazon Web Services) and is part of the Semeando Água Project. As a result, the project will publish a document with the main demands raised by students, which will be forwarded to decision makers responsible for each sphere: school directors, mayor, and local councils, for example.

Another highlight for the year 2023, in the Petrobras Socioenvironmental Program project portfolio, was the execution of a study in which the water benefit provided by the actions of the No Clima da Caatinga project, supported by us since 2011. The project works to preserve the largest private natural heritage reserve in Ceará, the Serra das Almas Natural Reserve (RNSA), which has 6,285 hectares of preserved caatinga.





The study concluded that the RNSA's forest cover prevents, annually, the runoff of 4,800 megaliters of water due to the presence of trees and the action of their roots, through which less surface runoff of water and greater infiltration of water in the soil, less sediment deposition (which silts up rivers), and more interesting support for the water cycle in a semi-arid region with great water scarcity. This avoided runoff generated in the RNSA is the equivalent of the annual supply of more than 299,000 plate cisterns that store 16,000 liters each, enough to serve a family during the dry period in the semi-arid region.

### **Integration with the Government and regulatory**

**bodies:** we interact with representatives from different spheres of the Executive, Legislative and Judiciary powers. Interactions with ministries, state and municipal departments, regulatory agencies, and councils, among others, are related to health, safety, and environment issues, including water and effluents.

### **Participation in Water Resources Forums, mainly in**

**River Basin Committees:** River Basin Committees are normative, consultative, and deliberative forums, in which the management of water resources in the river basin is discussed and in which different interested

parties participate (local community associations, non-governmental organizations (NGOs), government, large users, civil society entities, etc.).

**Engagement with the supply chain:** in 2023, we held the Petrobras Best Suppliers Award, including a special HSE – Environment award, which covered aspects related to water use, such as reduction, reuse, identification of water stress and discharge of effluents. We joined the CDP Supply Chain initiative with the aim of engaging our main suppliers to respond to the questionnaire on water security, regarding their management mechanisms, their performance, possible impacts, and risks related to the topic.

### **Management of Effluent Related Impacts**

The resolution of the National Environmental Council (CONAMA) no. 430/2011 provides for the conditions and standards for effluent discharge, complements and amends CONAMA resolution no. 357/2005. Thus, throughout Brazil, there are requirements to be met for the effluent streams to be discharged, as well as water quality requirements of the receiving body that cannot be violated (even if the discharged effluent stream is compliant). In other words, there is a double requirement: that the discharged effluent stream

be within the discharge standards, and that the receiving body of this stream also remains with its water quality compatible with the requirements of its classification.

Some effluents have specific legal requirements, as is the case of produced water, whose offshore discharge must comply with what is described in CONAMA resolution no. 393/2007. Effluents from offshore activities are also regulated by the technical note of the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA) n°. 01/2011, which brings the requirements of the Pollution Control Project, at a national level, for maritime oil and gas exploration and production projects.

It is within this framework that we act in relation to the quality of our effluents: respecting the release standards and respecting the classes of the receiving bodies. When operating in other countries, we obey the discharge standards in force.



### **Use of freshwater and reuse**

During 2023, we withdrew 114,663 megaliters of freshwater for our operational and office activities, 13% below our target<sup>5</sup> (maximum limit) of 131,900 megaliters.

A significant part of our investments in rationalizing the use of water has been directed towards developing reuse projects. Among the benefits achieved, we obtained a reduction in our global needs for withdrawing “new water.”

In 2023, the total volume of reuse was 35,805 million megaliters, which corresponds to 24% of our total freshwater demand. This reused volume would be enough to supply, for example, a city of approximately 650,000 inhabitants for one year. Based on these reuse actions, we estimate an annual savings of approximately BRL 16 million in water withdrawal costs.

### **Management of the main effluents**

In upstream activities, the main pollutants contained in our effluents are oils and greases, present in produced water and in oily effluents. An important impact that can be considered in environmental studies, for example, is bioaccumulation across the food chain, which can affect ecosystems and

human health. In mid/downstream activities, the main pollutants released by our effluents are those that contribute to the Chemical Oxygen Demand and ammonia. The main possible impacts associated with such pollutants are oxygen depletion and eutrophication of water bodies, which may cause losses or imbalances in biodiversity and ecosystems. In studies and licensing process for activities, the control and mitigation measures for the assessed impacts are defined and implemented during the installation and operation phases.

We treat our effluents for the pollutants described above and for an extremely broader set of other parameters, in accordance with CONAMA resolutions n. 430/2011, n. 357/2005 and n. 393/2007. Our discharge limits were defined based on the legal limits practiced in Brazilian legislation.

Our Discarded Wastewater Effluent Volume (EHD) indicator, routinely monitored by management, does not include the discharge of cooling water in an open circuit, nor the injection or reinjection of water in reservoirs for the purposes of secondary recovery. Therefore, Wastewater Effluent Volume allows us to have a better view of the effluents that could potentially pollute the environment. Therefore, the

EHD covers our industrial and sanitary effluents and produced water discarded after treatment or sent for treatment and final discharge. In 2023, the volume of these effluents was 207,180 megaliters.

### **Water produced**

We manage our discharges of seawater produced in accordance with CONAMA resolution n. 393/2007, which is the Brazilian regulation that provides for the continuous discharge of production water on maritime platforms. In this resolution, the daily and monthly limits for the discharge of Oil and Grease Content (TOG) are described, which correspond to 42 mg/L and 29 mg/L, respectively.

The monitoring of Oil and Grease Content in offshore discharge is carried out daily, however the monitoring of salinity is carried out every six months, in compliance with the provisions of article 10 of CONAMA Resolution n. 393/2007. In addition, the produced water discarded on the platforms is previously treated in treatment plants, commonly equipped with hydrocyclones and floaters.

<sup>5</sup>For the purposes of the PLR specifically, the demand from thermoelectric plants is not accounted for, due to its significant variability depending on the needs of the National Interconnected Electricity System. For 2023, the target (maximum limit) was 119,400 megaliters and the volume captured was 109,995 megaliters.

In both onshore and offshore environments, we also carry out the reinjection of produced water for the secondary recovery of oil in the reservoirs. Thus, we no longer withdraw “new water” from the environment, which is particularly relevant in land facilities, which would otherwise need to withdraw freshwater for this purpose.

In 2023, we discharged around 56,725 megaliters of produced water into the environment and re-injected around 34,100 megaliters for secondary oil recovery purposes. These volumes correspond to approximately 62% and 38% of the discharged volume, respectively. The total load of oils and greases in the discharged produced water was approximately 1 thousand tons.

Our trend for the next years is for an increase in the volumes of produced water reinjected offshore, due to the expansion of reinjection practices. For onshore fields, the tendency is to reduce the volumes of reinjected produced water, due to divestments. With regard to the load of oils and greases, despite the general trend towards an increase in the generation of produced water due to the maturation of the producing fields, a reduction in the discharged load is expected in the coming years.

### ***Nonconformities related to the use of water***

Despite all our efforts related to the management of water resources and effluents, and the continuous improvement of this management, some nonconformities resulted in sanctions in 2023. For the upstream, there were 14 sanctions considered significant (amount greater than or equal to BRL 1 million) related to discharges and, for the downstream, there were no sanctions considered significant.





# WASTE MANAGEMENT AND DECOMMISSIONING

[11.5.1] [11.5.2] [11.5.3] [11.5.4] [11.5.5] [11.5.6] [11.7.1] [11.7.2] [11.7.3] [11.7.4]

Waste management covers measures for the adequate management of solid waste throughout the life cycle of our business, including circular economy practices, which seek to prevent generation, the reduction, reuse, recycling, treatment of hazardous and non-hazardous waste, environmentally adequate waste disposal and even recovery of contaminated areas, with the aim of valuing materials and resources and avoiding or mitigating possible impacts on the environment and human health. This material topic includes the decommissioning process related to dismantling, transportation and disposal of equipment, structures, and waste, as well as its risks and opportunities. It also includes the proper planning and execution of studies and projects, all while seeking sustainability, environmental protection, safety, and care for people.

The linear production model has placed great pressure on the environment and natural capital, generating impacts related to the extraction of natural resources and the generation of solid

waste. In view of this, we have undertaken efforts to continuously improve the management of our products throughout their life cycle and have sought to close our processes in light of the circular economy, reinserting waste into the production cycle in order to minimize its final disposal in the environment and the need for raw material extraction.

Recognizing the relevance of the topic for the sustainability of our business throughout the production chain, one of our ESG drivers is to minimize the generation and maximize the reuse, recycling, and recovery of waste, promoting circular economy practices and seeking zero disposal in landfills. In this sense, we make and reaffirm in our 2024-2028+ Strategic Plan, the commitments to reduce the generation of solid process waste by 30% by 2030, generating a maximum of 195,000 tons/year, and to allocate at least 80% of this waste to reuse, recycling and recovery (RRR) routes by 2030.

Thereto, we have developed circularity actions to allow the reuse of our waste as raw material for oil products, and in other production processes. The effectiveness of these initiatives is monitored through indicators that measure the amount of waste generated and the percentage destined for use, recycling, and recovery routes.

Our activities generate solid waste that may contain mixtures of hazardous and non-hazardous substances; therefore, when not properly managed, they can be sources of potential adverse impacts on human health and the quality of the environment, such as:

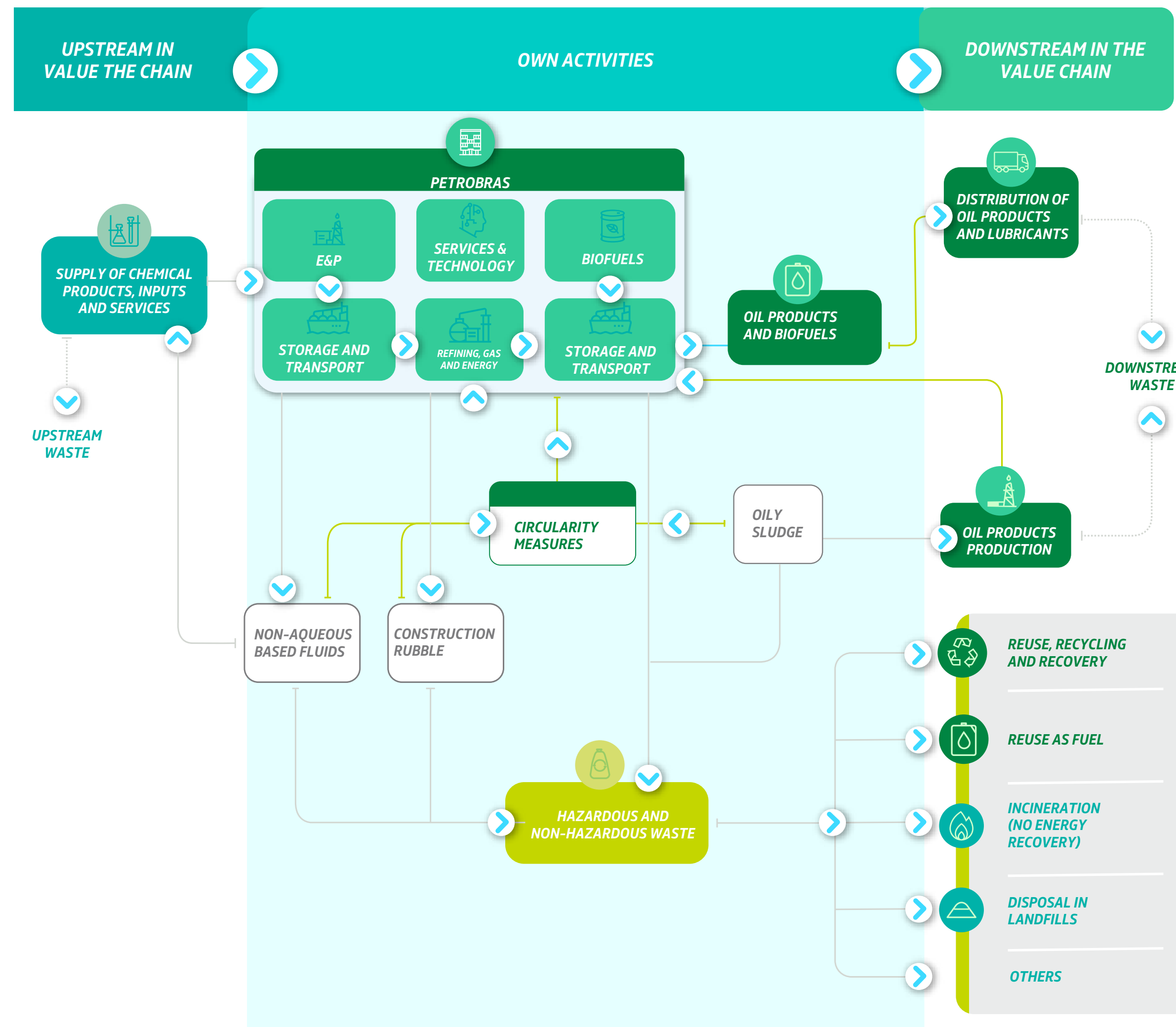
- Pollution of soil and surface or groundwater sources, due to the environmentally inadequate disposal of waste, which may compromise the availability of ecosystem services for use by society, productive sectors, and biodiversity;
- Decrease in the useful life of landfills due to the disposal of waste subject to RRR, reducing the area

available for the disposal of waste that does not have an economically or technologically available route at the time of its disposal.

Our supply chain may also occasionally be responsible for possible impacts due to inadequate waste management, which is why, in addition to seeking only suppliers licensed by the competent environmental authorities, audits are planned for qualification in the contracting and inspection process during the execution of the services.

As an example of waste generated in our processes we have: oily sludge, drilling fluids and gravelss, industrial effluent station sludge, spent catalysts, used lubricating oils, spent acidic or basic solutions, fuel filtering elements, paper, plastics, wood, and debris from civil construction. In our units, the sources of waste generation are the activities of production and processing of raw materials and intermediate streams, effluent treatment, preventive and corrective equipment maintenance processes, engineering works, as well as office activities. The following figure illustrates the simplified process flow of inputs, activities and outputs related to waste management

### Process flow for inputs, activities and outputs related to waste management





## MANAGEMENT OF WASTE-RELATED IMPACTS

The adequate waste management in accordance with current legislation, and good practices in the oil and gas industry integrates the principles of our Health, Safety, and Environment Policy. Our solid waste management follows the waste management hierarchy established in current legislation: non-generation, reduction, reuse, recycling, treatment of solid waste and environmentally appropriate final waste disposal, with the aim of avoiding or mitigating possible environmental impacts.

Since 2013, we have adopted circular economy practices in our activities to prevent the generation of solid waste, with emphasis on the reuse of oily sludge in the production of shale oil and green petroleum coke. These practices made it possible to reduce the generation of hazardous waste by more than half, from 245,000 tons to 79,600 tons in ten years, minimizing any negative impacts on the environment and people.<sup>1</sup>

In our operations in the Amazon, around 30% of the waste generated is organic. Everything is separated, transported to a specific area, and treated through composting, generating fertilizer, which is used in

the process of germinating seeds and developing seedlings for the process of restoring degraded areas in the Urucu oil province itself.

In 2023, we completed the public selection process focusing on the collection and adequate disposal of recyclable solid waste and, at the beginning of this year, we began partnerships with three social projects in the metropolitan region of Rio de Janeiro. We will forward solid waste such as plastic, paper, wood and glass generated in four properties in the capital of Rio de Janeiro and Baixada Fluminense (ARM RIO, Research Center - Cenpes), Galpão Belford Roxo and Conjunto Caju) to the cooperatives COOPCARMO, ACAMGJ and COOPAMA, which have the potential to receive around 600 tons of recyclable materials per year. The initiative is aligned with our strategic framework of generating value for society and the commitment to protect the environment by increasing the allocation of solid waste to reuse, recycling, and recovery routes, in addition to preserving biodiversity and mitigating climate issues through carbon capture. In addition to the materials, the cooperatives will receive resources to be invested in training and improving the education of the collectors, vehicle maintenance, sheds, and equipment, and in environmental education actions. Together, the

projects add up to an investment of BRL 8.9 million to be disbursed over the next three years.

Additionally, to mitigate the potential adverse impacts generated by waste, we implemented preventive and corrective actions described in our process standards and specific internal technical standards on the subject, in addition to following Brazilian and international technical standards.

For the development of new projects, we use the Front-End Loading (FEL) methodology for planning and approval of each phase of the project based on technical, economic, and environmental feasibility, in which technical criteria related to minimizing the generation and optimization of the destination of waste. Routinely, several studies are carried out as part of the environmental licensing process in order to identify and assess the socio-environmental impacts throughout the development's life cycle, thus mitigating impacts related to solid waste management. Preventive, mitigating, and compensatory measures are defined in the installation, operation, and decommissioning phases of the projects.

<sup>1</sup>We report in this chapter the information on waste in thousands of tons for a better understanding of the quantitative data.



We invested around BRL14 million in research and development projects at Cenpes in technologies related to waste reduction and reuse. We have made progress in building partnerships with universities and private companies to implement circular economy practices and in solutions that allow the use of our waste as input for high value-added products, such as pyrolysis oil and oil recovered from oily sludges for the production of asphalt, fuel oil and other products.

Information related to solid waste management is recorded in proprietary information systems that cover all stages of management, maintaining an up-to-date corporate database that is used to carry out our annual inventory.

We routinely assess our environmental performance in waste management through the monthly assessment and monitoring of four indicators: Hazardous Solid Process Waste Generated, Non Hazardous Solid Process Waste Generated, Hazardous Solid Waste Destined for non-RRR routes e Non-Hazardous Solid Waste Destined for non-RRR routes. Critical analyses of these indicators are monitored by the company's senior management.

Waste governance permeates all levels of the

company, with a Thematic Waste Forum, made up of company experts, which reports to the Environment Commission. This Committee, in turn, reports to the HSE Committee, linked to the HSE Executive Committee, which reports to the company's Board of Directors. As a result, issues related to Waste are the subject of a well-established flow in the various decision-making bodies.

### **GENERATED WASTE**

We adopt the system of classifying waste as hazardous or non-hazardous following the protocols reported by the Brazilian Association of Technical Norms (ABNT), Norma Brasileira (NBR) 10004, which is based on the Code of Federal Regulation – Title 40, Protection of Environmental – Part 260-265, Hazardous waste management. It should be noted that Law no. 12,305/2010, which establishes the National Solid Waste Policy, also adopts the same criteria for classifying waste as hazardous and non-hazardous, excluding radioactive waste.

In 2023, the generation of hazardous and non-hazardous solid waste in our processes was 79.6 thousand and 143.9 thousand tons, respectively, totaling 223.5 thousand tons of waste. The generation of waste from processes in 2023 was the best

performance in the last four years, the result of the sum of the circular economy actions implemented and the occasional reduction in non-continuous cleaning and maintenance activities.

In order to achieve our new ESG waste commitment, we are planning new circularity actions, operational optimizations, sustainable contracts, and workforce training and awareness, to reach 2030 generating a maximum of 195 thousand tons of process waste.

In 2023, we held the “Sustainability Journey – Conscious Consumption and Waste” training, with 1,032 participations from our workforce.



Regardless of the classification, the waste mass is determined by direct weighing or estimation considering technical and engineering criteria (density and volume). When they are estimated, we try to make conservative estimates by overestimating the masses, which are later corrected after weighing them at the time of shipment for final disposal, which may occur from one year to the next. Finally, in 2023, the result of hazardous solid waste generation was 27.6% below the established internal limit of 110 thousand tons and the generation of non-hazardous solid waste was 10.2% below the target of the internally established limit of 160.2 thousand tons.

## WASTE DISPOSAL

In 2023 we disposed 77.1 thousand hazardous and 158.5 thousand non-hazardous tons of waste from our processes. The proper management of our solid waste allowed 91% of the hazardous waste mass generated in the processes to be sent to RRR routes. The total waste from processes destined for non-RRR routes was 6.7 thousand tons, therefore, lower than the established limit for the year (15.9 thousand tons).

Also in 2023, it was possible to achieve that 69% of the mass of non-hazardous solid waste from the process

was destined for RRR routes. The disposal of non-hazardous waste from processes for non-RRR routes was 49.1 thousand tons, therefore, lower than the established limit for the year (55.6 thousand tons).

In total, 76% of the mass of hazardous and non-hazardous solid waste from the process was destined for RRR routes, which reiterates our efforts to adopt circular economy practices and puts us on track for our new ESG commitment to dispose of 80% of waste process solids for RRR routes by 2030.

The waste disposal methods are determined by us through contractual agreements and performed by hired, expert, licensed by the environmental authorities companies, considering our regulations and standards.

All the disposed hazardous and non-hazardous waste was transported to allow for the environmentally appropriate treatment or final disposal to take place. We employ, both for the transport and disposal stages, authorized suppliers licensed by the competent authorities (environmental, transport, and health inspection). In 2023, 77.0 thousand tons of hazardous waste and 157.2 thousand tons of non-hazardous waste from our processes were transported

nationwide. In the year in question, we did not make any international waste shipments.

The difference between the mass of waste generated and disposed of occurs as part of proper waste management, since a portion is temporarily stored safely in our units to await disposal where normally batches are formed for transport and may occur from one year to the next.

## DRILLING FLUIDS

We adopt actions related to operational efficiency in line with the practices of the offshore oil & gas industry, maximizing the use of the inputs used and minimizing landed waste. Some practices allow increasing the useful life of non-aqueous-based fluids, such as solids control and storage for evaluation of characteristics in order to allow their reuse in other projects. In addition, the use of dryers to reduce the content of adhered organic base has allowed the classification of gravels for environmentally adequate disposal in accordance with legislation in force and the determinations of the competent authorities.





In 2023, we generated 2.0 thousand tons and disposed of 1.5 thousand tons of cuttings and water-based fluids from exploration and production processes in land operations or landed from offshore operations<sup>2</sup>. We also generated and disposed of 0.1 thousand tons of cuttings and non-aqueous based fluids. Alternatives for environmentally appropriate treatment or final disposal of these materials were adopted.

## OILY SLUDGE

Oily sludge is one of the main hazardous wastes generated in the oil & gas industry, mainly in cleaning activities of oil and oil products storage tanks and effluent drainage and treatment systems. As reported in this chapter, in recent years we have adopted circular economy practices for reusing and valuing this waste.

In 2023, 39.6 thousand tons were generated, and 38.3 thousand tons of oily sludge were destined for disposal. For this portion that is not reused as raw material for oil products, environmentally appropriate treatment or final disposal alternatives are adopted.

## DIVESTMENT PROCESSES

We have systems for decommissioning and divestment of assets and companies, in addition to HSE policies,

guidelines and standards, which establish procedures for planning and executing these activities in offshore and onshore assets. Accident and leak prevention actions are carried out on all assets in which we are operators or have a stake, throughout the entire life cycle of the project, from planning to decommissioning, including the asset sale processes (divestments). This is always done under the supervision and with the participation of control and inspection bodies.

In the case of divestments, strict criteria are applied in the selection of potential buyers to ensure the technical, financial, and operational capacity to provide business continuity. Compliance with all commitments, requirements and accident and leak prevention programs are disclosed to potential buyers and maintained by us throughout the process until the asset is transferred to the new operator and the transaction closing. Our system also foresees the monitoring of assets divested by Petrobras during the post-closing phase, with the objective of ensuring execution in accordance with the contractual instrument, implementing standardized and adequate management of commitments, responsibilities, and rights.

The new operator, upon receiving the asset, takes on the responsibility for all commitments and requirements

related to the prevention of accidents and spills. These commitments and requirements are established and supervised by various control bodies (Agência Nacional do Petróleo, Gás Natural e Biocombustíveis (ANP), Brazilian Institute for the Environment and Natural Resources (Ibama), Brazilian Navy, Fire Department, state agencies environment, among others), that participate in the divestment process.

## DECOMMISSIONING PROCESSES

The E&P active portfolio management process must take into account issues related to the decommissioning of assets, which is a legal requirement to be carried out when the life cycle of the production system ends, or within the scope of area revitalization projects, through of replacing old systems with new ones, which is, therefore, a natural process within the production cycle of the oil and gas industry, which will be increasingly common in Brazil, given the proximity of the end of the productive life of many maritime production systems.

<sup>2</sup> The total waste of cuttings and water-based fluids reported refers to those that land as hazardous waste in accordance with NBR 10004.



Decommissioning consists of a set of activities associated with the definitive interruption of the operations of the facilities, the permanent abandonment and closing of wells, the appropriate disposal of deactivated facilities, materials, residues and waste and the environmental recovery of the area.

Once the need for decommissioning is confirmed, we plan and execute the activities in compliance with regulations in force, following strict safety standards and carrying out an analysis of project alternatives based on multidisciplinary criteria (environmental, technical, safety, social and economic), which allow us to compare solutions and identify the most appropriate decommissioning alternative.

In compliance with resolution n. 817/2020 of the ANP, the Maritime Installation Decommissioning Programs (PDI) are evaluated and approved by the ANP, Ibama and the Navy considering the institutional responsibilities of each body. In summary, Ibama analyzes the solutions presented from an environmental point of view; the ANP from a technical perspective, verifying the adequacy of proposals to best industry practices; and the Navy observes whether issues affecting navigation safety and other uses of the sea are guaranteed.

With specific reference to maritime production systems, the PDI encompasses several activities, distributed across three major scopes: (i) platform, (ii) wells and (iii) subsea systems.

Cleaning and conditioning of platforms, pipelines, and equipment; the treatment, final destination of waste and waste disposal in compliance with legislation in force; the safe and definitive plugging of wells; the disconnection and disposal of subsea systems; and the dismantling and recycling of platforms and other equipment removed are some examples of activities carried out during decommissioning.

Between 2024 and 2028, Petrobras will invest more than 55 billion reais in the decommissioning of its assets. Approximately 70% of this amount is allocated to well decommissioning activities and the remaining 30% to equipment decommissioning, including platforms and subsea systems.

Having the health and well-being of people, protection of the environment and the safety of our operations as non-negotiable values, we have the ambition to become a global reference in decommissioning activities, focusing on generating value, sustainability, safety and care for people and the environment.

We seek to convert the decommissioning of our assets into a value driver in sustainability in our production cycle, in line with our commitments to the country's economic development, sustainable innovation and improving the quality of life of society as a whole, respecting human rights and the environment and contributing to the achievement of the United Nations (UN) Sustainable Development Goals (SDGs).

There to, a series of initiatives have been, and are being, implemented to avoid and minimize risks, costs and adverse impacts that may affect the stakeholders, including employees, communities, and the entire supply chain. The measures also aim to expand positive impacts and social benefits, in addition to increasing the safety and economy of projects, thus enhancing the value networks that they have the potential to generate.



## **Sustainability in choosing decommissioning alternatives**

Sustainability criteria must be observed when evaluating and selecting decommissioning alternatives. Therefore, for each system to be decommissioned, we carry out specific analyses, considering the peculiar characteristics of the system and the environment in which it is inserted, and we propose to regulatory bodies the most advantageous and efficient decommissioning alternative, that is, the one that best reconciles and balances the various criteria applicable to the case.

Thereto, a multi-criteria analysis methodology was developed, in partnership with the Federal University of Rio de Janeiro (UFRJ), that can be used to support decision-making regarding the definition of the alternative for decommissioning subsea systems.

The methodology, which captures the particularities of the Brazilian context, considers six criteria (subdivided into 37 sub-criteria) for the process of evaluating decommissioning alternatives and decision-making: technical, environmental, social, waste management (life cycle assessment), safety and economical. The social and waste criteria include aspects such as restrictions on fishing activities, employability

(creation/maintenance of jobs) and GHG emissions (climate change). The adoption of the methodology as a support tool allows decision-making on the decommissioning of subsea systems to be directly linked to sustainability issues. It is certain that the alternative to be effectively adopted is always the one approved by regulatory bodies.

### **Biodiversity**

The floating platforms that are being decommissioned need to be transported from their location, in the production field, to their final destination, which can be tens of hundreds of kilometers away. Therefore, the proposal for the navigation route must consider the socio-environmental risks associated with this stage and strive to mitigate them.

After all the time operating on location, the hull of the floating platforms may contain fouling species, including native and invasive species. To reduce the risk of bioinvasion in sensitive areas, navigation routes designed for units undergoing decommissioning are designed to avoid areas of high biodiversity value and environmental sensitivity, prioritizing the route through deep areas far from the coast, also aiming to cross the shallow region by the shortest route possible.

Areas used for artisanal fishing are also avoided whenever possible, as the slow train used for towing can cause spatial conflict with this vulnerable fishing method.

In 2023, the tow route prepared for the P-32 met these assumptions.

### **Governance and Transparency**

We have systems for the development of asset decommissioning projects, in addition to HSE policies, guidelines and standards, which establish the guidelines, processes and activities to plan and execute offshore and onshore asset decommissioning.



Seeking to continually improve transparency and broader communication with our stakeholders, we implemented an integrated communication and engagement plan specific to decommissioning and launched the decommissioning page on our website in 2023.

Additionally, we included in our 2024-2028+ Strategic Plan detailed information about our decommissioning portfolio, with forecasts of projects that will be executed over an extended timeframe until 2034.

Maintaining a full dialogue with our stakeholders also takes place through social communication projects (PCS) and environmental education for workers (PEAT), developed within the scope of the environmental licensing of the facilities, and other publications such as the Sustainability Report itself, where the theme of decommissioning has been, since 2022, one of our 10 material topics and the Climate and Human Rights and Corporate Citizenship Supplements.

The disclosure of this information reinforces our credibility and makes it possible to improve our relationship with various stakeholders, such as employees, communities, shareholders, the government, investors, customers, and regulatory bodies, among others, while also allowing greater predictability for the market and the supply chain.

