

# Sustainability Report 2021

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# Message from the President and the Director of Institutional Relationship and Sustainability

What matters to society matters to Petrobras. Better results allow for greater returns to society. Petrobras has become a strong and healthy company, a fact revealed by the operating and financial results in 2021, when we paid more than double our profits in the form of taxes and duties. We believe that this is the best way for the company to play its social role and be able to grow, invest, generate jobs, pay taxes, return dividends to shareholders, including the Federal Government, and effectively contribute to development in Brazil. We generate jobs and make more than BRL 100 billion in payments to suppliers and financial institutions.

And we didn't stop there. In 2021, in order to help address the socio-economic impacts arising from the Covid-19 pandemic, we launched the Petrobras Gas Donation initiative. The initiative sought to help vulnerable families gain access to essential supplies, especially food and cooking gas. The program's actions total BRL 300 million and will benefit more than 4 million people by the end of 2022.

Additionally, in 2021, we took action as a response to the pandemic, with the allocation of oxygen cylinders, micro-oxygen plants, basic food baskets and medication kits for patient intubation. We donated a total of BRL101 million, and 84% of this total were financial donations. We also acted in a timely manner, understanding our social role in times of calamity. At the beginning of 2022, several regions of Brazil were affected by heavy floods, and we sought to support these communities, donating BRL 5.3 million to the states of Bahia, Minas Gerais and the municipality of Petrópolis/RJ.

In addition to the emergency actions necessary in times of pandemic and calamities, we voluntarily structured sponsorships and agreements supporting socio-environmental, cultural, sports, business, science, and technology projects that totaled BRL 138 million. The socio-environmental projects contribute to improving the quality of life of the communities where we operate, and in an expanded way, to society and for the conservation of the environment. Our priorities are projects focused on Oceans, Forests, Sustainable Economic Development and Education.

Within the scope of environmental licensing processes, we invested BRL 220.8 million in 80 monitoring programs and projects dedicated to fauna and beaches and BRL107.7 million in socioeconomic impact mitigation and compensation projects.

We believe that promoting economic, social, and environmental development in an integrated manner is not a simple task, but Petrobras believes that it is possible. To accomplish this, in September 2021, we reported our goal to achieve greenhouse gas emissions neutrality from the operations under our control (scope 1 and 2) and our intention to influence the same goal in non-operated assets, within a timeline compatible with the Paris Agreement. To achieve this objective, Petrobras contributes by: (i) investing resources and technologies in the production of low carbon oil in Brazil, generating energy, foreign exchange reserves, and significant wealth to finance responsible energy transition; (ii) investing in the ability to offer gas and dispatchable energy to enable the high share of

renewables in the Brazilian electricity matrix; (iii) investing and prospecting new possibilities in products and businesses with lower carbon intensity; (iv) promoting research and development of new technologies and low carbon solutions and (v) investing in socio-environmental projects for the recovery and conservation of forests.

We also have taken on commitments that ensure a governance model that allows a balance between efficiency and control; to act with integrity and transparency, and zero tolerance for fraud and corruption.

We prioritized the development of impact initiatives that contribute to the solution of social and/or environmental problems, involving opportunities to work with our stakeholders. We are committed to the socio-economic development of the places where we operate and to increasing the quality of life for society, respecting human rights and the environment, in accordance with the principles of the United Nations Global Compact and inspired by the Sustainable Development Goals. Our efforts have been recognized, and in 2021 we returned to the Dow Jones Sustainability™ World Index, which includes the global companies that are sustainability leaders.



Rafael Chaves  
Institutional Relations  
and Sustainability Officer



Joaquim Silva e Luna  
Chief Executive Officer

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# About the Report

The 2021 Sustainability Report meets the requirements of Law 13,303/16 and covers the period from January 1, 2021, to December 31, 2021, with the addition of relevant data regarding the history or facts that occurred in the initial months of 2022. In the cases when this occurs, the period is stated. The Petrobras Sustainability Report is published annually, and the previous edition was published on April 1, 2021.

Our report contains initial chapters that include the strategic unfolding for ESG (Environmental, Social, Governance) topics based on risks and opportunities identified in the short, medium and long-term perspectives. In these opening chapters we also find one of our material topics: Active and Transparent Communication, as the demands of our stakeholders are considered in our management and in our reporting. Subsequently, the other material topics and complementary topics are presented chapter by chapter, classified by ESG dimension. Each of them demonstrates our main initiatives, management practices and indicators.

## REPORT STRUCTURE



Material Topics

We present the summaries of the methodologies adopted, as well as the assurance report for this public information.

The scope of information includes our activities in Brazil and abroad, including data on subsidiaries, when material to the Parent Company.

We have adopted the Global Reporting Initiative (2016 GRI Standard and its potential revisions), in the Core option. In previous years, we had been reporting the Comprehensive option. In 2021, we opted for Core to focus even more on our core business, material topics and relevant indicators for the organization. In this way, we present a more streamlined and accessible document. On the other hand, we adopted for the first time the response to indicators contained in Sustainability Accounting Standards Board (SASB) standards, aimed at the oil and gas industry suitable for our organization (Exploration & Production, Midstream and Refining & Marketing). We used the IPIECA Oil and Gas Industry Guide for Sustainability Reporting as a supplementary reporting methodology. IPIECA is the global oil and gas industry association for advancing environmental and social performance. The GRI Summary, as well as the correlation with the IPIECA Guide, with the principles of the Global Compact and the United Nations Sustainable Development Goals (SDG) can be found at the end of this report.

This report was approved by our Executive Board. KPMG was responsible for the limited assurance service for the information in the 2021 Sustainability Report.



## NOTICE TO THE READER

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 and uncertainties that we may or may not predict, and thus do not guarantee 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 do not obliged to update such forecasts in light of new information or their future developments.

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# About Us

We are a publicly-held corporation that operates in an integrated and specialized manner in the oil, natural gas and energy industry.

We are recognized worldwide for our oil and natural gas exploration and production technology in ultra-deep waters. However, our business goes beyond the reach of the field and oil and gas extraction. This means a long process where we transport oil and gas to our refineries and natural gas treatment units, which must be equipped and constantly evolving to supply the best products.

## Reserves

We have a large proven reserve base and operate and produce most of Brazil's oil and gas. Most of our proven reserves in the domestic market are located in Campos and Santos basins in southeastern Brazil, which allows us to optimize our infrastructure and limit our development and production costs for our new discoveries. In addition, we have developed exploration and production knowhow in deep and ultra-deep waters from almost 50 years of operations in Brazilian sea basins. The Santos Basin is the main source of our future growth in proven reserves and oil production.

## Areas of business

We operate most of Brazil's refining capacity, most of which is concentrated in the Southeast, a region where the country's most populous and industrial markets are located, and adjacent to the sources of most of our crude oil. We operate in the sale of oil byproducts through a planned combination of oil refining in our refineries and the import of byproducts, seeking to maximize margins. We are also involved in the production of petrochemicals through holdings in companies. Our main products sold in Brazil and globally are petroleum, diesel, gasoline, natural gas, aviation kerosene, LPG, naphtha, and fuel oil.

We are responsible for the largest natural gas powered thermoelectric park in Brazil. Our plants have an important role in the flow and monetization of our own gas, and the portfolio management of the power generation complex undergoes permanent evaluation. In relation to natural gas, we operate in the production, flow, processing, transport, distribution, and import of Liquefied Natural Gas (LNG), LNG regasification, supply of gas for own consumption and for the marketplace, where the transport and distribution of natural gas is undergoing a divestment process.

Natural gas can be fuel or raw material for different uses, such as locomotion, the transformation industry, heating or cooking in homes, and the production of fertilizers, as well as for generating energy in thermoelectric plants.

Our largest gas customers are the natural gas distribution companies, responsible for serving the captive market made up of users in the industrial, commercial, residential, and vehicular segments, in addition to customers in the thermoelectric segment. We also became suppliers to new customers who act as free consumers, consisting in most cases of large industrial plants, as well as refineries and thermoelectric plants.

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

Natural gas is transported through pipelines that connect the main sources of supply (domestic production and imports) to final 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 hold shares in some, but are undergoing a divestment process.

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

We offer a diversified portfolio of products for the domestic market that includes bunker, aviation fuels, petroleum coke, gaseous derivative products, diesel, electricity, sulfur, automotive gasoline, energy LPG, asphalt inputs, lubricants and by-products, petrochemical naphtha, fuel oils, paraffin, propane, noble gases, solvent, and others, totaling more than 150 products. In the foreign market, we sell dark products, such as fuel oil (especially with low sulfur content); light products such as diesel, naphtha, and gasoline; and special products, such as lubricants, paraffin, green petroleum coke, asphalt, and solvents. We have a global presence, also selling oil, operating both in the international market and in the Brazilian market, with supply from refineries in Brazil.

As of December 31, 2021, our staff totaled 45,532 employees (parent company and subsidiaries in Brazil and abroad). Our net revenue was BRL 452,668 million in 2021 and our market value was USD 69.2 billion. Our 22 company owned units in Brazil include seven Exploration & Production units and 15 Refining & Natural Gas units.

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>> [Detailed information on our operations in Brazil by business segment can be found in our Annual Report and Form 20-F.](#)

## International operations

As of December 31, 2021, we had activities in seven countries, in addition to Brazil. In Latin America, our operations are exploration and production and distribution of oil products. In North America we produce oil and gas through a joint venture. We have subsidiaries in The Netherlands (Rotterdam), USA (Houston) and Singapore that support our commercial and financial activities. These units are responsible for market intelligence and trading of oil, oil products, and natural gas, in addition to storage (tankage) and chartering operations.

Our portfolio management includes continuous and integrated analysis of our assets, ensuring our sustainability in the short term and generating value and competitiveness over the medium/long term. Thus, we allocate our investments to ensure that assets generate the highest return, while simultaneously aligning different strategic perspectives and business segments. Active portfolio management is one of the pillars of our change process, ensuring the proper use of good market opportunities, bringing us closer to our strategic objectives and generating value for shareholders, employees, communities, customers, suppliers, and partners.

We continue to rationalize our international presence, considering the three main oil markets in the world: Europe, North America, and Asia. Our commercial activities outside Brazil will be concentrated in the offices in Rotterdam, in the Netherlands, Houston, in the United States, and in Singapore. The initiative seeks to reduce corporate expenses within the resilience plan. As part of the process, the commercial activities of Petrobras Europe Ltd., in London, England, will be transferred in 2021 to Petrobras Global Trading B.V., based in Rotterdam. Of the 18 external offices that we maintained at the end of 2018, ten have already been closed, in addition to London. This group includes representations in China, Mexico, Iran, Turkey, and the United States (New York). We also have office in Bolivia, Argentina, and Colombia. We still have two non-operational companies in Uruguay.

## Share control

We are controlled by the Federal Government, which, on Monday, February 28, 2022, 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 don't currently have a shareholder agreement.

**PRODUCTION DATA**

Activity	Quantity
Refining crude oil and other raw materials Million barrels per day (MMbpd)	1.780
Capacity of refinement operation <sup>1</sup> Million barrels per day (MMbpd)	1.897
Oil production Million barrels per day (MMbpd)	2.2
Natural gas production Millions of standard cubic feet per day (MMscfd)	3,101.7
Synthetic oil production using shale Million barrels per day (MMbpd)	0.0023
Synthetic gas production using shale Millions of standard cubic feet per day (MMscfd)	3.3775
Total transported natural gas (by type of transport) Billions of cubic meters (Bn m <sup>3</sup> )	23.5 (pipelines)
Total transported crude oil and refined products (by transport type) Millions of cubic meters (MM m <sup>3</sup> )	601 (pipelines and terminals) 57.5 (Transpetro ships)
Non-conventional oil production <sup>2</sup> Million barrels per day (MMbpd)	0.003
Non-conventional oil production <sup>2</sup> Millions of standard cubic feet per day (MMscfd)	43.714

>> **Information about our controlling shareholders can be found in item 15.4 of the Reference Form, available on our Investor Relations website.**

<sup>1</sup> Does not include the Landulpho Alves Refinery (RLAM).

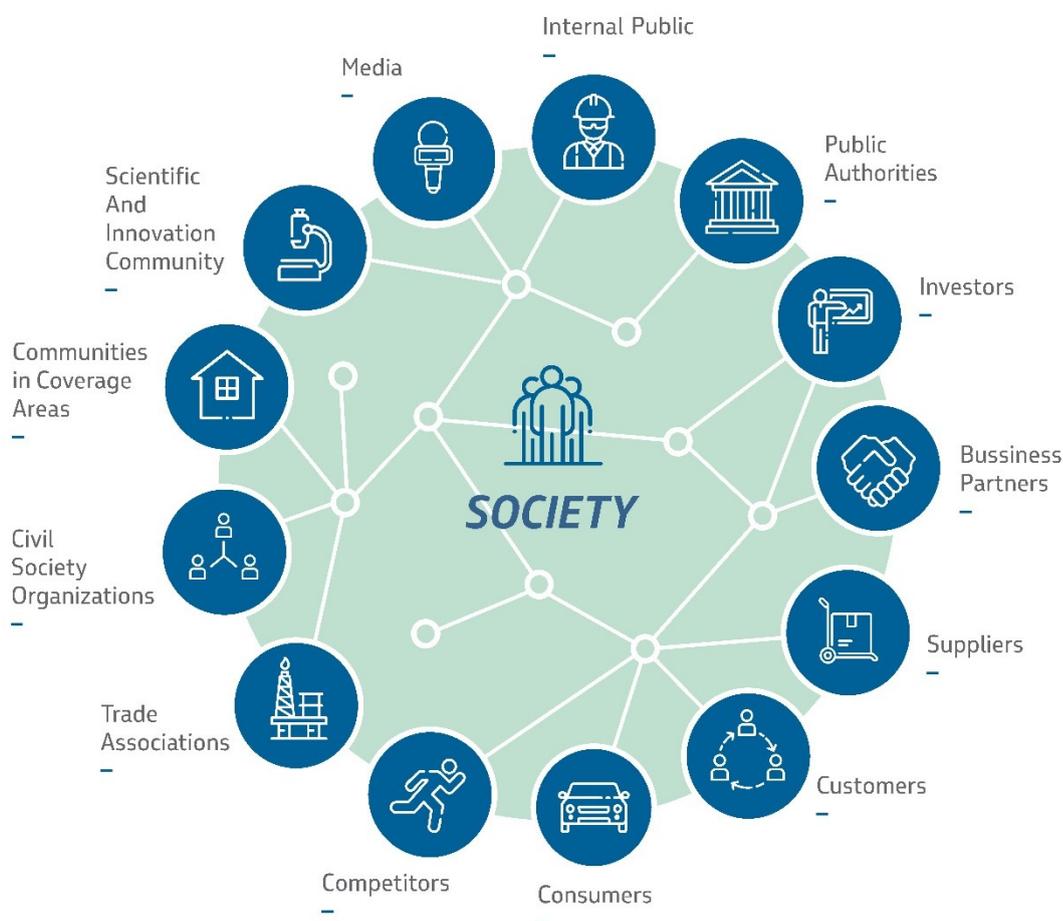
<sup>2</sup> Non-conventional production (*shale*): Shale from the Neuquén River (Argentina)

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# Active and Transparent Communication

We classify stakeholders as groups of individuals and organizations that have common social, political, economic, environmental, or cultural issues and needs. They establish or may establish relationships with us and can influence or being 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 interest group.

Our classification of stakeholders is shown in the following figure:



## Engagement with our stakeholders

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

**Related chapters**
**Main concerns and topics raised**

**Main stakeholder engagement and consultation activities**

Technical and management events, integration events, visits and meetings, satisfaction surveys, in addition to other relationship channels, such as the Customer Service (SAC) and the Petrobras Technical Assistance Program.

**Related chapters**
**Main concerns and topics raised**

**Main stakeholder engagement and consultation activities**

We participate in the main events, conferences and global discussion forums for the competitiveness of the oil and gas segment, such as CERAWeek (world energy conference) and OTC (Offshore Technology Conference), benchmarking of projects such as IPA (Independent Project Analysis), benchmarking of RTC (Solomon), E&P operational efficiency (Solomon), etc. We are also part, with 11 other oil and gas companies (Saudi Aramco, BP, Chevron, CNPC, ENI, Equinor, ExxonMobil, Occidental, Repsol, Shell and TotalEnergies), of the OGCI (Oil and Gas Climate Initiative).

Transpetro also interacts with competitors in periodic meetings for commercial negotiations, and in forums and events promoted by the market.

Our Intelligence and Market Studies area monitors competitor

activities and provides inputs for our other internal areas to develop commercial actions. In addition, this information serves as support for the elaboration of the Strategic Plan and to support strategic decisions. Likewise, image and reputation surveys assess our performance against the competition (specifically noting RepTrak™).

The increase in competition in the oil and gas sector is verified through a greater diversification of Brazilian production between companies (the participation in the production of other companies increased from 18% in 2015 to 27% in 2021, while the number operators went from 26 to 38 in the same period). This plurality of companies, which reflects the dynamic context and attractiveness of the oil and gas industry in Brazil, can intensify the appetite of companies in oil field auctions, influencing the amount paid in the auctions, the sharing of infrastructure, and the country's consumer market.

## Related chapters

\_Active and Transparent Communication

## Main concerns and topics raised

\_Management of cooperation agreements in partnership with Petrobras;

\_Partnership opportunities through the Connections for Innovation Program



**Scientific and Innovation Community**



## Main stakeholder engagement and consultation activities

We support technological cooperation with universities, science and technology institutes, companies and startups in search of high-impact solutions for value generation, establishing technological partnerships through cooperation agreements. Among our actions to leverage productivity in research, development and innovation (RD&I), the following stand out:

(i) The 'Petrobras Connections for Innovation' program brings together all our open innovation initiatives. In 2021, we launched a website (<https://tecnologia.petrobras.com.br>) in order to be a relationship channel with the open innovation ecosystem outside of Petrobras. The Program is structured in modules, each with a defined objective:

- Startups: Search and develop innovative solutions with startups from different areas such as digital technologies, robotics, energy efficiency, catalysts, corrosion, carbon reduction, geological modeling, inspection technologies and water treatment. There are currently 38 startups working on this module.
- Technological Order: Development of innovative solutions to our real problems where there is technological risk. 22 development opportunities have already been addressed using this module.
- Ignition: Technological innovation program promoted in partnership with a Brazilian university to encourage experimentation, challenging young people to co-create solutions for the digital transformation of the oil and gas sector. 25 students have already participated in this module.
- Solution Acquisitions: As part of the open innovation strategy, we look for startups and other innovative companies that present validated solutions, or solutions that are in the market validation phase, with the potential to address selected challenges, carrying out tests in production environments and validating requirements for implementation. 15 companies have already participated in this module.
- Technological Partnerships: Universities, companies and science and technology institutions from all over Brazil and abroad are our great partners in RD&I. The opportunities are endless and everyone wins. The technological partnerships module already has 900 partnerships and 9000 researcher professionals.
- Technology Transfers: We license technologies for third parties to use in their products, processes, applications, materials and services. There are already 23 contracts using this technology transfer module.

(ii) In addition, various channels of engagement and articulation with these actors are used, such as technical meetings with institutional representatives and researchers from the academic-scientific community; promotion of internal and external workshops to generate innovative ideas; and holding lectures at universities and research institutes to present our current technological challenges.

### Related chapters

- \_Active and Transparent Communication
- \_Socioeconomic Impacts
- \_Accident and Leak Prevention
- \_Safety and Commitment to Life
- \_Human Rights

### Main concerns and topics raised

- \_Requests for donations was the main community demand in 2021 (pandemic)
- \_Requests for various types of support

- \_Requests for information about dams, pipelines, maintenance shutdowns
- \_Complaints associated with odors/smells/noise/rattles/dust

- \_Job Applications (SAC 0800)
- \_Communication of incidents and accidents



#### Communities in Coverage Areas



### Main stakeholder engagement and consultation activities

We held meetings with community committees, which during the covid 19 pandemic remained active in a remote format, with public hearings and social communication programs.

We promote volunteer action and donations, such as donations of oxygen cylinders to help fight the pandemic, donation of computers for digital inclusion, donation of cooking gas and basic food baskets for the vulnerable population around our operations, and the production of masks to generate income for local seamstresses were examples of actions executed throughout 2021.

We also provide customer assistance through toll-free phones with 24-hour service coverage, seven days a week, using contact channels widely disseminated in the communities where we operate.

Our relationship with the communities located in our coverage area is guided by a corporate standard that determines levels of engagement to be established.

For each level of engagement, specific community relations activities are recommended. The defined actions are included in the local social responsibility and community relationship plans that we monitor.

In order to expand and materialize transparency for the results of the actions and impacts, we implemented the Lado a Lado digital newsletter in 2021, a communication tool aimed at communities in our operational coverage areas. Every four months, the bulletin provides information on our social responsibility actions, news related to the Operating Units, among other topics of community interest. The publication can be accessed on the website of the operational units, on the way: [Main Operations | Petrobras](#)

**Related chapters**

- \_Active and Transparent Communication
- \_Economic-Financial Resilience
- \_Business Ethics and Fighting Corruption
- \_Regulatory Environment, Market Opening and Competition

**Main concerns and topics raised**

- \_Price of gas and gasoline
- \_New Gas Law
- \_Integrity and compliance

- \_Organizational management and leadership
- \_Net Income and dividend payments
- \_Portfolio management

- \_Issues regarding the process of opening and promoting free competition in the natural gas market in Brazil

**Consumers**


**Main stakeholder engagement and consultation activities**

In 2021, we consolidated our digital communication strategy as a continuous and transparent dialogue channel with different segments of society. With a routine for publishing content on social networks, we increase the visibility of our strategies, commitments and actions and enable greater public engagement.

We made approximately **1.400** publications on our profiles on Facebook, Instagram, Twitter and LinkedIn, a network in which we closed the year with **2,597,530** followers, an increase of **10%** in relation to the previous year.

We also ran adwords campaigns on the Google search platform, covering the company's main areas of interest: fuel prices, environment, social projects, compliance, technology, pre-salt and portfolio management.

Sending the public to our websites and blogs, where there was more detailed content, for a total of over **15 million** users, **2.2 times** more than in 2020.

The contents permeate our operational activities, in an effort to translate our operations in the oil and gas industry, and include investments in research and development, new products, environmental and social commitments, sponsorships and new public selections, investment in innovation and digital transformation, combating to corruption, especially in 2021, in actions that sought to inform and provide clarity to our stakeholders, as well as society as a whole, about the composition and predictability of fuel prices.

We carried out two national advertising campaigns, on broadcast television, to provide clarity regarding how fuel prices are formed. In January we highlighted diesel, and in November, gasoline. In June, we launched a campaign focused on the company's technology and innovation. Finally, in December, we held an advertising campaign to demonstrate the company's contributions to society in the social and environmental realms.

**Our content on social media and Google was shown more than**

**1.7 billion** times and seen by **95 million** people.

There were more than **2.8 million** reactions, **138 mil** comments and more than **20 million** clicks.

## Related chapters

- \_ Safety and Commitment to Life
- \_ Economic-Financial Resilience
- \_ Active and Transparent Communication
- \_ People Management
- \_ Regulatory Environment, Market Opening and Competition

## Main concerns and topics raised

### Topics raised by labor unions:

- \_ Compensation
- \_ Work Regime
- \_ HSE
- \_ ACT (Collective Bargaining Agreement)

### Topics raised business and employer associations:

- \_ Benefits
- \_ Covid-19
- \_ Full Time Staff
- \_ Others
- \_ Progress in improving the oil and gas business environment
- \_ Transformation of the midstream and downstream market.
- \_ Process of opening and promoting free competition in the natural gas market in Brazil.
- \_ Active portfolio management
- \_ Energy transition
- \_ Opportunities to be a Petrobras supplier
- \_ New exploration frontiers



### Trade Associations



## Main stakeholder engagement and consultation activities

The relationship with trade associations and outside organizations is carried out by several of our management groups and managed by the External Relations Executive Management, which establishes guidelines, corporate standards and monitors our relationship with these entities.

Trade Associations include business and employer associations; labor unions, and other non-profit institutions, established on a voluntary basis, with the objective of providing services to its members in the defense of rights and interests that impact or may impact Petrobras.

We have established a close relationship with Industry Federations, entities representing segments of our supply chain, entities representing the segments of the industry in which Petrobras participates, etc. We can highlight our performance as members of the Brazilian Institute of Oil, Gas and Biofuels (IBP), the Brazilian Downstream Association (ABD) and the Brazilian Association of Petroleum Exploration and Production Companies (ABEP).

Communication with labor unions is centered in the Human Resources area. It is done through in-person or virtual meetings and by e-mails and letters sent to the address [relacoes\\_sindicais@petrobras.com.br](mailto:relacoes_sindicais@petrobras.com.br)

In 2021 there were more than **260 meetings** and approximately **1.300 interactions** (memos, letters and emails) with the labor unions.

We maintain relationships with **17** labor unions and **2** federations in the oil and gas category, as well as **8** labor unions and **1** federation in the maritime category. We maintain a policy of permanent dialogue and negotiation with employee representatives. An example of this are the meetings of the permanent committees, held periodically with the unions to deal with issues such as the work regime, benefits, and monitoring of the Collective Bargaining Agreement, which aim at both improving working conditions and facilitating negotiations for entering into ACTs, mitigating the risk of strikes.

### Related chapters

- \_Active and Transparent Communication
- \_Business Ethics and Fighting Corruption
- \_Socioeconomic Impacts
- \_Human Rights

### Main concerns and topics raised

- \_Registration operations and supplier certification
- \_Requirements to use Petronect
- \_Integrity Due Diligence evaluation dynamic
- \_Evaluation of supplier performance
- \_Prior knowledge of technical specifications
- \_Quality management



Suppliers



### Main stakeholder engagement and consultation activities

Engagement with the supply market is done using relationship actions directed towards the entire supplier base. The Supplier Channel ([www.canalfornecedor.petrobras.com.br](http://www.canalfornecedor.petrobras.com.br)) is the primary relationship channel, and the Portal Petronect ([www.petronect.com.br](http://www.petronect.com.br)) used to operate our contracting processes and supplier registry. Our subsidiary Transpetro interacts with its suppliers through the Suppliers Channel, available on the external portal: <https://transpetro.com.br/transpetro-institucional/canal-do-fornecedor.htm>

In the Supplier Channel, we provide institutional information to our suppliers of goods and services. We use this channel to disclose our contracting rules, guidelines on the registration processes, qualification and pre-qualification of suppliers, technical specifications, contract drafts, and clarify how bids and contracts work, as well as how to be in compliance. Additionally, the Supplier Channel includes tools that provide access to our public databases, such as Contract History and Projections, which enables practical and personalized access to contract and bidding information, in order to help companies map potential opportunities to participate in public tenders.

The Petronect Portal offers public and operational information regarding our contracting and supplier registration processes. In addition to carrying out the processes, it is widely accessible and allows the electronic evaluation, certification, pre-qualification and registration of suppliers, with security and traceability.

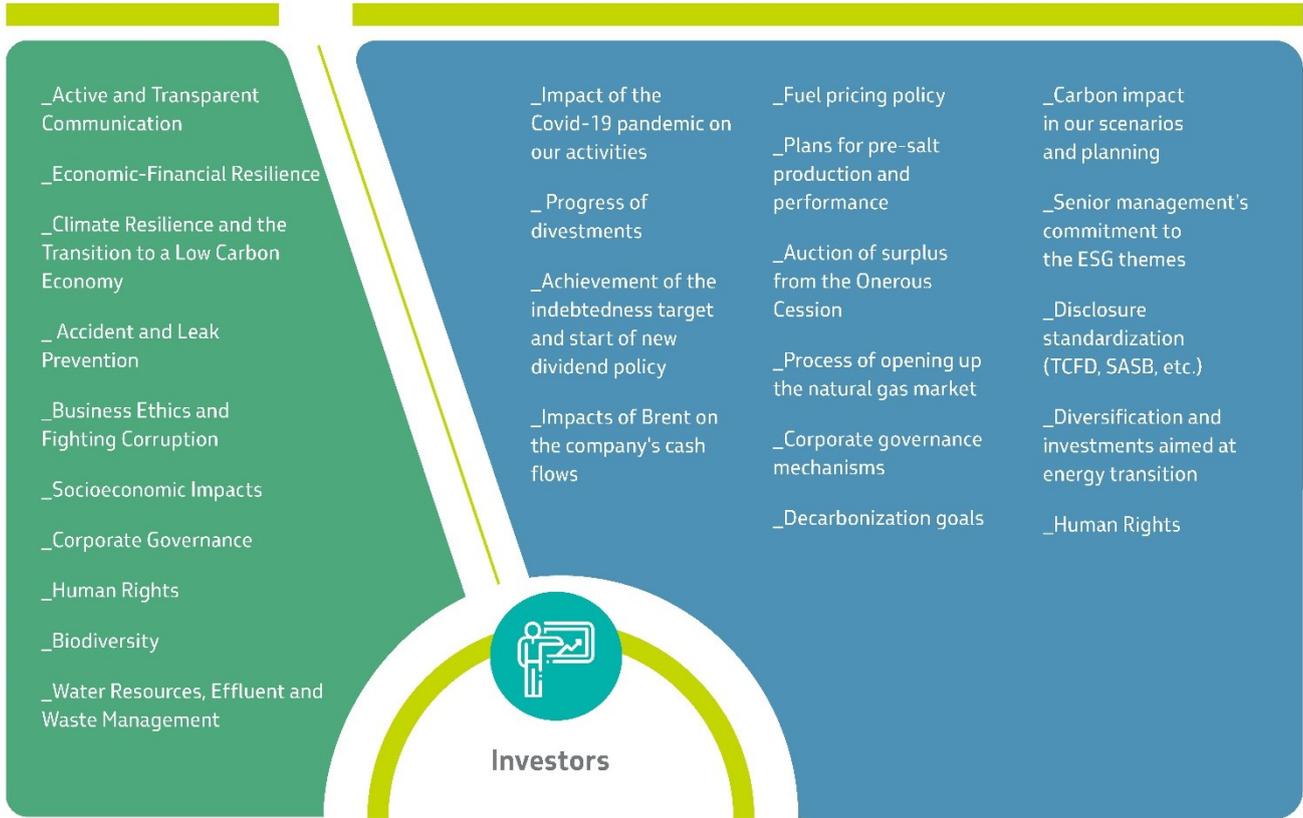
As an engagement tool, we give out a Best Suppliers Award, where we recognize suppliers that have excelled in their market niches for their high level of performance in the supply of goods and services to Petrobras.

For international suppliers, we promote events in partnership with diplomatic representations aimed at foreign companies, in order to clarify doubts and encourage their participation in our bidding processes.

In order to expand the reach of our communication actions, we hold monthly meetings through live streams where we invite all suppliers from our base, in order to establish direct and frequent communication, as well as share relevant information about our supply processes, along with other issues related to the supply chain.

In order to strengthen relationships and partnerships, with a focus on continuous improvement, we started to promote training to the supplier market with the recently launched training in "Quality of Goods" (distance learning), which seeks to train suppliers in the main concepts and processes regarding quality management and the requirements included in our contracts. Further capacity building training courses will be made available over time.

To reinforce communication channels with the supplier market, our Ombudsman coordinates the response to requests and complaints sent by suppliers and bidders, directing them to specific internal channels for service to suppliers.

**Related chapters**
**Main concerns and topics raised**

**Main stakeholder engagement and consultation activities**

Our relationship with investors takes place mainly through meetings (one-on-one or in groups, participation in conferences and roadshows) and presentations by the Executive Board to investors when we disclose our financial results and at events such as Petrobras Day. We also release quarterly reports, memos, material facts and news clarifications, in addition to various other financial, operational, and management information, available on our website for investor relations. We also hold shareholder meetings, and provide telephone, letter and e-mail services to our investors and shareholders, in addition to the service provided by the bookkeeping bank for our shares to all shareholders. During the circulation restrictions caused by the Covid-19 pandemic, we held virtual meetings, presentations and shareholders' meetings.

Investor concerns are considered in our strategic planning process and in the improvement of our processes. These interactions motivated the increase in our information reports regarding environmental, social, and governance issues.

## Related chapters

- \_ Economic-Financial Resilience
- \_ Accident and Leak Prevention
- \_ Active and Transparent Communication
- \_ Socioeconomic Impacts
- \_ Safety and Commitment to Life
- \_ Biodiversity

## Main concerns and topics raised

- \_ Our contributions to the fight against coronavirus
- \_ Ongoing divestments, such as exploration, production, refining, and logistics assets
- \_ Pricing policy for oil products such as gasoline, diesel, and cooking gas
- \_ The operating and commercial records achieved during the year
- \_ Preservation activities for marine and costal ecosystems such as the Beach Monitoring Program



### Media



## Main stakeholder engagement and consultation activities

We promote engagement with the press through the Petrobras Agency ([www.agenciapetrobras.com.br](http://www.agenciapetrobras.com.br)), where we publish information relevant to our stakeholders. These include announcements about business and operations, social responsibility actions in our coverage areas, accident reporting, among other releases and audiovisual content, always with the aim of informing the media and society in a transparent manner.

During the year we made **597 press releases** (regarding warnings and agendas) and had approximately **3550 interactions** such as addressing demands, agenda suggestions, correction requests, etc.

In 2021, we also did **7 press conferences** and more than **65 individual interviews** for regional, national and international media, or participation in events open to the press, in addition to courses for journalists on topics such as portfolio management, fuel price policy and Petrobras' operations in the Campos Basin.

To ensure prompt service to the press, we have a team of press officers who work on call on weekends and holidays.

In addition to the calls, releases and interviews, we monitor news clippings about Petrobras and prepare the company's spokespeople through media training (33 managers trained in 2021).

### Related chapters

- \_ Socioeconomic Impacts
- \_ Climate Resilience and the Transition to a Low Carbon Economy
- \_ Biodiversity
- \_ Water Resources, Effluent and Waste Management
- \_ Human Rights

### Main concerns and topics raised

- \_ Human rights
- \_ Diversity (in all the nuances)
- \_ Social impacts of the pandemic
- \_ Structural racism
- \_ Climate change
- \_ Biodiversity



**Civil Society Organizations**



### Main stakeholder engagement and consultation activities

Partnerships with Civil Society Organizations (CSOs) occur mainly through socio-environmental projects. These projects are received through two channels: public selection or direct choice. The public selection process is aligned with the Petrobras Socio-Environmental Program, may have a broad or restricted focus in relation to territories and topics, and must be disclosed and governed by specific regulations for each edition. During the process, a service channel is available on the selection website, in chat or email format, to clarify doubts on the part of the interested institutions. In May 2021, we carried out a new public selection for socio-environmental projects. In this process, **23 new projects** were considered in the four lines of action of the Petrobras Socio-Environmental Program - Education, Sustainable Economic Development, Climate and Ocean. In addition, we maintain an open channel for receiving direct choice proposals on our website ([petrobras.com.br](http://petrobras.com.br)). Projects received through this channel go through a pre-analysis directed by the guidelines and criteria defined within the scope of the Petrobras Socio-Environmental Program, and if they are eligible, they can be part of the Program's Project Bank, to be triggered upon specific demand. It is worth mentioning that the criteria for analysis and selection are the same, regardless of the type of project entry. 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, work plans, and even the establishment of joint public commitments.

As an example, we can mention the participation in the Biodiversity and Water Resources Networks of the National Confederation of Industries (CNI), in the Thematic Chambers of the Brazilian Business Council for Sustainable Development (CEBDS) and in the IPIECA Working Groups. These groups are engaged in various discussions, including the Conferences of the Parties to the Convention on Biological Diversity (CBD) and water risk assessment tools, and have been preparing publications and industry positions related to biodiversity and water resources.

In 2021, we held a relationship initiative for listening to stakeholders called Petrobras Dialogues. This year, in addition to two editions with a group of academics, we held an edition with representatives of six civil society organizations that are partners with the company. The objective was to create an environment for dialogue so that we could hear first impressions, concerns and contributions about our project in the exploratory phase in the Brazilian Equatorial Margin.

### Related chapters

- \_Active and Transparent Communication
- \_Economic-Financial Resilience
- \_Accident and Leak Prevention
- \_Regulatory Environment, Market Opening and Competition

### Main concerns and topics raised

- Public consultation for the regulation of the abandonment fund
- \_Communication platforms
- \_Well safety
- \_Recovery of depleted reservoirs



**Business Partners**



### Main stakeholder engagement and consultation activities

Our collaborations with other companies in the oil and gas sector take place in two main ways: exploration and production (E&P) consortia and cooperation agreements.

As part of exploration and production consortia, there is a governance rule that defines representatives from each company for discussions at the technical and operational levels. All impacts related to such ventures are dealt with in these forums. This same governance rule stipulates compliance with the main laws regarding compliance and anti-corruption practices in the world, such as the Bribery Act (United Kingdom) and the FCPA (Foreign Corrupt Practices Act, USA), in addition to Brazilian laws. Concerns about anti-corruption practices are also reflected in the supply contracts for these consortia. In the

formation of consortia, as well as in cases of assignment of rights therein, conformity issues are also subject to assessment.

Another form of action with other major E&P operators is characterized by technical cooperation alliances, through private agreements, to exchange experiences and good practices that can generate mutual benefits in technical-operational issues such as well security, depleted reservoir recovery, and studies about opportunities in alternative energies, among others. In addition, we participated in discussions inherent to the entire Brazilian oil and gas industry with the Brazilian Institute of Oil, Gas and Biofuels (IBP) and other representative bodies.

### Related chapters

- \_Active and Transparent Communication
- \_Regulatory Environment, Market Opening and Competition
- \_Public Policies, Initiatives and Associations
- \_Climate Resilience and the Transition to a Low Carbon Economy

### Main concerns and topics raised

- \_Progress in improving the exploration and production business environment

- \_Transformation of the midstream and downstream market
- \_Process of opening and promoting free competition in the natural gas market in Brazil

- \_Fuel pricing policy
- \_Active portfolio management
- \_Energy transition

**Public Authorities**



### Main stakeholder engagement and consultation activities

Our relationship with the government is carried out in an ethical, clear, transparent and impersonal manner, following our Code of Ethical Conduct, in addition to other internal regulations such as Institutional Relationships and Interactions with Government Agents. The questions raised by the government were addressed through responses to information requirements, explanatory technical notes, sending letters, cards and memos, meetings with public officials, and participation in public hearings. In addition, we participate in working groups and programs coordinated by public bodies, such as the Program for the Improvement of Tenders for the Exploration and Production of Oil and Natural Gas (BidSIM), New Gas Market, REATE, PROMAR, Fuel of the Future Program, State Commission for the Development of the Maritime Economy (CEDEMAR) of Rio de Janeiro, public hearings with regulatory agencies, with the National Petroleum Agency (ANP) and Ministries, as well as meetings at the National Environment Council (CONAMA) with collegiate bodies and working groups instituted by CNPE for the evaluation of biofuel insertion in the diesel production cycle.

We also highlight the 3rd publicity campaign to raise awareness among stakeholders and the start of the Safe Community social project in São Paulo. The objective is to establish cooperation between institutions to combat criminal actions in the areas of pipeline transportation services and the distribution of oil and oil products, as well as the illegal storage, processing, and trade of the diverted products, within the Prô-Dutos Program.

In 2021, we started a pilot program to disseminate integrity practices, with the Municipality of Quissamã, in the state of Rio de Janeiro, sharing experiences and improving processes.

We signed a memorandum of understanding with the government of the state of Rio de Janeiro, the municipality of Itaboraí and the Federation of Industries of the State of Rio de Janeiro (Firjan) to join efforts for the viability of an industrial complex in the area where GASLUB is located.

### Related chapters

- \_Economic-Financial Resilience
- \_Safety and Commitment to Life
- \_Active and Transparent Communication
- \_People Management

### Main concerns and topics raised

- \_Disinvestments
- Organizational restructuring
- \_Variable compensation
- \_New labor legislation and its implications
- \_ACT (Collective Bargaining Agreement)
- Petros Pension Plan
- \_Performance
- \_Results
- \_Hybrid work regime

  
**Internal Public**



### Main stakeholder engagement and consultation activities

Engagement with our internal stakeholders occurs through digital interaction in our internal communication channels, such as intranet, social networks, online communities, and sharing of messages, news, and in-person and virtual events. We also engage by linking our results to individual performance indicators and payment of variable compensation (Performance Management Process).

The Petrobras Portal is our main internal communication channel. In 2021, we published 1,434 articles from the most varied subjects there, highlighting people management themes. We had more than **24 million** visits, an average of **2 million** per month. Besides the Portal, we have about **300** communities of interest, created and updates by the employees themselves, geared towards specific topics of interest to the segmented groups.

Since 2020, with the restrictions imposed by the pandemic, we have kept about **40%** of our staff in total or partial remote work, while operational teams continued to work in person. In order to keep teams, managers and senior management closer, reinforcing a sense of trust, belonging, transparency and agility, digital channels have gained in relevance, allowing agile communication and reinforcing the company's culture through events broadcast live (and later available in recorded format). Among these events, we highlight Meetings with the Board of Directors, Petrobras HSE and Climate Congress and Dialogues for Integrity, the latter bringing together internal and external stakeholders around a subject of common interest.

**Our ecosystem of internal channels also includes Workplace Petrobras, our internal social network focused on communication and relationships. It has no institutional profile, communication is done only through personal profiles**

which are more than	<b>50</b> thousand employees	In 2021, these users created	<b>60</b> thousand publications and interacted even more:	almost <b>100</b> thousand comments and <b>815</b> thousand reactions (likes).
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We monitor our main internal communication channels, observing access/audience data and statements by our employees in environments where there is space for comments or other forms of evaluation.

We monitor the receptivity to our main subjects by means of favorability indicators from the internal public. This information is used in the planning of internal communication actions, generating new content from the doubts and questions of our employees.

We periodically conduct surveys with our employees to collect insights on key topics for people management. Throughout 2021, employees were consulted on training and development, work engagement, performance management and meritocracy, including recognition and reward processes and selection processes for bonus receiving positions.

## Our communication management

We are a company of great relevance, not only in the oil and gas segment, but for the entire Brazilian industrial and socioeconomic landscape. Our production chain is extensive, with thousands of partners and suppliers, and our businesses directly or indirectly impact millions of people. In this context, it is essential that we maintain active and transparent communication that is continuous and timely, with true and official information about our business, operations, performance, results, and contributions to society. It is essential that we establish a narrative that is relevant and pertinent to all our stakeholders, to highlight the importance of our role, recovering a relationship of trust with people and reinforcing the image and reputation of our brand.

We are committed to being consistent, true, transparent, simple, and timely in the way we communicate with all our stakeholders, representing our identity and our attitudes. This commitment is stated in internal documents, such as the Communication and Relationship Policy.

The Institutional Relationship and Sustainability Area defines the operating strategies, guides and coordinates activities aimed at the relationship with our stakeholders, reinforcing corporate communication and brand management activities, social and environmental project actions, and external relationship management in defense of the interests of our strategic themes and support to the treatment of demands, management of activities related to the transition to low carbon, emissions and energy performance and safety, environment and health, as well as intelligence, business and property security.

Since 2017, we have trained our spokespeople and the professionals who act as relationship agents at external events and who interact with stakeholders, to communicate our positions and strategies. In 2021, due to the Covid pandemic, 126 spokespersons and 107 relationship agents were trained using virtual training.

All of our official communication channels are managed centrally, in the Executive Management of Communication and Brands, in order to maintain the alignment, timeliness and relevance of the information communicated to stakeholders in a broad manner. In general, quantitative indicators - volume and origin of access to published content, engagement, and interactions - and qualitative - feelings about the brand and discourse analysis of statements about us are followed. These indicators provide inputs for planning new content and approaches across all channels.

We use surveying methodologies to understand stakeholder perception. The results are used to form communication diagnoses, help with decision making, and promote indicators regarding image and reputation.

**MONITORING RESEARCH**

Research	How does it work?	Frequency
Corporate Image Monitoring System (SÍSMICO)	Integrates and consolidates information from quantitative surveys of public opinion and various stakeholders, such as Communities in a Scope, where the survey is applied in about 70 municipalities, to assess perceptions about 23 units distributed in 13 Brazilian states. The collected information generates a set of image indicators that, when combined, make up our general image indicator.	Triennial
RepTrak™	The study allows us to evaluate public opinion regarding our reputation, in comparison with other companies, based on seven dimensions: Financial Performance, Products and Services, Leadership and Management, Citizenship, Work Environment, Governance and Ethics, and Innovation.	Quarterly
Perception Survey about Compliance Actions	Quantitative employee survey	Annual

In 2021, the Pulse Index measured by RepTrak™, which had a practically uninterrupted growth trajectory after Operation Car Wash (from the 2nd quarter of 2018 to the 4th quarter of 2020), recorded periods of instability, resulting from sensitive issues involving our operations; especially regarding fuel prices. The press coverage strongly pressured the company in the face of public opinion, and the issue of prices hampered the reputational recovery process, which has been naturally gradual and positive in a scenario without crises triggered in the external environment. The score achieved by the 3rd quarter was 46.8 points, which meant a drop of 4.3 points compared to the 51.1 points at the end of 2020. “Prices compatible with the market” was the most impacted attribute, reinforcing “prices” as a protagonist in this downward scenario. However, compared to the 2nd quarter of 2018, our reputation grew by more than 12 percentage points, showing that the important perceptual advances made in the eyes of the public remain.

We also monitor mentions of our brands and issues that are relevant to our social media strategy. This follow-up helps us to anticipate crises, identify trends, and better understand what society says about the company, as well as expectations regarding corporate positioning. We also monitor comments and interact on our social media profiles as well as our internal portal and the internal social network. Based on this monitoring, we survey and evaluate possible communication risks and, in conjunction with the areas involved and/or impacted, we produce positions or related content.

The unit responsible for business communication, brand management and relationship activities participates in risk analysis to support decisions on critical issues for the company. These activities are carried out from the perspective of the potential impacts on our image and reputation, which are consolidated with evaluations from other perspectives, such as the environment and people's health, compliance and finances. This analysis allows us to monitor the issues that most impact our relationship with stakeholders and our image with society. Such studies are presented to the Executive Board and the Board of Directors, according to their strategic relevance, and allow us to adopt the necessary measures to anticipate and mitigate potential impacts.

We have a crisis communication system prepared to act promptly when an operational occurrence is identified that creates risks to people or the environment. We have internal and external communication channels and quickly mobilize the necessary information to communicate with employees, the press, communities, the market, and other stakeholders.

## Fuel prices



Photo: Petrobras Image Database

**CONTEXT**

One of the main concerns raised by our stakeholders was the formation and predictability of fuel prices. To respond to this demand in an active and transparent manner, communication channels and campaigns were developed throughout 2021.

We didactically explain fuel pricing, Petrobras' share and responsibility, and the importance of the international parity policy.

**CHALLENGE**

We are seen by a large portion of society as solely responsible for the price of fuel at the gas stations, due to the lack of knowledge about the free fuel market, as well as the entire path of oil, from exploration to the pump, the innovation and technology involved, and the company's responsibility during this journey.

**SOLUTION**

We designed a communication strategy that involved providing clarity regarding our responsibility, which involved giving greater transparency to the final price composition through constant content on social networks and a concentrated campaign effort in the last quarter of the year.

**RESOURCES**

We have revised our page on fuel prices on our website, in order to be clearer, more current, and provide more information to the public, such as gasoline, LPG and diesel prices, in the states in which we sell to distributors. We also keep content up to date on the website Facts and Data.

We invested **BRL 2.2 million** in external networks and environments for a communication campaign that ran from November to December 2021.

**RESULTS**

Social media content was shown **261,147,596** times

with more complete content <https://petrobras.com.br/pt/nossas-atividades/precos-de-venda-de-combustiveis/>

281,329 accessed the website

In 2021, our website for fuel pricing totalled **2,038,738** views

The site dedicated to addressing and providing clarity regarding some of the main questions about gasoline prices totalled **2,137,993** users

**In Facts and Data we published two types of content, updated throughout the year:**

Truth about prices of cooking gas (LPG) **887,854** views

Truth about diesel prices that you need to know **601,776** views



## MAIN INSTITUTIONAL COMMUNICATION CHANNELS

<https://www.petrobras.com.br>  
<https://nossaenergia.petrobras.com.br>  
<https://novoscaminhos.petrobras.com.br>  
<https://www.investidorpetrobras.com.br>  
<https://www.agenciapetrobras.com.br/>  
<http://transparencia.petrobras.com.br/>  
<https://duvidasgasolina.petrobras.com.br/>  
<facebook.com/petrobras>  
<twitter.com/petrobras>  
<instagram.com/petrobras>  
<linkedin.com/company/petrobras>  
<youtube.com/petrobras>

### CITIZEN INFORMATION SERVICE:

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

### REPORTING CHANNEL:

<https://www.contatoseguro.com.br/petrobras>

### REQUESTS FOR LGPD PETROBRAS:

<https://petrobras.com.br/pt/privacidade-e-protecao-de-dados-pessoais/>  
Petrobras Customer Service: (0800 728 9001) or <https://petrobras.com.br/pt/ouvidoria/>

### SUPPLIER CHANNEL:

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

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# Materiality

The eight material issues that make up our matrix are the result of the process of identifying, evaluating, and prioritizing relevant topics that may affect our generation of value in the short, medium, and long term. Approved by our Executive Board in 2020, our materiality matrix was developed based on the issues that most impact our business, using our stakeholders as a reference.

Our materiality was reviewed in accordance with the Reporting Principles of the GRI Standard (Global Reporting Initiative Standards) and aimed to:

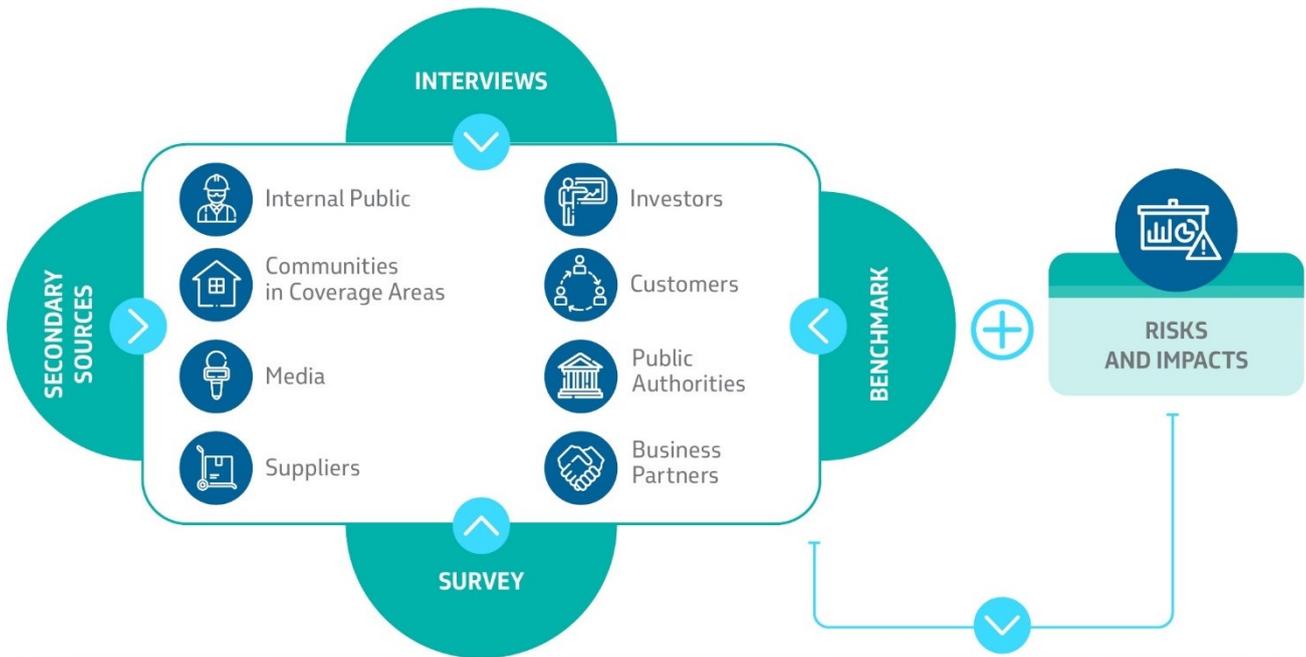
- Understand our impacts, risks, and opportunities in relation to these topics;
- Improve our vision as to how the company generates value;
- Increase transparency, with more ample communication of the most relevant topics to our stakeholders, for a better assessment of our performance; and
- Evaluate whether, based on changes in the context of the period, there were changes in material topics.

The selected topics were those that reflect significant impacts, whether they are environmental, social, economic, or influence the assessment and decisions of stakeholders, whether through our own activities, products, and services, or as a result of our business relationships with other entities.

Additionally, during 2021, we observed the main manifestations of our stakeholders to assess the relevance of making adjustments or not to the material issues that have been guiding our strategy, management and reporting.

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>> **Information on the statements received from our stakeholders can be found in the chapter on Active and Transparent Communication.**



**FEEDBACK FROM STAKEHOLDERS + RISK AND IMPACT ANALYSIS**



In this process, no new recurring topic was noted among the stakeholders or a lack of interest in any previously mapped topic, with no need to change our materiality. On the other hand, we observed that some topics, even if not recurring, deserved space in our report to meet the specific needs of some stakeholders.

An example of this was the statement by investors for our report that included indicators from the Sustainability Accounting Standards Board (SASB), as well as the material topics of the methodology. Knowing that the GRI methodology for defining topics considers multi-stakeholder listening, we did not change our materiality, as it was faithful to the standard. On the other hand, in line with transparency, we have included indicators related to the SASB material topics that are most appropriate for our organization, demonstrating our diligence and management regarding these topics and our respect for these specific stakeholders. This concern was not limited to just serving investors. We have included some non-material topics in our report to also meet the specific interests of the following audiences: communities in coverage areas, trade associations, media, Civil Society Organizations (CSOs) and the internal public.

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>> **Information regarding the additional topics requested by our stakeholders can be found in the chapter on Active and Transparent Communication.**

In this way, our materiality continues to include the eight topics mentioned in the figure above, but our report also presents complementary topics that meet these specific demands. They include:

- Corporate Governance
- Public Policies, Initiatives and Associations
- Biodiversity
- Water Resources, Effluent and Waste Management
- People Management
- Human Rights

# Sustainability at Petrobras

Our sustainability strategy is based on the firm commitment to accelerate the decarbonization of our company and to always act ethically and transparently, with safety in our operations and respect for people and the environment. We have a goal of achieving greenhouse gas emissions neutrality (net zero) in the operations under our control (scope 1 and 2) and our intention to influence the same goal in non-operated assets, within a timeline compatible with the Paris Agreement.

We have been working with decarbonization actions for more than a decade and have achieved a trajectory of progressive reduction of operational emissions. These actions mainly include: reduction of natural gas flaring, CO<sub>2</sub> reinjection, energy efficiency gains and control of losses in operations.

Our strategic model seeks to produce oil and gas that is compatible with scenarios of accelerated societal decarbonization, adopting the concept of dual resilience: economic, resilient to low oil price scenarios, and environmental, with low carbon.





Environmental


**Climactic Resilience<sup>1</sup>:**

- \_25% reduction in absolute operating emissions by 2030.
- \_Zero routine flaring by 2030<sup>2</sup>.
- \_40 MM tCO<sub>2</sub> reinjection by 2025 in carbon capture, utilisation and storage projects (CCUS).
- \_32% reduction in carbon intensity in the upstream segment by 2025 (15 kgCO<sub>2</sub>e/boe, maintained until 2030)
- \_40% reduction in methane emission intensity in the upstream segment by 2025.
- \_16% reduction in carbon intensity in the refining segment by 2025, expanding to 30% by 2030 (30kgCO<sub>2</sub>e/CWT).
- \_Achieve Net Zero emissions (scopes 1 and 2) in activities under our control within a timeframe compatible with the Paris Agreement


**Biodiversity Conservation:**

- \_100% of our facilities with biodiversity action plan by 2025.


**Water Security:**

- \_50% reduction in freshwater capture in our operations by 2030.


**Impact Prevention/Mitigation:**

- \_Zero increase in residues generation by 2025.
- \_Leaks: goal of zero with an alert limit of 120 m<sup>3</sup>.

1) Carbon commitments are based on 2015. Other commitments have 2018 as base year.

2) In accordance with the World Bank's zero routine flaring initiative.

Our 2022-26 Strategic Plan (PE 2022-26) features four top metrics (VAZO, IAGEE, TAR and Delta EVA<sup>®</sup>) that quantify the attributes of the vision and provide more explicit guidance on our key short-term goals. One of them corresponds to the Greenhouse Gas Goals Compliance Index (IAGEE), which set a target for 2022 of 16.5 kgCO<sub>2</sub>e/boe emission intensity in E&P and 39.2 kgCO<sub>2</sub>e/CWT for refining.

Our emissions commitments involve both operate with existing assets and when designing new projects. To support our actions, we have the Neutral Carbon Program, which not only seeks to strengthen our positioning in low carbon, but also to accelerate and reduce the costs of decarbonization solutions, bringing greater competitiveness to Petrobras. The program has a dedicated decarbonization fund, with an initial budget of USD 248 million for the five-year period (Strategic Plan 2022-2026).

Our emissions commitments involve both operations on existing assets and the design of new projects.

**INVESTMENTS TO STRENGTHEN OUR POSITIONING IN LOW CARBON****DECARBONIZATION OF OPERATIONS**  
(scopes 1 and 2)

- \_ Creation of a decarbonization fund
- \_ HISEP®, separation of CO<sub>2</sub>, methane detection, closed flare, CCUS
- \_ All electric - fully electrified platform
- \_ Carbon reduction projects in refineries

**CAPEX**  
USD 1.8 Billion +  
USD 0.25 Billion (fund)**BIOPRODUCTS**

- \_ Renewable diesel
- \_ Biojet Fuel
- \_ R&D in biobunker

**CAPEX**  
USD 0.6 Billion**SKILLS FOR THE FUTURE**  
(scope 3)

- \_ R&D in modern renewables, products with low carbon footprint and CCUS
- \_ Profitable diversification into new businesses

**CAPEX**  
USD 0.13 Billion**CAPEX 2022-2026 USD 2.8 BILLION**

Another top metric we have is related to the volume of oil and oil product leaks (VAZO). Our Strategic Plan 2022-2026 maintained the goal of zero leakage, with an alert limit for 2022 of 120m<sup>3</sup>.



Social

- **Health and Safety:**
  - \_ Goal: zero fatalities.
  - \_ TAR < 0.7.
  - \_ Promotion of safe operations that protect the lives of workers and other stakeholders.
- **Socio-Environmental Investment:**
  - \_ Measurement and disclosure of the social return of at least 50% of volunteer socio-environmental projects.
  - \_ Development of impact initiatives that contribute to the solution of social and/or environmental problems, involving opportunities for action with our stakeholders, customers of our products.
- **Human Rights (HR):**
  - \_ Development of a comprehensive HR training program for 100% of its company employees, in addition to carrying out human rights *due diligence* in 100% of operations (of all business units and refineries in the portfolio).
  - \_ Promote diversity, through internal and external actions to the company, providing an inclusive work environment.
- **Community Relations:**
  - \_ A socioeconomic diagnosis of communities in 100% of operations (of all business units and refineries in the portfolio).

Our commitment to people's health and safety and increasing the positive impact on society and mitigating the negative impacts of our operations are also part of our PE 2022-2026.

As life is a non-negotiable value for us, we continue with the goal of zero fatalities. The TAR indicator (rate of recordable accidents per million man-hours) is also one of our top metrics. For 2022, the alert threshold remains below 0.7, which reaffirms our commitment to life and keeps us in the best quartile in the industry.

Our vision for sustainability is also anchored in commitments in social responsibility, encompassing socio-environmental, human rights and community relations projects.

Continuing our work as an agent of socio-environmental transformation, engagement with partners and suppliers in aspects related to human rights and the Petrobras Socio-environmental Program, which corresponds to our voluntary socio-environmental investment program, will be expanded. We will also increasingly listen to society regarding the social impacts of our operations, proposing solutions to mitigate the potential impacts.

The strategy also provides for the promotion of a culture of social responsibility and dialogue with society, through active and transparent communication and encouraging the generation of good practices.



## Governance


**Economic Resilience:**

- \_ Maintain an optimal capital structure.
- \_ Maximize value generation.
- \_ Risk mitigation through litigation management.
- \_ Commitment to better capital allocation (portfolio management).


**Corporate Governance:**

- \_ Adoption of governance model that allows a balance between efficiency and control:
  - \_ Be a benchmark for the adoption of digital technology in the realm of the Governance and Compliance Department (DGC).
  - \_ Optimize the Petrobras corporate structure, focusing on the competitive environment.
  - \_ Strengthen the decision making process, focusing on security and speed.


**Integrity:**

- \_ Promotion of an environment that acts as a benchmark for ethics, integrity, and transparency at Petrobras:
  - \_ Consolidate a culture of integrity among our employees, focusing on trust, responsibility and innovation.
  - \_ Leverage our compliance risk monitoring processes, focusing on the competitive environment.
  - \_ Reduce the backlog of verification and Administrative Accountability Process (PAR).
  - \_ Implement an asset recovery process.
- \_ Encourage the adoption of ESG (Environment, Social and Governance) practices with our stakeholders:
  - \_ Disseminate integrity conduct and the ESG agenda to our supply chain.
  - \_ Expand operations in external projects to reinforce the adoption of integrity practices in Brazilian society.
  - \_ Promote the alignment of society with ESG criteria, in the Governance pillar.

In line with our purpose, we remain committed to adopting a governance model that allows for a balance between efficiency and control, through the optimization of our corporate structure, focusing on the competitive environment, strengthening the decision-making process, with security and speed and to be a reference in the adoption of digital technologies.

We do not tolerate conduct that is contrary to the principles described in our Code of Ethical Conduct, or non-compliance with legal and contractual obligations, demanding the same standard of behavior from our employees, partners, and suppliers.

[102-11] [102-15] [102-18] [102-19] [102-26] [102-29] [201-2]

# Risk Management and Sustainability Governance

## Sustainability governance

Our governance structure is composed of: General Shareholder Meeting, Fiscal Council, Board of Directors and its committees (Board of Directors Committees), Audits, Ombudsman's Office, Executive Board and its committees (Statutory Technical Committees and Executive Advisory or Deliberative Committees).

The Board of Directors has six Statutory Advisory Committees, with specific attributions of analysis and recommendation on certain matters, linked directly to the Board, and the Safety, Environment and Health Committee (CSMS) advises on the establishment of policies and guidelines related to the management HSE strategy, climate change, transition to a low carbon economy, social responsibility, among other subjects.

The composition and rules of operation of the committees are governed by regulations approved by the Board.

>> [Full information about the committees and their attributions can be found in the Corporate Governance chapter.](#)

We have an Institutional Relationship and Sustainability Department, responsible for driving our trajectory towards important goals: producing affordable, low-carbon energy and strengthening our trust and reputation with our stakeholders. The area is also responsible for the relationship strategy with our stakeholders, that is, all people, groups and organizations that establish relationships and can influence or be influenced by our activities, business, and reputation. The Statutory Technical Committee for Institutional Relations and Sustainability advises the director of the area in the decisions that are within its scope of approval.