### **Innovation**

Aiming to promote increasingly safe, efficient, and sustainable operations, new technologies have been adopted in the execution of decommissioning projects. Thus, in 2023, the emerged riser cut is a new, safer, and more efficient way of carrying out disconnection activities from these structures, with operations that minimize the use of divers.

In the decommissioning activity of offshore wells, we consolidate actions to optimize interventions, mitigating the need for additional resources and reducing the time to execute operations, whether by carrying out interventions in groups of wells and reducing operational steps, or by implementing pioneering technologies in Brazilian frontiers, made viable in 2023 and consolidated in 2024, such as the use of new (more efficient) materials for definitive plugging of wells and the use of a solution that allows the use of dynamic positioning rigs at shallower depths, avoiding the use of anchored rigs that generate more impacts on the seabed.

We are also invest in research and development projects aimed at increasing the sustainability of our decommissioning projects, through the application or development of studies, technologies

or methodologies that act on the main environmental aspects associated with decommissioning activities in order to reduce risks, prevent or mitigate negative impacts and enhance positive impacts.

### **Social and Economic**

The PDIs present information regarding the company's social responsibility management system, including social diagnosis; social responsibility plan (with measures to mitigate identified risks) and initiatives supported under the Petrobras Socio-environmental Program. The adoption of these actions supports the entire asset lifecycle, demonstrating our commitment to carrying out decommissioning activities safely. The social risks of decommissioning projects are evaluated, and mitigating measures are implemented, according to the internal standard Manage Social Risks throughout the Business Life Cycle. In 2023, social responsibility reports were prepared for 12 facilities in the decommissioning process, in line with the best practices of the oil industry.

We have also started to include a social responsibility clause or annex in contracts associated with services aimed at decommissioning projects.



Regarding workers of decommissioned assets, information on the minimum notice period for operational changes and programs for improving employees' skills and assistance for career transition can be found in the chapter **Labor practices and equal opportunities**.

### ***New sustainable destination policy for floating platforms***

We are actively following, at a global level, discussions on platform dismantling and recycling, aiming at bringing the best environmental practices and market engagement to the Brazilian scenario, to sustainably execute platform decommissioning projects .

Among the main changes achieved in recent years, a major highlight is the adoption of a new sustainable destination model for our own floating platforms, whose implementation began in 2023.

The new guidelines minimize risks of violation of human and environmental rights, as they incorporate, among others, the following requirements, and assumptions into the process:

- if recycling takes place in international shipyards, they must meet the requirements of resolution n. 1257/2013 of the European Union Ship Recycling;

- if recycling takes place in national shipyards, they must present specific licenses and authorizations for recycling activities and management of residues and waste arising from the process, in addition to proof of compliance with applicable legislation, rules and regulations regarding the environment, safety and worker health, including subcontractor management;
- obligation to carry out recycling in shipyards equipped with technological solutions that guarantee the containment of contaminants resulting from dismantling activities, preventing their release into the environment;
- implementation of actions to minimize waste generation, prevent impacts on biodiversity, in addition to reusing equipment and materials and promoting the circular economy;
- prior identification of hazardous materials and waste existing on the vessel, through inventories prepared by the company, in order to guarantee the adequate preparation of a recycling plan by the shipyard;
- approval of the shipyard recycling plan by the company; and
- monitoring of recycling activities.

The new model considerably expands our level of monitoring of these recycling activities, reinforcing the

guarantees that they occur in line with the best ESG practices in the global industry.

The adoption of the new policy generates numerous opportunities for new investments and the development of the circular economy with a multiplier effect for the economy and the country, as it allows for the redefinition of the structures involved, significantly expanding the socioeconomic benefits associated with this phase end of the production cycle of the oil and gas segment.

In addition to the steel industry, which directly benefits from all the metal scrap resulting from the process, opportunities for several other segments are also opening up. Companies that demand other materials that result from dismantling, companies that operate in the waste management chain, companies that operate in cargo transport, academia and companies that develop technologies that will be incorporated into production and operational processes, in addition to the naval industry itself, just to name a few industries, will also be positively affected by this process.



With this model, we were internationally recognized for our progress in sustainable recycling policies for end-of-life vessels by the non-governmental organization (NGO) Shipbreaking Platform, which annually lists and evaluates the conduct of companies around the world. Currently, we are highlighted as a benchmark for best practices for the disposal of decommissioned platforms.

The new guidelines are in addition to other initiatives adopted by us aimed at minimizing risks and adverse impacts and maximizing the positive impacts resulting from decommissioning activities, reinforcing our commitments to sustainability, promoting social development and a fair energy transition.

### **Project Execution**

In 2023 we abandoned 26 offshore wells, including temporary and permanent abandonments, disconnected 67 risers and the collection of approximately 1,100 km of flexible lines.

We also concluded in 2023, the first two tenders for the sale of platforms following the new model of sustainable destination of vessels, the P-32 in July, and the P-33 in November, both units in the Campos Basin. The two tenders were directed exclusively for

the national market and the winning company was GERDAU S.A., in partnership with the ECOVIX shipyard.

The option for the national sale of these two units aimed to contribute to the strengthening and qualification of the domestic market to operate in the decommissioning segment and boost the circular economy, incorporating the best international sustainability practices and promoting the country's socioeconomic development.

The P-32 was undocked in November 2023, when it went to the shipyard to begin the recycling process. The platform's recycling plan, elaborated by Gerdau-Ecovix, was approved by Petrobras, and covers everything from the first procedures for receiving the unit, through the dismantling work, which will take place in a dry dock, to the final disposal of the waste resulting from dismantling. The execution of the plan will be monitored by us to ensure compliance with safety, environmental, occupational health, and social responsibility practices in a sustainable manner, throughout the entire recycling process.

In relation to P-33, the forecast is that recycling of the unit, also in dry dock, will begin in 2024, at the Rio Grande shipyard. Until then, the unit, which left the

location in February 2024, will be temporarily docked at Porto do Açú.

The contracting of temporary berthing services and facilities to serve floating units undergoing decommissioning is another example of an initiative adopted in 2023 whose main objectives are to mitigate environmental, operational and occupational risks, as well as allow the reduction of costs for the company, since it shortens the time spent by floating platforms at the offshore location, until the subsequent definition of their final destination – facility where dismantling and recycling will take place.



In fact, by contracting these services we increase the efficiency of projects by reducing costs associated with decommissioning, at the same time as we make them safer from an environmental, occupational, and operational perspective.

We highlight that eventually some structures in the subsea system may have as the alternative approved by regulatory bodies for their decommissioning to remain on the seabed. This possibility is provided for in the legislation in force and is accepted when justified through studies that indicate this alternative as the one that best balances the various factors considered.

In our decommissioning projects, there are, therefore, cases of structures that, with the approval of regulatory bodies, were maintained on the seabed, after being properly cleaned and conditioned, in such a way that they do not imply risks or adverse impacts to the environment, safety navigation or the socio-economics of the region.

In 2023, we received approval from regulatory bodies for maintenance on the seabed of rigid pipelines associated with the decommissioning program of platforms P-32, P-26, P-35, and P-37, all in the Marlim field, in the Campos Basin.

Over the next five years, we plan to decommission 23 platforms, 550 offshore wells and approximately 1,900 km of risers and flowlines, and we want to become a global benchmark for this activity, focusing on sustainability, safety and care for people and the environment. After 2028, other 40 systems will be decommissioned.

Considering that, in general, more than 90% of the total weight of an FPSO (floating oil production, storage and offloading unit), as is the case of P-32 and P-33, is made up of metals and that these metals will be reused in national steel mills, the adoption of the green recycling policy contributes to the circularity of the economy, the reduction of environmental impacts due to the extraction of ore minerals and to the reduction of national GHG emissions, since the processing of metal scrap emits less GHG than the processing of iron ore, in addition to having a positive impact on the generation of an ecosystem for reusing materials and equipment and promoting the creation of jobs and a new national market for vessel recycling.

## **ONSHORE DECOMMISSIONING PROCESSES**

As with offshore decommissioning activities, the abandonment of assets located on land is subject to the same corporate system, obeying the same criteria to ensure the execution of the best alternative to the dismantling of onshore facilities.

In the case of onshore assets, the process involves several stages such as inspections, cleaning and decommissioning of pipelines, permanent plugging of wells, razing and environmental recovery of locations with authorization from regulatory bodies and in accordance with applicable legal requirements.

Analogously to offshore assets, we submit all our decommissioning projects to the ANP, however, the environmental licensing for decommissioning projects in onshore environments must be authorized by state environmental agencies, linked to the State Environmental Offices.

In 2023, we decommissioned onshore wells in several concessions, 13 of which were permanently abandoned and 14 were definitively plugged.



# ACCIDENT PREVENTION AND MANAGEMENT

[11.8.1] [11.8.2]

Accident prevention and management correspond to the set of strategies, plans and management practices adopted by the company to promote safe operation of assets and logistical activities and maintenance of the readiness of emergency response systems to mitigate impacts on human life and the environment, infrastructure, and reputation. It includes the ability to perform integrated work with public authorities, partners, the community, and other actors in emergency situations, such as, for example, response actions for offshore spills to prevent touching the coast and in sensitive areas. It also covers corporate security risks arising from acts of intentional interference by third parties in pipelines and nearby areas, especially clandestine oil and products tapping.

In our activities we produce and move large volumes of oil and oil products, therefore, proper management of processes and activities is essential to prevent loss of containment and spills that may result in impacts to the environment and people and are therefore included in the principles of Petrobras' Health, Safety

and Environment (HSE) Policy

Hence, we constantly seek to improve the integrity and reliability of our facilities and improve our processes, with our ambition being to achieve Zero Fatalities and Leaks, as disclosed in our 2024-2028+ Strategic Plan.

Among the main initiatives for accident prevention we can highlight:

- The Mar Azul Program: aims to manage actions to prevent losses of containment in offshore production E&P operation activities, including the incorporation of lessons learned from past events;
- Dynamic Management of Process Safety Barriers Project: a technological solution aimed at monitoring the situation of process safety barriers in an integrated, dynamic, and real-time manner, helping decision-making based on risk analysis.

In addition to these initiatives, we have an integrated response structure to respond to emergencies,

enabling fast and effective actions to be taken to mitigate accidental events. Each occurrence is recorded and treated according to our corporate HSE Anomaly Management standard, including carrying out investigations, treatment, and scope actions to prevent the occurrence of new events.

The corporate contingency plan provides the structure and information for providing additional resources to the Emergency Response Plans (PRE) of the units, in Brazil and abroad. These additional resources are distributed in the Environmental Defense Centers (CDAs) and in advanced bases, located throughout Brazil, in addition to Transpetro's Emergency Response Centers. The spill response plans are structured at the local, regional, and corporate levels.





In addition to the structure of the CDA System, we are members of Oil Spill Response Limited (OSRL), a specialized oil spill emergency response institution that provides support with resources for complementary action in case there is a need for a national or international response (Tier 3) with use of capping, aircraft for the application of chemical dispersants for the control of the source control in subsea well blowout scenarios. We are also members of ARPEL (Association of Oil, Gas and Renewable Energy Companies in Latin America and the Caribbean), aiming to improve our internal processes and share technical knowledge with other operators and regulators in Latin America.

Through our research center (Cenpes), we maintain permanent research in the field of application of chemical dispersants, environmental monitoring, environmental impact assessment, ecotoxicity, modeling and characterization of oil behavior at sea.

Additionally, the contingency equipment park is being continuously updated with the incorporation of more efficient devices, both for onshore and coastal use, as well as for offshore use. Finally, international partnerships were signed in order to allow access to cutting edge equipment and resources.

## **OIL AND OIL PRODUCTS SPILLS**

We invest in the continuous improvement of the integrity and reliability of facilities, the improvement of our processes, and operational practices. In 2023, a volume of 16.9 m<sup>3</sup> relating to seven oil and oil product spills above one barrel (0.159 m<sup>3</sup>) was recorded a value below the alert limit of 120 m<sup>3</sup>. Out of the total volume spilled, 9.1 m<sup>3</sup> occurred in the soil, with 7.7 m<sup>3</sup> recovered. The remaining volume spilled in the terrestrial environment (1.4 m<sup>3</sup>) resulted from a pipeline spill, in which, due to the small volume spilled, it was not possible to collect it. Appropriate emergency response measures were adopted, with the launch of barriers in adjacent riverstreams and removal and treatment of the affected soil. The rest of the spills occurred in a marine environment, making it not possible to recover the oil, as the volumes, types of oil and environmental conditions made recovery by vessel unfeasible, and the stains were monitored with eventual mechanical dispersion when activating the PRE. There was no impact on marine sensitive areas or unusual sensitive areas.

Among the events recorded, we note the spill into the land environment of 7.7 m<sup>3</sup> of oil, which occurred in June 2023, in Campo de Araçás, in Bahia, and the spill into the marine environment of 3.3 m<sup>3</sup> of diesel

in the NS-43 Rig, in the Roncador Field, together corresponding to 65% of the total spills above one barrel (0.159 m<sup>3</sup>) recorded in 2023.

The spill in the Araçás Field was due to an integrity failure in a pipeline. As initial response measures, the planned communication flow was activated, with the pumping stopped at the facility with subsequent containment and cleaning, with subsequent removal of the contaminated soil and directing it for treatment.

The event recorded on NS-43 was due to a failure in the diesel circulation system during drilling activity, being identified in an subsea area. After the identification of the event, the emergency plan was activated, and equipment isolation operations were carried out by closing valves. Oil recovery vessels were engaged and overflights with surveillance aircraft were carried out, with no features being identified on the sea surface.



## Response measures taken in cases of significant spills

In the case of occurrences at sea, the actions generally follow the activation of the Emergency Plan for Oil Spills (PEVO) of the respective units, and the Organizational Response Structure (EOR) is called to coordinate the actions.

Among the global actions, we highlight the identification and blocking of the spill source, mobilization of Oil Spill Response Vessels (OSRV), for assessment and assistance with the mechanical dispersion and/or containment, collection of the spilled oil, and the sending of aircrafts to do a flyover diagnosis, providing guidance for vessels deployed for mitigation.

For onshore events, similarly, the Emergency Plans are also activated and the EOR is established (at the same time in which operational maneuvers are carried out to interrupt the spill source). As part of the actions, the emergency response, property security, and cleaning teams are activated, as well as equipment to collect the spilled oil.

Subsequently, it is our practice to carry out coverage based on the recommendations resulting from the

accident investigation in order to act preventively in other units where there are similarities in processes or equipment that are associated with the root cause of the accident, promoting process improvement, and raising the level of operational safety.

The Mar Azul Program, which was incorporated into the Commitment to Life Program, continued to cover lessons learned from events that took place since 2020, improving the integrity of protection barriers, routine processes and activities at offshore production facilities, acting through of an active and continuous management in search of improvement opportunities.

We adopt health and safety practices that, in addition to ensuring the readiness of our contingency bases, also seek safe and efficient emergency responses, with the activity of expert professionals.

Our subsidiary Transpetro also has computerized systems for monitoring the integrity of the asset it operates. The software helps teams to implement maintenance techniques to prevent the loss of primary containment, mitigating the risk of accidental spillage of transported products to the environment.

The spill prevention strategy adopted by Transpetro considers:

- a) inspection, maintenance, and service activities for the integrity of equipment, pipeline systems and pipeline tracks;
- b) compliance with operating procedures, training of operators and control of process variables;
- c) communication and relationship activities with communities close to the pipelines.



d) use of a voyage management system for ships, aimed at efficiency in terms of fuel consumption and emissions reduction; and

e) implementation of pilot projects to reduce the fuel consumption of ships.

As for the conduct adopted by our subsidiary Petrobras Biocombustível (PBio), in cases of spills, PREs, specific to each operational unit, are executed. As part of the emergency actions, priority is given to operational maneuvers to identify and interrupt the spill source, delimit, and isolate the affected area, and clean and remove the spilled product, with coordinated action by contingency teams considering the nature of the spilled product, its characteristics and potential risks to human health and the environment.

Furthermore, depending on the magnitude of the event, the mobilization of the EOR may occur, whose systematics defines the organization and integrated coordination of response actions and mobilization of resources for more complex emergencies. Through the EOR, several functions and responsibilities relating to decision-making, communication actions, logistics, security, and operations, which act synergistically in managing the occurrence, are defined. The EOR

may vary according to the nature and severity of the emergency, and may involve different levels of management, from the actions of the local team to the involvement of other Petrobras System units, regulatory bodies, and government authorities.

In addition to emergency actions, PBio's integrated HSE management system uses several systems that prioritize safeguarding operations and preventing accidents. These standards range from planning and carrying out emergency drills to evaluating the management of changes that may imply new operational risks. Through the anomaly management process, the company guarantees the proper recording, classification, and due diligence of corrective actions applicable to occurrences, its own and those of other companies in the same segment of activity, thus managing to generate lessons learned and effective corrective measures. In turn, these learnings provide critical information about the immediate, primary, and organizational causes of accidents and are examined and shared systematically between the units of the Petrobras System with the aim of avoiding recurrences of the same type.

Finally, the information and data on the accidents that occurred are computed and analyzed using management indicators that are monitored periodically

by the subsidiary's senior management. This data is presented to the controlling company on a monthly basis through committees and forums provided for in our corporate governance system.

## **THE USE OF TECHNOLOGY IN OPERATIONS SECURITY**

The development of safer technologies and the application of HSE requirements in investment projects are extremely important for our performance. We have accident rates that are a benchmark in the oil and gas industry, and even so, we challenge ourselves to further improve the safety of our employees.

Throughout 2023, the Safety Innovation Lab, located at Cenpes, developed technological innovations focused on products that contributed to our ambition to zero fatalities and other HSE impacts. The laboratory seeks to implement solutions that are developed and tested quickly, in controlled and representative environments, to prevent and mitigate risks through active monitoring of workers and the workspace. To achieve this, we apply technologies such as wearable devices, intelligent video analytics, robotics and drones aiming to reduce human exposure to risk.



The main deliverables include:

- Medium-scale pilot testing of wearable geolocation and biomedical monitoring devices for occupational health and safety;
- Testing the application of a submerged heat source to neutralize biofouling, for the first time in the industry;
- Proof of concept and implementation of an anti-collision sensing system for interaction between people and large machines; and
- First implementation of the gas sensor system for use in confined spaces with IoT technology in industrial units.

Still in 2023, we became the first oil and gas company among the largest companies in the world to completely replace deep-sea diving, considered the second most dangerous profession in the world by the International Labour Organization (ILO), with the use of underwater robots.

The actions developed throughout the year contributed to the safety and health of workers.

## **MANAGEMENT OF HUMAN FACTORS IN PROCESS SAFETY**

We have a broad HSE initiative aimed at highlighting the importance of human factors in building a mature safety culture. Among these initiatives, we developed the five principles of human factors. These principles were elaborated and incorporated in the revision of the HSE Policy and HSE Guidelines to facilitate the understanding and to standardize the following concepts:

- Trust is fundamental;
- People create safety;
- How we respond to failure matters a great deal;
- Learning and improving is key to success; and
- Context guides behavior.

Furthermore, a Human Factors Management Committee which periodically meets with the participation of the HSE general managers, safety managers and experts on the subject, which monitors the communication plan to support the construction of the human factors journey, was created.

Professionals are being trained at the graduate level in human factors, and proactive indicators for safety

management are being developed. It is expected that these actions will contribute to improving learning from accidents and improving the culture of learning from successful operations, changing our culture of learning from what 'went wrong' to learning from what 'works'.

## **ASSET INTEGRITY MANAGEMENT**

In the asset operating phase, integrity management involves the continuous monitoring and evaluation of assets, be they platforms, refineries, thermoelectric plants, or gas processing assets, to ensure that they remain adequate for their purpose. Integrity management reduces the possibility of occurrences with negative consequences that adversely impact the safety of people, facilities, and the environment; and therefore, impact asset productivity. Inspections are carried out in order to detect possible failures and do preventive or corrective maintenance. Thereto, we make a note of the he turnarounds.

At defined intervals, according to the characteristics of the assets, there are turnarounds. These events presuppose a thorough plan for the scope and necessary contracting to execute the services, which aim to guarantee the integrity of the assets, ensuring a high level of reliability during the campaign term.

In 2023, we made 57 turnarounds at thermoelectric assets, 148 at natural gas assets, and 80 at refining assets. At PBio, four total turnarounds were carried out at the biodiesel plants and ten partial ones.

Furthermore, in our exploration and production assets, we carried out 27 scheduled turnarounds on platforms. In 2024, we plan to carry out 38 full turnarounds on platforms, 65 thermoelectric plants, 287 natural gas assets, 58 refining assets, and 127 at Petrobras Biocombustível, of which 21 are partial and six are full shutdowns.

Our commitments to life, the environment and operational safety have always been present in our activities carried out in 2023.

Our HSE practices are based on the Corporate HSE Guidelines, in line with the Operational Safety Management System (SGSO), which consists of a set of practices prepared by the National Agency of Petroleum, Natural Gas and Biofuels (ANP) for the segments under its responsibility and which deals with guaranteeing the operational safety of industrial facilities.



Information about our 15 HSE Guidelines can be found on our [website](#).

## COMBATING CLANDESTINE TAPPING

Our integration with Transpetro was further reinforced in actions to combat the theft of fuel in pipelines, also known as clandestine tapping.

Aiming at greater effectiveness in the fight against clandestine tapping, we strengthened ties with the communities neighboring the pipeline ranges with the expansion of social and awareness projects. We also invested in the improvement of technological solutions and strengthened relationships with public safety bodies.

These actions enabled a drop from 58 occurrences recorded in 2022 to 28 occurrences of clandestine tapping in 2023, what represents a 52% reduction. When comparing this to the historical high in 2018 when 261 occurrences were recorded, we have a 89% reduction in fuel theft.

There was a reduction in the number of occurrences in urban areas, what, consequently, minimizes the risks

for the population close to the pipelines.

In 2023, we intensified activities aimed at communities. Different topics - such as pipeline integrity and preservation of the pipeline - were discussed in meetings, lectures, drills, and visits. The promotion of telephone number 168, a communication channel for communities and other audiences with the company, was intensified, which was improved and included improved service and auditing of calls.

Throughout 2023, Transpetro expanded its operations with communities, seeking to resolve conflicts in a collaborative and participatory way. As an example, we can mention the action carried out in the Indigenous villages of Cajuhiri Atravessado, in Coari (AM), where our pipelines pass.

We develop initiatives to promote environmental compensation programs with traditional communities on the coast of São Paulo and in the RJMG Pipeline Strip, in addition to collaborative research and studies to develop integrated solutions for communities neighboring the company's facilities and operations.

## PROCESS SAFETY

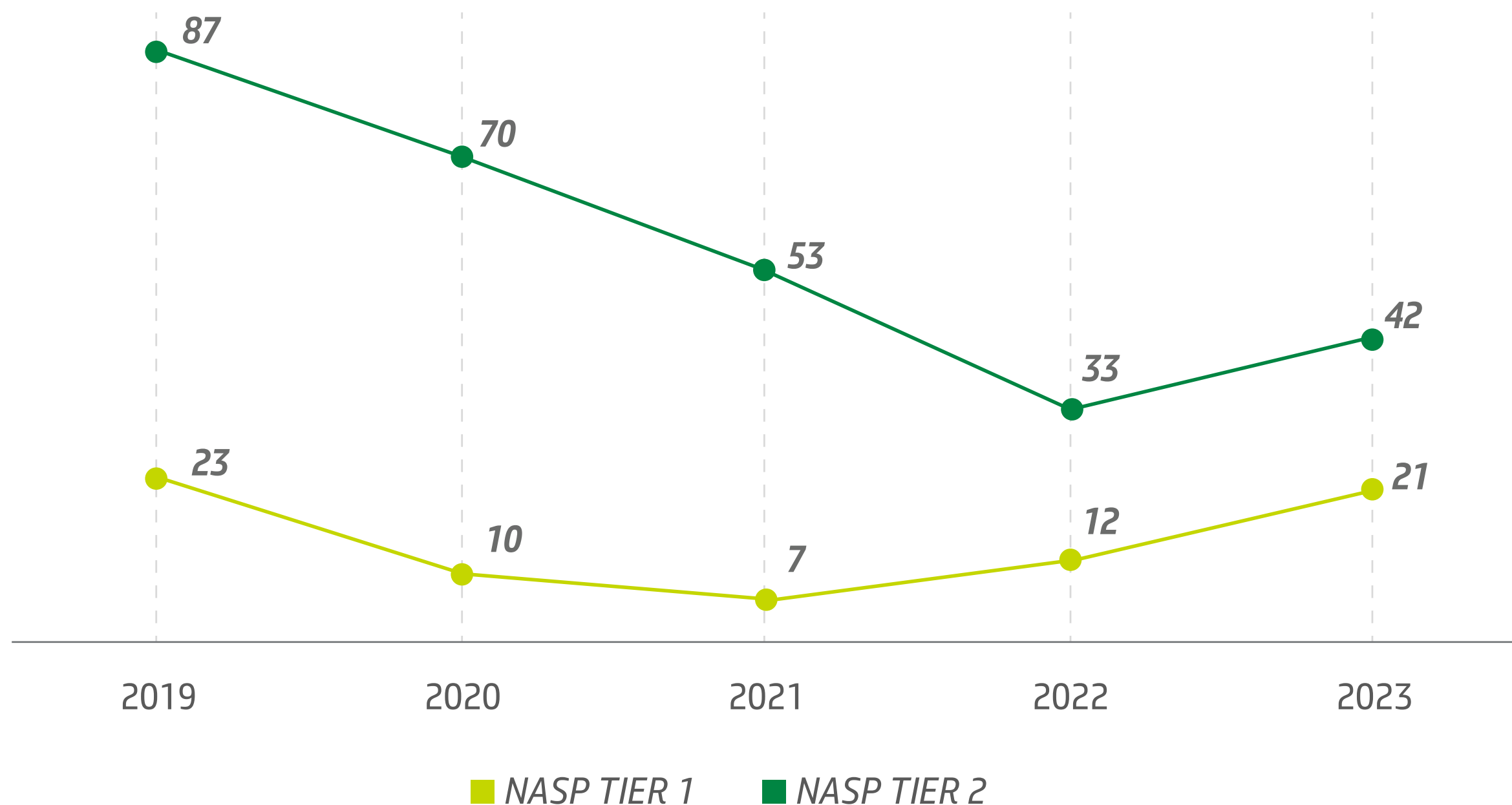
We monitor our Process Safety performance by means of indicators established in accordance with the best practices in the industry, which allows us to monitor our performance against that of our peers.

Thereto, we track the Number of Process Safety Anomalies (NASP) and the Process Safety Anomaly Rate (TASP). These indicators record the occurrence of process safety accidents, which are events characterized by primary containment losses, with unplanned or uncontrolled releases of hazardous products or energy in processing facilities. Process safety accidents have the potential to cause environmental impacts, damage to facilities and to human health.

The most serious process safety accidents are classified as Tier 1, while those of lesser severity are classified as Tier 2. These indicators follow the recommendations of the API Standard RP 754 – Process Safety Performance Indicators for the Refining and Petrochemical Industries and the publication IOGP RP 456 – Process safety – Recommended Practice on Key Performance Indicators.

In 2023, we recorded 21 Tier 1 process safety accidents and 40 Tier 2 accidents. It is worth mentioning that, in the same year, our subsidiary Transpetro recorded two Tier 2 accidents and no Tier 1 accidents.

## EVOLUTION OF NASP TIER 1 AND NASP TIER 2 INDICATORS<sup>1</sup> (consolidated)



In addition to the Tier 1 and Tier 2 indicators, considered reactive or lagging indicators aimed at monitoring the occurrence of primary containment loss events, we continue to direct efforts towards the improvement and monitoring of Tier 3 and Tier 4 leading indicators, a set of preventive or anticipatory metrics.

In addition to Tier 1 and Tier 2 indicators, considered lagging indicators aimed to monitoring of the occurrence of primary containment loss events, we continue to make efforts for the improvement and monitoring of Tier 3 e Tier 4 indicators (leading indicators), a set of metrics with a preventative or anticipatory character.

<sup>1</sup>The data includes Petrobras S.A., Transpetro, TermoMacaé and TermoBahia.



Within this context, with regard to the monitoring of process safety systems, it is worth highlighting the efforts to implement, within the scope of the Commitment to Life Program, technology that will enable the dynamic management of the integrity and availability of the barriers to protect against larger process accidents in our industrial facilities. This initiative progressed, totaling 32 process units with the system implemented.

This application was integrated with the company's various risk management systems, providing real-time insights for effective decision-making focused on risk management. The synergy achieved through Dynamic Barrier Management not only improves the efficiency of risk management processes, but also ensures a more coherent and effective response to potential challenges.

In a significant move to reinforce our commitment to process safety, we have introduced a new Process Safety Engineering role in 2022. More than 90 employees have already been recruited, increasing the workforce dedicated to process safety.

These professionals undergo a six-month training program designed to equip them with a diverse set

of skills and knowledge relevant to our operations. Taught by our experienced consultants in the field, the curriculum covers a wide range of process safety subjects. Hands-on training components are integrated to provide hands-on experience in applying theoretical knowledge to real-world scenarios. This training program is not just a routine onboarding process but is elevated to the status of a postgraduate qualification. We recognize the importance of investing in the ongoing education and development of our workforce, especially in areas as critical as process safety.