In addition to the statutory advisory committees of the Board of Directors and the Institutional Relations and Sustainability Department, we have operational, tactical and strategic forums that make up our HSE Governance, Climate Change and Social Responsibility, so that these matters can be dealt with at all levels of the company, as stated here.

**SUSTAINABILITY FORUMS**

Forum	Main attributions
HSE Executive Committee (CE-HSE)	Advise the Executive Board regarding the definition of HSE, Climate Change and Social Responsibility strategies, policies, and guidelines. 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 "HSE Management" macroprocess with the standardization, integration, development, and critical analysis of the unfolded processes of the macroprocess, seeking continuous improvement of HSE performance at Petrobras.
HSE Thematic Commissions (Safety Commission, Process Safety Commission, Environment Commission and Health Commission, among others)	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 Commission	Advise the macroprocess manager in the standardization, integration, development, and critical analysis of the unfolded processes of the Manage Climate Change macro process, aiming at the continuous improvement of our performance in atmospheric emissions, energy efficiency and climate change.
Technical forum on atmospheric emissions and energy efficiency	Advise the Climate Commission in the technical evaluation of strategies, guidelines, standard procedures and norms for atmospheric emissions, energy efficiency and climate change; monitor the implementation of strategies, guidelines, programs, projects, and actions on the subject; periodically monitor and report the performance of the indicators; forward to the Climate Commission proposals for programs, projects and actions to improve the theme.
Human Rights Guidelines	Develop the action plan to ensure the implementation of the results, guidelines and inputs produced by the Human Rights Working Group (WG). Unfold the human rights commitments provided for in the Strategic Plan 2022-26 (PE 2022-26).
Community Committees	Spaces coordinated by us, with the participation of community leaders and other social actors, normally on a quarterly basis. The purpose of these committees is to maintain a permanent dialogue with the communities neighboring Petrobras operations, discussing issues related to the impacts arising from activities and operations in the communities, and actions to be developed to expand the positive impacts and minimize the negative impacts.

We also adopt practices aligned with the principle of prevention to prevent environmental degradation. This principle governs the internal standards that standardize our environmental management.

An example of the application of this principle is the guideline for us to adopt a hierarchy in the management of risks and impacts to the biodiversity of our operations, which aims, in order of priority, to minimize impacts on biodiversity, the recovery of impacted habitats, residual impact compensation, and whenever possible, the search for a net positive impact on biodiversity in habitats we consider to be critical.

The principle of prevention is also present in our waste management, where we seek to eliminate, minimize, or control adverse impacts on health and the environment, prioritizing the non-generation, reduction, reuse and recycling of solid waste.

Another example of alignment with this principle is our environmental management of water resources and effluents, which seeks to prevent and/or minimize environmental

impacts by periodically assessing the needs and opportunities to reduce our water demand, minimizing the polluting load of effluents and the adoption of alternative sources of supply. For this, we use global and internal water balances, information on current and future water availability (for supply and support capacity in water bodies for assimilation of effluents), assessed water risks, and regulatory requirements as a basis.

Finally, to prevent impacts and environmental degradation, we continuously identify operational activities, equipment, and installations that can cause contamination of soil, groundwater and degraded areas, through the assessment of environmental aspects and impacts, process risk analysis, management of environmental anomalies, audits and inspections, among others. Based on this information, we implement preventive or mitigating actions.

## Decision-making process

The decision-making process for economic, social, and environmental topics involves several corporate governance structures, including the Board of Directors and the Executive Board.

The Safety, Environment and Health Committee (CSMS), which supports the Board in ESG (Environmental, Social and Governance) matters, is composed 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 realm, we can highlight seven executive management areas with specific responsibilities associated with social and environmental topics: Finance; Investor Relations; Social Responsibility; External Relationship; Health, Safety, and Environment; Climate Change; 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 Executive Board) or shared, requiring at least two managers to approve the act. This decision model is based on the four-eye principle, which increases the transparency and control of our decision-making process.

## Compensation associated with sustainability objectives

In the 2022-2026 Strategic Plan (PE 2022-26), we present three top metrics that are used for the variable compensation of 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, to ensure that activities are aligned with the main commitments established in the plan. Of these three metrics, two are correlated to ESG, the indicator showing compliance with the goals regarding greenhouse gases (IAGEE) and oil and oil product leaks (VAZO), committing the entire company to these goals.

Performance analysis takes place through the Performance Management (GD) process, which assesses competencies and goals. In the Performance Management process, goals are based on objective 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.

## Defining strategy and policy

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 objectives, 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 fulfillment 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 related parties, spokespeople, human resources, and minority interests, in compliance with the provisions of art. 9, Paragraph 1 of Decree No. 8,945, of December 27, 2016.

According to our Bylaws, it is up to the Executive Board, among other duties, to evaluate, approve, and submit to the Board of Directors the basis and guidelines for the preparation of the Strategic Plan, as well as the annual programs and multi-annual plans, as well as annual expenditure and investment plans and programs with their 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.

Within the scope of Strategic Plan 2022–26, we have advanced in the analysis of possible new businesses that can reduce exposure to and dependence on fossil sources and that, at the same time, are profitable, guaranteeing our long-term sustainability. In this sense, approval governance was created for entry into new resilient businesses focused on diversifying our portfolio, prioritizing businesses related to the energy segment, or new products that are not provided for in the current strategic plan.

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>> [Information regarding our Bylaws and main governance instruments can be found on our Investor Relations website.](#)

## Risk management

We believe that integrated and proactive risk management is essential for delivering safe and sustainable results. The fundamental principles of our Corporate Risk Management Policy are respect for life in all its diversity, ethical performance in compliance with legal and regulatory requirements, as well as full alignment and consistency with our strategic plan. Risk management is integrated with the guidance of risk response actions that consider the possible impacts on our stakeholders and aimed at adding or preserving shareholder value and business continuity.

Our risk management process is coordinated by a corporate area, allowing the standardization and uniformization of our risk analyses and the management of risk responsibilities, which are structured according to a model with three lines. 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 related parties.

The identification, assessment and treatment of risks are carried out by the organizational units in conjunction with the Executive Risk Management Department, which periodically reports Petrobras' main risks to the Executive Board and the Board of Directors. 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 preparation of our Corporate Risk Matrix is coordinated by the corporate risk management area and involves all areas of our structure. In this process, employees with different specialties 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 identifies risks, how likely they are to occur, and their potential impacts, suggesting action plans to deal with them. The impact assessment considers four dimensions: Financial, Image/Reputation, Legal/Compliance, and Environmental/Life.

This qualitative analysis of risks allows the prioritization and direction of efforts related to action plans to be carried out, to minimize the events that may adversely affect us and maximize those that may bring us benefits. In addition, it may be necessary to apply a quantitative risk analysis to support decision making, where numerical simulations are used to evaluate the combined effect of the identified risks and other sources of uncertainty on our objectives.

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 analyzes, 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.

Using the risk matrix, we identify the main events and sustainability risk factors that could affect our long-term performance. The management and treatment of these risks will be detailed throughout the report, according to how the chapters are organized, as detailed below:

Material topic	Main associated events and risk factors	Risk Management and treatment
 <b>Business Ethics and Fighting Corruption</b>	<ul style="list-style-type: none"> <li>_ Failure to prevent, detect in a timely manner, or correct behaviors that are inconsistent with our principles ethics and rules of conduct.</li> <li>_ Operations with related parties that are not properly identified or dealt with.</li> </ul>	PAGES 67-82
 <b>Climate Resilience and the Transition to a Low Carbon Economy</b>	<ul style="list-style-type: none"> <li>_ Climate changes; Physical Risks of Climate Change.</li> <li>_ Energy Transition - Market Risk, Regulatory Risk, Legal and Reputational Risk, and Technological Risk.</li> <li>_ Greater requirements regarding the transparency of actions related to the transition to low carbon.</li> <li>_ Water scarcity events and difficulties in obtaining grants for the right to use water resources.</li> </ul>	PAGES 111-131
 <b>Active and Transparent Communication</b>	<ul style="list-style-type: none"> <li>_ Inappropriate or untimely sharing of information to our stakeholders.</li> <li>_ Fake news and hate speech against the company.</li> </ul>	PAGES 11-27
 <b>Regulatory Environment, Market Opening and Competition</b>	<ul style="list-style-type: none"> <li>_ Changes in the competitive environment of the Brazilian oil and gas market.</li> <li>_ Different interpretations of environmental, health and safety regulations and industry standards that are becoming more rigorous.</li> <li>_ Differences in interpretations and new regulatory requirements by agencies in our sector.</li> <li>_ Delays or difficulties in obtaining or renewing licenses and environmental permits.</li> <li>_ Risk of incurring losses and dedicating time and financial resources to defending pending litigation and arbitration.</li> </ul>	PAGES 90-108
 <b>Safety and Commitment to Life</b>	<ul style="list-style-type: none"> <li>_ Epidemics and pandemics in public health.</li> </ul>	PAGES 171-177
 <b>Accident and Leak Prevention</b>	<ul style="list-style-type: none"> <li>_ Safety, environmental and health risks in our operations and facilities such as oil spills, product leaks, fires and explosions.</li> <li>_ Clandestine derivation.</li> <li>_ Compromised digital assets for automation.</li> <li>_ Failures in emergency response and victim rescue assistance.</li> </ul>	PAGES 157-167 177-187

Material topic	Main associated events and risk factors	Risk Management and treatment
 <b>Economic-Financial Resilience</b>	<ul style="list-style-type: none"> <li>_Volatility of oil, gas and derivatives prices.</li> <li>_Depreciation of the real against the US dollar and increases in the prevailing market interest rates.</li> <li>_Short and medium term liquidity constraints.</li> <li>_Credit risks of some of our customers.</li> <li>_Obligations related to our pension plan ("Petros") and medical assistance.</li> </ul>	PAGES 54-63 203-206
 <b>Socioeconomic Impacts</b>	<ul style="list-style-type: none"> <li>_Expectations and dynamics of the communities where we operate.</li> <li>_Impacts on the communities where we operate due to our operational activities, such as noise, emissions, delimitation of circulation area, among others.</li> <li>_Strikes, labor stoppages or claims by our employees or by employees of our suppliers, contracted companies and other sectors.</li> <li>_Violation of human rights in our operations, whether in our workforce, in the communities where we operate, or in our supply chain.</li> </ul>	PAGES 234-244 247-261

>> [Information about risk factors can be found in our Reference Form.](#)

In addition to sustainability risks, we also highlight risks considered emerging, that is, new long-term risks arising from external factors, where we have identified a potential for a significant impact on a large part of our operations and which may require adaptations to our strategy. We highlight below some highly relevant emerging risks and the measures being taken to mitigate these risks.

### Carbon risk

The Paris Agreement calls for a profound reduction in greenhouse gas (GHG) emissions and a transformation of the energy supply. Our scenarios point to an unequivocal energy transition. Changes are already being observed in energy markets, through regulatory changes and some physical impacts of climate change on the infrastructure of companies and countries. Industry leaders have been increasing their commitments to reducing carbon emissions and with the growing market demand for transparency of results related to greenhouse gas emissions and the impacts that the energy transition has on companies. The transition generates a series of additional expenses, both for the control of emissions and for eventual adaptations to avoid or mitigate physical risks of the units, as well as business adaptations of to regulatory and market changes.

The scenarios predict reduced demand for fossil fuels and possible carbon pricing, leading to higher costs and segmentation of oils and fuels according to their carbon intensity. Greater requirements can also be expected regarding the transparency of actions related to the transition to low carbon, with potential reputational risk.

In our Strategic Plan 2022-26, we use a series of oil and gas price assumptions to evaluate our projects. Our current focus is on investing in the decarbonization of our operations, the development of bioproducts, and the development of competencies for future

diversification into renewables and low carbon products. For these initiatives, investments of USD 2.8 billion are planned over a five-year period.

Projects related to decarbonization initiatives of our operations have an estimated investment of USD 1.8 billion in our PE, with emphasis on CO<sub>2</sub> separation, methane detection systems, closed flare commissioning, HISEP technology, carbon reduction projects in refineries, among others. The initiatives involve all our operational areas and include actions related to the reduction of natural gas flaring, CO<sub>2</sub> reinjection, energy efficiency gains, and control of operational losses.

In 2020, we launched the Biorefino 2030 Program, which includes projects for the production of a new generation of more modern and sustainable fuels, such as renewable diesel and aviation biokerosene (BioQAv). Regulatory evolution is still necessary in the recognition of renewable diesel, in the mandates of mandatory addition to fossil diesel. The investments foreseen in the horizon of the strategic plan add up to USD 600 million.

We assess the physical risk associated with climate change in our operations through research and development of climate regionalization, with renowned institutions in Brazil and abroad (Universidade de São Paulo – USP, Instituto Nacional de Pesquisas Espaciais – INPE and National Oceanic and Atmospheric Administration – NOAA), of parameters considered potentially more susceptible to these changes, such as water availability for our refineries and thermoelectric plants, and wave, wind and ocean current patterns for our offshore platforms, generating qualified information for the process of adapting our operations.

A technological partnership is in progress with the University of São Paulo, focused on simulating extreme atmospheric conditions and waves under the effect of climate projections<sup>1</sup> over watersheds in southeastern Brazil, where most of our activities are concentrated. The time horizon for these simulations will be 2060, with a time lapse of 10 years, that is, average projections will be made for 2020–2030, 2030–2040 and so on. Completion of the results associated with this technology partnership is expected by the end of 2022.

For environmental variables in the oceanic region, we carry out physical risk assessments of our operations due to changes in hydrodynamic circulation (currents and vortices) and found that, over the useful life of our assets, the magnitude of impacts is within the safety parameters already considered in our projects.

To assess the risk of water scarcity for our onshore facilities, we have a technological partnership with the Decision Support Systems Laboratory (LabSid/USP), which developed a decision support system to analyze the water vulnerability of critical assets in areas with water conflicts and reduced water availability. This system performs hydrological modeling with the precipitation results available from the regionalized projections generated by INPE<sup>2</sup>.

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>> **Information about our carbon risk management can be found in the chapter** [Climate Resilience and Transition to a Low Carbon Economy](#).

<sup>1</sup> RCP 4.5 and RCP 8.5 of the MPI and HadGEM Earth System Models using dynamic downscaling to adequately represent the physical phenomena of interest in the Santos, Campos and Espírito Santo Basins, based on the regional atmospheric models RegCM4 and WRF and the WW3 wave model.

<sup>2</sup> It uses the regional atmospheric model Eta, forced by the global models of CMIP5 HadGEM2-ES, BESM, MIROC5 and CanESM2

### **Covid-19 pandemic**

Public health epidemics and pandemics such as Covid-19 have impacted and may continue to impact our workforce, our partners, and our suppliers, which may affect our supply chain and the productivity of many of our activities, including the impact on some of our facilities, such as our platforms, refineries, and terminals, among others. This could have a negative impact on our results and financial condition. The pandemic also continues to influence our activities in different ways, which may result in operational discontinuity, increased costs, reduced revenues, compromised supply, delays in processes and projects, interruption and/or interdiction of activities. In addition, public health epidemics and pandemics may affect oil prices and demand, and consequently, our financial results.

We continue to monitor the impact of new variants and the availability and effectiveness of vaccines on our own and outsourced employees. During the Covid-19 pandemic, we continue to observe:

- A reduction in demand for oil products due to mobility restrictions.
- A reduction in economic activity, recession, growth in unemployment due to the closure of small and medium businesses, which could affect our supply chain.
- The postponement of the return to in-person work due to the pandemic.

To manage a situation that involves the mass contagion of our employees due to public health epidemics or pandemics, we must use mitigating actions that minimize the impact on our operations. We continue to rely on our EOR (Organizational Response Structure) to organize actions and make decisions, adopting different work formats to reduce exposure, defining ways to optimize the operation of prioritized assets and units, and providing the necessary resources for operational continuity. Our ability to continue to effectively manage the impact of the Covid-19 pandemic could affect our operations and financial results.

### **Cyber security risk**

The strategic digital transformation initiative of our strategic plan seeks to prepare us for a competitive environment that is being increasingly influenced by digital technologies and a new way of working, based on collaboration. The possibilities of transforming operating and business models bring opportunities to increase the efficiency and security of operations, reduce costs, and bring more robustness and agility to decisions. These technologies are increasingly present in our daily lives, such as in the operation of our assets or in corporate activities.

In this context, cybersecurity plays a crucial role in our daily lives, and managing its risks is being treated as a priority. Cybersecurity flaws can have an external source such as malware, hacking, cyber terrorism, among others; or they may have an internal origin, through the intentional and fraudulent acts of employees and contractors with the objective of obtaining personal advantages.

Our management has been increasingly aware of the seriousness of the cybersecurity risk, which can severely impact our operations and business, including in the long term, causing financial and image losses and the application of legal or regulatory sanctions.

As mitigation actions, we are bringing robustness to our layers of protection over e-mails, managing vulnerabilities in networks and applications, audit trails in information systems, privileged access control, updating security packages, among other actions. In addition, we maintain an area dedicated to information security, linked to the executive director for

Digital Transformation and Innovation, with the objective of centralizing management related to all information security disciplines.

Our Center of Excellence in Handling and Responding to Security Events is focused on the cybernetic protection of our technological and operational assets, including industrial and control systems, so that we have solid processes to protect our digital environments in line with the best market practices, and is subject to constant improvement. Based on reference frameworks and with benchmarks from peers in the oil and gas industry, a work plan is in progress that has increased our safety management maturity, both in corporate and industrial automation environments. In 2021, we were accepted as members of a world-leading information security forum. This entity brings together a wide range of cybersecurity and incident response teams from organizations, including industrial, government, commercial and academic sectors, with representation from different countries. These organizations work primarily with prevention, helping to increase the maturity level of information security on a global scale.

From a privacy perspective, we carry out a comprehensive mapping of personal data in our processes, train the workforce, institute internal regulations, such as adjustments to the Code of Ethical Conduct, creation of guidelines and procedures to address legal requirements to ensure the protection of personal data and the privacy of stakeholders, without losing focus on the necessary transparency and the full exercise of the holders' rights, in addition to providing technical and administrative measures for prevention, security and response against improper, non-conforming or illicit treatment of that data. It should be noted that a general management department was created that is directly linked to the Director of Governance and Compliance, that will be in charge of processing personal data, in accordance with Law 13.709/2018 (General Personal Data Protection Law - LGPD), focused on the management of privacy, responsible for coordinating compliance with the LGPD, guiding employees on the protection of privacy and carrying out the governance of privacy management and personal data protection processes, promoting awareness of the importance of the topic for all stakeholders, incorporating privacy protection into the organizational culture and decision-making processes.

[201-1]

# Sustainability Performance

Our sustainability performance is verified by monitoring indicators and goals throughout the organization. The main indicators include the top metrics and commitments established in the Strategic Plan, in addition to the metrics of the scorecards for executive departments, executive management offices, and other departments of the general structure, along with other management indicators.

Top Metrics are elements that translate and quantify the attributes of our vision, and provide more explicit guidance regarding our main objectives, as a way of ensuring that activities are aligned with the main commitments established in the plan.

## MAIN SUSTAINABILITY METRICS

Indicator	2021 Achievement	Goal or Maximum Admissible Limit (MAL) for 2021	2021 Performance	Goal or Maximum Admissible Limit (MAL) for 2022
Fatalities	3	MAL: Zero	Actual results below zero fatality goal	Goal: Zero
TAR <sup>1</sup>	0.54	LMA <0.7	Actual result 23% under the planned Warning Level for the year	<0.7
VAZO <sup>2</sup>	11.6 m <sup>3</sup>	Goal: Zero MAL: 120 m <sup>3</sup>	Actual result was 95% below the volume leaked in 2020 (216.5 m <sup>3</sup> ) and 90% below the warning limit established for 2021.	Goal: Zero MAL: 120 m <sup>3</sup>
IGEE <sup>3</sup> E&P	15.7	17 kgCO <sub>2</sub> e/boe	Actual result 8% less than the emission intensity goal established for 2021	16.5 kgCO <sub>2</sub> e/boe
IGEE <sup>3</sup> Refinement	39.7	40 kgCO <sub>2</sub> e/CWT	Actual result 1% less than the emission intensity goal established for 2021	39.2 kgCO <sub>2</sub> e/CWT

<sup>1</sup> Recordable Accident Rate per millions man hours.

<sup>2</sup> Leaked volume of oil and oil products.

<sup>3</sup> Intensity of Greenhouse Gas Emission

## MAIN ECONOMIC AND GOVERNANCE INDICATORS

Indicator	2017	2018	2019	2020	2021
Proven oil, condensate, and natural gas reserves (Biboe)	9.8	9.6	9.6	8.8	9.9
Oil and LNG production (Mbpd)	2,217	2,099	2,222	2,282	2,224
Natural gas production (Mboed) <sup>4</sup>	549	529	548	554	550
Revenue from sales (millions of BRL)	283,695	310,255	302,245	272,069	452,668
Operating profit (loss) (millions of BRL)	35,624	60,545	81,154	52,893	202,404
Adjusted Ebitda (millions of BRL)	76,557	114,852	129,249	142,973	234,576
Net profit (loss) - Petrobras Shareholders (millions BRL)	(446)	25,779	40,137	7,108	106,668
Free cash flow (millions BRL) <sup>5</sup>	47,002	55,450	73,232	118,132	168,992
Net debt (millions USD) <sup>6</sup>	109,275	84,360	87,121	75,538	58,743
Investments (millions BRL) <sup>7</sup>	48,219	49,370	111,120	40,796	47,500
Market Leverage: Net Debt/ (Net Debt + Market Cap)	57%	46%	44%	46%	41%
Percentage of employees trained in ethics and integrity <sup>8</sup>	96%	86%	99%	98%	98%
Employee disciplinary measures	298	282	351	250	147
Texts published at the Petrobras agency <sup>9</sup>	507	428	434	515	515
Petrobras website users (monthly average)	270,056	290,627	256,049	202,235	530,900
Petrobras Transparency website users (monthly average)	9,981	11,034	10,126	10,081	12,490

<sup>4</sup>As of 2019, the unit of measurement of gas production is thousands of barrels of oil equivalent per day (Mboed).

<sup>5</sup>Our free cash flow metric was changed to reflect the new Shareholder Remuneration Policy, approved in 2021, and now includes net cash generated by operating activities less acquisition of property, plant and equipment and intangible assets. 2020 free cash flow has been recalculated based on changes in this metric for comparative purposes only and does not affect past dividends. The values for the years 2017 to 2019 were not recalculated and are presented considering the metric in force at the time of its calculation.

<sup>6</sup>The effects of the adoption of IFRS 16 occurred as of January 1, 2019, when the rule went into effect.

In 2019, the amount includes the signing bonus of BRL 68,612 million for the acquisition of the Onerous Cession.

<sup>8</sup>Excluding employees on long-term leave or assigned to other equity interests and external entities, the percentage is 99.6%.

<sup>9</sup>The combination of indicators from texts published in our news agency (releases and notices to the financial market) and visits to our institutional website and Petrobras Transparency website demonstrates our efforts towards transparency, as it seeks to expand the dissemination of information to various stakeholder groups.

**MAIN ENVIRONMENTAL INDICATORS**

Indicator	2017	2018	2019	2020	2021
Oil and oil product spills (m <sup>3</sup> )	35.8	18.4	415.3	216.5	11.6
Emission of greenhouse gases (millions tCO <sub>2</sub> e)	67	62	59	56	62
GHG intensity in E&P (kgCO <sub>2</sub> e/boe) <sup>10</sup>	21	17.5	17.3	15.9	15.7
Intensity of methane emissions in E&P (tCH <sub>4</sub> /mil tHC)	0.56	0.57	0.58	0.45	0.33
GHG intensity in refinement (kgCO <sub>2</sub> e/CWT)	43	42	41.7	40.2	39.7
Fresh water withdrawal (Megaliters)	177,694	182,316	156,864	146,251	150,749
Waste generation <sup>11</sup>	113	121	120	123	109
Facilities with biodiversity action plan	-	-	-	-	30%

<sup>10</sup> Revised 2020 value after third-party certification completed in July 2021, from 15.8 kgCO<sub>2</sub>e/boe to 15.9 kgCO<sub>2</sub>e/boe.

<sup>11</sup> The generation of hazardous solid waste from our processes in the last four years (2017 to 2020) was updated considering improvements in the calculation of the indicator. For the purposes of the Waste Sustainability Commitment – Zero growth of process waste by 2025, the reference value (2018) is maintained and remains at 120 thousand tons.

**MAIN SOCIAL INDICATORS**

Indicator	2017	2018	2019	2020	2021
Fatalities	7	6	2	0	3
Recordable Injury Frequency Rate (TAR)	1.08	1.01	0.76	0.56	0.54
Investments in cultural projects (millions BRL) <sup>12</sup>	61	38	37	18	37
Investments in sport projects (millions BRL) <sup>12</sup>	21	80	71	5	1
Investment in business, science, technology, and innovation (millions BRL) <sup>12</sup>	7	17	13	8	12
Investments in socio-environmental projects (millions BRL)	60	87	116	89	88
Social and environmental projects with measurement of social return (%) <sup>13</sup>	-	-	0.94	5.88	13.75
Donations (millions BRL) <sup>14</sup>	-	-	0.9	26	101
Number of Employees <sup>15</sup>	62,703	63,361	57,983	49,050	45,532
Number of Female Employees <sup>15</sup>	10,411	10,518	9,331	8,161	7,692
Percentage of management positions held by women <sup>15</sup>	15.4	18.1	18.4	19.1	19.3
Number of black employees <sup>16</sup>	17,491	17,914	16,763	14,744	13,914
Percentage of management positions held by black <sup>16</sup>	22.2	17.7	19.3	20.0	21.3
Number of employees with disabilities <sup>17</sup>	342	239	337	278	404

<sup>12</sup> This information includes the Petrobras Parent Company.

<sup>13</sup> The percentage considers the cumulative number of projects measured from 2019 onwards by the number of projects in the portfolio on December 31 of each year.

<sup>14</sup> Until 2019 the number was just for the Petrobras Parent Company.

<sup>15</sup> In the 2020 Sustainability Report, the numbers of employees and respective percentages were only from the Petrobras Parent Company. In the current report we present the data including the subsidiaries in Brazil and abroad. Data prior to 2021 were adjusted considering this scope.

<sup>16</sup> Self declared color/race as black or brown. In the 2020 Sustainability Report, the numbers of employees and respective percentages were only from the Petrobras Parent Company. For cultural reasons in some countries, this information cannot be obtained and consolidated, including subsidiaries abroad. In the current report we present the data including the subsidiaries in Brazil. Data prior to 2021 were adjusted considering this scope.

<sup>17</sup> Until 2020 the number was just for the Petrobras Parent Company.

**HIGHLIGHTS TOWARDS CARBON NEUTRALITY**

We operate one of the most decarbonized productions in the world in the Brazilian pre-salt and we have made investments in efficiency that place us as a low-emission, high-efficiency player in the industry.

We have been working in decarbonization actions for more than a decade and have achieved a trajectory of progressive reduction of operational emissions. These are timely gains in carbon efficiency, the effect of which must be evaluated by the contribution accumulated in the period:



↓ Reduction of **21%** of absolute emissions between 2015 and 2021

↓ Reduction of approximately **50%** of methane emissions over the last 10 years

Reduction of approximately **50%** in the intensity of green house gas emissions per barrel produced from 2009 to 2021



One of the largest CO<sub>2</sub> reinjection programs in the world<sup>1</sup>



In addition to operating results, we play a significant role in corporate voluntary conservation and reforestation programs in Brazil, with a direct impact in more than **175 thousand hectares** and support for protected areas in more than **25 million hectares**, and gains in carbon, biodiversity, water and social and economic development.



<sup>1</sup>) In 2020 we operate the largest CCUS project in the world, in terms of annual injection, according to the Global Status of CCUS 2021 report.

**AWARDS**



Return to the *Dow Jones Sustainability™ World Index*



Conclusion of the obligations foreseen in agreement with the USA Department of Justice (DoJ)



Adherence to good prevention practices against fraud and corruption by the National Program for Corruption Prevention (PNPC), in partnership with the TCU



Transparency Portal **was 1st place** in the CGU ranking



Certification from the *Association for Supply Chain Management* in environmental, ethical and economic excellence in the procurement and supply chain of goods and services



Among the most transparent in Brazil for sustainability, according to the Advisory Council for the Global Reporting Initiative (GRI) in Brazil



**94% adherence** to the Brazilain Code of Corporate Governance (CBGC)



Awarded the *Distinguished Achievement Award for Companies*, granted by *Offshore Technology Conference (OTC)*, for the innovations developed in the Búzios field



Return to the Brazilian Institute for Corporate Governance (IBGC)



Certification in the Governance Indicator of the Secretariat for Coordination and Governance of State-Owned Companies (IG-Sest), of the Ministry of the Economy, classified in the best level of the indicator (Level 1)



Approval in editing 2020-2021 of the Pro-Ethics Company Program, from the Ethos Institute and the Federal Controller General (CGU)



Adherence to B3's Special Level 2 Corporate Governance Listing Segment (Level 2)



Financial Statements Transparency Award from the National Association of Finance, Administration and Accounting Executives (Anefac).

Since 2021 we have been answering the EcoVadis questionnaire. The objective of the EcoVadis Corporate Social Responsibility (CSR) Assessment methodology is to assess the quality of a company's CSR management system - through its policies, implementation measures and results, and to assist companies and their value chain with sustainability management.

The assessment, carried out by EcoVadis experts, focuses on 21 questions that need to be answered with documents and are grouped into four themes (environment, labor practices and human rights, fair business practices, sustainable procurement).

In 2021, Petrobras achieved a score of 47 and was among the best in the industry.

# Governance



# GOVERNANCE



## Integrity

Compliance with the obligations foreseen in agreement with the USA Department of Justice (DoJ)

**BRL 6.2 billion** Returned to cash in Operation Car Wash

**98 %** of employees trained in ethics and integrity<sup>2</sup>

**98.7 %** of employees signed the informed consent agreement of the Code of Ethical Conduct.

Reduction in PAR Backlog by **10%** during the period

Reduction of **22%** of the number of investigations in stock related to incidents of conformity during the period

Details provided to the Statutory Audit Committee regarding the **113** most critical conformity incident reports

**147** Employee disciplinary measures

1) Attributable to Petrobras shareholders.

2) Excluding employees on long-term leave or assigned to other equity interests and external entities, the percentage is 99.6%.

[102-10] [103-1] [103-2] [103-3] [201] [OG1] [OG1.1]

# Economic-Financial Resilience

Our economic and financial resilience incorporates issues related to our portfolio management, reserve replacement, effectiveness of the production curve, the price of oil and oil products, reflections of political-economic issues, market value/ratings, capital allocation, indebtedness, and economic/financial impacts resulting from unpredictable events such as pandemics. Our Strategic Plan 2022-26 aims at creating and adding value to our stakeholders in all businesses and scenarios. The main objectives of our financial strategy are:



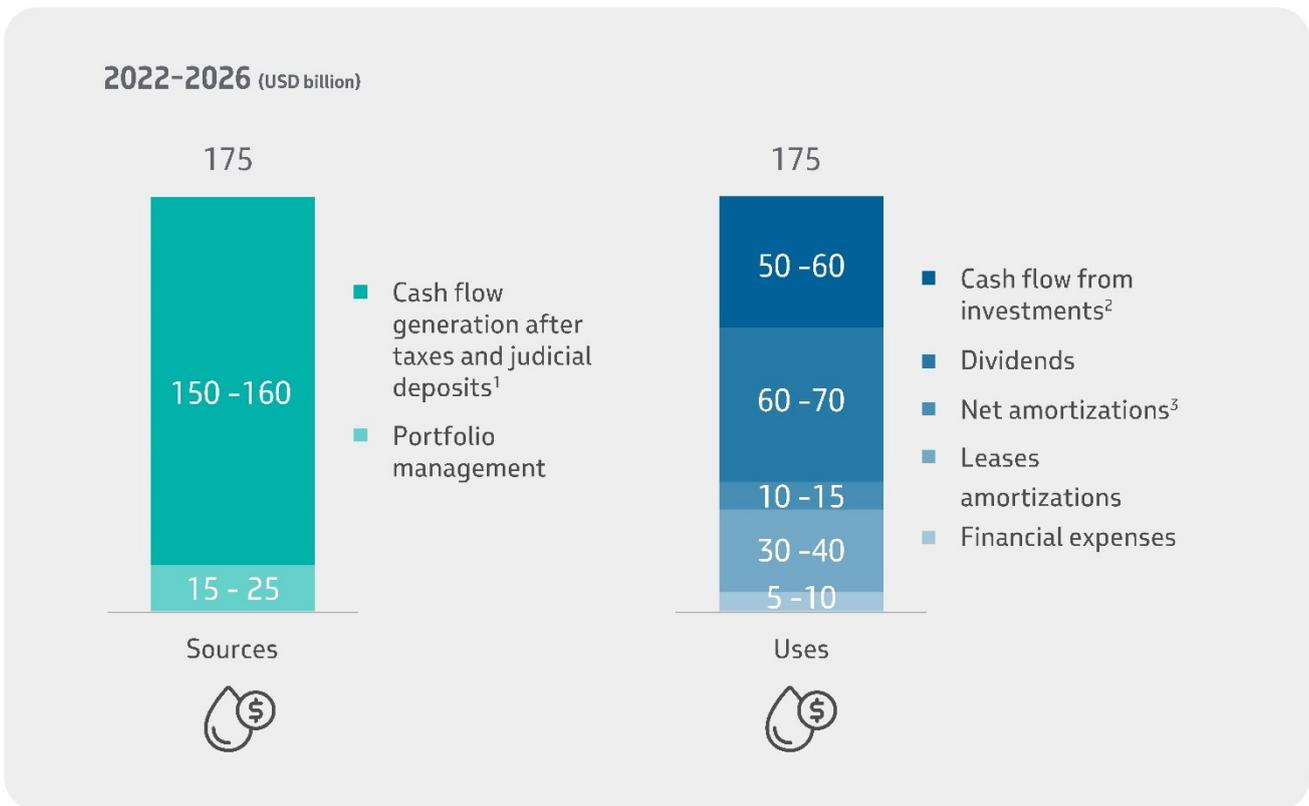
We seek to reconcile economic resilience - which implies the viability of projects in scenarios of low oil prices -, with the context of energy transition. Our goal is to ensure the sustainability of our business and our company throughout the energy transition, ensuring the achievement of our economic and financial goals.

We periodically prepare corporate scenarios that seek to identify the main trends and business uncertainties. These scenarios are considered in the development of our Strategic Plan and are used to evaluate investment projects individually and as a portfolio.

The assessment of the impacts of the energy transition is incorporated in the stages of the elaboration of scenarios that contemplate several aspects such as prices of Brent oil and natural gas; composition of the global energy matrix; penetration of hybrid and electric cars; international carbon prices; inflation; exchange rate; and interest rates in Brazil.

The competitiveness of companies in the long run will relate to the ability to produce at low costs and with less emission of greenhouse gases, thriving in scenarios of falling oil prices, carbon pricing and possible practices of differentiating oil according to its carbon intensity during production.

For the period of the Strategic Plan 2022-26 (PE 2022-26) we project funding sources in the order of USD 150 billion, arising mainly from cash generation from our operations, supplemented by divestments. These resources ensure the execution of the planned investment plan, as well as the fulfillment of financial obligations, such as the payment of interest and debt amortization, in addition to dividend remuneration to our shareholders.

**STRONG EXPECTED FREE CASH FLOW GENERATION AT THE HEART OF CAPITAL MANAGEMENT**


1) Considers decommissioning costs of about USD 1 billion/year.  
 2) Excludes leases classified as total CAPEX.  
 3) Considers funding of USD 5 billion.

## Portfolio management

Active management of the business portfolio is a fundamental point of our economic and financial resilience, and the review of the investment portfolio takes place annually within the process of preparing the Strategic Plan for the five-year period. In addition, the project portfolio and its performance are periodically monitored by senior management in specific forums.

Our active portfolio management is also the main driver of our partnerships and divestments, which aim to improve our operational efficiencies and return on capital, in addition to generating additional cash to service our debts and investment opportunities. Currently, our partnerships and divestitures including the sale of minority, majority, or wholly owned positions in some of our subsidiaries, associated companies, or assets, to strategic financial investors or through public offerings.

In the following table are the projects that were completed in the period from January 1, 2021, to February 23, 2022:

Signature Date	Closing Date	Transaction
11/28/2019	2/5/2021	Full sale of the interest in the Frade concession, located in the Campos Basin, on the northern coast of the state of Rio de Janeiro.
10/2/2020	2/5/2021	Full sale of stake in Petrobras Uruguay Distribución S.A. (PUDSA).
1/7/2021	4/9/2021	Full sale of interest in the company Eólica Mangue Seco 1.
1/7/2021	4/5/2021	Full sale of interest in the companies Eólica Mangue Seco 3 and 4.
4/30/2021	4/30/2021	Sale of remaining 10% stake in Nova Transportadora do Sudeste S.A. (NTS).
2/26/2021	5/31/2021	Full sale of interest in the company Eólica Mangue Seco 2.
6/30/2021	7/5/2021	Secondary public offering of all common shares issued by Petrobras Distribuidora S.A. (BR) owned by Petrobras.
8/21/2020	7/14/2021	Sale of all interests in eight onshore exploration and production concessions, located in the state of Bahia, jointly known as Polo Rio Ventura.
12/21/2018	8/31/2021	Granting of rights of 10% of the Lapa field to Total, in Block BM-S-9. Exercise of the option to sell the rest of the company's interest, as provided for in the contract signed in January 2018, when Total acquired 35% of Petrobras' interest, within the scope of the strategic partnership, retaining the operation of the field.
9/21/2020	9/24/2021	Sale of the entire stake of Petrobras (40%) in the company GNL Gemini Comercialização e Logística de Gás Ltda (GásLocal) to White Martins Gases Industriais Ltda. (White Martins).
7/29/2021	11/5/2021	Sale of the entire stake in two electricity generation companies: TEP Termoelétrica Potiguar S.A and Companhia Energética Manauara (CEM).
8/27/2021	11/10/2021	Sale of entire stake in the company Breitener Energética S.A. (Breitener).
3/24/2021	11/30/2021	Sale of refining and associated logistics assets at the Landulpho Alves Refinery (RLAM) in Bahia.
2/24/2021	12/6/2021	Sale of the total interest in nine onshore exploration and production fields, jointly called Polo Miranga, located in the state of Bahia.
5/3/2021	12/6/2021	Sale of three fuel oil-fired thermoelectric plants located in Camaçari, in the state of Bahia (TTPs Polo Camaçari).
12/23/2020	12/22/2021	Sale of the total interest in twelve onshore exploration and production fields, called Polo Remanso, located in the state of Bahia.
8/27/2020	12/28/2021	Sale of the total interest in 27 onshore exploration and production concessions, located in Espírito Santo, jointly known as Polo Cricaré.
7/5/2021	2/4/2022	Sale of the entire stake in a set of seven land and shallow water field concessions located in the state of Alagoas, jointly called Polo Alagoas.

At Transpetro, in October 2021, the Ship Sale Plan was finalized, reaching a sales result of USD 42.6 million. Between 2020 and 2021, 16 ships were sold (14 from Transpetro and two from TIBV), according to plan and matching the average age of the fleet with the main companies in the market.

Thus, 2021 started with 41 ships and ended with an operational fleet of 37 ships. It is worth noting that the reduction in the average age of the fleet was 49%, from 14.3 years in December 2019 to 7.3 in December 2021.

In January 2020, we communicated our decision to hibernate Araucária Nitrogenados S/A (ANSA), located in the city of Araucária, Paraná. In September, we announced an

opportunity (teaser) for the sale of our interest in this fertilizer plant, which is currently in the binding phase.

We have 213 fields, 112 offshore and 101 on land. Of the offshore fields, 30% are considered inactive. Of the onshore fields, 13.9% are considered inactive (484 km<sup>2</sup> area).

In addition to the 213 fields, there are three offshore fields and 23 onshore fields that have already had their decision to return them communicated to the National Agency for Petroleum, Natural Gas and Biofuels (ANP) (183 km<sup>2</sup>). For these fields, we are negotiating with the ANP for the approvals of the Facilities Decommissioning Programs (PDI). We also carried out decommissioning activities in five fields already accepted as returned by the ANP (69 km<sup>2</sup>).

Of the 78 active offshore fields, we have 13 with deactivation plans in place.

Of the 34 inactive offshore fields, we have 10 with deactivation plans in place. Of the 14 inactive onshore fields, 13 have deactivation plans in place.

There were no new hibernations in 2021. However, 62 platforms were hibernated in previous years. One platform ceased operating in 2021 (P-32).

Another five platforms were deactivated and directed to the decommissioning process in 2021: two floating units and three fixed platforms. In Sergipe, the FPSO (Floating, Production, Storage, and Offloading) Piranema Spirit, a chartered unit located in the Piranema field, was decommissioned, undocked, and delivered to its owner in April. In Espírito Santo, the three Fixed Platforms in Cação (PCA-1, PCA-2 and PCA-3) were removed and dismantled through an EPRD (Engineering, Preparation, Removal and Disposal) contract, ensuring the forwarding of recycled materials for reuse and correct disposal of waste. In turn, in the Campos Basin, the floating platform P-15, which was in the Piraúna field, and which had already been sold in 2020, was undocked and handed over to the new owner in December.

We are guided by a divestment system ratified by the Federal Audit Court (TCU), based on the Bylaws for State-Owned Companies (Law 13,303/16) and the General Petroleum Law (Law 9,478/98). The system employed is in line with decrees 9.355/2018 and 9.188/2017, and provides the rules for divestment with market transparency, as well as ensuring ample competitiveness, fairness, and publicity, with the disclosure of relevant facts regarding the stages of each process.

In addition, we have expanded our value generated and improved our competitiveness when compared to competitors, by directing our investments into assets where we have greater expertise.

Our operations result in wealth generation in the societies where we operate through taxes, as well as jobs and income generation. On the other hand, our portfolio management may indicate an exit from certain businesses or assets where we are not the best owners, which can impact employment, the supply chain, and the tax base in the regions where they are located.

In assets and units under active portfolio management, we have a personnel plan for our own employees covered by the projects, which has as its pillars respect for people, the guarantee of operational continuity with safety, mobility and transparency and provides for three tools: permanence in the company through internal relocation to other areas or units, leaving the company through the Agreement Termination Procedure (PDA) and the Specific Voluntary Termination Program (Specific PDV). This plan is presented to employees after the signing of the purchase and sale contract of each divestment process. Each portfolio management project has its own personnel plan rules, with a schedule

suited to the characteristics and progress of the project and has a robust change management process focused on the relocation and adaptation of employees to new locations.

## Financial strategy

An important resource for generating value is our financial strategy, focused on reducing leverage, one of our top metrics of our Strategic Plan 2021-2025. Our cash generation and continuous debt management allowed us to reach, in the third quarter of 2021, the gross debt target of USD 60 billion, established for 2022, more than a year in advance. Even with the achievement of the goal, we continued to focus on debt management, always seeking to reduce interest rates and increase maturities.

We are evaluated by the three main credit rating agencies (Standard & Poor's - S&P, Moody's, and Fitch) and our ratings are based on our financial situation, strategies, and governance, and are also influenced by Brazil's sovereign risk classification. In 2021, Moody's raised our credit rating by one point from "Ba2" to "Ba1", one notch below investment grade, with a stable outlook. The agency also raised our stand alone rating by one point, from "Ba2" to "Ba1". With this update, we are rated one notch above the Brazilian government. S&P upgraded our standalone credit rating to BB+, also one notch below investment grade. There were no changes in our global credit rating and outlook in 2021 by S&P and Fitch, remaining at BB- and stable at S&P and BB- and negative at Fitch. There were no changes in our independent Fitch credit rating, remaining at BBB. In 2022, through February 28, there were no changes to our standalone credit rating or our global credit rating.

### PERFORMANCE INDICATORS

Indicator	2017	2018	2019	2020	2021
Adjusted Ebitda (millions of BRL)	76,557	114,852	129,249	142,973	234,576
Free cash flow (millions BRL) <sup>1</sup>	47,002	55,450	73,232	118,132	168,992
Net debt (millions USD) <sup>2</sup>	109,275	84,360	87,121	75,538	58,743
Investments (millions BRL)	48,219	49,370	111,120	40,796	47,500
Market Leverage: Net Debt/ (Net Debt + Market Cap)	57%	46%	44%	46%	41%

<sup>1</sup> Our free cash flow metric was changed to reflect the new Shareholder Compensation Policy, approved in 2021, and now includes net cash generated by operating activities less acquisition of property, plant and equipment and intangible assets. 2020 free cash flow has been recalculated based on changes in this metric for comparative purposes only and does not affect past dividends. The values for the years 2017 to 2019 were not recalculated and are presented considering the metric in force at the time of its calculation.

<sup>2</sup> The effects of the adoption of IFRS 16 occurred as of January 1, 2019, when the rule went into effect.

The gross debt metric present in the last strategic plan was excluded, due to the anticipated achievement of the USD 60 billion target in the third quarter of 2021. However, to maintain the incentives for good leverage management, the maintenance of gross debt below USD 65 billion will be considered as a trigger for the top Delta EVA<sup>®</sup> metric. That is, if this value is exceeded, the Delta EVA<sup>®</sup> grade will be counted as zero. Strategic Plan 2022-26 maintains active portfolio management, with expected divestments between USD 15 and 25 billion, which will contribute to improving operational efficiency, return on capital, and cash generation necessary to maintain debt at an appropriate level, as well as supporting the best investment opportunities. Active management makes it possible to focus on assets that have the potential to sustainably raise the expected return on the portfolio. The investments planned for the 2022-2026 period are USD 68 billion, with 84% of this total allocated to the exploration and production of oil and natural gas (E&P). Of the total E&P CAPEX (USD 57 billion), around 67% will be allocated to pre-salt assets. This allocation is in line with our strategic focus, increasingly concentrating our resources on assets in deep and ultra-deep waters, in which we have demonstrated a great competitive advantage over the years, producing better quality oil with lower greenhouse gas emissions.

We received the “Deals of the Year 2021” award from the American magazine Latin Finance, in the Corporate Liability Management of the Year category. The award is a recognition of the great effort made in the management of our liabilities over the last few years. Our indebtedness, which reached approximately USD 160 billion in 2014, if we also consider the charters that started to be considered as debt as of 2019 with the adoption of IFRS 16, was reduced to USD 59.6 billion in September 2021, reaching the target that was expected to be achieved only in 2022.

Due to the anticipated achievement of the target for 2022 of gross indebtedness below USD 60 billion, achieved in the third quarter of 2021, in November we approved the improvement of our Shareholder Remuneration Policy. We have established our optimal gross debt level of USD60 billion, including commitments related to leasing, and for the purposes of the Shareholder Remuneration Policy, we have adopted a more flexible parameter, applying the gross debt of USD65 billion as a criterion for defining the method of calculating the remuneration to be distributed. The policy also establishes that the distribution of remuneration must be made on a quarterly basis and determines a minimum annual remuneration, promoting greater predictability in the flow of payments to shareholders. The Shareholder Remuneration Policy with all its new parameters for distributing earnings is available [on our Investor Relations website](#).

## Reaching the goal of USD 60 billion in Gross Debt



Photo: Petrobras Image Database



### CONTEXT

We ended 2020 with gross debt of BRL 75.5 billion. Our goal, disclosed in the PE21-25, was to reach a debt of USD 67 billion by the end of 2021 and USD 60 billion by the end of 2022. We managed to reach the goal of USD 60 billion planned for the end of 2022 as early as the third quarter of 2021.



### CHALLENGE

Reduction of the company's Gross Debt, with the anticipated achievement of the goal of USD 60 billion of gross debt.



### SOLUTION

In 2021, we reduced our gross debt by USD 16.8 billion, reaching USD 58.7 billion. In the same period, the Net Debt / Adjusted EBITDA ratio went from 2.22 to 1.09, both at their lowest levels in the last 10 years. Still in 3Q21, that is, 15 months in advance, we reached the Gross Debt target of USD 60 billion, forecasted for the end of 2022, a level that we consider adequate as it allows us to go through challenging moments of external scenarios. Achieving this goal, even before the agreed deadline, was only possible thanks to our focus on generating value through technical and balanced management.



### RESOURCES

Debt reduction was carried out by using cash flows from operations and divestments to prepay debts, focusing on the most expensive ones. Occasionally, funding was carried out to increase the average debt term at lower costs, improving our

indebtedness profile. It is also worth mentioning that we have a total of USD 9.4 billion in Revolving Credit Facilities, which guarantees us immediate liquidity in times of crisis and reaffirms the confidence of our creditors in the company's solvency.

In 2021 alone were saved about USD 1 billion in interest, when compared to the year 2020.



### RESULTS

With this great effort in the readjustment trajectory of our capital structure and debt level, to make them compatible with those practiced by the sector, external recognition followed. In 2021, Moody's revised our independent global credit rating from "Ba2" to "Ba1" (one notch above the sovereign credit rating), in addition to Standard & Poor's revising our independent credit rating from "BB" to "BB+." Both highlighted our strong operational and financial performance, competitive position, focus on cost reduction, and portfolio management as levers that strengthened our credit metrics, capital structure, liquidity and debt profile.

In the 2022-2026 Strategic Plan, Petrobras seeks to be "the best energy company in the generation of value, with a focus on oil and gas, sustainability, safety, respect for people and the environment." Achieving our indebtedness goal allows us to responsibly invest USD 68 billion over the next five years, an amount 24% higher than reported in the previous plan, generating jobs and taxes that will boost the potential of Brazilian society. Additionally, we expect to pay USD 60 to 70 billion in dividends between 2022 and 2026. This result is due to our decision to remain faithful to our strategy, and the year's achievements reinforced our ability to execute.

## Reserve replacements

Another relevant factor for the sustainability of our business is the replacement of our reserves, which indicates that the reserve already produced was offset by new volumes to be produced in the future. A reserve replacement of less than 100% means that the incorporated volumes were not sufficient to offset the year's production, indicating that the company may be reducing its source of future revenue generation. Maintaining a high level of reserve replacements is a challenge, especially in companies with high production levels.

In 2021, our proven reserves of oil, condensate, and natural gas, estimated according to criteria from the Securities and Exchange Commission (SEC), totaled 9.9 billion barrels of oil equivalent, 85% of which is oil and condensate and 15% is natural gas. In 2021, we made the largest addition of reserves in our history (1.97 billion boe), resulting in the replacement of 219% of this year's production, already considering the divestments. These results demonstrate our improvement trajectory for the management system, with a focus on maximizing the generation of value from our assets. Reserves were added, mainly due to the progress in the development of the Búzios field, resulting from the acquisition of the surplus from the Assignment of Rights and the signing of the co-participation agreement, and from investments in new projects to increase the recovery in other fields of the Santos and Campos Basins, in addition to appropriations for the good performance of the reservoirs. The increase in reserves was also driven by the increase in the price of oil. Our Organic Reserve Replacement Index (ORRR), that doesn't consider the effect of the sale of assets, was 221%.

Our activities in Brazil represent 99% of proven oil equivalent reserves. In relation to the operating environment, our reserves are predominantly in deep and ultra-deep waters (97%).

>> **Information about our reserves can be found in our** [Financial Statements](#), [in the Management Report](#), [the Annual Report](#), and [in Form 20-F](#).

Annually, at least 90% of our proven reserves, according to the criteria of the Securities and Exchange Commission (SEC), are submitted to an independent evaluation company. The reserve estimation process occurs annually, based on the projects provided for in the Strategic Plan and following reserve estimation and classification criteria defined by regulatory bodies. Throughout the year, changes in reserves and opportunities for incorporating new volumes are monitored by the Executive Management of Reservoirs, in contact with the operational units and design and project implementation areas.

### PROVEN RESERVES (Biboe)

Indicator	2017	2018	2019	2020	2021
Proven oil reserves, condensate, and natural gas	9.8	9.6	9.6	8.8	9.9

## Production curve effectiveness

Our oil and gas production is one of the main non-financial indicators monitored by investors, due to their direct link with cash generation and shareholder value. We have internal processes that systematically monitor the performance of the production curve

compared to what was planned, in addition to publishing our quarterly Production and Sales Report, which contains the main information on the topic and is available for consultation on our [Investor Relations website](#).

Investment in production development is linked to the process of strategic choices and the Strategic Plan 2022-26 portfolio vision and aims to ensure profitability and value generation through the replacement and incorporation of reserves, adding value to our results. The efficient management of these projects increases our cash generation potential. On the other hand, a possible lower-than-expected performance in the management and implementation of a project can lead to an increase in its costs and deadlines, with a delay in the first oil, impacting its ramp-up and reducing its value.

The monitoring and control process occurs throughout the project's life cycle and potential deviations are assessed, recorded, and justified, in order to allow traceability and the adoption of corrective actions and to implement corrective actions. At least the following project performance monitoring is carried out: pos-EVTE (Technical and economic feasibility study), risk monitoring, and physical and financial monitoring, compared them to what was planned in the EVTE and the Strategic Plan.

In 2021, our oil and natural gas liquid (NGL) production was 2.22 million barrels per day (bpd), and total production (oil, NGL and natural gas) was 2.77 million barrels of oil equivalent per day (boed). As a result, we achieved all of our operational production targets (total oil and gas, commercial oil and gas, and oil and NGL).

In 2021, investments totaled USD 8.8 billion, an increase of 9% compared to 2020, reflecting the improvement in the economic scenario after the critical phase of the Covid-19 pandemic. Of the USD 8.77 billion invested in 2021, investments in E&P correspond to USD 7.13 billion, of which approximately 66% relate to investment in growth. These investments focused on the development of production in ultra-deep waters in the pre-salt complex of the Santos Basin and on the development of new projects in deep waters.

Investments in growth are those that seek to increase the capacity of existing assets, deploying new production, flow, and storage assets, increasing asset efficiency or profitability and implementing essential infrastructure to enable other growth projects. Includes acquisitions of assets/companies and remaining investments in systems that entered as of 2019 and exploratory investments. The FPSO Carioca started production at the S epia field in August. We expect another 15 FPSOs to begin operations in the period between 2022 and 2026. Among them the FPSO Guanabara, which was rented in January 2022, in the Mero field.

On the other hand, investments in maintenance (sustaining) have as their main objective the maintenance of the operation of existing assets, that is, they do not aim to increase the capacity of the facilities. They include investments in facility safety and reliability, replacement well projects, complementary development, remaining investments in systems that entered before 2019, shutdowns and retrofits (without new systems), seismic 4D, health, safety and environment projects (HSE), submarine line exchanges, operational infrastructure, and information technology (IT).

This demonstrates that we are better reallocating our resources and building a portfolio of high-quality, profitable, resilient and value-creating projects and assets.

An example of these investments was the investment of approximately BRL 10 million made in the improvement of the Integrated Operations Center (COI) in the Campos Basin, which expanded the data transmission links, in addition to using more robust applications for the transmission of this data, which are essential for monitoring production. The COI monitors the production of the 28 platforms located in the Campos Basin, 24 hours a day,



seven days a week, in real time, recognizing everything that happens on the platform and all the events necessary to solve problems. The system instantly monitors the production parameters of 190 oil wells operated at the Campos Basin Business Unit (UN-BC) and avoids the temporary stoppage of platforms, in addition to monitoring the operations and location of tankers and supply vessels.

[102-18, 102-23, 102-24]

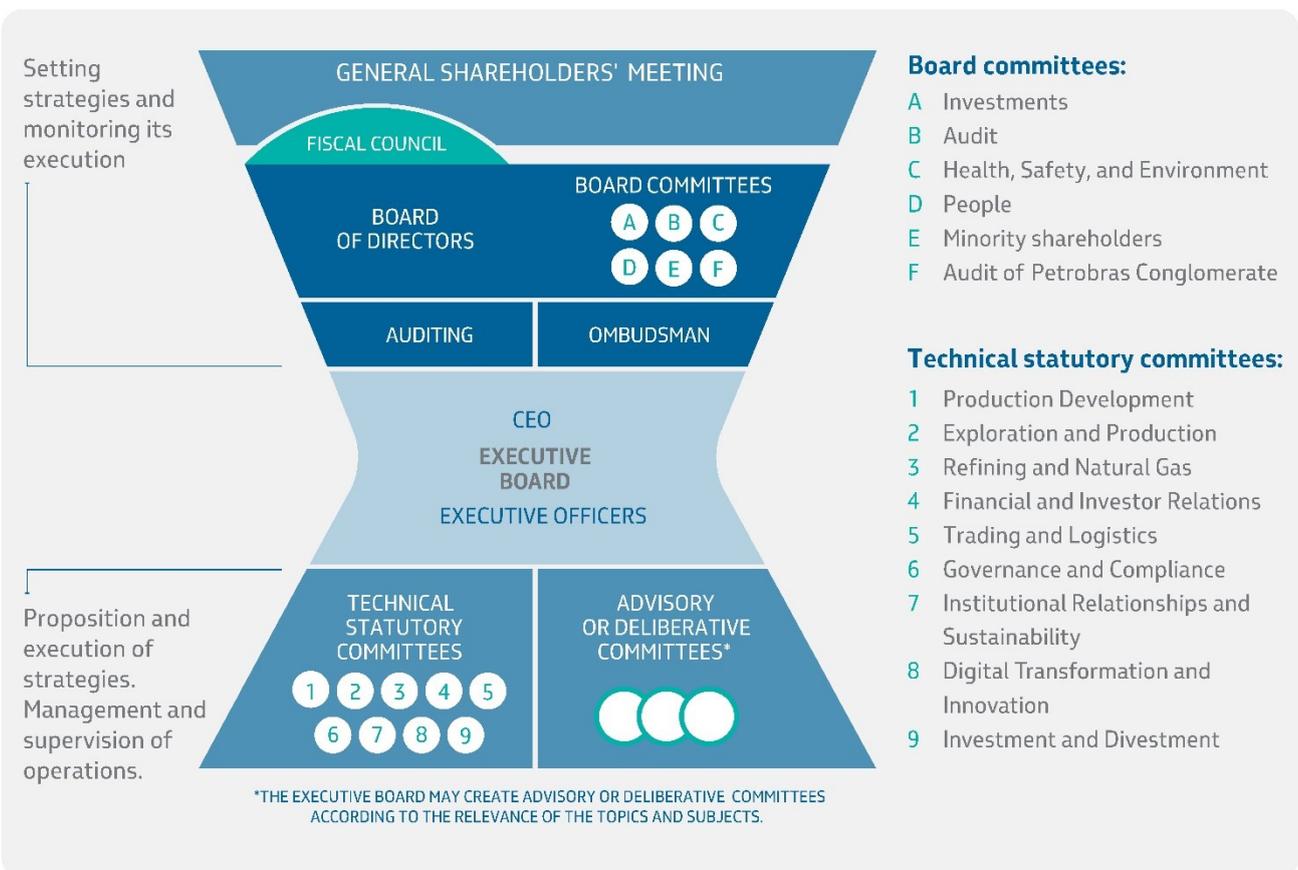
# Corporate Governance

Good corporate governance practices are a pillar that supports our business. Our priority is to act always guided by ethics, integrity, and transparency.

In recognition of our commitments and advances in governance, in 2021, for the fifth time in a row, we received certification in the Governance Indicator from the Secretariat for Coordination and Governance of State-owned Companies (IG-Sest), of the Ministry of Economy, achieving a classification at the best level of the indicator (Level 1), which demonstrates our degree of excellence in corporate governance.

In 2021, we also returned to the membership of the Brazilian Institute of Corporate Governance (IBCG). This return confirms our commitment to the continuous improvement of our processes and internal controls, as well as the alignment with the best corporate governance practices in the market. The following figure represents our governance structure:

## GOVERNANCE STRUCTURE



**STATUTORY COMMITTEES OF THE BOARD OF DIRECTORS.**

Committee	Main attributions
Health, Safety, and Environment Committee (HSEC)	Assist the Board of Directors in establishing policies and guidelines related to the strategic management of HSE, climate change, transition to a low carbon economy, social responsibility, among other matters. 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 divestitures, 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 funding 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; perform prior analysis of transactions with related parties that meet the criteria established in the Policy on Transactions with Related Parties, approved by the Board of Directors; become aware of governance and compliance activities; evaluate and monitor, together with management and the internal auditors if the actions to prevent and combat fraud and corruption are appropriate; ensure the adoption, maintenance and improvement of good company 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.
Conglomerate Statutory Audit Committee (CAECO)	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 is responsible for being the audit committee of companies in the Petrobras Conglomerate that do not have a local audit committee. 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.
People Committee (COPE)	<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 People 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 manifestations will be intended to assist shareholders in appointing members to the Board of Directors and Fiscal Council and to verify the conformity of the process of evaluation of the administrators and of the fiscal councilors, not being limited in these cases to an advisory body to the Board of Directors.</p> <p>COPE also advises the Board of Directors in any potential application of a measure of the consequence system to members of the Senior Management and external members of the Board of Directors committees, in addition to acting as the last resort appeal of disciplinary proceedings when the Petrobras Integrity Committee does not decide by consensus.</p> <p>The Committee monitors image and reputation surveys, recommending actions when appropriate.</p>
Minority Shareholder Committee (COMIN)	Assist the Board of Directors in transactions with related parties involving the Federal Government, its autarchies and foundations and federal state companies, including the monitoring of the revision of the Onerous Cession Agreement. 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.

>> [Information about our corporate governance model can be found in the Risk Management and Sustainability Governance chapter.](#)

Our Bylaws provide that the Board of Directors must be composed of at least 40% independent members, while Law 13,303/16 and B3's Level 2 corporate governance regulation require, respectively, 25% and 20%. Currently, we have 64% of independent members, and the independence criteria must respect the strictest criterion of legal obligations, in case of divergence between the rules.

According to our Bylaws, the Board of Directors must be composed only of external members, with no statutory or current employment relations with the company, except for our CEO and the member elected by the employees.

The functions of chairman of the board of directors and CEO or main Petrobras executive shall not be exercised by the same person (§8), in line with the best practices of corporate governance.

## Selection and nomination process

The selection and appointment processes for the Board of Directors, our highest governance body, follow the guidelines set out in the Bylaws and the Policy for the Appointment to Senior Management and the Fiscal Council.

The Appointment Policy upholds the strengthening of principles such as transparency, equity, accountability, corporate responsibility, independence, focus on results, and diligence in relation to the selection, nomination, and evaluation processes of the appointee's eligibility, which must be observed together with the legislation and our Bylaws.

In this sense, 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 appoint, 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.