### **Emergency Preparedness and Response**

Our HSE management defines, in Guideline 11 - Contingency, that emergency situations must be foreseen and be dealt with quickly and effectively, seeking maximum reduction of their effects. Therefore, contingency management provides for the assessment of accidental scenarios; the available resources and technologies; the social, environmental, and economic impacts of emergency situations; training and drills; as well as the involvement of relevant audiences such as



Information on the dynamic management of protective barriers and the Fundamentals of Process Safety can be found in the chapter on **Safety, Health, and Well-being**.

neighboring communities.

We developed a process standard for working with communities in emergency situations, which establishes guidelines, requirements and procedures related to the prevention, mitigation, preparation, response, and recovery of emergencies with communities potentially exposed to accidents resulting from activities carried out by our business units.

The actions provided for in this standard are in line with the National Civil Defense and Protection Policy, defined by law 12,608, of April 10, 2012, which establishes the roles and responsibilities of the Federal Government, states, and municipalities, indicating that companies and other social entities should support the civil defense and protection agencies. These actions are also in line with our Social Responsibility Policy, Corporate Health, Safety and the Environment Policy and Guidelines, Communication Policy, and Crisis Management Guide.

Every year, our local social responsibility plans provide for actions aimed at reinforcing the culture of risk prevention within our communities and guiding them on safety procedures in the event of an emergency, whether through awareness-raising



actions such as lectures and visits to our facilities, or through emergency drills involving this public. In this line of action, in November 2023, we held an emergency awareness workshop with the presence of representatives from 14 schools around the Abreu e Lima Refinery (RNEST) visiting the refinery. Another important action was the drill exercise at the Ibirité Dam and the Gabriel Passos Refinery (REGAP) in August 2023. The fictitious scenario of raising the dam's emergency level to two generated the need to evacuate residents close to the dam and all people inside the refinery. The sirens covering the Self-Rescue Zone (ZAS) were activated and, in partnership with the municipal Civil Defenses and the municipalities of Ibirité, Betim and Sarzedo, the surrounding population was advised to move to the nearest meeting point, along escape routes, as mapped out in the Emergency Plan. In the diagnosis carried out for the drill, 93 people were mapped in the risk area, 66 residents and 27 workers from 25 residences and three neighboring companies. The exercise was widely publicized to the community through banners, visits, folders, a sound car, and an orientation seminar before the event.

We have integrated contingency management between different organizational levels. We have emergency

response plans at local, regional, and national levels. At the operational level, each facility has an Emergency Response Plan, which identifies the scenarios and measures to be adopted by the response teams in order to control the event and mitigate the resulting impacts. This plan is exercised and continuously improved through a robust training program and simulation exercises.

When incidents are larger, local resources are complemented by specialized corporate structures, promoting a broad expansion of the response capacity, and allowing the integrated action of different areas of the company. Whenever there are partners, they are notified and integrated into the Organizational Response Structure to monitor contingency actions.





# **CARING FOR PEOPLE**

# LOCAL AND TRADITIONAL COMMUNITIES

[11.15.1] [11.15.2] [11.15.3][11.15.4][11.16.1] [11.17.1] [11.17.2] [11.17.3] [11.18.1][11.18.2]

This material topic is associated with economic and social development around our operations. It reflects negative impacts on the community both in operations and in the investment and divestment process, general social disruptions, and risk of human rights violations in the community, including those caused by the supply chain and security forces. Includes direct and indirect impacts such as: production of noise, odor, soot, demographic increase, increased influx of workers and vehicle traffic, increased cost of living and impacts on Indigenous peoples and traditional communities, such as fishing communities, due to restriction zones, seismic surveys, and support vessel traffic, as well as those resulting from spills. It also covers the systematization of the human rights due diligence process and issues related to the right to land in resettlement processes and respect for the communities' right to natural resources when installing new ventures and in operations. It

also covers positive impacts such as security and protection for local communities through dialogue between communities and public security forces.

## ENGAGEMENT WITH THE LOCAL COMMUNITY

Our engagement with local communities occurs through public hearings and social communication programs, established throughout the environmental licensing processes and through our community relations process.

As part of the environmental licensing process for new developments, the environmental agency requests social participation in a consultative manner with a view to analyzing the issue of the license. Social participation takes place through public hearings that we hold with the participation of several bodies and communities within the areas of influence of the enterprise or activity.

In these meetings, based on the disclosure of the environmental study, all sectors of society can express their doubts and, mainly, make proposals to be incorporated into the environmental licensing process, in order to mitigate and compensate for negative impacts and maximize positive ones.

In 2023 we had six public hearings held, as shown below:

## AGENDA

*Environmental Impact Study  
- EIA and respective  
Environmental Impact Report  
- RIMA, of the Oil and Natural  
Gas Production and Flow  
Activity in the Pre-salt Pole of  
the Santos Basin*

 **04/26/2023**  
ANGRA DOS REIS - RJ

 **05/09/2023**  
NITERÓI - RJ

 **05/11/2023**  
MARICÁ - RJ

 **05/17/2023**  
SANTOS

 **05/30/2023**  
CARAGUATATUBA

 **06/01/2023**  
ILHABELA



**RJ**



**SP**

Throughout the life cycle of the licensed enterprise, society's participation continues through the conditions of environmental licenses.

Among the conditions, the Environmental Education Programs (PEA), which are aimed at communities in the area of influence and are based on critical, dialogical, and emancipatory training stand out, as well as the Social Communication Programs (PCS), which maintain communication channels (Call Center, Free toll Channel and online information portals) that provide information on operational activities, social and environmental projects developed.

Community relationship is developed continuously in communities located within the coverage area of our operational units and are guided by a corporate standard that establishes methodology and recommends specific community relationship actions, which are included in periodically reviewed and monitored local social responsibility plans. One of the main actions established in the community relationship plans are the community committees, present in 14 business units.

The community committees allow active listening to



the demands of local communities. An example of this listening process took place in the municipality of Maricá-RJ, where we identified, together with the Indigenous community of the Guarani Mbya ethnic group, in the Mata Verde Bonita and Céu Azul villages, the need for legal guidance to regularize documents and demands with the civil and family courts. In this context, in partnership with the Public Defender's Office, we organized a joint effort with our Pro-Bono Legal project which, in september 2023, carried out 52 services aimed at guaranteeing the rights of this population.

Another example was the coordinated response to requests related to employment opportunities. In this theme, we highlight our work in the Units in Bahia and Espírito Santo, where there were roadblocks and disruptions organized by the community requesting job opportunities for local labor. As we can only hire direct employees through selection processes, we take these demands to our suppliers, through the dissemination of our Social Responsibility Policy and our Human Rights Guidelines, which encourage the promotion of the hiring of qualified workers from our area of coverage. Mediation resulted in an improvement in our relationship with our suppliers and a better relationship with the communities around us.

We currently have 157 assets in construction or operation. Of this total, 98% (154 active) had some type of consultation with communities. Among the projects under development, we have 30 projects being implemented, of which 93% (28 projects) had their Environmental Impact Reports, for purposes of public hearings, made available by IBAMA, at state environmental agencies and/or Petrobras website, in addition to having been distributed in the places indicated by environmental agencies, such as city halls, Public Prosecution Office, Conservation Units, depending on the phase of the licensing process.

### **ASSESSMENT OF SOCIAL AND ENVIRONMENTAL RISKS AND IMPACTS**

Our operations can bring risks (potential impacts), mainly to artisanal fishing and tourism in the event of a spill accident related to offshore oil and gas exploration activities; injuries in the event of accidents during operational activities; disruptions due to the migration of labor in large investment projects or major turnarounds.

In terms of real impacts, the following stand out: the fishing exclusion area defined by the Navy around platforms in offshore oil and gas exploration activities; disturbances resulting from noise, vibration, high

flare, or particulate emissions in refining activities; the pressure on traffic in general when moving people and cargo; and the unmet expectation of job and income generation.

To prevent and mitigate the risks and negative impacts of our activities and to enhance the positive impacts on local communities, we develop environmental licensing processes, community relationship actions and social and environmental risk management throughout the business life cycle.

#### **Environmental licensing**

Environmental licensing is a legal obligation, in which we strictly follow all the guidelines and rules for its execution, such as Federal Law 6,938/81, Complementary Law no. 140/2011 and CONAMA Resolutions nº 001/86 and no 237/97.

The environmental licensing process includes an analysis of the potential socioeconomic impacts in the region, considering the survey of all aspects of the activities and their respective impacts, according to the environmental impact studies and regulations in force. For those impacts identified as negative, mitigation, monitoring or compensation measures are developed



and implemented, while for positive impacts, actions are defined to enhance them.

The assessment of impacts is carried out by project, or set of projects, and the starting point is the identification of the activities inherent to each phase (Design, Installation, Operation and Decommissioning), characterizing the socioeconomic environment, qualifying the environmental risk, and proposing respective monitoring, mitigation, or compensation measures. In 2023, the total we invested in projects to mitigate/compensate socioeconomic impacts was BRL135 million and the amount invested in environmental monitoring in licensing processes was BRL431 million.

### **Management of social and environmental risks**

In addition to the legal obligations of the environmental licensing process, we develop social and environmental risk management processes throughout the life cycle of our businesses. The main purpose of managing social and environmental risks is to prevent negative impacts resulting from the interaction between our activities, society, and the environment. Risk analyses are carried out at all stages of the business life cycle.

Establishing the context is the initial step that supports the entire risk management process. This step is carried out through the socioeconomic diagnosis, which consists of a translation of the reality experienced by a population in a given geographic space. In 2023, we signed a contract to review the socioeconomic diagnosis, to collect and analyze primary and secondary data from more than 730 communities and 136 municipalities surrounding all of our operational units, including interviews with social actors and participatory discussions with several communities, with the purpose of identifying local vulnerabilities and potentials, systematizing information for analysis and treatment of social risks and impacts on Human Rights. This socioeconomic diagnosis will begin in the areas surrounding the Abreu e Lima Refinery (RNEST), Equatorial Margin, UN-ES, UTGC, UTG Sul and GASLUB.

An example of social risk management in operations occurred during the general turnaround at the Gabriel Passos Refinery – REGAP, in the second half of 2023, with the participation of more than 3,000 people at the peak of the work. To prevent situations of disrespect for human rights, work was carried out to survey social risks within the scope of the turnaround activities,

under the coordination of Social Responsibility and the involvement of other strategic areas at REGAP. Based on the identified risks, we prepared an action plan aiming to carry out prevention activities covering our own and outsourced employees, addressing topics related to discrimination and harassment, sexual exploitation of children and adolescents and degrading working environment conditions.

We also carry out assessments and due diligence in investment projects, divestments, acquisition, and decommissioning, taking into account social responsibility and HSE aspects, among others.

In 2023, 17 investment projects were submitted to Social Responsibility and HSE evaluation for the phase change, contemplating 100% of non-operated Joint Ventures (JVs), in the project phase, with Petrobras' working interest (WI) above USD 300 million for projects in the E&P segment and over USD 25 million for projects in the refining segment. In the case of JVs not operated by Petrobras in the operational phase, 100% of HSE and social responsibility assessments are carried out, as provided for in their respective Joint Operation Agreement contracts.



## **Local Social Responsibility (RS) and Community Relations Plans**

Local Social Responsibility and Community Relations plans aim to offer answers to the Business Units' community issues, such as: inappropriate use of land pipelines by community members, inconvenience caused by possible emissions and turnarounds involving a significant number of workers. The plans are carried out annually and the process also provides for periodic reviews and updates. The actions foreseen in the plans seek to respond to the social risks identified in the socioeconomic diagnosis and increase the level of engagement of communities with us, seeking to maintain a permanent communication line and expand community participation in the planning of actions.

In 2023, 25 local plans were executed that cover 100% of the refining and E&P units, with the plan for the Búzios and Mero units being separated into two and we added the realization of the local plan for the Equatorial Margin.

All planned actions are monitored by a management system that monitors the percentages planned and carried out, in addition to allowing the insertion of

evidence. Periodically, management meetings are also held with the head of the unit to report on the progress of activities and outline strategies for correcting deviations, if necessary. With these practices, we guarantee the execution of 97% of the activities planned for the year, surpassing the target established by management by three percentage points.

Our plans also provide for actions aimed at reinforcing the culture of risk prevention within our communities and guiding them on safety procedures in the event of an emergency, whether through awareness-raising actions such as lectures and visits to our facilities, or through emergency drills involving this public.



## COMMUNITY RELATIONS AT TRANSPETRO

At Transpetro we also develop actions aimed at the communities with which we share territories. We carry out a set of awareness-raising activities aimed, above all, at safeguarding the safety and health of communities neighboring our facilities and protecting the environment.

In terms of relationships with stakeholders, many advancements have been achieved. The communication and awareness efforts carried out in communities neighboring the pipelines, combined with investments in technology, security, monitoring, and actions with public entities, reduced the incidence of clandestine tapping that put communities at risk.

At Transpetro, all sectors that deal with communities and other stakeholders work together to integrate their initiatives in a collaborative way through the Permanent

Community Relations Forum, developing corporate guidelines and solutions, as well as continuous debate on the most critical topics. As a result of the activities of this Forum, committees to specifically address technical demands were created.

This year we published the Transpetro Community Relations Management Standard, which presents eight guidelines for building a company engaged with the population impacted by our operations. Therewith, from negative impacts we want to generate positive impacts.

In search of best market practices and internal success stories - for a better understanding of the company's operations - an itinerary for training in Community Relations was created for the company's employees. This initiative proposes solid and multifaceted training for professionals

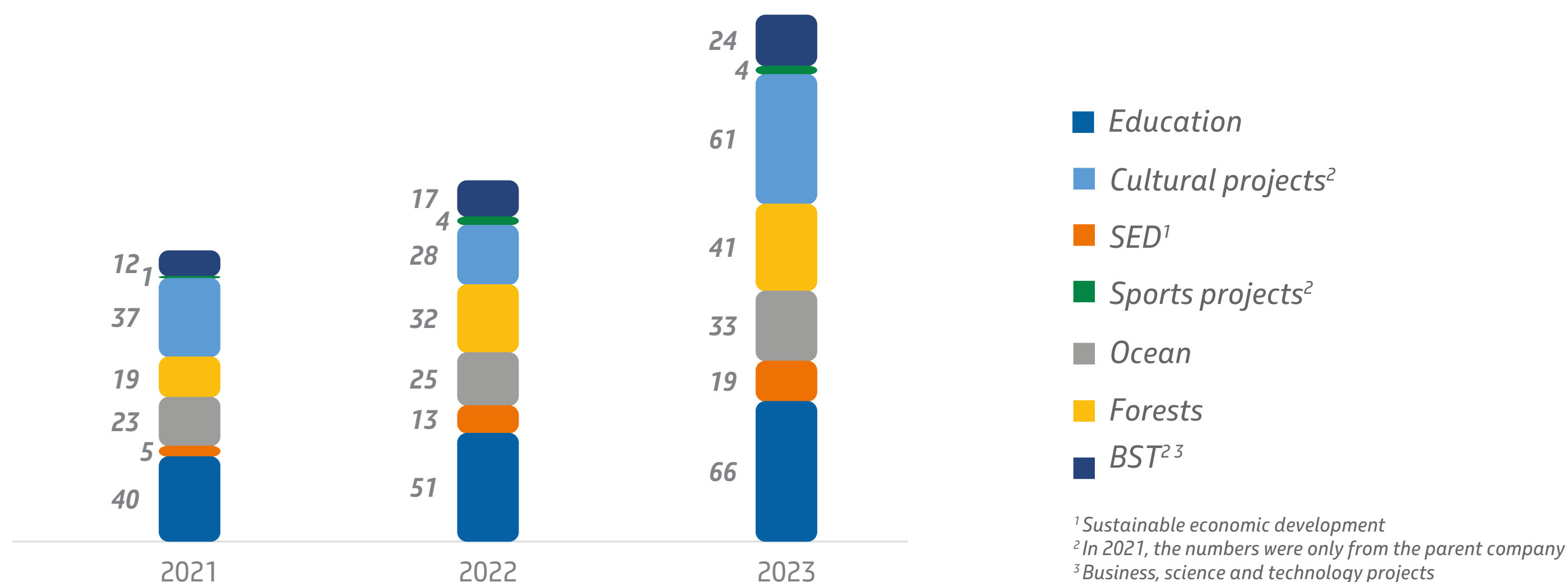
with the mission of dealing directly with this important public of interest to Transpetro.

With the end of the pandemic and the consequent possibility of once again being closer to our stakeholders, we intensified activities aimed at communities. Different topics - such as pipeline integrity and preservation of the pipeline - were discussed in meetings, lectures, drills, and visits. We promoted the improvement of channel 168, which included improving call service and auditing. The promotion of telephone number 168, a communication channel for communities and other audiences with the company, was intensified.

## ACTIONS FOR SUSTAINABLE DEVELOPMENT OF COMMUNITIES

We develop several corporate citizenship practices, with the aim of responding to the demands of communities in the territories where we operate, achieving positive socio-environmental transformations, contributing to a fair energy transition, protect the environment, through the promotion of conservation, restoration, and biodiversity gains actions and also, consolidate the relationship with our stakeholders and strengthen our reputation. These actions can occur through socio-environmental investments and sponsorships, donations, and volunteering actions.

### Total socio-environmental investments, sponsorships, and other voluntary social projects (consolidated data in BRL million)



## VOLUNTARY SOCIO-ENVIRONMENTAL INVESTMENTS

Our voluntary socio-environmental investment, structured within the scope of the Petrobras Socioenvironmental Program, is aligned with the 2024-2028+ Strategic Plan and contributes to the sustainability of our business. Through the program, we develop socio-environmental solutions on topics relevant to the oil and gas industry in the territories where we operate.

Socio-environmental investment planning is structured based on the analysis of the results of socioeconomic diagnoses of the territories, mapped social risks, social and environmental themes relevant to the business, community demands, in addition to evaluating the portfolio of current and completed projects in the period. Based on this information, we identify gaps and opportunities for the composition of our project portfolio, prioritizing the carrying out of periodic public selections or the analysis of projects from our proposal bank.

The lines of action of the Petrobras Socio-environmental Program are: Education, Sustainable Economic Development, Ocean, and Forests. Through





these lines, we prioritize the contribution to four Sustainable Development Goals (SDGs): (4) Quality Education, (8) Decent Work and Economic Growth; (14) Water Life and (15) Land Life. Early childhood, innovation and human rights are the cross-sectional themes that can be highlighted in the actions carried out by the projects that make up the portfolio.

### **Autonomy and Income Program**

The Autonomy and Income Program focuses on professional training for people in socially vulnerable situations to work in the energy sector. Aimed at residents of cities within the area covered by Petrobras' operations, the Program will prioritize unemployed people and minority groups, such as women, Black and brown people, LGBTQIAPN+ people, people with disabilities and refugees.

In addition to training in technical careers and initial and continuing education (FIC), participants will have access to actions to develop socio-emotional and personal skills (soft skills), in addition to receiving a stipend during the period in which they are taking the courses. Participating women who have children up to 11 years of age will receive a stipend with an added amount.

The Program is aligned with 2024-2028+ Strategic Plan, which includes among its ESG (Environmental, Social and Governance) Drivers that the company aims to “Be a driver of socio-environmental development”. The training will be carried out in partnership with Sistema S and Federal Institutes of Education, Science and Technology, with resources from Petrobras in the order of BRL 350 million to be disbursed over four years.

### **Transpetro**

Our subsidiary Transpetro restructured the portfolio of socio-environmental projects throughout 2023 with the development of local tactical plans related to the business, in partnership with regional teams, respecting the reality of each area of activity. Three projects were included: Cine Transpetro, Faixa Limpa II and Do Manguê ao Mar.

Throughout 2023, we expanded our work with communities, seeking to resolve conflicts in a collaborative and participatory way. As an example, we can mention the work carried out in the Indigenous villages of Cajuhiri Atravessado, in Coari (AM), which resulted in the implementation of compensation programs for the Basic Environmental Plan of the Cajuhiri Atravessado Indigenous Territory as a

complement to the Indigenous Component Study. The inauguration of the Caípe de Baixo sports center and football court, in São Francisco do Conde (BA) (a partnership established between the company, community and public authorities) was another important milestone in Transpetro's Community Relations.

We develop initiatives to promote environmental compensation programs with traditional communities on the coast of São Paulo and in the RJ-MG Pipeline Strip, in addition to collaborative research and studies to develop integrated solutions for communities neighboring the company's facilities and operations. The other projects that make up our portfolio can be found on our **website**.



More information about our socio-environmental investments can be found in the **Human Rights and Corporate Citizenship 2023 Supplement**.

## **PUBLIC SELECTION**

As a way of democratizing access to resources and ensuring transparency, we periodically hold national and regional public selections. These selection processes are governed by specific regulations for each edition and can have a broad or narrow focus in relation to territories and themes.

In 2023, we launched the largest public selection of the Petrobras Socio-environmental Program, in which more than BRL 430 million will be invested, over 3 years, in socio-environmental projects in all Brazilian regions. In this selection process, opportunities to support projects were defined with the aim of contributing to the guarantee of human rights, with the indication of Indigenous peoples and traditional communities as priority audiences, in addition to opportunities whose expected results are related to education for human rights, gender equality and the appreciation of cultural diversity, as well as promoting awareness with a focus on environmental justice, fighting racism, promoting racial equity and combating prejudice.

The Public Selection for the Petrobras Socio-Environmental Program was divided into two stages and, in 2023, the results of the first stage were announced. The number of registrations exceeded expectations, totaling 414 projects without incentives and 37 projects with incentives, leading the company to increase the resources allocated to this stage of the notice, from BRL 162 million to BRL 212 million, and the number of projects went from the initially planned 23 to 31. The selected initiatives will operate in the states of Amapá, Amazonas, Bahia, Ceará, Goiás, Maranhão, Pará, Paraná, Pernambuco, Rio Grande do Norte, Rio Grande do Sul and Sergipe, in all lines of action of the Program, including four socio-environmental projects of educational sports, encouraged by the Federal Sports Law, worth BRL 32 million, as well as a Forests project for the Cerrado biome.

The second stage, launched in 2023, should receive proposals for 28 opportunities, in which BRL220 million will be invested over a period of three years, in all lines of action of the Program, including five opportunities for incentivized projects, in the total


amount of BRL53 million. The initiatives will cover the states of Rio de Janeiro, São Paulo, Minas Gerais, and Espírito Santo, in addition to Mato Grosso and Mato Grosso do Sul, with an opportunity aimed at the recovery and conservation of the Pantanal and its biodiversity.

With the aim of providing wide publicity and expanding access to the voluntary socio-environmental investment resources of this selection, a “Socio-Environmental Trail” was created, which consisted of a series of guiding videos made available on Petrobras' YouTube channel and five live broadcasts carried out to the public interested in the subjects that generate the most doubts when preparing a project. The material should serve as a basis for civil society organizations in the construction of their proposals, containing good practices for preparing socio-environmental projects and clarifying the main aspects of the regulations, as well as the criteria for participation in the selection. In around two weeks of being shown on the company's YouTube channel, the explanatory videos reached more than 34,000 views.

We set goals and indicators since the contracting phase of our socio-environmental projects, which allow us to periodically evaluate their performance. The periodicity of this assessment is defined at the beginning of each project, as well as the means of verification. The collection of information can vary, generally covering the public intended, engagement in planned activities and the results obtained in socio-environmental actions.

The accumulated results achieved by the 107 ongoing projects in the year 2023 include:

- Over three million seedlings planted
- 930 protected, studied, or monitored wildlife species
- 4,000 scholarships provided
- Over 140,000 participants engaged in continuous activities

 **More information about the results of our projects can be found in the Human Rights and Corporate Citizenship 2023 Supplement.**

In addition to monitoring indicators, we also carry out analyses of the socio-environmental return on investment - SROI - and its variant of Cost-Benefit Analysis - CBA) whose methodology converts the

environmental, social, and economic transformations that have occurred as a result of the project implementation into monetary value. As a result of these projects, we can mention a result of BRL 512 million in PV related to 30 socio-environmental projects evaluated since 2019. On average, the projects evaluated return BRL 4.84 in social and environmental benefits for each real invested by Petrobras.

 **More information about our socio-environmental investments can be found in the 2023 Human Rights and Corporate Citizenship Supplement.**

## **CULTURAL, SPORTING AND BUSINESS, SCIENCE, AND TECHNOLOGY SPONSORSHIPS**

In 2023, in addition to the current portfolio, we selected new sponsorships in the cultural, sports and business, science and technology segments. Sponsorship selection is carried out through the “direct choice” or “public selection” modalities. The public selection of projects corresponds to a broad and transparent process, with its own regulations, predefined criteria, national disclosure, and collegiate selection committees for choosing projects to be developed.

In direct selection, projects are forwarded directly to us using a dedicated system for managing sponsorships, and must meet analysis and suitability criteria for contracting, as well as relevance for achieving the company's goals. Sponsored projects follow lines of action focused on music, performing arts, audiovisual and multiple expressions, improving the company's reputation and aligned with our brand strategy.

Among the various projects carried out during the year, we highlight the sponsorships of the Petrobras

Orchestra, Petrobras Team, São Paulo Film Festival, Galpão Group, Pernambuco Book Biennial, Psica Festival in Belém, Porto Alegre Book Fair, Focus Cia de Dança, Vitória Film and Festival, Teatro Municipal do Rio de Janeiro, Team Petrobras at the Olympics, Offshore Technology Conference, CERAWEEK, World Petroleum Congress, and Web Summit Rio.

Several methodologies are used to select, manage, and evaluate sponsoring projects, individually and jointly, including technical assessments, potential assessment, scope achievement assessment, measurement of brand exposure in the media, in order to assess the value achieved in financial return equivalent to sponsoring cultural, sports and business, science and technology events.

It should be noted that all selected sponsorships, as well as the others that already make up the Communication portfolio, will be evaluated using the Sponsorship Performance Index (IDP). Alignment with strategic drivers and opportunities for the company, associated with sponsorship, are considered. The IDP is a process indicator that evaluates the performance of sponsorships contracted by Petrobras in the Culture, Sports and Business, Science and Technology lines of action.

## DONATIONS

In addition to investment in socio-environmental projects and sponsorships, we also make donations with the aim of contributing to society with actions that help solve social and/or environmental problems and that involve opportunities to work with our stakeholders. In 2023, we donated BRL 1.6 million, with the main donation made for emergency actions for families affected by the heavy rains that occurred that year in São Paulo. The families covered were selected through a diagnosis conducted by a non-profit institution.



More information about our donations can be found in the **ESG Datasheet**.

## VOLUNTEERING

We also carried 82 volunteering actions throughout 2023, in which over 4,000 hours of volunteer work were performed. Among them, we highlight the actions for the homeless population in downtown Rio de Janeiro. The work that has been carried out since 2021 aims to positively contribute to the improvement of living conditions around our office buildings, through the engagement of our workforce. In 2023, more than 100 volunteers participated in face-to-face actions between the months of June and October.



More information about our socio-environmental investments can be found in the **2023 Human Rights and Corporate Citizenship Supplement**.

It is also worth mentioning the strengthening of the Legal Pro Bono Project, which has been providing free legal advice to meet the demands of communities close to our units, contributing to this public's access to basic rights as citizens. The project already has the participation of more than 70 lawyers. Among the main initiatives of this project, we mention Adhesion to the Amicus Project of the Pro Bono Institute, a joint effort for legal assistance in Aldeia Mata Verde Bonita (Indigenous people of the Guarani Mbya ethnic group, in Maricá-RJ), support for the establishment of the Quilombo Patuazinho Residents Association in Oiapoque-AP and the formalization of the partnership with the Business Initiative for Equality, to promote preparatory courses aimed at Black people, for the Petrobras selection in the Legal Assistance for All Project.

## **RIGHT TO NATURAL RESOURCES AND LAND (SOIL, WATER AND SANITATION, BIODIVERSITY)**

We manage our aspects and impacts related to the environment and natural resources not only because of the importance of these issues for our business and our various stakeholders, but also because we recognize that a healthy environment is a human right. We express in our Code of Ethical Conduct, item 2.1.b, that natural resources must be used rationally and, therefore, the preservation of the environment and sustainable development are principles that must be observed in all the company's actions, for the benefit of present and future generations. Also in our Health, Safety and Environment Policy, comprising the principle "Sustainability in Business", we set forth that we must conduct our business and activities with environmental responsibility, contributing to sustainable development and the prevention and mitigation of the environmental impacts of our activities and products, with the improvement of environmental quality where we operate.

We understand that society's access to water in adequate quantity and quality and to sanitation are essential issues and are part of human rights.

Therefore, our water resources management has as its basic principle the constant search for the rationalization of water use, its conservation and availability in the areas of influence of our facilities.

The search for excellence in the management of solid waste and residues is also essential to guarantee the preservation of natural resources. We promote environmentally appropriate disposal and adopt circular economy practices, including partnerships with organizations that collect reusable and recyclable materials made up of low-income individuals.

Managing risks and impacts on biodiversity is also part of our environmental agenda. We identify and assess impacts, in order to support the definition of preventive, mitigating and compensatory measures in the construction, operation and decommissioning phases of our projects. We also contribute with studies and programs for the knowledge and protection of biodiversity in all the biomes in which we operate.

Furthermore, we have established and standardized processes aimed at recovering areas degraded by erosive and depositional processes, soil

degradation and impacts on vegetation cover, and the remediation/rehabilitation of areas impacted by chemical contaminants.



More information about our **management of water resources, waste and biodiversity** can be found in the specific chapters on these themes throughout the report.