>> [Information about our Nomination Policy can be found on our Investor Relations Website and is part of our Code of Good Practices.](#)

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# Business Ethics and Fighting Corruption

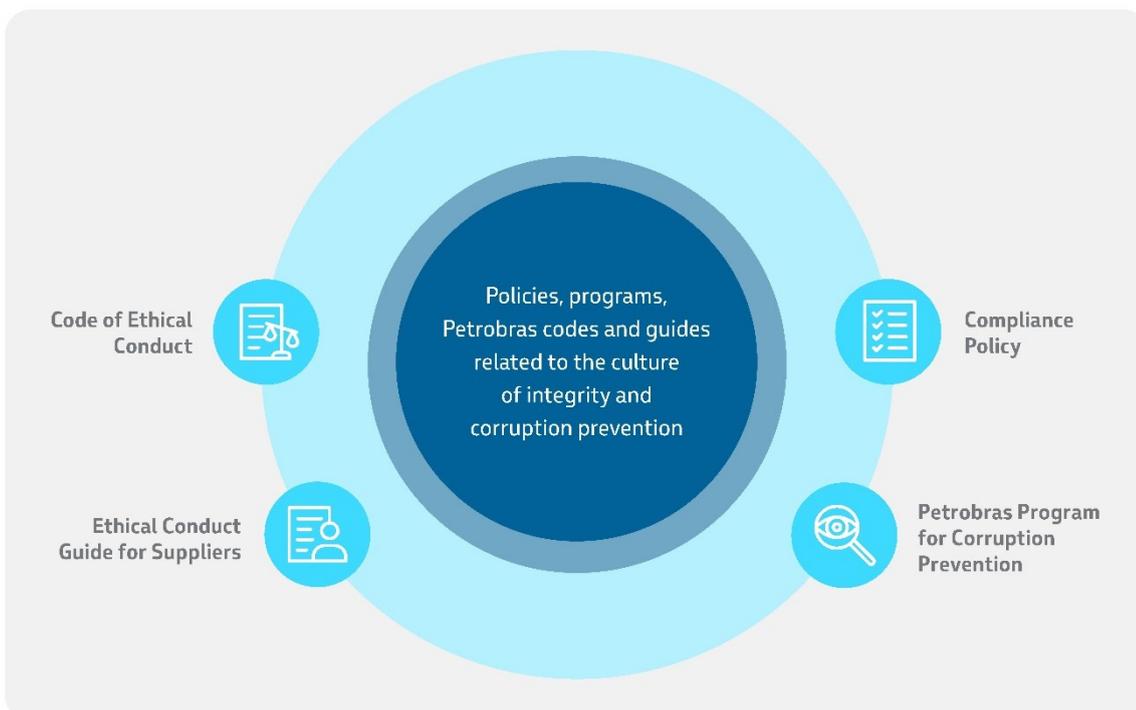
Business ethics and the fight against corruption were identified in our materiality survey process as a relevant topic for several of our stakeholders. The topic covers corporate integrity, positioning in relation to ethics and anti-corruption, and promoting a balanced and fair environment.

Ethics is an individual commitment for the good of all. In our relationships with different stakeholders, we seek ethical behavior through the dissemination of a set of ethical principles and behavior commitments.

Our business purpose is “to provide energy that ensures prosperity in an ethical, safe, and competitive manner” and we reaffirm our values in our strategic positioning, which represent our commitment to people, society, partners, and shareholders:



## PETROBRAS INSTRUMENTS RELATED TO A SYSTEM OF INTEGRITY AND CORRUPTION PREVENTION



## 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.

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. It contains three principles, including integrity, transparency, and meritocracy, and 11 conduct commitments, including accountability and transparency.

In accordance with the provisions of our Code of Ethical Conduct, in its items 4.6. and 4.8, we are committed to promoting integrity in the public and private business environment and reject all forms of fraud and corruption, including bribery, money laundering or insider trading, at all hierarchical levels. We also accept the duty to refuse to support and contribute to political parties or political campaigns of candidates for elective office.

The Code of Ethical Conduct can be accessed by all employees on our internal page and on our [external 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. By 2021, 98.7% 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.

## Petrobras Ethical Conduct Guide for Suppliers

Created in 2020, our Ethical Conduct Guide for Suppliers is a document aimed exclusively at our suppliers, with guidance on expected ethical values and behaviors. The guide reaffirms our zero tolerance for all forms of fraud and corruption, recommending the same stance to our supply chain.

The document is published in Portuguese and English and can be accessed on [our external website](#).

## Compliance Policy

Our **Compliance Policy** has principles and guidelines that aim to describe and disclose the commitments we assume in relation to the promotion of the highest ethical values of integrity and transparency in the conduct of our business, with zero tolerance for fraud, corruption, and money laundering.

## Petrobras Corruption Prevention Program

Our Petrobras Corruption Prevention Program (PPPC), is driven by ongoing actions to prevent, detect, and correct ethical deviations, including fraud, corruption, and money laundering. The program is aimed at our various stakeholders, such as senior management, customers, suppliers, investors, partners, public authorities, company employees and services providers.

All of our business and our relations with counterparties must be guided by the highest values of ethics, integrity and transparency, in strict compliance with applicable national and international rules and laws, with zero tolerance for any type of misconduct.

We have developed integrity mechanisms geared towards our stakeholders, including suppliers, encouraging them to implement integrity programs and continuously improve their processes, to ensure compliance with applicable laws, rules, and procedures. These mechanisms deal with topics such as: conflicts of interests; nepotism; money laundering; terrorism financing; illegal acts such as fraud and corruption; receiving or offering gifts, presents, hospitality, and sponsorship consideration; transparency in actions and resources for sponsored projects; favoritism, bribery or facilitation payment; payment of funds to foreign governments; anti-corruption laws; international embargoes and sanctions; internal investigations; internal controls; accounting practices and records of assets and liabilities; information security; disciplinary measures; overpricing and underpricing; and relationships with public authorities.

Also, we have two integrity mechanisms:

- Risk management;
- Administrative Accountability Process (PAR);
- Internal investigations;
- Monitoring (e-mails, contracts, bidding processes, sanction lists, prohibited family relationships - nepotism, participation in compliance training, incidents identified by the Ombudsman's Office, Internal Audit and control bodies, among others);
- Training on ethics and integrity issues;
- Counterparty Integrity Due Diligence (DDI);
- Employee Integrity Background Check (BCI);
- Reporting Channel;
- Perception Survey about Compliance Actions;
- "Integrity Moment" in work meetings and institutional events; and
- Compliance clause in standard contractual drafts.

## Governance and Compliance Directorate

We have a Governance and Compliance Department, 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 (DGC) has been elected from a list of professionals that were pre-selected by a specialized executive search agency.

The Executive Director of Governance and Compliance, has a different role in relation to the other members of the Executive Board, and is responsible for issuing an opinion on the procedural compliance of agendas items submitted to senior management. Issues identified as relevant in our integrity risk matrix, require compliance opinion statements. 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 regarding integrity.

Our Basic Organization Plan, mentioned in our Bylaws, highlights the responsibilities of the Governance and Compliance Department. These include the following attributions: planning, guiding, coordinating, and evaluating the activities for spreading a culture of compliance, preventing fraud incidents, corruption, and money laundering, internal controls, integrity analysis of managers and counterparties, as well as ensuring third party accountability and reporting to senior management on the progress of compliance related activities. This is done to ensure a healthy business environment.

Governance and compliance activities are reported quarterly to the CAE and the Fiscal Council (CF) and annually to the Executive Board and the Board of Directors, allowing for the monitoring of integrity actions and the recommendation of efforts to mitigate corporate risks, including those related to fraud and corruption.

In addition to the structure responsible for compliance actions, we have around 200 professionals from different areas acting as integrity agents, with the objective of contributing to the multiplication of information and the dissemination of a culture of integrity in the various areas of our company.

Our Ethics Committee, on the other hand, aims to promote ethics management and issue recommendations, acting as a forum for discussion and deepening of topics related to ethics, in addition to dealing with conduct that does not comply with the relevant rules. One of the attributions of the Ethics Committee is to supervise the observance of the Code of Conduct for Senior Federal Administration and to report to the Public Ethics Committee any situations that may constitute a lack of compliance with its rules.

Our administrators and managers have additional responsibility for the effectiveness of compliance actions and should serve as a legitimate example of ethical behavior for all stakeholders, maintaining the continuous strengthening of the integrity environment as one of our priorities.

We have a network of organizational units in our structure to ensure compliance with the assumptions related to ethics and compliance, such as the Compliance areas (monitoring, advisory services, management functions of the Integrity Program, analysis of the integrity of counterparties and employees, in addition to internal controls), Corporate Integrity, Ombudsman's Office, Internal Audit, Governance and Corporate Intelligence and Security.

## Human Resources Policy

Ethical principles guide our work relationships, in accordance with our **Human Resources Policy**, in the extension of its principles and guidelines, which aim to provide a good working environment for employees to carry out their activities in accordance with corporate guidelines, committed to achieving business objectives. Under the regulatory aspects, the management of labor relations is regulated by corporate standards that establish the appropriate conditions for these relations.

## Culture of integrity

The disclosure of policies, rules, and procedures of the precepts of conduct and integrity is carried out to all our stakeholders. Through internal and external campaigns and actions in

the various communication channels, we reinforce ethics and integrity as non-negotiable principles in the conduct of our business.

As an example, we can cite publications on the internal portal, announcements and guidelines on external sites, emails directed to employees, posts by senior leadership on Workplace, moments of integrity at institutional events, live broadcasts for specific audiences and microlearning for various stakeholders and channels, among others.

These actions, planned based on our analysis of integrity risks, are combined with specific training actions, also designed based on the prioritization of risk topics and audiences, with annual training on integrity for our entire workforce, including the senior management, which is annually confronted with content required by law and other topics related to the position. Employees involved in compliance activities and counterparties also periodically receive content on integrity topics, as well as audiences who work in areas more exposed to integrity risks, including fraud, corruption, and money laundering.

The following table summarizes the main ethics and integrity training campaigns carried out in 2021:

### COMPLIANCE TRAINING (PARENT COMPANY)

Mechanism	2021 Numbers	Gender	Functional category	Region
<b>Competitive Compliance Training (Distance Learning)</b> Course offered for employees working in Procurement activities	1,703 employees completed the training, corresponding to 97.9% of the target audience	505 Female 1,198 Male	1,061 college graduates 642 high school graduates	Northeast - 4.9% North - 0.2% Midwest - 0% Southeast - 94.3% South - 0.6%
<b>Conflict of Interest Prevention</b> Training offered to all employees and mandatory for company employees	37,804 employees completed the training, corresponding to 98% of the target audience <sup>1</sup>	6,333 Female 31,471 Male	17,572 college graduates 20,232 high school graduates	Northeast - 9.9% North - 1.7% Midwest - 0.3% Southeast - 84.3% South - 3.8%
<b>Mandatory Training for Statutory Officers (TOPE)</b> Course intended for members of senior management, in compliance with the provisions of Law No. 13,303/16 and Decree No. 8,945/16. The initiative aims to reinforce the basic concepts of governance and compliance	18 members completed the training, corresponding to 64% of the target audience	5 Female 13 Male	18 college graduates 0 high school graduates	Northeast - 0% North - 0% Midwest - 0% Southeast - 100% South - 0%
<b>Audience:</b> CEO, directors, members of the Board of Directors and Fiscal Board of the parent company				

<sup>1</sup> Excluding employees on long-term leave or assigned to other equity interests and external entities, the percentage is 99.6%.

Mechanism	2021 Numbers	Gender	Functional category	Region
<b>Compliance DGC</b> We closed the 5th class of the Compliance DGC Course, on topics related to our Integrity environment. <b>Audience:</b> integrity officers, employees of the Governance and Compliance Board and employees of Petrobras' equity interests	40 trained professionals	19 Female 21 Male	30 college graduates 10 high school graduates	Northeast - 5% North - 2% Midwest - 0% Southeast - 93% South - 0%
<b>Lectures on Prevention of Violence, Discrimination and Harassment at Work</b> Commitment to our Human Rights Agenda, the lectures are not mandatory and are carried out by the Ombudsman's Office, available to managers and employees in the HR area	3,368	560 Female 2,808 Male	1,717 college graduates 1,651 high school graduates	Northeast - 13.3% North - 2.3% Midwest - 0.1% Southeast - 77.8% South - 6.5%

In addition to the ethics and integrity training listed in the table above, we have a permanent training portfolio remain available for employees who did not participate when it was launched, or who want to revisit the content.

In 2021, we cultivated the Moment of Integrity at the opening of Executive Board and Board of Directors meetings, as well as at institutional events, where points related to this topic are discussed.

We also promoted the Petrobras Dialogues event: Integrity & ESG (Environmental, Social and Governance), in reference to the International Anti-Corruption Day.

In 2021, the annual integrity event expanded the scope of debates, bringing the ESG agenda to the agenda. The event was totally remote and brought together speakers from international organizations, universities, public and private sectors and aimed to inspire people, promote debates, and contribute to the strengthening of a culture where integrity is at the heart of the actions.

During three days, more than 50 speakers were gathered, distributed in 20 panels and generating more than 15 hours of content. On the platform for remote events, it was possible to find virtual booths with our main projects and initiatives in the Environmental, Social, Economic and Integrity aspects. At the end of the third day, the event had almost 13 thousand participants.

## Emphasis

In 2021, we launched the Petrobras Journey for Integrity, a project focused on the offshore segment, with the objective of bringing matters related to compliance, ethics, and integrity to the operational areas, in a light, gradual and customized way for the target audience. The P-74 unit was chosen to carry out the pilot project.

At Transpetro, the First Compliance Meeting was held in 2021 with customers, suppliers, employees and collaborators. Anchored in the commitment to strengthen and disseminate the culture of integrity, the virtual event was attended by members of the Executive Board of the subsidiary and addressed the importance of ethics, transparency, and integrity in business and in the corporate environment.

In recent years, we have externally reinforced our governance, compliance, and transparency environment. Our Director of Governance and Compliance, Salvador Dahan, assumed the vice-chairmanship of the Corporate Responsibility and Compliance Committee at the International Chamber of Commerce (“ICC Brasil”), with a term starting on January 1, 2022, and ending on December 31, 2023. His participation helps to expand the performance of the board in external projects that aim to reinforce the adoption of integrity practices in Brazilian society and strengthens our culture of integrity.

Additionally, as participants in the UN Global Compact, we joined the “Movimento Transparência 100%” initiative, by Rede Brasil, which aims to contribute to achieving the Sustainable Development Goals of the 2030 agenda. The companies participating in this initiative undertake to adopt measures that go beyond their legal obligations, such as strengthening mechanisms of transparency and integrity.

Altogether, the movement proposes five goals to be followed by its members: 100% transparency in interactions with the public administration; 100% full compensation of senior management; 100% of the high-risk value chain trained in integrity; 100% transparency of the compliance and governance structure; and 100% transparency on the performance of reporting channels.

## Conflict of Interest Prevention

In addition to complying with article 115 §1 of law 6,404/1976 (Brazilian Corporations Law), law 12,813/2013 (Conflict of Interests Law) and law 13,303/2016 (State Companies Law), we have instruments that are continuously improved to deal with the identification and management of potential conflicts of interest relating to our managers and other employees.

### CONFLICT OF INTEREST PREVENTION INSTRUMENTS

Instrument	Mechanism to prevent conflicts of interest
Bylaws	Prevents 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.
Corporate Governance Guidelines	Define that the Board of Directors is to monitor and manage potential conflicts of interest between shareholders and senior management members.
Internal Regulations of the Board of Directors	Define that the Board of Directors is to monitor and manage potential conflicts of interest between shareholders and Senior Management members.
Code of Ethical Conduct	It determines that employees should not be involved in any activity that conflicts with corporate interests and should communicate to the hierarchical superiors or the Ombudsman any situation that appears to be an apparent or potential conflict of interest.
Ethical Conduct Guide for Suppliers	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 conflict of interest, either real or potential.

Conflict of Interest Prevention Guideline	In addition to the guidelines contained in the Code of Ethical Conduct, the guideline presents the concept and types of conflict of interest, the prevention mechanisms we use, the roles and responsibilities of the areas involved, as well as the legislation and other regulations applicable.
Integrity Background Check	Assesses the risk of conflict of interest related to the attributions and responsibilities of candidates for key positions, including verification of equity interests and kinship relationships with public and political agents.
Ethics Commission	It acts as an advisory body in the Compliance area, in relation to the assessment of identified conflict of interest situations, as well as in the definition of mitigating or remedial actions.
Petrobras Corruption Prevention Program (PPPC)	It states that the conflict of interest is harmful to the business and to the internal control environment, as it can improperly influence employee conduct. It also reinforces the existence of communication tools available to employees to carry out consultations on potential conflict of interest situations, and request authorization to carry out activities that, depending on their nature, may conflict with our interests.
Code of Good Practices	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.
Policy for the Appointment of Senior Management and Fiscal	Establishes the minimum requirements and guidelines for appointing members of senior management and the Fiscal Council
Related Party Transaction Policy	Establishes the principles that guide us and our employees when entering into Related Party Transactions and in situations where there is a potential conflict of interest in these operations

If a potential conflict of interest is identified in a transaction with a related party, the company's manager or employee must recuse themselves and abstain from participating in the negotiation, structuring and decision-making rite related to the transaction, to guarantee the sole interest of the company.

The Ombudsman's Office is responsible for receiving inquiries regarding conflicts of interest from employees who are not managers. Potential employee conflicts of interest should be consulted through the Electronic System for the Prevention of Conflicts of Interest (SeCI), a system developed by the Federal Comptroller General (CGU), in compliance with Law No. 12,813/2013 (Conflict of Interest Law).

## Integrity mechanisms in the value chain

### Integrity due diligence

We perform Integrity Due Diligence (DDI) of counterparties 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 for Communication and Social Responsibility functions; and companies interested in the asset divestment processes and/or equity interests, or 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 2021, the Compliance team assigned 3,491 GRIs to our suppliers.

### Integrity Background Check

Another integrity mechanism we use is the Integrity Background Check (BCI). The BCI seeks to support managers and senior management in making decisions regarding the nomination of candidates for key positions, through the analysis of legal requirements and compliance with Petrobras' Code of Ethical Conduct and our Policy for Nomination of Managers. In 2021, we conducted 2,853 BCI assessments.

## Integrity risk management

Our risk management directs our integrity actions and strengthens our internal controls and governance. Our Corporate Risk Management Policy defines 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 integrity 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.

Annually, we prepare and review an integrity risk matrix which maps our business processes that are most exposed to these risks. In 2021, 253 processes (100%) were reassessed based on risk factors related to fraud and corruption<sup>2</sup>.

During the year, the most severe cases in relation to the risks of fraud and corruption are monitored in periodic meetings held with our Statutory Audit Committee, which advises our Board Members.

We continuously monitor our business processes, especially those that are high-risk, to identify signs of fraud and corruption. Our monitoring and control efforts are based on our compliance risk assessment. Whenever we identify an incident, we carry out a root cause analysis to improve the business process and its respective controls, alerting those responsible for the failure to execute. If there are any sign of fraud, additional measures are taken. We continually review the results of our audits to develop new types of monitoring and implement necessary changes in processes, controls, information technology systems and training, among others.

Our senior management has tools for mitigating risks such as fraud, corruption and ethics deviations in general, among which we highlight the monitoring of integrity risks, the operational work of the Internal Audit area, as well as those within the scope of SOx certification, which are carried out together with Executive Compliance Management through the execution of control tests. Internal Auditing, certified by the Institute of Internal Auditors Brazil, provides directors, executive managers, and unit managers with operational audit reports, in addition to quarterly reports of their results to the Statutory Audit Committee, the Executive Board and the Board of Directors, so that the executives can monitor the implementation, by area, of the proposed improvements.

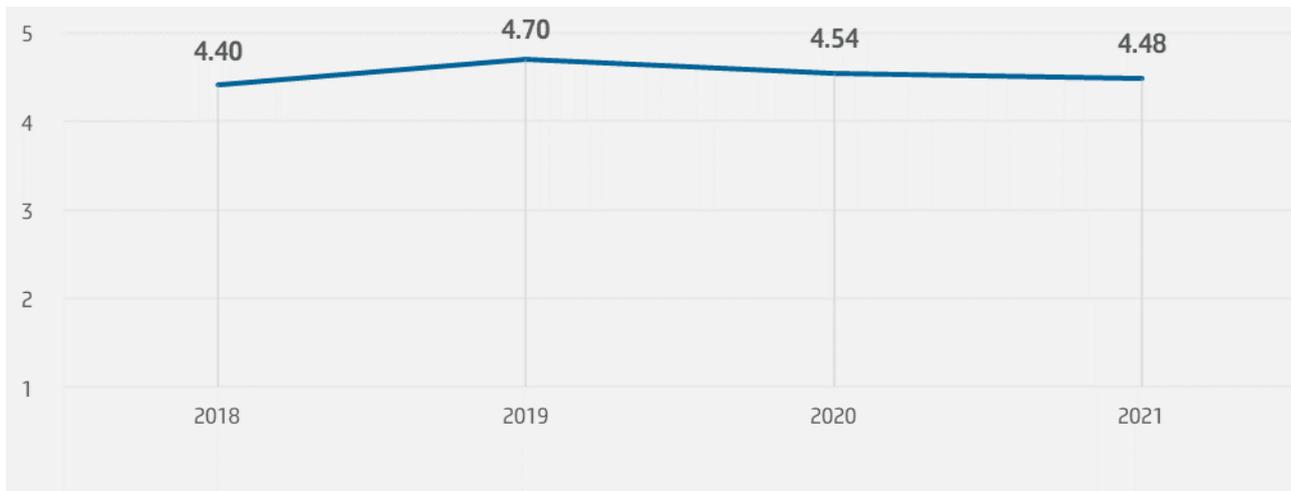
<sup>2</sup> In view of the configuration of process patterns in hierarchy, the method of evaluation, control and verification count by pattern started to be done by a level 2 process, reducing the number of verified processes count, not interfering, on the other hand, in its effectiveness and scope, since the other standards are subordinated to these.

## Internal audit

Based on a methodology approved by senior management, manual and automated control activities are tested by the Internal Audit. Within the context, it examines, for example, if the design of the financial reporting process is satisfactory, and whether the respective risks of fraud are mitigated. Issues such as segregation of duties, authority limits, and registration and custody of assets are also considered. The Internal Audit professionals involved in the evaluation of the controls carry out periodic training to maintain the necessary skills and competencies for the performance of their individual responsibilities, in addition to having sufficient knowledge about the main risks of fraud and corruption to carry out their assigned activities.

Internal Audit monitors its activities through the Perception of Audit Work by Areas indicator:

### PERCEPTION OF THE AUDIT WORK BY AREAS (GENERAL AVERAGE OF ASSESSMENT OF THE WORK)<sup>3</sup>



## Compliance procedures in sponsored projects

In order to avoid deviations in the use of resources related to the projects we sponsor, project proposals go through various analysis processes - technical, documentary, budgetary - prior to the start of contracting, ensuring that governance and compliance procedures are followed, and seeking to prevent possible conflicts of interest.

Proposals for socio-environmental, business, science, and technology projects, or cultural and sports 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.

<sup>3</sup> Scores range from 1 to 5, where 1 indicates the least favorability and 5 the greatest favorability. During 2021, pilot assessment projects were developed to improve the methodology, and the indicator of Compliance with Internal Audit Standards and Procedures (CNPAI) was not calculated, which will be calculated again in 2022.

With direct choice, proposals or opportunities are forwarded directly to us, using our own project management systems, which must meet criteria for analysis and suitability for contracting, as well as its relevance to achieving our goals.

The submitted proposals undergo prior analysis and - if they meet the criteria and are considered relevant - they are forwarded to the recommendation of the Statutory Technical Committee on Institutional Relationship and Sustainability (CTE-RIS), and subsequent approval by the Director of Institutional Relationship and Sustainability (DRIS).

In addition, Integrity Due Diligence (DDI) of the counterparties is done to learn about and assess the integrity risks inherent in our relationship with holders of sponsorship or agreement opportunities. The DDI result is expressed by the Integrity Risk Level. In addition, sponsorship projects are also subject to analysis and verification of prior compliance by the Special Communication Secretariat - SECOM.

After the signing of sponsorship contracts or agreements for the implementation of our socio-environmental, cultural and sports projects, we maintain internal control procedures for their execution and monitoring, to strengthen ethical behavior and prevent acts of fraud and corruption.

The social and environmental projects should seek to support our business needs and act on topics that are relevant to us, contributing to the socioenvironmental transformation of the communities and the environment where we operate and, in a broader sense, to society. Proposals are evaluated according to technical quality and their relevance to meet the strategic objectives of socio-environmental investment.

Therefore, to promote ethical and compliance values among Civil Society Organizations (CSOs) - in the case of socio-environmental projects - which maintain partnerships with us, we developed the Ethical Connections of The Third Sector project, in partnership with the United Nations Organization for Education, Science and Culture (UNESCO).

The Third Sector Ethical Connections project has been done since 2018 with the aim of strengthening ethics and integrity management among CSOs that develop socio-environmental projects with our support and sponsorship. In 2021, we continued the work started in 2020 in the face of the challenging scenario imposed by Covid-19. UNESCO and Petrobras are committed to developing alternatives to continue activities, in the face of the limitations imposed by the pandemic and the need to maintain social distance.

Visits and technical assistance for the preparation of action plans, which guide the review of compliance instruments by CSOs, were adapted, incorporating social technology tested by other organizations, with the adoption of easily accessible tools, such as social networks and the gamification of activities, making the learning experience more effective, fun, and able to stimulate interactivity and collaboration among all involved.

So far, the 60 partner CSOs that had received their first missions and started group activities have involved 679 people in the actions. Among the CSOs that started their missions, 54 continued on the project in 2021 and 45 have already fully completed the 15 proposed missions, finalizing their compliance planning with the preparation of the risk mapping matrix.

## Ombudsman's Office, Reporting Channel and Transparency Portal

As part of our Integrity System, the Ombudsman's Office is responsible for receiving complaints, requests for information, requests, consultations, compliments, and

suggestions from all our stakeholders in a confidential, free, and accessible manner. Linked to our Board of Directors, which ensures its independence and impartiality, the Ombudsman's Office interacts with the relevant areas, seeking to strengthen and promote the fulfillment of demands and contribute to the improvement of internal processes.

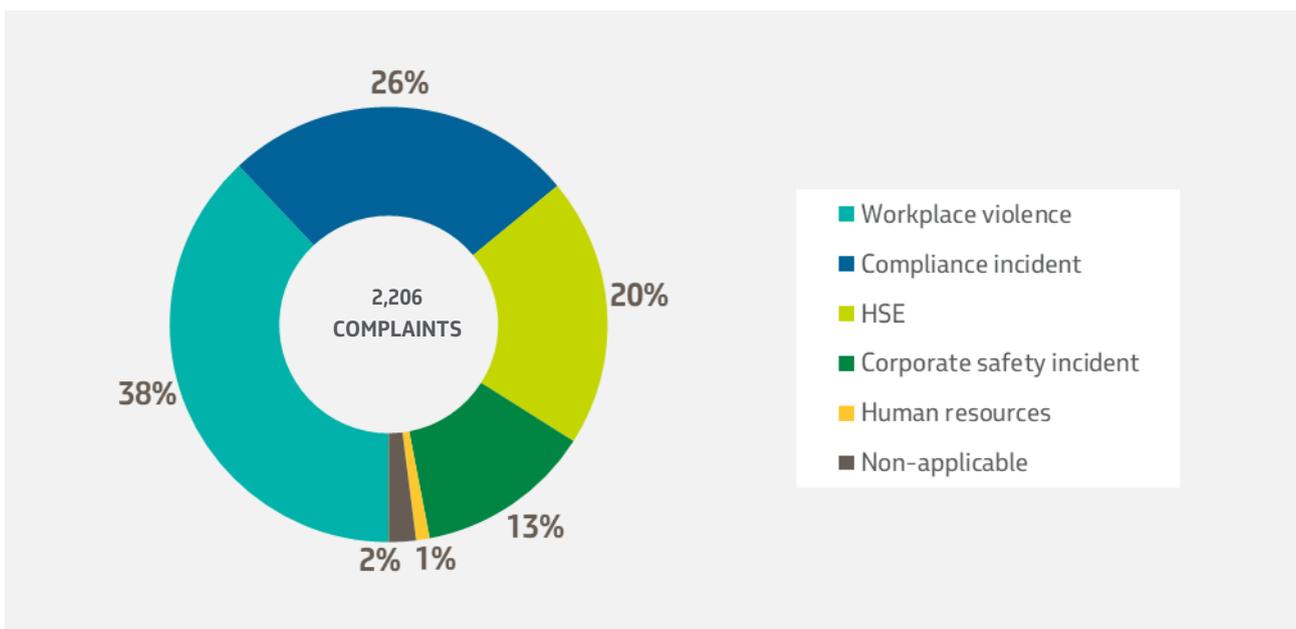
In addition to the direct channel with our Ombudsman's Office, we also offer our stakeholders an external and independent channel for receiving complaints, available in Portuguese, English and Spanish, 24 hours a day, every day of the year. In cases of denouncements, the protection of whistleblowers occurs by preserving the confidentiality of the reports received and by receiving anonymous reports.

In the case of reports of workplace violence, in circumstances where it is impossible to handle the case without identifying the complainant, the investigation will only proceed if there is consent. In addition to the various resources and procedures for preserving the whistleblower's identification, including those adopted by the company that operates the Reporting Channel, non-retaliation is foreseen as a specific topic to identify a situation in which the whistleblower feels harmed or retaliated against after reporting a complaint. The prohibition against retaliation is systemically and objectively contained in the Code of Ethical Conduct and in the "Protection for whistleblowers" guideline, managed by the Ombudsman's Office, in addition to other specific internal rules.

The Ombudsman's Office provides the Statutory Audit Committee (CAE) with detailed information on the most critical compliance incident reports, classified as high and very high risk in our matrix, on a quarterly basis. In addition, it submits semi-annually to the Statutory Audit Committee and annually to the Executive Board and Board of Directors quantitative and qualitative information on the complaints received, as well as other statement, including requests for information and complaints, providing support documentation for improving management.

The graph below shows the total number of complaints received, presented in large groups according to the similarity of the reports received.

### COMPLAINTS RECEIVED IN 2021



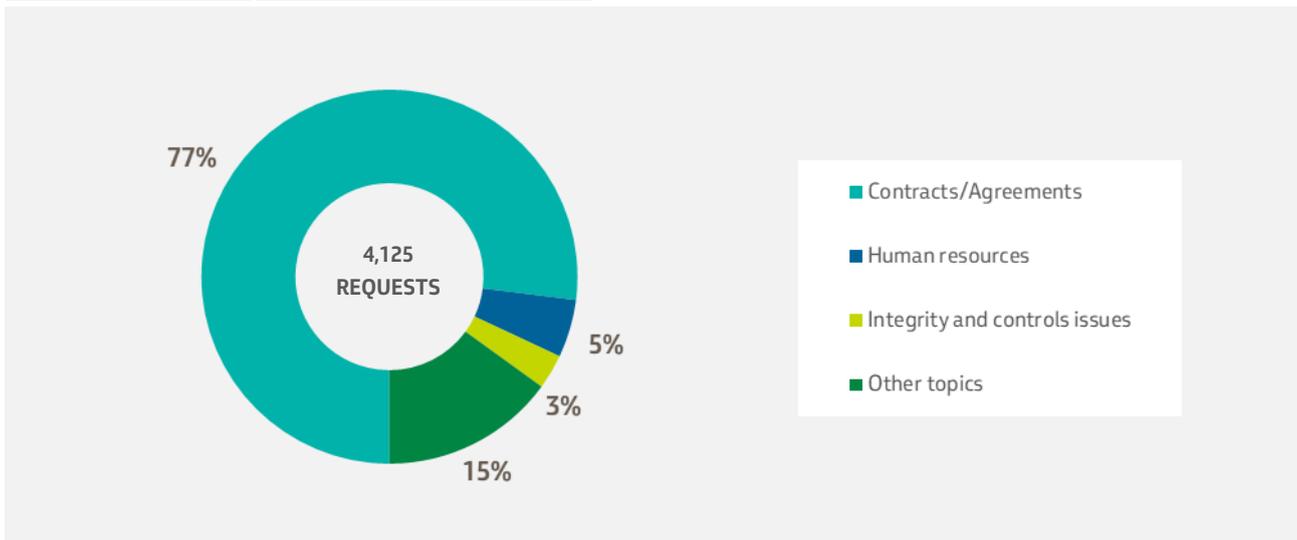
Our Board of Directors became aware of the list of complaints received, and our Statutory Audit Committee obtained detailed information on 113 compliance incident complaints.

that were considered to be the most critical, classified as high and very high risk according to our Compliance Incident Risk Matrix.

Most of the complaints regarding compliance incidents dealt with favoritism, bidding/contract irregularities and contract execution irregularities. Regarding complaints about workplace violence, most of them were related to abusive management, offense and intimidation. Regarding corporate security incidents, most were related to security at the premises, theft, and burglary; and on human resources, most were related to job role deviation.

Regarding promoting transparency and access to information, the Petrobras Transparency Portal reached 1st place in the ranking of 306 bodies and entities monitored by the Federal Comptroller General (CGU). The outstanding position in the ranking recognizes that our portal meets 100% of the requirements defined by the control body, this index was achieved through the continuous improvement of active transparency, with the review of content and tools available to citizens. Regarding the Citizen Information Service - SIC, we ended the year among the sixth most demanded entity of the entire Federal Executive Branch, providing the requested information at high rates, equivalent to 80% of the requests.

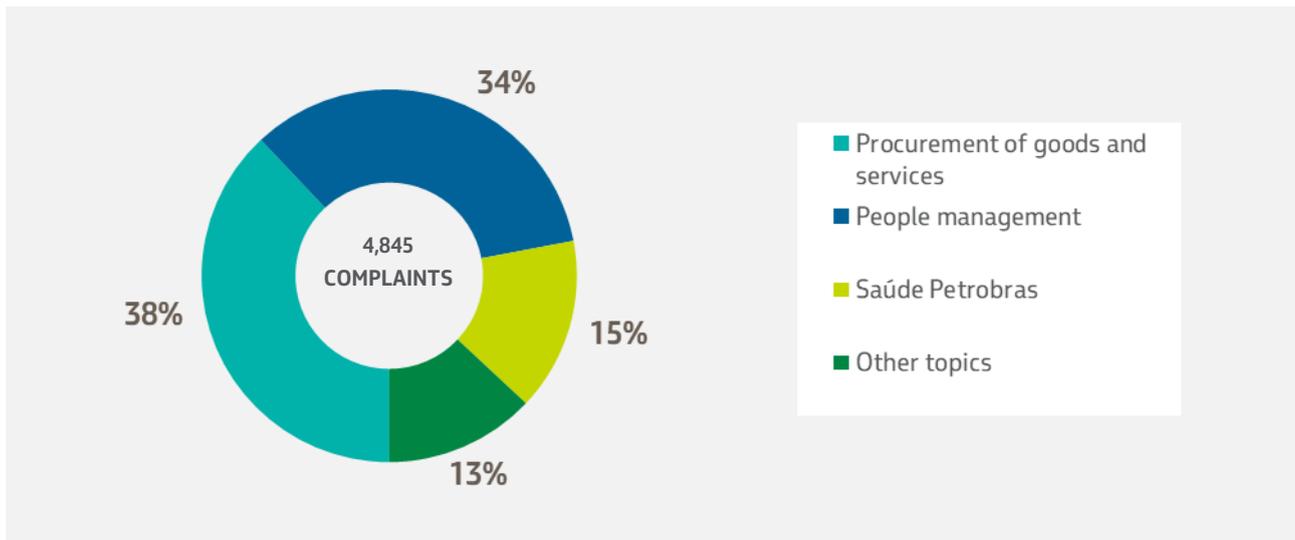
#### INFORMATION REQUESTS RECEIVED IN 2021



Of the requests for information received about contracts and agreements, most of them refer to access to copies, information, and execution details. In relation to human resources, most were related to the workforce numbers and hiring processes. Regarding issues of integrity and controls, most of them were related to unit access control and internal investigations.

As for the other types of statements received and dealt with by our Ombudsman's Office (complaint, request, compliment, and suggestion), it should be noted that this works as a second service channel, not replacing the various communication channels that we make available to our audiences (such as Customer Service, People Relationship Center, Supplier Channel).

The graph below shows the total complaints received:

**COMPLAINTS RECEIVED IN 2021<sup>4</sup>**


Of the complaints about contracting goods and services, most were about labor irregularities in contracted companies, such as late payment of salaries, severance pay and meal tickets. As for the complaints about people management, most were related to compensation and educational benefits.

Regarding the Saúde Petrobras topic, it is worth noting that the Petrobras Health Association (APS) took over, in April 2021, the handling of statements about the Petrobras Health benefit, which, until then, was carried out by our Ombudsman's Office. The gradual transition that began in 2020 was planned so that the Petrobras Health Ombudsman would be prepared to guarantee adequate service to all beneficiaries.

## Reporting mechanisms

Our channels do not replace the role of immediate managers in the direct treatment of demands, as well as direct access to the Human Resources, Ombudsman's Office, Governance and Compliance or Legal areas. Likewise, they do not replace the legitimate role of unions in addressing labor disputes, nor do they prevent access to judicial or other non-judicial grievance mechanisms. We also do not impose any access restrictions on competent authorities in the investigation of human rights violations, except to preserve the anonymity of whistleblowers. We include alternatives such as telephone, letter, and face-to-face service to guarantee access to all our audiences, including marginalized groups.

In order to ensure a more effective response to communities, we also have free phones with 24-hour service coverage, from Sunday to Sunday, which are widely publicized in the locations where we operate. In addition, our Social Responsibility teams provide specific telephone contact numbers and e-mail address for each operational unit to meet community demands.

Suggestions can also be sent through the Ombudsman's channels, to analyze the feasibility of their implementation. Additionally, the General Ombudsman's Office itself seeks to continuously improve our channels, working together with the management areas

<sup>4</sup> Saúde Petrobras corresponds to the health care benefit offered to our employees.

to improve processes and assess satisfaction with the treatment given to complaints and requests.

## Investigations of complaints

Within the scope of our integrity system, we seek to maintain the reduction of the indicator - Number of Inventory Investigations (NAE) - related to issues of conflict of interest, nepotism, irregularities in hiring processes, bribery/kickback, among others, as well as to investigate administrative responsibility for the practice of harmful acts committed by legal entities against Petrobras, considering Law No. 12,846/2013 - Administrative Liability Proceedings (PAR).

In 2021, we achieved a 22% reduction in NAE, which meant an accumulated reduction of 55% compared to December 2019, demonstrating adherence to our ESG<sup>5</sup> commitment to act with integrity and transparency, with zero tolerance for fraud and corruption.

In relation to PAR, during the reporting period, there was a reduction of 10%, and of 24% accumulated since December 2019. In 2021, we maintained our outstanding performance in the National Register of Punished Companies (CNEP), maintained by CGU, as one of the main bodies that apply the consequence system provided for in 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.

The reduction of the NAE and PAR, together with other measures, contributes to the effectiveness of our integrity system, as it demonstrates our commitment to quickly investigate reported situations to identify possible irregularities, implement corrective actions, and improve of processes.

## Disciplinary measures

In 2021, we applied 147 disciplinary measures to employees of different hierarchical levels, 11 contract terminations, 53 suspensions, and 83 written warnings. The cases refer to misconduct such as non-compliance or omission of internal regulations, non-compliance or omission of contracting/contract management procedures, insubordination, and others.

Our internal procedures revealed no new cases of corruption as defined by article 317 of the Penal Code, involving employees in 2021.

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 realm, we received formal confirmation regarding four unappealable final court decisions, regarding charges made between 2014 and 2021, regarding Operation Car Wash. In the criminal realm, 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 six 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.

<sup>5</sup> Commitment to reduce the calculation backlog by 50% by 2025, with January 31, 2019, as the base date.

We also had, within the scope of Administrative Accountability Processes (PAR), 37 investigations that resulted in the liability of 38 legal entities for the practice of harmful acts in Law 12.846/2013 - Corporate Anticorruption Law.

## Operation Car Wash

Regarding Operation Car Wash, we continue to cooperate with the authorities and take the necessary measures to recover the damage suffered as a victim of the irregularities practiced.

As reported since 2014 in our annual reports, Operation Car Wash (OLJ), an investigation conducted by the Federal Police and the Federal Public Prosecution Office, has focused, since the beginning of its investigations, on irregularities involving suppliers of goods and services and revealed undue payments to political parties, political agents, and others, including some of our former executives, who were arrested and/or indicted for money laundering and passive corruption.

In all criminal and administrative misconduct cases in which our former employees are defendants for acts related to corruption, we were recognized by the courts as a victim of the discovered irregularities; therefore, we act as an assistant to the prosecution, or one of the parties that presses charges, as the case may be.

As the investigations result in leniency agreements with the investigated companies or collaboration agreements with individuals who agree to return funds, we may be entitled to receive a portion of them. Thus, throughout the OLJ investigation, cash in the form of compensation for damages provided for in leniency agreements, collaboration agreements, and repatriations has been returned to us in the amount of approximately BRL 6.220 billion as of end of 2021. In 2021 alone, more than BRL 1.272 million was returned to us.

In addition to recognizing our status as a victim, the Courts has been sentencing those accused of criminal acts to "minimal damage" (which offers the smallest amount of compensation for damages resulting from crimes), the value of which will be paid back to us. Such amounts will be charged to the defendants (individuals) by the Civil Court - but only after the respective criminal action has become final. At the end of 2021, these amounts totaled approximately BRL 1 billion, in addition to a dollar amount of over USD 145.59 million (since in some cases the amount of the sentence is presented in US dollars).

We monitor and collaborate with the work of the Federal Police, Federal Public Prosecution Office (MPF), The Judiciary, Federal Audit Court (TCU), Federal Comptroller General (CGU), and Administrative Economic Defense Council (CADE), as well as cooperate with investigations by international bodies.

At the end of 2021, we there were 98 criminal cases in the context of OLJ, and we are considered an assistant to the prosecution in 88 cases and as an interested party in five other cases. In four cases, we are awaiting the granting of our request to be considered an assistant to the prosecution, and in another we are still evaluating our participation in the case. We want to use this opportunity to make it clear that what guides our participation as assistants to the prosecution is the fact that there is strong evidence in the information prepared by the Public Prosecutor's Office that money was diverted from our coffers, and our participation, alongside that criminal prosecution body, seeks to prove all wrongdoing so that a final decision can be handed down sentencing the individual defendants to return amounts to our coffers (the so-called "minimum damage").

Petrobras Certification	Number of cases certified or awaiting certification/analysis
Interested Party	05
Assistant	88
Certification as assistant requested, awaiting authorization	04
Evaluating entry	01
<b>Total</b>	<b>98</b>

Note that eleven of the aforementioned criminal cases resulting from OLM have had reached their final unappealable verdict for both the defense and the prosecution.

### CRIMINAL CASES THAT REACHED A FINAL VERDICT FOR THE PLAINTIFF OR THE DEFENDANT

File no.	Case	Date
5007326-98.2015.404.7000	Cerveró/Jolmey	2/11/2016
5083838-59.2014.404.7000	Cerveró/Samsung	7/12/2017
5083258-29.2014.404.7000	Camargo Correa	10/22/2018
8620331-98.2015.100.0000	Gleisi Hoffman (STF)	1/11/2019
5031719-82.2018.404.7000	Eduardo Musa – Desm. Bumlai	1/15/2019
5027422-37.2015.404.7000	UTC	2/22/2019
8620386-38.2015.100.0000	Nelson Meurer (STF)	6/12/2019
5026212-82.2014.404.7000	Abreu e Lima	12/6/2019
5000553-66.2017.404.7000	Mariano Marcondes	2/17/2020
5036518-76.2015.4.04.7000	Andrade Gutierrez	10/15/2021
5036518-76.2015.404.7000	Vantage/Paul Bragg	2/4/2021

Of the 98 OLM criminal actions that we follow, 82 involve the crime of corruption.

As reported in our Annual Report, in September 2018, we disclosed agreements made to close the SEC and DoJ investigations, related to our internal controls, accounting records, and financial statements, during the period from 2003 to 2012. The agreements completely ended investigations by US authorities and established payments of USD 85.3 million to the DoJ and USD 85.3 million to the SEC. Additionally, they recognized the allocation of USD 682.6 million to the Brazilian authorities.

As such, we have fulfilled all obligations under the agreement with the DoJ, including the evolution of our integrity program and the submission of information to the DoJ during the three-year agreement, which was fully complied with and ended in September 2021.

We are currently party to a class action lawsuit initiated in the Netherlands, an arbitration proceeding in Argentina, and court 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 actions. The first action 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, it is worth noting that we were never mentioned in the scope of said collective action. The second criminal action alleges an alleged 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.

### Conclusion of the obligations foreseen in agreement with the USA Department of Justice (DoJ)



Photo: Petrobras Image Database

#### CONTEXT

During Operation Car Wash, Brazilian authorities identified that a corruption scheme caused severe financial damage to Petrobras, identifying weaknesses related to the company's internal controls, accounting records, and financial statements. In this context, Petrobras entered into an agreement to close investigations by the Department of Justice in the United States (DoJ) and the U.S. Securities and Exchange Commission (SEC). Under the agreements, the DoJ recognized Petrobras as a victim of the corruption scheme and the SEC recognized the company's performance as an assistant to the prosecution in several criminal proceedings in Brazil.

#### CHALLENGE

We were challenged to improve our internal controls through a system of integrity and a commitment to cooperate with US agencies, including providing information in annual reports to the DoJ.

To this end, we implemented actions to improve the effectiveness of internal controls and concluded structural and governance changes through the strengthening of a culture of ethics, integrity and transparency. We also implemented measures for the development of Ethics and Anti-Corruption as an independent Reporting Channel, carrying out Due Diligence, that is, the evaluation of the mechanisms to combat fraud and corruption of the companies with which we do business and the analysis of the integrity of all managers, administrators and employees who work in critical processes (Integrity Background Check).

#### SOLUTION

#### RESOURCES

In order to carry out these actions, we created the Governance and Compliance Department composed of

approximately 300 employees, and carried out actions to engage all of our employees through implemented

integrity actions (training, internal controls, process review, etc.).

#### RESULTS

With this effort, we ended the obligations under the agreement with the DoJ in September 2021. Due to the strengthening of good governance and integrity practices in its processes, Petrobras obtained external recognition, such as its return to the Partnering Against Corruption Initiative (PACI)

in 2020, its return to the Dow Jones Sustainability™ Index (DJSI) and recognition by the Pro-Ethics Program of the Brazilian Federal Comptroller General in 2021. In addition, as a result of its position as a victim, Petrobras has already received more than **BRL 6.2 billion** as compensation for the losses suffered by acts of fraud and corruption.

[415] [415-1] [102-12] [102-13]

# Public Policies, Initiatives and Associations

## Public policies

As provided for in article 238 of Law 6.404/1976, we can have our activities directed with the purpose of serving the public interest that justified our creation, that is, seeking to meet the objective of the national energy policy provided for in article 1, item V, of Law 9.478/1997, to guarantee the supply of oil products throughout the national territory. The contribution to the achievement of this public interest must be compatible with our corporate purpose and market conditions and must not jeopardize our profitability and our financial sustainability.

Our bylaws clearly indicate the relevant collective interest that justified our creation and formalize the requirements so that its execution is provided for under conditions different from those of any other private sector company operating in the same market. In this case, each fiscal year it will be up to the Federal Government to compensate for the difference between market conditions and the net income from operations or economic return of this obligation.

In compliance with the requirements for the disclosure of data on activities that are related to the achievement of public interest purposes under conditions different from those of any other private sector company operating in the same market, we summarize the commitments in force in 2021 below:

### PUBLIC POLICY COMMITMENTS

<p><b>PPT - Priority Thermoelectricity Program</b></p>	<p>The Program, instituted by Decree no. 3.371, of February 24, 2000, sought to implement thermoelectric plants. The plants that are part of this program, as long as they had entered into effective commercial operation by December 31, 2004, are entitled to the supply of natural gas by Petrobras for a period of up to 20 years, counted from the beginning of commercial operation, with a price -established and readjusted for American inflation.</p> <p>The supply of gas to the plants under the PPT generated, in 2021, revenues of approximately BRL 1.754 billion and costs of BRL 2.812 billion, a result supplied by the company's budget.</p>
<p><b>CONPET - National Program to Rationalize the Use of Oil Products and Natural Gas</b></p>	<p>The Program, instituted through the Decree of July 18, 1991, aims to promote the development of an anti-waste culture in the use of non-renewable natural resources. Petrobras also participates in the Brazilian Labeling Program (PBE), in partnership with the National Institute of Metrology, Quality and Technology (INMETRO), which aims to encourage the production and use of gas appliances and more efficient vehicles. In 2021, the costs associated with CONPET, funded by the company's budget, amounted to approximately BRL 527 thousand.</p>

Public interest information is also available in our Annual Letter of Public Policies and Corporate Governance, developed in compliance with Law 13,303/2016 and Decree 8,945/2016 and is published on our [Investor relations website](#).

## Associations and advocacy

We carry out our activities with the government through the Institutional Relations and Sustainability Department. Its main role is the relationship with our stakeholders, reinforcing corporate communication and brand management activities, social and environmental project actions, and external relationship management in defense of the interests of our strategic topics, management of activities related to the transition to low carbon, emissions and energy performance and safety, environment, and health, as well as intelligence, business, and property security.

Our relationship with the government is regulated by our Code of Ethical Conduct, in addition to other internal regulations such as the Institutional Relationship guidelines and the standards for Interactions with Public Agents. We seek to establish a relationship with the public authorities in compliance with the commitments set out in the aforementioned documents.

It is worth mentioning that the discussions held with the public authorities seek to defend our legitimate interests and the achievement of the objectives established in our Strategic Planning, always guided by the Code of Ethical Conduct, seeking to avoid inconsistencies when establishing a relationship with them.



### Political Contributions

In accordance with our Code of Ethical Conduct and the Petrobras Corruption Prevention Program (PPPC), we are committed to refusing support and contributions to political parties or political campaigns of candidates running for office, and no instances of non-compliance or complaints were made related to donations or political contributions in 2021.

Our advocacy occurs through national and international industry associations related to the oil and gas industry; we are signatories to initiatives related to the sector and to national and international commitments that we assume regarding social, environmental and governance issues; and we support projects by civil society organizations that seek to debate and produce content on topics relevant to us and of interest to society. As part of our commitment to foster a culture of integrity and to promote ethical behavior in our businesses, we play an active role in the industry in which we operate. Thus, we voluntarily participate in some initiatives and collective associations in Brazil and abroad, as follows:

**MAIN ASSOCIATIONS**

Association	Participation	Basic Membership Fee (BRL) <sup>1</sup>
Brazilian Petroleum, Gas, and Biofuel Institute (IBP) <sup>2</sup>	1957	0.00
Brazilian Geological Society (SBG)	1957	43,000.00
Brazilian Association of Publicly Traded Companies (ABRASCA)	1984	60,000.00
Brazilian Association of Automotive Engineering (AEA)	1984	47,640.00
International Association of Oil and Gas Producers (IOGP)	1988	359,448.00
<i>Camara Boliviana de Hidrocarburos Energía (CBHE)</i>	1996	106,100.00
<i>Camara Brasileira Boliviana</i>	1996	5,600.00
Brazilian Association of Technical Standards (ABNT)	1998	21,370.00
<i>Camara de Industria y Comercio (CAINCO)</i>	2000	35,200.00
Ethos Institute <sup>3</sup>	2000	51,000.00
Brazilian Committee on Materials, Equipment and Oceanic Structures for the Oil and Natural Gas Industry of the Brazilian Association of Technical Standards (ABNT/CB-50)	2002	30,000.00
Brazilian Institute	2002	9,738.78
Brazilian Investor Relations Institute (IBRI)	2002	25,000.00
<i>International Gas Union (IGU)</i>	2003	0.00
Brazil Network of the United Nations Global Compact	2003	167,580.00
Brazilian Association of Energy Traders (ABRACEEL)	2004	70,140.00
<i>American Petroleum Institute (API)</i>	2005	0.00
National Association of Research and Development of Innovative Companies (ANPEI)	2005	32,000.00
<i>Well Testing Network (WTN)<sup>5</sup></i>	2005	42,624.59
IPIECA - The global O&G industry association for advancing environmental and social performance	2006	661,810.00
<i>Electric Power Research Institute (EPRI)</i>	2007	0.00
<i>Center for Chemical Process Safety (CCPS)</i>	2009	182567.80
Brazilian Association of Thermoelectric Generators (ABRAGET)	2011	0.00
Brazilian Exploration and Production Association (ABEP)	2013	1,124,537.92
Federation of Espírito Santo Industries (FINDES – headquarters)	2013	0.00
<i>International Association of Drilling Contractors (IADC)</i>	2014	279,300.00
Pipeline Technology Center (CTDUT)	2015	146,000.00

<sup>1</sup> For dollar payments we used an exchange rate of BRL 5.5860.

<sup>2</sup> IBP receives funds from ABEP and ABD.

<sup>3</sup> We were part of Ethos from 2000–2008 and then again in 2018.

<sup>4</sup> We were part of IBCG from 2002–2015 and then again in 2021. Pro-rata amount regarding November and December 2021.

<sup>5</sup> original amount in pounds. Exchange rate used 7.5242.

Association	Participation	Fee
National Compact for the Eradication of Slave Labor(InPacto)	2015	15,000.00
Vale do Paraíba Integrated Emergency Network (RINEM)	2015	10,037.00
<i>CDP Benchmark Club</i> <sup>6</sup>	2017	47,344.50
<i>World Economic Forum</i> <sup>7</sup>	2017	867,603.00
<i>American Society for Testing and Materials (ASTM)</i>	2018	2,094.75
Brazilian Association of Licensing Executives (Les Brasil)	2018	600.00
National Scientific Computing Laboratory (LNCC)	2018	0.00
<i>The Welding Institute (TWI)</i>	2018	360,067.70
<i>The Open Group</i>	2018	174,562.50
<i>University of Tulsa (TULSA)</i>	2018	475,588.20
<i>Fieldcomm Group</i>	2019	8,379.00
Enterprise Equality Initiative - NGO Afrobras and Zumbi dos Palamares College	2019	30,000.00
<i>International Chamber of Commerce (ICC Brasil)</i>	2019	24,691.80
<i>Association for Supply Chain Management (ASCM)</i>	2019	0.00
Brazilian Downstream Association (ABD)	2020	1,359,417.00
<i>Brazilian American Chamber of Commerce (BRAZILCHAM)</i>	2020	33,516.00
American Chamber of Commerce in RJ (AMCHAM)	2020	36,897.00
Brazilian Association of Automotive Engineering (AEA)	2021	238,200.00
Brazilian Association of Institutional and Governmental Relations (ABRIG)	2021	36,000.00
Brazilian Center for International Relations (CEBRI)	2021	55,000.00

Treaties, principles, and initiatives with external institutions are part of our institutional relationship. These are initiatives that are sometimes linked to associations we maintain with external entities and most of them do not have a membership fee and are voluntary<sup>8</sup>. In the following table it is possible to observe what these initiatives are, as well as the years we participated.

<sup>6</sup> We participate in this association since 2017, except for in 2020.

<sup>7</sup> Original amount is Swiss Francs. Exchange rate used 6.9408.

<sup>8</sup> Only the initiative with the National Service for Industrial Learning (SENAI) is not voluntary.

**MAIN TREATIES, PRINCIPLES, AND INITIATIVES (PARENT COMPANY)**

Treaty, principle or initiative	Participation
<i>Partnering Against Corruption Initiative (PACI) – World Economic Forum</i>	2005
Gender and Race Pro-Equity Program – Federal Government	2005
Declaration of Corporate Commitment to Combat the Sexual Exploitation of Children and Adolescents	2010
Women Empowerment Principles - UN Women	2010
<i>Carbon Sequestration Leadership Forum (CSLF)</i>	2010
Alerting and Preparing Communities for Local Emergencies (APELL)	2011
Business Compact for Integrity and Against Corruption – Ethos	2014
Anticorruption Platform of the Global Compact Brazil Network	2015
Technical Chamber of Environmental Education - CBH-LN	2016
Program for the Assessment of Mineral Potentiality of the Brazilian Legal Continental Shelf (REMPLOC) - Brazilian Navy	2016
Prospecting and Exploration of Mineral Resources in the South Atlantic and Equatorial International Area (PROAREA) - Brazilian Navy	2016
Open Charter Enterprises for Human Rights	2018
Corporate Responsibility and Anti-Corruption Commission – ICC Brazil	2019
National Early Childhood Network	2019
Young Apprentice - National Service for Industrial Apprenticeship (SENAI)	2020
Brazilian Business Commitment to Biodiversity – Brazilian Business Council for Sustainable Development (CEBDS)	2021
Brazilian Business Commitment to Water Security – Brazilian Business Council for Sustainable Development (CEBDS)	2021

[103-1] [103-2] [103-3] [206] [206-1] [207] [207-1] [207-2] [207-3] [207-4] [307] [307-1] [419] [419-1] [OG8]

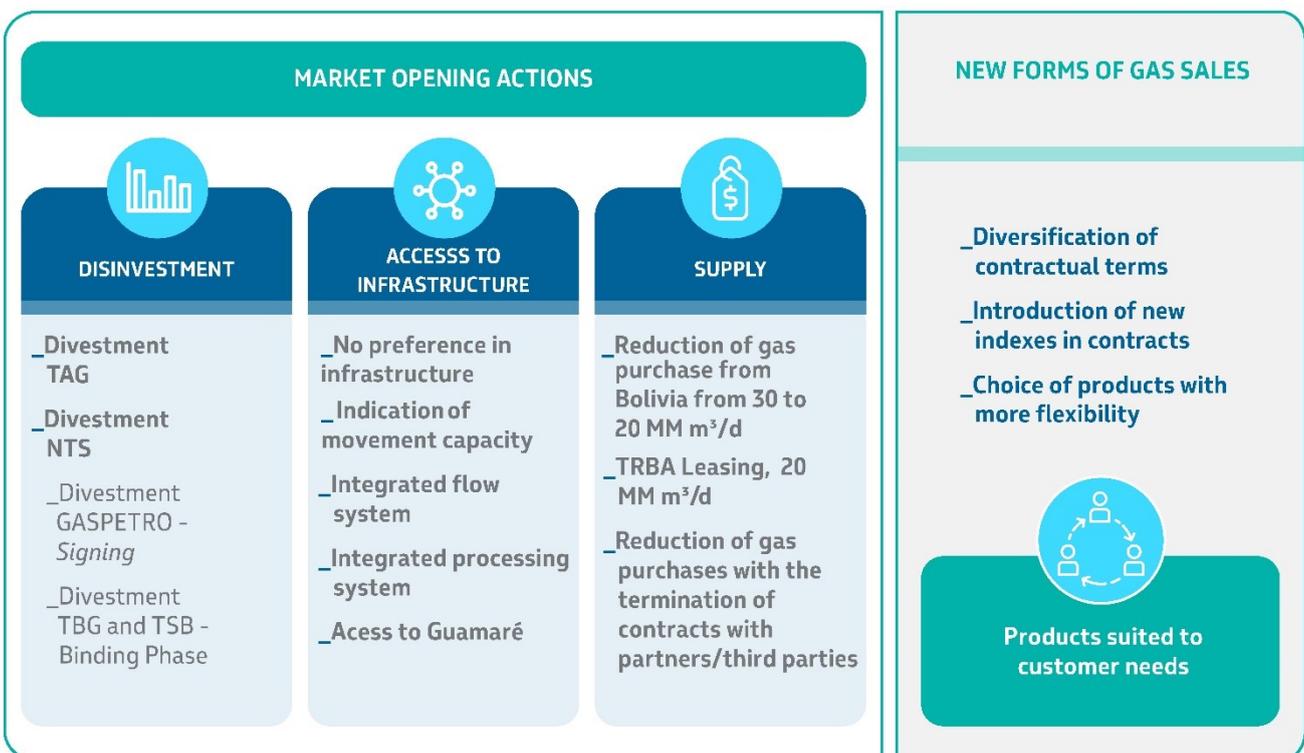
# Regulatory Environment, Market Opening and Competition

Regulatory Environment, Market Opening and Competition is a material topic for us and our stakeholders. This topic is related to the company’s respect for legislation, compliance management, lobbying, and competitive behavior, as well as adapting practices to the regulatory environment and market opening.

In the context of market opening, Law 14,134/2021 was enacted, on August 4, 2021, called the New Gas Law. The text, by revoking Law 11.909/2009 (Gas Law), established a new regulatory framework for the natural gas market in Brazil, with provision for changes in the regulation of activities related to gas transport, as provided for in art. 177 of the Federal Constitution, as well as related to the flow, treatment, processing, underground storage, conditioning, liquefaction, regasification, and trading of natural gas. The New Gas Law forms the basis for creating a legal and regulatory environment conducive to the formation of an open and competitive natural gas market, allowing for competition between suppliers.

Within this regulatory context, we are leaving the gas transportation and distribution sectors entirely and focus on production and marketing. We believe that the opening of the market is positive and is in line with our strategy to improve our capital allocation. The natural gas segment is also undergoing a profound transformation, not only for our company, but also for Brazil. The new gas market in Brazil is already in operation and we are an important part of this policy.

## WE REMAIN COMMITTED TO THE OPENING OF THE NATURAL GAS MARKET



We are convinced that respect for antitrust legislation is fundamental for the socioeconomic principles and objectives of the National Energy Policy, in compliance with legal instruments related to the oil, gas, and energy sectors, can be preserved and expanded.

Therefore, we did a diagnosis of our competitive environment and mapped the related risks, followed by the creation of management mechanisms. Our Antitrust Code of Conduct, approved by the Board of Directors, embodies our commitment to strict compliance with antitrust legislation in Brazil and in the foreign jurisdictions where we do business.

Additional guidance on the subject is the subject of internal memos issued by the Antitrust Office of our legal team, the body responsible for resolving doubts in relation to antitrust rules and their concrete application. Additionally, we have some relationship channels that allow the needs, expectations, and perceptions of the related audiences be addressed: Customer Service, Reporting Channel, Ombudsman, and Talk to Us.

The Competition Defense Coordination monitors and follows up any legal and administrative actions that deal with unfair competition or any accusation of anti-competitive practice.

Our Legal department monitors the process of active management of our portfolio by discussing the clauses related to anti-trust law in the Purchase and Sale and Share Agreements, and by participating in internal and external meetings with potential interested parties and the respective contracted offices. The area also advises the business area in the elaboration and execution of the most efficient strategies, from the competitive point of view, for the generation of value in the different markets in which we operate.

We are also in constant relationship with CADE, monitoring any investigations in progress in the markets affected by our operations. We promote a culture of competition, instructing our employees regarding aspects that may violate the economic order and how to prevent them, through lectures, meetings, and the issuance of manuals and general guidelines on the subject.

## Price formation

Petroleum products are commodities. Therefore, their prices in different regions of the world are influenced by the balance between global supply and demand and international trade flows. It is also important to point out that variations in the prices of crude oil and the various products derived from it do not occur in perfect sync. Depending on seasonality and global inventories, among other factors, the balance between supply and demand for a particular oil product may result in price changes different from changes in oil prices. This is reflected in the refining margins, which may vary upwards or downwards.