It is important to highlight that we also develop socio-environmental projects that aim to conserve our biomes and their ecosystems. Among the projects developed, we highlight the following projects:

### **Uçá**

The Uçá Project is carried out by Associação Guardiões do Mar and supported by Petrobras since 2012. It develops integrated forest restoration, environmental education and research actions in the Guanabara Bay region and has traditional communities as one of its priority audiences. LimpaOca Operation provides opportunities and income for crab collectors and artisanal fishermen. Through the granting of aid grants, more than 228 people were mobilized to



clean the mangroves during the Uçá crab closed season. In addition to the 55 tons of trash that were removed from 47 hectares of this ecosystem, the impacts are felt in the social and economic spheres, promoting positive changes in the short and long term. Due to its relevance, this action became part of the calendar of the APA/ESEC Integrated Management Center of ICMBio.

The UÇÁ Project achieved the restoration of more than 18 hectares of mangroves, planting 64,500 seedlings in the Guapimirim APA, which form a mangrove forest now visible on Google Earth. With a record of 54 academic productions, the project has impacted more than 250,000 young people and benefited 8,000 teachers through environmental education actions since its creation. The impact goes further, with 175 leaders from traditional communities being trained and applying this knowledge to promote Community-Based Tourism in the region. The initiative was a pioneer in the territory in terms of inclusive environmental education actions with accessibility for people with disabilities or PWDs.

Presently, it can be said that the project has gone beyond the geographical limits of its

activities, becoming a national good practices benchmark. The measurement of the project's socio-environmental impact showed that for every BRL 1 invested by Petrobras, more than BRL 4 returns to the environment and society, including in this calculation, for example, the maintenance of ecosystem services and the improvement of the local community's income.

### **Floresta Viva**

With the aim of expanding our investments in a more diversified portfolio of projects in nature-based solutions, aligned with our strategic objectives and commitments, we established a partnership with the National Bank for Economic and Social Development (BNDES) through the Floresta Viva matchfunding. Aiming at joint financial support for reforestation projects of native species in Brazilian biomes, we intend to follow the path of generating high-integrity carbon credits, which generate social and environmental benefits.

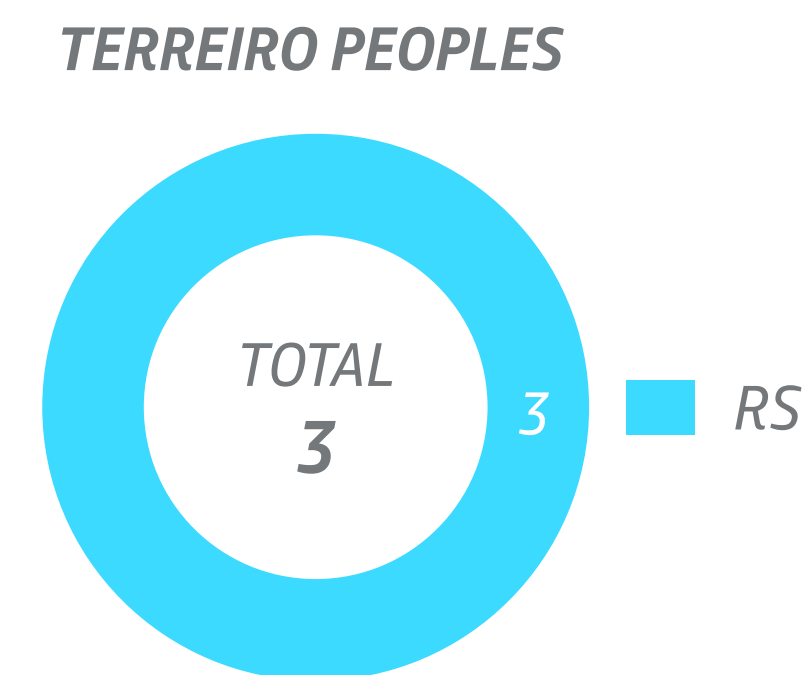
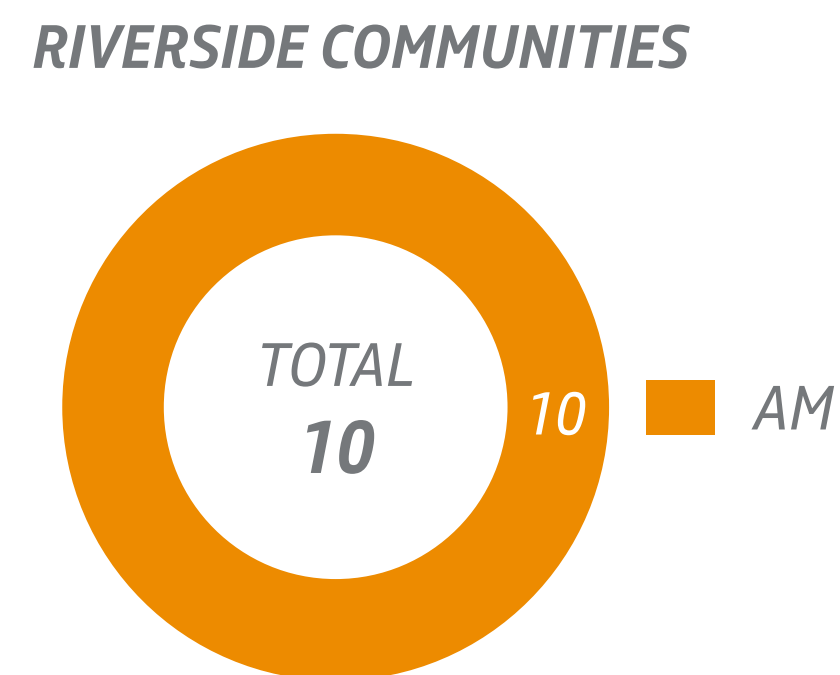
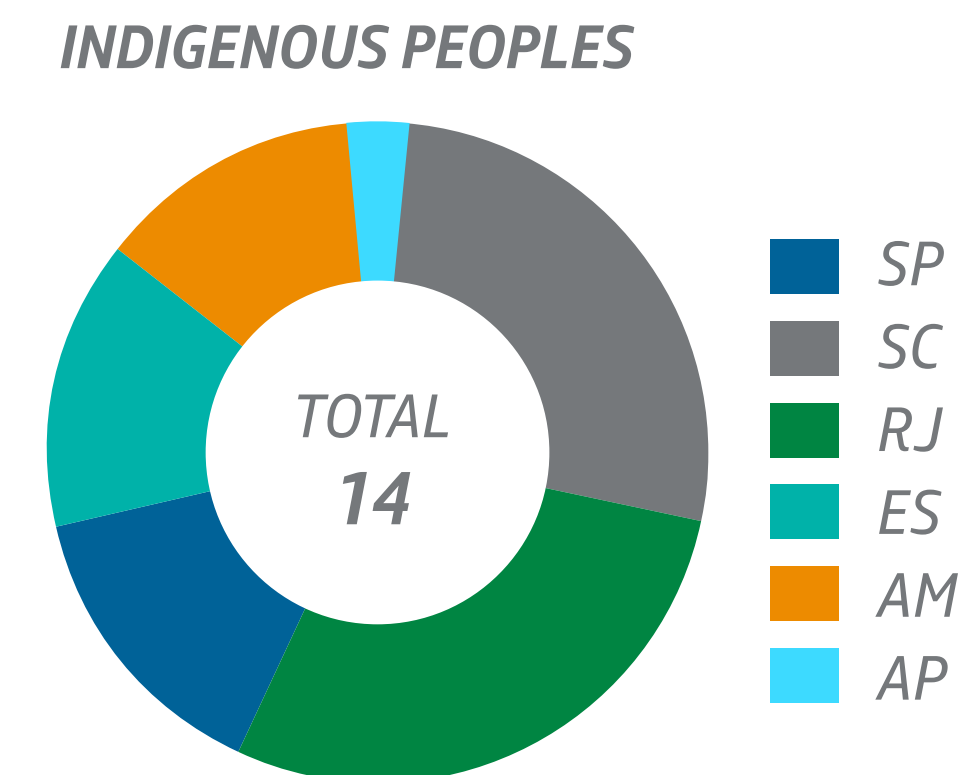
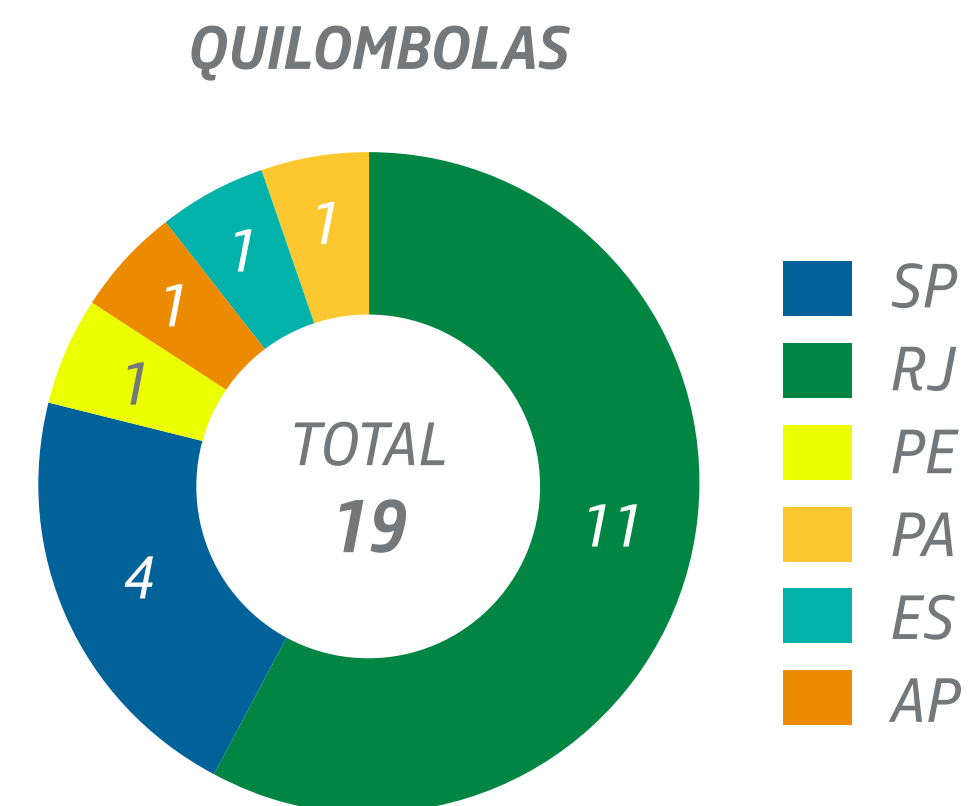
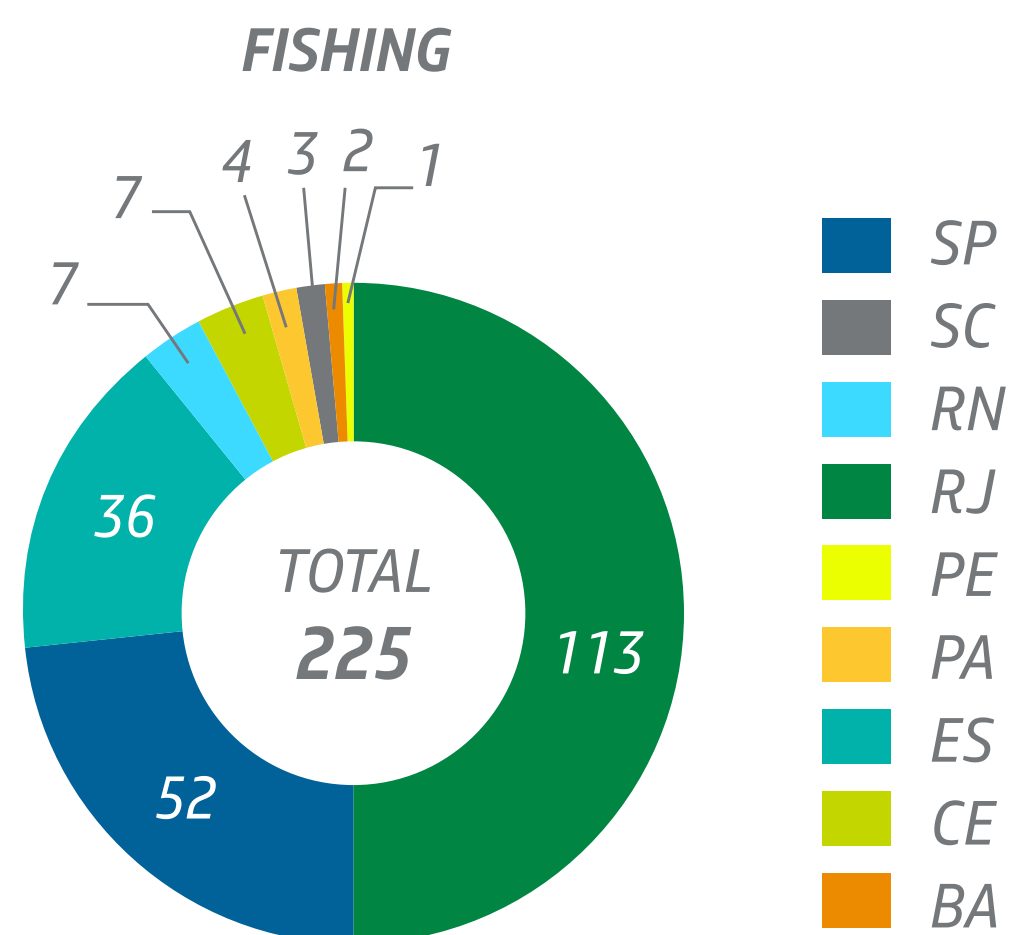
In November 2023, we launched and announced the results of the first public selection process: "Manguezais do Brasil". We selected eight projects that will cost BRL 47.3 million for actions to recover native

vegetation in mangrove and restinga areas in Brazil and which should reach more than 1,750 hectares. We believe in the importance of this investment as an advancement in this frontier of knowledge, especially in Brazil, which has one of the largest mangrove areas in the world. This initiative will reinforce our socio-environmental investments in blue carbon.

In December 2023, we launched at Climate COP 28, the second public selection of Floresta Viva, which will support ecological restoration and strengthening the restoration production chain in biodiversity corridors for the conservation of the Cerrado and Pantanal biomes. BRL 42 million will be invested in these initiatives, which will take place over the next four years.

## TRADITIONAL COMMUNITIES

In our Local Social Responsibility Plans, we prioritize the denominated traditional peoples and communities of fishermen, caiçaras, quilombolas, Indigenous peoples, riverside communities and terreiro peoples. The identification of traditional communities and peoples covered in this section considers the legally established concepts. This scope was anchored in the identification established in Decree 6040/2007, which institutes the National Policy for the Sustainable Development of Traditional Peoples and Communities. The communities prioritized in Brazil are shown in the following figure:





We have reported reserves in Brazil, United States and Argentina. We do not have reserves in areas close to Indigenous lands, as defined by the Sustainability Accounting Standards Board (SASB), that is, a distance of five kilometers or less.

Under Bolivian law, there are no reserves in that country. Petrobras' operations in Bolivia close to Indigenous communities are located in the Sábalo field, in the San Antonio Block. In this camp, there are around 70 families in the Guaraní Tierra Comunitária de Origem (TCO), called Tucainty. TCO has an area of 20,000 hectares. In this area, there is a road approximately 36 km long, and community houses are distributed along this road. It is characterized by having dispersed housing (at a distance that varies between two and five kilometers between housing).

Our exploratory areas, in Brazil and abroad, are also not close to Indigenous lands.

The relationship with Indigenous peoples and traditional communities occurs both through mandatory actions arising from environmental licensing conditions (such as the Environmental Education Project, Project for the Characterization of Traditional Territories, and compensation projects

for fishing activities), as well as through voluntary activities such as corporate social responsibility projects and socio-environmental investments.

The Project for the Characterization of Traditional Territories, currently known as Projeto Povos, is a condition for the environmental licensing for the socioeconomic environment, carried out together with the Quilombola, Indigenous and Caiçara peoples in the area of influence of the projects in the Santos Basin, specifically in the municipalities of Angra dos Reis (RJ), Paraty (RJ) and Ubatuba (SP). The intention of the project is to allow communities to get to know and empower themselves, allowing them to work on their vulnerabilities in the face of regional development pressures. More information about the project can be found at the Comunica Bacia de Santos site.

Our voluntary socio-environmental investments develop specific actions focused on recording and valuing Indigenous culture and traditional communities, based on strengthening the protagonism of these populations. Through the Petrobras Socio-Environmental Program, we support 47 socio-environmental projects that aim to contribute to the institutional strengthening and autonomy of Indigenous peoples and traditional communities,

which represents 43.9% of the number of projects currently supported by the Program. In all, there are 34 Indigenous peoples, 75 Quilombola communities and 183 other traditional communities supported through conservation actions with sustainable use of natural resources, which consider ways of life, production systems and knowledge associated with socio-biodiversity.

To expand the work to strengthen Indigenous peoples in the different Brazilian biomes, in 2023, three projects were integrated into the portfolio, operating in the Pampa, Amazon and Cerrado. They are: Biodiverso, Berço das Águas and Ar, Água e Terra.

The Biodiverso and Berço das Águas projects have already been supported in previous cycles and, in the current proposal, will consolidate the management of the Erikpatsa, Escondido, Japuira, Apiaká do Pontal and Isolados, Aripuanã, Arara do Rio Branco Indigenous Lands, in addition to the Guariba-Roosevelt State Extractive Reserve, in the state of Mato Grosso. Together, the projects will operate in an area of around 2.4 million hectares, promoting the sustainable use of socio-biodiversity among Indigenous peoples and traditional communities. The initiatives aim to mitigate climate change through the conservation





of standing forests. Actions will be carried out with the aim of increasing the level of knowledge and income generation of Indigenous and riverine women, through training to improve production practices, strengthening the production and reception of handicrafts and implementing technological production reference units of honey and honey derivatives. We also highlight that the Biodiverso project will support the consolidation of the Free, Prior and Informed Consultation and Consent Protocol of the Rikbaktsa People, in addition to articulating partnerships and participation in forums, stimulating management, governance and dissemination of the knowledge generated.

The Air, Water and Land Project will promote the sustainable management of Guarani Indigenous territories in Rio Grande do Sul, with actions for the productive conversion of areas, recovery, and conservation of biodiversity, in addition to environmental education. With the implementation of traditional food plots and agroforestry systems, the aim is to contribute to food security, combined with the maintenance and expansion of vegetation cover. In education actions, the project will address the topics of human rights, gender equity, waste collection, recycling and composting, sustainable

land management, eco-efficient measures, and income generation. The project will conserve a region of significant importance due to the occurrence of vulnerable or critically endangered species, of which more than 200 will be the target of project actions, in addition to the sociocultural diversity provided by the Guaranis' stay in the territory.

More information about our relationship actions with Indigenous peoples and traditional communities can be found in the 2023 Human Rights and Corporate Citizenship Supplement.

### **SECURITY FORCES AND HUMAN RIGHTS**

The Intelligence and Corporate Security Policy establishes as a guideline that “protective intelligence and corporate security actions are carried out in compliance with legislation in force and respect for Human Rights, in accordance with internal and external legal requirements, recommendations and relevant technical standards”. Therefore, the Corporate Security Risk Management methodology contemplates analyzing the interaction of the internal and external environments of our units in order to identify threats that could compromise the safety of people, facilities, and the company's business.

For the external scenario, we use intelligence analysis that covers, among other issues, the mapping and monitoring of external threats, through sources specialized in security risk management in Brazil and abroad, monitoring of crime rates and other information relevant to foresee and prevent potential conflict situations. Therefore, it is possible to carry out risk assessment and develop corporate security actions and procedures with a focus on preventing and responding to the risks of intentional acts, as well as anticipating critical security issues with the potential to impact the company's business to managers. Furthermore, we use technological resources that contribute to planning responses in cases of conflict, promoting more responsible action. As an example, we have drones used in large areas, such as refineries and onshore production fields, and the Mobile Property Security Units (UMSP), used in production shutdowns or occasional monitoring of remote locations.

The Local Property Security Plan (PLSP) is the plan that establishes standardized procedures and actions related to preventive and/or reactive security practices. The entire security team at our units is trained in their respective PLSP.

In 2023, with the aim of disseminating the importance of respect for human rights, both in the exercise of protecting Petrobras facilities and in the reception of our visitors and workforce, we held lectures and Human Rights Dialogues in several company facilities, reaching 538 participations from our office team and 3,231 surveillance, concierge, and reception professionals.

It is important to highlight that the employees and service providers who carry out property security activities are all trained and undergo recycling every two years, in compliance with the relevant legislation and in accordance with the Federal Police (PF/MJ). The training and recycling courses include aspects of Constitutional and Criminal Law, private security legislation and interpersonal relations, based on respect for the human person with the aim of curbing the practice of discriminatory activities or disrespect for human rights, especially from the perspective of fighting gender, , sexual orientation-based violence or violence against children, adolescents, the elderly and persons with disabilities, as well as the correct and proportional application of force.

Complaints, doubts, claims, and reports relating to corporate security activity can be communicated to the Petrobras General Ombudsman's Office, with the

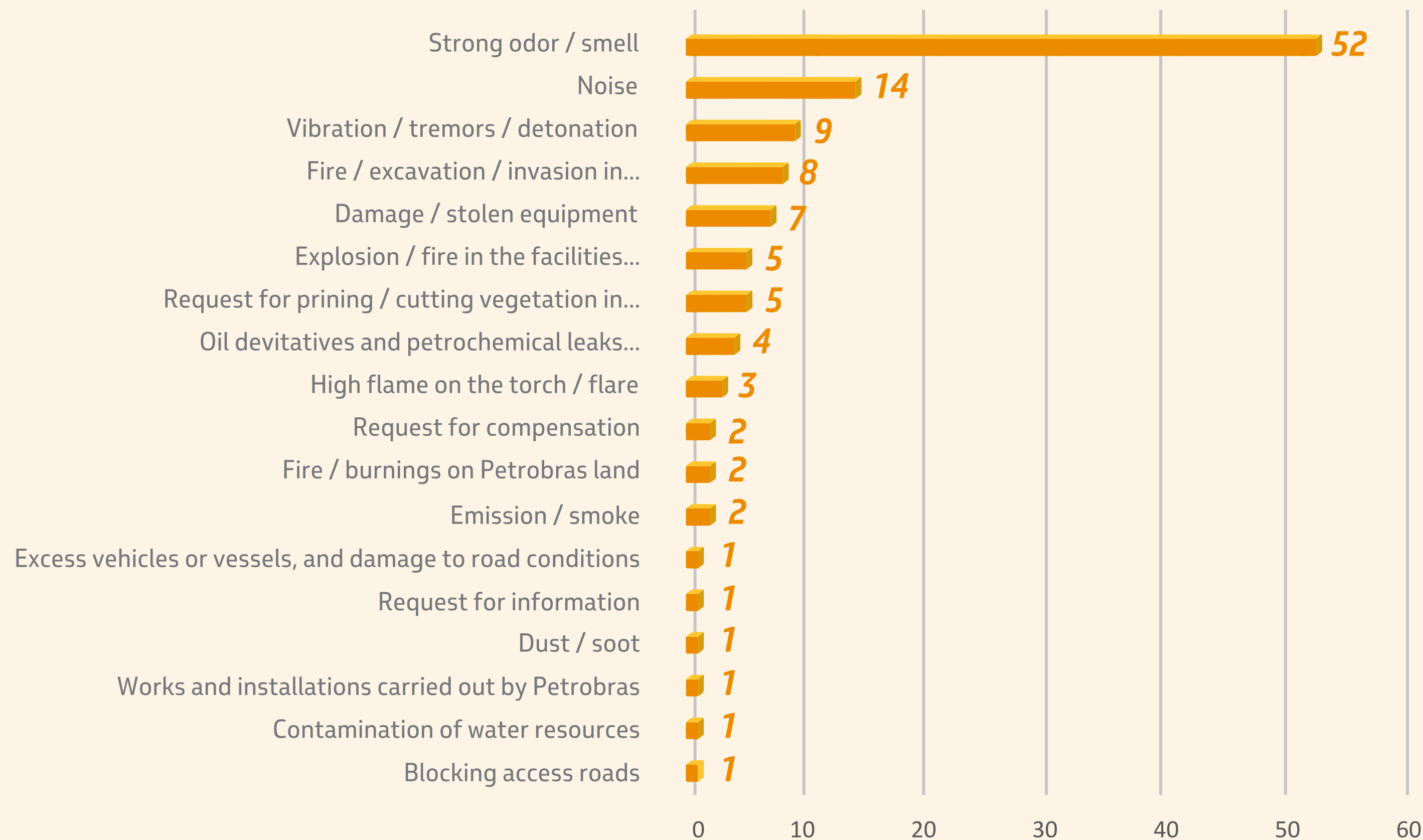
anonymity of the communicator being assured, and will be forwarded to the Intelligence management for treatment in accordance with corporate procedures, with periodic reports to senior management. If they refer to outsourced security services, the sanctions provided for in the contract are adopted.

## REPORTS AND COMPLAINTS FROM LOCAL COMMUNITIES

We widely publicize our contact channels to the communities present in our areas of coverage. Reports and complaints can be made through the channels of our General Ombudsman's Office, community committees and Customer Service (Contact Us 0800), which provides assistance via 24-7 toll-free lines.

In 2023, 129 requests were received through the SAC on community issues, which were monitored by the Social Responsibility area. This information is categorized by unit and theme and is monitored by a specific panel. The community manifestations received by SAC in 2023 (Petrobras parent company), classified by type of complaint, are shown below:

### RECORDS PER TYPE



*In 2023, our General Ombudsman's Office received 268 manifestations from local communities of the Petrobras parent company. Of this total:*

## **74 reports**

*(16 confirmed, 38 unconfirmed, 10 archived and 10 under treatment);*

## **102 complaints**

*(34 answered, 39 not answered, 26 archived and 3 in progress);*

## **74 requests**

*(37 answered, 20 not answered, 14 archived and 3 in treatment);*

## **18 suggestions, opinions, and compliments**

*(14 answered to, 3 archived and 1 under treatment).*

*These complaints include reports of invasion or irregular occupation of Petrobras areas.; alleged environmental impacts and irregularities in the conduct of projects maintained by the company.*

Specifically in relation to Indigenous communities or traditional peoples (artisanal fishermen, Quilombolas, shellfish gatherers, among others), in 2023, we received 12 calls to our General Ombudsman. There were four complaints about alleged irregularities involving projects maintained by the company and one about oil contamination in a river located in a permanent preservation area, in the village of Biriba in Araçás-BA. Of these, two were unconfirmed and three are undergoing assessment. In addition to these complaints, there was also a request regarding the operation of a social project in a fishing region, which was met.

We seek to respond and deal with recurring requests from communities through actions planned in the social responsibility plans of the business units. In addition to that, we present and discuss these issues through community committees, which gather at our operating units. We also respond to the demands of the communities in the territories where we operate through mandatory actions arising from environmental licensing conditions (such as the Environmental Education Project and Compensation Projects for Fishing Activities), as well as through voluntary actions such as the corporate social responsibility and socio-environmental investments.

# LABOR PRACTICES AND EQUAL OPPORTUNITIES

[2-7] [2-8] [2-19] [2-20] [2-21] [2-30] [3-3] [11.10.1] [11.10.2] [11.10.3] [11.10.4] [11.10.5] [11.10.6] [11.10.7] [11.10.8] [11.10.9] [11.11.1] [11.11.2] [11.11.3] [11.11.4] [11.11.5] [11.11.6] [11.11.7] [11.12.1] [11.12.3] [11.14.3][11.7.2][11.7.3]

This material topic is associated with employment opportunities and positive impacts on workers due to the employment practices adopted and their influence on the supply chain. It includes impacts on employees, on their careers and development, such as career and training, and on the organizational environment due to the level of transparency in communication and the establishment of dialogue, especially in career advancement processes, and the company's policies and practices in relation to the promotion of non-discrimination, diversity, equity, inclusion, and equality of opportunity. It also covers the prevention of forced labor and modern slavery, especially in the supply chain, and the impacts related to sexual harassment, moral harassment, and discrimination, as well as the company's approach to the issue. Finally, it includes the positive impacts on workers and the organization due to the implementation of teleworking.

## LABOR PRACTICES

Changes in the oil and gas industry, demands related to Environmental, Social and Governance (ESG) and discussions about the future of work have been on the agenda in organizations and their Human Resources (HR) areas. However, the great contemporary challenge in HR management is to have more human-centered processes with practices that promote diversity, equity and inclusion, mental health, and well-being of employees, making companies more agile, resilient, and sustainable.