The prices we practice seek balance with the international market and follow the variations in the value of products and the exchange rate, up and down, while avoiding the immediate transfer of volatility of international quotes and the exchange rate caused by conjunctural issues. We operate in balance with the market, observing domestic demand, competition with other players, and asset profitability.

In 2021, we adjusted our sales prices to distributors according to this rationale, as global prices for oil and oil products, also impacted by the exchange rate, changed, and settled at new levels.

## Lawsuits brought by Natural Gas distributors and others

Some Natural Gas distributors and other entities have filed nine lawsuits against Petrobras, all of which are still ongoing, where they are requesting the extension of the effects of the natural gas supply contracts that would expire in December 2021. As the prices of liquefied natural gas that we import, which is necessary to meet new commitments, have shown a great increase since mid-2021, we offered new contracts for supply as of January 1, 2022, proposals with prices in line with the current market. However, some Natural Gas Distributors and other entities want to get away from the new prices, claiming that we abused our economic power.

In these cases, judges granted injunctions to maintain the prices of old contracts. We appealed these decisions, and the appeals are awaiting judgment. Simultaneously, we proposed arbitrations, given that this is the dispute settlement method chosen in the contracts.

Due to questions about the fuel price policy, the Administrative Council for Economic Defense (CADE) launched two Administrative Inquiries to study the prices charged by Petrobras in the derivatives market.

It is worth mentioning that CADE had previously initiated investigations in the refining and natural gas markets. These investigations, in addition to the guidelines issued by the National Energy Policy Council (CNPE), culminated in the signing of a Termination Commitment Agreement (TCC) with CADE, an agency whose mission is to ensure market competition, committing ourselves to sell 50% of the refining complex (eight oil refineries, including assets related to transportation of fuel). With this, in this TCC, CADE committed to suspend Administrative Inquiry (no. 08700.006955/2018-22), initiated on May 12, 2018, with the objective of investigating possible abuse of a dominant position in the Brazilian refining market.

We also signed a TCC with CADE regarding the natural gas sector. The measures include divestment in natural gas area, negotiations on access to flow and processing assets, not purchasing new volumes of gas from partners or third parties except in certain situations provided for in the agreement and leasing the Regasification Terminal in the State of Bahia, subject to tax legislation adjustments to the contract flow taxation model. Like the TCC of the Refining sector, CADE committed to suspending administrative procedures to investigate our performance in the sector.

According to CADE, the agreements are healthy measures that support improvements in the gas and oil product markets. It is worth mentioning that the TCC signatures are in line with our strategy of improving capital allocation, reducing leverage and regulatory risk. We are complying with both agreements with monitoring by CADE, using companies contracted for monitoring. All the reports presented so far prove compliance with the signed agreement.

## Opening of natural gas market in Brazil



Photo: André Valentim



### CONTEXT

We are repositioning ourselves in the Natural Gas segment, with divestments in distribution and transportation assets. This strategy allows us to share risks, contribute to structuring a more dynamic, competitive and efficient market, and also allows us to generate greater liquidity for our company, redirecting resources to the pre-salt layer. In line with this position, in 2019 we signed an agreement with CADE (Gas TCC) that consolidates the understanding on the execution of the commitments that contribute to the opening of the Natural Gas market in Brazil.



### CHALLENGE

The main objective of the Gas TCC is to generate conditions of competitiveness and greater dynamism in the national gas market, in order to encourage other economic agents to enter the market, as well as to suspend the administrative proceedings underway at CADE related to alleged abuse of economic power.



### SOLUTION

The solution found to boost the gas market was the signing of the TCC with CADE, with a view to carrying out the planned actions according to the defined term and scope.



### RESOURCES

We complied with the commitments made with CADE through the mobilization of several teams that work in the assets covered by the agreement. Commitments have been met within the stipulated period, or even in advance in some cases.



### RESULTS

Since 2019, we have established the end of exclusive contracts for the transport of Natural Gas and have appointed independent members to the Boards of TAG, TBG, Gaspetro, NTS and TSB. In 2020, we sold our equity interest in Gaspetro, NTS and TAG. We concluded negotiations with YPFB on the purchased quantities of Natural Gas and leased the Bahia Regasification Terminal. In 2021, we signed the unit agreement processing and outflow from Guamaré.

We are currently negotiating with NTS to sign an agreement to reduce flexibility and with third parties on access to the Natural Gas outflow system and to the Natural Gas outflow treatment plants. We are also in the process of negotiating for TBG's Signing and Gaspetro's Closing.

## GAS + Program

As part of the management improvement actions associated with the opening of the Gas market, we have the GAS+ Program, which aims to increase our competitiveness in the natural gas and energy segment. Among the highlights, we can mention the availability of new commercial products and new forms of relationship with customers, with a focus on evaluating the use of tools such as digital contracts and sales through automated platforms. We are also developing new business models, such as access to gas flow and processing infrastructure in our Treatment Units.

The Program also includes projects already in progress, with the potential to add efficiency and profitability to the business, as well as the incorporation of digital transformation initiatives aimed at strengthening the vision of innovation, bringing a technological approach as an important resource for improving performance in all processes, whether industrial or business.

Throughout 2021, several initiatives of the GAS + Program were implemented, and their development was periodically monitored by different hierarchical levels. The main achievements of the reporting period are highlighted below:

**- Commercial Transformation**

- Negotiation of the access framework to our gas processing infrastructure
- Development of new commercial products (products for natural gas consumers, network balancing products, flexible and short-term products)
- LNG Supply Prospecting for A-4 / A-5 Electric Power Auction

**- Digital Transformation for Assets and Businesses**

- Progress in the implementation of the new CRM – Customer Relationship Management (“Evolve Project”)
- Implementation of digital operational support tools for 13 assets: “BR Alarm” (alarm management) and “Conf Online” (integrated mobility equipment for operations)

**- High Performance Assets**

- Licensing for operation of the Guanabara Bay Regasification Terminal for 30 MM m<sup>3</sup>/d
- Completion of technical upgrade on the gas turbine at Termobahia
- Progress in retrofit projects at the Cabiúnas Gas Treatment Unit

## Opening of refining market in Brazil



Photo: André Valentim



### CONTEXT

On April 26, 2019, we released the new approved guidelines for our portfolio management, which included the divestment of eight refineries. On June 12, 2019, we signed a Agreement to Cease the Practice (TCC) with the Administrative Council for Economic Defense (CADE) to open up the refining market through the divestments of RLAM, RNEST, REPAR, REFAP, REGAP, REMAN, LUBNOR and SIX, with their associated logistical infrastructures. RLAM was the first, and so far, the only refinery to have its process completed, in November 2021.



### CHALLENGE

Sale of eight refineries considering the occurrence of external factors that impacted the process, such as the Covid -19 pandemic, which delayed the initial schedule established in the TCC.

Our strategy for the refining segment is to focus on assets close to the largest supply of oil (Santos Basin) and the largest consumer market (Southeast), developing more efficient processes and new environmentally friendly products.

We have combined guidelines for portfolio management with the refining segment's strategy in which we seek to improve our capital allocation, concentrating our participation in segments with greater competitive advantage and profitability, increasing our resilience by reducing our leverage.



### SOLUTION

The solution we found was to test the market and carry out the divestments gradually, according to the interests of the players and with the completion of the due diligence process. Thus, RLAM was the first to have its binding offer scheduled. Subsequently, with the conclusion of the due diligence phase, the other binding proposals were scheduled, always seeking to comply with the schedule established in the TCC with CADE and preserving the competitive process.



The TCC provided for the closing of the 8 refineries to be carried out by Dec/2021.

Within the agreed period, we carried out the closing of RLAM and the signing of REMAN and SIX.



Currently, we are working with CADE to review the schedule for the execution of the Divestment Project in the Refining Area.



The RLAM divestment process took place over 2.5 years, starting on June 28, 2019 with the disclosure of the opportunity to the market and ending on November 30, 2021.



### RESOURCES



### RESULTS

The closing of the RLAM cluster was carried out on November 30, 2021, with the entry of Acelen (a company of the Mubadala Capital group) in the refining operation in Brazil. The cash inflow of this operation plus the cash inflow referring to the signals received in the subscriptions of the REMAN and SIX clusters, respectively on August 25, 2021 and November 11, 2021 with the companies Ream Participações and Forbes & Manhattan, was **USD 1.8 billion**.

We will restart new competitive processes for refineries that were not successful in the first process. In the end, service to the derivatives market, which was mainly due to competition between refineries owned by us and importers, will have intensified competition dynamics, with refineries led by other agents.

## Tax management and compliance with tax legislation

Brazilian tax legislation is complex and difficult to interpret. In addition, a large number of new norms are published annually by the Federal Government, States and Municipalities.

This scenario favors the emergence of risks and legal uncertainty, making companies need to adopt tax strategies to comply with tax obligations.

We have a tax risk management system where decisions are made according to the authority limits established for each hierarchical level, with the Executive Board having the maximum approval level.

Our tax strategy is formally approved, as defined in our process standards and in the risk management system approved by our executive board in 2016.

We comply with the tax legislation of Brazil and other countries where we operate, based on ethics and the technical interpretation of tax legislation, always in line with the best market practices and the spirit of the law. This is obtained through the excellent technical training of our team, the implementation of standards and processes for tax assessment, interpretation and execution in line with our business strategies, and the management of risk and tax litigation.

Our areas of specialized tax and legal advice support our tax strategy, as well as the interpretation and application of federal, state, and municipal tax legislation, evaluating the effects on our business of each change in tax legislation or jurisprudence.

We are reducing our presence abroad, especially in places considered to be tax-favored. In recent years the following companies have been closed: Petrobras Asphalt Trading BV - PAT BV, Bear Insurance Company - BEAR and Petrobras Well Response BV, located respectively in Curaçao, Bermuda and The Netherlands. Other companies abroad are analyzing the potential closure of activities.

It is also worth noting that, during 2021, we instituted the Transfer Pricing Policies Manual, whose main purpose is to guide tax analysts regarding the proper observance of the Transfer Pricing rules in force, in Brazilian and foreign legislation, in relation to commercial, financial and service operations between companies of the Petrobras System and related parties, with an individual or legal entity established in a jurisdiction with favorable taxation and with entities that enjoy a privileged tax regime.

We do not tolerate, encourage, or support tax evasion and government participation. Compliance is incorporated in our company, through principles and the Code of Ethical Conduct, and the tax strategy is led by the Accounting and Tax Executive Management Office, and shared with different hierarchical levels, in compliance with strategic objectives and contributing to improved development for Brazil and the countries where we operate.

Details of our tax strategy are available on Form 20-F (Legal and Tax Aspects) and on the Fiscal Report, published on the electronic portal.

Additionally, we disclose various types of information regarding our tax litigation in our financial statements, especially notes 16 and 18.3.1, as well as in other reports addressed to investors and stakeholders, such as form 20-F (SEC) and the Reference Form (CVM).

## PRINCIPLES OF TAX FUNCTION

<b>Governance</b>	We exercise our tax function with excellence, managing risks appropriately and contributing to increasing the profitability of our businesses in Brazil and abroad.
<b>Compliance</b>	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.
<b>Business Structure</b>	We guide and apply commercial and business practices that are in line with legal requirements and that have genuine substance. We strive to pay the fair amount, at the right time and in the right way.

<b>Relationship with Tax Authorities</b>	We seek, whenever possible, to develop cooperative relations with tax authorities, based on mutual respect, transparency and trust.
<b>Use of Tax Benefits and Incentives</b>	We apply tax incentives to ensure that they are transparent and consistent with statutory and regulatory standards.
<b>Effective Tax System</b>	We engage in dialogues with tax authorities, business groups and civil society, constructively, to generate effective tax laws
<b>Fiscal Responsibility</b>	We provide timely and comprehensive tax information to tax authorities and are always open to dialogue.
<b>Transparency</b>	We provide regular information to our investors, employees, contractors and the general public about our approach to government taxes and interests.
<b>Training</b>	Our team of tax attorneys is always up-to-date, trained and prepared to disseminate knowledge to other areas of the company.
<b>Social Responsibility</b>	We are committed to conducting our business in a fair manner, in accordance with tax legislation and with values of safety, teamwork, respect for people, integrity, excellence and respect for the environment, with a focus on sustainable economic development and making a relevant contribution to federal, state, municipal and local levels (considering the locations where we operate and the surroundings).

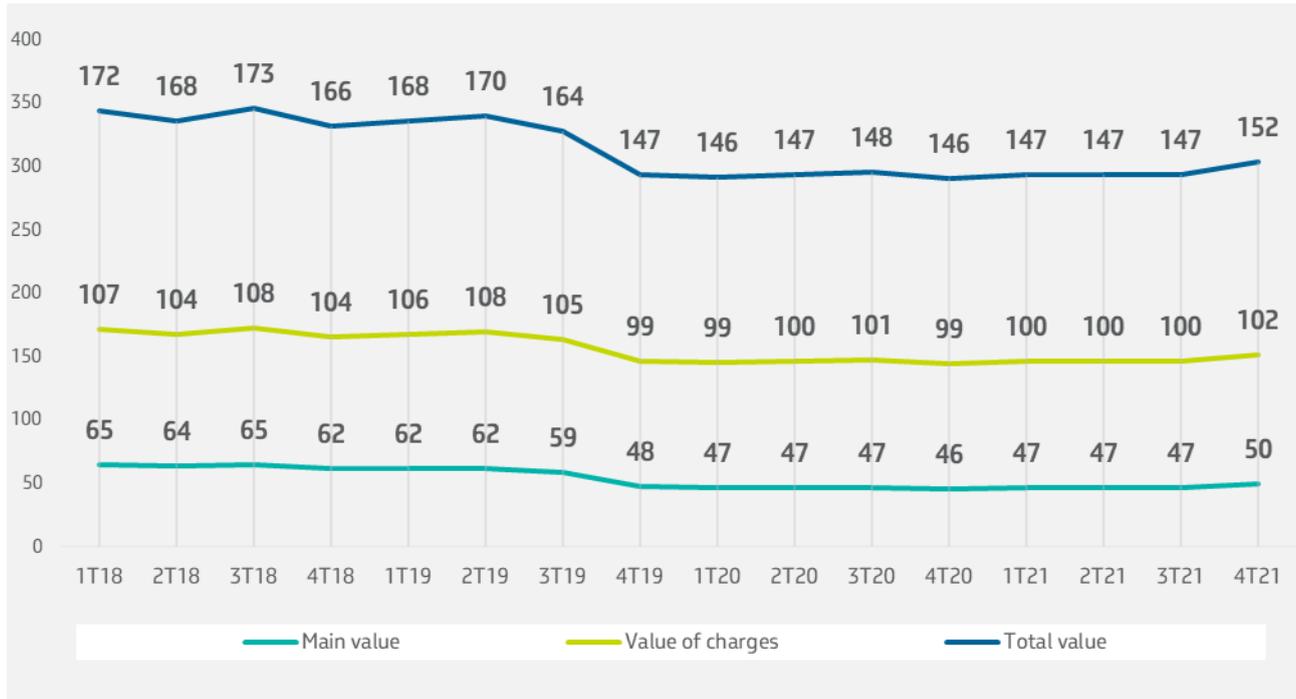
We are subject to the levy of income tax at the Brazilian corporate rate of 34%, made up of a 25% income tax rate and social contribution at a 9% rate. Since 2015, we have recognized income tax expenses on non-exempt revenue generated by our foreign subsidiaries based on Brazilian corporate tax rates, as established by Law No. 12,973/2014.

In addition to the taxes collected on behalf of consumers for the federal, state and municipal governments, such as the Tax on Transactions related to the Circulation of Goods and on the Provision of Interstate and Intermunicipal Transport and Communication Services (ICMS), we are legally obliged to collect financial compensation for our oil production activities in Brazil, within the scope of the ANP, whose purpose is to pay back society for the exploration of non-renewable resources: royalties, special holdings, signing bonuses, and payment for the occupation or retention of an area.

We fully comply with the obligations provided for in the tax laws of the countries in which we operate, guided by the best international practices related to the calculation, collection, and provision of tax information to the various stakeholders, in particular to the tax authorities of each country.

We, as well as our shareholdings in Brazil and abroad, have issued several reports with information of this nature, such as the Country-by-Country Report, Mandatory Disclosure Rules, Master File and Local Files, which are documents that clarify our policies and positions regarding income tax, in compliance with the guidelines of the BEPS Project (Based Erosion Profit Shifting) of the OECD, specifically Actions 12 and 13, which aim precisely to promote greater fiscal transparency and avoid non taxation of commercial or financial operations (anti-abuse rules).

As we operate in the exploration, production and refining segments, selling products throughout the national territory, we are subject to several tax rules at the federal, state, and municipal levels, which are sometimes conflicting, dubious, or which generate uncertainties, which can result in legal disputes to ensure the legal safety of our operations.

**QUARTERLY EVOLUTION OF OUR TAX LITIGATION** (billions BRL)


Uncertainties about the treatment of taxes on profits represent the risks that the tax authority does not accept a certain tax treatment applied by us. We estimate the probability of acceptance of uncertain tax treatment by the tax authority based on technical assessments by our legal advisors, considering precedents in jurisprudence applicable to current tax legislation, which may be impacted mainly by changes in tax rules or court decisions that alter the analysis of the uncertainty fundamentals.

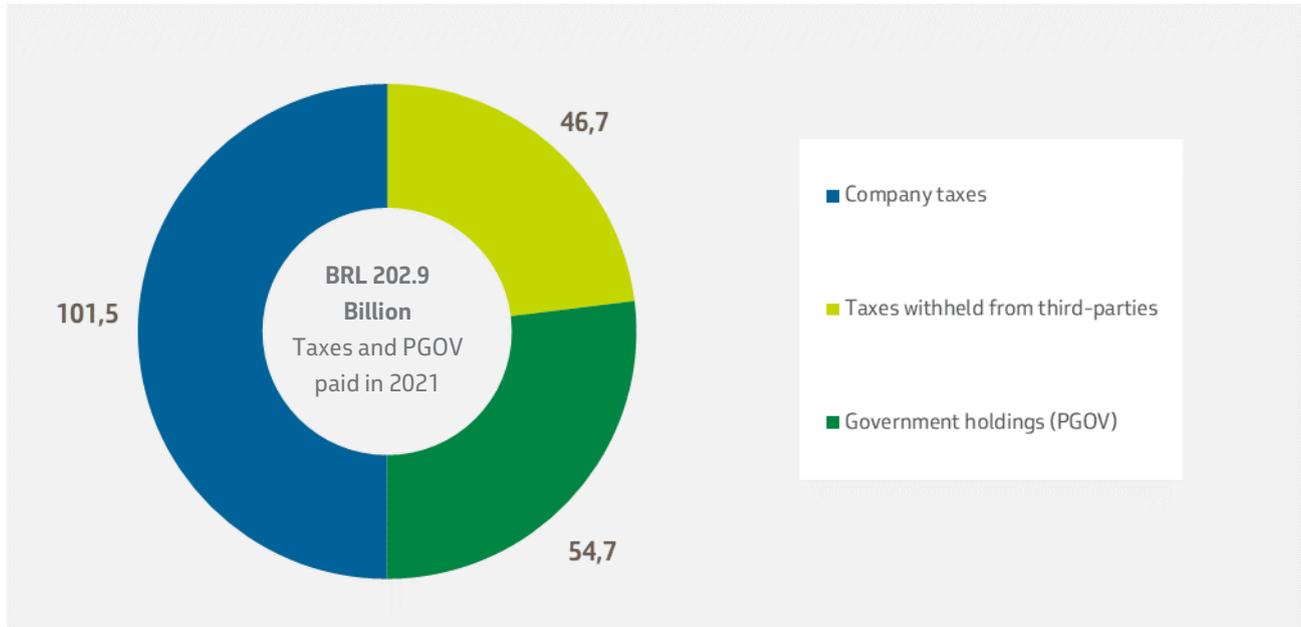
For the governance of our position on these issues, we have a Structured Tax Risk Management Methodology, which covers the stages of identification, registration, measurement, deliberation, and monitoring of the respective risks, in addition to periodic reports to senior management, with shared deliberations and at different levels, depending on the amounts involved.

Even in an often adverse tax scenario, we seek ways to end tax disputes, negotiating agreements for paying infraction notices and making spontaneous reports, with reduced interest, fines and legal charges.

In addition to the reported initiatives and in compliance with the commitment to transparency, we publish our Fiscal Report quarterly on our [Investor Relations Website](#), with detailed information on the payment of taxes and government holdings made in the prior quarter to the report, considering a cash basis. As of 2021, we started to disclose payments made abroad.

The information contained in the document reaches the payments in the amount of BRL 202.9 billion, in 2021, corresponding to company taxes, those withheld from third parties and those withheld for third parties, in addition to including information on government holdings.

**TAXES AND PGOV PAID IN 2021** (billions BRL)



**TAXES BY GOVERNMENT SPHERE** (billions BRL)



Considering that the 2021 information for our companies located abroad will only be available in June 2022, due to the difference in the fiscal calendar, we list the main companies abroad that had total revenue recorded in 2020 above 1 billion BRL.

Name of Institution	Residence Jurisdiction	Tax Identification Number	Primary Activities of the Organization	Number of Employees
<i>Agri Development B.V.</i>	NL	807558965	Platform chartering and subsea equipment rental, for the oil and natural gas field (Albacora Leste), operated by Petrobras in partnership with Repsol	0
<i>Guara B.V.</i>	NL	823121070	Platform chartering and subsea equipment rental, for the oil and natural gas field (BM-S-9), operated by Petrobras in partnership with other companies.	0
<i>Iara B.V.</i>	NL	858312542	Platform chartering and subsea equipment rental, for the oil and natural gas field (BM-S-11-A), operated by Petrobras in partnership with other companies.	0
<i>Petrobras America Inc.</i>	US	760235183	Purchasing, sales, marketing or distribution, administrative, management or support services, participation in oil and gas exploration and production areas.	34
<i>Petrobras Colombia Combustibles S A</i>	CO	900047822-5	Wholesale of solid, liquid, gaseous fuels and related products Manufacturing of petroleum refining products Other professional, scientific and technical activities n.c.p. Highway cargo transportation	69
<i>Petrobras Global Finance B.V.- PGF</i>	NL	851869026	Regulated Financial Services	0
<i>Petrobras Global Finance B.V.</i>	NL	8505 18 568	Purchasing, sales, marketing or distribution, administrative, management or support services, Group financial department.	30
<i>Petrobras International Braspetro B.V. - PIB BV</i>	NL	811086756	management of Shares and Other Capital Instruments:	1
<i>Petrobras Netherlands B.V.</i>	NL	809863832	Platform chartering and subsea equipment rental for Petrobras' oil and natural gas exploration fields. Ownership of equity interest in Dutch companies operated by Petrobras in partnership with other companies.	29
<i>Petrobras Singapore Private Limited</i>	SG	200604967H	Purchasing, Sales, Marketing or Distribution, Administrative, Management or Support Services	42
<i>Petrobras Uruguay Distribución S.A.</i>	UY	210001000012	Purchasing, Sales, Marketing or Distribution.	74
<i>Roncador BV</i>	NL	858866201	Platform chartering and subsea equipment rental, for the oil and natural gas field (Roncador), operated by Petrobras in partnership with Equinor.	0
<i>Transpetro International B.V.</i>	NL	850927663	Ship purchasing, sales, leasing and rental.	2
<i>Tupi B.V.</i>	NL	822650939	Administrative, management or support, purchasing, sales, marketing or distribution services	0

We use productivity and quality indicators (Key Performance Indicators) to measure and monitor performance in the tax function, seeking continuous process improvement.

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. In this regard, 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 Code of Ethical Conduct and standards, in particular:

- (a) we adopt formal and documented means to express our position in the relationship with the 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 preserved and that the disclosure only occurs in a timely manner and in accordance with the legal provisions and our rules.



## ADVOCACY

In the context of advocacy, our performance can be collective or individual, depending on the particularities and scope of the demand. At the collective level, we actively and constructively participate in dialogues with groups linked to our business segments, such as IBP - Brazilian Petroleum Institute, GETAP - Group of Applied Tax Studies, ABD - Brazilian Downstream Association, always looking after the defense of our interests and our industry, and to build and maintain our image and reputation. In addition, our external representation with the Tax Authorities in tax matters is always carried out by professional equipped with a power of attorney that gives them specific powers to act on behalf of the company.

We also monitor and accompany the legislative projects regarding tax matters and government holdings, at the federal and state levels, with a view to proposing adjustments in the legislation to mitigate adverse impacts, manage risks, and obtain tax incentives that maximize profitability of our businesses.

Another point that deserves to be highlighted, especially due to the high degree of litigation in the country, is the due disclosure of information regarding our tax litigation in the financial statements, as well as in other reports addressed to investors and stakeholders, such as Form 20 -F (SEC) and the Reference Form (CVM). We are aware of the importance of tax litigation, and we fulfill our duty to be transparent to our investors, other stakeholders, and society by reporting information in a detailed and critical manner, not only through the previously mentioned mandatory forms, but also through the timely publication of notices to the market upon the occurrence of a fact that implies a significant change in a position in relation to tax disputes.

Exemplifying our transparency and timeliness of information, we refer to the relevant facts published on our [Investor Relations Website](#). Accordingly, if convenient and opportune, we have repeatedly reassessed our litigation base in an attempt to seek agreements with state tax authorities, with a view to ending tax disputes.

An important tax fact that took place in 2021 was the publication on October 28, 2021, of a lower court decision, within the scope of the writ of mandamus filed by us, which recognized the right to non-taxation of the Selic in the undue tax.

On September 24, the STF ruled that the incidence of income tax (IRPJ) and social contribution (CSLL) on the amounts corresponding to the basic interest rate – SELIC applied to undue tax payments was unconstitutional.

In this context, as stated in the Notice to the Market of October 28, 2021, we recognized in the financial statements for the third quarter of 2021 an income from IRPJ and CSLL in relation to tax overpayments in the amount of BRL 4.8 billion, of which BRL 3.3 billion due to the recomposition of the tax loss related to the periods in which we determined a negative tax base and BRL 1.5 billion in recoverable taxes.

**Information on taxes can also be found in the Fiscal Report, published on February 23, 2022 and available on the Investor Relations website.**

## Environmental and socioeconomic compliance

Health, Safety, and Environment (HSE) are our strategic pillars; therefore, we value these practices both for society and for our daily activities. When we talk about environmental and socio-economic compliance, we cover social and environmental issues related to our investments, operations, and products, including compliance with environmental legislation and respect for the people who work with us or live in the places where we carry out our activities.

The main drivers for the development of our products, which begins with the definition of their concept, are aspects related to improving air quality and health, safety, the environment, energy efficiency, climate change and adequacy to use. We comply with national and international standards for health and safety and environmental impacts, in addition to explaining to our suppliers that they need to comply.

### BENZENE, LEAD, AND SULFUR CONTENT IN FUEL

Description	Average Benzene - Petrobras Content	Maximum allowable limit of national specification
Gasoline	0.5%	1.0%

Description	Average Benzene - Petrobras Content	Maximum allowable limit of national specification
Gasoline	35 ppm	50 ppm
Diesel S-10	5 ppm	10 ppm
Type A Fuel Oil	0.5 %	2.0 %
Marine Fuel Oil - Bunker	0.38 %	0.50 %

In this context, the addition of lead is only carried out on aviation gasoline - GAV, as used worldwide. In 2021, we returned to producing aviation gasoline at the RPBC and we did not carry out import operations of this product. The average lead content of aviation gasoline that we traded in the market in 2021 was 0.50 g-Pb/L, with the maximum specification limit equal to 0.56 g-Pb/L. No other product uses lead-based additives, according to current legislation.

As for benzene, considering that this product is carcinogenic, paragraph 1 of Interministerial Directive No. 775, of April 28, 2004, of the Ministry of Health and Ministry of Labor and Employment, allows a percentage of benzene not exceeding 1% vol. for oil based fuels.

Regarding sulfur, since 2009, we produce and sell diesel with a small amount of sulfur. In 2013, Diesel S-10, which contains a maximum sulfur content of 10 milligrams for every 1,000,000 milligrams of the product (10 ppm - parts per million), replaced Diesel S-50, which contained 50 ppm. Diesel S-10 enables diesel vehicles to use more modern technologies to control emissions, reducing emissions of particulate matter by up to 80% and nitrogen oxides by up to 98%, thus minimizing respiratory and cardiovascular effects on human health.

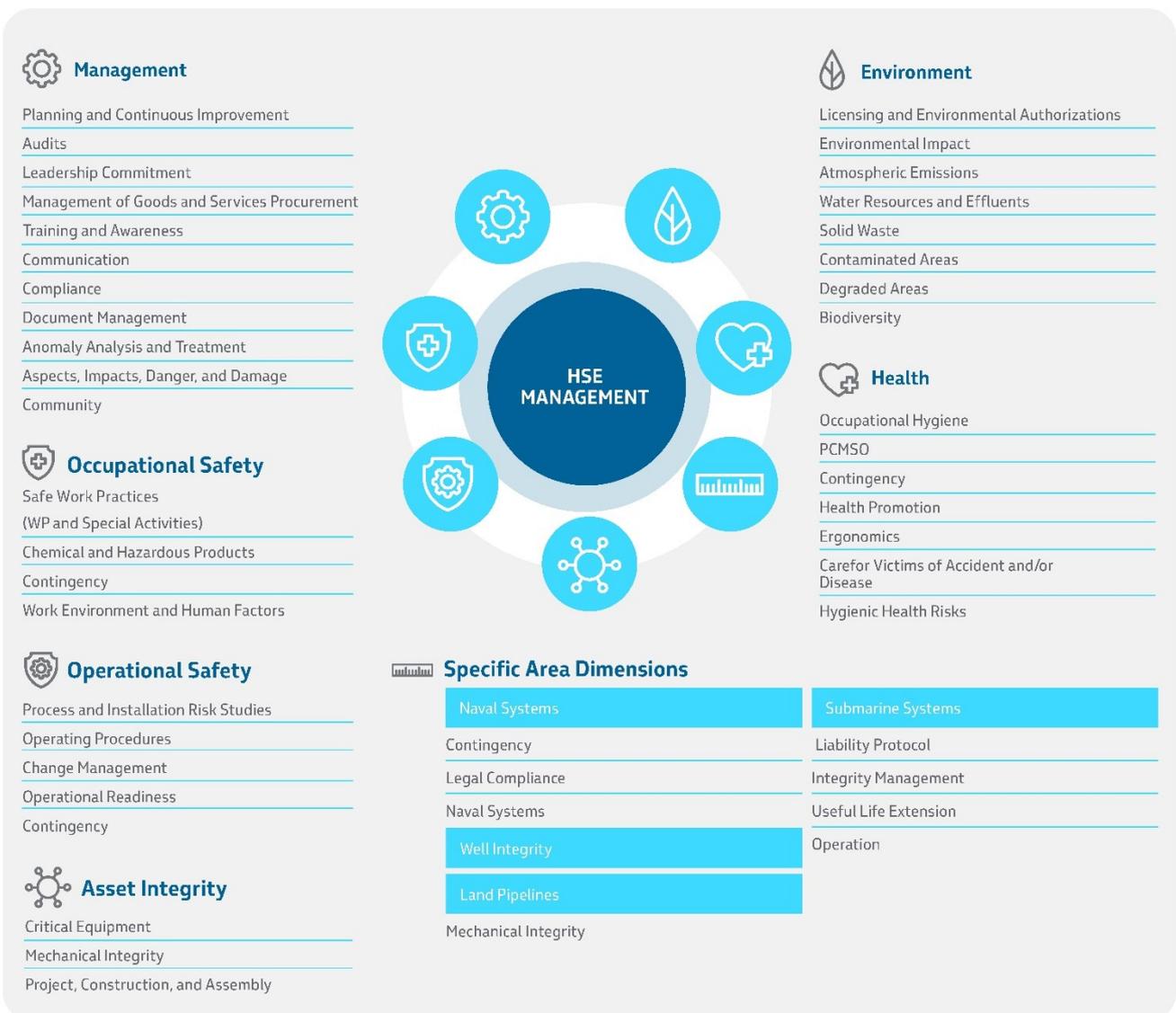
In this sense, we highlight the percentage increase in the share of Diesel S-10. The sale of this product, which in 2020 was equivalent to 48.3% of total diesel sales, now represents 55.6% of sales for the product in the 2021 average. It is noteworthy that, in December 2021, the share of Diesel S-10 was 59.0% of the sales of this product. Another important contribution is the percentage increase in our share with Diesel S-10 in the automotive market, whose estimate grew from 42.7% in 2020 to 50.7% in 2021.

## HSE Performance

Continuous improvement in HSE performance is promoted at all levels of our organization, to ensure progress in these areas. To this end, we carry out systemic assessments through the Internal Audit Process for Safety, Environment and Health Management (HSE-MAP). This process is based on verifying compliance with the requirements established in our HSE Management System and applicable legislation.

The HSE-MAP seeks to identify potential operational and HSE management weaknesses, in order to reduce risks of accidents and incidents and their impacts on industrial processes, people and the environment, promoting learning and continuous improvement of HSE performance. Learning from the evaluation of each Unit is disseminated to the other Units that are related to the evaluation item observed.

**LIST OF THE HSE-MAP DIMENSIONS, TOPICS AND SUBTOPICS**



Anomalies identified during the evaluations are classified as critical, severe, moderate, and mild, and are dealt with through action plans, which are prepared by the operation units in conjunction with the corporate HSE area. In these plans, those responsible, the resources and the deadlines for the implementation of prevention and correction actions are defined, taking into account the degree of criticality of the anomalies.

The results of the HSE-MAP are followed up in critical analysis meetings with senior management.

In 2021, 117 HSE-MAP audits were carried out, the vast majority (104) in the Exploration and Production (E&P) and Refining and Natural Gas (RGN) areas. In addition, although we did not purchase an environmental policy, we have coverage against sudden and accidental pollution in our General Civil Liability (RCG) and Protection and Indemnity (P&I) policies.

**Management of socioeconomic compliance**

We also manage socio-economic compliance through the licensing and risk management process of investment projects, as detailed in the Socio-Economic Impacts chapter,

considering government regulations for the oil and gas industry regarding HSE issues, including risks and opportunities both locally and internationally.

Even with the adoption of several control initiatives regarding the environmental and socioeconomic compliance of our operations and projects, in 2021 we suffered administrative sanctions related to these topics, as reported in the table below:

**ADMINISTRATIVE SANCTIONS RELATED TO ENVIRONMENTAL AND SOCIOECONOMIC COMPLIANCE IN 2021** (in millions of BRL)<sup>1</sup>

	Regulatory Agency	Amount
Fines related to Environmental licensing	IBAMA	6.0
Fines related to oily appearance	IBAMA	1.0
Fines related to miscellaneous discharges (except TOG)	IBAMA	3.5
Fine related to Fluids and Gravels	Various environmental agencies	15.0
<b>Total number of fines</b>	<b>6</b>	

We are not aware of administrative labor fines with an amount greater than BRL 1 million in 2021.

<sup>1</sup> Fines received by the company with an amount greater than or equal to BRL 1 million.

**CONDUCT ADJUSTMENT AGREEMENT OR COMMITMENT**

<b>Conduct Adjustment Agreement (TAC) or Commitment</b>	<b>Description</b>
<p><b>TAC - Underwater Warehouses</b></p>	<p>In March 2021, we entered into a TAC with the Federal Public Prosecution Office in Rio de Janeiro with the objective of establishing the actions necessary for the complete demobilization/removal of equipment and the environmental recovery of the areas called Underwater Warehouses, as well as the respective compensatory measure due to the period in which the areas were used without an environmental license. To this end, we took on the obligation to fully collect the structures stored in the Underwater Warehouse areas, carry out a survey of the existing underwater structures, carry out an environmental diagnosis and do environmental monitoring, presenting a report about the international practices used for the recovery of calcareous algae impacted by exploration and production of oil and natural gas, and critical evaluation of its viability in Brazil.</p> <p>A compensatory measure in the amount of approximately BRL 20 million was also established, deposited in favor of the Fundo Abrolhos Terra e Mar, Bahia and Espírito Santo project, managed by FUNBIO, which signed the TAC as an intervening party. We have already fully complied with this obligation. The TAC is valid until December 31, 2029, the expected date for the conclusion of the actions related to the collection.</p> <p>As a result of the execution of the TAC, the 4th Chamber of Coordination and Review of the Federal Public Prosecution Office approved the request for the filing of a public civil investigation and the opening of an Administrative Follow-up Procedure.</p>
<p><b>TAC - Coral-sol</b></p>	<p>We have also entered into a TAC within the scope of Public Civil Action (ACP) with the objective of compensating any and all alleged damages that may be caused to the environment, of any nature, arising from the facts in view of which the ACP was proposed by the committing party and any and all cause of action related to the ACP, which dealt with the establishment of the so-called Coral-sol in Ilha Grande Bay/RJ (BIG).</p> <p>The Federal Public Prosecution Office (MPF) was involved, as well as the Chico Mendes Institute for Biodiversity Conservation (ICMBIO) and the Rio de Janeiro State Institute for the Environment (INEA). The committed parties include, in addition to us, the companies Transpetro, Vale, Brasfels and TPAR (formerly Technip). With regard to IBAMA, which licenses our activities in the region, the MPF postulated the dismissal of the requests made against the environmental agency.</p> <p>The TAC and the request for dismissal of the requests against IBAMA were approved by a final and unappealable decision on July 22, 2021.</p> <p>The TAC has a total value of approximately BRL18 million, to be paid by the companies for the cost of compensatory measures for the implementation of two technical projects: a) Project for the Assessment and Monitoring of the Dynamics and Management of Coral-sol at the Tamoios Ecological Station ; and b) Supplementary Project for the Assessment and Monitoring of the Dynamics of Coral-Sol at BIG, in line with the objectives and actions of the "Coral-Sol Plan", which aim to generate information, tools and procedures in order to increase knowledge about interaction at Coral -sol and the benthic communities at BIG, among other activities.</p> <p>The responsibility for the execution of the projects included in the agreement will belong to the Brazilian Fund for Biodiversity - FUNBIO, indicated and chosen expressly by the MPF and accepted by the committing parties.</p>
<p><b>Fishermen and Mobile Workers TAC</b></p>	<p>On July 23, 2019, a preventive Conduct Adjustment Agreement (TAC) was signed with the Public Defendants Office of Rio de Janeiro due to the oil spill on March 25, 2019, on P-53, with a touch of the coast, on beaches in the municipalities of Arraial do Cabo, Búzios, and Cabo Frio. Thus, a TAC was signed that provides for the payment of a total reparations of approximately BRL 9.2 Million to approximately 2 thousand fishermen, shellfishers, and shellfish gatherers. Additionally, due to the same event in January 2020, another TAC was signed with the Public Defender's Office - the "TAC dos ambulantes", this time seeking compensation payment in the order of BRL 800.00 to about 250 street vendors impacted by the occurrence.</p>

<p><b>Commitment agreement - TOG</b></p>	<p>On December 27, 2021, the fourth amendment to Commitment Agreement No. 1777032 (commonly titled "TC do TOG"), signed between Petrobras and IBAMA in February 2018, was signed. The aforementioned agreement sought to establish the actions and measures necessary during the transition period to adapt 28 offshore platforms, in relation to the disposal of production water, by carrying out gravimetric analyses to monitor the oil and grease content (TOG) from Standard Methods (SM) 5520-B.</p> <p>Since 2018, we have strictly complied with the agreed actions, which are monitored in detail by IBAMA, and most of the platforms initially included in the agreement have already been fully discharged by the environmental agency.</p> <p>Due to various reasons - including the Covid-19 pandemic - it was necessary to negotiate and sign some amendments to the TC. Its fourth amendment, signed on December 27, 2021, includes actions for some platforms - P-40, P-50, P-51 P-54, P-55, P-56 and P-62 - and seeks to enable the period necessary to carry out studies and establish action plans necessary for the implementation of the produced water reinjection solution, a topic that represents a great challenge not only for our company, but for oil operators around the world. The term established by the 4th Amendment ends on October 30, 2024.</p> <p>In general, the commitments assumed within the scope of the "TOG TC" are complex and require the reorganization of several of our internal procedures, both in operational terms and in environmental and budgetary management.</p>
<p><b>Court Agreement - OSPAR</b></p>	<p>On October 8, 2021, a court agreement was signed within the scope of the Federal Regional Court of the 4th Region with the Federal Public Prosecution Office, Public Prosecution Office of the State of Paraná, State of Paraná, Instituto Água e Terra, Brazilian Institute for the Environment and Renewable Natural Resources, and the Municipality of Araucária to conclude the discussions regarding the merits related to the three public civil actions that investigated environmental damage resulting from the leakage of the Santa Catarina - Paraná Oil Pipeline (OSPAR), which occurred on July 16, 2000, in the municipality of Araucária, state of Paraná, providing for the payment of the approximate total amount of BRL 1.4 billion, the conclusion of the remaining remediation measures and their disclosure.</p>
<p><b>Agreement with ANP - Shale Oil</b></p>	<p>In line with our risk management policy, associated with the management of contingencies and the strategy of generating value through the negotiation of disputed amounts, in 2019, we started negotiations with the ANP with a view to entering into an agreement to close all the judicial and administrative proceedings related to the collection of royalties and administrative fines arising from the shale oil mining carried out by SIX. The Agreement was unanimously approved by the ANP Board of Directors at meeting No. 1079, on October 2, 2022, and is pending approval by the competent bodies in the Granting Authority.</p> <p>The negotiation aims both at the conclusion of administrative and judicial disputes and the execution of a concession agreement, through which the granting of shale exploration and mining rights that were granted to us will be established.</p> <p>The negotiations are moving towards the commitment of the ANP to adopt a 5% royalty rate as soon as the concession contract goes into effect (for 27 years, renewable for an equal period) and to no longer claim from Petrobras anything related to the royalties collected by the company regarding SIX's activities in the period prior to the signing of the Agreement, as well as any fines and/or penalties and/or late payment additions.</p> <p>On the other hand, Petrobras would commit to pay the approximate amount of BRL 576 million, updated as of December/2021.</p> <p>The negotiation was the subject of Public Consultation and Hearing 20/2021 promoted by the ANP on November 9, 2021.</p>

Within the scope of Transpetro, except for the TAC – Coral-sol, which is jointly signed with Petrobras and the other companies, no TAC was entered into in 2021.

In relation to non-judicial disputes, we have not had any lawsuits filed through arbitration mechanisms in the socioeconomic realm, due to environmental impact of our production process. We are not aware of any non-monetary sanction received in 2021.

We participated in the Parliamentary Commission of Inquiry, which aimed to investigate the loss of government participation in the Legislative Assembly of the State of Rio de Janeiro. We collaborated with the work of parliamentarians to verify the fairness and compliance of the procedures we adopted, and whose final report was completed and approved in November 2021, bringing recommendations to the Secretary of Finance

(Sefaz), the National Agency of Petroleum, Natural Gas and Biofuels (ANP) and other government bodies regarding the implementation of the inspection process.

## Provisions made for judicial, administrative and arbitration proceedings

We set up provisions in judicial, administrative and arbitration proceedings, in an amount sufficient to cover losses considered probable and for which a reliable estimate can be made. The main actions refer to:

- Environmental processes, in particular: (i) fines related to the environmental accident that occurred in 2000 in the State of Paraná; and (ii) fines related to our offshore operation and (iii) public civil action for an oil spill in 2004 in Serra do Mar/SP State Park. Probable loss amount BRL 0.982 billion
- Labor lawsuits, highlighting: (i) individual actions to review the methodology for calculating the Minimum Remuneration by Level and Regime (RMNR); and (ii) outsourced actions. Probable loss amount BRL 3.995 billion
- Tax cases, including (i) non-approval of federal tax offsets; and (ii) non-payment of pension contributions on allowances and bonuses. Probable loss amount BRL 1.705 billion
- Civil lawsuits, highlighting: (i) claims involving contracts; (ii) collection of royalties and government shares, including royalties on shale extraction; and (iii) fines imposed by the ANP related to measurement systems. Probable loss amount BRL 4.581 billion

# Environmental



# ENVIRONMENTAL

Climate Resilience and the Transition to a Low Carbon Economy



MATERIAL TOPICS



Accident and Leak Prevention



7.2 and 7.a



11.4



13.2



14.1 and 14.2



15.5

	SITUATION 2015	SITUATION 2021	COMMITMENT 2025	COMMITMENT 2030
<b>TOTAL ABSOLUTE OPERATIONAL EMISSIONS</b>	78.2 millions of tCO <sub>2</sub> e	61.8 millions of tCO <sub>2</sub> e		58.7 millions of tCO <sub>2</sub> e
<b>ROUTINE FLARING</b>	Continuous improvement of use of the gas produced, reaching 97.2% in 2021			ZERO routine flaring <sup>1</sup>
<b>GHG INTENSITY IN E&amp;P</b>	22 kgCO <sub>2</sub> e/boe	15.7 kgCO <sub>2</sub> e/boe	15 kgCO <sub>2</sub> e/boe	15 kgCO <sub>2</sub> e/boe
<b>GHG INTENSITY IN REFINING</b>	43 kgCO <sub>2</sub> e/CWT	39.7 kgCO <sub>2</sub> e/CWT	36 kgCO <sub>2</sub> e/CWT	30 kgCO <sub>2</sub> e/CWT
<b>METHANE INTENSITY IN E&amp;P</b>	0.65 tCH <sub>4</sub> /mil tHC	0.33 tCH <sub>4</sub> /mil tHC	0.39 tCH <sub>4</sub> /mil tHC	
<b>REINJECTION IN CCUS PROJECTS<sup>2</sup></b>	2.9 MM tCO <sub>2</sub>	30.1 MM tCO <sub>2</sub>	~40 MM tCO <sub>2</sub>	

## Accidents and Leaks

11,6 m<sup>3</sup> leaked in 2021<sup>3</sup>

95% less than recorded in 2020

7 accidents Tier 1

30% less than recorded in 2020

## Other Relevant Social Topics

	SITUATION 2018	SITUATION 2021	COMMITMENT 2025	COMMITMENT 2030
<b>TOTAL WATER WITHDRAWAL</b>	182 thousand megaliters	151 thousand megalitres		91 thousand megalitres
<b>GENERATION OF HAZARDOUS WASTE</b>	120 thousand tons	109 thousand tons	120 thousand tons	120 thousand tons
<b>BIODIVERSITY ACTION PLANS</b>	0%	30%	100%	



**BRL 220.8 million** distributed in more than **80 programs** and environmental monitoring projects, dedicated to fauna (cetaceans, birds, other types of marine biota) and beaches, in the environmental licensing processes.

1) In accordance with the World Bank's zero routine flaring initiative.

2) CO<sub>2</sub> reinjection values in CCUS projects accumulated since 2008.

3) Sum of the volumes of oil (or oil products) spills that were individually greater than 1 barrel, that reached bodies of water or non-impermeable soil.

The volumetric criterion (> 1 barrel) is used in the corporate indicator Leaked Oil and Derivatives Volume and is in line with the Manual of the National Agency of Petroleum, Natural Gas and Biofuels (ANP) for reporting incidents related to E&P activities. Leaks originating from clandestine oil derivations were not accounted for.

[103-1] [103-2] [103-3] [201-2] [302] [302-1] [302-2] [305] [305-1] [305-2] [305-3] [305-4] [305-5] [305-7] [OG2] [OG3] [OG6]

# Climate Resilience and the Transition to a Low Carbon Economy

We recently published the **Petrobras Climate Change Supplement**. The material below is an extract from this booklet and was organized according to indicators from the Global Reporting Initiative (GRI).

The last few years have been marked by the firm consolidation of science in the assessment of current and future climate impacts. The increase in global temperature leads to greater frequency and intensity of extreme events, such as heat waves, storms, and droughts. Society seeks effective actions to face the ambition of zeroing net greenhouse gas (GHG) emissions by the middle of the century, in order to avoid serious, widespread and irreversible impacts resulting from global warming.

We are aware of the intrinsic relationship between energy and greenhouse gas emissions. The activities of production and use of energy are historically responsible for  $\frac{3}{4}$  of the emissions that have already raised the average temperature of the planet by 1.1° C in relation to pre-industrial levels.

In this context, over the past few years, with the establishment of the Paris Accords, there have been intensified vectors of the energy transition, with the growth of social support for the emissions mitigation agenda; the advancement of mitigation commitments (NDC, IMO, ICAO) and regulatory instruments, with more than 20% of emissions covered by carbon pricing schemes; and the sharp reduction in decarbonization costs due to the advancement of technology.

On the other hand, energy is an integral part of economic and social development. Population growth is expected to reach the mark of 9.8 billion inhabitants by 2050, and the world needs to face the challenge of drastically reducing emissions from energy delivered while ensuring the necessary access for social and human development and at an acceptable cost. This growth in primary demand, the existing energy infrastructure, and economic and non-economic barriers are challenges for accelerating the transition to low carbon, with all scenarios assuming that there will be persistent, albeit decreasing, global demand for oil in the coming decades.

Considering the persistence of oil in the world matrix and the impacts along its entire value chain, from extraction and production to the use of the final product, we reaffirm our commitment to contribute to the Paris Agreement, while contributing to meeting the growing demand for energy and energy security. Our focus is on operational excellence and energy innovation.

## Risks and Opportunities of the Transition to Low Carbon

Climate change represents new challenges and opportunities for our business. New regulations, such as carbon pricing, or more restrictive ones, such as greater mitigation requirements by environmental agencies, may increase our operating costs and reduce production (regulatory risks). Growing societal concerns about the impacts of climate change may increase the risks of litigation and have a material adverse effect on our business. The growing number of climate litigation around the world has generated

greater pressure for disclosure of emissions performance and transparency in relation to goals and actions involving climate issues (legal and reputational risks). Evidence shows that transparency and good performance in ESG (Environmental, Social and Governance) contribute to financial performance, facilitating access to capital.

The energy transition towards a more renewable profile in the global energy matrix, the insertion of substitutes for fossil fuels, and the increase in the use of electricity for urban mobility can have negative impacts on the demand and price of our products and services (market risks) and may encumber or even make the implementation and operation of our projects unfeasible, adversely impacting our results and financial condition, and limiting some of our growth opportunities.

Additionally, we monitor the evolution of low-carbon technologies that bring competitiveness to projects and products (technological risk).

Physical risks arising from weather events may cause changes in patterns in the operating conditions of our assets, such as water availability and meteorological-oceanographic conditions.

The set of risks related to climate change and energy transition are assigned a very high degree of severity, which are then evaluated in an integrated analysis of the business.

Our investment strategy incorporates the assessment of transition risks. The assessment of the intensity of GHG emissions and the impacts on Net Present Value (NPV) of a possible carbon pricing are part of the sensitivity analyzes of the process of evaluating new investments. Opportunities related to the adoption of low carbon technologies are quantified in these sensitivity analyses. In addition to the deterministic NPV analysis in the various strategic scenarios and the carbon pricing sensitivity analysis, risk analyzes are carried out considering other uncertainties that may impact the profitability of investment projects: oil prices, gas prices, oil product prices, exchange rates, investment cost, operating costs, implementation schedule, production curve and demand for products.

Our investment strategy also includes the assessment of physical risks related to climate change that could affect the integrity and value of our assets.

Climate change also brings new business opportunities. Profitable new businesses arising from incentives for low carbon products and services leveraged by public policies can lead to revenue diversification and reduction of carbon exposure. Our research portfolio explores opportunities in the oil and gas chain and also in renewables, seeking arrangements for us to be competitive, also considering the synergy with our assets and competencies. The development of low carbon solutions plays an important role in our technological direction, with a minimum allocation of 10% of our investment in Research and Development (R&D).

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>> **Information on risks and opportunities related to climate change and the energy transition can be found in our Climate Change Supplement.**

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>> **Information about our risk management can be found on Form 20-F and the Reference Form on our Investor Relations website.**

## Our focus and management

The topic of climate change is part of our **Health, Safety, and Environment (HSE)** and **Social Responsibility (SR)** Policies.

Our approach to climate change is based on three pillars:



In September 2021, we reported our goal to achieve greenhouse gas emissions neutrality (net zero) from the operations under our control (scope 1 and 2) and our intention to influence the same goal in non-operated assets, within a timeline compatible with the Paris Agreement. The decision is in line with the position of the member companies of the Oil and Gas Climate Initiative (OGCI), of which we are a member.

In our **Strategic Plan 2022-2026** (PE 2022-26), we reiterate our set of published sustainability commitments for 2025 and 2030, six of which are carbon-related<sup>1</sup>:

1. Reduction of total operational absolute emissions by 25% by 2030;
2. Zero routine flare burning by 2030<sup>2</sup>;
3. Rejection of approximately 40 MM tCO<sub>2</sub> by 2025 in carbon capture, use and storage (CCUS) projects;
4. 32% reduction in carbon intensity in the E&P segment by 2025 (15 kgCO<sub>2</sub>e/boe, maintained until 2030);
5. 40% reduction in the intensity of methane emissions in the E&P segment by 2025;
6. 16% reduction in carbon intensity from refining by 2025, increasing to 30% by 2030 (30 kgCO<sub>2</sub>e/CWT).

Our goal of reducing absolute operational emissions encompasses 100% of the assets operated in all of our businesses, including energy generation for all greenhouse gases, and is a material, relevant, and short-term contribution to tackling climate change.

Several initiatives seek to support our goals and ambitions, with commitment from all areas of the company. Strategic Plan 2022-26 allocated USD 2.8 billion of CAPEX to projects related to the decarbonization of operations (scopes 1 and 2), bioproducts (renewable diesel and aviation biokerosene) and R&D.

We have established carbon governance in which commitments, goals and initiatives are followed up at the various technical and managerial levels, including senior management. The integration of the theme across the different levels of the company is carried out by the Climate Change Executive Management, created in 2020.

Since 2020, metrics linked to carbon intensity in our E&P and Refining operations are top metrics, and thus influence the variable compensation of our entire workforce.

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>> **Information about our sustainability strategy can be found in the chapter** [Sustainability at Petrobras](#).

In addition to internal monitoring, we provided external disclosure regarding our carbon strategy, management, and performance, following the best transparency practices worldwide. In June 2020, we decided to publicly support the Task Force on Climate Related Financial Disclosure (TCFD), a benchmark for disclosing financial results related to carbon risk, and we have just published our new version of the Climate Change Journal structured in accordance with these guidelines. We follow the evaluations of our performance, carried out by various benchmarks and questionnaires such as:

- CDP Climate Change, in which we achieved a B grade (Management level) in 2021;
- Transition Pathway Initiative (TPI), where we obtained a score of 4 (Strategic Assessment) in the carbon management assessment;

<sup>1</sup> Base Year: 2015

<sup>2</sup> In accordance with the World Bank's zero routine flaring initiative.

- MSCI ESG Rating, where we were ranked in the first quartile of performance for “carbon emissions”;
- Dow Jones Sustainability Index World (DJSI World) from S&P Global’s Corporate Sustainability Assessment, with emphasis on the performance of Climate Change and Operational Eco-efficiency criteria.

Based on these results, we implemented constant improvements in the management of this topic.

>> [Information on our climate management and transition to low carbon can be found in our Climate Change Supplement.](#)

## Our decarbonization initiatives

Over the last few years, we have reached the position of specialist in low carbon oil production, with an emphasis on pre-salt fields. We have built a portfolio of GHG emissions mitigation projects and have already advanced in a series of decarbonization actions in our processes, which involve reducing the burning of natural gas in flare, CO<sub>2</sub> reinjection associated with advanced oil recovery (EOR-enhanced oil recovery), energy efficiency gains and loss control in operations.

In August, we received, for the fourth time, the Distinguished Achievement Award for Companies, by the Offshore Technology Conference (OTC), the main award of the world oil and gas industry. Granted annually by the OTC, the award recognized the set of innovations developed to enable the production of Búzios, the largest deepwater oil field in the world, in the pre-salt layer of the Santos Basin. To make the Búzios project a reality, we developed a series of technologies for a scenario that combines challenging conditions, such as ultra-deep waters and reservoirs located below the salt layer, more than 7 thousand meters deep, with high levels of pressure and low temperatures. Through new configurations of pipelines and subsea equipment and technologies for separation and reinjection of CO<sub>2</sub>, Búzios has become a world-class project, which combines safety, giant reserves of high-quality oil, low extraction cost and reduction of carbon.

In 2021, a mapping of GHG mitigation opportunities was carried out in all segments in which we operate, using the Marginal Abatement Cost Curve (MACC) methodology, generating an integrated MACC with almost 200 mitigation options, with different technological maturities, subdivided into five categories: Efficiency, Energy Supply, Loss Reduction, Processes and CO<sub>2</sub> Removal. The results of the analysis of the opportunities of the integrated MACC supported, in 2021, our long-term neutrality ambition communication.

Among the various initiatives underway to implement actions to reduce GHG emissions are:

- **Neutral Carbon Program:** aims to identify the best solutions for the decarbonization trajectory at the lowest cost, with a fund of USD 248 million. We focus on operational excellence, disruptive, supply chain decarbonization, product emission reduction and carbon removal projects. The prioritization of alternatives uses criteria such as marginal abatement cost, total amount of GHG abatement, technological maturity, project phase (window of opportunity), among others. We also consider the NPV assessment of the alternatives considering carbon pricing.

- **“All electric” concept:** electrification of the greatest possible number of equipment and applications in new oil and gas production platforms. All the energy is generated in a single point, in a more optimized way, distributing the electrical energy to the equipment. This configuration is more efficient than decentralized generation, allowing to use less fuel, reducing by up to 20% GHG emissions per barrel of oil produced.
- **HISEP® (High Pressure Separation) technology:** patented by Petrobras and in the testing phase, in which the CO<sub>2</sub>-rich gas that leaves the reservoir is separated and part of it is reinjected from a system located on the seabed, preventing this volume from being processed. This allows the unit to have a smaller and simpler gas processing plant, as part of the gas will be removed beforehand, making it possible to increase the unit's oil processing. The HISEP technology also has a positive impact on the unit's GHG emissions intensity, by reducing emissions from gas processing and enabling increased production.
- **RefTOP Program:** a set of initiatives to increase the efficiency and operational performance of refineries, with an investment of approximately USD 300 million by 2025. RefTOP foresees initiatives to increase the energy performance of refineries, though, for example, the reduction of losses, recovery of energy currents and optimization of the thermoelectric system, resulting in better use of inputs such as natural gas, electricity, and steam in the operations. The program also makes intensive use of digital technologies, such as the use of Digital Twins - digital representations of operational facilities - for optimization through real-time monitoring, as well as automation and robotization of our refineries.
- **Biorefino 2030 Program:** includes projects to produce a new generation of more modern and sustainable fuels, such as renewable diesel and aviation biokerosene (BioQAv). Renewable diesel is a biofuel chemically similar to mineral diesel (derived from petroleum) but produced from renewable raw materials. It can be used pure or mixed with mineral diesel. The technology for co-processing vegetable oils using the process called HBIO was patented by Petrobras in 2006. We have already completed the adaptations at the Presidente Getúlio Vargas Refinery (REPAR) to co-process refined soybean oil and diesel in our HDT (Hydrotreatment) unit, enabling the production of diesel with 5% renewable content. With the necessary regulatory evolution for the recognition of renewable diesel in the mandates of mandatory addition to fossil diesel, we are planning to carry out co-processing also at the Planalto de Paulínia Refinery (REPLAN) and at the Presidente Bernardes Refinery (RPBC) to produce diesel with 5% to 7% of renewable content. Other technologies to produce renewable diesel and BioQAv have also been developed with a view to the implementation of dedicated biofuel units. This will contribute to the decarbonization of the road and air transport segments, while diversifying our portfolio with more sustainable products.
- **Hiring of Eco Type vessels:** ships with low sulfur fuel and with lower consumption. In 2020, we hired two Eco Type vessels and from January to August 2021, they have already shown an average fuel consumption reduction of 24% (ton per mile), when compared to conventional vessels of the same class. Also in 2020, we received another four new Suezmax DP-2 Eco Type vessels, built for deep and ultra-deep water relief operations off the Brazilian coast. In just over a year of contract, the expected performance has already been proven, with the average fuel consumption 20% lower than that of other vessels of the same size in the fleet, which represented a reduction of approximately 31 thousand

tCO<sub>2e</sub> of atmospheric emissions in 2021 alone. In 2022, we will receive three more ships of this same class.

Additionally, we developed an agenda of initiatives associated with the reduction of carbon emissions with our suppliers, partners, and other members of our supply chain. These initiatives are in line with our Strategic Plan 2022-26 and are directly reflected in ongoing actions in the process of supplying goods and services, such as:

- New technology solutions for decarbonization;
- Prior engagement and communication actions with the supplier market, with emphasis on sustainability dimensions; and
- Alignment of incentives associated with the implementation of operational actions to reduce carbon emissions.

In this way, our policy for contracting goods and services is being gradually improved, with a view to considering sustainability requirements. In this context, there are already contractual mechanisms implemented that encourage the reduction of emissions, for example, in the operation of vessels and drilling rigs.

In order to support our actions for the transition to a low carbon economy, we issued guidelines to encourage the supply chain, such as the review of the Ethical Conduct Guide for Suppliers, the launch of the Quality Guide for Suppliers, in addition to recently joining the CDP Supply Chain 2022, which seeks to map and monitor emissions from our critical suppliers.

## Emission performance

One of the main tools of our emissions management is the Atmospheric Emissions Management System (SIGEA<sup>®</sup>), a computerized system that, since 2002, consolidates our emissions inventory through the monthly processing of information from about 10 thousand emission sources. This system includes greenhouse gases: 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 atmospheric pollutants.

The inventory of atmospheric emissions is prepared according to the guidelines of the GHG Protocol, developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). The inventory approach follows the source-by-source methodology, that is, the total inventory is the result of the sum of emissions from each emission source. Emission calculations are based on international references, such as the API Compendium, AP-42 (US EPA) and the GHG Protocol.

Our inventory is verified annually by a third party and published voluntarily in the Public Emissions Registry of the Brazilian GHG Protocol Program, of which we are one of the founders.

Each operational area has responsibility for its own emissions management. Based on its inventory, it assesses its own performance, identifies opportunities to reduce emissions at its units, and implements improvement solutions. The Climate Change Executive Management Office monitors our global inventory and coordinates our corporate and strategic actions.

In terms of absolute operational GHG emissions, between 2015 and 2021, we dropped 21%. In 2021, emissions totaled 62 million tCO<sub>2e</sub>, higher than the result of the previous three years. This increase is a direct consequence of the atypical thermoelectric dispatch in a year of water crisis, even in a scenario of reduction in our carbon intensities in E&P and Refining.

**ABSOLUTE GHG EMISSIONS (millions of tCO<sub>2e</sub>)<sup>3</sup>**


Our goal of reducing absolute operational emissions by 25% by 2030, compared to 2015, is related to the progressive reduction of our operational emissions, already considering the increase in production expected for the period, and is supported by a set of actions systems to be implemented in the coming years.