It is worth highlighting that the 2024-2028+ Strategic Plan brings the following major HR challenges: evolve the organization, processes, and work models; improve the journey of employees and leaders by being a reference in HR practices and technology; and strengthen the organizational culture and humanized environment, with diversity, equity, and

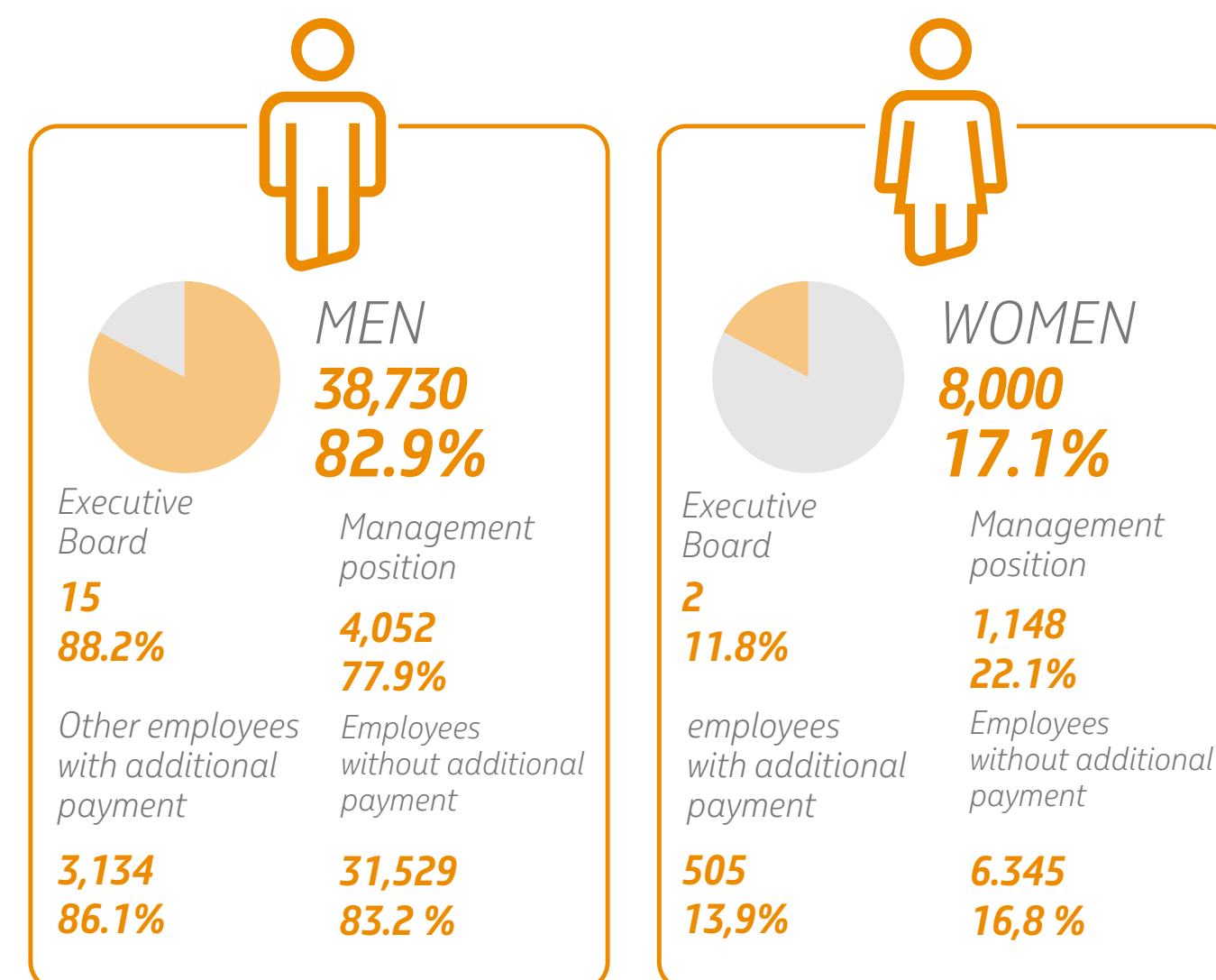
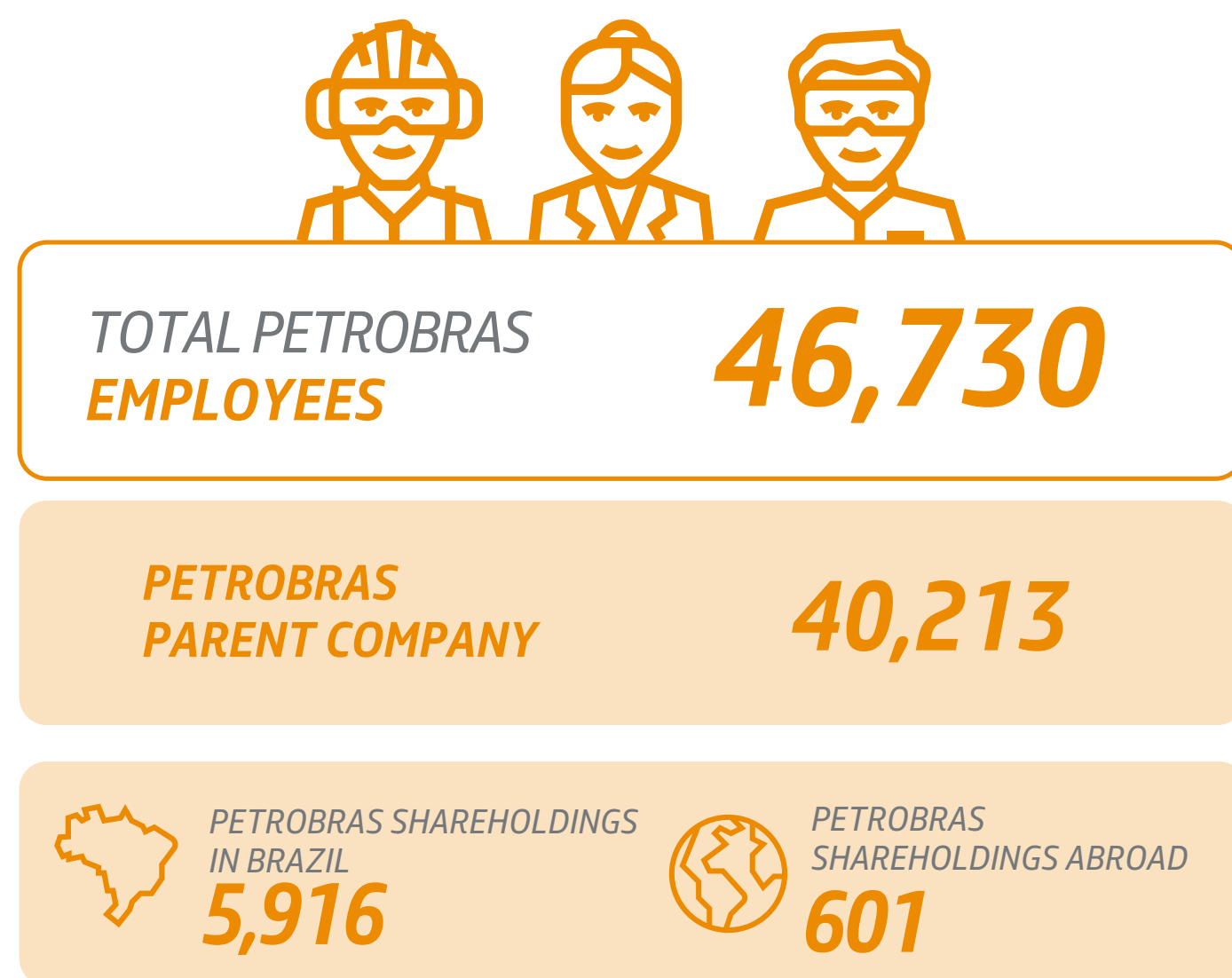
inclusion, attracting talent and promoting well-being, engagement, productivity, and innovation. In this sense, the HR Strategy aims to ensure adherence of people management practices with the needs of the business, promoting people's engagement in overcoming the company's challenges.

Furthermore, our goals, associated with ESG practices, is to contribute to the country's socioeconomic development, with an emphasis on promoting well-being and human rights. Thereto, we seek to advance in diversity and inclusion actions, especially with regard to people with disabilities, as well as with racial and gender issues.

Finally, we will maintain and strengthen valuable aspects of our culture, such as the ability to innovate and overcome challenges, and focus on producing with

excellence in the technical and economic fields, acting as a single team to generate value. And we will do all this with full respect for people and the environment, as safety is our greatest value.

### Employee profile



optional reduction in working hours with a proportional reduction in compensation: a reduction in daily working hours from eight to six hours, with a proportional reduction in compensation of 25% for employees on an administrative basis and flexible working hours who do not perform a bonus-paid role; and the optional reduction in weekly working hours with a proportional reduction in remuneration of 20%, which allowed employees to reduce their working days per week from five to four. The reduction of days was offered to employees who work in the administrative regime with flexible and fixed hours with a workday of eight hours a day and in the administrative regime of differentiated category (social workers) whose daily work hours are six hours, as long as they are not in an additional payment role. Reduced working hours employees have the same benefits as regular employees. In 2023, 361 employees of Petrobras parent company were on reduced working hours.

At Petrobras parent company, all employees are hired for an indefinite period, and the contractual workload is eight hours or six hours a day, depending on the employee's position. All employees of the Petrobras parent company were hired according to the Consolidation of Labor Laws (CLT). Throughout 2023, our workforce increased by around 4% due to

admissions through the public selection process. Additionally, we have nine directors who are statutory and governed by our statutes, 8 men and 1 woman, totaling 40,213 employees as of December 31, 2023. We do not use temporary contracts for hiring at the Petrobras parent company. Petrobras offers its employees two possibilities for

### Our hybrid working model

Petrobras offers a hybrid work model for administrative employees. Adhesion is optional, by signing an acceptance agreement, which serves as an amendment to the employment agreement, which sets forth the rules that must be observed.



The administrative employees of Petrobras, the parent company who adhered to the permanent teleworking model, began to carry out their activities in a hybrid manner, currently 80% of the total administrative employees are in the hybrid work model.

In the Brazilian subsidiaries, 30% of employees use the hybrid model (1,798 employees), with the same rule of the parent company for the number of days teleworking and in person.

In subsidiaries abroad, 88% of employees (527) work in a hybrid model. Subsidiaries abroad followed the market rules of the country where they are to maintain post-pandemic telework. At the end of 2023, the majority had the possibility of two to three days of telework, depending on the employee's position.

### **Petrobras Young Apprentice Program**

One way to encourage and attract young people to our industry is the Petrobras Young Apprentice Program (PPJA). In October 2022, we admitted young people selected for the new learning cycle, in courses distributed across 16 states in the country. This selection process considered quotas for adolescents in foster care protection measures / institutional or family care (15%), adolescents leaving child labor

(10%) and people with disabilities (10%). In December 2023 we had 653 active young people, and this cycle (still ongoing) is expected to last until July 2024. The Petrobras Young Apprentice Program complies with Law 10,097 2000 and Decree 9,579/2018, which determines that businesses of any type are obliged to employ and enroll in training courses a number of apprentices equivalent to at least five percent and as much as fifteen per cent of the workers in each establishment that require professional training. The Petrobras Young Apprentice Program learning classes last up to two years.

### **Petrobras Student Internship Program**

In 2023, parent company Petrobras resumed the Petrobras Student Internship Program (PEEP). The internship returned with an innovative model, increasing the active, collaborative, and autonomous participation of our interns. The selection process included vacancies for people with disabilities (10%) and Black and brown people (30%). The hiring of 202 interns took place between October and November 2023. The vacancies were distributed across seven states.

### **Profile of contractors**

We do not define the number of employees that contracted companies must use to execute their contracts, only the deliveries that must be carried out as provided for in the contractual agreement. As a result, information related to gender or any other information about professional service providers, including the workhours, belongs to their respective employers. We have the information available in our corporate access system. Thus, in December 2023, we had 107,819 employees from service providers working in our units, with 100,646 service providers working at the parent company Petrobras.

Our suppliers must provide their employees with decent working conditions, ensuring compliance with current labor legislation. This obligation is provided for both in our draft contract and in our Guide to Ethical Conduct for Suppliers. Therefore, based on this guide and the internal standards with the guidelines for the inspection of contracts for goods and services, full compliance with labor obligations is sought, requiring monthly submission of the necessary documentation to prove compliance with labor, social security obligations and payment of the Employee Severance Fund (FGTS), when applicable. Failure to comply with

these obligations allows us to apply fines and other penalties provided for in the contracts.



For more information about the hiring of new suppliers and negative social impacts on the supply chain and measures taken can be consulted in our **2023 Human Rights and Corporate Citizenship Supplement**.

## **NON-DISCRIMINATION AND EQUAL OPPORTUNITIES**

When it comes to diversity, we embrace inclusion and fairness to foster an environment favorable to the expression and recognition of employee identities and the consolidation of relationships based on respect and trust. Management is carried out through the principles of respect for differences, equal opportunities, and non-discrimination.

Our diversity management is guided by corporate references such as:

- Company Values
- Code of Ethical Conduct
- Human Resources Policy
- Social Responsibility Policy
- Diversity, Equity, and Inclusion Policy
- Human Rights Guideline

## **Diversity at Petrobras**

It is known that more diverse teams tend to make better decisions and provide companies with greater results, both due to the ability to consider different points of view in decision-making, and due to the welcoming organizational climate that allows employees to participate more and be proactive. Therefore, we are advancing in actions that seek to increase the participation and inclusion of underrepresented groups in line with our values, and with the best practices being adopted by the market.

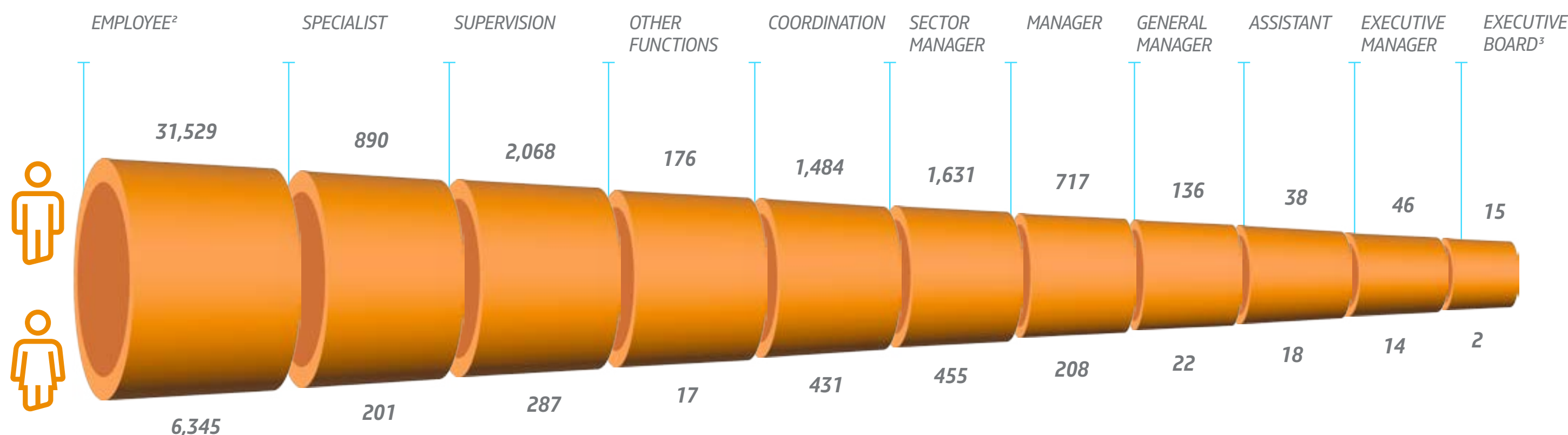
Promoting a greater number of people with a diverse profile implies encouraging more women, Black people, people with disabilities and other minority groups to be part of our company via the public selection process.

In addition to seeking to attract more diversity to our teams, we are investing in actions that promote a more inclusive environment. In other words, an environment in which all people can genuinely experience their identity, express themselves and work without encountering into prejudices or any type of bias or limiting beliefs, thus enhancing their performance.



Below is some of the main diversity information regarding our teams:

### DATA ON GENDER<sup>1</sup> (consolidated)



Regarding diversity in our governance bodies, as of May 2023, the Executive Board<sup>3</sup> of the Petrobras parent company had a composition of 11% women. Underrepresented social<sup>4</sup> groups made up 11%. As for age group, there were three members between 51 and 55 years old, four between 56 and 60 years old and two 61 years old or older.

<sup>1</sup> The calculated numbers correspond to employees registered in the system under the regime as of December 31, 2023. Specialists, supervisors, and “other functions” are not considered managerial positions, but rather other compensated functions. Therefore, we consider the 1st level of management, or junior leadership, to include the positions of coordinator and sector manager, and senior management leadership to include the positions of executive manager, director (DE member), and president (who is part of the DE). Thus, we have 22% of women in overall leadership (junior leadership and senior management leadership combined with the positions of manager, general manager, and assistant), 22% in junior leadership, and 21% in senior management leadership.

<sup>2</sup> Employees without a bonus-paying position.

<sup>3</sup> Executive Board: Includes CEO and Executive Officers.

<sup>4</sup> By underrepresented social groups we mean political minorities related to color/race; LGBTQIA+; disabled; gender identity.)

<sup>5</sup> Revenue-generating departments include: Exploration and Production Office, Engineering, Technology and Innovation Office, Industrial Processes and Products Office, Logistics, Commercialization and Markets Office, Energy Transition and Sustainability Office.

We have specific goals for the participation of women in the Petrobras parent company. In 2023, we ended the year with women representing 17% of our employees. In management positions, which include coordination, sector manager, managers, general manager, assistant, executive manager, and executive board (CEO and directors), women represent 21.8% and in supervisory roles 12.9%. Considering the management and supervisory positions together, women represent 19%. In revenue-generating departments<sup>5</sup>, where we have the majority of employees in STEM positions (82%), women in management position represent 14.6% of management position (an increase of 0.1% compared to the previous year). Among all employees in STEM careers, women represent 12%, and among all revenue-generating positions, the percentage rises to 15%.

In accordance with Guideline 7 of our Human Resources Policy and with item 4.7.a of our Human Resources Policy and with item 4.2.a of our Code of Ethical Conduct, our Career and Compensation Plan (PCR) does not make a gender distinction in the remuneration between men and women who occupy the same position or bonus role. Thus, considering the same position, salary level, time with the company, regime and working conditions, the ratio of the average compensation between women and men is equal to 1.

However, when we analyze it broadly, it is clear that the special work regimes, which have specific additional compensation, impact the average ratio between the compensation of women and men, indicating a small difference. It should also be clarified that there is a male predominance in the activities associated with these regimes in the oil and gas industry. Despite this, also from this perspective, we are managing to reduce the difference. In 2023, the ratio between the compensation of women and men at Petrobras parent company was 0.97.

## **PETROBRAS PROGRAM AGAINST SEXUAL VIOLENCE**

Aiming to provide a diverse, respectful, safe, and sexual violence-free work environment, in May 2023, we launched the Petrobras Program against Sexual Violence (PPCVS), which centralizes and monitors the execution of actions carried out, and to be implemented, to combat harassment, sexual harassment and violence. The program has been developing actions in four axis:



Information on the salary ratio between women and men, consolidated and by employee category, can be consulted on the **ESG Datasheet**.

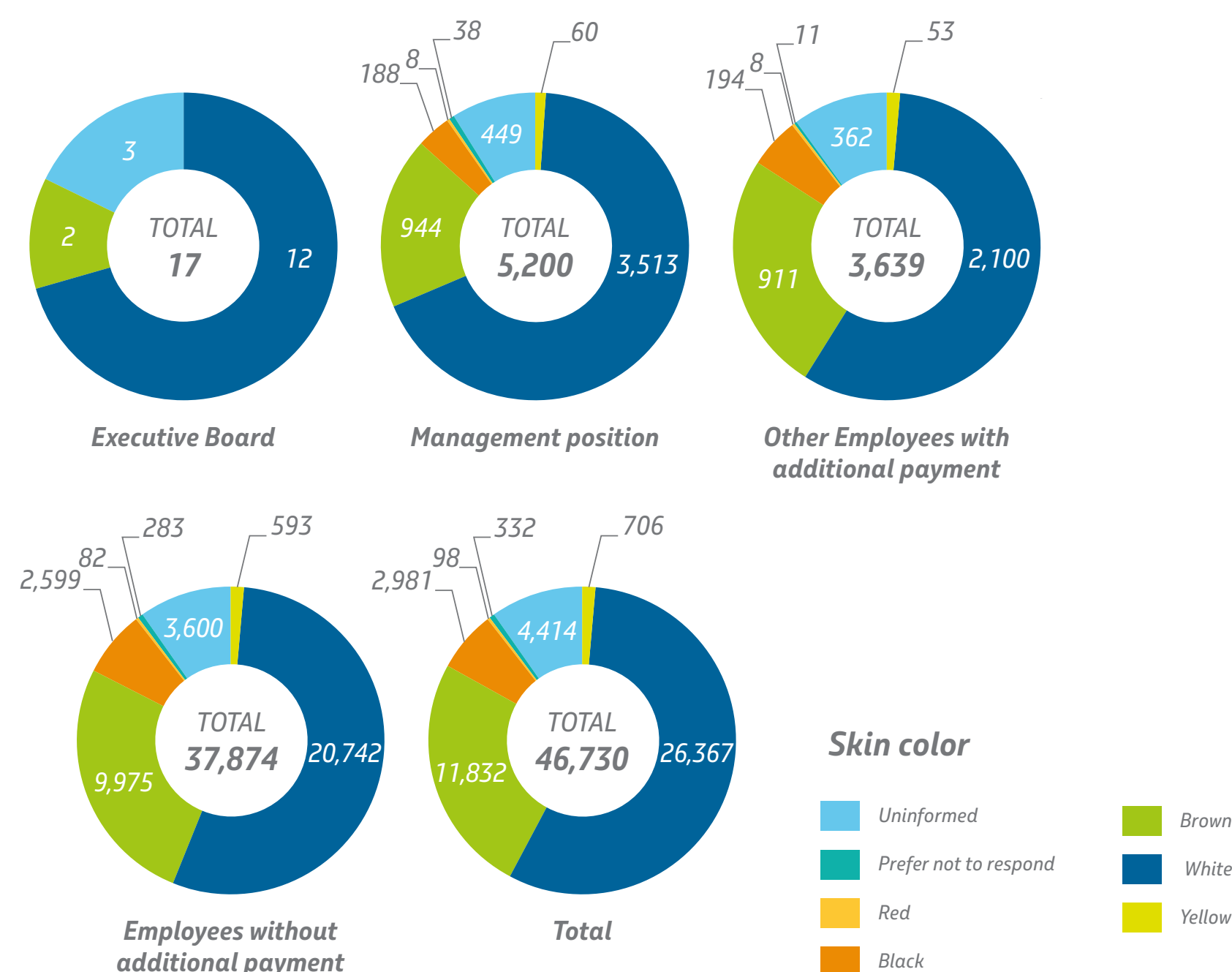
For more information about our actions and goals for diversity at Petrobras, see the **Human Rights and Corporate Citizenship Supplement 2023**.



Specifically in relation to reports of Sexual Violence, we received 136 reports throughout 2023, of which the reported public corresponded to 50% employees, 43% service providers and another 7% that could not be identified. Of these, 53 are undergoing treatment, 52 have been archived, 13 have been confirmed or partially confirmed and 15 have not been confirmed. From confirmed employee complaints, in addition to training, the following corrective measures were applied: five suspensions and one termination of employment contract with cause, in addition to training. As for professional service providers, two were demobilized by the contracted companies.

### AGE AND ETHNIC-RACIAL PROFILE (CONSOLIDATED)<sup>6</sup>

With the aim of promoting greater intergenerational exchange, throughout 2023 we carried out the Bidirectional Mentoring Program, which brings together top leaders and new employees in pairs to exchange knowledge and world views, in order to increase resilience in the face of the transition for some and accelerate learning and the company's systemic vision for others, promoting intergenerational exchange, openness to diversity and mutual respect for all audiences and levels of activity in the organization.



In November 2023, the Petrobras Racial Equity Program was launched. The program was developed based on creation of a working group with representatives from different areas of the company. The Program establishes initiatives that seek to strengthen an inclusive culture, influence the supply chain for the topic and strengthen the health and well-being of Black workers at Petrobras, incorporating racial equity commitments into the company's Strategic Plan.



For more information about Petrobras' Racial Equity Program, see the 2023 **Human Rights and Corporate Citizenship Supplement**.

Our Whistleblowing Channel is prepared to receive incidents related to the workforce. Information on complaints received by the Ombudsman's Office is published annually in the Ombudsman's General Balance Sheet, available at <https://www.petrobras.com.br/en/ouvidoria> and on the Transparency Portal. The reports received are classified by the General Ombudsman's Office into groups and themes, in accordance with best market practices and taking into account Petrobras' specificities and sent to the investigation areas.

<sup>6</sup> The scope of this information is Petrobras parent company, shareholdings in Brazil, and the following shareholdings abroad: Petrobras America Inc., Transpetro International BV, Petrobras Singapore Private Limited, Petrobras Operaciones S.A., Petrobras Colombia Combustiveis. For cultural reasons in some countries, this information cannot be obtained and consolidated for all companies abroad. Notes: Adjustment requested in the Validation ISA.



In 2023, we received 153 reports of discrimination, the reported population of which corresponds to 52% employees, 45% service providers and another 3% it was not possible to identify. Of these reports, 48 were undergoing treatment on 12/31/23, 12 were confirmed and/or partially confirmed and 20 were not confirmed. When reporting persons chose to remain anonymous and did not provide sufficient information in their reports, the Ombudsman's Office archives the complaint. Thus, 73 complaints of discrimination were archived due to insufficient information, or lack of authorization from the complainant or victim to continue treatment.

Complaints of discrimination are investigated by specialized and independent management from the Governance and Compliance Department, when the person reported is an employee. In the accountability stage, two suspensions were applied, in addition to training. With regard to employees of service providers, when a complaint is filed against them for non-compliance with the Code of Ethical Conduct, the appropriate measures are taken by Petrobras' contract management together with the respective employer. In 2023, two contract service providers were demobilized, and a warning was issued, in addition to promoting training.



For more information about Petrobras' Racial Equity Program, see the **2023 Human Rights and Corporate Citizenship Supplement**.

## **STAFF MANAGEMENT**

One of the main challenges for HR management is to ensure ideal staff size for our business portfolio. The analysis of the projected headcount for the coming years, associated with the historical evolution and turnover of our staff, guide the initiatives for adapting personnel to the company's strategies.

Improving internal personnel mobility practices is essential to support portfolio management projects in a flexible and dynamic way. In addition, Petrobras analyzes the staff profile and implements strategies for refreshing the staff, seeking better adherence to the company's needs and challenges, supported by structured planning of employee entrances and exits, training and continuing education programs and analysis of impacts and costs, creating conditions for the maintenance of critical knowledge, entry of new knowledge, and gradual change in the profile of the workforce.

## **Employee recruitment and selection**

Employees are one of our most important intangible assets and the ability to attract qualified and talented employees, as well as retain and nurture internal talent, is critical to our success and sustainability. Thus, Petrobras has sought to strengthen its employer brand and increase diversity in the composition of its workforce. In 2023, 2,177 employees were hired through Public Selection Processes (PSP) at Petrobras parent company, with 20% of vacancies reserved for Black people and 8% for people with disabilities. In addition, the increase to 20% of vacancies reserved for people with disabilities in the next selection for technical level was approved. In 2023, the total number of incoming new hires, including other modalities besides PSP, was 2,275. That year, 744 company employees were laid off, with a turnover rate of 3.86, considering incoming and outgoing people. If we only consider dismissals, the voluntary turnover rate is 1.85% and the total turnover rate is 1.7% and the total turnover rate is 2.2%.

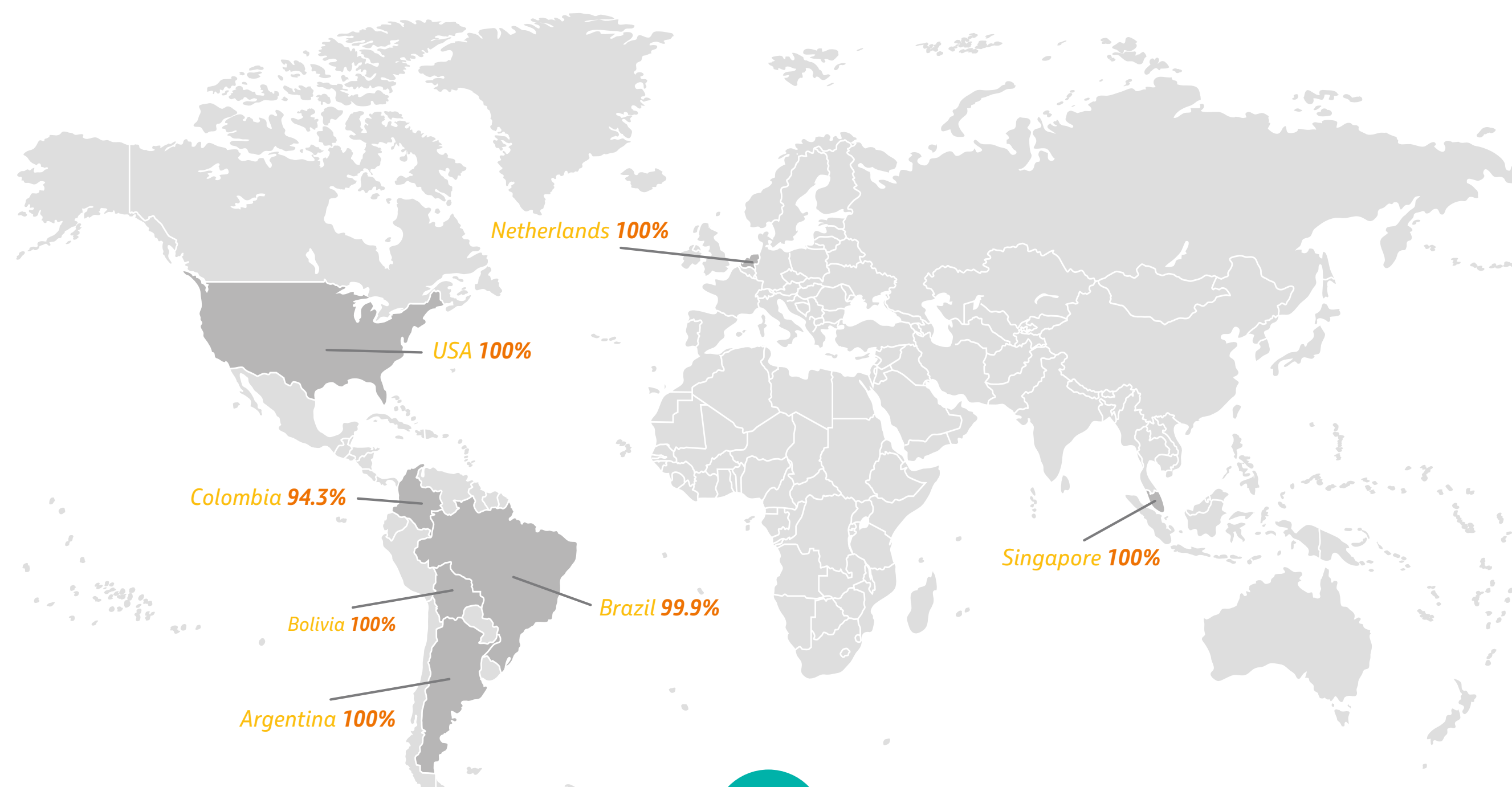


Information on admissions, dismissals and turnovers at Sitema Petrobras (parent company and subsidiaries), consult the **ESG Datasheet**.

### Hiring of local employees

Our admissions in Brazil are made through public selection processes, in accordance with article 37 of the Federal Constitution of Brazil and the job and compensation plan in force. In compliance with the principles of publicity and transparency, the Notice of the Public Selection Process is published in the Official Gazette (DOU) and on the websites of Petrobras and the event organizer. After these publications, the process is also widely publicized in different media. To participate, it is necessary to pay the registration fee and, only after it has been completed, the candidate's registration is confirmed. Exemption from the registration fee may be requested if the candidate is supported by the requirements of Law n° 13.656/2018 (people who are registered in the Federal Government's Single Registry for Social Programs - CadÚnico, whose monthly family income per capita is less than or equal to half the national minimum wage, and bone marrow donors in entities recognized by the Ministry of Health).

One of the basic requirements for admission, among others, is that the applicant have Brazilian or Portuguese nationality (when supported by the equality status between Brazilian and Portuguese nationals), under the terms of paragraph 1, article 12, of the Federal Constitution and the Treaty of Friendship, Cooperation and Consultation, promulgated in Brazil through Decree n. 3,927/2001). Foreign individuals are allowed to be members of the Executive Board if they are national residents, as provided for in our Bylaws. In 2023, people with Brazilian nationality were 99.95% of our employees at the parent company, including senior management. Considering only the Executive Board, this percentage is 100%. In our companies abroad, we have a policy of prioritizing local workforce.



Information on local labor by country and functional category can be consulted on the **ESG Datasheet**.



## Mobility and Career Transition

We seek to attract the best talent without forgetting our internal talents who grew up with the company, understand the organization, its mission and culture. To meet staffing needs, we seek to integrate the internal movement process with the hiring of new employees admitted through a public selection process, thus allowing greater talent retention and optimization of external contracting costs.

The advances in internal mobility are aligned with Petrobras' new strategic guidelines, which foresee the regionalization of activities, the reoccupation of previously demobilized buildings and teleworking. In 2023, approximately 490 employees who expressed interest in internal movement were relocated or authorized to carry out full teleworking.

Furthermore, we have the recruitment modalities provided for in the internal mobility process through structured recruitment and selection which, in 2023, implemented innovations compatible with the context of hiring of new employees. Areas that have vacancies approved for admission via the Public Selection Process (PSP) may choose to initially make these vacancies available to internal candidates. Thus, in order to identify experienced professionals for

new projects or new areas (e.g. Oil Exploration and Production Project in the Búzios field and structuring of the new Energy Transformation Executive Office), Interest Banks were launched in 2023. This type of internal recruitment aims to identify employees interested in working in a specific area. In the case of internal selection, the recomposition of the staff of the employee's original area occurs through the hiring of new employees, allowing an adequate mix of professionals in the areas and providing mobility to the company's employees.

In 2023, we had 10,093 open positions at the Petrobras parent company filled by internal candidates (transfers, assignments, etc) and external candidates (public selection processes, direct hiring, etc). Of these, 7,818 were filled by internal candidates, representing 77% of the total. In the consolidated data, there were 10,367 open positions, of which, 7,821 were filled by internal candidates, representing 75% of the total. It should be noted that internal mobility takes place within the same position (Technical Level Petrobras Professional and University degree r Level Petrobras Professional), with the possibility of changing emphasis within the same position and mobility between positions being prohibited by law.

Safety and operational continuity, attention and respect for people are fundamental principles that we apply in all our actions. In 2023, structured actions of Portfolio Management projects were planned and executed, with prior presentation to union entities regarding actions to demobilize employees to other regions. Furthermore, the company sought to reconcile the company's needs with the interests of employees, whenever possible, offering all employees covered the opportunity to remain in the same state of residence at the time of divestment.

As we believe in the autonomy of our employees and in transparency as a basis for decision-making, we have adopted an integrated change management journey for employees covered by collective transfers. The purpose is to manage different aspects involved in the transition, seeking to reconcile business interests and the diversity of individual situations in this process, contemplating the execution of specific actions for the allocation, movement and adaptation of employees, communication activities and the involvement of stakeholders; occupational health actions; conducting an organizational climate survey and a study of labor impact; as well as training programs.



Communication to employees of plans related to portfolio management occurs four to six months in advance. The execution includes several actions, such as:

- communication to employees about the opening of the Personnel Plan (demobilization and reallocation)
- relocation (communication to the employee at least 60 days in advance of the effective date, in cases of change of municipality and domicile)<sup>7</sup>
- specific dismissal and relocation programs
- qualification and change of emphasis of employees, when applicable

This process also includes a moment of individual support by the Health area, which aims to map cases of exceptionality that may impact the transfer due to socio-family and health aspects. The consultations are performed by our health professionals and treated by a multidisciplinary committee comprised of doctors, psychologists, and social workers. The results are confidential, in respect of people's privacy.

The actions of the Personnel Plans are monitored by the Change Management Committee for Portfolio Management. This committee was established as part of the agreement entered into between Petrobras and the Labor Prosecution Office (MPT), ratified in the case

file No. 0000673-48.2019.5.05.0006 on 12/17/2019, whose purpose was to regulate, under the legal limits, the process of collective transfers of employees impacted by Petrobras' Active Portfolio Management. Among its attributions is to act as an advisory body on issues related to the change management in units undergoing decommissioning, disinvestment, sale, hibernation or leasing of assets, or in collective transfers of employees. The committee has equal composition, with half of its members representing the company and the other the employees.

The Personnel Plan and the Integrated Change Management Journey for Active Portfolio Management represent the commitment to our employees at all stages of the process.

### **Compensation and Benefits**

Petrobras has a Compensation Policy, approved by the Board of Directors, which is directly related to the organizational strategy, focusing on attracting, engaging, and retaining talent; competitive in relation to players that operate in the market where it is located and aligned with its performance culture, providing the construction of value in the medium and long term, taking into account organizational and individual performance. Our job plan and variable compensation

programs are derived from this policy. The readjustment of the compensation tables is the result of negotiations between the company and the unions representing Petrobras employees, during the Collective Bargaining Agreement renewal campaign. The salary adjustment proposals offered by the company during the negotiation are appreciated by the employees through deliberative meetings convened by the unions. Thus, the compensation tables are readjusted due to the terms negotiated and agreed in the Collective Bargaining Agreement.



**To learn about our approach to freedom of association and collective bargaining, as well as the percentage of employees covered by collective bargaining agreements, consult the 2023 Human Rights and Corporate Citizenship Supplement.**

<sup>7</sup> Collective transfers as a result of personnel plans are carried out in quarterly windows.



The Career and Compensation Plan (PCR) establishes our structure of positions and careers, with their respective descriptions of attributions and responsibilities, requirements of their occupants, evaluations, and respective salary ranges. In line with our strategic objectives, the PCR is the instrument that supports the planning and management of our employees, providing support for policies of attraction and retention, recognition and reward processes, functional evolution, and professional development.

The PCR is the job position plan officially in force at Petrobras. It was implemented in 2018, replacing the Position Classification and Evaluation Plan (PCAC), which is in the process of being phased out. Currently, the PCR encompasses 89% of our employees, since the migration to this job plan is optional. Admissions of employees occurring after the beginning of the effectiveness of the PCR will occur exclusively in this plan.

Our positions and emphases are classified based on the score resulting from the position evaluation process, conducted by a specialized consultancy and independent from management, correlated to the result of the compensation survey. Regarding direct compensation, market surveys are conducted annually, being carried out by expert consulting companies, such

as Willis Towers Watson and the Korn Ferry Hay Group. The results demonstrate that the salaries we pay are competitive with the best practices in the oil and gas market. This position has remained stable since 2007. The salary amounts, without any distinction regarding region, gender, or ethnicity, are reviewed and corrected annually through negotiation with unions representing each professional category.

We have a conceptual variable remuneration model, made up of the following programs: Performance Bonus (PRD) and Profit-Sharing Program (PLR), both for employees with additional payment or not. The PRD was implemented in 2023 to replace the former Performance Bonus Program (PPP), which is now only in force for members of the Executive Board. These programs were formatted in light of the company's new strategic guidelines, as well as with a close eye on people and our remuneration policy. Unlike what has been practiced in recent years, this program is intended to complement the PLR, which becomes our main variable compensation practice. With the PRD, the company intends to reinforce the recognition of the effort and individual performance of each employee to achieve Petrobras' results.

The PLR is regulated through a Collective Bargaining Agreement (ACT), which is the result of negotiation between the company and the unions representing employees, with the ACT proposal being assessed by the employees in a deliberative assembly.

We have a current collective PLR agreement for the 2023 financial year for all employees with or without additional payment. In order for the PLR payment to occur, the following conditions must be met:

- declaration and payment of remuneration to the shareholder, referring to the year in question, approved by the Board of Directors;
- calculation of Net Profit for the reference year;
- achievement of the average weighted percentage of the set of indicator targets of at least 80% (eighty percent).

The calculation of the 2023 results indicated the achievement of the triggers proposed in the PLR agreement. Therefore, as established in the PLR rules, in February/2024 an advance was made in the amount equivalent to 1/3 of the premium to which each eligible employee is entitled.

The global remuneration of administrators (Board





of Directors and Executive Board) is approved annually by the General Meeting, in accordance with Article 152 of the Corporation Law (Law no. 6,404, of 12/15/1976). The compensation of Executive Board members considers the economic and financial results, the recognition of management efforts, and their alignment with our short-, medium- and long-term strategies and goals. The compensation of the members of the Board of Directors corresponds to 10% of the average monthly fees received by the members of the Executive Board. There is no difference between benefit plans and contribution rates for the highest governance body, senior executives, and all other employees.

During 2023, the organizational units' scorecards continue to be considered as input for the assessment of the Executive Board (CEO and executive officers), executive managers and other members of our general structure, which are reflected in the calculation of variable compensation.

Thus, in 2023, these scorecards include the following items:

- the results of our key metrics such as: Petrobras Delta Valor (VALOR - which measures Petrobras' economic and financial performance based on the value

generated by its activities (wealth created or destroyed) in a given year), IAGEE (monitors our performance in relation to the direct emission of greenhouse gases in the atmosphere) and VAZO (calculates the total volume of oil and oil products spilled in events with a volume above one barrel and which reached bodies of water or non-impermeable soil); and

- the metric scores specific to each executive scorecard (represented by specific indicators that address economic, environmental, and social factors); and

The higher the hierarchical level, the greater the weight of the main metrics and, therefore, of the multiple compensation associated with the award, reflecting the greater degree of responsibility of the manager in relation to the metrics of his/her area and our performance metrics.

The estimated amount of disbursement will depend on some factors, such as individual employee performance and the company's performance metrics.

For Executive Board members (CEO and Executive Officers), executive managers and general managers, the payment of the Long-Term Incentive (ILP) is deferred over five years, whose amounts will be

referenced by the market price of Petrobras shares without, however, contemplating the granting of stock options for the company. For this audience, 60% of the program amount is paid in cash and the balance of 40% is settled in four deferred annual installments, the value of which is symbolically converted into the corresponding quantity of Petrobras common shares (PETR3), used as the value based on the weighted average of the last 60 trading sessions of the program's reference exercise, providing an impetus for sustainable decision-making. The installments will be received after the established grace periods have been met, upon formal request from the interested party. The value of each installment to be paid is equivalent to the transformation of the symbolic shares into pecuniary value by the quotation of the weighted average of Petrobras common shares (PETR3) of the last 20 trading sessions prior to the order date.

Furthermore, we have mechanisms to protect the company (clawback), where members of the Executive Board (CEO and Executive Officers) no longer earn the cash and deferred installments of the Performance Award Program (PPP) - or the Performance Award (PRD) for Executive Managers and General Managers - in cases of resignation or when applying sanctions provided for in the consequences system.



At the same time, we do not adopt specific remuneration mechanisms for members of senior management, such as attraction bonuses or recruitment incentive payments, nor severance payments.

The relationship between the total annual compensation of the highest paid individual and the average salary of all other Petrobras parent company employees is 6,48, where the highest paid person is the CEO. In 2023, the salary readjustment in the company was 5.66% in the salary tables for permanent positions and 5.66% in the tables for employees with additional payment. The members of the Executive Board (CEO and Executive Officers) had a 9.0% adjustment from April/2023, decided at the Ordinary General Meeting (AGO). The minimum starting salary is BRL 5,878.82 and is equivalent to 4.45 times the current national minimum wage (December 2023), without any differentiation by gender.

In Brazilian subsidiaries, the ratio between the total annual compensation of the highest paid individual and the average salary of all other employees<sup>8</sup> is 6.14. In 2023, the average salary adjustment of subsidiaries in Brazil was 5.66%. The minimum entry wage average is BRL 8,265.20 and is equivalent to 6.26 times the current national minimum wage, without any differentiation by gender.

In subsidiaries abroad, the ratio between the total annual compensation of the highest paid individual and the average salary of all other employees is 3.09.

In 2023, the average salary adjustment of subsidiaries abroad was 7.27%. It was not possible to calculate the average entry salary in relation to the local minimum salary, because several companies are in countries where there is no local minimum salary and entry compensation is made considering the market, experience, and knowledge of the employee.

The ratio between the total annual compensation of the highest paid individual and the average salary of all other employees in the consolidated of all companies is 6.39.

The ratio between the percentage increase in the total annual remuneration of the highest paid individual and the consolidated average percentage increase of all employees is 1.51.

### **Other Benefits**

The Multidisciplinary Health Assistance Plan (AMS), named Saúde Petrobras, is a health insurance offered by the company, which operates in the dimensions of health promotion, prevention, and recovery. The benefit is available to our active employees, retirees, pensioners, and their respective family groups. The

plan's care segmentation covers outpatient, inpatient, obstetric and dental health care services, with an area of national coverage and performance and individual type of inpatient accommodation. In 2023, the Multidisciplinary Health Care Plan ended the year with 261,539 beneficiaries distributed across all states of the Brazilian federation. The benefit costing ratio was 60% for the employer and 40% for the employees, complying with the provisions of the ACT 2023-2025.

The AMS Plan also provides coverage for supplementary programs, such as the Care program and the Pharmacy Benefit (Benefício Farmác program. The Benefício Farmácia program offers coverage for drugs for the treatment of chronic or psychiatric diseases, in addition to others considered high cost.

We also offer educational benefits, aiming at contributing to the training and education of the children of employees. These benefits do not cover our administrators, who are members of the Board of Directors and Executive Board. They also do not include Fiscal Council members. The educational benefits are financial amounts granted for reimbursement with educational expenses.

<sup>8</sup> For the relationship between the total annual remuneration of the highest paid individual and the average salary of all other employees, the weighted average was used, considering the headcount of each company.



In addition to the benefits mentioned above, we have implemented other measures aimed at the well-being of our employees, such as the granting of hourly allowances to employees with disabilities and employees who have children with disabilities, who are enrolled in the Special Assistance Program (PAE) and that need assistance with medical appointments and/or therapies. The allowance for employees who have children with disabilities has been extended to up to 240 non-cumulative hours per year. In 2023, 338 employees received the aforementioned bonus.

In the case of medical leave due to health reasons, we apply the supplementation of sick pay and the ACT benefit for 48 months if work-related, and 36 months if it is not, the first for employees on sick pay for more than 15 days. Reduced hours employees have the same benefits as employees in regular working hours.

### Pension Plans

We sponsor six post-employment benefit plans, operated by the Petrobras Social Security Foundation (Petros), focusing on social security:

- Petros Plan of the Petrobras Renegotiated System (PPSP-R)

- Petros Plan of the Petrobras Non-Renegotiated System (PPSP-NR)
- Petros Plan of the Petrobras Renegotiated System Pre-70 (PPSP-R Pre-70)
- Petros Plan of the Petrobras Non-Renegotiated System Pre-70 (PPSP-NR Pre-70)
- Petros Plan 2 (PP-2)
- Petros Plan 3 (PP-3)

Together, these plans cover 93.3% of our employees, considering that the plans are offered to all employees and adherence is optional.

### Parenting

All employees who have proven the birth or adoption of a child are eligible to take maternity (primary caregiver) or paternity (secondary or non-primary caregiver) leave. In addition to the legal determination, our employees have the right to an extension of maternity leave, reaching a total of 180 days, and to an extension of paternity leave which, from November 2023, during the negotiation of the Collective Labor Agreement, became 30 days. The extension of maternity leave is also guaranteed in case of hospitalization of the mother or baby, for the duration of the hospitalization.

In 2023, Petrobras approved, in a pioneering manner, maternity leave for non-pregnant mothers. As provided for in the Collective Labor Agreement, Petrobras grants a 120-day maternity leave - with the option to extend for an additional 60 days or for an additional 120 days with a 50% reduction in working hours - to non-pregnant mothers. Non-pregnant mothers are considered female employees whose maternity leave benefits are not covered by Social Security and who are listed as mothers on the birth certificate or custody document for adoption purposes.

At Petrobras parent company 995 employees were on paternity leave, one female employee on paternity leave and 328 employees were on maternity leave, making a total of 100% of employees entitled to maternity/paternity/adoption leave. The parent company's return to work rate was 100% and the parent company's employee retention rate was 99.4 % in 2023.



In 2023, we increased the number of breastfeeding support rooms from 21 to 26, distributed across operational units and office facilities.

### **Performance Analysis**

The analysis of individual employee performance takes place through the Performance Management (GD) process, which assesses competencies and goals. For senior management positions, a multidimensional assessment is applied, incorporating peer and superior views, as well as self-assessment. Goals are based on objective metrics, derived from the top management scorecard. Based on these metrics, we seek to ensure that individual and shared goals are distributed from leaders to teams, contributing to the achievement of our top metrics. This process is carried out in a four-step cycle: planning, monitoring, and feedback, reviewing goals, and assessment.

For the evaluation cycle of 2022 (conducted in the first quarter of 2023) 100% of eligible employees for performance management process were assessed. The 3,458 employees not assessed, representing 8.6% of the total number of employees on december 31, 2023 (40,213), were considered not eligible for assessment, as established by the company's process regulations.

As a way of recognizing the contribution of our employees at Petrobras parent company, reflected in the performance management process, in 2023, the annual professional career progression program was applied, called Increase by Merit, which aims to promote the culture of meritocracy through the recognition and reward of employees with differentiated performance, considering deliveries and behaviors in the different levels of complexity required and levels of compensation.

In this edition, more than 21,800 employees occupying mid-level and higher-level positions in the Career and Compensation Plan (PCR) were considered, observing the financial resources to contemplate 50% of the total number of eligible employees. For employees with additional payment, according to the resources made available to cover 30% of those eligible, 2,700 employees were contemplated with salary progression in the tables of the respective employees with additional payment (management position, specialist or supervision).

In the set of employees that were considered, the proportion of men and women was very similar to the pattern found in the company's total workforce, so that asymmetries or expressive systematic biases were not found.

### **Training**

Training our employees is a value for the company. We provide an internal infrastructure for training at Petrobras University and at our units across the country, in addition to providing methodologies and teaching technologies to assist with the application and access to employee content. We invested BRL154 million in training in 2023.

Based on the performance evaluation and our Strategic Plan, training needs are identified, which are negotiated between the manager and each employee. Considering Petrobras' consolidated data, the average hours of training per employee in 2023 was 71.

Petrobras University has a network of 13 Science and Technology Centers, focusing on the company's various business areas, which prepare and provide specific programs and development actions for the entire workforce, always seeking alignment between the actions offered and the company's Strategic Plan.

We highlight the following training/development actions carried out throughout 2023:

- More than 2,300 new employees went through Training Courses before being allocated to the area of activity;



- Expansion of the Petrobras University infrastructure, with the opening of two Campuses – EDIRN, in Natal/RN and Pituba, in Salvador/BA – and five teaching laboratories (Submarine Engineering Laboratory – LABSUB, Multidisciplinary Geosciences Didactic Laboratory – MULTILAB, Immersion Laboratory in Process and Equipment Simulations – LISPE, Dynamic Equipment Vibration Laboratory – LAVEDIN and Experimentation and Leadership Development Laboratory – LIDERLAB);
- Resumption of training in the areas of Petrochemicals and Fertilizers, aligned with Strategic Planning;
- Creation of a specific program for training in Energy Transition;
- Provision of Training Programs focused on company leadership (U-LEAD and Make It Happen);
- More than 50,000 employee enrollments in external training, reinforcing the company's commitment to the search for knowledge, integrating its businesses, and fostering a healthy relationship with other companies in the industry.

In addition to training and development programs, we also provide an assistance program for the

transition to retirement, the Retirement Preparation Program (PPA) aims to develop with the participant a broad and critical understanding of retirement, contributing to the appreciation of employees and their quality of life. This program targets people who are up to five years away from retirement and people who are already retired. It encourages reflections and shares information that allows them to carry out processes of preparing for retirement through informative and reflective talks, such as: Health and Quality of Life, My Pension Fund, Financial Planning, PETROS Plans, AMS Health Plan, Retirement Life Planning and Future Project. In May 2023, a PPA class was held, with the participation of 231 employees.

For employees enrolled in Voluntary Severance Programs, severance pay is increased by compensation installments that take into account the employee's remuneration and length of service.

In addition, we prepare our employees for mobility within the company itself, whether through career transition actions or assuming new responsibilities, through the development of soft skills, in order to develop employees' interpersonal and relationship skills. In 2023, the Petrobras Soft Skills Development

Program had over 36,000 participants in development actions, while the Lider 4.0 Course had 359 approved leaders.



Information on training hours by gender and functional category can be consulted in the **ESG Datasheet**.

# SAFETY, HEALTH, AND WELL-BEING

[11.9.1] [11.9.2] [11.9.3] [11.9.4] [11.9.5] [11.9.6] [11.9.7] 11.9.8] 11.9.9] [11.9.10] [11.9.11]

The theme of safety, health and well-being brings our approach to achieving healthy and safe working conditions, including efforts to prevent physical and mental harm to workers and to promote health, seeking to avoid negative impacts such as fatalities, work accidents and occupational diseases.

Our Health, Safety and Environment (HSE) Policy states that our safety, environment, and health activities include five principles that guide and support the decision-making process and the behavior of all employees. The principles of our HSE Policy are:

- HSE as a value
- Respect for life
- Risk based management
- Business sustainability
- Performance excellence and transparency

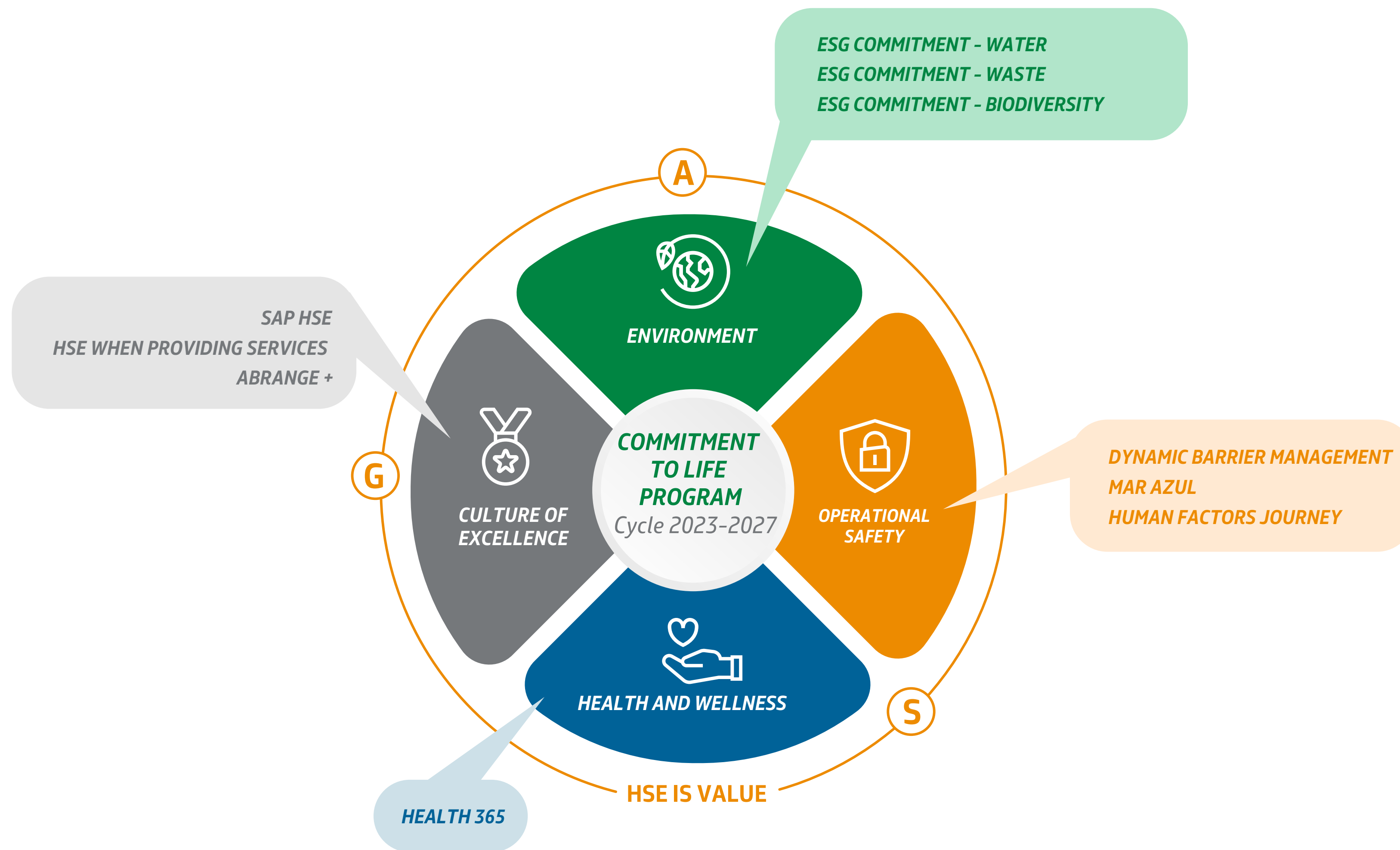
Each of these principles is broken down into standards that detail the company's ways of operating. In our 2024-2028+ Strategic Plan, we maintain respect for life, people, and the environment as one of our values. Therefore, we work constantly to occupy a position of excellence in HSE in our segment of activity with safety, respect for the environment and full attention to people, pursuing a Total Recordable Injury Rate (TRIR) below 0.7 and zero fatalities.

Furthermore, we integrated ESG (environmental, social and governance) elements into our plan into a single vision, summarizing our position on the subject. More than a concept, ESG is a risk/return view of how the company should act to mitigate risks and ensure its sustainability for the future, using the best environmental, social and governance practices.

Our ESG diagram guides planning and engagement with stakeholders and is aligned with our strategic elements and goals. In this theme, one of the

commitments made the promotion of safe operations, based on the protection of life and the promotion of the well-being of our more than 40,000 employees. Our goal is that, at the end of their workday, each employee can return healthy and safe to their family, and for this reason, in October 2016, we launched the Commitment to Life Program. The Program is made up of structuring projects defined based on critical analysis of HSE management, with reference to best market practices, and, in its seventh cycle, initiated and developed throughout 2023, we can highlight the following actions:

## COMMITMENT TO LIFE PROGRAM



The actions planned for the Commitment to Life Program are periodically reported. The progress of the program is monitored at several organizational levels, culminating in the evaluation by Executive Board and the HSE Committee of the Board of Directors.

At the moment, our more than 40,000 employees (100%) are covered by our HSE management system. Our service providers also use this system when they are on the company's facilities and are even evaluated by the HSE Management Assessment Process (HSE-MAP). Among the assumptions for its execution are the legislation in force and resolutions of regulatory bodies, such as the Regulatory Norms (NRs) of the Ministry of Labor and Employment, the legislation of the Ministry of Health, the resolutions of health professional councils, the General Law of Data Protection, Social Security Legislation, and resolutions from the National Petroleum Agency (ANP), among others.



Furthermore, every service provision contract has an HSE attachment with the health and safety requirements that contracted companies must comply with regarding their employees. Compliance with these obligations is monitored through contractual management and HSE-MAP assessments, which include mechanisms for evaluating and improving HSE performance throughout the company. The treatment of points for improvement identified in the periodic evaluations of the HSE-MAP contributes to the continuous improvement of our HSE management system.

## **EMPLOYEE HEALTH**

We take care of workers' health 365 days a year, going far beyond meeting legal occupational health requirements. We are with employees from the first step of their health journey in the company, through the promotion, prevention, and preservation of physical, mental, and social well-being, aiming for healthy and productive work environments.