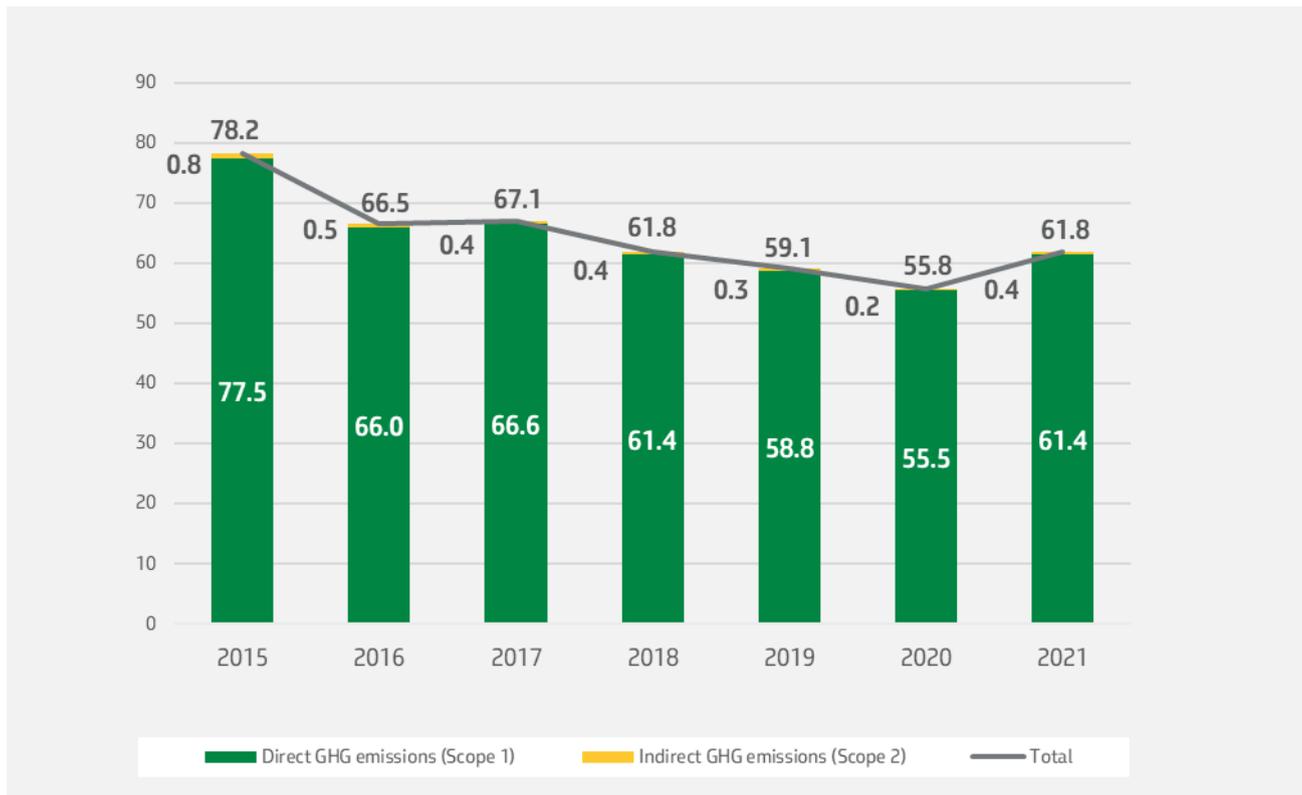
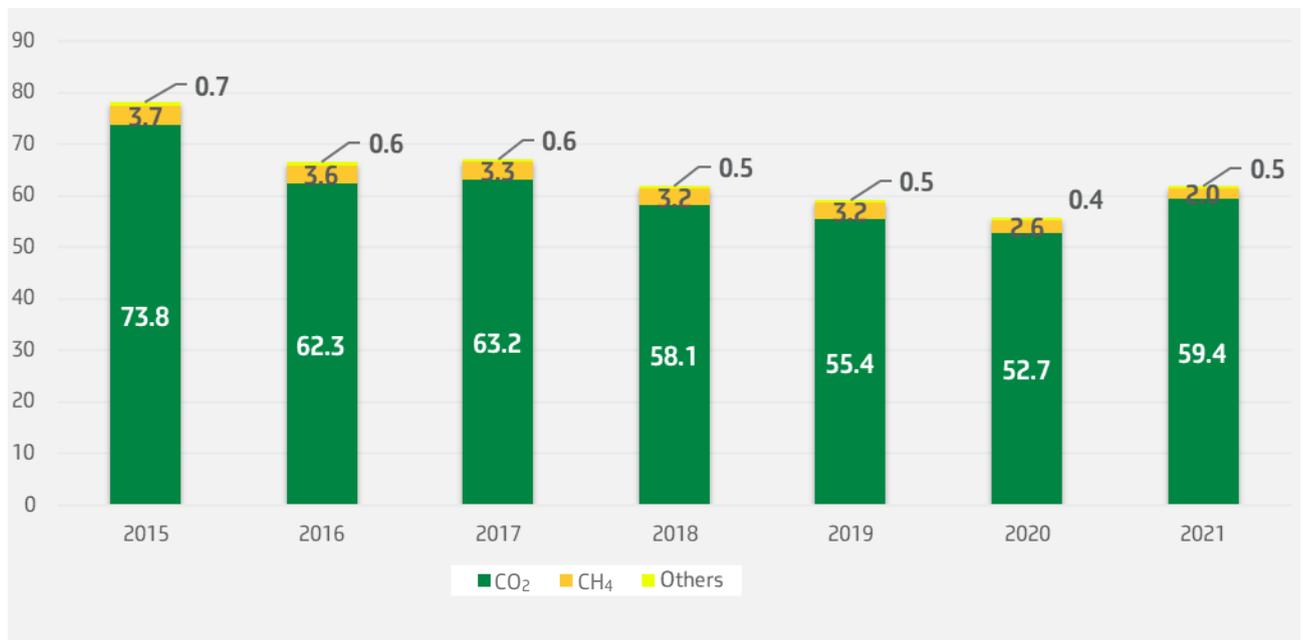
<sup>3</sup>a) Emissions over the period refer to exploration and production, refining, fertilizers, petrochemicals, electricity generation, land (pipeline and road) and maritime transport operations, as well as distribution activities in Brazil, Argentina, Bolivia, Colombia, United States, Mexico, Paraguay, and Peru. The range of activity types and countries of operation may vary over the years according to our portfolio management.

b) We include direct (Scope 1) and indirect greenhouse gas emissions from the acquisition of electric and/or thermal energy produced by third parties (Scope 2).

c) CO<sub>2</sub> emissions were calculated based on the Global Warming Potential (GWP) values of the Fourth Assessment Report of the IPCC - Intergovernmental Panel on Climate Change (AR4). In reports prior to 2016, these emissions were calculated considering the GWP (Global Warming Potential) values of the IPCC's Second Assessment Report (SAR); therefore, there are changes in data from previous years.

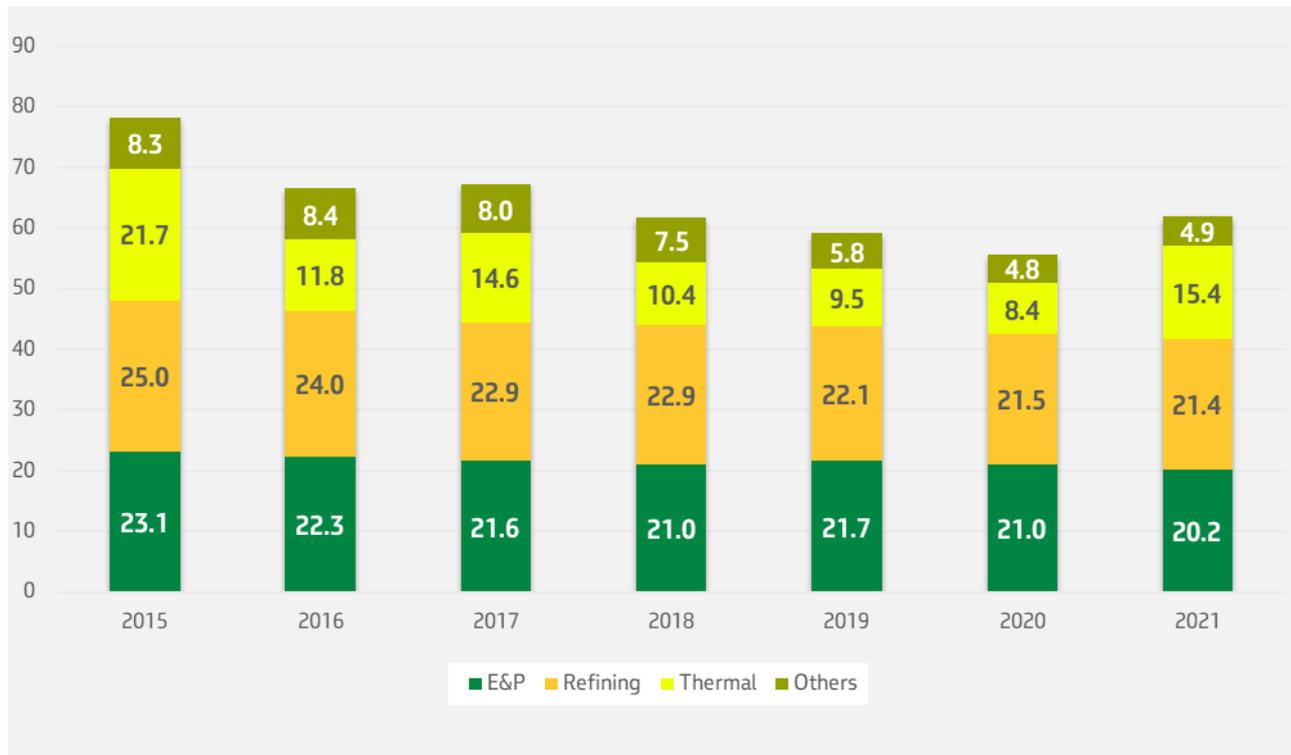
d) Other possible changes in historical numerical information, referring to previous publications of the Sustainability Report, are due to improvements in the atmospheric emissions management system or to the recommendations resulting from the third-party verification process.

e) Our emissions are verified annually by a third party, with a forecast that data verification from 2021 will be completed by July 2022 and may undergo adjustments until then.

**HISTORY OF DIRECT GHG EMISSIONS** (millions of tCO<sub>2e</sub>)<sup>4</sup>

**HISTORY OF GHG EMISSIONS BY TYPE OF GAS** (millions of tCO<sub>2e</sub>)<sup>5</sup>


<sup>4</sup> Biogenic CO<sub>2</sub> emissions are not representative in our inventory.

<sup>5</sup> "Others" includes HFCs and SF<sub>6</sub> gases. No emissions of PFCs and NF<sub>3</sub> were identified in our activities.

**HISTORY OF GHG EMISSIONS BY BUSINESS SEGMENT** (millions of tCO<sub>2e</sub>)<sup>6</sup>


## Intensity of Greenhouse Gas (GHG) Emissions in E&P

Currently, we have an outstanding performance in terms of GHG emissions intensity in the offshore oil and gas industry, being a low-emission and high-efficiency player, especially in the pre-salt fields.

Our commitment is to continue to improve the carbon efficiency of our E&P activities, with the goal of reaching 15 kgCO<sub>2e</sub>/boe in 2025, maintained until 2030.

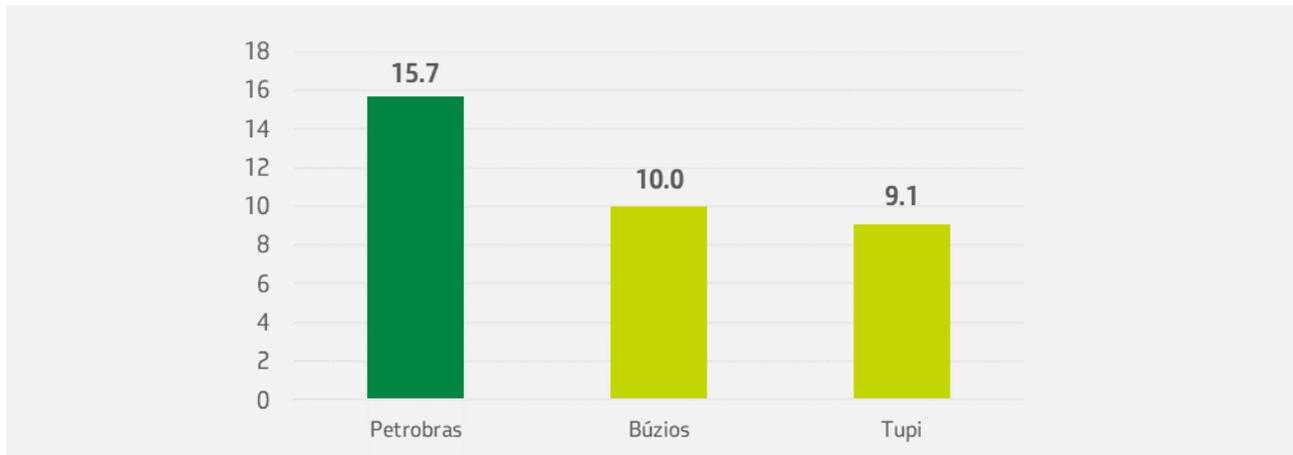
**GHG EMISSION INTENSITY IN E&P** (kgCO<sub>2e</sub>/boe)


<sup>6</sup> "Others" include gas treatment units, LNG terminals, maritime transport, gas transport activities (Transpetro and TBG), administrative activities of Petrobras, in addition to operational activities not previously described: Petrobras Biofuels; Fertilizers (until 2020); Liquegás (until 2019); and Petrobras Distribuidora (until 2018).

Since 2009, we have already achieved a 48% reduction in the intensity of GHG emissions in E&P activities linked to improvements in energy efficiency, reduction of losses and greater use of gas with reduced flaring.

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 accounted for around 53% of our total production in 2021.

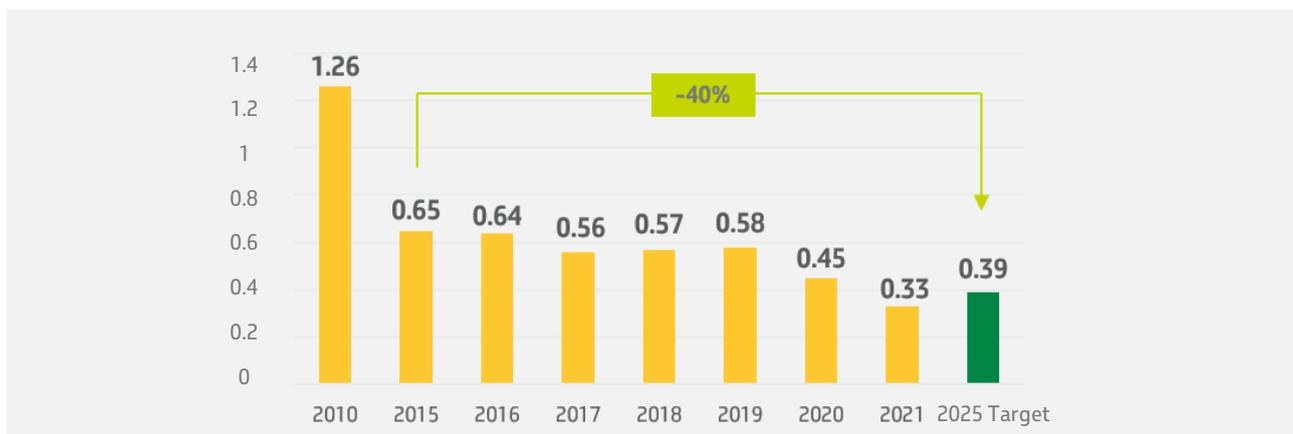
#### GHG EMISSION INTENSITY IN E&P - 2021 (kgCO<sub>2e</sub>/boe)



## Methane intensity in E&P

Our segment carbon intensity targets incorporate different GHGs, including methane. However, given the characteristics of methane, whose heating potential is very high in the short term, we monitor this gas with a specific metric and are committed to reducing the intensity of methane emissions by 40% in relation to the total production of hydrocarbons operated (tCH<sub>4</sub> /mil tHC) in the E&P segment (compared to 2015).

#### INTENSITY OF METHANE EMISSIONS IN E&P - 2021 (tCH<sub>4</sub>/mil tHC)



In 2021, the intensity of methane emissions in E&P showed a reduction of 27% compared to 2020. This result is mainly due to the inventory optimization with the adjustment of the flaring emission protocol (combustion efficiency) and the increase in the Associated Gas Utilization Index.

We highlight that our already high rate of average use of produced gas reached 97.2% in 2021. In addition, in 2018, we announced our support for the World Bank's Zero Routine Flaring by 2030 initiative, with meeting its criteria considered one of our Sustainability Commitments. In 2021, we started operating the flare gas recovery system (FGRU, for Flare Gas Recovery Unit) on platforms P-66, P-70, and P-77, located in the Tupi, Atapu and Búzios fields. This system allows the gas to return for processing in the unit, avoiding its burning and the resulting emission of GHGs. Another eight platforms should start operating the system in 2022 and all new own projects also already have the FGRU.

### Commissioning and operation of closed flare system



Photo: André Motta

C

**CONTEXT**

The purpose of unit flares are to burn unused platform gas, in order to discard it safely. This flaring produces greenhouse gas emissions.

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C

**CHALLENGE**

Need to reduce greenhouse gas emissions by burning flare gas on platforms.

S

**SOLUTION**

Start-up of the flare gas recovery system (FGRU - Flare Gas Recovery Unit), allowing this gas to return for processing in the unit, avoiding its burning and the consequent emission of greenhouse gases.

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R

**RESOURCES**

In addition to the cost of equipment, it involved personnel from the Production Development and Exploration and Production departments, with more than 400 hours of dedication by offshore personnel alone for the commissioning and start-up of each platform.

R

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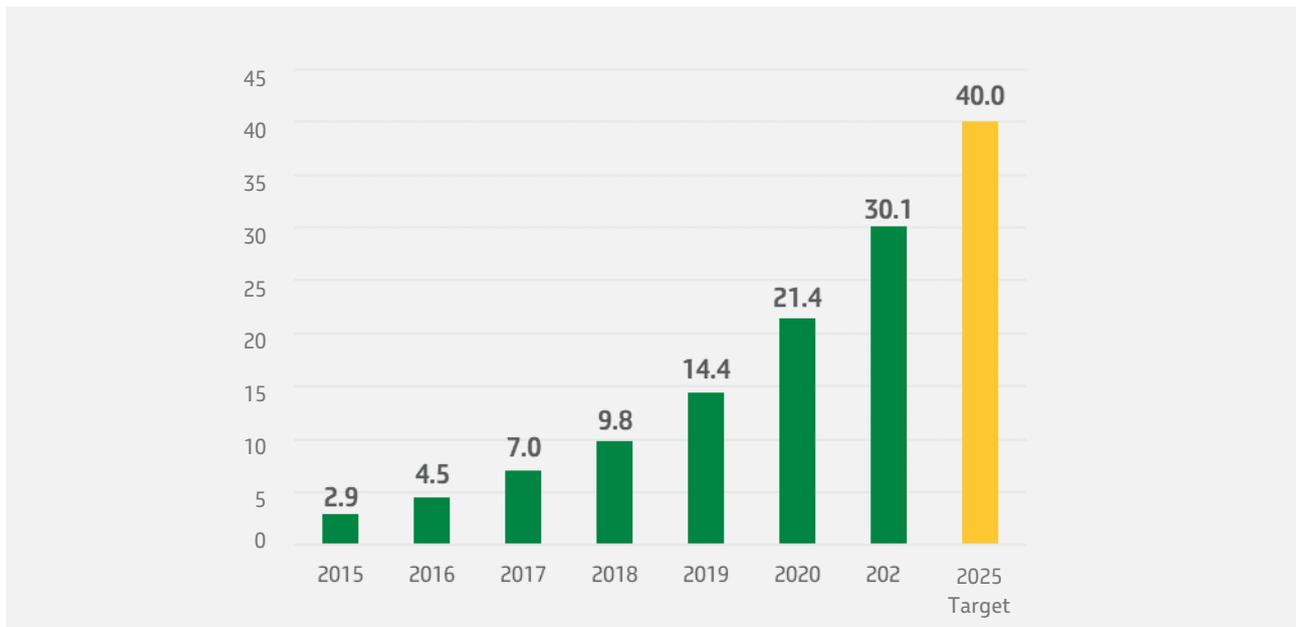
R

**RESULTS**

Platforms P-66, P-70 and P-77, located in the Tupi, Atapu and Búzios fields, started to operate with the minimum flaring, which occurs only in exceptional safety situations, reducing greenhouse gas emissions. The potential for emission reduction with the use of systems in these three platforms is about **80 thousand tons of CO<sub>2</sub>** equivalent per year. In 2022, Flare Gas Recovery Units should become operational for 8 more platforms.

## CCUS projects in E&P

In 2021, we reinjected around 8.7 million tons of CO<sub>2</sub> separated from the gas produced in our pre-salt fields, reaching an accumulated total of 30.1 million tons of CO<sub>2</sub> reinjected since 2008. We highlight that, according to the Global Status of CCUS report issued in 2021, Petrobras operated in 2020 the largest CCUS project in the world in terms of annual injection.

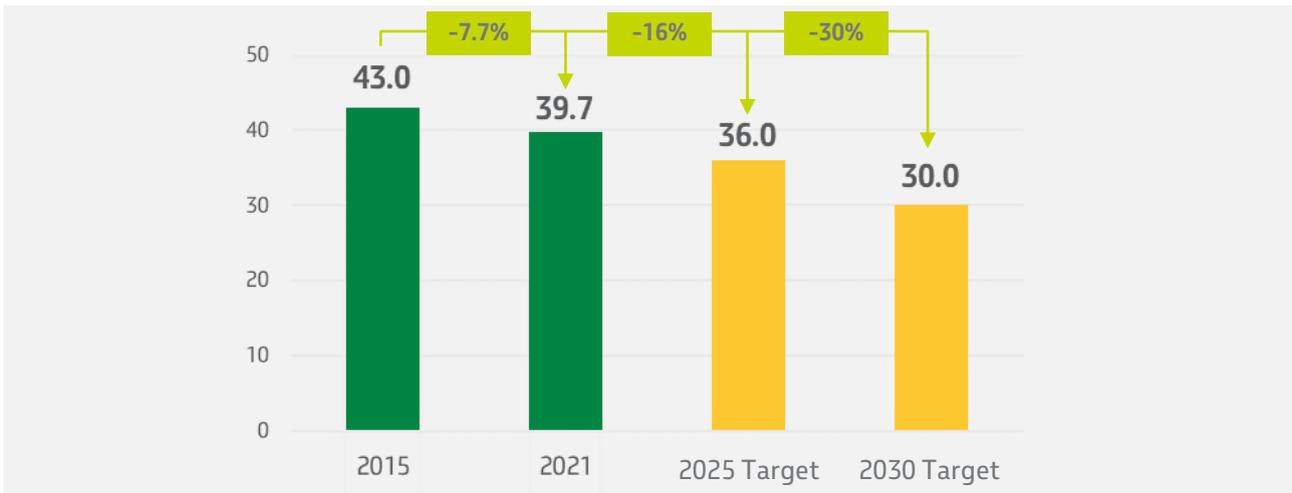
**ACCUMULATED HISTORY OF CO<sub>2</sub> REINJECTED IN CCUS PROJECTS** (millions of tCO<sub>2</sub>)


To reach the projected target for 2025, we are counting on the start-up of new FPSOs (Floating Storage and Offloading Units) that have CCUS-EOR technology and the confirmation of the reinjection volume in the main assets of the E&P: Tupi, Mero and Búzios.

We are also working on the development of new CO<sub>2</sub> capture technologies aimed at reducing the size and weight of processing units in FPSOs, in addition to reducing costs for operations. An example is HISEP. With this technology, patented by Petrobras and in the testing phase, the CO<sub>2</sub>-rich gas that leaves the reservoir is already separated from the oil and part of it is reinjected, from a system located on the seabed. As a result, field production is increased, and it is possible to achieve lower GHG emissions for each barrel of oil produced.

## Intensity of Emission of Green House Gases (GHG) during Refinement

In the Refining segment, the intensity of GHG emissions followed the downward trajectory of recent years, reaching a result of 39.7 kgCO<sub>2e</sub>/CWT in 2021, demonstrating the good performance in emissions of our Refining complex. It is noteworthy that in 2021, we recorded a reduction in energy consumption in Refining, even in a scenario of increased load at the units compared to 2020.

**INTENSITY OF GHG EMISSIONS IN REFINING (kgCO<sub>2</sub>e/CWT)<sup>7</sup>**


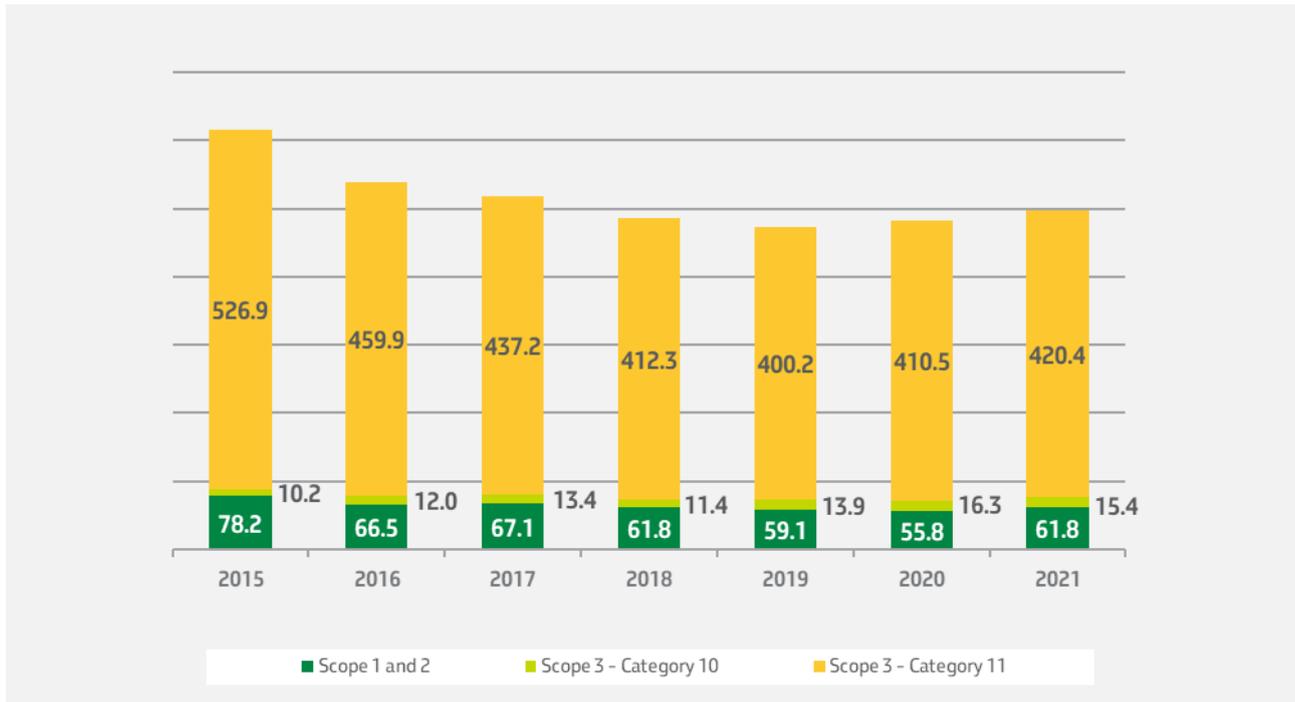
## Greenhouse Gas (GHG) Emissions from the Value Chain

In addition to managing emissions from our operations, we monitor emissions from our suppliers and products (Scope 3 emissions), with emissions related to the use of our products making up the most relevant category in our value chain. These data are also included in the third-party verification process.

To calculate the aforementioned scope 3 emissions, we used two categories of the GHG Protocol: indirect emissions from product processing (Category 10) and indirect emissions related to the use of products delivered to the market (Category 11). Our direct emissions (scope 1 and 2) corresponded in 2021 to around 12% of the total value chain considering the two categories included in our scope 3.

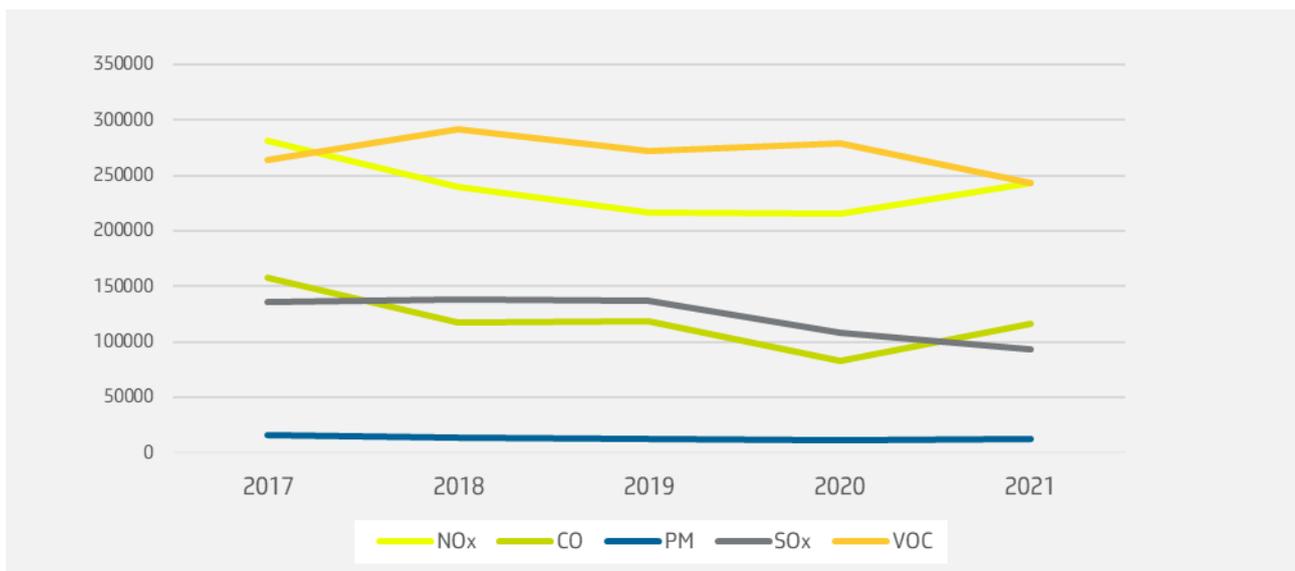
The increase in Scope 3 Category 11 emissions in 2021 is the result of greater sales of derivatives in the domestic market.

<sup>7</sup> The kgCO<sub>2</sub>/CWT indicator was developed by Solomon Associates specifically for refineries and was adopted by the EU Emissions Trading System and by CONCAWE (Association of European oil and gas refining and distribution companies). A refinery's CWT (Complexity Weighted Tonne) considers the potential for greenhouse gas (GHG) emissions, in equivalence to distillation, for each processing unit. Thus, it is possible to compare emissions from refineries of various sizes and complexities. We accompany the kgCO<sub>2</sub>/CWT indicator, according to its original identity. We also monitor an adapted indicator: kgCO<sub>2</sub>e/CWT, to enable the inclusion of emissions from other greenhouse gases (for example methane), but which represent a small portion of our refining emissions. The process of external verification of the inventory and emission indicators for the year 2021 is expected to be concluded by July 2022 and may undergo alterations by this date.

**VALUE CHAIN EMISSIONS (millions of tCO<sub>2</sub>e)<sup>8</sup>**


## Other emissions

In addition to GHG emissions, our inventory also monitors pollutants: sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), carbon monoxide (CO), volatile organic compounds (VOCs) and hydrocarbons totals (HCT). The annual third-party verification also includes these emissions.

**EMISSIONS OF REGULATED POLLUTANTS (t)**


<sup>8</sup> The following references are used as a reference for the calculations of the scope 3 emissions presented: *Life Cycle Assessment Comparison of North American and Imported Crudes*, prepared for Alberta Energy Research Institute, 2009 e *Guidance methodology for estimation of scope 3 category 11 emissions for oil and gas companies*, Carbon Disclosure Project (CDP), updated in 2022.

The one-off increase in NO<sub>x</sub> and PM emissions in 2021 is directly related to the higher atypical thermoelectric dispatch this year in a context of water crisis, including the need to dispatch liquid fuel thermal plants to meet the demand of the National Electric System Operator (ONS). The 2021 result for CO was affected by the need to operate FCC (fluid catalytic cracking) units in a partial CO burn regime.

Emissions of volatile organic compounds decreased in 2021 mainly due to improvements in the flaring inventory (adjustments to the combustion efficiency of the emission protocol).

SO<sub>x</sub> emissions, more significant in the Refining segment, which corresponded to 73% of the total emission of this pollutant in 2021, had a relevant reduction in 2021 compared to 2020. This reduction was largely linked to the reduced operational factor of some process units at the Abreu e Lima Refinery (RNEST) throughout the year, in addition to a general maintenance stoppage of this refinery. The good performance of sulfur recovery units in other refineries also contributed to the reduction of SO<sub>x</sub> emissions.

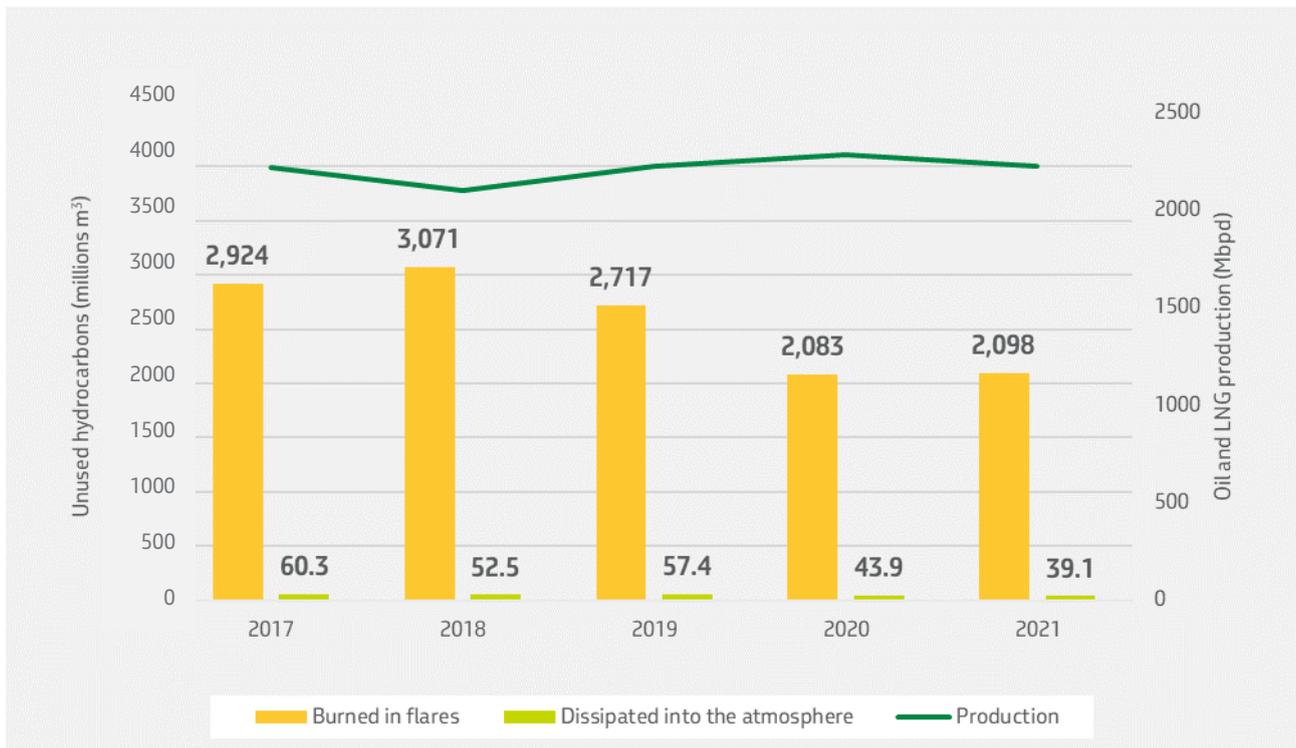
We want to highlight that in the Refining area, for about 20 years, the indicator of absolute SO<sub>x</sub> emissions has been monitored internally, with alert limits for each refinery. Total SO<sub>x</sub> emissions from our refining park were 17% lower than in 2020 and were 20% below the alert limit established for 2021.

In the context of regulated pollutant emissions, we highlight two relevant projects for the reduction of SO<sub>x</sub>, NO<sub>x</sub>, and particulate matter pollutants, with a positive impact on air quality.

At the Gabriel Passos Refinery (REGAP) we are expanding and modernizing the sulfur recovery units (URE). Also in 2021, we started the assisted operation of the new URE, which aims at very high sulfur recovery as a solid product and reliability gains. Actions in REGAP also include the modernization of the existing URE (U-114), scheduled to start in 2022.

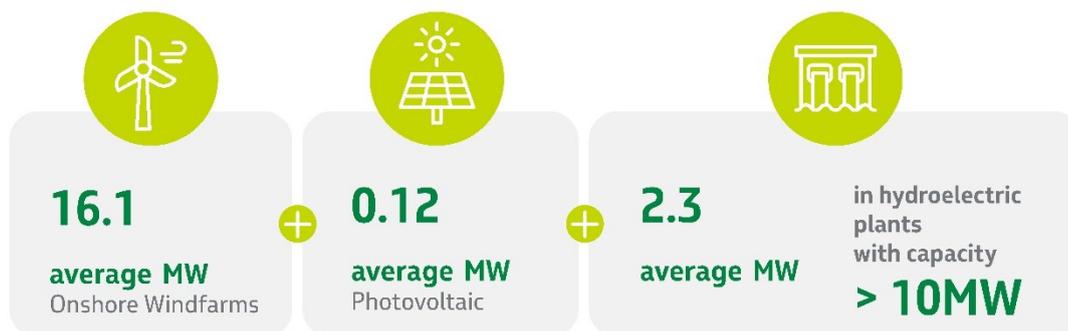
At RNEST, we seek to increase the flexibility of processing high sulfur oils from the resumption in 2021 of the project to implement the Emissions Abatement unit (U-93) with SNOX™ technology. In addition to ensuring the reduction of emissions, the technology used allows the production of H<sub>2</sub>SO<sub>4</sub> from the sulfur compounds present in the load.

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. As already reported in previous items, this constant reduction in flaring is mainly due to the better use of gas in E&P operations. With regard to hydrocarbons dissipated directly into the atmosphere, we also observed a significant reduction in 2021, as a result of improvements and the reduction of losses in our units.

**UNUSED HYDROCARBONS<sup>9</sup>**


## Generation of renewable energy

In 2021, our thermoelectric park generated around 29.9 million MWh, with 92% of this energy generated from natural gas thermoelectric plants and only 8% from oil based thermoelectric plants.

**GENERATION OF RENEWABLE ENERGY<sup>10</sup>**


<sup>9</sup> a) We considered the records of volume of gas flared in the activities, while they are part of our portfolio, of exploration and production, refining, production of fertilizers, treatment and transport of gas.

b) We considered records of gas released directly to the atmosphere through venting and depressurization events (fugitive emission losses in line and equipment components are not included).

c) About 99% of the volume of flared gas occurs in Brazil.

<sup>10</sup> Data on renewable energy generation considers Petrobras generation. This means that, in the case of generation in companies in which Petrobras has holdings (onshore wind and hydroelectric power), only Petrobras' share in the company is considered. We do not have hydroelectric plants with a capacity of less than 10MW. We also do not generate geothermal energy from waves or tides, from biomass or from an offshore wind farm.

During 2021, we stopped operating in the wind and hydroelectric power generation segment. Mangue Seco wind farms 1, 2, 3 and 4 were sold on 04/09/2021, 05/31/2021, 04/05/2021 and 04/05/2021, respectively. In relation to hydroelectric generation, on May 11, 2021, we sold the company TEP Termoelétrica Potiguar S.A., parent company of Água Limpa Energia S.A. and Areia Energia S.A., owners of the Small Hydroelectric Power Plants (SHPs) Água Limpa and Areia, respectively.

Our revenue from sales generated from renewable energy sources in the year 2021 reached the amount of BRL 285 thousand. This revenue is related to renewable sources of company assets (does not consider minority interests).

In 2021, we invested BRL 22.4 million in R&D in Brazil in the advanced biofuels segment and BRL 36.1 million in renewable energy. Investments were made in wind and solar energy and in BioQav and renewable diesel. Totaling BRL 58.5 million, the amount represents 1.9% of our total investment. Our R&D portfolio is structured with projects that address both remediation and prevention of the impacts of our activities on the environment, aiming to reduce the effects of local and global emissions caused by our operations. Our technology deliveries reflect our strategy for the transition to a low carbon economy. The investment in low carbon solutions corresponds to a minimum of 10% of our investments in R&D, which include, in addition to investments in advanced biofuels and renewable energy, projects aimed at increasing energy efficiency, reducing losses, removing CO<sub>2</sub>, among others. linked to the decarbonization of operations.

## Energy consumed

In 2021, we consumed 932 thousand terajoules (TJ) or 434 thousand barrels of oil equivalent per day (boed) of energy, which represents a 14% increase when compared to the previous year. This increase is directly related to the increase in thermoelectric generation in 2021, due to greater demand from the ONS increases because of the sharp water crisis in Brazil this year.

### ENERGY CONSUMPTION WITHIN THE ORGANIZATION (TJ)<sup>11</sup>

	2017	2018	2019	2020	2021
Fuels from non-renewable sources	946,292	873,197	823,828	808,350	918,835
Electricity	19,593	15,362	13,740	12,811	13,615
<b>Total</b>	<b>965,885</b>	<b>888,559</b>	<b>837,568</b>	<b>821,161</b>	<b>932,450</b>

<sup>11</sup> a) The consolidation of internal energy consumption follows the approach and standards adopted for our emissions inventory, including the scope of the limits for direct and indirect operations included.

b) The amounts in mass or volume of fuel consumption consumed are converted to energy considering the values of calorific value by fuel type. Electricity and steam are accounted for based on the theoretical thermal equivalent (0.0036 TJ = 1 MWh).

c) Conservatively, we consider that the total energy consumption reported is of fossil origin, since a possible consumption of energy from renewable sources has a low representation in the total, and to separate these in the report there would be a need to improve its tracking.

d) Reported fuel consumption includes all those necessary for our various operations, including: generation of electric energy and steam for internal use, heating and cooling currents, transportation, and processes, among others.

e) In previous reports, values of energy in the form of steam consumed by Petrobras were reported. This consumption refers to the amount of steam acquired by our refineries, but which is imported directly from Petrobras' own thermal plants. In other words, there is no consumption of energy in the form of steam from sources outside of Petrobras. In this sense, there is no report of steam energy consumed by third parties and we excluded the item from the table, also rectifying previous years.

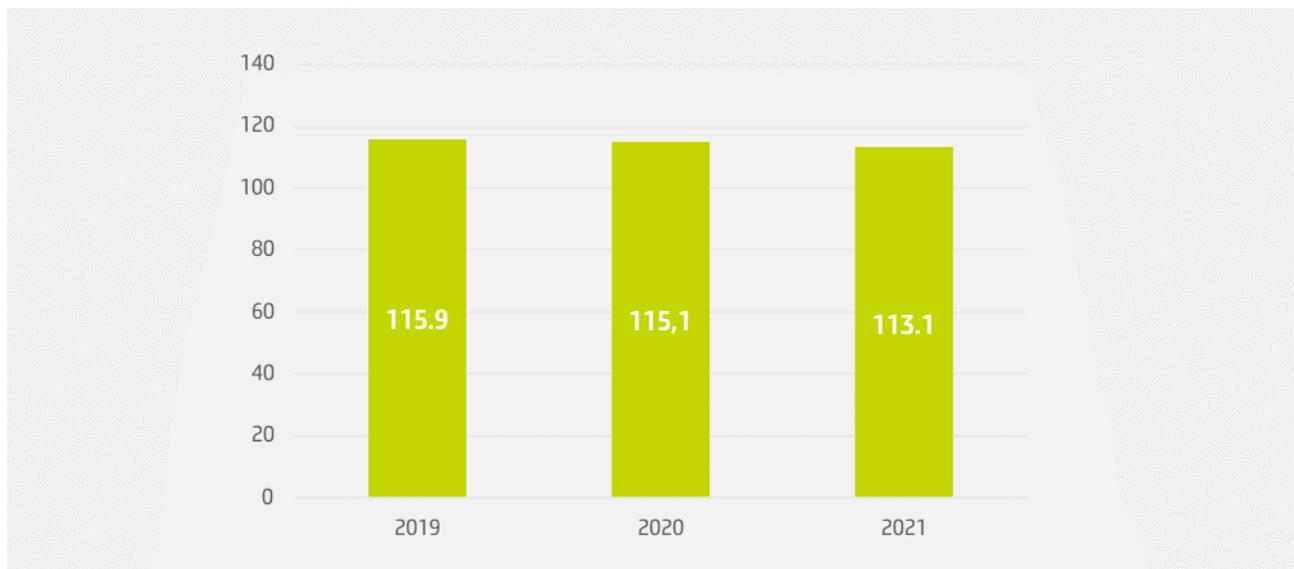
f) The volume of natural gas and liquid fuels burned through flaring in 2021, totaled 81 thousand TJ and is not considered in the calculation of energy consumption.

**TOTAL ENERGY SOLD (TJ)<sup>12</sup>**

	2017	2018	2019	2020	2021
Electricity	134,659	126,743	124,756	102,488	113,183
Steam	2,277	2,279	401	1,290	775
<b>Total</b>	<b>136,936</b>	<b>129,022</b>	<b>125,157</b>	<b>103,778</b>	<b>113,958</b>

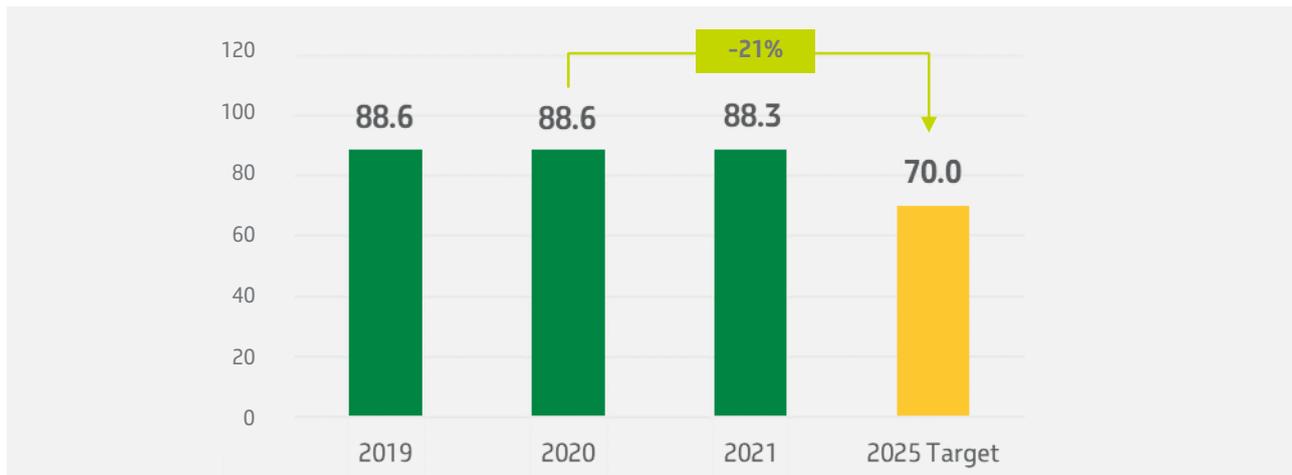
In 2021, we consumed 932,450 TJ of energy and sold 113,183 TJ of electricity and 775 TJ of steam, resulting in 818 thousand TJ of total energy consumption within the organization. We highlight that we supply society, in terms of fuel sold, a total of 5.9 million TJ of energy.

In the Refining segment, we internally monitor the intensity of our energy consumption, considering the relationship between the total consumption of primary energy of a refinery and a standard energy consumption that takes into account the volume of processed load, the quality of the load, the complexity and severity of process units.

**ENERGY INTENSITY IN REFINING**


As previously reported, in 2021 there was lower energy consumption in our refining park. This result is in line with the goal of reducing energy consumption in Refining by 21% by 2025 (base year 2020).

<sup>12</sup> We do not sell "heating" and "cooling" energy. The energy sales volumes are those of the Free Trading Environment (ACL) and Regulated Trading Environment (ACR) of the thermoelectric plants we effectively control and are the same as those already reported to the market through Form 20-F reports (filed in the U.S. Securities and Exchange Commission - SEC) and Reference Form (filed at the Securities and Exchange Commission - CVM) converted by a factor of 3,600 in the transformation from MWh to Joule.

**ENERGY CONSUMPTION IN REFINING** (millions of MWh)


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 2021 we sold a total equivalent to 5.9 million terajoules (TJ), about 3% higher than in 2020, when we totaled 5.7 million terajoules (TJ) sold in energy products.<sup>13</sup>

## Socio-environmental investment in forests

Our Social Responsibility Policy presents as a guideline investing in socio-environmental programs and projects and, as a principle, overcoming sustainability challenges related to our business, including the transition to a low carbon energy matrix. In this sense, through the Petrobras Socio-environmental Program, we voluntarily supported, in 2021, 17 projects focused on forest recovery and conservation of areas. In addition, four more new projects will be added to the portfolio in 2022, resulting from public selection. The total investment during the execution of these 21 initiatives will be BRL 69 million, considering contracts that started in 2018 and others that will develop their activities until 2025.

The projects in force in 2021 worked on the direct recovery or conservation of more than 175 thousand hectares of forests and natural areas of the Atlantic Forest, Amazon, *Caatinga* and *Cerrado*, contributing to the mitigation of GHG emissions due to deforestation in Brazil. The estimated benefit of the work carried out to date by these projects is around 1.3 million tCO<sub>2e</sub>, of which 95,500 tCO<sub>2e</sub> refer to net removal by recovery and productive reconversion actions and 1.2 million tCO<sub>2e</sub>, emissions avoided through actions that prevent deforestation and forest degradation. These values represent the results accumulated until 2021 in projects in force in that year, considering, on average, a period of five years.

The projects also worked to strengthen the management of more than 25 million hectares of protected areas<sup>14</sup>, including actions such as fire monitoring, biodiversity monitoring and sustainable management with income generation through sociobiodiversity products. In this sense, around 7,000 people were mobilized in continuous actions of the projects in

<sup>13</sup> The energy consumption of these fuels sold can occur at different points in the chain, such as in the transport of people and products. 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)".

<sup>14</sup> Value referring to the area covered by the set of projects in force in 2021. The profile of projects and type of action affect this value and reflect the composition of the portfolio, whose dynamics can lead to annual variations.

activities such as training for work and technical support to carry out actions that promote the recovery of forests and natural areas. We also carried out face-to-face or distance actions, aimed at raising awareness or environmental education, which reached more than 50,000 participants. The initiatives also monitored endangered terrestrial species that occur in conserved areas, such as the jaguar (*Panthera onca*) and the three-banded armadillo (*Tolypeutes tricinctus*).

Starting our work aimed at the future generation of carbon credits based on natural climate solutions (or Natural Climate Solutions - NCS), in 2021 we announced a partnership with the National Bank for Economic and Social Development (BNDES) to join efforts in supporting projects of forest restoration. For this initiative, called Floresta Viva, public notices will be held for the selection of projects from 2022, with an estimated budget of around BRL 50 million for the next five years.

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>> [Information about our socio-environmental projects can be found in the Socio-Economic Impacts chapter.](#)

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>> [Information on our operational and management practices to protect biodiversity can be found in the Biodiversity chapter.](#)

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# Biodiversity

Recognizing the risks associated with the increasing loss of biodiversity and ecosystem services, and the repercussions of these risks on society in general and on the productive sector in particular, the management of risks and impacts to biodiversity is internalized in our environmental agenda. This management is guided by standards, norms, georeferenced information systems, and our Annual Biodiversity Report. We also adopt good operational and management practices and develop studies that contribute to the knowledge and protection of biodiversity in all the biomes where we operate.

Within the scope of the Strategic Plan 2022-2026 (PE 2022-26), considering the importance of the biodiversity theme for our internal management and for our stakeholders, among the 10 sustainability commitments we have assumed, we highlight that of having "100% of the Petrobras facilities with a Biodiversity Action Plan (PAB) until 2025." PABs have already been developed for 18 units and facilities (30% of the total) located in terrestrial and coastal environments. For 2022, our goal is to prepare or review 24 PABs, when we will reach more than 80% of the commitment to sustainability in biodiversity.

The methodology for preparing and reviewing PABs has been improved and currently includes the assessment of the baseline of biodiversity in the study area, considering the mapping of protected areas, the occurrence of endemic and threatened species, and the analysis of actions in course. Thus, complementary actions are proposed to address any gaps identified regarding the management of risks and impacts on biodiversity in these units and facilities. Among the actions contemplated in the plans, are the mapping of land use, the recovery of vegetation and actions for the conservation of threatened species.

Fauna Management Plans were also prepared for 14 units and facilities, as sub-plans associated with the PABs, in order to implement specific fauna management actions, aiming to prevent and mitigate the risks and impacts to fauna, human health and operational safety, considering the animal welfare in meeting these objectives.

Reinforcing the relevance of the biodiversity theme for the company, in 2021 we adhered to the Brazilian Business Commitment to Biodiversity, established by the Brazilian Business Council for Sustainable Development (CEBDS), one of the main voices of the business sector for the promotion of sustainable solutions with governments and civil society. Adherence is in line with the biodiversity sustainability commitments we made in 2019, reaffirmed in our SP 2022-26.

As part of this commitment, we adhere to three goals:

- Apply the mitigation hierarchy: prevent, mitigate, recover and compensate impacts on biodiversity throughout the life cycle of the projects;
- Develop and encourage studies, research projects, technology and innovation that contribute to the conservation of biodiversity and ecosystem services;
- Know the biological diversity of the company's areas of activity and, whenever possible, monitor and measure impacts and dependencies.

In line with the goal of applying the mitigation hierarchy, a principle that governs our internal management of risks and impacts on biodiversity, we carried out a study to survey metrics to assess the net impact on biodiversity, and selected metrics that could be

applied in terrestrial and marine environments, which will be the subject of pilot tests throughout 2022.

**TOTAL NUMBER AND PERCENTAGE OF SIGNIFICANT OPERATING LOCATIONS WHERE BIODIVERSITY RISK WAS ASSESSED AND MONITORED**

Operating Locations	Number	Percentage
Important operational sites <sup>1</sup> where biodiversity risk has been assessed <sup>2</sup>	57	100%
Important operational sites exposed to significant biodiversity risk <sup>3</sup>	-	-
Key operational sites exposed to significant biodiversity risk where PABs were developed and are being implemented <sup>4</sup>	15	26%

We invested approximately BRL64 million in research projects and the development of technological solutions and methodologies aimed at improving the management of biodiversity associated with our operations. 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, and other measures.

In this sense, the SENSIMAR project, conducted by the Petrobras Research Center (CENPES), in partnership with five national and international research institutions, University of São Paulo (USP), Instituto de Estudos do Mar Almirante Paulo Moreira (IEAPM) stands out. ), Federal University of Rio de Janeiro (UFRJ), Environmental Analysis Laboratory (LABTOX) and Norwegian Research Center (NORCE). The project aims to increase knowledge about sensitive marine environments in our areas of operation (Campos, Santos and Espírito Santo Basins). Focusing on deep-water corals and rhodolites, the SENSIMAR project, developed within the scope of environmental licensing, generates information that subsidizes the assessment of environmental impacts on these ecosystems, promoting the dissemination of this knowledge and the training of human resources.

We are testing the effectiveness of fauna crossings over pipelines to prevent and mitigate the impacts on the connectivity of forest fragments and allow the circulation of arboreal mammals in the União Biological Reserve (REBio), in the Poço das Antas REBio and in the Environmental Protection Area. (APA) of the São João River Basin.

We developed a pioneering project in Brazil for risk management for avifauna on offshore platforms, focusing on predicting the collision of masked boobies (*Sula dactylatra*) with aircraft, highlighting the use of laser to scare away birds from the helidecks.

In addition, there is the Petrobras Socio-environmental Program, which structures our socio-environmental investments and includes, in the environmental dimension, the

<sup>1</sup> Important operational locations: administrative units and production flow and distribution ducts were not considered.  
<sup>2</sup> The assessment of risks to biodiversity is carried out within the scope of the environmental licensing process.  
<sup>3</sup> Conservatively, our biodiversity commitment calls for the development of PABs for all significant operational sites, regardless of the significance of biodiversity risk.  
<sup>4</sup> Administrative units that have a PAB (3 units) were not considered.

Forests<sup>5</sup> and Ocean lines of action, which contribute to the conservation and recovery of biodiversity in various biomes.

## Protected areas

The spatial distribution and the variety of our operations make the interface with protected and sensitive areas frequent. The identification of these areas is for the prevention and mitigation of risks and associated impacts and is carried out by crossing information from our operations with the data from the World Database on Protected Areas, made available by the World Conservation Monitoring Center of the United Nations Environment Program and based on the systematic mapping of Brazil.

### INTERSECTION WITH PROTECTED AREAS (KM<sup>2</sup>)

Types of units	Types of operations	Types of area	Total area of units (Km <sup>2</sup> )	Total area intersection with UCs (Km <sup>2</sup> )	Position in relation of UCs
Refineries	Production	Superficial	50.23	11.86	Intersection
UTEs	Production	Superficial	87.90	18.09	Intersection
Exploration & Production Blocks	Extraction	Subsuperficial	632.49	124.12	Intersection
Ducts	Production	Superficial	322.19	126.49	Intersection

In 2021, we supported the protected areas listed below, in compliance with the licensing conditions that deal with the Law on the National System of Nature Conservation Units (SNUC), through contributions to the Environmental Compensation Fund. The amount allocated to these conservation units was BRL121,103,337.19.

<sup>5</sup> As of 2022, the "Climate" line of action of the Petrobras Socio-environmental Program was renamed "Forests", maintaining the same characteristics.

**PROTECTED AREAS SUPPORTED**

Conservation Unit	Category
Estação Ecológica dos Tupiniquins	full protection
Estação Ecológica Tupinambás	full protection
Estação Ecológica da Chapada dos Veadeiros	full protection
Parque Nacional da Serra da Canastra	full protection
Parque Nacional da Tijuca	full protection
Parque Nacional do Pantanal Matogrossense	full protection
Reserva Extrativista Chico Mendes	sustainable use
Parque Nacional da Lagoa do Peixe	full protection
Parque Nacional da Serra Geral	full protection
Parque Nacional de Aparados da Serra	full protection
Refúgio de Vida Silvestre de uma	full protection
Reserva Extrativista Prainha do Canto Verde	sustainable use
Estação Ecológica do Taim	full protection
Parque Nacional de Jericoacoara	full protection
Parque Nacional do Descobrimento	full protection
Parque Nacional dos Lençóis Maranhenses	full protection
Refúgio de Vida Silvestre Rio dos Frades	full protection
Reserva Biológica do Lago Piratuba	full protection
Estação Ecológica de Tamoios	full protection
Parque Nacional Marinho dos Abrolhos	full protection
Parque Nacional Marinho de Fernando de Noronha	full protection
Parque Nacional da Serra da Bocaina	full protection
Reserva Biológica União	full protection
Monumento Natural das Ilhas de Trindade, Martim Vaz e do Monte Columbia	full protection
Monumento Natural do Arquipélago de São Pedro e São Paulo	full protection
Área de Proteção Ambiental Costa dos Corais	sustainable use
Estação Ecológica de Mata Preta	full protection
Parque Nacional da Serra das Lontras	full protection
Parque Nacional do Cabo Orange	full protection
Parque Nacional Guaricana	full protection
Reserva Biológica Bom Jesus	full protection
Estação Ecológica da Terra do Meio	full protection
Parque Nacional da Serra do Divisor	full protection
Parque Nacional da Serra do Itajaí	full protection

Conservation Units	Category
Parque Nacional de São Joaquim	full protection
Parque Nacional do Superagui	full protection
Parque Nacional Grande Sertão Veredas	full protection
Refúgio de Vida Silvestre de Santa Cruz	full protection

#### QUANTITY OF PROTECTED AREAS OVERLAPPING OPERATIONS

Type of Protected Area	Environment	Areas Overlapping with Operations
RAMSAR (Wetlands of international importance)	Land	2
Legal Reserve	Land	9
World Heritage	Land	1
Conservation Units	Land	107
<b>TOTAL</b>		<b>119</b>

#### LOCATION OF FACILITIES INTERSECTING WITH PROTECTED AREAS



We act strongly in the prevention and mitigation of operational risks in areas of high biodiversity value. We have environmental and emergency response programs, and we

strictly comply with the legislation and all the requirements of the environmental agencies for the licensing process, such as those underway in the Equatorial Margin and in stage 4 of the Pre-Salt Complex in the Santos Basin.

Additionally, considering the commitments made by us, to prepare PABs; applying the mitigation hierarchy, developing, and encouraging research that contributes to the conservation of biodiversity and ecosystem services; and knowing the biological diversity of the company's areas of operation, we reaffirm that our operations in these regions will be guided by robust criteria and procedures regarding the protection of biodiversity.

## Impacts to biodiversity

We identify and assess impacts in order to help define preventive, mitigating, and compensatory measures during the installation, operation, and deactivation phases of our projects. Depending on the project life cycle stage, the types of operations, environmental factors, legal requirements, environmental agency requirements (when there are license restrictions), among other factors, we have developed several studies and projects to assess biodiversity risks and establish action plans.

Despite all our efforts, in 2021 we recorded 10 events involving spills of oil and oil products with a volume greater than one barrel (which is equivalent to 159 liters). Of these leaks, three occurred in an offshore environment, without significant impacts, and seven occurred in terrestrial environments, with specific impacts, of short duration and reversed by contingency actions. None of the spills reached sensitive areas from a biodiversity point of view.

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>> [Information on leaks can be found in the Accident and Leak Prevention chapter.](#)

Environmental risk assessments are also carried out within the scope of environmental studies prepared in the environmental licensing processes for all drilling and offshore production activities. The assessments consider potential accident scenarios defined by the danger of environmental contamination, its causes, the probability categories, severity, and risks resulting from the volume of hydrocarbons and chemicals that can be released into the sea. 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.

**NUMBER OF SPECIES IN HABITATS LOCATED IN AREAS INFLUENCED BY OUR OPERATIONS**

Threat Category	National List	International List (IUCN)
Vulnerable	109	68
In danger	48	24
In Critical Danger	47	11
Near threatened	2	58
Minimally concerning	260	501
<b>TOTAL</b>	<b>466</b>	<b>662</b>

In 2021, as part of the initiative to prepare PABs and Fauna Management Plans, we improved the collection and updating of our databases. It should be noted that our operations are concentrated in Brazil, which is a mega-diverse country, with species categorized as threatened 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.

We carry out a number of important regional projects to expand knowledge and conservation of endangered marine species and biodiversity in their areas of operation, assumed as a commitment to federal environmental licensing for offshore exploration and production activities with the Brazilian Institute of the Environment and of Renewable Natural Resources (IBAMA). As a highlight, we continuously carry out four Beach Monitoring Projects (PMPs), which carry out monitoring and veterinary care for birds, turtles, and marine mammals, along 3,000 km and in 10 coastal states. The projects' veterinary care network comprises 24 facilities, in which live animals are rehabilitated and returned to nature, contributing to the maintenance of natural populations, while dead animals undergo autopsies to identifying the cause of death. In addition, the large and detailed set of data generated by the PMPs support the formulation of public protection policies, and the actions of the National Action Plans for threatened species referring to the zoological groups monitored by the project. These data are recorded in the Aquatic Biota Monitoring Information System (SIMBA), and are available to environmental agencies, managers of Conservation Units (UCs), researchers and the entire population.

In the Santos Basin, the Cetacean Monitoring Project carries out aerial and on-board monitoring campaigns to observe whales and dolphins, as well as to tag some animals with telemetry equipment, in order to know the size of natural populations, the areas in which live, feed and reproduce. The project also performs acoustic recordings and collects small samples of skin and fat for genetic and chemical analysis. Over the six years of its execution, the project has generated relevant and unprecedented results for the science and preservation of at least 27 species of cetaceans, seven of which are in some degree of threat of extinction, including the three largest whales: the blue whale (*Balaenoptera musculus*) -the largest animal on Earth, the fin whale (*Balaenoptera borealis*) and the sei whale (*Balaenoptera physalis*).

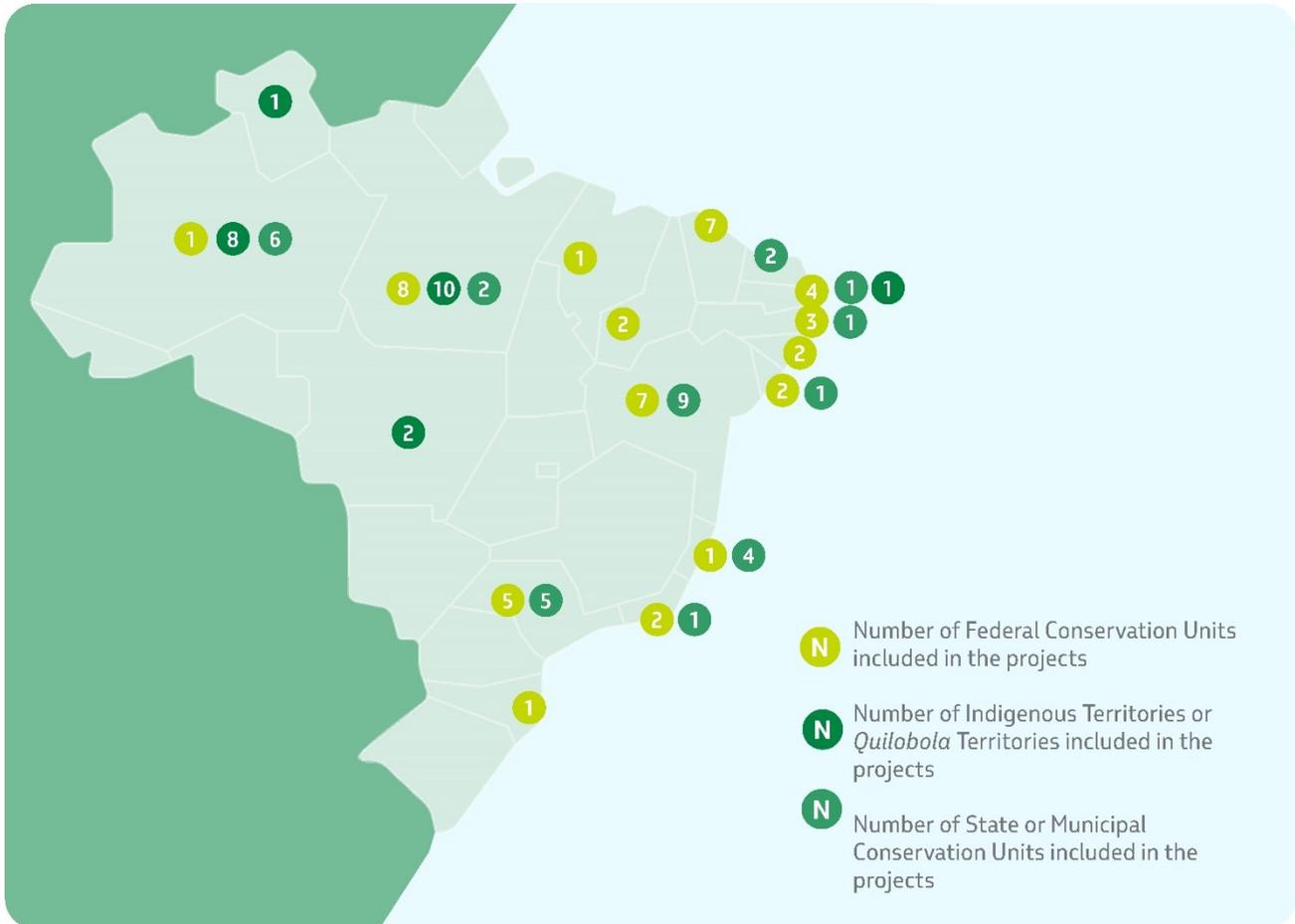
## Main investments and socio-environmental results

The voluntary environmental initiatives supported through the Petrobras Socio-environmental Program in 2021 covered 74 terrestrial and marine conservation units (UCs), 34 of which are federal, including categories such as National Parks, Sustainable

Development Reserves, Extractive Reserves, Ecological Stations, Environmental Protection Areas, among others, in addition to 15 Indigenous Lands (TIs) and three *Quilombola* Territories (TQs).

The figure below illustrates the number of Federal UCs, TIs and TQs covered by our socio-environmental investment in force in 2021, by state.

#### MAP OF PROTECTED AREAS COVERED BY SOCIO-ENVIRONMENTAL PROJECTS<sup>6</sup>



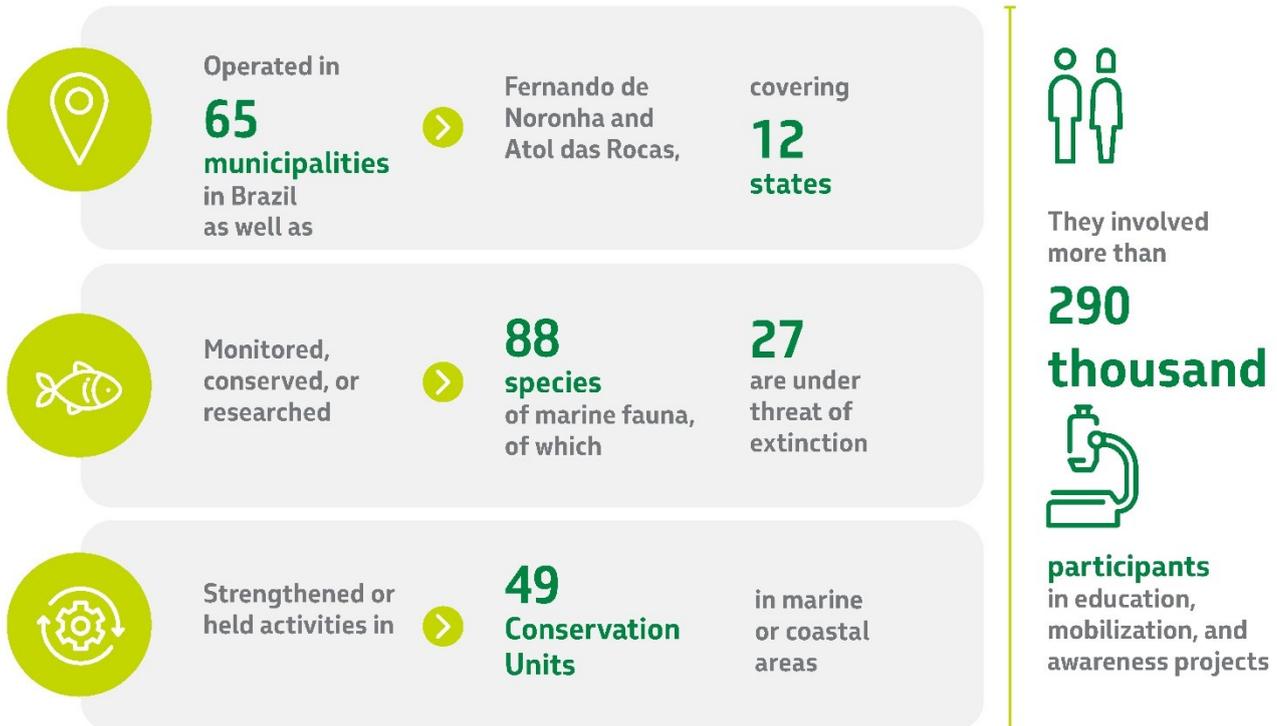
<sup>6</sup>Map illustrating the number of protected areas covered by our socio-environmental investment in effect in 2021. It is noteworthy that the same project can cover several protected areas, just as the same protected area can cover more than one state of the Federation.

## MAIN ACCUMULATED RESULTS OF THE BIOMAR NETWORK

The Biomar Network gathers all the



projects supported by the Petrobras Socio-Environmental Program, which as international benchmarks for marine biodiversity conservation. During 2021 these projects:



Among the main accumulated results of the environmental projects portfolio in force in 2021 in the Petrobras Socio-environmental Program, we highlight:

- More than 197 publications, including articles, books, booklets and disclosures at technical and scientific events.
- Involvement of more than 27 thousand direct participants in the actions carried out.
- 220 species of fauna monitored, studied or protected; of which 56 are threatened with extinction.
- More than 2.6 million participants in awareness-raising actions and more than 4.2 thousand benefited from training actions.
- Recovery or direct conservation of around 175 thousand hectares of forests and natural areas of the Atlantic Forest, Amazon, *Caatinga* and *Cerrado*; and actions to strengthen protected areas in around 25 million hectares.

In order to increase the company's socio-environmental investment in natural climate solutions (NCS) with a focus on forest restoration, we intend to increase our investments in projects aimed at forest restoration of native species in Brazilian biomes by approximately BRL 50 million, which contribute to carbon sequestration and fixation, and

to avoid greenhouse gas emissions. The investment, scheduled for the next five years, is part of the Floresta Viva initiative, launched by the National Bank for Economic and Social Development (BNDES) during the forum “Strengthening the Forest Agenda”, held at the United Nations Conference on climate change – COP-26, in Glasgow, which was attended by Petrobras.

Within the scope of the environmental licensing process for our activities, only in the Environmental Characterization and Monitoring Projects, we invested a total of more than BRL 220.8 million, distributed among 80 Environmental Monitoring programs and projects dedicated to fauna (cetaceans, birds, other types of marine biota) and beaches.

[303] [303-1] [303-2] [303-3] [306] [306-1] [306-2] [306-3] [306-4] [306-5] [OG5] [OG7]

# Water Resources, Effluent and Waste Management

The availability of water quantity and quality is essential for our operations. We use water directly in our oil, gas and derivatives production and processing units; for steam generation; refrigeration; human consumption; among others. As a result, practically all of our activities generate domestic and industrial effluents, such as produced water.

Our activities also generate solid waste, which, regardless of the source of generation, can present as complex mixtures of various chemical substances and materials, with a potential risk to health and the environment, in addition to the safety of people and our facilities.

Therefore, we undertake efforts to continuously improve the management of water resources, effluents, and waste, considering our value of respect for the life and integrity of our facilities. The search for excellence in the management of our products, throughout their life cycle, includes the environmentally appropriate disposal of solid waste and tailings.

We believe, therefore, that the topics are very relevant and strategic for the sustainability of our businesses throughout our chain (upstream and mid/downstream), whether in operations on land or in an offshore environment.

## Management of water resources and effluents

Our water resource management has as its basic principle to constantly seek the rational use of water, which allows us to ensure the necessary supply for our activities, and to contribute to its conservation (quantity and quality) and availability in the areas influenced by our facilities. In this sense, 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.

Regarding the effluents generated, we seek to minimize discarded polluting substances, through segregation, treatment and adequate disposal of currents, 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 for these topics, 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 2021 included 310 facilities that use water and generate effluents.

In addition, we invested approximately BRL30 million in research and development (R&D) projects related to the management of water resources and effluents, through internal research and in partnership with eight Brazilian institutions (universities and technological institutes). The research lines sought to optimize our effluent treatment processes, including produced water, bringing greater reliability and efficiency, in addition to enabling the advancement of reuse in our onshore facilities, and the reinjection of produced water in offshore units. Studies are currently underway to assess current and future water availability, as well as the identification of alternative withdrawal sources, in 16 hydrographic basins from which 26 of our facilities withdraw or receive water.

In 2021, we reaffirmed our Sustainability Commitment to reduce our freshwater withdrawal by 50% by 2030, which considers planned divestments in the company's portfolio management, as well as a portfolio of actions and projects developed for this purpose. These actions are focused on reuse and complemented by measures to reduce water losses or adopt alternative sources of water. The evolution of such actions is periodically monitored by our HSE Governance structure and by the Executive Board.

As a mechanism for receiving complaints for possible matters involving water and effluent resources, 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 evaluate our environmental performance in water resources and effluents through the calculation, and monthly monitoring of four corporate indicators on a monthly basis: Demand for Fresh Water; Volume of Fresh Water Withdrawn; Volume of Reused Water and Volume of Discharged Wastewater Effluent. Critical assessments and analyzes of Demand for Fresh Water, Volume of Fresh Water Withdrawn, and Volume of Reused Water are monitored by senior management. Annually, we outline actions related to these topics in the Commitment to Life Program, 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.

In addition, we participate annually in the evaluation process of the Dow Jones Sustainability Index (DJSI World) and Carbon Disclosure Project (CDP) Water Security as a way of also evaluating, with an external perspective, our management. In 2021, we obtained, for the third consecutive year, the maximum score (100) in the DJSI World on the topic of Water-Related Risks and achieved an A- (Leadership) score in the CDP Water Safety.

### Water as a shared resource

We have facilities in several Brazilian states. We draw 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. Regarding water consumption, our products do not incorporate significant amounts of water in their composition, with the main portion of consumption taking place in cooling systems, by evaporation.

With regard to water withdrawal, in Brazil, the maximum limits for fresh water 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 prohibited 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 2021, we did not identify significant quantitative or qualitative impacts on water sources resulting from our direct water withdrawal processes.

Regarding disposal, the main types are 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 disposal standards established in environmental legislation. Such effluents can be disposed of in shallow water sources, underground environments (eg: 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.

Regarding the discharge of effluents, they are previously treated in order to meet the quality standards for disposal established in the environmental legislation. In 2021, we also 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, and this includes 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 all cases, several studies are required for the operations to develop in the best possible means, mitigating the impacts. Aspects and impacts related to water use and effluent disposal are covered in these assessments. 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, to support the definition of preventive, mitigating and compensatory measures in the phases of installation, operation, and deactivation of the projects. Finally, our activities, when licensed by Brazilian environmental agencies, are subject to a series of conditions (license conditions) imposed by licensing agencies 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 venture projects go through several review rounds where technical criteria are evaluated so that the project can pass through what we call "approval gates." Among these criteria are criteria related to the use of water, the generation, treatment, and disposal of effluents, and the possible impacts on water sources and mitigation, prevention, and occasional compensation measures.

We also invest in research and development projects for technological solutions and methodologies that promote the improvement of environmental management and mitigate the impacts of our operations.

Specifically, regarding water scarcity risks (of relevance not only to society and stakeholders, but also to the continuity of our operations), these are assessed using different tools:

- \_ 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; and
- \_ Studies to assess water availability and alternative sources for strategic hydrographic basins (carried out by the company since 2002).

The Water Shortage 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. In 2021, we carried out the third round with this tool, covering 45 installations, which corresponded to about 94% of the fresh water withdrawal from our operating units in Brazil. The results of the index make it possible to understand and compare the water risk levels for different facilities, as well as to identify the most important sites and facilities where to direct detailed local water availability studies (as is the case of the aforementioned water availability assessment study and alternative sources in 16 basins, for 26 installations), as well as mitigation and risk management actions, such as a study to optimize the cooling systems in six of our thermoelectric plants and in a natural gas processing unit.

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 spills of oil or products in water bodies. Another example of actions to minimize impacts is the Commitment Agreement signed in 2018 with the Brazilian Institute for the Environment and Renewable Resources (IBAMA) to comply with the best practices for monitoring the disposal of water produced in the marine environment. And finally, the initiative that is part of the new Commitment to Life, Water Management Program cycle, which works strongly on improving the process of managing produced water, making it more proactive and preventive, and reducing our intake of fresh water. Because we understand that water is a shared resource, we develop engagement and relationship activities with multiple stakeholders.

**Engagement with the industry and business sector in strategic forums:** We are a member of the Water Thematic Chamber of the Brazilian Enterprise Council for Sustainable Development (CEBDS), of the Global Compact Network Brazil Network Action Platform for Water and of the Water Resources Network of the National Confederation of Industry (CNI), forums in which we can liaising with other major water users, evaluating trends and synergies, standardizing positions and anticipating/solving potential conflicts;

**Engagement with local communities and civil society organizations through investment in socio-environmental initiatives and local environmental education programs:** our Petrobras Socio-Environmental Program supports civil society initiatives aimed at environmental protection and the promotion of ecological awareness, to create conciliatory dialogue with society. In 2021, we supported 17 projects aimed at the conservation and restoration of forests and natural areas integrated with water preservation through actions for the reversal of degradation of springs and water courses, restoration of riparian forest. and management of watersheds; in addition to initiatives aimed at strengthening resilience and the ability to adapt to water scarcity and extreme events, promoting the use of social technologies and practices of rational use and aimed at making water available with quantity and quality.

**Integration with the Government and regulatory bodies:** we are engaged and develop relationships with the Executive, Legislative and Judicial branches, as well as with the Executive Branch Office, Ministries (e.g.: Ministry of the Environment), state and municipal secretariats, Councils (e.g.: CONAMA - National Environment Council), agencies (e.g.: ANA - National Water Agency), among other bodies that may be related to health, safety, and environment issues, including water and effluents. The activities are developed at the federal, regional (state) and local levels.

### **Participation in Water Resources Forums, mainly in Hydrographic Basin Committees:**

Hydrographic Basin Committees are normative, consultative, and decision-making forums where the management of water resources in the hydrographic basin is discussed, and which involve different stakeholders (local community associations, NGOs, government, large users, civil society entities, etc.).

Regarding engagement with suppliers, in 2021, we held the Petrobras Best Suppliers Award including a special ESG (Environmental, Social and Governance) award with one of its emphases on the environment, which included aspects related to the use of water, its minimization, reuse, identification of water stress and effluent disposal, as a way of encouraging our suppliers to improve their performance in water and effluents.

The establishment of our Water-related Sustainability Commitment started from the identification and proposition of actions that allow the reduction of freshwater withdrawal in different facilities, both as a water risk mitigation strategy, as well as aiming to contribute to the environment and society. This process was conducted, and the progress of the Commitment is monitored, within the scope of the company's internal environmental governance, formed by a committee and a specific thematic forum, with actions accompanied by the governance of Health, Safety and Environment (HSE) and by senior management.

Based on this Commitment, we established our goals for the Fresh Water Withdrawn (ADC) indicator, which in the years 2021 and 2022 is part of the basket of indicators that make up the Profit Sharing (PLR) of the company's employees.

### **Management of effluent related impacts**

CONAMA Resolution No. 430/2011 provides for the conditions and standards for discharging effluents and 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, such as produced water, whose offshore disposal must comply with the provisions of CONAMA Resolution No. 393/2007.

In general, it is within this framework that we act in relation to the quality of our effluents: respecting the discharge standards and respecting the classes of receiving bodies. When operating in other countries, we obey the current disposal standards.

### **Total water withdrawal**

Our total water withdrawal in 2021 can be seen in the table below:

**TOTAL WATER WITHDRAWAL (Megaliters)<sup>1</sup>**

		All of the areas	Areas Undergoing
Water withdrawal by source	(1) Surface water	147,670	14,323
	Fresh (salinity <sup>3</sup> ≤ 0.5 ‰)	139,030	14,323
	Brackish/saline (salinity <sup>3</sup> > 0.5 ‰)	8,640	0
	(2) Underground water	8,698	734
	Fresh (salinity <sup>3</sup> ≤ 0.5 ‰)	7,342	734
	Brackish/saline (salinity <sup>3</sup> > 0.5 ‰)	1,355	0
	(3) Sea water (saline)	2,745,407	0
	(4) Produced water (saline) <sup>4</sup>	154,100	17,500
	(5) Third party water (Petrobras Facilities) <sup>5</sup>	13,915	5
	Fresh (salinity <sup>3</sup> ≤ 0.5 ‰)	13,272	5
	Brackish/saline (salinity <sup>3</sup> > 0.5 ‰)	644	0
	(6) Water from third parties (utilities and other companies) <sup>5</sup>	18,544	223
	Fresh (salinity <sup>3</sup> ≤ 0.5 ‰)	18,544	223
	Brackish/saline (salinity <sup>3</sup> > 0.5 ‰)	0	0
	<b>Total water withdrawal</b>	<b>(1) + (2) + (3) + (4) + (5) + (6)</b>	<b>3,088,335</b>

### Use of fresh water and reuse

During 2021, we withdrew 150,749 megaliters of fresh water for our operational and administrative activities, 8% below our target (maximum limit) of 163,000 megaliters.

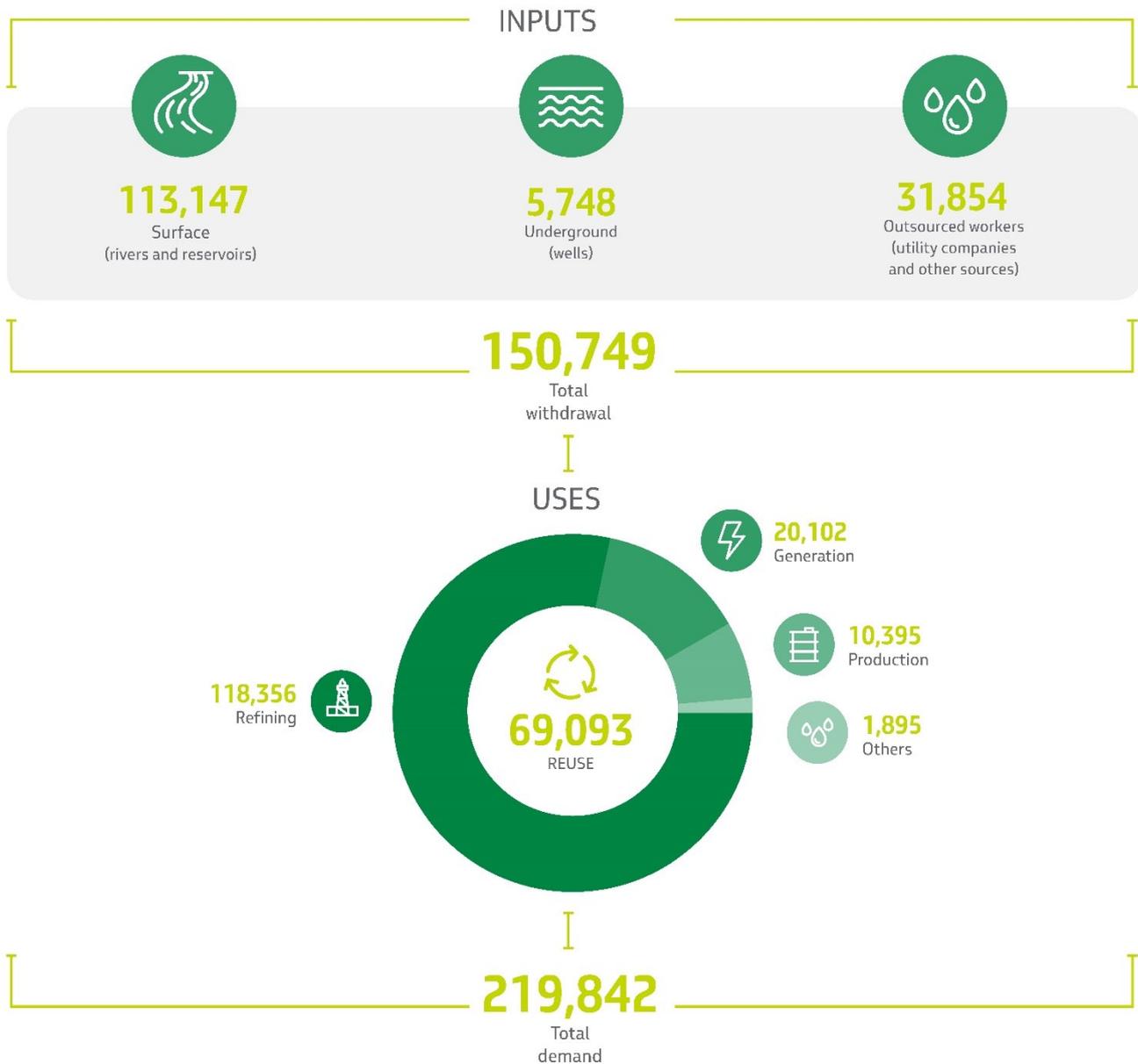
<sup>1</sup> Includes cooling water.

<sup>2</sup> Water stress according to the criteria of the World Resources Institute "Aqueduct Water Risk Atlas": ratio between the "total annual water withdrawal" and the "total annual available renewable water supply" (i.e. Basal Water Stress) being high (40- 80%) or extremely high (> 80%). The analysis took place using the locations of the facilities themselves as inputs and not of their water intake points. This is an approximation, but we believe that the result achieved was satisfactory, since, in general, the intake points are not located in basins other than the basin where the installation itself is located.

<sup>3</sup> Although the GRI requests the division of withdrawals into "fresh water" (≤1,000 mg/L Total Dissolved Solids) and "other water" (> 1,000 mg/L Total Dissolved Solids), we have chosen to follow the criterion to separate fresh water from brackish/saline water adopted in Brazil by CONAMA Resolution no. 357/2005.

<sup>4</sup> Produced water generation values are estimated based on the BSW (Basic Sediments and Water) of the producing wells.

<sup>5</sup> Due to our calculation system, when one of our facilities receives from another Petrobras facility or from a Petrobras subsidiary, this is calculated as "receipt from third parties." GRI requests a breakdown of "Third party water" in Water Stress Areas by typology of the original source of withdrawal by suppliers. We can state that these volumes (5 + 223 Megaliters) come from surface and underground sources, but this detail of which portion comes from each specific source is not available, due to the variety of suppliers.

**USE OF FRESH WATER AND REUSE (MEGALITERS)**


- a) The numbers presented are obtained by consolidating direct measurements in the units (2021 Inventory of Water Resources and Effluents).
- b) Rainwater volumes are recorded in the category "Third Parties (Utility Companies and other sources)," for a total of 38 thousand megaliters.
- d) The volume of fresh water received from Petrobras facilities or subsidiaries is accounted for in the "Third Parties (Utility Companies and other sources)" category, due to the defined calculation system.
- The volumes counted for reuse do not include condensate recovered in thermal cycles and recirculated cooling water. On the other hand, they include the produced water reinjected for secondary recovery in terrestrial fields, replacing fresh water.
- e) In this diagram, fresh water inlets and outlets for open circuit cooling are not included. In 2021, we used 27,440 megaliters of fresh water for this purpose.

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 abstracting "new water." In 2021, the total volume of reuse was 69,093 million megaliters, which corresponds to 31.4% of our total fresh water demand. This reused volume would be enough to supply, for example, a city of approximately 1.6 million inhabitants for one year. Based on these reuse actions, we estimate an annual savings of approximately BRL 18.1 million in water withdrawal costs.

**TOTAL VOLUME OF REUSED WATER**

Description	2018	2019	2020	2021
Reuse (megaliters)	84,012	82,216	73,943	69,093
Fresh water captures (megaliters)	182,316	156,864	146,251	150,749
Demand: reuse + fresh water captured (megaliters)	266,327	239,080	220,194	219,842
Reuse in relation to demand (%)	31.5	34.4	33.6	31.4

a) The data source used for the calculations was the Inventory of Water Resources and Effluents 2021.

b) The volumes of produced water reinjected for secondary recovery of oil and gas in onshore fields, which would otherwise need to use fresh water, are accounted for as reuse.

c) The increase in freshwater withdrawal from 2020 to 2021 was due to the need to increase the energy dispatch in our thermoelectric park.

d) The reduction in reuse volumes between 2018 and 2021 is justified by the decrease in production activities in onshore fields.

**USE AND REUSE OF FRESHWATER (MEGALITERS) – DOWNSTREAM BREAKDOWN**

	All of the areas	Areas undergoing water stress
Reuse (megaliters)	25,444	739
Fresh water captures (megaliters)	119,386	3,089
Demand: reuse + fresh water captured (megaliters)	144,830	3,827
Reuse in relation to demand (%)	17.6	19.3

**USE AND REUSE OF FRESHWATER (MEGALITERS) – UPSTREAM BREAKDOWN**

	All of the areas	Areas Undergoing Water Stress <sup>6</sup>
Reuse <sup>7</sup> (megaliters)	43,054	9,867
Fresh water captures (megaliters)	10,395	321
Demand: reuse + fresh water captured (megaliters)	53,450	10,188
Reuse in relation to demand (%)	80.6	96.9

The sum of the Freshwater Usage and Reuse tables – details for Downstream and Upstream – does not result in our total amounts of freshwater abstracted and reused because we have assets of other types, such as thermoelectric plants and administrative buildings. In these other assets, the volume of fresh water captured in 2021 was 20,968 megaliters and the reuse was 595 megaliters.

**Water consumption**

Despite water being an essential resource for use in our operations, our products do not incorporate significant amounts of water in their composition, and the main consumption

<sup>6</sup> Water stress according to the criteria of the World Resources Institute "Aqueduct Water Risk Atlas": ratio between the "total annual water withdrawal" and the "total annual available renewable water supply" (i.e. Basal Water Stress) being high (40- 80%) or extremely high (> 80%). The analysis took place using the locations of the facilities themselves as inputs and not of their water intake points. This is an approximation, but we believe that the result achieved was satisfactory, since, in general, the intake points are not located in basins other than the basin where the installation itself is located.

<sup>7</sup> The volumes of produced water reinjected for secondary recovery of oil and gas in onshore fields, which would otherwise need to use fresh water, are counted as reuse.

portion observed occurs in evaporative cooling systems. Therefore, we do not follow this indicator in our internal management.

### Produced water management

We manage our offshore produced water discharges in accordance with CONAMA Resolution 393/2007, which is the Brazilian regulation that provides for the continuous disposal of production water on offshore platforms. In this resolution, the daily and monthly limits for the disposal of Oil and Grease Content (TOG) are described, which correspond to 42 mg/L and 29 mg/L, respectively.

The monitoring of TOG in offshore disposal 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 393/2007. In addition, the produced water discarded on the platforms is previously treated in treatment plants, commonly equipped with hydrocyclones and floaters.

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 terrestrial installations, which would otherwise need to withdraw fresh water for this purpose.

In 2021, we discharged around 84,000 megaliters of produced water into the environment and re-injected around 68,000 megaliters for secondary oil recovery purposes. These volumes correspond to approximately 55% and 45% of the disposed volume, respectively. The total load of oils and greases in the discarded produced water was approximately 2,000 tons. Our trend for the coming years is for an increase in the volume of re-injected produced water, due to the expansion of the use of the re-injection practice. Consequently, despite the general trend towards an increase in the generation of produced water due to the maturation of the producing fields, a reduction in this load of discarded oils and greases is expected for 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 non-compliances occurred in 2021, resulting in sanctions. For the downstream there were no sanctions considered significant (above BRL1 million).

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>> [Information on administrative sanctions can be consulted in the Regulatory Environment, Market Opening and Competition chapter.](#)

### Waste management

The search for excellence in the management of our products, throughout their life cycle, includes the environmentally appropriate disposal of solid waste and tailings. Proper waste management integrates our value of “Respect for life, people and the environment”, in accordance with our Strategic Plan 2022–2026 (PE 2022–26), current legislation and good oil industry practices. and gas. Recognizing the importance of this topic for our

internal management and for stakeholders, we publicly reaffirm the ten Sustainability Commitments, including “Zero growth of process waste by 2025.”

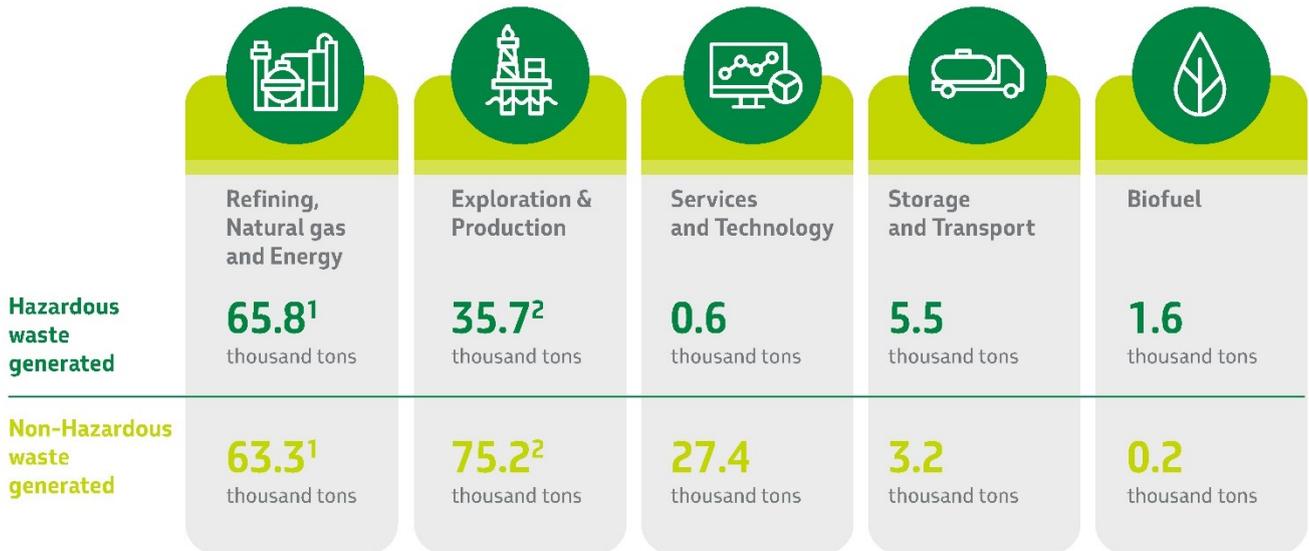
In the last decade, a new concept called circular economy emerged, which aims, among other practices, to collect waste for reprocessing, reuse, and recycling, in order to transform them into new products. In this way, raw materials are saved, as well as other natural and energy resources. We have several examples of adoption of circular economy practices in the company.

Solid waste can contain mixtures of hazardous and non-hazardous substances and, therefore, when not properly managed, it is a source of potential adverse impacts on human health and the quality of the environment. Examples of hazardous process residues include: oily sludge, used lubricating oils, industrial effluent station sludge, spent acidic or basic solutions and fuel filter elements. In the case of non-hazardous waste, we can mention paper, plastic, wood, and construction debris. To mitigate the potential adverse impacts that may be generated by the waste, we implement preventive and corrective actions described in our internal technical standards and norms and follow Brazilian technical norms and technical norms of international reference that deal with the subject. In our units, the sources of waste generation are the activities of production and processing of raw materials and intermediate currents, effluent treatment, preventive and corrective maintenance processes of equipment, engineering works, as well as administrative activities. Therefore, all our sectors, upstream, downstream, biofuels, transport and services generate hazardous and non-hazardous solid waste.

## Generated waste

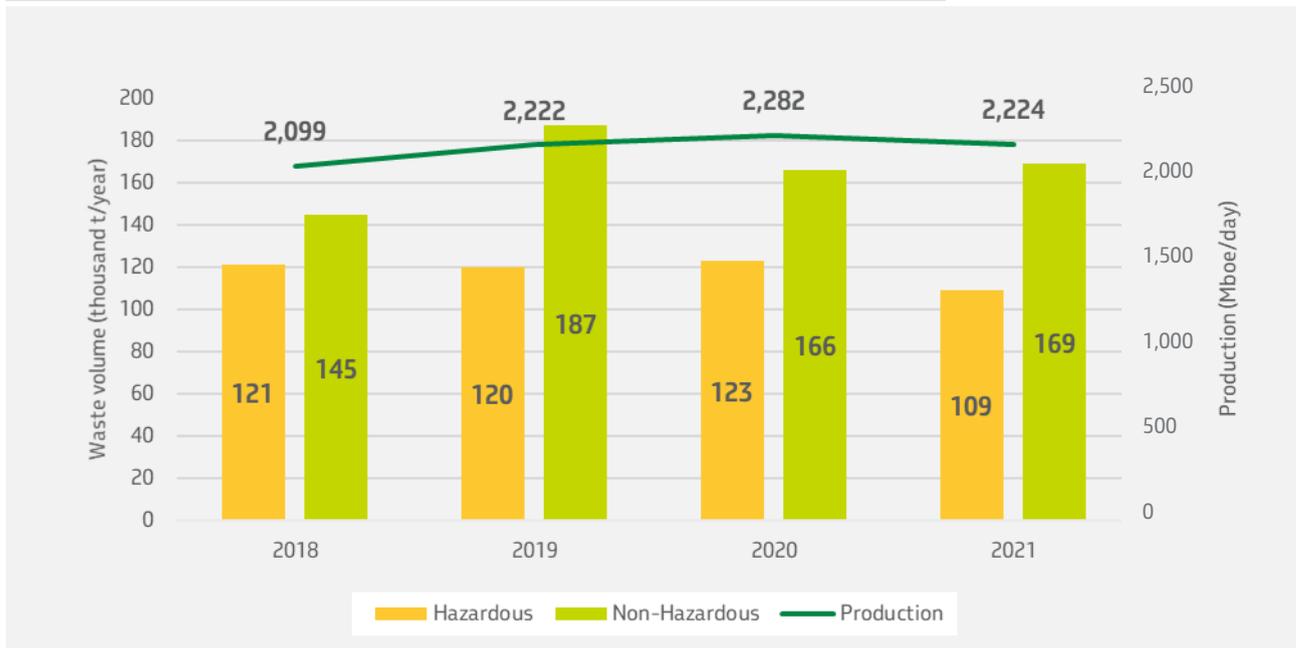
We adopt the system of classifying waste as hazardous or non-hazardous following the protocols reported by the Brazilian Association of Technical Norms (ABNT), Norma Brasileira (NBR) 10004, which is based on the Code of Federal Regulation – Title 40, Protection of Environmental – Part 260-265, Hazardous waste management. It should be noted that Law 12305/2010, which establishes the National Solid Waste Policy, also adopts the same criteria for classifying waste as hazardous and non-hazardous, not taking into account radioactive waste.

In 2021, the generation of hazardous and non-hazardous solid waste in our processes was 109 thousand and 169 thousand tons, respectively. The generation of hazardous waste from processes in 2021 was lower than the result of the last four years, the result is the sum of the implementation of actions to minimize and punctually reduce non-continuous cleaning and maintenance activities. The generation of non-hazardous waste, in turn, was slightly higher than that recorded in 2020, in accordance with variations in our processes.

**HAZARDOUS AND NON-HAZARDOUS WASTE GENERATED**


1) Considers engineering works in the Refining, Natural Gas and Energy units.

2) Considers Production Development activities.

**PRODUCTION OF OIL, LNG AND NATURAL GAS VS WASTE GENERATED <sup>8</sup>**


Regardless of the classification, the waste mass is determined by direct weighing or estimation considering technical and engineering criteria (density and volume). The waste disposal process is carried out by us or by contracted companies. Finally, in 2021, the

<sup>8</sup> The generation of hazardous solid waste for 2018, 2019 and 2020, published in the 2020 Sustainability Report, was updated considering improvements in the calculation of the indicator. For the purposes of the waste sustainability commitment (zero growth of process waste by 2025), the reference value of 120 thousand tons was maintained. The generation of non-hazardous solid waste from our processes for the years 2018, 2019 and 2020, published in the 2020 Sustainability Report, was updated considering improvements in the calculation of the indicator that identified portions of waste not related to our processes that were being accounted for.

result of hazardous solid waste generation was 9% below the established internal limit of 120 thousand tons and the generation of non-hazardous solid waste was 29% below the target of the internally established limit of 245 thousand tons<sup>9</sup>.

### Management of waste-related impacts

As recommended by the Petrobras Management Waste Standard and the National Solid Waste Policy, we follow the waste management hierarchy established in current legislation, namely: No generation; reduction; reuse; recycling; treatment of solid waste; environmentally correct disposal of waste. Since 2013, we have developed initiatives to minimize the generation of solid waste, in line with the concept of circular economy and the generation of new products. We highlight four processes:

- 1) Processing of oily waste streams, with the recovery of hydrocarbons and the reduction of the generation of oily waste at the Shale Unit (SIX) in Paran , which allowed to avoid the generation of approximately 112 thousand tons of oily waste in 2021, contributing to the production of shale oil, naphtha and liquefied petroleum gas (LPG);
- 2) Operation of an oil recovery unit at the Alberto Pasqualini Refinery (Refap), which allowed, in 2021, the reuse of 11 thousand m<sup>3</sup> of oily residual streams, with the recovery of hydrocarbons and the production of green petroleum coke, avoiding oily waste generation;
- 3) Recycling of the entire diatomaceous earth cake generated in the biofuel filtration stage in our biodiesel production units. In 2021, two thousand tons were recycled, 42% of which in the production of ceramic artifacts and 58% in the manufacture of cement;
- 4) Reprocessing in plants of the pulp and paper industry, of spent soda (sulfide) generated in the caustic treatment of light and medium currents in our units, allowing its reuse as a substitute of raw material in the process of digestion of wood and extraction of lignin. In 2021, the total amount of soda (sulfide) disposed of by our units, approximately two thousand tons, followed this destination route.

The waste circularity practices have allowed, in the last 10 years, to reduce the generation of hazardous waste by more than half, from 261 thousand tons in 2012 to 109 thousand tons in 2021, minimizing any negative impacts on the environment and people.

The information on hazardous and non-hazardous waste generated, stored and disposed of by us and our contractors is recorded and managed in our own computerized systems, dedicated to the topic, covering all stages of the management of these materials.

When the waste generated in our activities is managed by contracted companies, they are instructed to follow the same procedures adopted by us, in accordance with contractual, technical, and legal obligations, and continuous inspection activities are carried out by our own personnel. The companies involved in the management of our waste are licensed or authorized by the competent environmental authorities. Outsourced companies involved in waste management can be audited by the inspection of contracts and by the Goods and Services Supplies area, during the supplier qualification phase and/or during the execution of the contracts.

<sup>9</sup> Portions of waste unrelated to our processes were being incorrectly accounted for in the calculation of internal limits for the generation of non-hazardous waste. For clarification, if the improvements in the calculation of the indicator were not considered, the generation of non-hazardous solid waste in 2021 would be 220 thousand tons, 8% below the established limit.

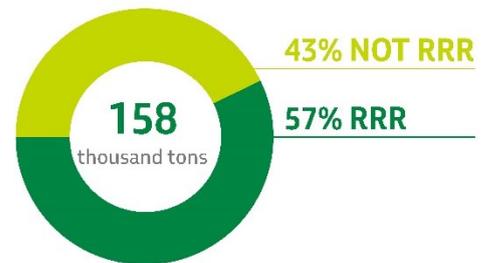
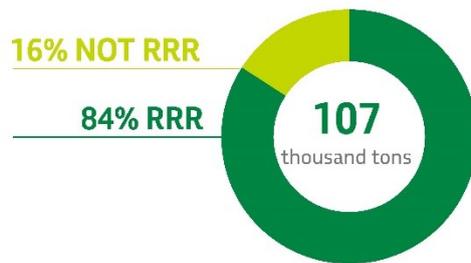
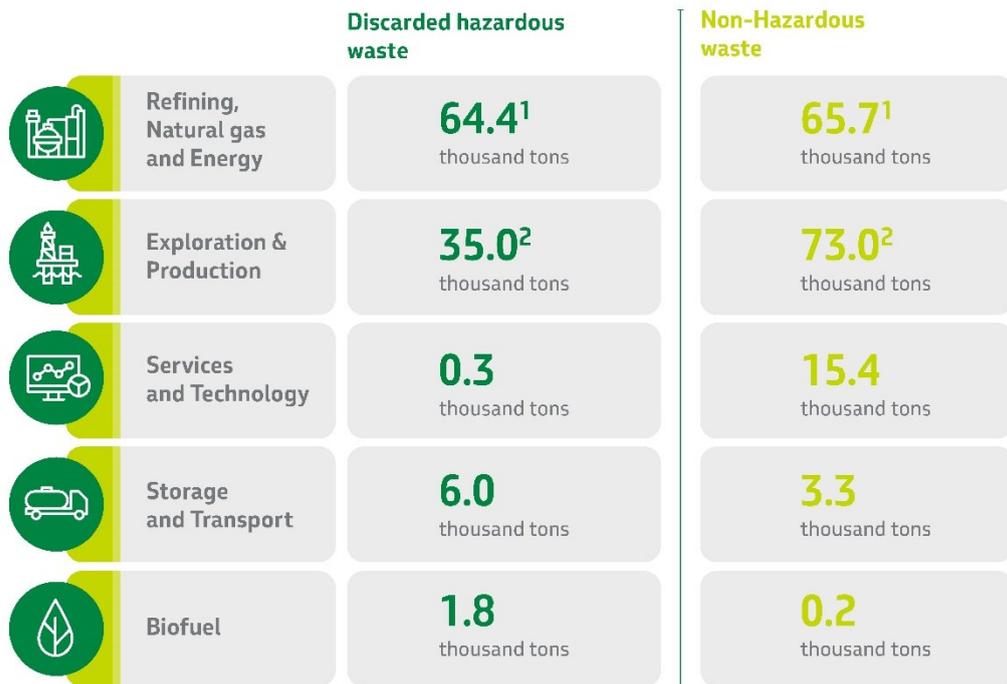
## Waste disposal

We disposed 107 thousand hazardous and 158 thousand non-hazardous tons of waste from our processes. The proper management of our solid waste allowed 84% of the mass of hazardous waste generated in the processes to be destined for RRR (Reuse, Recycling and Recovery) routes, thus reiterating our efforts to adopt circular economy practices. The total waste from processes destined for non-RRR routes was 18 thousand tons, therefore, lower than the established limit for the year (24 thousand tons).

Also in 2021, 57% 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 68 thousand tons, therefore, lower than the established limit for the year (86 thousand tons).

The waste disposal methods are determined by us through contractual agreements and performed by companies hired, specialized and licensed by the environmental authorities, considering Petrobras 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 2021, 107 thousand tons of hazardous waste and 158 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.

**DESTINATION HAZARDOUS AND NON-HAZARDOUS WASTE AND DISPOSAL TECHNOLOGIES**


DISPOSAL TECHNOLOGY	Hazardous waste		Non-Hazardous Waste	
	Mass (mil/t)	Percentage	Mass (mil/t)	Percentage
<b>RRR</b>				
Reuse as fuel	56.0	52.1%	11.4	7.2%
Recovery, recycling, and reuse	33.9	31.5%	78.1	49.6%
Incineration (with energy recovery)	0.0	0.0%	0.0	0.0%
<b>NOT RRR</b>				
Biological treatment	4.4	4.1%	10.8	6.9%
Incineration (without energy recovery)	2.0	1.9%	0.5	0.3%
Disposal in landfills	7.2	6.7%	41.0	26.0%
Others <sup>3</sup>	4.0	3.7%	15.8	10.0%

1) Considers engineering works in the Refining, Natural Gas and Energy units.

2) Considers Production Development activities.

3) Waste submitted to unconventional disposal technologies or to more than one type of treatment.

## Disposal of 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 current legislation and the determinations of the competent authorities.

In 2021, we disposed of 1,700 tons of gravel and water-based fluids for exploration and production processes in land operations or landed from offshore operations<sup>10</sup>. We also sent 13,500 tons of gravel and non-aqueous based fluids. We adopted alternatives for environmentally appropriate treatment or final disposal of these materials.

### TECHNOLOGIES FOR DISPOSAL OF WATER-BASED FLUIDS (WBF) AND NON-WATER-BASED FLUIDS (NWBF)

Disposal Technology	Gravel and WBF		Gravel and NWBF	
	Mass (thousand tons)	Percentage (%)	Mass (thousand tons)	Percentage (%)
Multiphase separation	0.25	14	13.3	99
Recovery, recycling, and reuse	0.06	4	0.01	0
Incineration (without energy recovery)	1.10	64	0.00	-
Disposal in landfills	0.02	1	0.11	1
Others	0.30	17	0.04	0

We invested approximately BRL5.5 million in research and development projects in lines of research related to the minimization, reuse, and environmentally sustainable disposal of waste at our Research Center (CENPES). In this sense, we are studying solutions that make it possible to use our waste as an input for high value-added products, for example the use of oily sludge to produce asphalt products. Also noteworthy is the development of research into the use of drill cuttings as a mineral supplement to enrich poor soils.

<sup>10</sup>The total waste of gravel and water-based fluids reported refers to those that land as hazardous waste in accordance with NBR 10004.

[103-1] [103-2] [103-3] [OG13]

# Accident and Leak Prevention

In our activities, we produce and move large volumes of oil and its derivatives, for this reason, proper management of processes and activities is essential to prevent loss of containment and leaks that can result in impacts to the environment and people. The leak response plans are structured at the local, regional and corporate levels. The corporate contingency plan provides the structure and information for making additional resources available to the units' Emergency Response Plans, 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.

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 there is a need for a national or international response (Tier 3) with use of capping, aircraft for the application of dispersants, and chemical dispersants for source control in underwater well blowout scenarios.

Through our research center (Cenpes), we maintain permanent research in the field of chemical dispersant application, environmental monitoring, environmental impact assessment, ecotoxicity, modeling, and behavior characterization of oil at sea. Additionally, the contingency equipment park has been continuously updated with the incorporation of more efficient devices, both for land 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 product spills

The volume of oil and derivatives leaked recorded in 2021 was 11.6 m<sup>3</sup>, below the alert limit of 120 m<sup>3</sup> established internally for the year. This result represents the best performance in the historical series. Of the leaked volume, 1.56 m<sup>3</sup> were recovered.

This value corresponds to a total of 10 leaks with a volume greater than one barrel (0.159 m<sup>3</sup>). Of note are the leaks of 6.8 m<sup>3</sup> of lubricating oil in the Roncador field, and 1.2 m<sup>3</sup> of diesel oil in the Marlim Leste field, accounting for 69% of the total volume leaked in the year. The other eight leaks recorded were less than 1m<sup>3</sup>.

Of the leaks recorded above a barrel, no occurrence was recorded that reached a sensitive coastal area or unusual sensitive area.

2021 was marked by important results in the fight against clandestine derivations, which are characterized by the action of organized crime that pierces the ducts and installs mechanical systems to steal products, posing a risk to life and the environment.

In 2021, the set of actions implemented resulted in a reduction in the number of clandestine derivations from 201 to 102, that is, a reduction of 49.25% in the number of occurrences, when compared to the previous year. This reduction occurred consistently in nine of the 10 pipelines most susceptible to this type of occurrence.

The reduction in the volume of product extracted from the pipelines, as a result of the fight against this type of crime, was also an important result. The total extracted in 2021 was 1.8 thousand m<sup>3</sup>, versus 5.0 thousand m<sup>3</sup> in the previous year.

Of these occurrences, 83 (81%) occurred in the state of São Paulo, 10 (10%) in the state of Rio de Janeiro, five (5%) in the state of Minas Gerais and the remainder in other states. These three states concentrated 96% of the occurrences in the year 2021.

**LEAKED VOLUME OF OIL AND DERIVATIVES - VAZO (m<sup>3</sup>)<sup>1</sup>**

Description	2021
Total number of leaks above 1 bbl	10
Total volume of leaks above 1 bbl	11.6m <sup>3</sup>
Alert Limit (LMA)	120 m <sup>3</sup>
2021 Performance in relation to the LMA	90.3% below LMA
Average volume leaked by other oil and gas companies in 2020 <sup>2</sup>	513.3 m <sup>3</sup>

**CHARACTERISTICS OF OCCURRENCES PER LEAK VOLUME (%)**

COUNTRY WHERE LEAK OCCURRED	2021
Brazil	100%
Others	0%
<b>PRODUCT LEAKED</b>	
Oil Products	71.9%
Oil	28.1%
<b>LOCATION</b>	
Sea	71.8%
Soil	25.4%
Water Body	2.8%
<b>ACCIDENT CAUSE</b>	
Pipe or tube rupture	25.2%
Equipment failure	61.5%
Tube or equipment corrosion	7.2%
Others	6.1%

<sup>1</sup> The volumes of oil leaked related to our operation are computed (does not include clandestine derivations) of all occurrences that individually account for a volume leaked above one barrel (0.159m<sup>3</sup>) and that have reached water bodies or non-waterproofed soil. A total of 11.6 m<sup>3</sup> is equivalent to 73 barrels.

<sup>2</sup> Peer group average: data on leaked volumes resulting from operations, extracted from sustainability reports or similar published by the companies that make up our peer group for 2020. Until the closing of this report, all data for 2021 had not been released.

## Response measures taken in cases of significant leaks

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 leak source, mobilization of OSRV (Oil Spill Response Vessels) for assessment and assistance with the mechanical dispersion and/or containment, and collection of the leaked oil, and the sending of aircraft to do a flyover diagnosis, providing guidance for vessels deployed for mitigation.

For onshore events, the Emergency Plans are also activated and the EOR is established (operational maneuvers were carried out to interrupt the source of the leak. As part of the actions, the emergency response, property security, and cleaning teams are activated, as well as modern 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.

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 performance of specialized professionals. The “Mar Azul” program, instituted in 2019 with a focus on identifying and treating the main causes associated with the loss of primary containment, has evolved, incorporating the lessons learned with spills in 2020, and was integrated into the “Commitment to Life Program” during the 2021 cycle, one of our largest HSE programs.

Our subsidiary Transpetro also has computerized systems for monitoring the integrity of certain assets 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. The leak prevention strategy considers:

- a) Inspection, maintenance and service to 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 emission reduction;
- e) Implementation of pilot projects to reduce the fuel consumption of ships.

Regarding the conduct related to accidents and spills, our subsidiary Petrobras Biocombustível has a Crisis Management Guide and in its operational units, and has Emergency Response Plans, and a Waste Management Plan and standards to deal with anomalies, planning and execution of emergency drills, and change management.

Petrobras Biocombustível records and treats anomalies through the use of the SIGA System. Computed leaks are reported through strategic indicators and monitored monthly by our senior management.

## 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 in challenging conditions such as those in the pre-salt layer. 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.

During 2021, the Safety Innovation Lab, located at CENPES, was consolidated as a laboratory focused on generating value in process safety and operational health, implementing digital solutions developed and tested in an agile way, in controlled and representative environments, for risk prediction and prevention. The solutions developed to increase the security level of operations, reduce exposure in risky situations, monitor and predict failures in critical systems, involve the application of portable devices, intelligent analysis of videos, robots, drones, virtual reality, and artificial intelligence, among others. These activities are developed jointly with professionals from other areas of the company, in order to optimize and accelerate value delivery. Highlights in 2021 were:

- \_Development of two prototypes of firefighting robots, with a focus on reducing the exposure of firefighters in risk scenarios;
- \_ Use of a training simulator for firefighters to combat emergencies using virtual reality, capable of monitoring the performance of tactical actions and vital functions of employees during training;
- \_ Development and availability of a tool capable of performing 360° photographic mapping, with an estimated 15% reduction in the man-hour cost of planning/outlining maintenance in offshore installations;
- \_Beginning of the partnership for the development of the first robot for autonomous operation in a classified (hazardous) area of the Latin American oil industry, being able to operate in an offshore or terrestrial environment, integrating different systems, sensors, cameras, and detectors with visual inspection capability HD/thermographic, plus sound spectrum analysis for gas leak detection.

Throughout 2022, we will continue with the developments started in 2021, highlighting the following milestones: field tests of fire-fighting robots in onshore and offshore units, for validation of the prototypes developed; availability of virtual reality training. We have a broad HSE initiative aimed at highlighting the importance of human factors in building a mature safety culture.

In November 2021, the Petrobras Human Factors Journey was launched during the Petrobras HSE and Climate Congress, with the participation of senior management. The journey consists of five steps to be built along a plan:

- Leadership engagement;
- Fluency in the fundamentals;
- Operational learning;
- Alignment and integration;
- Organizational resilience.

On this occasion, the five principles of Petrobras' Human Factors were communicated to the entire company. These principles were designed to facilitate understanding and homogenize the following concepts within Petrobras:

1. Trust is key
2. People create security
3. How we respond to failure matters a lot
4. Learning and improving is key to success

The context drives behavior, and the HSE Policy and HSE Guidelines were also revised, incorporating more explicitly the concepts of human factors.

A Human Factors Management Committee was created, which meets weekly with the participation of the five HSE general managers and specialists on the subject and monitors the communication plan to support the construction of the human factors journey.

Professionals are being trained at the postgraduate level in human factors, and proactive indicators for safety management are being developed. We hope that these actions will contribute to improving learning from accidents and improving the culture of learning from successful operations, changing our culture from learning from what 'went wrong' to learning from what 'works'.

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 to detect possible failures and do preventive or corrective maintenance. For this, we highlight the scheduled maintenance stops.

At intervals defined according to the characteristics of the assets, there are scheduled maintenance stops. These stops presuppose a thorough plan for the scope and contracting necessary to execute the services, which seek to guarantee the integrity of the assets, ensuring a high level of reliability during the campaign term.

In 2021, we made 46 maintenance stops of thermoelectric assets, 57 natural gas assets, and 104 refining assets. At Petrobras Biocombustível, five total maintenance stops were carried out at the biodiesel plants and 12 partial ones. In addition, in our Exploration and Production assets, we made 29 of the 31 planned shutdowns on platforms and three of the five planned in onshore production facilities. The Covid-19 contingency scenario limited the number of employees in our operational areas of exploration and production at our refineries, postponing part of the stops scheduled in 2021. In any case, we were able to prioritize activities related to maintaining safety by the legal deadlines and ensuring good operational performance.

In 2022, we plan to carry out 36 maintenance stops on platforms and five onshore production facilities, 43 thermoelectric plants, 68 natural gas assets, 108 refining assets, and 18 at Petrobras Biocombustível, of which 14 are partial and one is total.

Our Health, Safety, and Environment (HSE) practices are based on the Corporate HSE Guidelines that converge with the Operational Safety Management System (SGSO), which consists of a set of management practices defined from Resolution No. 5 of the National Agency of Petroleum, Natural Gas and Biofuels (ANP), dealing with measures to ensure the operational safety of industrial facilities.

>> [Information about our 15 HSE Guidelines can be found on our website.](#)

Committed to strengthening our commitment to life, the environment and operational safety, in 2021 we intensified our relationship with the Public Ministry and public security agencies. With our adhesion to the Instituto Combustível Legal (ICL) and the active participation of Transpetro, we continued to address the issue of fuel theft in pipelines, also known as clandestine derivations (DCs). With these engagement actions and the constant investments in detection systems and monitoring of pipelines, combined with the permanent efforts of several areas of Transpetro (multidisciplinary action) we managed to reduce the number of occurrences of DCs by 49.25% compared to year 2020 and a significant reduction in the volume of extracted product. We have developed greater agility in locating DCs, which minimizes the risks to the population, contributes to the preservation of the environment, the integrity of the pipelines, as well as to avoid interruption of pipeline operations, reducing financial losses and impacts on our image.

Throughout 2021, we continued to implement the Petrobras Integrated Pipeline Protection Program (Pró-Dutos), launched in 2019 and conducted by us in partnership with Transpetro. The program aims to expand and integrate all actions planned to mitigate the risks caused by theft of oil and oil products in pipelines. We also continued with the Emergency Action Plan (PAE/SP) and managed to achieve an accumulated achievement of 93% of the planned actions. It is important to highlight that the programs are multidisciplinary and focus on several areas: intelligence, legislation, social responsibility, communication, technology, and contingency.

During the pandemic period, in particular, social responsibility initiatives focused on actions to support and assist the most vulnerable populations in the vicinity of our pipelines. The actions with the assisted families considered social factors and the criticality in relation to theft issues, based on criteria developed together with us, within the scope of Pró-Dutos and PAE/SP, always acting in a multidisciplinary manner.

Among the actions, we highlight the following:

- Social actions focused on strengthening our link with the communities directly affected, reinforcing the creation of mechanisms to protect human life and the environment. The Solidarity Band project was reissued in 2021 with the distribution of 14,357 basic kits (comprising a basic food basket and hygiene and cleaning items). The field action was developed by the Stakeholder Relations area (RPI) in partnership with local leaders, residents' associations, and partner institutions.

- To build relationships with the communities in the places where we have assets, we carry out periodic activities involving residents and other stakeholders of the local society. These include drills with community participation, face-to-face communication with visits by representatives of Transpetro to the residents surrounding pipeline lanes, meetings at schools and community association sites, events for information and engagement on pipeline safety, and the relationship channel with Transpetro (dial 168), informational brochure distribution in the communities, and dissemination through an advertising campaign with sound cars, radio, and billboard ads.

We also launched a new and extensive advertising campaign to increase public awareness of this type of risk, which encouraged the population to collaborate through the communication channel, telephone number 168, effectively reporting criminal actions. In addition, we maintained our focus on exercising our crisis procedures and responding to emergencies caused by fuel theft from pipelines, by conducting the first integrated crisis drill between Petrobras and Transpetro.

We seek to use these activities to keep communities aware of our operations and understand that the transportation of fuels by pipeline is a safe activity as long as there are no unauthorized interventions in the assets. We expect the communities neighboring the pipeline lanes will be engaged in fighting clandestine derivations and will cooperate by making complaints by dialing 168.

## Leak detection in subsea pipelines



Photo: Petrobras Image Database

### CONTEXT



The inspection of production collection subsea pipelines is carried out periodically by support vessels, which can be assigned for investigation and identification of potential containment losses. There was no technique for automatic identification of these events during the continuous operation of the production wells. The techniques used for pipelines (which transport processed oil) are not directly applicable to production collection pipelines due to technical difficulties in light of the multiphase flow (mixture of water, oil and gas).