We offer continuous health actions that contribute to the adoption of healthy attitudes and behaviors, bringing employees to the center of care. Our health promotion programs include individual, collective and environmental actions. Among them, we highlight

actions of: Health Education; Prevention and Control of Chronic Noncommunicable Diseases (NCDs); Promotion of Healthy Eating; Promotion of Physical Activity; Prevention, Approach and Monitoring of Treatment of Problems related to the Use of Alcohol, Tobacco, and Other Drugs; Pregnancy and Lactation Care; and Mental Health Promotion.

Through Health Surveillance, we act in the identification, monitoring, and assessment of health risk scenarios. Epidemiological analyses of the employee population are carried out and the external epidemiological scenario is monitored. These inputs encourage strategic drivers for prioritizing health actions. In 2023, two major strategies related to the United Nations (UN) Sustainable Development Goal (SDG) 3 were defined: Promotion of Mental Health and Reduction of Sedentary Behavior, commitments made in our 2024-2028+ Strategic Plan.

In March 2023, we joined the Mind in Focus movement, which is part of the United Nations Global Compact's 2030 Ambition initiative. Our goal is to address mental health in a preventive and humane way as an ongoing theme that is integrated into our business strategy. As initiatives, we carried out mental health training

for 100% of leaders and launched the Organizational Well-being Manifesto, which defines the concept of well-being as "the dynamic result of the interaction between aspects relating to life in its entirety, management of the environments where work is carried out and the relationship between people, aiming to promote integral health, quality of life, psychological safety, respect for diversity, cooperation, satisfaction, learning, recognition, in order to contribute for the sustainability of people, business and society".

As a result of reporting cases of harassment, embarrassment, and gender-based violence occurring at our facilities, we structured the Petrobras Program against Sexual Violence (PPCVS), in joint action between several areas, including the HSE executive management department. We created organizational well-being management area, responsible for planning, advising, and structuring comprehensive health care actions for people affected by violence at work in our facilities, including those of a sexual nature, through individualized humanized care and collective interventions related to biopsychosocial health in impacted environments. We created an Support Channel that offers specialized individual assistance 24-7 to our entire workforce.





We maintain a Psychological Support Service for mental health situations such as anxiety, depressive symptoms, stress, or psychological distress. Additionally, at the end of 2023, Petrobras' supplementary health assistance (AMS/Saúde Petrobras plan) implemented the Cuidar Program - Mental Health, in which beneficiaries over 18 years of age can receive remote Mental Health care with an interdisciplinary team, comprised of psychiatrists, psychologists and nurses, on an emergency basis or within an individual care plan defined according to the diagnosis. In the case of a highly complex diagnosis and/or in need of in-person follow-up, the beneficiary is advised to seek out the accredited network in their region for specific and continued treatment.

We have established a corporate goal to encourage active lifestyle and reducing sedentary behavior, seeking to reach more than 50% of physically active employees by 2030, considering how much physical activity contributes to a healthier life and to reducing mortality from chronic non-communicable diseases. To achieve this, we develop projects to promote healthy habits and health-promoting environments. The Ativa Petrobras Project, for example, encouraged participation in running and walking circuits in 2023 with discounts for employees and family members, and

promoted events such as the Petrobras Running and Walking Circuit, aimed at employees, service providers and family members, having its first stage held in Rio de Janeiro, with 3,000 registrants.

In 2023, we expanded health assessments, strengthening the concept of comprehensive worker health care promoted by the company. We use a more comprehensive approach than the requirements of regulatory standards, including the management of health risks not related to work, such as men's and women's health care and the screening of highly prevalent chronic diseases. Dental and nutritional health assessments are part of the periodic examination, in order to promote comprehensive health, with a focus on changing habits and lifestyle.

It is noteworthy that we have corporate standards and guidelines for the development and execution of the Occupational Health Medical Control Program (PCMSO), standardized by NR-7 (Regulatory Standard 7 of the Ministry of Labor and Employment). The risk factors involved in our operations are controlled and described in the Risk Management Program (PGR) and in the PCMSO. The areas of Occupational Health, Occupational Safety, Occupational Hygiene and Ergonomics work in integration,, aiming to protect and

maintain the health of employees.

In line with regulatory and legal requirements and aiming to protect and preserve the health of employees, we periodically and systematically carry out health assessments and monitoring of our employees, allowing any work-related health problems to be identified early. We have a corporate standard with technical guidelines for the prevention, investigation, diagnosis, and monitoring of occupational diseases in accordance with current standards and legislation. For the management and guarantee of legal compliance, tools to control occupational health leaves are used, improving the processes for better employee experience and actions to engage and training leadership in the care for complying with legal provisions and standards relating to health and safety at work.



Through the Percentage of Health Time Lost (PTP-S) indicator, which measures the prevalence of hours lost due to absence due to illness or accident based on the planned work schedule and workload, we measure and monitor absenteeism due to health-related causes. For employees on leave for more than 15 days, we offer the Labor Potential Restoration Program (PRPL), which aims to monitor in an interdisciplinary way employees who are on medical or dental leave, aiming to evaluate and, whenever possible, develop strategies to restore working potential and reintegration into work.

Health Surveillance plays a fundamental role in the context of our collective health actions and is based on our strategic pillars, such as care for people and the integrity of our work processes. Its management model, based on a vision of health risk and compliance with current health legislation, is aligned with SDGs 3, 6 and 8.

We establish internal standards and guidelines for the identification and treatment of health risks, we carry out regular and extraordinary health inspections to assess legal compliance and the health risk of your facilities and we work on the constant training and development of professionals involved with the topic. Also, we monitor topics of health interest, such as the areas of food, health services, water and air

quality, hygiene and cleaning of environments and clothing, and pest and vector control. These strategies enable robust health management, which acts more effectively in maintaining and promoting the health and well-being of our workforce.

In acquisition and divestment projects, assessments are carried out covering environmental, safety and health requirements, including, in this last pillar, requirements related to occupational hygiene, ergonomics, health surveillance and sanitary conditions of new facilities.

## **EMPLOYEE PARTICIPATION**

### **Health and safety participation, committees, and commissions**

All of our employees are represented on formal health and safety committees. In our operating units and administrative facilities, the Internal Commissions for the Prevention of Accidents and Harassment (CIPAs)



**Information on employee access to health services and health promotion programs offered by the company can be consulted in our Human Rights and Corporate Citizenship Supplement.**

are responsible for reporting risk conditions in the workplace and contributing to the preservation of the health, well-being, and physical integrity of employees. These commissions discuss HSE issues for company employees and contractors, with annual meetings held with representatives of the unit's CIPAs and the contractors that work there (integrated SIPAT). The members of the committees receive training, follow routines to verify the safety conditions of the facilities and the actions implemented to improve these conditions and participate in accident investigations.

Employees are also present through their union representatives. We invest in permanent and effective dialogue with trade unions. An example of this are the periodic meetings of permanent, local, and corporate committees, held to deal exclusively with occupational health and safety issues. In 2023, HSE working groups with trade unions were established to discuss topics such as Mental Health, Workplace Safety and Teleworking, aiming to maintain a healthy and safe working environment. It is also through the negotiation of the Collective Labor Bargaining Agreement that unions take the main health and safety demands to employees for deliberation, in assemblies, reinforcing our commitment to life, people and the environment, in addition to social dialogue permanent relationship between the parties.

From an ESG perspective, with a focus on promoting mental health and well-being, since 2021 our Intersector Organizational Well-being Committee has been responsible for monitoring and proposing actions to promote organizational well-being.

## SECURITY

Our Safety Management System is based on the best practices of companies in the sector, being in line with the main management standards and regulations of regulatory bodies such as the National Agency of Petroleum, Natural Gas and Biofuels (ANP), which deals with ensuring safety operating industrial facilities.

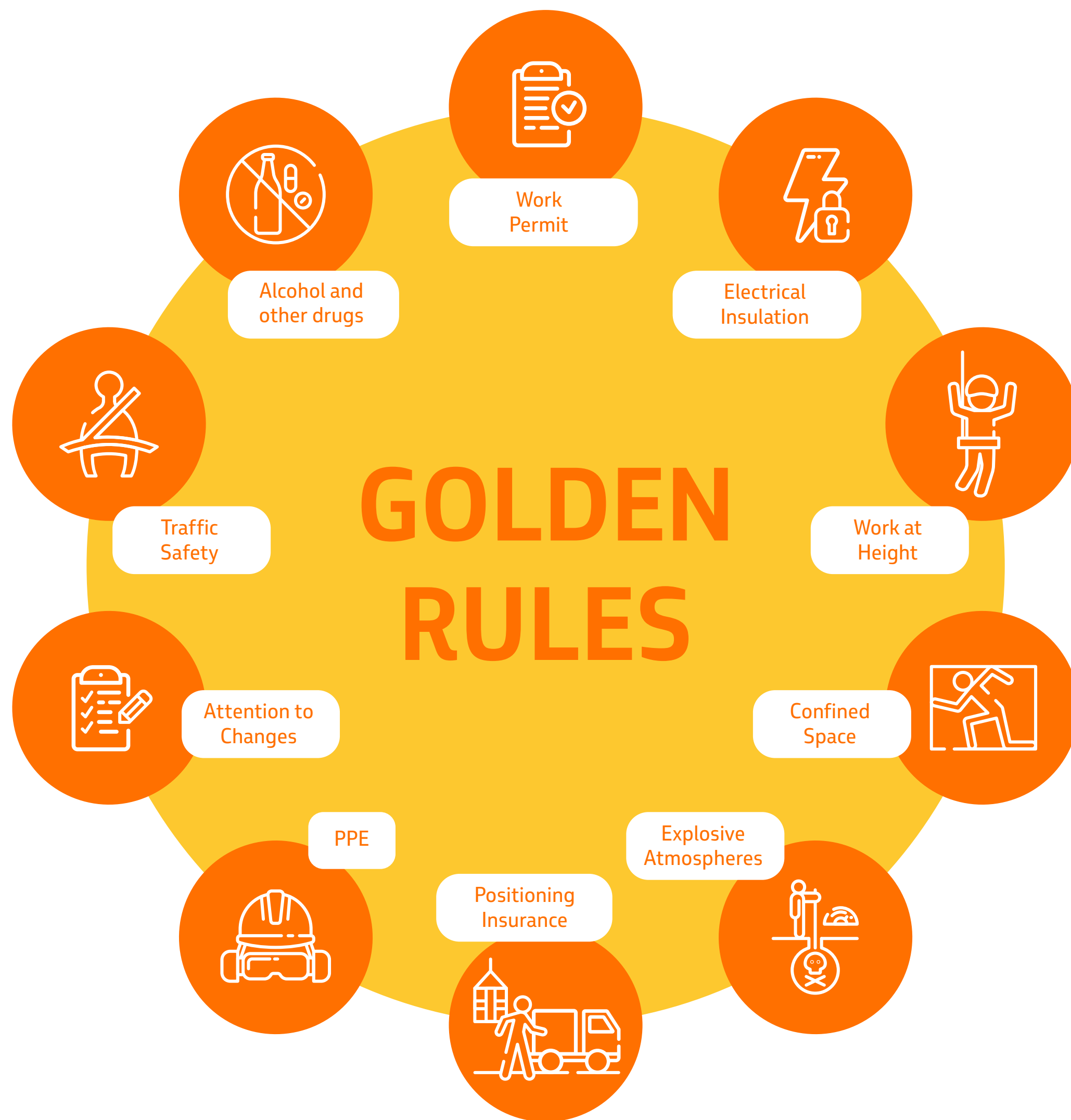
Aiming at the continuous improvement of our HSE management system, specific structuring programs and initiatives are developed, such as the Commitment to Life Program, the Golden Rules, and the Fundamentals of Process Safety.

Since the launch of the first Commitment to Life Program in 2016, we had a significant reduction in the Total Recordable Injury Rate (TRIR) from 2.15 to 0.80. We are working to have a high-performance culture, which demands health, respect for the environment and safety.

The Commitment to Life Program also plays a decisive role in guaranteeing the results required for portfolio management, as it contributes to the continuous improvement of our HSE indicators. The Program promotes increased awareness among employees about caring for life, through training and qualification of teams and structuring actions.

In order to support the safety culture, in 2016, ten safety Golden Rules were defined based on the most recurring accidents in the oil and gas industry and our history. Training on the Golden Rules is mandatory for all our employees in Brazil and abroad.





Before each activity, the employees involved are presented with the HSE risks inherent to the activities to be performed, and depending on the nature of the activities, Work Permits are released. In addition, at the place and at the time of execution of the works, there is the practice of Task Safety Analysis (AST, Portuguese acronym). If any situation appears to be risky, the work must be stopped, and if there is an unforeseen event that poses a risk to safety or life, the employee can and must exercise his right of refusal to proceed. In these situations, employees are instructed to interrupt the activity and report the occurrence to the hierarchical superior, who must maintain the suspension of activities until the situation returns to normal, if serious and imminent risk is verified. Due to the fact that the Safety, Health, and Environment Policy establishes HSE as a value and as one of its principles is that all activities are duly supervised and must comply with our HSE standards, there is support from the company that reprisals cannot occur against workers who ensure safer operations. In any case, we provide the Whistleblowing Channel for cases of reprisals and retaliation, and whistleblowers can choose to remain anonymous.

Also, the process accident analysis indicated that the application of a set of “Process Safety Fundamentals” (FSP) would have the potential to eliminate a significant portion of these events. This result highlighted the importance of this accident prevention strategy and led to efforts to implement this initiative within the scope of the Commitment to Life Program.



Information about the Whistleblowing Channel can be found in the chapter **Business integrity**.

PSFs reinforce good practices, already known on operational fronts, so that they are followed by teams and supported by supervisors and leaders. We expect the dilemmas faced by the operational fronts to comply with PSFs are raised, and that process safety issues become a daily conversation with the leaders involved.

Process Safety Fundamentals complement the Golden Rules, focusing on Process Safety issues. Five fundamentals were then defined and brought together in our Process Safety Fundamentals Manual. They are:



During the implementation of the Process Safety Fundamentals, several actions such as raising awareness among leaders, establishing focal points for the theme at the units and training the operational fronts in the distance learning modality were carried out. The Process Safety Fundamentals are already included in the company's HSE management system.

Also within the scope of the Commitment to Life Program, the Dynamic Management of Barriers (GDB) project deserves to be highlighted, for technical training and the adoption of best practices and technological solutions that optimize the management of the integrity and availability of protection barriers against the most significant process accidents in our industrial facilities. In 2023, this initiative advanced to a total of 32 process units as part of the project scope.

Also noteworthy was the creation of an emphasis on process safety in the company's job structure, with the opening of a public selection process in 2022 to attract professionals in this area, to strengthen this focus in the Commitment to Life Program. We have a total of more than 90 employees trained in process safety who have joined the workforce. It is worth highlighting that their training is recognized as postgraduate degrees by the Ministry of Education (MEC).



In a complementary way, we have advanced in offering market postgraduate courses for professionals who already work in the process safety area.

HSE is in our vision, in our purpose and in our values. More than part of our culture, it is present in everything we do on a daily basis: from the uniform and personal protective equipment we use, to the Golden Rules we follow and the care we take with each other to keep us safe at all times.

Our commitment to employee safety is also reflected in the management of transport vehicle contracts. In 2023, vehicles used in cargo and passenger transport contracts traveled more than 120 million kilometers, transporting employees from operating units, machinery, and equipment for our operations. These activities are regulated by corporate safety standards in road transport, in order to guide safety management in exclusive transport contracts at our service, both for people, products and cargo. This standard covers the management of road transport risks associated with people, vehicles, and the surrounding environment on major routes. Each Petrobras area responsible for transporting people or cargo has standards that detail the specific requirements for its activity.

In 2023, aviation safety audits were carried out at ten airlines, 140 helidecks of maritime units and 14 airports, in order to guarantee the safety conditions of aircraft and facilities. Our fleet of 79 aircraft transported more than 919,000 own and contracted passengers, in around 41,000 flights, for a total of 78,000 flight hours, transporting more than 116,000 cargo items weighing approximately 1060 tons in total.

### **SAFETY AND HEALTH TRAINING**

In addition to mandatory safety and health training automatically managed and operationalized through curricula in the Integrated Human Resources System (SIRH), with a portfolio of more than 250 educational solutions distributed in legal, regulatory and mandatory training for all our employees, as per external legislation, standards and internal procedures, 33 development tracks on critical HSE topics were developed and made available for guided self-learning, including non-technical skills linked to human factors and digital skills.

There are more than 450 educational solutions in safety and health available in the Integrated Human Resources System (SIRH), with more than 389,000 participations in 2023 and an average rating by participants of 4.6 out of 5.0, with management

and control of implementation in analytical panels for leaders, their delegates, and the employees themselves.

We can highlight some training in 2023 due to its importance and criticality for the Commitment to Life Program, such as: Mental Health for Leadership (100% of leaders trained), Human Factors Laboratories, SAP HSE, HSE in Contracts, Management of Barrier Dynamics, New HSE Policy, HSE Audit and Coverage (Anomaly Coverage System), in addition of training courses for the emphases of Process Safety Engineering, Occupational Safety and Occupational Safety Technician and Nursing, including, in these trainings, the conceptual stages, technical and experiential visits, aiming for these new employees to arrive at the Operational Units with the necessary readiness and skills.



HSE distance learning solutions are available with audio and subtitles for employees with visual and/or hearing impairments, in line with the company's accessibility guidelines, and are also translated into English and/or Spanish when required by the areas, according to the target audience.

The application of new digital teaching and learning tools also enhanced the exchange of knowledge and best practices between technical HSE networks and enabled employees to take a leading role in their development process, with digital curation of content. The modalities of distance courses are divided into asynchronous, without the presence of the instructor, and synchronous, with the presence of the instructor.

Below are some numbers of HSE content, in different formats, made available in these new teaching, learning and awareness tools:

- HSE Content Portal: centralized repository of HSE content in the cloud with more than 6,000 contents with intelligent search capabilities;
- Streams: more than 30 channels according to HSE development and internal conference tracks, containing videos, recordings of webinars, synchronous sessions, interviews and videocasts about HSE;

- Petrobras Workplace: 13 thematic groups on the internal social network, with systematic knowledge exchange.

- More than 700,000 participations in HSE development actions, including local development actions at the Units.

Strengthening organizational learning in HSE is a strategic driver, included in the HSE policy and unfolded in different actions. We highlight the delivery, monitoring and continuous improvement, with better user experience using a subway map, of the 33 development tracks in critical HSE themes, namely: Operational Safety – Human Factors; Process Safety; Occupational hygiene; Investigation of Anomalies in HSE; Occupational Safety; Safety in Diving Activities; Initial inspection of electrical equipment and facilities in classified areas; Ergonomics and Health – Health Management; Integral Health; Occupational Health and Health Surveillance.

The purpose of the tracks is to develop structured knowledge management, mapping the topics and critical knowledge relevant to the areas, identifying the technical references for knowledge, and accelerating learning through the combination of different educational solution formats.

The tracks were created using andragogical methodologies that favor the strengthening of collaboration networks. To facilitate user experience, the tracks were automated and made available on the corporate system for employees to take, according to their time availability and through any mobile device.

## **OCCUPATIONAL HEALTH AND SAFETY INDICATORS**

To assess the HSE management system, the Health, Safety, and the Environment Management Assessment Process (HSE-MAP) is used. This Process is based on verifying compliance with the standards derived from the 15 HSE Corporate Guidelines and legal requirements. The HSE-MAP aims to reduce the risks of accidents and incidents and their impacts on industrial processes, people, and the environment, promoting learning and continuous improvement of HSE performance.

One of our top metrics is the Total Recordable Injury Rate (TRIR) per million man-hours. Within an evolutionary and continuous improvement process, our TRIR indicator – which, until 2015, was above 2.0 – has, in the last three years, been consolidating close to 0.7. The historical series demonstrates that we, together with the oil and gas industry, have been reducing these rates in recent decades, having achieved the best

historical result, in the 2020 – 2021 biennium, during the period of the Covid-19 pandemic. With the full resumption of activities in 2022, a return to 2019 levels can be seen, not only in the company, but throughout the industry. We monitor critical process indicators monthly, in our critical analysis meetings, notably their top metrics such as TRIR.

In 2023, we obtained an TRIR of 0.80, 18% above that achieved in 2022, when we achieved a result of 0.68, with 0.67 being the average of the last three years. The industry average TRIR in 2022, according to the International Association of Oil & Gas Producers (IOGP) Annual Report, was 0.90, which represented a 17% increase compared to the industry in 2021 (0.77). It is therefore observed that our performance has been consistently better than the industry average. Additionally, we have halved our number of serious and fatal incidents compared to 2022.

In accordance with the existing management mechanisms, several initiatives were launched, such as: immediate execution of local actions in the units in order to prevent new events of a similar nature, creation of a working group with the purpose of proposing additional response actions and maintenance of execution of structuring initiatives

that aim to reduce accidents, which make up the Commitment to Life Program. By carrying out a critical analysis of the events that make up the TRIR, it was possible to direct strategic initiatives for the year 2024. The actions also focus on reducing more serious events, in line with the ambition of ZERO Fatalities.

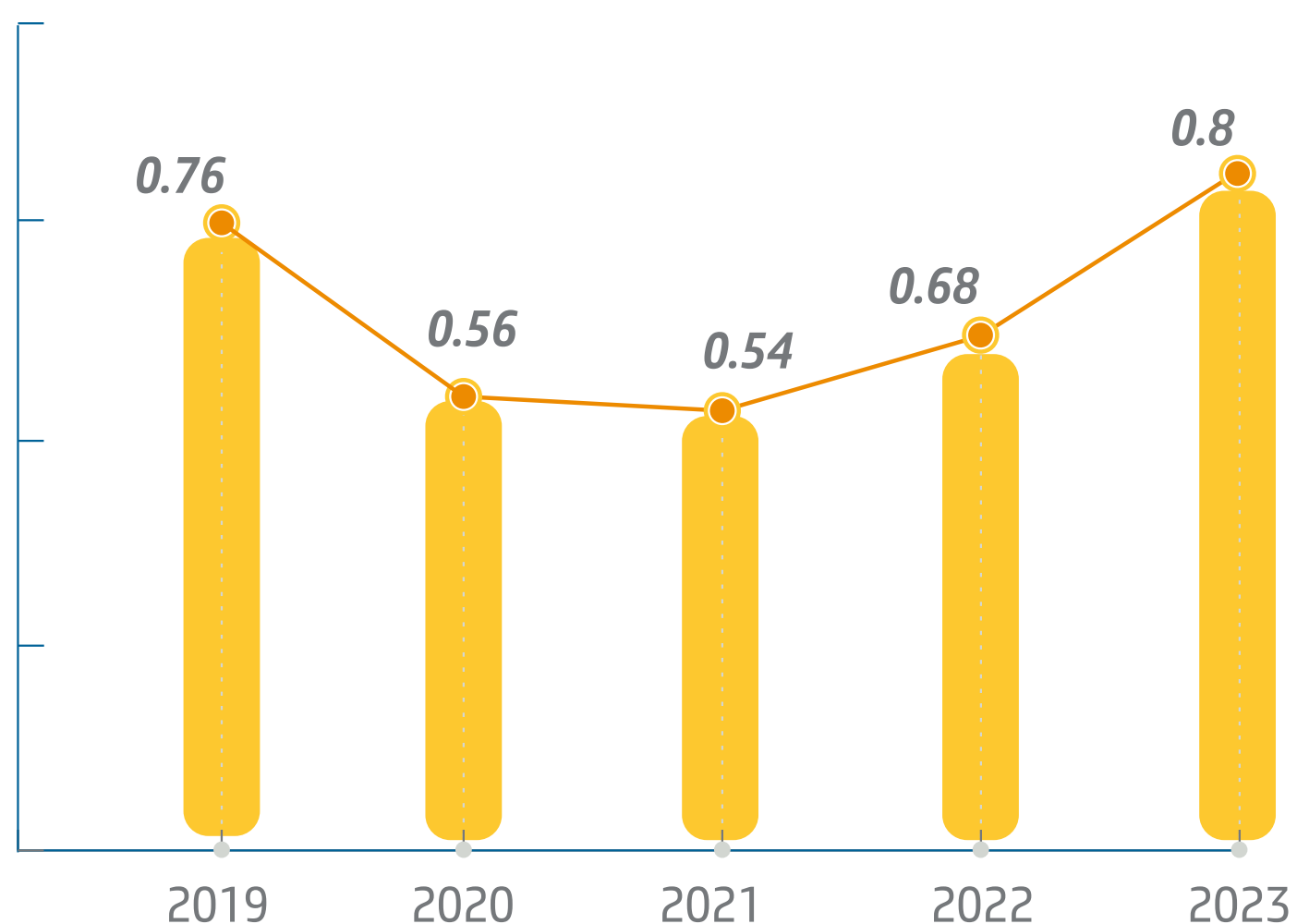
The TRIR for employees is 0.41, while the TRIR for contractors is 0.92, indicating the need for intensified actions with the supply chain to improve the indicator. We had 37 recordable injured employees and 261 recordable injured contractors. Out of the total of accidents with time off, 23 involved our own employees and 150 involved contracted employees, resulting in a Lost Time Injury Frequency Rate (LTIF) of 0.25 and 0.53, respectively. In 2023, there were two fatal accidents, both involving employees of contracted companies during the execution of our contracts, resulting in an index of 0.53. In both cases, the involved contracted companies assumed the management of the funeral costs and provided support to the families (financial and psychological), which we monitored to ensure proper support. All accidents were analyzed, and a multidisciplinary team identified the root causes and established action plans to prevent further occurrences. Lessons learned were implemented in all units, contributing to the reinforcement of preventive measures in our management system.



Information on the constant improvement of the integrity and reliability of the company's facilities and improvement of our processes can be consulted in the chapter **Accident Prevention and Management**.



### Total Recordable Injury Rate (TRIR)<sup>1, 2, 3</sup>

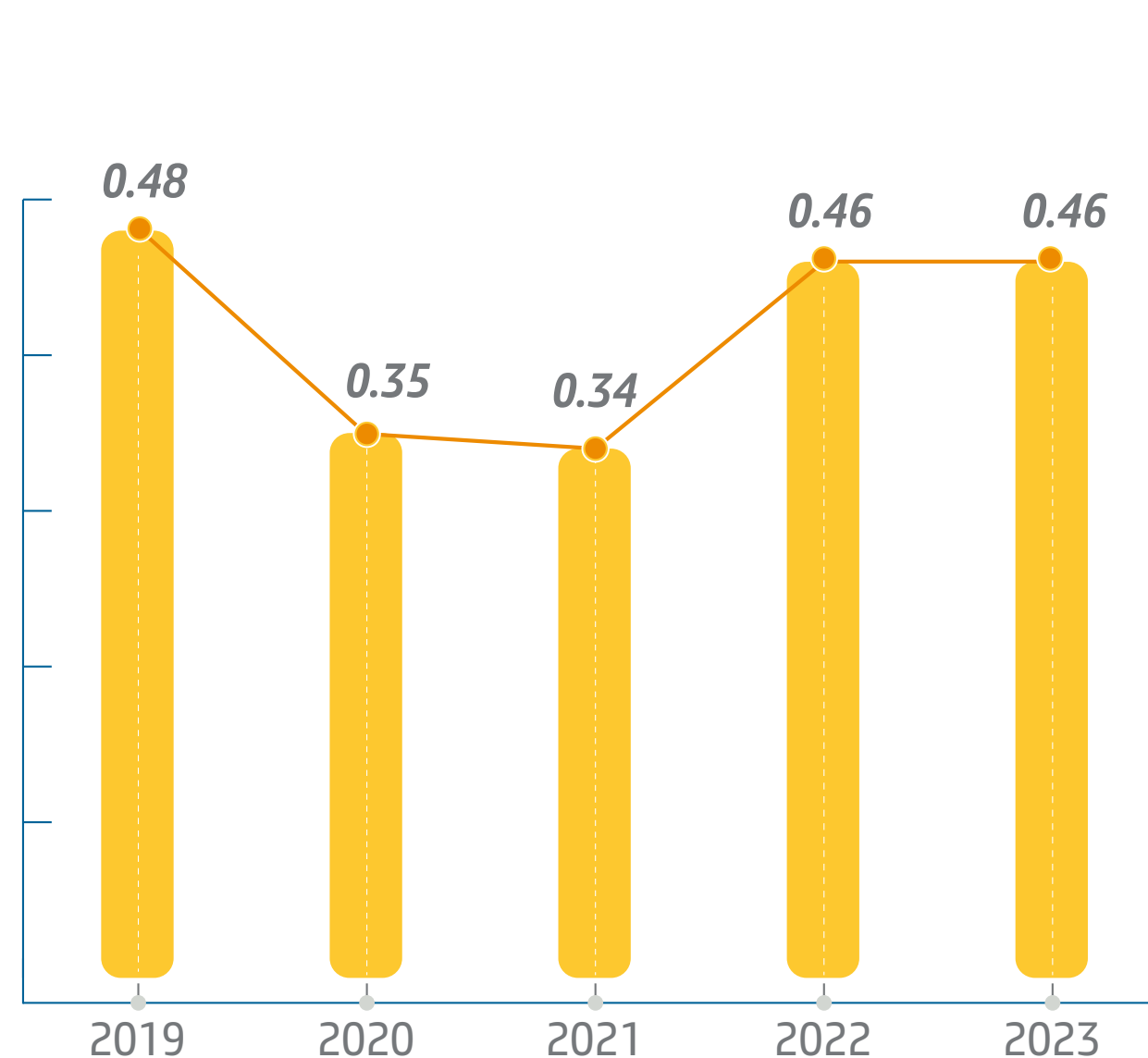


<sup>1</sup> Ratio between the number of fatalities and the number of hours worked, multiplied by 100,000,000.