In newer wells, there is reasonable availability of real-time data due to the use of pressure and temperature sensors at points of interest along the flow, from the bottom of the well, passing through the ANM (Wet Christmas Tree, equipment installed at the head of the well, on the seabed), until the arrival of the fluid produced on the platform. Occasional leaks in the production collection subsea pipeline provoke characteristic responses in these sensors, although their interpretation is not always immediate. Depending on the internal pressure in the pipeline, an eventual loss of containment can cause the fluid produced to leak into the marine environment, or the entry of seawater into the pipeline. These phenomena have different effects on the observed variables, in addition to variable response times and amplitudes. Furthermore, contributing to the complexity of the problem, all the parameters of a well (such as the characteristics of the pipeline, the fluid produced, and the operating condition at the moment the event occurs) have an effect on the behavior of the observed variables. Added to this are the uncertainties about the characteristics of the leak, such as its position (on the seabed, close to the well, or closer to the platform, in the riser section) or its size.

### SOLUTION



### CHALLENGE



Our main challenge is the need for early detection of containment loss in subsea production collection pipelines. We needed to obtain more objective data (albeit uncertain) that would point to a possible lack of integrity in the pipeline, based on a large volume of information collected.

As a solution, a methodology was developed based on the continuous analysis of production parameters, from pressure and temperature sensors, which was implemented and perfected over almost two years of trials.

The tool created, which is in essence an algorithm executed on specific computers, consists of a process of creating a set of rules based on the transient simulation of the multiphase flow of thousands of different hypothetical situations, in order to create a sufficiently large database. This set of rules operates using the data in a process based on machine learning, resulting in a score from 0 to 100%, which represents the certainty of the occurrence of a leak.

### RESOURCES



The solution required approximately 1.5 year of intense work from a team of approximately five professionals. In addition, an intense numerical simulation project, with thousands of hours of processing, was necessary to produce a database with reasonable reliability. It was



initially implemented in the Integrated Operations Center (COI) of the Santos Basin and later extended to the Búzios COI and is gradually being implemented directly on the platforms.

### RESULTS



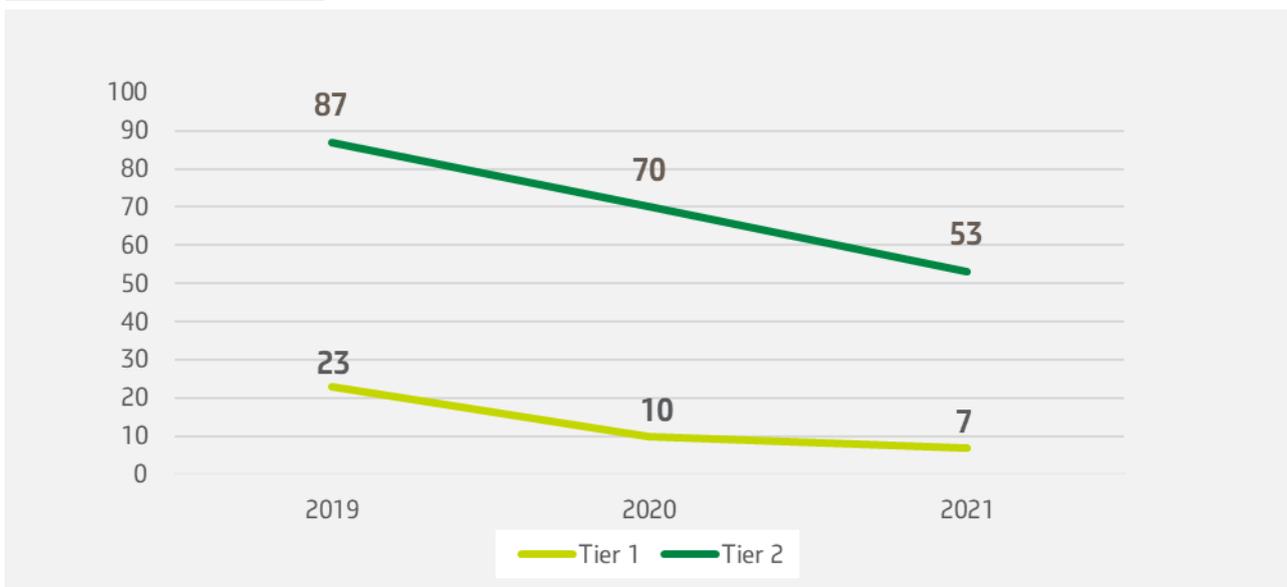
This small failure event detection initiative in subsea pipelines reduced the expected detection time from days to a few hours, minimizing the potential leakage volume. The solution is being gradually implemented directly on the platforms, in order to permanently operate with greater reliability, with the automated closing of valves in case of suspected leakage, allowing to reduce the time of detection of possible leaks. As it is still a recent solution, even in global terms, it is constantly evolving and there are still several challenges to be overcome.

## Process safety

We monitor our Process Safety performance using indicators established in accordance with the best practices in the industry, which allows us to monitor our performance against that of our peers. Thus, we monitor the Number of Process Safety Anomalies Level 1 (Nasp Tier 1) and Level 2 (Nasp Tier 2). 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 Nasp Tier 1 indicator records the most serious process safety accidents.

In 2021, we recorded 10 Tier 1 process safety accidents and 51 Tier 2 accidents, which is lower than last year, showing improved performance. In 2021, our subsidiary Transpetro had no Tier 1 process safety accidents recorded but two Tier 2 accidents were recorded. In all cases, accidents were investigated to identify their causes and define corrective and preventive actions with monitored implementation.

### NASP TIER 1 AND TIER 2



In addition to the reactive indicators (lagging), aimed at monitoring the occurrence of events of loss of primary containment, we continue to direct efforts to improve the set of metrics of a preventive or anticipatory nature (leading). Regarding the monitoring of 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 reliability of the barriers to protect against process accidents in our industrial facilities. Additionally, we continued in 2022 with training in our Process Safety Fundamentals, which reinforce good practices along the operational fronts, so that they are followed by the teams and supported by supervisors and leaders.

>> [Information on the dynamic management of protective barriers and on the Fundamentals of Process Safety can be found in the chapter Safety and Commitment to Life.](#)

## Emergency preparedness and response

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. In this way, 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 simulations; as well as the involvement of relevant audiences such as neighboring communities. We have emergency response plans at local, regional, and national levels.

In 2020, we approved the process standard for working with communities in emergency situations. This standard establishes guidelines, requirements and procedures related to the process of preventing, mitigating, preparing, responding, and recovering emergencies from communities potentially exposed to accidents resulting from activities developed by our business units.

The actions provided for in this standard are in line with the National Civil Protection and Defense Policy, defined through Law 12,608, of April 10, 2012, which establishes the roles and responsibilities of the Federal Government, States and Municipalities to protect and defend civil society, indicating which companies and other social entities act in support of the protection and civil defense bodies. It is also in line with our Social Responsibility Policy, our Corporate Safety, Environment and Health Policy and Guidelines, our Communication Policy, and our Crisis Management Guide.

In 2021, due to the Covid-19 pandemic, all face-to-face actions that were scheduled to occur with communities as a result of the implementation of the standard regarding activities with communities for emergency situations continued suspended, until health security is reestablished. However, despite the impossibility of on-site drills with the communities, the Social Responsibility team did a tabletop drill in order to exercise the Incident Command System (ICS) methodology on August 19, 2021. This methodology was created in the USA and disseminated worldwide and is considered by experts as the main tool for managing crises related to emergencies.

The chosen scenario was fire in the product storage tank TQ-41007 of the Henrique Lage Refinery (REVAP), located in São José dos Campos – SP, after receiving an atmospheric discharge.

The unit in question is activated by the community in the catchment area. The simulated exercise sought to exercise the performance of community relationship teams in emergency situations, according to the standard "Working with communities for emergency situations", training the internal flows of the EOR (articulation assistance), as well as the use of documents and forms (ICS, battle box, activation matrix, mailing, social actors, among others) and propose improvements to community relationship processes.

We also note that, in 2021, even with the pandemic, we carried out 11 drill exercises at a regional level that were 100% remote, using digital tools.

**MAIN DRILLS IN 2021**

Business Area	Drill
HSE	HSE/SA/SS/RE (Table Top): April 20 – Explosion and fire on the platform ship FPSO – 76, in the Búzios field, with multiple victims
E&P	UN-ES (Table Top): April 29 and 30 – Oil leak, followed by fire and explosion on P-55
	UN-BA (Table Top): May 19 – Condensate leak into the sea
	UN-BC (Table Top): August 18 – Oil leak into the sea due to submarine pipeline rupture
	UN-BS (Table Top): September 14th and 15th – Naval Emergency
	UN-SEAL (Table Top): October 20 – Oil spill at sea
	UN-ES (Table Top): November 18 – Oil spill at sea May 19 - Oil leak in the Mataripe River
	UN-RNCE (Table Top): December 09 - Oil leak in the sea from a ruptured underwater pipeline
DP	SUB: May 26 (Table Top) – Sinking of a vessel in the service of SUB
	POÇOS: December 7 and 8 (Table Top) – Blow out
Transpetro	Pipelines: October 19 (Table Top, with BST and CMT) - accident simulation initiated by clandestine derivation in OSBRA Km 158 + 140
Petrobras Biocombustível	eInvoice (UBC): March 25th and December 15th - Communication simulation
	UBC: August 19 and 20 – Tabletop and abandonment drill, and confined space field and rescue
	UBMC: September 29 - Communication and area abandonment drill
	UBMC: October 28, November 30, and December 22 – Tabletop, drill confined space rescue, resource mobilization and activation of the Fire Department

In 2021, we continued the plan for the transition of the units that make up our portfolio management to ensure full compliance with all the units' emergency preparedness and response requirements. This way, a culture of contingency and accident prevention was reinforced in order to prepare the teams involved with this new scenario.

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 is closed (closing). 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.

We have integrated contingency management between different organizational 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 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.

# Social



# SOCIAL



	SITUATION 2020	SITUATION 2021	COMMITMENT 2025
Socioeconomic Impact	TRAINING ABOUT HUMAN RIGHTS	Commitment made	100% trained employees
	HUMAN RIGHTS DUE DILIGENCE	Commitment made	100% of operations
	SOCIOECONOMIC DIAGNOSIS	territories with diagnosis made in up to 3 years	100% of territories with updated diagnosis (maintenance)
	MEASUREMENT OF THE SOCIAL RETURN	5.88% of the voluntary socioenvironmental projects	50% of the voluntary socioenvironmental projects

### Safety and Commitment to Life

- 3 fatalities in 2021
- Best ever TAR result **0.54**
- Increase of **26.15%** in 2020 to **34.99%** in 2021 of physically active employees
- Broad based Covid-19 testing: **631,843** tests in 2021

### Other Relevant Social Topics

#### PEOPLE MANAGEMENT

Women in Management Positions: 16% (2011), 17% (2016), 20% (2021)

Blacks in Management Positions: 14.6% (2011), 17.1% (2016), 20.4% (2021)

#### Profile by age

- 60 or more years: 1,483
- 50 to 59 years old: 7,957
- 40 to 49 years old: 15,540
- 30 to 39 years: 13,063
- 29 or under: 660

#### CONTRIBUTIONS TO SOCIETY

**BRL 203 billion** in company and third-party withheld taxes

**BRL 101 million** donated to fight the pandemic, help families in socially vulnerable situations, among others

#### Sponsorships and Agreements

- Socio-environmental: **BRL 88 million**
- Cultural: **BRL 37 million**
- Sport: **BRL 1 million**
- Business, Science and Technology: **BRL 12 million**

**11** evaluated socio-environmental projects

On average, each project returns **BRL 5.10** in social and environmental benefits to society, for each **BRL 1.00** invested

Together they returned to society more than **BRL 226 million** in social and environmental benefits

**BRL 107.7 million** in socioeconomic impact mitigation and compensation projects

Note: Data on fatalities, TAR, taxes, donations, socio-environmental sponsorships and agreements are consolidated. Other data are specific to Petrobras Parent Company.

[103-1] [103-2] [103-3] [403] [403-1] [403-2] [403-3] [403-4] [403-5] [403-6] [403-7] [403-8] [403-9] [403-10]

# Safety and Commitment to Life

Commitment to life is a value for our organization. Safe work is a critical tool for preserving the health of our employees. Associated with health promotion actions, this binomial results in a healthy work environment.

## Commitment to employee health during the pandemic

After the World Health Organization (WHO) declared the pandemic in March 2020, we internally established an Organizational Response Structure (EOR), based on the *Incident Command System* (ICS) management tool. This provisional structure, formed by our employees, began to guide uniform actions to prevent and combat the advance of the new SARS-CoV-2 virus and to mitigate its consequences on all possible fronts.

We acted quickly and adopted a series of measures to preserve the health of our employees in the operational and administrative areas. The initiatives are in line with the recommendations of the WHO and the Ministry of Health and aim to contribute to efforts to mitigate the risks of the disease. Preventive measures were adopted, such as:

(i) extensive testing, with 631,843 tests being carried out on employees by December 2021; (ii) pre-boarding and pre-shift health monitoring, reinforcement of hygiene measures, distancing and mandatory use of a mask at the units; (iii) reduction in the number of personnel on board platforms, rigs and other vessels to the extent necessary for the safe operation of each unit; (iv) intensified inspection of compliance with prevention standards in all offshore or onshore operational units, with audits in all units and immediate correction of any deviations; (v) return to face-to-face work implemented in stages (since October 2021), in accordance with the context of the pandemic; (vi) awareness and guidance for employees on individual care; (vii) health monitoring and access to telemedicine services, automatic authorization of the two main tests related to Covid-19 (RT-PCR and Serology), coverage for home collection of exams and Covid-19 control rooms for monitoring cases.

All employees were instructed to report any symptoms immediately. We shared specific communication channels (24-hour call center and e-mail), as well as an online form for self-reporting of suspected symptoms. We monitor suspected cases and their contacts since the first report, taking all preventive measures to avoid contagion, guiding employees and applying real-time RT-PCR testing (real-time polymerase chain reaction preceded by reverse transcription - RT- qPCR), when indicated by the health team.

For the offshore sector, considering the special confinement characteristic, we have adopted even more rigorous measures, always maintaining constant contact with regulatory bodies, service companies, and other entities in this sector to align practices. We implemented monitored home isolation and screening by health professionals in pre-boarding platforms, with the suspension of boarding for those who showed any symptoms in the previous fourteen days, as well as performing diagnostic tests before boarding. A dedicated health team is used to evaluate all employees with symptoms on board and provide for the immediate unboarding of suspected cases and their contacts.

Also, we strongly encourage the vaccination of our entire workforce and reached the percentage of 96.9% of employees fully vaccinated as of December 2021.

All this effort has guaranteed the continuity of operational activities that ensure the provision of essential goods and services to society, always preserving the safety and health of all our employees.

In order to ensure that the best practices are also adopted by our suppliers, we monitored the measures and plans of the companies responsible for chartered units and the companies providing services.

## Employee health

Our occupational health management system was implemented and aims at protecting the health of our employees, through measures aimed at promoting, preventing and preserving physical, mental and social well-being, aiming at quality of life and productivity. As a basis for its execution, it considers the Regulatory Norms (NRs) provided for in Ordinance No. 3,214, of the Ministry of Labor and Social Security, including in these norms the Environmental Risk Prevention Program (PPRA), the Occupational Health Medical Control Program (PCMSO), the resolutions of the councils of health professionals, guidelines from the Health and Epidemiological Surveillance, the General Data Protection Law and other legislation in force, such as social security legislation. The management system also has the Ergonomics and Human Factors Program.

Currently, our more than 38,000 employees are covered by our occupational health and safety management system. Also, our contractors also make full use of this system when they are at the company's facilities and are even audited by the Health, Safety and Environment Management Assessment Program (HSE-MAP).

The basis of the health management system also considers the Contec standards developed and approved by its committees, such as Standards 2691 (occupational medical examinations), 2748 (health information), 2692 (occupational dental examinations) in addition to the health standards with guidelines for the main work processes, such as:

- Manage occupational health
- Manage health emergencies and urgent care
- Manage Health Promotion
- Manage Health Surveillance
- Occupational health guidelines for international movements
- Prevention, investigation and monitoring of occupational diseases
- Occupational health guidelines for assigned and requested employees
- Health assessment and recommendation for critical labor activities
- Corporate guidelines for managing medical and dental leave for up to 15 days
- Health Surveillance
- Prevention of Foodborne Diseases

The activities developed in health management include the monitoring of legal, technical and scientific references, both national and international, the analysis of the need to elaborate or revise existing standards or other decision-making documents, the elaboration or revision of content and dissemination of guidelines for occupational health training, and the deployment of occupational health guidelines.

The risks related to the processes and activities developed in our operations are controlled and described in the Environmental Risk Prevention Program (PPRA), as per NR-9 (Standard 9 of the Ministry of Labor and Social Security), which bases the protection and control measures listed in the Occupational Health Medical Control Program (PCMSO), standardized by NR-7 (Standard 7 of the Ministry of Labor and Social Security). All HSE management has as one of the priorities to avoid the occurrence of accidents and injuries to the health of workers and to promote respect for the environment, the communities around our facilities and the entire public with whom we interact.

These actions aim at ensuring that HSE is a value in all our activities, in order to contribute to the sustainability of our business.

Our units have an emergency response plan that provides for emergency and urgent care. Also, all units have professionals dedicated to health care. The health professionals present in different units perform their services and approaches based on the attributions defined by their different class regulatory bodies, complemented by the existing guidelines from internally established rules.

Health care can occur through spontaneous demand, emergencies, occupational assessments or due to health promotion programs. Some of these services can be accessed through scheduling tools, such as an electronic calendar and telephone contact.

As of 2020, we have built and made available the health self-assessment form, in order to obtain from employees their own perception of their health condition. Based on the responses, employees are invited to participate in approaches suited to their health needs. This instrument is based on aspects related to physical, emotional, social, and family health and the relationship with work, allowing respondents to assess their current condition and point out aspects considered a priority for care at the moment. Thus, from the perspective of the person at the center of care, health professionals direct approaches to the promotion, prevention and integral health care of employees, directing them to specific care axes of the *Pra Viver Melhor* Program: Eat, Move, Listen, Harmonize, Take Care. In 2021, we had 7,092 employees monitored in the care axes. Also, information from the self-assessment is of great relevance in monitoring some indicators, such as Percentage of Time Lost (PTP-S), Physically Active Employees (EFA), Rate of Controlled Hypertensives (THC), Body Mass Index above 30 (BMI>30) and Adequate Consumption of Fruits and Vegetables (FLV).

We work to identify and prioritize health risks and vulnerabilities through an integrated analysis of legal requirements, strategic guidelines and the risks and vulnerabilities profile regarding the health of employees and the population in general.

Considering the scenarios, risks, and vulnerabilities identified and prioritized, as well as the other health management processes, strategic guidelines are established, defining the themes that will guide the preparation of health promotion plans and programs. The activities consider the main risk and protection factors related to the identified risks.

Health programs are divided into individual, collective and environmental actions.

Currently, our employees are called upon to carry out occupational examinations, with general and specific guidance on health promotion, in addition to occupational guidelines related to identified occupational risks, work organization, and the work environment.

Some actions related to the following health programs are available to employees, which seek to promote comprehensive health, in an approach that goes far beyond occupational health, focusing on health and well-being 365 days a year:

- Pra Viver Melhor Program
- Program for the Control of Chronic Non-Communicable Diseases (CNCD);
- Mental Health Program
- Labor Potential Restoration Program (PRPL)
- Oral Health Program
- Care program for pregnant women
- Healthy Eating Program
- Physical Activity Promotion Program
- Alcohol, Tobacco, and Drug Prevention Program
- Other actions are also provided by Health Services

Health education actions are continuously carried out, based on epidemiological indicators and data, which permeate different health topics, through different tools such as internal social networks, electronic mail, among others.

Access to these health programs and actions can occur in different ways: through invitations to occupational examinations, whether medical or nutritional; invitations to specific groups of employees via e-mail, availability of health services for professionals to guide health action programs, specific actions also based on the employee's needs and perception of their own health, live streams about health topics, periodic group meetings, individual consultations, and posts in employee groups.

We have modified our physical activity promotion model, allowing the participation of all employees and dependents. The physical activity modalities were expanded, including weight training, cross fit, dance, martial arts, Pilates, and outdoor sports, encouraging employees to choose an activity they enjoy. We also expanded the number of gyms available, all in order to make physical activity a constant in the life of our employees. During the pandemic, for social isolation reasons, online classes were included, in addition to wellness apps with meditation, yoga, Pilates classes and other features, with the aim of encouraging the development of healthy habits, reaching employees and their relatives.

In 2020, due to the coronavirus pandemic and telework, we created a digital relationship environment with employees called Pra Viver Melhor (To Live Better), with the aim of sharing experiences and knowledge to strengthen the topic of health, in addition to specific topics according to needs. of individual care, with monthly interactive posts, with health guidelines related to relevant and prevalent aspects in the employee population, such as diet, physical activity, mental health, family health, breastfeeding, among others.

Among the health events held in 2021, we highlight:

- Online Health Week (more than 5,800 participations);
- Health gamification for healthy habits (Health Week Game; Start Game - Leaderships and Challenge 21) with 5,794 participants in total;
- Live broadcasts with themes about Mental Health (Mental Health in Times of Pandemic; Maternal Mental Health; Mental Health and Valuing Life; and Mental Health for Leadership).

In partnership with health authorities, we are aligned with public vaccination campaigns, encouraging the immunization of employees, whether through the public or private network. During the Flu Vaccination Campaign, we reimbursed 5,400 employees vaccinated from April to July 2021. We develop systematic actions to prevent and control communicable diseases, such as dengue (inspection of areas in search of possible outbreaks and notification of cases to the competent authorities). We also have the Traveler's Health Program that was recently restructured. The health management of employees in international travel guides the processes aimed at these employees, such as medical examinations, approval of medical and dental licenses, etc. There is specialized occupational health care for employees on an international mission, allowing a personalized approach.

In view of the coronavirus pandemic, non-essential business trips, both national and international, were suspended, and only essential and unavoidable trips were maintained, for which we promoted adaptation meetings with health and safety guidelines in the country of destination. In addition to the pre-trip exams, we also monitor travelers returning to Brazil.

We updated the Mental Health Program, as well as implemented the Minha Saúde application, with exclusive content for employees focused on comprehensive health, in addition to a self-applied form that allows referral for mental health follow-up, if necessary. This application is the result of an investment in the construction of an epidemiological and analytical environment in mental health.

The actions developed to promote health throughout 2021 had positive results on the indicators, such as an increase in the percentage of physically active employees, which rose from 26.15% to 34.99% (December 2020 and 2021 percentages). Even in a pandemic context, this result was achieved through initiatives such as online gymnastics, physical activity apps, gamification and monitoring by the Pra Viver Melhor Program.

## Implementation of the Healthcare Gamification System



Photo: Petrobras Image Database

CONTEXT

Data related to the Physically Active Employees (EFA) indicator showed a reduction in the level of physical activity of employees in the pandemic period. In June of 2020 EFA was **33.83%**, reaching **24.66%** in February 2021.

CHALLENGE

Our challenge was to increase the level of physical activity of employees, reducing sedentary lifestyles, encouraging employees to be engaged and take a leading role in their own healthcare.

SOLUTION

CHALLENGE

The solution found was the implementation of a health gamification system (competition), as a playful strategy with the objective of influencing behaviors, increasing motivation and improving engagement. The proposal built focused on encouraging physical activity, improving eating habits, hydration, and offering activities for mindfulness, using apps for a competition between teams.

Two major competitions were held throughout the year involving all employees (April and September/October).

SOLUTION

RESULTS

As a result, **5,794** people enrolled in the competitions and pilots held during the year. In a survey with participants, gamification was evaluated with a high satisfaction rate, between **76** and **87%**. There was an increase in the level of physical activity, consumption of fruits and vegetables, water, interaction with colleagues and the number of steps during the competition. The competition encouraged the start of physical activity and meditation, reaching **18,81%** and **62,17%** respectively during the 21-day Challenge. Another positive aspect was that **71%** of the participants who responded to the survey reported the involvement family members or people close to them in the competition, showing that the initiative favors a change of habits, not only of the participant, but also in their support network. The main result was the increase in the percentage of physically active employees (**34,99%** in December 2021). Considering the success of the initiative, we intend to keep the gamification as part of our health actions calendar, expanding its reach and including other themes focused on holistic health and well-being.

RESOURCES

The implementation of the gamification strategy included:

Partnerships and hiring of Health Techs focused on innovation in health and corporate well-being.

Pilots for tests and adjustments to the reality of Petrobras (four in all, one of them aimed at top leadership).

Communication strategy, involving leaders and the workforce.

From a legal standpoint, we cannot manage the health information of outsourced employees, and therefore, we do not have information on service providers in the health systems, except for emergency events. However, it is worth mentioning that these collaborators are engaged in various actions such as health education campaigns, health efforts and health screenings before critical activities and urgent and emergency care. Also, in every service provision contract there is an HSE attachment that lists the health and safety requirements that must be met by the contractors for their employees. Compliance with these obligations is monitored by inspectors and contract managers and by HSE-MAP audits.

>> [Information on employees of service providers can be consulted in the People Management chapter.](#)

## Health actions related to portfolio management

We reiterate our full attention and care for employees, with an emphasis on those who are in assets undergoing the divestment process. With this objective in mind, the Health Journey in Portfolio Management Project was developed over the last three years. In this project, actions are taken to welcome and care for employees, health professionals, and managers who will be transferred to other units.

Our employees are involved in educational activities with topics regarding the importance of precautions and health care in changing situations, stress management, the role of support networks, and financial education tips, among others. In addition, all employees of this public go through a process of listening and welcoming when they are treated individually and their biopsychosocial issues are carefully evaluated by a multidisciplinary health team, seeking recommendations regarding the times and movements of the transfer.

We also have local Occupational Health Services, which are systematically monitoring the health conditions of these employees throughout the process, through regular occupational examinations and a staff that is on call for emergency care.

## Employee participation

### Participation, commissions, and health committees

We consider it important for employees to participate in the development, implementation, and evaluation of health actions through forums such as the Internal Accident Prevention Commission (CIPA) and our Health Subcommittee, whose main purpose is health prevention and promotion.

Another form of participation is the provision of individualized information through the Health Self-Assessment, a computerized questionnaire that gathers, among other data, health self-assessment and choice of priority health dimension - Healthy Eating, Mental Health, Dental Health, Physical Activity etc.

We reinforce our concern for the health of employees through the establishment of Internal Health Commissions, which discuss our rules and regulations on a biannual basis or less, through technical forums in the most diverse areas. In this context, the CONTEC standards 2691 and 2692 stand out, covering the guidelines for conducting occupational medical and dental exams; providing our employees with health care that goes beyond meeting legal requirements.

In 2021, the Change Management Committee for Portfolio Management monitored and actively collaborated with suggestions for the improvement of Health actions carried out with employees covered by Petrobras' Active Portfolio Management projects.

Information regarding the health of employees is available in publications in the Petrobras Workplace (internal social network), as well as in the Health Panel and in the "My Health" intranet portal, which contains collective and individual information, so that our employees can follow its evolution over time.

All of our employees are represented on formal health and safety committees. In our operating units and administrative facilities, there are Internal Accident Prevention Committees (CIPAS) responsible for reporting risk conditions in the workplace and contributing to the preservation of worker health and physical integrity. In the units

located in the other countries where we operate, there are also committees comprised of employees and guided by local laws that establish the characteristics, duties, and responsibilities of the members. 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.

We encourage the participation of all employees in improving health and safety issues. We believe that taking care of each other is essential and, since 2018, we have maintained the HSE campaign “Caring and Being Cared For,” which encourages a culture of safety for oneself and for others. “Caring and Being Cared For” makes us think about the need to realize that help, through warnings and interventions from colleagues, is important.

## Safety

Our Health, Safety and Environment (HSE) practices are based on guidelines, norms and corporate standards that make up our HSE management system, which covers all employees in administrative and operational areas, being convergent with the Operational Safety Management System (SGSO), which consists of a set of management practices defined based on Resolution No. 5 of the National Agency for Petroleum, Natural Gas and Biofuels (ANP), which deals with ensuring the operational safety of 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.

The Commitment to Life Program, whose first cycle was launched in October 2016, is comprised of structuring projects defined based on a critical analysis of Health, Safety and Environment (HSE) management. With reference to the best market practices, the Program seeks to achieve our Zero Fatalities and Zero Leakage ambitions, and to strengthen our vision of being a reference in Health, Safety and Environment in the industry, based on the following principles:

- HSE as value
- Respect for Life
- Risk-Based Management
- Business Sustainability
- Excellence and Transparency in Performance

The fifth cycle, initiated and developed throughout 2021, highlighted actions such as:

- Saúde 365: comprehensive health care 365 days a year, strengthening employee engagement and protagonism through constant and personalized engagement;
- Dynamic Barrier Management: monitoring the integrity and reliability of preventive and mitigating process safety barriers;
- HSE in the Provision of Services: improvement of HSE requirements and unification of the HSE evaluation process in contracts;
- Water Management: improvement of the produced water management process, making it more proactive and preventive, with a reduction in water abstraction in our operations;

- Mar Azul (Blue Sea): prevention of loss of containment impacting people and the environment;
- Pro-Ducts: mitigation of risks related to loss of containment resulting from clandestine derivations, strengthening operational continuity, reducing impact to people and the environment;
- Transition to Low Carbon: implementation of the Oil & Gas Decarbonization Program, carbon quantification in critical decision-making processes and skills development for low carbon opportunities.



The actions planned for the Commitment to Life Program are reported monthly. The progress of the Program is monitored at various organizational levels, culminating in the evaluation by Executive Board and the HSE Committee of the Board of Directors.

Since the launch of the first Commitment to Life Program in 2016, we had a significant reduction in the Recordable Injury Frequency Rate (TAR) from 2.15 to 0.54. We are working to have a high-performance culture, which demands health, safety, and respect for the environment.

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. This Program promotes the increase of employees' awareness of care for life, through training and qualification of teams and structuring actions. With competitive HSE results in the market, we keep our assets attractive to potential buyers in the event of divestments, in addition to avoiding the generation of liabilities.

In order to support the safety culture, in 2016, ten Golden Safety Rules were defined based on the most recurrent accidents in the oil and gas industry and in our history. Training in the Golden Rules, mandatory for all our employees in Brazil and abroad, is one of the actions provided for in the Commitment to Life Program.



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, they are released through Work Permits (WPs). 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.

In addition, the Tier 1 process accident analysis indicated that the application of a set of “Process Safety Fundamentals” (PSF) would have the potential to eliminate a sizable 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 on Tier 1 process safety events can be found in the [Accident and Leak Prevention chapter](#).**

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.

PSFs complement the Golden Rules, focusing on Process Safety issues. Five Fundamentals were then defined and brought together in our Process Safety Fundamentals Manual. Which are:



The Manual was issued at the end of 2019 and the implementation of the Process Safety Fundamentals in our operational units took place through a series of steps developed in 2020, which included: creating awareness among leaders, establishing focal points for the topic in the units, and training of operational fronts using distance learning. By the end of 2021, more than 17,000 employees had been trained.

Also, within the scope of the Commitment to Life Program, the Dynamic Barrier Management project, aimed at technical training and the adoption of best practices and technological solutions that optimize the management of the integrity and reliability of barriers to protect against process accidents in our industrial facilities. In 2021, the process was standardized, and two pilots were carried out with the application of the *bowtie* technique using a commercial software tool. From 2022 to 2024, this project will be expanded with the implementation in several industrial facilities, both *onshore* and *offshore*.

Also noteworthy was the creation of an emphasis on process safety in the company, with the opening of a public tender to attract professionals in this area, whose strengthening is one of the focuses of the Commitment to Life Program.

## Safety and health training

In addition to the mandatory safety and health training provided and automatically assigned to employees, in accordance with external legislation, internal standards and procedures were developed and made available for self-directed learning, with 20 development paths on critical HSE topics, including non-technical skills related to human factors and digital skills. There are more than 200 safety and health educational solutions available in the SIRH (Integrated Human Resources System), with management and control of implementation in control panels for leaders, their delegates and by the employees themselves.

Considering the need to continue training in operational safety and health and the isolation and social distance due to the pandemic, we developed new solutions and transformed educational solutions from the face-to-face modality into distance solutions.

The application of new digital teaching-learning tools enhanced exchanges between technical HSE networks and enabled employees to play a leading role in their own development process, with digital content curation. The modalities of distance courses are divided into asynchronous, without the presence of an instructor, and synchronous, with the presence of an instructor.

Below are some numbers of HSE content, in different formats, made available in these new teaching-learning and awareness-raising tools:

- HSE Content Portal: centralized repository of HSE content in the cloud with over 6,000 subjects with smart search;
- *Streams*: 20 channels per development track with videos and recordings of webinars and synchronous sessions;
- Petrobras Workplace: 13 thematic groups.

The strengthening of HSE organizational learning is a strategic driver and has unfolded in different actions. It is worth mentioning the delivery of the 20 development tracks in the critical HSE and Climate themes, namely: Contaminated Areas, Explosive Atmosphere,

Audit for Lead Auditors, Audit for Auditees, HSE Assessment in Projects, Biodiversity and Degraded Areas, Contingency and Emergency Response, Atmospheric Emissions and Climate, Human Factors and Ergonomics, HSE Management in Contracts, Management in Occupational Safety, Occupational Hygiene, Licensing and Environmental Compliance - Decommissioning, Licensing and Environmental Compliance - Maintenance of Licenses, Licensing and Environmental Compliance - Obtaining Licenses, Water Resources and Effluents, Solid Waste, Health, Process Safety and Safety in Diving.

The trails aim at working in a structured way with knowledge management, mapping topics and critical knowledge relevant to the areas, identifying technical references per knowledge area, accelerating learning through the combination of different formats of educational solutions. The trails were created using andragogical methodologies that favor the strengthening of collaboration networks. To facilitate user experience, the trails were automated and made available on the corporate system for employees to take, according to their time availability and through any mobile device.

In 2021, the Petrobras HSE and Climate Congress should also be highlighted. Held 100% virtually, the event had more than 450 highly technical works registered, 120 of which were presented, with more than 3,800 spectators. Several panels and lectures were held, with more than 4,000 viewers. The Congress made 11 virtual booths available in an immersive 3D environment, which received over 5,400 visits. Renowned national and international experts (employees and guests) participated in 40 internal and external panels. As a learning strategy, the entire event was recorded and is available on the intranet, in order to encourage the multiplication of knowledge.

It is worth mentioning that during the Covid-19 pandemic, Return to Face-to-Face Work Distance Learning (EAD, in the Portuguese acronym) program was created, mandatory for all employees. As a result, a health questionnaire is applied. Only negative answers about symptoms that lead to the suspicion of the disease generates a Health Passport that allows access to the company's facilities, which needs to be renewed weekly.

## HEALTH AND SAFETY TRAINING (%)

<b>Distance - Risk Factors</b>	
<b>Goals:</b> Identify mechanisms that promote the perception of risk, related to the activities performed by workers, helping in the collective development of safety awareness, inside and outside the professional environment.	
<b>Audience:</b> all employees	83,680 participants in 2021
<b>Return to Face-to-Face Work Distance Learning Program</b>	
<b>Goals:</b> Recognize the main health and safety protection measures when returning to face-to-face work.	
<b>Audience:</b> all employees	35,520 participants in 2021
<b>Beware of Hands Distance Learning Program</b>	
<b>Goals:</b> Understand the importance of care with hands in the most common situations in our activities.	
<b>Audience:</b> all employees	37,712 participants in 2021
<b>Process Safety Fundamentals Distance Learning Program</b>	
<b>Goals:</b> Understand Petrobras' Process Safety Fundamentals (PSFs), their importance, what is expected from their implementation, connecting each of the good practices that the fundamentals reinforce to their operational realities.	
<b>Audience:</b> operational area employees	11,275 participants in 2021

<b>Ergonomics Fundamentals and Management</b>	
<b>Goals:</b> Train to work in the ergonomics program and carry out simplified assessments in their organizational units.	
<b>Audience:</b> employees who will work with ergonomics in their organizational units	61 participants in the 2 groups taught in
<b>ICS 100</b>	
<b>Goals:</b> Provide participants with a basic understanding of ICS 100 – Introduction to the Incident Command System. Prepare them to identify and recognize basic ICS characteristics, ICS roles, standardized facilities and common responsibilities.	
<b>Audience:</b> Organizational Response Structure (EOR) members and professionals involved in contingency planning	10,406 participants in 2021
<b>ICS 200</b>	
<b>Goals:</b> Present the fundamentals and principles of the reactive phase of Incident Management, describing its concepts and dynamics. After the course, participants will be able to act in the initial response of an incident, analyze the complexity of the event, interpret and use the ICS 201 – Initial Incident Report form.	
<b>Audience:</b> Organizational Response Structure (EOR) members and professionals involved in contingency planning	4,262 participants in 2021
<b>ICS 300</b>	
<b>Goals:</b> Introduce members of the EOR incident management group to the fundamentals and principles of proactive planning for medium magnitude incidents.	
<b>Audience:</b> Organizational Response Structure (EOR) staff, the Incident Management Group, and professionals who take oversight positions during escalating incidents	604 participants in the 21 groups taught in 2021
<b>ICS 320</b>	
<b>Goals:</b> Introduce members of the EOR incident management group to the fundamentals and principles of proactive planning for medium magnitude incidents.	
<b>Audience:</b> Organizational Response Structure (EOR) staff, the Incident Management Group, and professionals who assume supervisory positions during escalating incidents	67 participants in the 3 groups taught in 2021
<b>NR-37 (Services in High Voltage Electrical Installations) Health and Safety on Oil Platforms</b>	
<b>Goals:</b> Act in accordance with the requirements contained in Regulatory Standard No. 37 regarding the performance of services in electrical installations energized with high voltage.	
<b>Audience:</b> workers who require training to perform services in electrical installations energized with high voltage on board oil platforms operating in Brazilian Jurisdictional Waters	322 participants in the 7 groups taught in 2021
<b>Electrical Installations in Explosive Atmospheres</b>	
<b>Goals:</b> Recognize the risks of equipment and installations in explosive atmospheres, throughout their operating cycle.	
<b>Audience:</b> employees who work in the operation, design, installation, inspection, maintenance and surveillance of electrical installations in explosive atmospheres	567 participants in the 2 groups taught in 2021
<b>BOW TIE Methodology - Fundamentals and its Applications at Petrobras</b>	
<b>Goals:</b> Apply the <i>Bow Tie</i> methodology to perform risk analysis.	
<b>Audience:</b> Petrobras employees and their equity interests	172 participants in the 3 groups taught in
<b>Training of Leaders in PRA, HAZOP and LOPA</b>	
<b>Goals:</b> Train leaders in Preliminary Risk Analysis (PRA), HAZOP (Hazard and Operability Study) and LOPA (Layers of Protection Analysis).	
<b>Audience:</b> employees assigned to work on risk studies in the E&P facility change management phases	204 participants in 1 group in 2021

<b>NR-10 (Basic Recycling) - Safety in Electricity Installation and Services</b>	
<b>Goals:</b> Identify the risks to the safety and health of workers who interact with electrical installations and services involving electricity, recycling the concepts of safety, firefighting and first aid contained in NR-10.	
<b>Audience:</b> employees involved with interventions in electrical systems that require recycling of the NR-10 Basic course	13,254 participants in 2021 (held every 2 years and whenever there is one of the situations provided for in the NR)
<b>NR-20 (Basic Update) - Occupational Health and Safety with Flammables and Fuels</b>	
<b>Goals:</b> Provide for refresher training for employees who carry out their work activities in accordance with the requirements contained in Regulatory Standard (NR) 20, which deals with the management of occupational safety and health and the risk factors for accidents arising from extraction, production, storage, transfer and handling of flammable and combustible liquids.	
<b>Audience:</b> workers in class I, II or III facilities in activities with flammable and combustible liquids as per item 20.11.4 of NR-20 and need refresh training as per item 20.11.13 of NR-20	3,255 participants in 2021 (carried out every 3 years and whenever one of the situations provided for in the
<b>NR-20 (Intermediate Update) - Occupational Health and Safety with Flammables and Fuels</b>	
<b>Goals:</b> Provide for refresher training for employees who carry out their work activities in accordance with the requirements contained in Regulatory Standard (NR) 20, which deals with the management of occupational safety and health and the risk factors for accidents arising from extraction, production, storage, transfer and handling of flammable and combustible liquids.	
<b>Audience:</b> workers who work in accordance with items 20.11.5 and 20.11.6 of NR-20 and need the refresher course	1,064 participants in 2021 (carried out every 2 years and whenever one of the situations provided for in the
<b>EAD NR-20 (Advanced I Update) - Occupational Health and Safety with Flammables and Fuels</b>	
<b>Goals:</b> Provide for refresher training for employees who carry out their work activities in accordance with the requirements contained in Regulatory Standard (NR) 20, which deals with the management of occupational safety and health and the risk factors for accidents arising from extraction, production, storage, transfer and handling of flammable and combustible liquids.	
<b>Audience:</b> workers who work in accordance with item 20.11.7 of NR-20 and need the refresher course	3,967 participants in 2021 (held every year and whenever one of the situations provided for in the NR occurs)
<b>EAD NR-20 (Advanced II Update) - Occupational Health and Safety with Flammables and Fuels</b>	
<b>Goals:</b> Provide for refresher training for employees who carry out their work activities in accordance with the requirements contained in Regulatory Standard (NR) 20, which deals with the management of occupational safety and health and the risk factors for accidents arising from extraction, production, storage, transfer and handling of flammable and combustible liquids.	
<b>Audience:</b> employees of class III facilities, in activities with flammables and combustibles according to item 20.11.8 of NR-20 and need a refresher course as per item 20.11.13 of NR-20	4,674 participants in 2021 (held every year and whenever one of the situations provided for in the NR occurs)
<b>Petrobras Golden Rules</b>	
<b>Goals:</b> Know Petrobras' Golden Rules and recognize the importance of complying with these rules.	
<b>Audience:</b> Petrobras employees and their equity interests	1,772 participants in 2021
<b>EAD - Safe Driving Tools</b>	
<b>Goals:</b> Promoting safe behavior in traffic, using safe driving tools when driving vehicles and multiplying this knowledge for their work teams.	
<b>Audience:</b> professionals responsible for raising awareness among drivers of vehicles weighing up to 3.5 ton and seating up to 8 passengers providing service to Petrobras	251 participants in 3 groups in 2021
<b>EAD - Emergency Response Plan - EDISEN Building</b>	
<b>Goals:</b> Know the Emergency Response Plan (ERP) of the Senado Building (EDISEN), identify emergency scenarios and available resources; to know the abandonment procedures and the importance of simulated exercises and walking monitors.	
<b>Audience:</b> EDISEN employees	632 participants in 2021

<b>EAD - Emergency Response Plan - EDISE Building</b>	
<b>Goals:</b> Know the Emergency Response Plan (ERP) of the Petrobras Headquarters Building (EDISE), identify emergency scenarios and available resources; to know the evacuation procedures and the importance of simulated exercises and floor monitors.	
<b>Audience:</b> EDISE employees	189 participants in 2021
<b>EAD - Emergency Response Plan - EDIHB Building</b>	
<b>Goals:</b> Know the Emergency Response Plan (ERP) of the Gen. Horta Barbosa Building (EDIHB), identify emergency scenarios and available resources; to know the evacuation procedures and the importance of simulated exercises and floor monitors.	
<b>Audience:</b> EDIHB employees	47 participants in 2021
<b>PEODIVE Platform and HSE Alert Tool Familiarization - Safety Rank</b>	
<b>Goals:</b> To promote the familiarization of the employees involved with the technical details of the operations in the HSE Alerts - <i>Safety Rank</i> tool.	
<b>Audience:</b> employees involved with technical details of diving operations	100 participants in 2021
<b>IMCA Best Practices and Safety Recommendations Course for Diving Operations</b>	
<b>Goals:</b> Instruct Petrobras' Operational and Fiscal Technical Support team on the IMCA (International Marine Contractor Association) guidelines aimed at improving performance in quality and safety in diving operations.	
<b>Audience:</b> professionals working in the Diving Operational Technical Support and Diving Supervisors at Petrobras	96 participants in 2021
<b>General Aspects of Operations with Human Diving</b>	
<b>Goals:</b> Know the main concepts of operations (maintenance and inspection) with human diving applied to subsea systems	
<b>Audience:</b> Petrobras employees, especially those who interface with subsea systems	215 participants in 2021
<b>Health Program for Pregnant Women and Future Parents</b>	
<b>Goals:</b> Offer guidelines on health care for pregnant employees from the gestational period to return to work and active parenthood, aiming at health care, working conditions, maintenance of working potential and considering legal aspects, internal rules, maternity and paternity rights.	
<b>Audience:</b> pregnant employees and their partners, future father employees and their pregnant partners.	149 participants in 4 groups in 2021 (quarterly)
<b>Prevention of Problems Related to the Use of Alcohol and Other Drugs</b>	
<b>Goals:</b> Identify, approach and raise awareness with employees about the consumption of alcohol and other drugs; guide and monitor employees undergoing treatment; act as a facilitator in the reinsertion of employees to their work and advise managers and supervisors in the process of reinserting employees in regular work activities.	
<b>Audience:</b> healthcare professionals	310 participants in 2021
<b>Portfolio Management - Training of Health Professionals: Local Teams</b>	
<b>Goals:</b> Train local health teams to act on Portfolio Management demands, presenting an overview of health performance in this process and improving the ability of professionals to intervene in these demands.	
<b>Audience:</b> healthcare professionals	880 participants in the 12 groups taught in
<b>Portfolio Management - Health Journey: Management Awareness</b>	
<b>Goals:</b> Raise awareness and guide managers involved in Portfolio Management projects, providing self-reflection and sharing strategies for managing teams in times of change.	
<b>Audience:</b> managers, coordinators and supervisors	955 participants in the 25 groups taught in
<b>Covid-19: training for airway swab collection</b>	
<b>Goals:</b> Train to carry out test collection for Covid-19.	

<b>Audience:</b> healthcare professionals	16 participants in 2021
<b>Mental Health for Health Professionals: Mental Health, Listening and Inclusion</b>	
<b>Goals:</b> Expand knowledge on topics related to mental health and develop listening and inclusion skills for the development of care in this field.	
<b>Audience:</b> healthcare professionals	1,131 participants in 2021
<b>Internal Audit Process for Health, Safety and Environment Management - HSE-MAP</b>	
<b>Goals:</b> Strengthen the training of internal auditors in the HSE-MAP audit processes and interactions with regulatory bodies.	
<b>Audience:</b> lead auditors, auditors and audit facilitators	158 participants in 2021

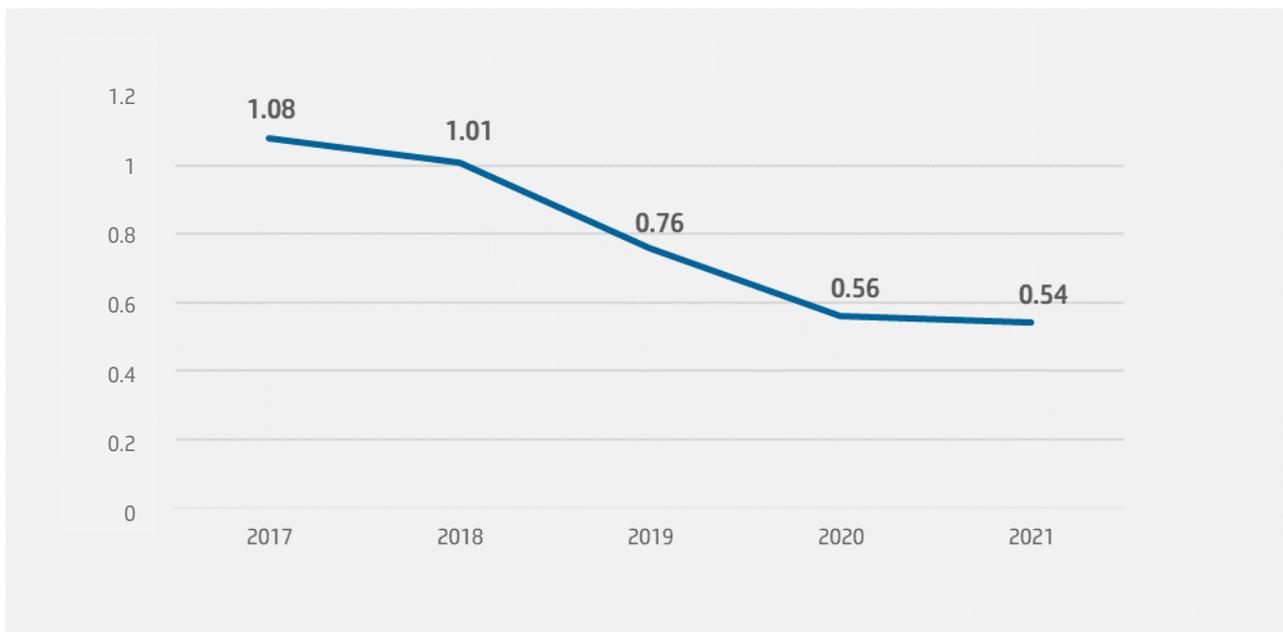
## Occupational health and safety indicators

The evaluation of the HSE management uses the HSE Management Assessment Program (HSE-MAP). This process is based on verifying compliance with the standards derived from the **15 Corporate HSE 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.

Our goal is to operate within the best global safety standards. One of our top metrics is the Recordable Injury Frequency Rate (TAR) per million man-hours. In 2021, we obtained a TAR of 0.54, our best historical result, 4% below 2020 results, when we reached a TAR of 0.56, below the peer group benchmark. The performance was 23% lower than the target for the year (>0.7). The outstanding result was supported by the programs to reinforce safety management and the Commitment to Life Program and a possible direct consequence of the implementation of the numerous initiatives to promote our safety culture that are reflected in our zero-fatality ambition, defined in our Strategic plan.

In 2021, there were three fatal accidents, all involving third-party employees, in the execution of contracts with Petrobras, resulting in an index of 0.85<sup>1</sup>. The first fatality occurred in a rope access tank inspection activity; the second, during the launching of the service boat in the water, for training in oil collection; and the third, during the maintenance process in the compressed air-drying system. In all three cases, the contracted companies involved took over the management of the entire funeral and family (financial and psychological) support process and Petrobras monitored this support so that everything was properly carried out.

<sup>1</sup> Ratio between the number of deaths and the number of hours worked, multiplied by 100,000,000.

**RECORDABLE INJURY FREQUENCY RATE (TAR)**


The Occupational Disease Incidence Rate (TIDO) indicator allows you to monitor the occurrence of occupational diseases in the company. There was no record of any new cases of occupational diseases between 2019 and 2021, according to data available from SIS and SD2000.

**OCCUPATIONAL HEALTH AND SAFETY INDICATORS**

Indicator	2017	2018	2019	2020	2021
Recordable Injury Frequency Rate (TAR) <sup>2</sup> - Total	1.08	1.01	0.76	0.56	0.54
Recordable Injury Frequency Rate (TAR) - Employees	0.81	0.82	0.71	0.31	0.27
Recordable Injury Frequency Rate (TAR) - Contractors	1.18	1.08	0.78	0.66	0.64
Recordable Injury Frequency Rate with Leave (TFCA) <sup>3</sup> - Total	0.58	0.57	0.48	0.35	0.34
Recordable Injury Frequency Rate with Leave (TFCA) - Employees	0.60	0.61	0.62	0.25	0.19
Recordable Injury Frequency Rate with Leave - TFCA - Contractors	0.57	0.56	0.43	0.39	0.40
Occupational Disease Frequency Rate - TIDO <sup>4</sup> - Employees	0.02	0.02	0	0	0
Average work-related days lost per employee <sup>5</sup> - Employees	0.23	0.18	0.15	0.11	0.15
Percentage of Lost Time - PTP/PTP-S <sup>6</sup> (%) - Employees	2.32	2.42	2.37	1.53	1.83

<sup>2</sup> Number of recordable injuries per million man-hours of risk exposure. It includes typical cases of injuries without leave (excluding first aid cases), injuries with leave, occupational diseases, and fatal accidents.

<sup>3</sup> Number of injury victims that take leave from work resulting from typical accidents or cases of occupational disease per million man-hours of risk exposure.

<sup>4</sup> Total number of new cases of occupational diseases, per 1,000 employees.

<sup>5</sup> Average days lost per employee related to work: number of days lost per employee due to occupational health leave - occupational accident and disease. In 2021, there were no cases of occupational diseases, despite the fact that it is accounted for in the calculation of the indicator. The calculation considers the days from the day after the injury to the day before the return.

<sup>6</sup> Total hours not worked due to illness and injury accumulated during the period, divided by the total planned hours accumulated during the period, multiplied by 100. As of 2020, this indicator will be called Percentage of Time Lost - Health - PTP-S. We decided to make an adjustment in the calculation of the Percentage Lost Time indicator - PTP, in order to remove hours referring to vacation from the total planned hours of work, as well as data related to assigned employees. As a result, it was necessary to adjust its calculation formula, as well as to establish a target for the year 2021 based on the new parameters.



In 2021, we had 25 recordable injured employees and 166 recordable injured contractors, generating a TAR of 0.27 and 0.64, respectively. Of that total, 17 of those injured on leave were employed and 102 were contractors, for a TFCA of 0.19 and 0.40 respectively.

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.

[102-8] [102-35] [102-36] [102-38] [102-41] [401] [401-1] [401-3] [404] [404-1] [404-3] [405] [405-1] [405-2]

# People Management

The world of work continues to evolve, and the business context is undergoing rapid transformation with the opening of the market in Brazil and the global energy transition, demanding even more extensive collaboration and innovation from our employees. People management in the company is crucial for the execution of our strategies and the achievement of the expected results. Our Human Resources (HR) area focuses on valuing professionals and creating the necessary conditions for each one to fulfill their full potential.

Thus, HR has been implementing solutions aligned with the strategic challenges of each business segment and making people management processes more agile and efficient, compatible with the best market practices, offering employees and leaders a better experience.

In order to integrate the Strategic Plan 2022-2026 (PE 2022-26), with a focus on the medium and long term, challenges are observed regarding organizational culture, the development of critical skills, cost efficiency and staff adaptation, which translate into the strategic HR choices established for the period.

Our final goal is to preserve 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.

## Staff and profile of the workforce

Respect for life, people and the environment is one of the principles of our Code of Ethical Conduct and is, together with health and safety, one of the pillars of Strategic Plan 2022-26.

In accordance with our strategic positioning and as an expression of work relations management permeated by dialogue, valuing employees, respecting their representations, and by balancing employee desires and our corporate objectives, we affirm our policy of permanent union negotiation, with the consolidation of Collective Labor Agreements (ACT), in which the objective conditions of labor relations are broken down into social and economic clauses.

The employment contract of 38,694 of our employees at the parent company follows the Consolidation of Labor Laws (CLT), with 32,158 men and 6,536 women. Additionally, we have nine officers who are statutory and governed by our bylaws, all men, totaling 38,703 employees as of December 31, 2021.

**NUMBER OF EMPLOYEES UNDER EMPLOYMENT CONTRACT PER REGION IN 2021 (PARENT COMPANY)**

Work Region	CLT	Statutory
Southeast	32,563	9
Northeast	3,840	-
South	1,514	-
North	642	-
Central-West	135	-
<b>Total</b>	<b>38,694</b>	<b>9</b>

Members of our board (officers) are governed by the company's bylaws and also by the Corporate Law and are not subject to the CLT. We do not have employees on temporary or part-time contracts (only on permanent contracts, for an indefinite period).

For service contracts, we do not define the number of employees contracted companies must use to execute their contracts, but 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 scale of work, belongs to their respective employers. We have the information available in our corporate access system. Thus, in December 2021, we counted 92,401 employees of service providers operating in our units, classified of activities and geographic areas, as shown in the table below.

**SERVICE PROVIDERS OPERATING IN OUR UNITS BY GEOGRAPHIC REGION (PARENT COMPANY)**

Activity Type	Central-West	Northeast	North	Southeast	South	Total
Administrative Support	81	1,074	225	5,994	143	7,517
Direct and Indirect Operations Support	160	14,237	2,298	34,763	2,975	54,433
Maintenance Stoppage	10	185	1	3,433	494	4,123
Works	5	3,067	150	22,986	120	26,328
<b>Total</b>	<b>256</b>	<b>18,563</b>	<b>2,674</b>	<b>67,176</b>	<b>3,732</b>	<b>92,401</b>

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 for services and in our Ethical Conduct Guide 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 even terminate the contract with the supplier. Also, in order to comply with articles 83 and 84 of Law 13,303/16, the need to open a Commission for the Analysis and Application of Sanctions (CAASE) is analyzed.

One way to encourage and attract young people to our industry is the Petrobras Young Apprentice Program (PPJA) which in 2021 included 1,197 young people distributed across

17 Brazilian states<sup>1</sup>. The numbers account for trainees engaged throughout the year and those with an active contract in December 2021. The Petrobras Young Apprentice Program complies with Law 10,097 2000 and Decree 9,579/2018, which determines that establishments of any type are obliged to employ and enroll 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.

Even considering the pandemic, the PPJA did not suffer a shutdown; when necessary, assisted technology was used to carry out the learning courses.

## Headcount Adaptation

One of the main current and future challenges for our HR management is to ensure the continuous adaptation of our staff to the business portfolio. In this sense, at the end of 2020, we implemented a new method of headcount planning, called Optimal Headcount (OH). The purpose of OH is to define headcount according to the company's needs, which is sufficient to support the established strategy, observing the leading role of each executive manager in defining the assumptions used for the projection, guarantee operational safety and implementation of new projects, in addition to focus on reducing overhead.

The analysis of this projection, associated with the historical evolution of headcount and the turnover of our staff in recent years, indicates the need to implement a set of initiatives to adapt the workforce to the company's strategies. Improving internal staff mobility practices will be essential to provide the company with the necessary flexibility for its portfolio management strategy. Also, there is an opportunity to adopt a policy of oxygenation of people, with specific guidelines, and supported by structured planning of hiring and termination of employees and training and continuing education programs, in addition impact and cost analysis, creating conditions for the maintenance of critical knowledge, entry of new knowledge and gradual change in the profile of the workforce. Finally, programs that make it possible to increase productivity and optimize processes will also allow us to better adapt our staff to the needs of our business.

## Recruitment and selection of employees

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.

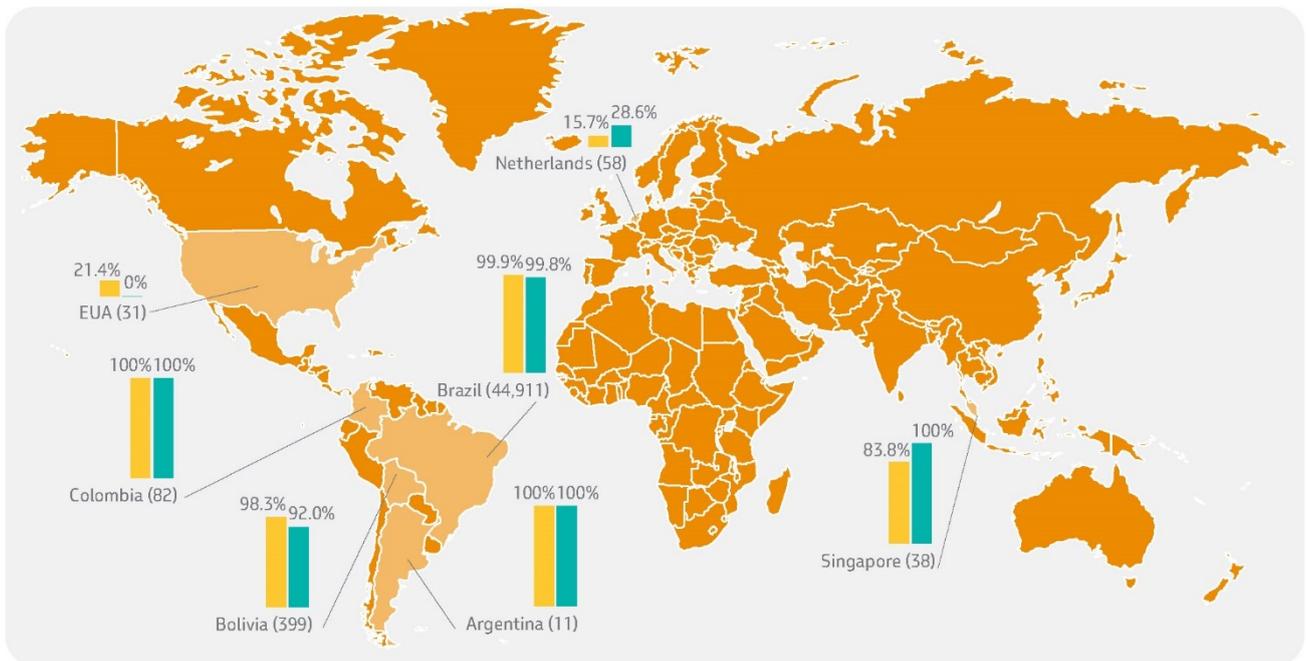
Our admissions are made through public selection processes, in accordance with article 37 of the Federal Constitution and the current job and salary plan. Guidance on the necessary procedures is contained in a public notice available on the Petrobras website and in the Federal Official Gazette. In order to participate, it is necessary to pay the registration fee and, only after its completion, the candidate's registration is confirmed. Exemption from the registration fee may be requested if the candidate meets the requirements of Federal Decree No. 6,593 of October 02, 2008 (citizens registered with the Federal Government Social Program Register - CadÚnico, included in Federal Decree No. 6,135, of June 26,

<sup>1</sup>Data on the PPJA were obtained considering the two cycles of direct hiring and the young trainees active in programs still in force.

2007, and who are members of low-income families, pursuant to Decree No. 6,135, of 2007).

One of the basic requirements for admission, among others, is that the candidate has Brazilian or Portuguese nationality (when supported by the equality status between Brazilians and Portuguese, under the terms of paragraph 1, article 12, of the Federal Constitution and the Treaty of Friendship, Cooperation and Consultation, enacted in Brazil through Decree No. 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 2021, Brazilians were 99.94% of our employees at the parent company, including senior management.

In our companies abroad, we have a policy of prioritizing local workforce.



■ Percentage of local employees among employees with no additional payment for leadership/management position.  
 ■ Percentage of local employees among employees with additional payment for leadership/management position (consultants, supervisors, managers and directors). Data from December 31, 2021

The public selection processes in our parent company are carried out with equal compensation for men and women and, according to Brazilian legislation, 20% of vacancies are reserved for black candidates and a minimum 5% for people with disabilities. As one of the measures adopted to promote the gradual oxygenation of our workforce, and in line with our Strategic Planning, after three years without carrying out public selection processes (PSP), in 2021 a new PSP was opened for admission from 2022, with 757 vacancies of different emphases of higher education, 8% of the vacancies reserved for people with disabilities, which had the registration of 212,000 candidates.