<sup>2</sup> Data from the parent company, Libra, Petrobras Bolivia (PEB), Petrobras Internacional Braspetro B.V. - Sucursal Colômbia (PIBCOL), Transpetro, Araucária Nitrogenados (ANSA), Petrobras Colombia Combustibles (PECOCO), TERMOMACAÉ, and TERMOBAHIA.

<sup>3</sup> Number of recordable accidents per million man-hours of exposure to risk. Includes cases of non-serious injuries (excluding first aid cases), injuries with time off, occupational diseases, and fatal accidents.

### Lost Time Injury Rate (LTIR)<sup>2, 4</sup>



<sup>4</sup> Number of work related accidents resulting in time off due to typical accidents or occupational diseases per million man-hours of exposure to risk



Additional information on occupational health and safety rates for workers and contractors can be found in the **ESG Datasheet**.

Aiming to further improve the learning process from accidents, we decided, in 2023, to start monitoring the Serious Injury and Fatality (SIF). In line with international concepts, monitoring these anomalies allows the identification of precursor events to more serious occurrences, expanding learning possibilities proactively. The SIF consists of the relationship between the number of anomalies (incidents and accidents in Classes 1 to 3) with the potential to generate class 4 or 5 injuries per million man-hours of exposure. The SIF result in 2023 was 0.57. We will continue to monitor the indicator in order to create maturity and historical series for comparisons and to increase the process of identifying and treating these high potential events.

Occupational health and safety indicators meet industry standards and practices. To prevent accidents, we comply with regulations and adopt strict operating standards and procedures. We are trained to operate safely, and in case of any doubts during the execution of a procedure, we are instructed to stop it immediately.

# AUDITORS' LIMITED ASSURANCE REPORT



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## Limited Assurance Report on the non-financial information included in the Sustainability Report and ESG Datasheet

To the Board of Directors and Shareholders  
**Petróleo Brasileiro S.A. - Petrobras**  
Rio de Janeiro - RJ

### Introduction

We were engaged by Petróleo Brasileiro S.A. – Petrobras ("Company") to present our limited assurance report on the non-financial information included in the "2023 Sustainability Report and ESG Datasheet" of Petróleo Brasileiro S.A. – Petrobras ("Report"), for the year ended December 31, 2023.

Our limited assurance does not extend to prior period information or to any other information disclosed together with the 2023 Sustainability Report and ESG Datasheet, including any images, audio files or embedded videos.

### Responsibilities of the Management of Petróleo Brasileiro S.A. - Petrobras

The Company's Management is responsible for:

- selecting and establishing proper criteria for preparing the information included in the 2023 Sustainability Report and ESG Datasheet;
- preparing information with reference to the Global Reporting Initiative (GRI – Standards) criteria and guidelines;

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- design, implement and maintain internal controls over the information relevant to the preparation of the information included in the 2023 Sustainability Report and ESG Datasheet, which are free from material misstatement, whether due to fraud or error.

**Responsibility of independent auditors**

Our responsibility is to express a conclusion on the non-financial information included in the 2023 Sustainability Report and ESG Datasheet, based on the limited assurance engagements conducted in accordance with NBC TO 3000 (revised) - Assurance Engagements Other than Audits and Reviews, issued by CFC – Federal Association of Accountants, which is equivalent to international standard ISAE 3000 (revised) - Assurance engagements other than audits or reviews of historical financial information, issued by the International Auditing and Assurance Standards Board (IAASB). These standards require the planning of work and perform procedures to obtain limited assurance about whether the non-financial information included in the Company's 2023 Sustainability Report and ESG Datasheet taken as a whole is free from material misstatements.

KPMG Auditores Independentes ("KPMG") applies the Brazilian Quality Management Standard (NBC PA 01), which requires that the firm plan, implement and operate a system of quality management, including policies or procedures regarding to compliance with ethical requirements, professional standards and applicable statutory and regulatory requirements. We complied with the independence and other ethical requirements of the Accountant's Professional Code of Ethics and Professional Standards (including Independence Standards) based on fundamental principles of integrity, objectivity, professional competence and due zeal, confidentiality and professional behavior.

A limited assurance engagement conducted in accordance with the revised NBC TO 3000 (ISAE 3000 revised) consists mainly of inquiring the Company's management and other professionals who are involved in the preparation of the information and applying analytical procedures to obtain evidence that enables us to conclude, in the limited assurance manner, information taken as a whole. A limited assurance engagement also requires additional procedures to be applied when the independent auditor gets to know about issues that lead him to believe that the information disclosed in the 2023 Sustainability Report and ESG Datasheet, taken as a whole, may have material misstatements.

The selected procedures are based on our understanding of the issues related to the compilation, materiality and presentation of the information included in the 2023 Sustainability Report and ESG Datasheet, of other circumstances of the engagement and of our consideration about the areas and processes associated with the material information disclosed in the 2023 Sustainability Report and ESG Datasheet, in which material misstatements could exist. The procedures consisted of, among others:

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- a) planning the work, considering the relevance, the amount of quantitative and qualitative information, as well as the operating and internal control systems that supported the preparation of the information included in the 2023 ESG Sustainability Report and ESG Datasheet;
- b) understanding the calculation method and the procedures followed to compile indicators by making inquiries and holding interviews with the managers in charge of gathering information;
- c) applying analytical procedures to quantitative information and inquiring about qualitative information and its relationship with the indicators disclosed in the information included in the 2023 Sustainability Report and ESG Datasheet;
- d) when non-financial data correlate with financial indicators, these indicators are cross-matched to financial statements and/or accounting records;
- e) analyzing the procedures followed to prepare the Company's 2023 Sustainability Report and ESG Datasheet and its structure and contents, in accordance with the Content and Quality Standards for the Global Reporting Initiative – GRI Sustainability Report; and
- f) evaluating sampled non-financial indicators.

The limited assurance engagements also covered compliance with the guidelines and criteria of the GRI - Standards framework applicable to the preparation of the information included in the 2023 Sustainability Report and ESG Datasheet.

**Scope and limitations**

The procedures performed in a limited assurance engagement vary in terms of nature and timing and are less in the extent than for a reasonable assurance engagement. Consequently, the level of security obtained in a limited assurance engagement is substantially lower than that obtained if a reasonable assurance engagement had been carried out. Had we performed a reasonable assurance engagement, we could have identified other issues and possible misstatements which may exist in the information included in the 2023 Sustainability Report and ESG Datasheet. Accordingly, we do not express an opinion on that information.

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Non-financial data are subject to more inherent limitations than financial data, given the nature and diversity of the methods used to determine, calculate or estimate this data. Qualitative interpretations of materiality, relevance and accuracy of data are subject to individual assumptions and judgments. Moreover, we did not performed any procedures on data informed for prior periods, or about future projections and goals.

The preparation and presentation of sustainability indicators followed GRI- Standards and therefore do not have the purpose of ensuring compliance with social, economic, environmental or engineering laws and regulations. However, those standards provide for the presentation and disclosure of possible violations to these regulations when significant sanctions or fines are imposed. Our assurance report should be read and understood accordingly, inherent to the selected criteria (GRI- Standards).

**Conclusion**

Our conclusion was based on and is subject to the matters described in this report.

We believe that the evidence we have obtained in our work is sufficient and appropriate to provide a basis for our limited conclusion.

Based on the procedures performed and described on this report and the evidence obtained, nothing has come to our attention that causes us to believe that the non-financial information included in the 2023 Sustainability Report and ESG Datasheet for the year ended December 31, 2023 of Petróleo Brasileiro S.A. - Petrobras has not been prepared, in all material respects, with reference to the Global Reporting Initiative - GRI (GRI- Standards) criteria and guidelines.

Rio de Janeiro, June 5, 2024

KPMG Auditores Independentes Ltda.  
CRC SP-014428/O-6 F-RJ

Original report in portuguese signed by

Bernardo Moreira Peixoto Neto  
Accountant CRC RJ-064887/O-8

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# GRI CONTENT INDEX

## Statement of use

*Petrobras has reported the information cited the GRI Standards for the period of 01/01/2023 to 31/12/2023 with reference to the GRI*

## Publication

**06/06/2024**

## GRI 1 used

**Applicable GRI Sector Standard(s)**

Applicable GRI Sector Standard(s)

**Applicable GRI Sector Standard(s)**

## GENERAL DISCLOSURES

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
	GRI 2: General Disclosures 2021	2-1 Organizational details	p. 10	Yes
	GRI 2: General Disclosures 2021	2-2 Entities included in the organization's sustainability reporting	p. 6	Yes
	GRI 2: General Disclosures 2021	2-3 Reporting period, frequency and contact point	p. 6 e p.238	Yes
	GRI 2: General Disclosures 2021	2-4 Restatements of information	p. 7	Yes
	GRI 2: General Disclosures 2021	2-5 External assurance	p. 7	Yes
	GRI 2: General Disclosures 2021	2-6 Activities, value chain and other business relationships	p. 8 to 10; 31 and 32	Yes
	GRI 2: General Disclosures 2021	2-7 Employees	p.182 <b>ESG Datasheet</b> p. 4; 33 and 34	Yes
	GRI 2: General Disclosures 2021	2-8 Workers who are not employees	p. 183 and 184 <b>ESG Datasheet</b> p.4	Yes
	GRI 2: General Disclosures 2021	2-9 Governance structure and composition	p. 56 to 60	Yes
	GRI 2: General Disclosures 2021	2-10 Nomination and selection of the highest governance body	p. 60 and 61	Yes



GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
	GRI 2: General Disclosures 2021	2-11 Chair of the highest governance body	p. 57	Yes
	GRI 2: General Disclosures 2021	2-12 Role of the highest governance body in overseeing the management of impacts	p. 58 to 65	Yes
	GRI 2: General Disclosures 2021	2-13 Delegation of responsibility for managing impacts	p. 55 to 63	Yes
	GRI 2: General Disclosures 2021	2-14 Role of the highest governance body in sustainability reporting	p. 7, 13	Yes
	GRI 2: General Disclosures 2021	2-15 Conflicts of interest	p. 78 to 80	Yes
	GRI 2: General Disclosures 2021	2-16 Communication of critical concerns	p. 65	Yes
	GRI 2: General Disclosures 2021	2-17 Collective knowledge of the highest governance body	p. 66	Yes
	GRI 2: General Disclosures 2021	2-18 Evaluation of the performance of the highest governance body	p. 66 and 67	Yes
	GRI 2: General Disclosures 2021	2-19 Remuneration policies	p. 191 to 194	Yes
	GRI 2: General Disclosures 2021	2-20 Process to determine remuneration	p. 191 and 192	Yes
	GRI 2: General Disclosures 2021	2-21 Annual total compensation ratio	p.194 <b>ESG Datasheet</b> p.38	Yes



GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
	GRI 2: General Disclosures 2021	2-22 Statement on sustainable development strategy	p. 3 to 5	Yes
	GRI 2: General Disclosures 2021	2-23 Policy commitments	p. 43 to 53	Yes
	GRI 2: General Disclosures 2021	2-24 Embedding policy commitments	<b>Human Rights and Corporate Citizenship Supplement 2023</b> - p. 46 to 50; 84 and 85; 89 to 92	Yes
	GRI 2: General Disclosures 2021	2-26 Mechanisms for seeking advice and raising concerns	p. 70 and 71; 80 and 81	Yes
	GRI 2: General Disclosures 2021	2-27 Compliance with laws and regulations	<b>ESG Datasheet</b> p.8	Yes
	GRI 2: General Disclosures 2021	2-28 Membership associations	<b>ESG Datasheet</b> p. 9 to 11	Yes
	GRI 2: General Disclosures 2021	2-29 Approach to stakeholder engagement	p. 19 to 24	Yes
	GRI 2: General Disclosures 2021	2-30 Collective bargaining agreements	<b>Human Rights and Corporate Citizenship Supplement 2023</b> - p. 45 and 46	Yes

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
<b>MATERIAL TOPICS</b>				
	GRI 3: Material Topics 2021	3-1 Process to determine material topics	p. 11 to 18	Yes
	GRI 3: Material Topics 2021	3-2 List of material topics	p. 11 to 18	Yes
<b>Economic performance</b>				
11.14.1	GRI 3: Material Topics 2021	3-3 Management of material topics Economic Impacts	p. 28 to 40	No
11.14.2 11.21.2	GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	p. 31	No
11.2.2	GRI 201: Economic Performance 2017	201-2 Financial implications and other risks and opportunities due to climate change	p. 93 to 94	Yes
11.21.3	GRI 201: Economic Performance 2019	201-4 Financial assistance received from government	p. 32 to 34	No
<b>Market presence</b>				
11.11.2 11.14.3	GRI 202: Market Presence 2016	202-2 Proportion of senior management hired from the local community	p.189 <b>ESG Datasheet</b> p.35	Yes



GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
<b>Indirect economic impacts</b>				
	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 28 to 40	No
11.14.4	GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	p. 39 and 40	No
11.14.5	GRI 203: Indirect Economic Impacts 2016	203-2 Significant indirect economic impacts	p. 37 to 39	No
<b>Procurement practices</b>				
11.14.6	GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	p. 37 and 38 <b>ESG Datasheet</b> p.6	No
<b>Anti-corruption</b>				
11.20.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 68 to 82	Yes
11.20.2	GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	p. 66 and 67 <b>ESG Datasheet</b> p.7	Yes
11.20.3	GRI 205: Anti-corruption 2016	205-2 Communication and training about anti-corruption policies and procedures	p. 75 and 76 <b>ESG Datasheet</b> p.7	Yes



GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
11.20.4	GRI 205: Anti-corruption 2016	205-3 Confirmed incidents of corruption and actions taken	p. 82 to 86 <b>ESG Datasheet</b> p.5	Yes
<b>Tax</b>				
	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 28 a 40	No
11.21.4	GRI 207: Tax 2019	207-1 Approach to tax	p. 32 a 36	No
11.21.5	GRI 207: Tax 2019	207-2 Tax governance, control, and risk management	p. 32; 34 a 36	No
11.21.6	GRI 207: Tax 2019	207-3 Stakeholder engagement and management of concerns related to tax	p. 32; 34 a 37	No
11.21.7	GRI 207: Tax 2019	207-4 Country-by-country reporting	p. 32; 34 a 36	No
<b>Energy</b>				
11.1.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 91 a 110	No
11.1.2	GRI 302: Energy 2016	302-1 Energy consumption within the organization	p. 102 and 103 <b>ESG Datasheet</b> p.17	No
11.1.3	GRI 302: Energy 2016	302-2 Energy consumption outside of the organization	p.103 <b>ESG Datasheet</b> p.17	No

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
11.1.4	GRI 302: Energy 2016	302-3 Energy intensity	p. 102 p. 17	No
<b>Water and effluents</b>				
11.6.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 131 a 134	No
11.6.2	GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	p. 134 a 137	No
11.6.3	GRI 303: Water and Effluents 2018	303-2 Management of water discharge-related impacts	p. 137	No
11.6.4	GRI 303: Water and Effluents 2018	303-3 Water withdrawal	<b>ESG Datasheet</b> p.3 and 20	No
11.6.5	GRI 303: Water and Effluents 2018	303-4 Water discharge	<b>ESG Datasheet</b> p.21	No
<b>Water and effluents</b>				
11.4.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 114 a 122	Yes

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
11.4.2	GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	p. 122 and 123 <b>ESG Datasheet</b> p.24 to 26	Yes
11.4.3	GRI 304: Biodiversity 2016	304-2 Significant impacts of activities, products and services on biodiversity	p. 124 a 127	Yes
11.4.4	GRI 304: Biodiversity 2016	304-3 Habitats protected or restored	p.127 <b>ESG Datasheet</b> p.27	Yes
11.4.5	GRI 304: Biodiversity 2016	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	p. 127 to 130 <b>ESG Datasheet</b> p.23	Yes
<b>Emissions</b>				
11.1.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 91 a 110	No
11.1.5	GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	p. 97 to 100 <b>ESG Datasheet</b> p.2, 13 and 14	No



GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
11.1.6	GRI 305: Emissions 2016	305-2 Energy indirect (Scope 2) GHG emissions	p. 97 to 100 <b>ESG Datasheet</b> p.2 and 13	No
11.1.7	GRI 305: Emissions 2016	305-3 Other indirect (Scope 3) GHG emissions	p.100 <b>ESG Datasheet</b> p.13	No
11.1.8	GRI 305: Emissions 2016	305-4 GHG emissions intensity	p.99 <b>ESG Datasheet</b> p.2	No
11.2.3	GRI 305: Emissions 2016	305-5 Reduction of GHG emissions	p. 96; 98; 100 and 107 <b>ESG Datasheet</b> 13	Yes
11.3.2	GRI 305: Emissions 2016	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	p. 101 and 102 <b>ESG Datasheet</b> p.16	No
	<b>Waste</b>			
11.5.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 140 and 141	No
11.5.2	GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	p. 141	No
11.5.3	GRI 306: Waste 2020	306-2 Management of significant waste-related impacts	p. 142 and 143	No

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
11.5.4	GRI 306: Waste 2020	306-3 Waste generated	p.144 <b>ESG Datasheet</b> p.3 and 19	No
11.5.5	GRI 306: Waste 2020	306-4 Waste diverted from disposal	p. 144 and 145 <b>ESG Datasheet</b> p.19	No
11.5.6	GRI 306: Waste 2020	306-5 Waste directed to disposal	p. 144 and 145 <b>ESG Datasheet</b> p.19	No
<b>Employment</b>				
11.10.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 181 a 197	No
11.10.2	GRI 401: Employment 2016	401-1 New employee hires and employee turnover	p.188 <b>ESG Datasheet</b> p.36 and 37	No
11.10.3	GRI 401: Employment 2016	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	p. 182 and 195	No
11.10.4 11.11.3	GRI 401: Employment 2016	401-3 Parental leave	p.188 <b>ESG Datasheet</b> p.36 and 37	Yes



GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
<b>Labor / management relations</b>				
	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 181 a 197	No
11.7.2 11.10.5	GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	p. 191	No
<b>Occupational health and safety</b>				
11.9.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 198 and 199; 203 a 206	No
11.9.2	GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	p. 199 a 203	No
11.9.3	GRI 403: Occupational Health and Safety 2018	403-2 Hazard identification, risk assessment, and incident investigation	p. 199 a 207	No
11.9.4	GRI 403: Occupational Health and Safety 2018	403-3 Occupational health services	p. 200 to 203 <b>Human Rights and Corporate Citizenship Supplement 2023</b> - p. 37 to 43	No

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
11.9.5	GRI 403: Occupational Health and Safety 2018	403-4 Worker participation, consultation, and communication on occupational health and safety	p. 202 and 203	No
11.9.6	GRI 403: Occupational Health and Safety 2018	403-5 Worker training on occupational health and safety	p. 203 a 207	No
11.9.7	GRI 403: Occupational Health and Safety 2018	403-6 Promotion of worker health	p. 203 a 207	No
11.9.8	GRI 403: Occupational Health and Safety 2018	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	p. 200 to 202; 206 <b>Human Rights and Corporate Citizenship Supplement 2023</b> - p. 37 to 43	No
11.9.9	GRI 403: Occupational Health and Safety 2018	403-8 Workers covered by an occupational health and safety management system	p. 200 and 201; 203 a 205; 207 a 209	No
11.9.10	GRI 403: Occupational Health and Safety 2018	403-9 Work-related injuries	p. 199 and 200	No

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
11.9.11	GRI 403: Occupational Health and Safety 2018	403-10 Work-related ill health	p. 201 to 205; 207 to 209 <b>ESG Datasheet</b> p. 4 and 41	No
<b>Training and education</b>				
	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 196 and 197	No
11.10.6 11.11.4	GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	p.196 <b>ESG Datasheet</b> p.39	Yes
11.7.3 11.10.7	GRI 404: Training and Education 2016	404-2 Programs for upgrading employee skills and transition assistance programs	p. 190 and 191; 196 and 197	No
	GRI 404: Training and Education 2016	404-3 Percentage of employees receiving regular performance and career development reviews	p. 196	No
<b>Diversity and equal opportunity</b>				
	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 184 a 188	No

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
11.11.5	GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	p. 185 to 187 <b>ESG Datasheet</b> p.32	Yes
11.11.6	GRI 405: Diversity and Equal Opportunity 2016	405-2 Ratio of basic salary and remuneration of women to men	p. 185 to 186 <b>ESG Datasheet</b> p.38 e 39	Yes
<b>Diversity and equal opportunity</b>				
11.11.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 184 a 188	Yes
11.11.7	GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	p.188 <b>ESG Datasheet</b> p.39	Yes
<b>Freedom of association and collective bargaining</b>				
11.13.1	GRI 3: Material Topics 2021	3-3 Management of material topics	<b>Human Rights and Corporate Citizenship Supplement 2023</b> - p. 45 and 46	No
<b>Child labor</b>				
	GRI 3: Material Topics 2021	3-3 Management of material topics	<b>Human Rights and Corporate Citizenship Supplement 2023</b> - p. 91 and 92	No

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
<b>Forced or compulsory labor</b>				
11.12.1	GRI 3: Material Topics 2021	3-3 Management of material topics	<b>Human Rights and Corporate Citizenship Supplement 2023</b> - p. 91 and 92	No
<b>Forced or compulsory labor</b>				
11.18.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 177 and 178	No
11.18.2	GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	p.178 <b>ESG Datasheet</b> p.42	No
<b>Rights of indigenous peoples</b>				
11.17.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 175 a 177	No
11.17.2	GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	p. 180	No
<b>Local communities</b>				
11.15.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 162 a 180	No

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
11.15.2	GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	p. 162 to 172 <b>ESG Datasheet</b> p.42	No
11.15.3	GRI 413: Local Communities 2016	413-2 Operations with significant actual and potential negative impacts on local communities	p. 164	No
<b>Supplier social assessment</b>				
	GRI 3: Material Topics 2021	3-3 Management of material topics	<b>Human Rights and Corporate Citizenship Supplement 2023</b> - p. 86 to 92	No
11.10.9	GRI 414: Supplier Social Assessment 2016	414-2 Negative social impacts in the supply chain and actions taken	<b>Human Rights and Corporate Citizenship Supplement 2023</b> - p. 90 and 91	No
<b>Public policy</b>				
11.22.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 87 a 91	No
11.22.2	GRI 415: Public Policy 2016	415-1 Political contributions	p. 73	No

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
<b>Customer health and safety</b>				
11.3.3	GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	p. 107	No
<b>OTHER INDICATORS REPORTED ACCORDING TO GRI SECTOR STANDARDS</b>				
<b>Climate adaptation, resilience, and transition</b>				
11.2.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 91 a 110	Yes
<b>Air emissions</b>				
11.3.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 91 a 110	No
<b>Closure and rehabilitation</b>				
11.7.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 140 and 141; 145 a 151	No
11.7.4	Additional sector disclosures	Operational sites	p. 10; 151	No

GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
<b>Asset integrity and critical incident management</b>				
11.8.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 152 and 153	No
11.8.2	GRI 306: Efluentes e Resíduos 2016	306-3 Significant spills	p. 153 to 160 <b>ESG Datasheet</b> - p. 3 and 22	No
11.8.3	Additional sector disclosures	Total number of process safety events	p.158 <b>ESG Datasheet</b> - p.22	No
<b>Local communities</b>				
11.15.4	Additional sector disclosures	Grievances from local communities identified	p. 179 a 180	No
<b>Land and resource rights</b>				
11.16.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 173 and 174	No
<b>Rights of indigenous peoples</b>				
11.17.3	Additional sector disclosures	Locations of operations where indigenous peoples are present or affected by activities of the organization	p. 175	No



GRI SECTOR STANDARD REF. NO.	GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION / EXPLANATION	ASSURANCE
<b>Anti-corruption</b>				
11.20.5	Additional sector disclosures	Approach to contract transparency	p. 74	Yes
<b>Payments to governments</b>				
11.21.1	GRI 3: Material Topics 2021	3-3 Management of material topics	p. 30 a 42	No
11.21.8	Additional sector disclosures	Oil and gas purchased from the state, or from third parties	p. 34 a 36	No

### TOPICS OF THE APPLICABLE GRI SECTORAL STANDARD DEFINED AS NON-MATERIAL

	TOPIC	
	11.13 Freedom of association and collective bargaining	This topic is not considered material by our stakeholders, including our internal public. We believe that this is a mature issue in the company which, although important, does not stand out as a priority.
	11.19 Anti-competitive behavior	Focusing on aspects such as collusion and abusive practices, the topic was not prioritized by our stakeholders and did not reach the minimum of 0.3 in our matrix to be considered material.

# SASB CONTENT INDEX

Code	Topic	Metric	Pages
EM-EP-000.A EM-RM-000.A EM-RM-000.B EM-MD-000.A	Activity Metrics	Production of: oil, natural gas, synthetic oil, and synthetic gas; refining throughput of crude oil and other feedstocks; refining operating capacity; total metric ton-kilometers of: natural gas, crude oil, and refined petroleum products transported, by mode of transport	<b>Management Report and FORM</b> - 20F - p.28
EM-EP-110a.1 EM-RM-110a.1 EM-MD-110a.1	Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	p. 99-101 <b>ESG Datasheet</b> - p. 2;14
EM-EP-110a.2	Greenhouse Gas Emissions	Amount of gross global Scope 1 emissions from: flared hydrocarbons, other combustion, process emissions, other vented emissions, and fugitive emissions	p. 99-102 <b>ESG Datasheet</b> -p.2; 13-14
EM-EP-110a.3 EM-RM-110a.2 EM-MD-110a.2	Greenhouse Gas Emissions	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	p. 94-103 ;105-112 <b>ESG Datasheet</b> - p.13
EM-EP-120a.1 EM-RM-120a.1 EM-MD-120a.1	Air Quality	Air emissions of the following pollutants: NO, (excluding N2O), SOx, volatile organic compounds (VOCs), and particulate matter (PM10)	p.102-104 <b>ESG Datasheet</b> - p.16

Code	Topic	Metric	Pages
EM-EP-140a.1 EM-RM-140a.1	Water Management	Total fresh water withdrawn, (2) total fresh water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	p. 133-135; 138 <b>ESG Datasheet</b> - p.3;21
EM-EP-140a.2 EM-RM-140a.2	Water Management	Volume of produced water and flowback generated; percentage discharged, injected, recycled; hydrocarbon content in discharged water; Number of incidents of non-compliance associated with water quality permits, standards, and regulations	p.138-139
EM-RM-150a.1	Hazardous Materials Management	Amount of hazardous waste generated, percentage recycled	p. 144 <b>ESG Datasheet</b> - p.3
EM-EP-160a.1 EM-MD-160a.1	Ecological Impacts	Description of environmental management policies and practices for active sites	p. 114- 121
EM-EP-160a.2	Ecological Impacts	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume impacting shorelines with ESI rankings 8-10, and volume recovered	p.153 <b>ESG Datasheet</b> - p.3
EM-MD-160a.3	Ecological Impacts	Terrestrial acreage disturbed, percentage of impacted area restored	p. 115
EM-MD-160a.4	Ecological Impacts	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume in Unusually Sensitive Areas (USAs), and volume recovered	p. 153

Code	Topic	Metric	Pages
EM-EP-210 a.2	Security, human rights & rights of indigenous peoples	Percentage of proved and probable reserves in or near areas of conflict	p. 176
EM-EP-210 a.3	Community relations	Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	<b>Human Rights and Corporate Citizenship Supplement</b> p. 27-29; p. 51-85
EM-EP-210 b.1	Community relations	Discussion of process to manage risks and opportunities associated with community rights and interests	<b>Human Rights and Corporate Citizenship Supplement</b> p. 51-59
EM-EP-320a.1 EM-RM-320a.1	Workforce health & safety	Total recordable incident rate (TRIR), fatality rate, near miss frequency rate (NMFR), and average hours of health, safety, and emergency response training for full-time employees, contract employees, and short-service employees	p. 207-209 <b>ESG Datasheet</b> - p.4;41
EM-EP-320a.2 EM-RM-320a.2	Workforce health & safety	Discussion of management systems used to integrate a culture of safety throughout the exploration and production lifecycle	p. 198-207
EM-EP-420a.3	Reserves valuation & capital expenditures	Amount invested in renewable energy, revenue generated by renewable energy sales	p. 108-109

Code	Topic	Metric	Pages
EM-EP-420a.4	Reserves valuation & capital expenditures	Discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition, and development of assets	p. 95-99
EM-EP-510a.2	Business ethics & transparency	Description of the management system for prevention of corruption and bribery throughout the value chain	p. 69-85
EM-EP-530a.1 EM-RM-530a.1	Management of the legal & regulatory environment	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	p. 34-39
EM-EP-540a.1 EM-RM-540a.1	Critical incident risk management	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)	p. 158 <b>ESG Datasheet</b> - p.22
EM-EP-540a.2	Critical incident risk management	Description of management systems used to identify and mitigate catastrophic and tail-end risk	p. 154-158 <b>ESG Datasheet</b> - p.28-31
EM-MD-540a.4	Operational safety, emergency preparedness & response	Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project lifecycles	p. 156-157 e 159-160 <b>ESG Datasheet</b> - p.28-31

# STAFF

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## GENERAL COORDINATION, PRODUCTION, EDITING AND LAYOUT

Executive Management of Social Responsibility

## GRAPHIC DESIGN

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