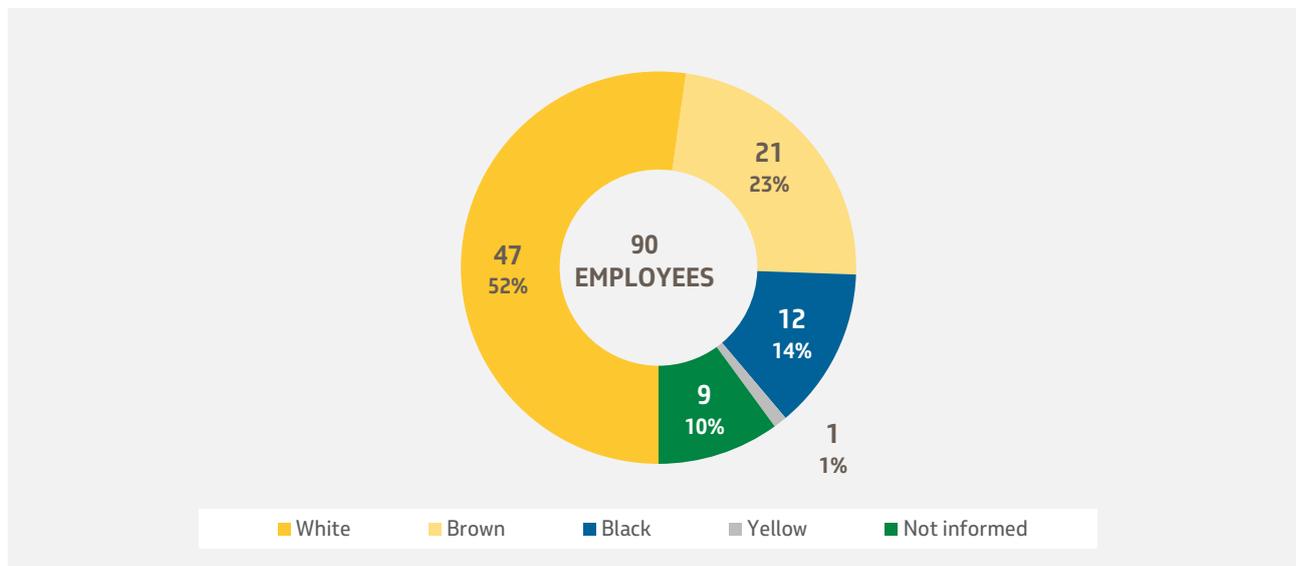
Our employees are hired through a public selection process. However, as provided for in Art. 50 of the Bylaws, the functions of Senior Management may, exceptionally, and, at the discretion of the Board of Directors, be assigned to technicians or specialists who are not part of our permanent staff, through freely appointed commissioned positions. As defined in the Basic Organizational Plan (PBO), Senior Management is comprised of: positions with additional payment for leadership/management fulfilled by the heads of the organizational units of the general structure; consultants and advisors to the president's office; and executive technical assistants to the president's office, Board of Directors,

Audit Committee and executive officers. For positions of the general structure, the hiring of professionals who are not part of our permanent staff are limited to 40% of the total staff.

In 2021, a total of 90 people were admitted, 14 women and 76 men, the majority (90%) participating in public selection processes from previous years. Of those hired, 9 went to senior management positions and 81 were employees with no additional payment for leadership/management position. The distribution of admissions per age group, region, race, and nationality are shown in the following tables.

**NUMBER OF EMPLOYEES ADMITTED IN 2021 PER REGION (PARENT COMPANY)**

Region	Up to 30	From 31 to 40 years old	From 41 to 50 years old	From 51 to 60 years old	Above 60 years old	Total
Midwest	0	0	0	0	0	0
Northeast	26	2	0	0	1	29
North	1	0	0	0	0	1
Southeast	38	9	6	5	1	59
South	1	0	0	0	0	1
<b>Total</b>	<b>66</b>	<b>11</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>90</b>

**ETHNIC-RACIAL PROFILE OF EMPLOYEES ADMITTED IN 2021<sup>2</sup> (PARENT COMPANY)**


The average cost of external hires was BRL 6,542.86, and the rate of new hires was 0.23%.

**Mobility**

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.

<sup>2</sup>All new employees of Petrobras Parent Company are Brazilian. We had no new self-declared red (indigenous) employees.

In order to meet the needs of staff suitability, we prioritize the filling of open positions internally, through internal career mobility processes organized to retain talent and reduce external hiring costs.

Our internal mobility has several mobility solutions applied to our needs, including the Mobility Program, which takes place through a structured internal recruitment and selection process to meet our personnel needs. This process guides the carrying out of internal selections in a structured manner, with the application of methods for evaluating employees in face of the requirements of each opportunity. The application of these selection processes seeks to promote meritocracy and attend to the interests of the business and employees in internal transactions. Internal mobility takes place within the same position (Medium Level Petrobras Professional and Higher-Level Petrobras Professional), with the possibility of changing emphasis within the same position and mobility between positions is prohibited by law.

In addition to the Mobility Program, jobs open throughout the year can also be filled through direct negotiation between management (of origin and destination) and employees. In 2021, 7,326 open positions were filled internally, representing 98.8% of the total.

In moments of transformation, our focus is always on the professionals involved. Along with safety and operational continuity, attention and respect for people are fundamental principles that we apply in all of our actions. In this context, in 2021, under the Portfolio Management People Plan, structured actions were planned and implemented for the relocation of employees from units covered by the portfolio management, seeking to reconcile, whenever possible, the company's needs with the interests of employees.

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 distinct 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.

The process also includes a moment of individual assistance by the Health area. The session aims at mapping cases of exceptionality that may impact the transfer due to social, 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 People Plan 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. Its attributions include acting as a consultative body in matters related to the conduction of actions that make up the change management plan applied in units in demobilization, divestment, sale, hibernation, or lease of assets, or in the collective transfers of employees. The committee has a parity composition, with half of its members representing the company and half representing the employees. The People

Plan and the Integrated Change Management Journey for Active Portfolio Management represent the commitment to our employees at all stages of the process.

### Employee dismissal

Other measures used to adapt our staff are the Voluntary Termination Programs (PDVs). In 2021, 2,579 employees left the company through the Incentive Retirement Program (PAI) and the three Voluntary Termination Programs (PDV) separated by target audience: (i) one aimed at employees working in the corporate segment, (ii) one specific to employees involved in divestment projects, demobilization and/or activity reduction processes, and (iii) another for retired employees.

In total, 2,847 employees left the company in 2021, 2,702 of which due to voluntary dismissal (includes POSs and other types of dismissals).

Historically, our turnover rate has been at low levels, with the exception of 2014, 2016 and 2017, due to the voluntary termination programs carried out. In 2021, the observed employee turnover rate was 3.72%, considering admissions and terminations throughout the year. Considering only terminations, the turnover rate for total terminations was 7.36%, and for voluntary terminations it was 6.98%.

#### TURNOVER RATE PER GENDER (Parent Company)

Gender	Voluntary terminations		Other terminations		Overall Total	
Female	358	0.92%	24	0.06%	382	0.99%
Male	2344	6.06%	121	0.31%	2465	6.37%
<b>Overall total</b>	<b>2702</b>	<b>6.98%</b>	<b>145</b>	<b>0.37%</b>	<b>2847</b>	<b>7.36%</b>

#### TURNOVER RATE PER AGE (Parent Company)

Age	Voluntary terminations		Other terminations		Overall Total	
Up to 25	4	0.01%	-	-	4	0.01%
26-30 years old	19	0.05%	1	0.00%	20	0.05%
31-35 years old	46	0.12%	8	0.02%	54	0.14%
36-40 years old	61	0.16%	13	0.03%	74	0.19%
41-45 years old	34	0.09%	16	0.04%	50	0.13%
46-50 years old	40	0.10%	25	0.06%	65	0.17%
51-55 years old	734	1.90%	24	0.06%	758	1.96%
56-60 years old	1204	3.11%	26	0.07%	1230	3.18%
61 years old or more	560	1.45%	32	0.08%	592	1.53%
<b>Overall total</b>	<b>2702</b>	<b>6.98%</b>	<b>145</b>	<b>0.37%</b>	<b>2847</b>	<b>7.36%</b>

**TURNOVER RATE PER REGION (Parent Company)**

Region	Voluntary terminations		Other terminations		Overall Total	
Midwest	6	0.02%	2	0.01%	8	0.02%
Northeast	645	1.67%	9	0.02%	654	1.69%
North	92	0.24%	5	0.01%	97	0.25%
Southeast	1851	4.78%	126	0.33%	1977	5.11%
South	108	0.28%	3	0.01%	111	0.29%
<b>Overall total</b>	<b>2702</b>	<b>6.98%</b>	<b>145</b>	<b>0.37%</b>	<b>2847</b>	<b>7.36%</b>

**TURNOVER RATE PER LEVEL IN THE ORGANIZATION (Parent Company)**

Position	Voluntary terminations		Other terminations		Overall Total	
Employees with no additional payment for leadership/management position	2444	6.31%	97	0.25%	2541	6.57%
Supervision	126	0.33%	1	0.00%	127	0.33%
Managerial	86	0.22%	42	0.11%	128	0.33%
Specialist	46	0.12%	5	0.01%	51	0.13%
<b>Overall total</b>	<b>2702</b>	<b>6.98%</b>	<b>145</b>	<b>0.37%</b>	<b>2847</b>	<b>7.36%</b>

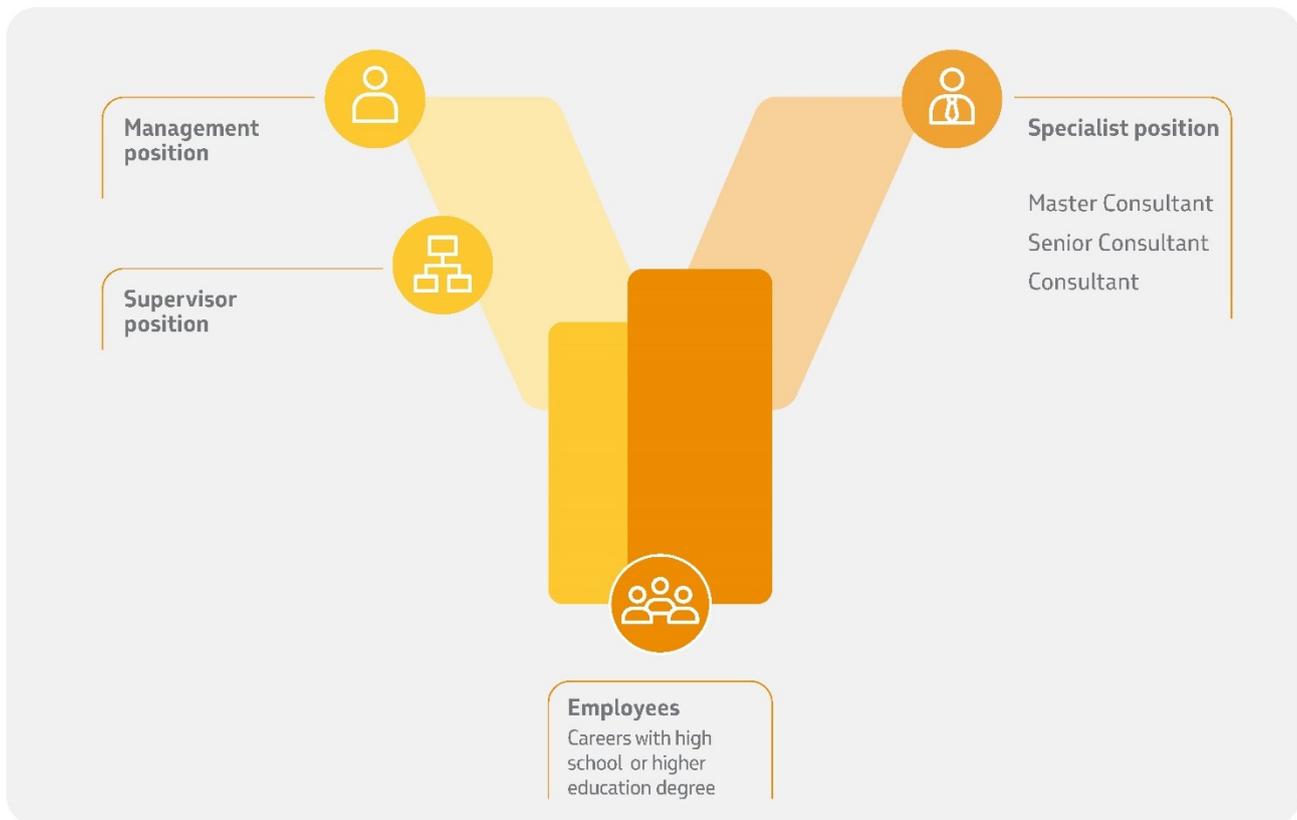
**TURNOVER RATE PER ETHNIC-RACIAL PROFILE (Parent Company)**

Race/Color	Voluntary terminations		Other terminations		Overall Total	
Yellow	25	0.06%	2	0.00%	27	0.07%
White	1,458	3.77%	87	0.23%	1,545	3.99%
Red	3	0.01%	0	-	3	0.01%
Not informed	443	1.15%	22	0.06%	465	1.20%
Brown	636	1.64%	29	0.07%	665	1.72%
Black	137	0.35%	5	0.01%	142	0.37%
<b>Overall Total</b>	<b>2702</b>	<b>6.98%</b>	<b>145</b>	<b>0.37%</b>	<b>2847</b>	<b>7.36%</b>

## Career

Our career structure follows the “Y” model and is comprised of positions with additional payment for leadership/management that include managerial, specialist and supervisory roles. Additionally, when the term “position” (managerial or specialist) is mentioned, the information refers to a specific vacancy already occupied or to be filled.

## CAREER STRUCTURE<sup>3</sup>



In 2018, we implemented an internal selection process to fill managerial positions. In 2021, more than 100 leadership positions were filled through a structured management selection process at the most diverse organizational levels. In December 2020, we implemented the management succession process, contributing to the formation and development of successors for our key positions. The Petrobras Succession Plan is a reference for decisions to fill these positions. In the managerial selection processes, we consider the profile necessary for the position, define the type of recruitment, consult the succession plan, and select candidates through the application of selection techniques in a partnership between HR and the manager responsible for the vacancy. In the case of filling positions for directors and general structure heads (executive managers and the equivalent), we use the support of a company specialized in Executive Recruitment and Selection. Also, for these positions, nominations must be submitted for analysis and validation by the Executive Board (DE), the People Committee (COPE) and the Board of Directors (CA), according to the approval authority defined in our Bylaws. In 2021, 80% of these positions were filled through a structured Recruitment and Selection process. Considering the predominantly national scope of operations, the percentage of new directors and executives hired in the local community was 100%.

In addition to the managerial career, we have the specialist career, which is split in consultant, senior consultant and master consultant, whose focus is the technical journey of these professionals. This career represents a strategy of recognition, retention and unique compensation of professionals with outstanding and relevant expertise for our

<sup>3</sup>Management positions include: coordination, sector manager, managers, general manager, assistant, executive manager and executive board (CEO and executive officers).

business, whose appointment is preceded by a structured selection process, aligned with the business needs identified and mapped by our critical processes.

Still in terms of career, our employees can also be appointed to the supervisory role, in activities more related to the operational front line, and their appointment can be made through the appointment of the manager or through a selection process.

## Reduced working hours

All hired employees are hired for an indefinite period, and the contractual workload is eight or six hours per day, depending on the employee's position. We do not practice the modality of temporary contracts, but it can be adopted in specific situations in the Equity Interests, such as the case of emergency replacements in the ships of subsidiary Transpetro.

With the purpose of providing a better quality of life for our employees, in addition to being another tool for adapting the workforce, in 2017, the optional reduction of the daily working day from eight to six hours was implemented, with a 25% proportional reduction of compensation to the employees in an administrative regime and flexible hours who do not occupy positions with additional payment for leadership/management. In addition, in 2018, an optional weekly workload reduction with proportional reduction of 20% was implemented, which enabled employees to reduce their workdays per week from five to four, after negotiating the rules with labor unions. 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 did not perform a position with additional payment for leadership/management. Part time employees have the same benefits as regular employees.

The table below details current adherence to the two models:

### NUMBER OF EMPLOYEES IN REDUCED WORKING HOURS IN 2021 (Parent Company)

Description	Total	Percentage	6h/day	Percentage	4 days/week	Percentage
Men	161	44%	126	43%	35	52%
Women	202	56%	170	57%	32	48%
<b>Total</b>	<b>363</b>	<b>100%</b>	<b>296</b>	<b>100%</b>	<b>67</b>	<b>100%</b>

## Our hybrid working model

In March 2020, due to the coronavirus pandemic and the contents of Provisional Measure 927/2020, we unilaterally adopted telecommuting full time, that is, on the five business days of the week. This measure included, in addition to employees in the administrative regime with flexible hours, those in the fixed administrative regime assigned to the operational units, and employees of the special regime belonging to the risk group for Covid-19. In this context, around 25 thousand employees telecommuted since March 2020. Of this total, approximately 79% are men and 21% are women.

In August 2020, the permanent model of teleworking for up to three days a week was approved by the Executive Board. Optional inclusion was made available to employees by

signing an agreement term, which serves as an addendum to the employment contract, which contains the rules that must be observed. The return to face-to-face work, and the effective application of the permanent telework model, for up to three days a week, has been implemented in waves since October 2021, observing the context of the pandemic.

In April 2021, we adopted, on a temporary and exceptional basis, special boarding schedules at the *offshore* units and in Urucu with the aim of reducing the movement of people, shift changes and the number of flights to platforms, minimizing the risks of exposure and contagion of the new coronavirus. The measure was due to the worsening of the Covid-19 pandemic. Initially, the 21x21 scale was adopted (21 working days and 21 rest days) and, later, the 21x28x21x35 schedule (21 working days, 28 rest days, 21 working days and 35 rest days) was approved, where the ratio of work x time off is maintained on a 105-day cycle with only two boardings. In September 2021, after evaluating the scenario, employees returned to their original 14x21 schedules.

## Performance analysis

The analysis of individual employee performance takes place through the Performance Management (GD) process, which assesses competencies and goals. Petrobras competencies were built based on the challenges inherent to our Strategic Plan, which explain the behaviors expected from our employees, to achieve superior results in different situations and scenarios, aiming at generating value for the company. The current model includes the notion of complexity, with distinct levels of description according to the position held. 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, established through the unit scorecards, we seek to ensure that individual and shared goals are deployed to the teams, contributing to the achievement of our top metrics. This process is carried out in a cycle of four steps: planning; follow-up and *feedback*; review of goals; and evaluation.

On the date of preparation of this report, in February 2022, we were at the beginning of the 2021 evaluation cycle, which is expected to end in March and, therefore, the data presented for this cycle are incipient. The last cycle to be evaluated prior to the closing of this report (for 2020, done during the first quarter of 2021) evaluated the performance of 99.99% of employees eligible for the performance management process, that is, those who worked for at least three consecutive months. Amounts listed by gender and functional category can be seen in the table below:

**PERFORMANCE MANAGEMENT<sup>4</sup> (PARENT COMPANY)**

	Evaluated			Not evaluated			Total
	Female	Male	Total	Female	Male	Total	
Managers	0.42%	1.66%	2.08%	0%	0%	0%	2.08%
Coordinator	0.32%	1.14%	1.46%	0%	0%	0%	1.46%
Supervisors	0.14%	1.44%	1.58%	0%	0%	0%	1.58%
Specialists	0.18%	0.65%	0.83%	0.004%	0%	0.004%	0.83%
Employees with no additional payment for leadership/management position	15.34%	78.70%	94.04%	0.002%	0%	0.002%	94.05%
Total	16.34%	83.59%	99.99%	0.01%	0%	0.01%	100.0%

## Compensation and benefits

The Career and Compensation Plan (PCR) establishes our structure of positions and careers, with their respective descriptions of attributions and responsibilities, requirements of their assignees, 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 plan officially in force at Petrobras. It was implemented in 2018, replacing the Position Classification and Assessment Plan (PCAC), which is in the process of being extinguished. Currently, the PCR reaches 88% of our employees since the migration to this job plan is optional. The admissions of employees that occur after the start of the PCR will take place exclusively under this plan.

Our compensation is defined through a compensation policy approved by the Board of Directors, and represents an instrument for attracting, engaging, and retaining talent, in accordance with the Public Selection Processes (PSPs) for hiring employees and current legislation, being competitive and aligned with our performance culture. As a result, we compensate our employees fairly, with a package that involves competitive salaries and benefits compared to companies operating in the same market.

Our positions and emphases are classified based on the score resulting from the job evaluation process, conducted by a specialized consulting, independent from management, correlated with the result of the compensation survey. Regarding direct compensation, market surveys are conducted annually, conducted by specialized consulting firms, 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.

For senior management employees and their direct advisors who joined through a direct hiring process, the compensation practiced follows the same policy adopted for other employees with additional payment for leadership/management positions (managers, specialists, or supervisors).

<sup>4</sup>The amounts are listed as a percentage of the 45,095 total employees.

The overall compensation for Board of Directors and Executive Board members is approved annually by the General Meeting, in accordance with Article 152 of the Brazilian Corporate Law (Law No. 6,404, December 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.

>> [Information on senior management compensation policies can be consulted in chapter 13 of the Reference Form.](#)

In addition to monthly compensation, members of our Executive Board (CEO and Directors) receive additional benefits, such as: medical assistance, supplementary pension and housing allowance, while members of the Board of Directors are entitled to supplementary pension. Additionally, Executive Board and Board of Directors members may be legally entitled to payment of quarantine after the end of the term, whose rules and exceptions are provided for in Brazilian legislation and evaluated externally to the company by the Public Ethics Commission (CEP), of the Federal Government.

In 2019, the Performance Award Program (PPP) was approved, a variable compensation model aimed at all employees. Linked to our Strategic Plan, the PPP aims at aligning the interests of shareholders, executives, occupants of positions with additional payment for leadership/management and employees with no additional payment for leadership/management position; encourage results-oriented behavior; rewarding people for the results achieved; pay differently for differentiated delivery (meritocracy); and contribute to attracting and retaining talent.

In 2020, the PPP was activated after meeting the minimum prerequisites established:

For employees, the program was activated after obtaining a positive net income for the year, disregarding in its calculation the impacts of the amounts due to *impairment* and exchange variation contained in Petrobras' net financial result.

For Executive Board members, activation took place due to the achievement of positive net income in 2020.

As a result, during 2021, approximately BRL 2.44 billion was paid, distributed between the advance in the first quarter and the settlement in the second quarter.

For the calculation of the Variable Compensation 2021 (PPP 2021), adjustments were made in relation to the model in force in 2020 (PPP 2020), both in the prerequisite for its activation, and well as our top metric indicators, in order to align them with the 2021-2025 Strategic Plan.

The prerequisite for activating the PPP 2021, both for Executive Board members (CEO and directors) and for other employees, is the declaration and payment of shareholder compensation, referring to the year considered, approved by the Board of Directors and the achievement of positive net profit for the year.

During 2021, the organizational units' *scorecards* continue to be considered as input for the assessment of the Executive Board (CEO and directors), executive managers and other

members of our general structure, which are reflected in the calculation of variable compensation.

As in 2020, these *scorecards* include the following items:

- (i) the results of our key metrics such as: Gross Debt (corresponds to the total debt balance of contracted debts), Delta EVA® (*Economic Value Added* - measures economic profit in a given period minus the cost of invested capital from its operating profit), IGEE (monitors our performance in relation to direct issuance of greenhouse gases in the atmosphere) and VAZO (calculates the total volume of oil leaked in occurrences with a volume above a barrel and that reached bodies of water or non-impermeable soil);
- (ii) the metric scores specific to each executive *scorecard* (represented by specific indicators that address economic, environmental, and social factors); and
- (iii) discretionary assessment made by the immediate superior according to the employee's profile and performance.

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 (President and Directors), 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 value of the program will be paid in cash and the balance of 40% is settled in four deferred annual installments, the value of which will be symbolically converted into the corresponding amount of Petrobras common shares (PETR3), using as value based on the weighted average of the last 60 trading sessions of the program's reference fiscal year. 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.

We do not adopt specific compensation mechanisms for members of senior management, such as attraction bonuses or payments for recruitment incentives, nor payments for terminations and refund of amounts paid (*clawback*).

We have a collective agreement in force for a Profit-Sharing Program (PLR) for the period 2021-2022 for all employees with no additional payment for leadership/management position (managers, specialists and supervisors).

In order for the PLR payment to occur, the following conditions must be met:

- Approval of dividend distribution by the Annual General Shareholder Meeting;
- Calculation of net income for the reference year; and
- Achievement of an average (weighted) percentage of at least 80% for target indicators established by the Board of Directors in the PLR agreement.

For fiscal years 2019 and 2020, the PLR only applied to maritime employees, as only their unions accepted the proposal, although it was offered to all unions representing our

employees. In June 2021, the amount of profit sharing paid to this group of employees was approximately BRL 896,500.00, corresponding to the results obtained in 2020.

The monitoring of the results achieved until the third quarter indicated the achievement of the triggers provided for in the PLR agreement: payment of shareholder compensation, net income projection for 2021 and projection of the average achievement of the PLR indicators at 100%. In view of this, as provided for in the PLR rules, in January 2022, an advance payment was made in the amount equivalent to 1/3 of the bonus to which each eligible employee is entitled.

The relationship between the total annual compensation of the highest paid individual and the average salary of all other employees is 5.73, where the highest paid person is the CEO. In 2021, the salary readjustment in the company was 10.42% in the salary scales for permanent positions and 6.1% in the tables for positions with additional payment for leadership/management. Executive Board members (CEO and directors) were not covered by such readjustments. The minimum entry wage is BRL 5,117.17 and is equivalent to 4.65 times the current national minimum wage, without any differentiation by gender.

Additionally, as a way of recognizing the contribution of our employees, reflected in the performance management process, in 2021, we promoted a review of the annual professional career progression program. The new model, called Merit Pay Increase, aims at promoting a culture of meritocracy through the recognition and reward of employees with outstanding performance, considering deliveries and behaviors at the distinct levels of complexity required and levels of compensation.

In this edition, more than 18,700 employees occupying middle and higher-level positions in the PCR were covered, observing the financial resources to cover 40% of the total eligible employees. For employees with additional payment for leadership/management position, 1,031 employees (14% of those eligible) received salary progression in the tables of the respective position (management, specialist, or supervision).

There are several lawsuits related to the Minimum Compensation per Level and Work Regime (RMNR), with the aim of reviewing its calculation criteria. The RMNR consists of a minimum compensation guaranteed to employees, based on salary level, work regime and condition and geographic location. This compensation policy was created and implemented in 2007 through collective bargaining with union representatives and approval at employee meetings and was questioned only three years after its implementation.

In 2018, the Superior Labor Court (TST) issued a decision against Petrobras, which requested an injunction and filed an appeal with the Federal Supreme Court (STF). The STF suspended the effects of the decision handed down by the TST and also determined the national suspension of the ongoing processes related to the RMNR.

On 07/29/2021, a monocratic decision was published in which the Rapporteur Justice granted the extraordinary appeal filed by Petrobras to reestablish the sentence that dismissed the plaintiff's requests, accepting the company's thesis and recognizing the validity of the collective bargaining agreement freely signed between Petrobras and the unions, reversing the decision of the TST. Currently, the judgment of the appeals filed by the plaintiff and by several *amicus curiae* in view of the aforementioned decision of the Justice Rapporteur is in progress, with 3 votes in favor of the company. Considering that the last justice to speak up requested to view the case files, the trial was suspended pending the presentation of the vote by the Viewing Justice.

## Other benefits

Saúde Petrobras is a health care benefit offered by the company, which works 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 2021, Saúde Petrobras ended the year with 269,350 beneficiaries distributed across all states of the federation. The benefit costing ratio was 60% for the employer and 40% for the employees, complying with the provisions of the ACT 2020-2022.

Also on the occasion of the ACT 2020-2022, a costing change was planned to be implemented in January 2022, which would change to 50% for the employer and 50% for the employees, in compliance with the determination of Normative Resolution 23 of the Interministerial Governance Commission and the Federal Government Administration of Equity Interests (CGPAR). On 09/01/2021, due to the approval of the Draft Legislative Decree (PDL) No. 342 of 2021, CGPAR's RN 23 had its effects suspended. Therefore, the costing ratio will not change again until a new adjustment is agreed between Petrobras and the employees.

In April 2021, as provided for in the new management model for the health benefit approved in 2020 by our Board of Directors, the portfolio of beneficiaries (about 270,000) was migrated to Associação Petrobras de Saúde (APS), a non-profit civil association created for this purpose, in order to consolidate the transfer of health plan management to the new operator.

Since then, improvements in the management of the health plan have been implemented, mainly:

The implementation of analysis by a medical board when procedures with orthotics, prostheses and special materials are requested, responsible for savings of BRL 53.8 million in 2021.

The telemedicine service, which, with improved communication, was consolidated in 2021 and became an alternative to search for the diagnosis used by beneficiaries of the Petrobras Saúde Health Plan, as it reduces the exposure of beneficiaries to the contamination of Covid-19 and other diseases in circulation. In 2021, we had 36,237 calls, paying a total of BRL 9.6 million for the availability and use of the service.

The Petrobras Saúde benefit also provides coverage for complementary programs, such as the Benefício Farmácia 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 and include the following:

- Daycare Allowance
- Caregiver Allowance
- Preschool Assistance Allowance

- Elementary School Allowance
- High School Allowance
- University Youth Program (active for employees who were enrolled until 09/30/2019)

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 2021, 116 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 and the second for retired employees away for medical reasons for more than 15 days.

Part time employees have the same benefits as regular employees.

### 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 96% of our employees, considering that the plans are offered, and membership is optional.

Until March 2018, there were only two pension plans sponsored by Petrobras: (i) the Petros Plan of the Petrobras System (PPSP), which is a defined benefit plan closed to new members, and the Petros Plan 2 (PP-2), a variable contribution plan, made available to the workforce since 2007, both managed by Petros.

In April 2018, the PPSP was split into two new plans: (i) the Renegotiated PPSP (PPSP-R), comprised of participants who adhered to the new rules of the plan in 2006, 2007 and 2012 and (ii) Non-Renegotiated PPSP (PPSP-NR), comprised of participants who did not adhere to the new rules.

In December 2019, the PPSP-R and PPSP-NR plans were again split into two new plans, separated between participants who were admitted to the entity before 1970 and those who were admitted after 1970, forming the PPSP-R plans, PPSP-NR, PPSP-R Pre-70 and PPSP-NR Pre-70, that is, the original PPSP was converted into four new plans.

In PP-2, a plan that operates in the variable contribution modality and is currently open to new entries, the same amount is collected by the sponsor (in the case of sponsored

participant) and by the participant, who can contribute with percentages according to their age that vary between minimum of 6% and a maximum of 11%.

### **PPSP deficit equating plan**

In March 2020, the new Deficit Settlement Plan (New PED) prepared by Petros in accordance with the rules in force for the PPSP-R and PPSP-NR Plans, was approved by the Petrobras Board of Directors.

The New PED was structured to replace PED 2015, as well as to cover the deficit recorded in 2018, and to take into account the actuarial results obtained by the plans in 2019. The New PED required changes in the regulations of the PPSP-R and PPSP-NR, in order to provide a reduction in extraordinary contributions for most participants and beneficiaries, with a review of the settlement period for the longevity of benefit plans, as well as improvement of the plan's rules in accordance with regulatory standards, seeking to mitigate the needs of future deficit settlements.

The operations of the New PED were initiated in June 2020 through the collection of extraordinary joint contributions between sponsor and participants throughout the existence of the plans, where the present value in December 2020 totaled BRL 16 billion.

Additionally, still in the context of the New PED, as possible under the rule, Petros made changes to the regulations of the PPSP-R and PPSP-NR Plans, including a reduction in the amount payable as an annuity benefit to participants and, in return, Petrobras assumed a debt in the amount of BRL 2.2 billion, in the position of December 2020, to be paid in installments from January 2021, initially in 40 semi-annual installments, that is, in a total term of 20 years, and in June/21 Petrobras decided to settle this debt, due to its better cash condition.

As for the financial operations contracted with Petros, Petrobras carried out an early partial settlement of the Financial Commitment Terms related to the PPSPs Pre-70 plans, in the amount of BRL 94 million, in December 2020, and BRL 4,493 million, in January 2021.



## **NEW PENSION PLAN**

Due to the effects of the PPSP-R and PPSP-NR plan deficits on both the sponsor's and its participants' finances, Petros and Petrobras structured a new defined contribution plan called the Petros Plan 3 (PP-3).

In August 2021, Petros, after attesting to its economic feasibility of implementation, started the operation of the new plan called Petros-3 (PP-3), which is a pure defined contribution plan, closed to new adhesions, originating from of the migration of part of the participants of the PPSP-R and PPSP-NR plans, who voluntarily opted to join the new plan.

### **Estimated results of the Plans for 2021**

In 2021, due to the adverse economic scenario, the closing projection is for negative profitability for all PPSPs. The PP2 plan, in turn, has been showing positive profitability,

but below the actuarial targets also due, especially, to the challenging market environment.

Petros will carry out solvency assessments of the plans in compliance with the rules guided by the applicable rule and, in each specific case, will indicate the most appropriate measures for the treatment of results in order to contribute to the economic and actuarial stability of the plans managed by Petros.

## Parenting

All employees who have proven the birth or adoption of a child are eligible to take maternity or paternity leave. In addition to the legal determination, our employees have the right to extend maternity leave, reaching a total of 180 days, and to extend paternity leave, reaching a total of 20 days. The extension of maternity leave in case of premature birth (before the 37th week of gestation) is also guaranteed as long as the baby remains hospitalized, limited to eight weeks.



### EMPLOYEES WHO USED THE BENEFIT IN 2021 (PARENT COMPANY)

In 2021, 989 employees went on paternity leave, 380 employees went on maternity leave, and 10 on adoption leave, making a total of 3.06% of employees. In terms of returning to work after parental leave, 15 employees and 139 employees took parental leave in 2020 and returned in 2021, 947 employees and 131 employees took parental leave in 2021 and returned in 2021 and 28 employees and 119 employees took parental leave in 2021 and will return in 2022.

The total number of employees who returned to work after maternity/paternity leave and remained employed 12 months after returning to work was 1,568. Of these, 454 are women and 1,114 are men. The rate of return to work and retention of employees who were on maternity/paternity/adoption leave in 2021 was 100%.

We provide 25 breastfeeding support rooms, distributed in operational units and administrative facilities. The rooms provide, in addition to information and specialized guidance, an adequate, safe, and welcoming environment, provided with a breastfeeding chair, a freezer for proper storage of milk and all the necessary material for employees who wish to collect and store breast milk to give it to their children.

## Promotion of diversity and inclusion

Our diversity management is guided by corporate references such as:

 **Value**

Respect for life, people, and the environment

 **Guideline 3 of the Social Responsibility policy**

Respect human rights, seeking to prevent and mitigate negative impacts on our direct activities, supply chain and partnerships, and fight against discrimination in all forms.

 **Guideline 7 of the Human Resource policy**

Provide employees with a good working environment that promotes diversity and relationships based upon trust and respect, and do not tolerate any form of harassment or discrimination.

 **Human Rights Guidelines**

- Provide decent working conditions and a diverse, inclusive, safe, and healthy environment
- Promote diversity, guaranteeing respect for differences and equal opportunities in access, compensation, and job promotions
- Fight prejudice and discrimination as a result of race, skin color, ethnic origin, nationality, social position, age, religion, gender, sexual orientation, personal aesthetics, physical, mental or psychological condition, marital status, opinion, political conviction, gender identity, or any other individual differentiating factor

When we talk about 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. Diversity management is carried out through the principles of respect for differences, equal opportunities, and non-discrimination.

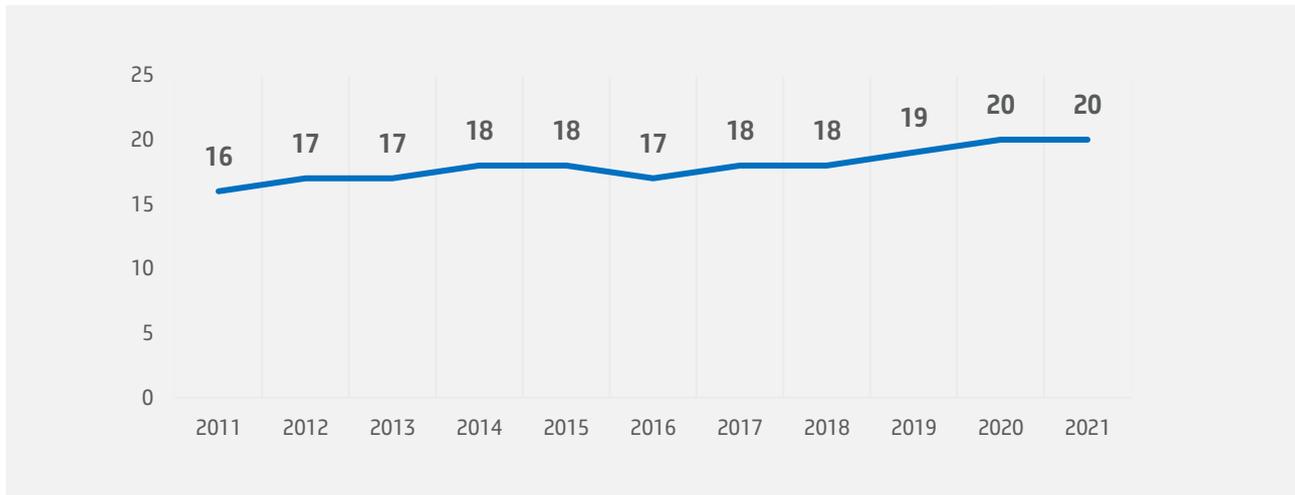
**GENDER DATA** (Parent Company – as of 12/31/2021)



1) Employees with no additional payment for leadership/management position.  
 2) Executive Board (DE): Includes president and officers.

>> [Information about the members of the Board can be consulted on our Investor Relations website.](#)

**EVOLUTION OF THE PERCENTAGE OF WOMEN IN MANAGERIAL POSITIONS<sup>5</sup>** (Parent Company - %)



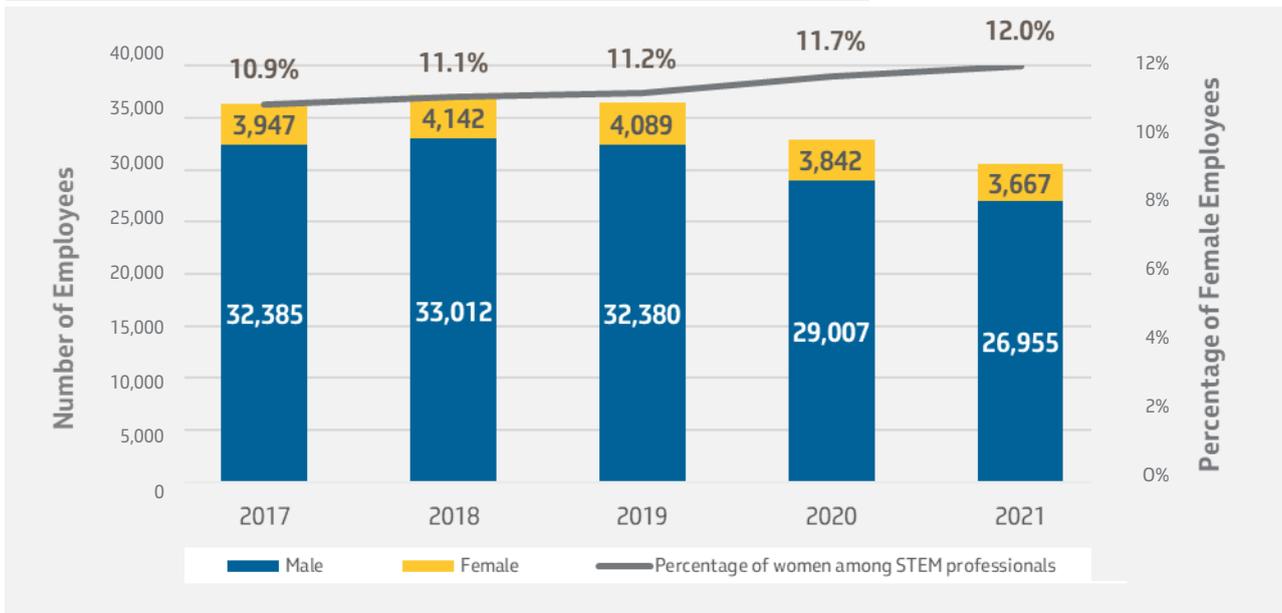
We ended 2021 with women representing 17% of our employees. In managerial positions, which include coordination, sector manager, managers, general manager, assistant, executive manager, and executive board (CEO and directors), women represent 20% and in supervisory roles 11%. Considering the managerial and supervisory roles together, women

<sup>5</sup> Management positions include: coordination, sector manager, managers, general manager, assistant, executive manager and executive board (CEO and directors).

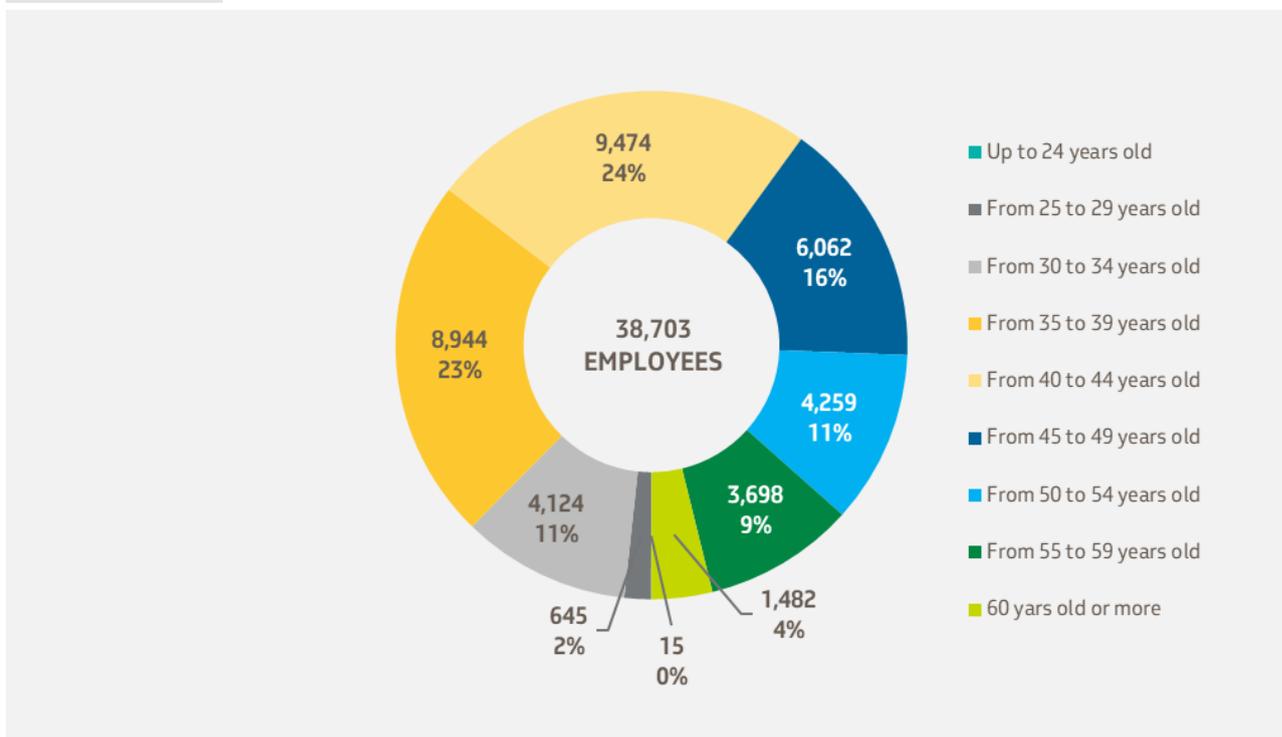
represent 17%. In the revenue-generating directorates<sup>6</sup>, women in managerial roles represent 13.38% of managerial roles.

In positions related to the STEM career - Science, Technology, Engineering and Mathematics-, we also identified a gradual increase in female representation in the last five years. We ended 2021 with 12.0% of women in STEM-related positions (out of the overall total of STEM positions), as shown in the following table:

**EVOLUTION OF THE NUMBER OF EMPLOYEES IN STEM POSITIONS** (Parent Company)



**PROFILE BY AGE** (Parent Company)



<sup>6</sup>The revenue-generating directorates are: Commercialization and Logistics Department; Production Development Directorate; Exploration and Production Directorate; and the Refining and Natural Gas Department.

**ETHNIC-RACIAL PROFILE<sup>7</sup> (Parent Company)**

	Management position				Other positions with additional payment for leadership/management				Position with no additional payment for leadership/management			
	Female	% of the total	Male	% of the total	Female	% of the total	Male	% of the total	Female	% of the total	Male	% of the total
<b>White</b>	590	1.52%	2305	5.96%	242	0.63%	1,444	3.73%	3,172	8.20%	14,045	36.29%
<b>Brown</b>	139	0.36%	617	1.59%	74	1.19%	623	1.61%	1,162	3.00%	6,677	17.25%
<b>Black</b>	17	0.04%	116	0.30%	17	0.04%	138	0.36%	306	0.79%	1,615	4.17%
<b>Yellow</b>	7	0.02%	47	0.12%	5	0.01%	39	0.10%	87	0.22%	395	1.02%
<b>Red</b>	2	0.01%	6	0.02%	1	0.00%	5	0.01%	12	0.03%	72	0.19%
<b>Not informed</b>	97	0.25%	408	1.05%	43	0.11%	349	0.90%	563	1.45%	3,266	8.44%
<b>TOTAL</b>	<b>852</b>	<b>2.20%</b>	<b>3499</b>	<b>9.04%</b>	<b>382</b>	<b>0.99%</b>	<b>2,598</b>	<b>6.71%</b>	<b>5,302</b>	<b>13.70%</b>	<b>26,070</b>	<b>67.36%</b>

**RATIO OF SALARY AND COMPENSATION BETWEEN WOMEN AND MEN<sup>8</sup> (PARENT COMPANY)**

Relevant Operational Units	Job Category	High School	Higher Education
Executive Department for Exploration and Production (DE&P)	with additional payment for leadership/management position	0.81	0.91
	no additional payment for leadership/management position	0.77	0.92
Executive Department for Refining and Natural Gas (DRGN)	with additional payment for leadership/management position	0.80	0.93
	no additional payment for leadership/management position	0.83	0.93
Other directorates	with additional payment for leadership/management position	0.82	0.94
	no additional payment for leadership/management position	0.82	0.92
Total	with additional payment for leadership/management position	0.81	0.93
	no additional payment for leadership/management position	0.77	0.92
Total <sup>9</sup>		0.77	0.92

In accordance with Guideline 7 of our Human Resources Policy and with item 4.2.a of our Code of Ethical Conduct, our Career and Compensation Plan (PCR) makes no gender distinction regarding the compensation between men and women who occupy the same

<sup>7</sup>“Other position with additional payment for leadership/management” comprises the supervisor and specialist positions.

<sup>8</sup>We classify the areas directly related to our core business in “Relevant Operating Units”, the exploration and production (E&P) area and the refining and natural gas area (RGN). The other operating units and administrative units are part of the item “other departments.” The ratio considers the average of women's earnings divided by the average of men's earnings, in the case of each group. We have a salary table with different levels of basic salary, all applicable to both men and women. However, when calculating compensation, basic and additional wages are considered, such as transportation vouchers, childcare allowances, etc.

<sup>9</sup>The ratios equivalent to the “Total” and “Grand total” lines present comparable results, considering that more than 80% of the employees with no additional payment for leadership/management position that the percentages informed in the table are calculated from the average compensation of the employees.

function or position with additional payment for leadership/management. Thus, considering the same position, 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 2021, the ratio between the compensation of women and men was 0.96, against 0.91 in 2018.

## Petrobras Culture Day

Organizational culture is one of our strategic drivers of Human Resources and the basis for the development of a series of actions aimed at people management. Structured on the basis of a comprehensive diagnosis with employees, the Petrobras target culture is based on working in a single team featuring high performance, endurance and innovation. We value the example of leadership and highlight aspects such as meritocracy, efficiency, value creation and respect for people.

In this sense, in 2021, a work plan was structured that included actions focused on leadership training and engagement and initiatives for all employees. Strengthening relationships of trust, based on leadership, and valuing positive examples were some of the aspects emphasized.

## Engagement with employees

We practice listening to our employees through surveys. Since 2020, we started to apply searches in the pulse format. In this format, our employees are consulted several times a year and the questionnaires are short and focused on specific topics, in a dynamic and timely manner. The assumptions of anonymity of responses and voluntary participation are adopted.

In 2021, we consulted with employees on training and development, job engagement, performance management and meritocracy, including recognition and reward practices and the selection process for positions with additional payment for leadership/management. Among the results, it is worth mentioning the general rate of engagement with work, of 85%, with 94% in managers and 83% in non-managers.

Information on engagement with the internal public can be found in the chapter on Active and Transparent Communication.

## Relationship with Labor Unions

The management of labor union relations is an attribution of our Human Resources area. We follow the conventions of the International Labor Organization (ILO) ratified by Brazil, in addition to being, since 2003, signatories of the United Nations Global Compact, whose principle 3 provides for the effective recognition of the right to collective bargaining. This commitment is reinforced by our Human Resources Policy, approved by the Board of Directors, which determines the implementation of sustainable agreements built through dialogue, ethics, and transparency, as a way to overcome differences in negotiations with employees and their representatives. In turn, the Code of Ethical Conduct establishes the

right to free trade union association. It is also worth mentioning that our Collective Bargaining Agreement contains a chapter dedicated to union relations, where the obligations and rights between Petrobras and unions are stipulated.

In fact, we periodically hold meetings with the unions to address issues such as the work regime, benefits and monitoring of the Collective Bargaining Agreement (ACT). When necessary, we also make instructional presentations to unions. It should be noted that during the years 2020 and 2021 we held meetings almost weekly with the unions about Covid-19, whose purpose was to present to the entities all the measures adopted by the company to mitigate the effects of the pandemic among its employees. These actions aim at maintaining a permanent and effective channel of dialogue with the unions, contributing positively to the negotiations of collective agreements, and mitigating the risk of strike.

As a result of this effort, ACTs are celebrated at the negotiating table. Pursuant to Brazilian legislation, the ACTs signed with labor unions in the economic and professional categories are applicable to all employees represented by them. At Petrobras, it is also possible for employees to sign an Individual Work Agreement (AIT), and this happens, among other reasons, for not closing the collective bargaining within the base date, which may imply in the loss of some benefits and/or advantages, even if momentarily, or even by an individual choice of the employees legally qualified to sign this type of agreement. We have a Collective Labor Agreement (ACT) in force with all unions representing their employees (92% of the workforce covered by collective bargaining agreements), as well as an AIT in place for 8% of employees. As provided by art. 457 of the Consolidation of Labor Laws (CLT), these agreements include social clauses related to work, safety conditions, and benefits, among others, and are valid for two years under the terms of the agreements in force.

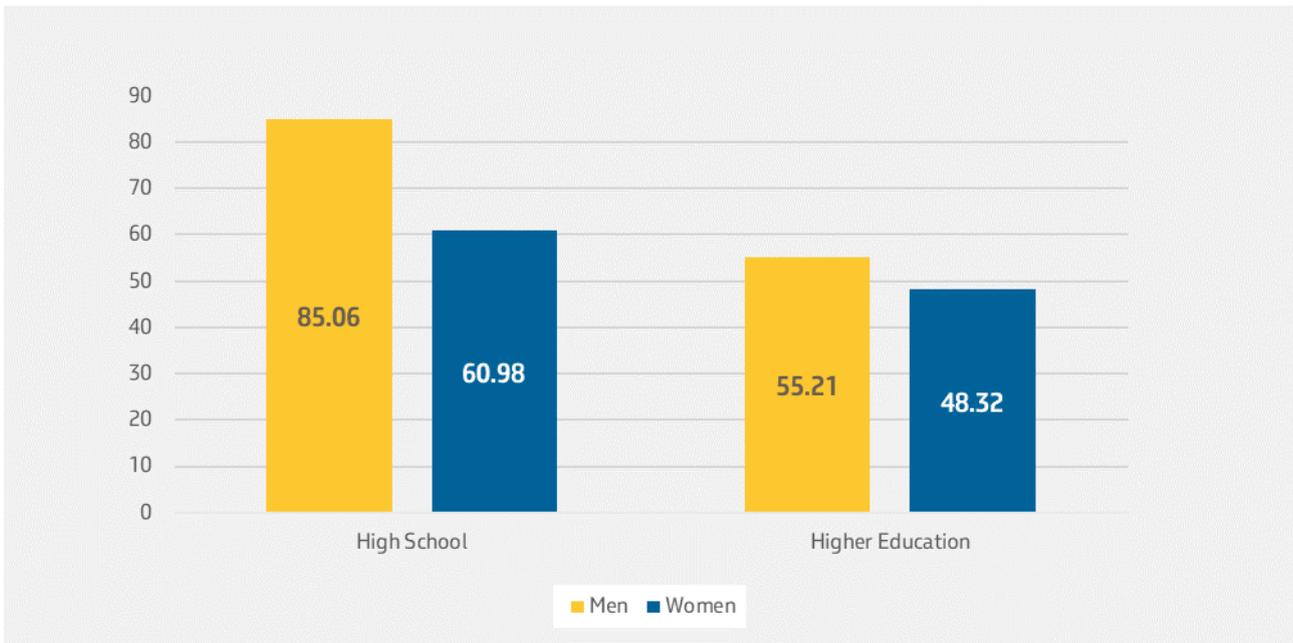
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>> [Information on labor union relations can be found in the Active and Transparent Communication chapter.](#)

## Training

Our Human Resources area is responsible for training planning guidance and execution. 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 BRL 43.6 million in training during 2021.

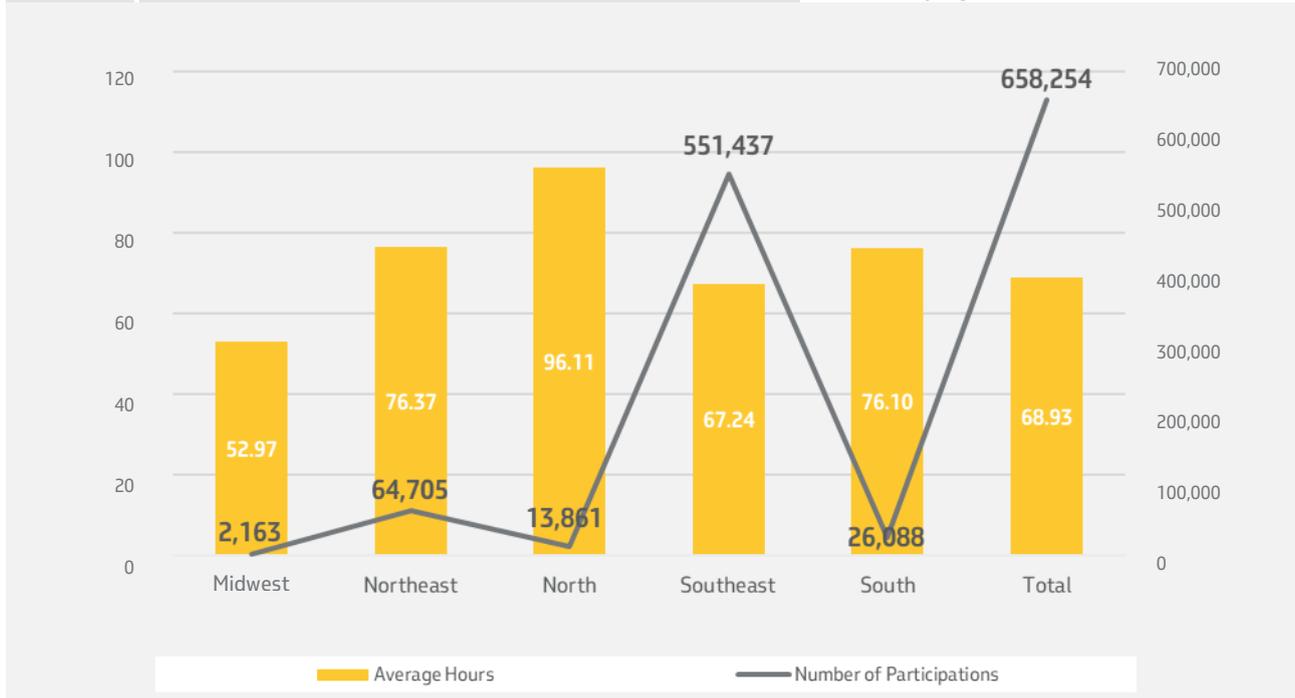
Based on the performance assessment and our Strategic Plan (PE), training needs are identified. Annually, training is negotiated between the manager and each employee to achieve the expected results for the business during the evaluation period. By 12/31/2021, 1 million courses had been attended, with 658,000 employees, with an average of 68.93 hours of training per employee that year, distributed as shown in the chart.

**AVERAGE HOURS OF TRAINING PER EMPLOYEE AND GENDER**


Considering Petrobras Holding and its subsidiaries in Brazil and abroad, the average training hours per employee in 2021 was 63.34.

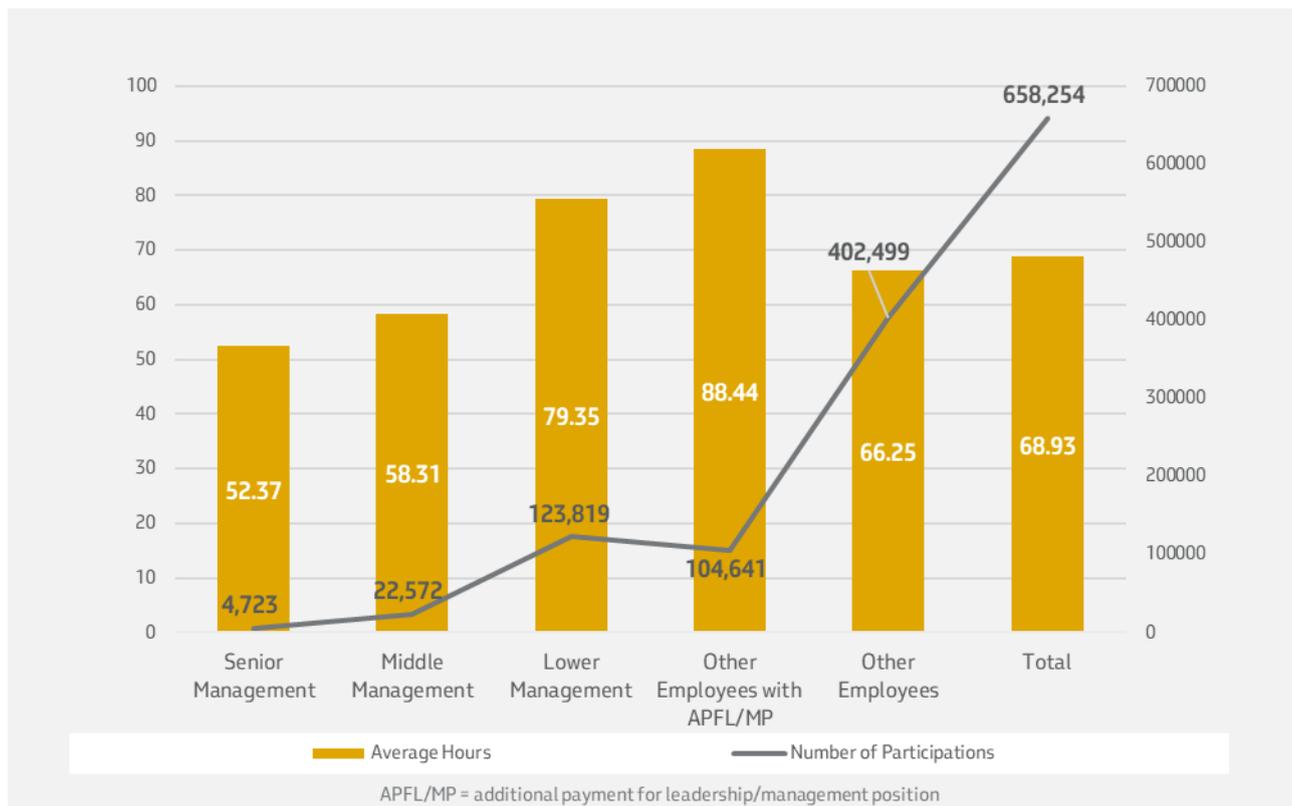
**AVERAGE HOURS OF TRAINING PER EMPLOYEE AND AGE (Parent Company)**


**AVERAGE HOURS OF TRAINING PER EMPLOYEE AND REGION (Parent Company)**



**AVERAGE HOURS OF TRAINING PER EMPLOYEE AND ETHNIC-RACIAL PROFILE (Parent Company)**



**AVERAGE HOURS OF TRAINING PER EMPLOYEE AND FUNCTIONAL CATEGORY<sup>10</sup> (Parent Company)**


We have a Leadership Academy focused on developing more than 6,400 managers and supervisors. This academy is responsible for training leaders at all levels of the organization, offering training in partnership with renowned institutions, such as Fundação Dom Cabral, the 9th best business school in the world according to the executive education ranking of the Financial Times, and Harvard University, the oldest university in the United States.

In December 2021, we finalized the *Harvard Manage Mentor* Program, available to all managers. Its content, spread over 42 modules, addressed issues related to self-development, people management, process compliance and business management. In total, 4,253 (56%) managers completed all modules. Among the modules, we highlight the diversity theme with 4,602 (61%) managers and ethics with 5,273 (70%) managers.

The academy has also been developing, since November 2021, a development program for senior management, called U-Lead, which, through disruptive learning, aims to qualify leaders to: act as protagonists, with critical sense adjusted to mental model transformations and new management forms; share experiences and knowledge in the quest to meet Petrobras' strategic demands; use new capabilities needed for digital transformation; and evolve in the skills assessed. In the first two groups, in 2021, 76 leaders were trained, out of a total of 187 senior management executives. In 2022, monthly classes of 40 leaders are planned, starting in February. There will be 440 managers with synchronous classes.

<sup>10</sup>Senior Management comprises CEO, director, executive manager, general manager, ombudsman, secretary general and chief of staff of the president's office; Middle Management comprises adviser to the president's office, aide to the president's office, assistant, manager and representative of an affiliated/controlled company; Lower Management comprises coordinator, shift coordinator, platform manager and sector managers; and Other Employees with additional payment for leadership/management position include advisor, consultants and supervisors.

We also highlight the implementation of the Leadership Development Program in Active Portfolio Management, which aims at assuming the role of leader of change, developing managerial skills and agility with people and changes, leading managers to reflect on the role of the leader in the asset demobilization process, in addition to training managers on effective communication. This type of development brings benefits in the daily lives of employees as they feel better guided and confident about decision-making that directly affect their personal and professional lives. In 2021, 759 leaders were trained.

Among the various accomplishments, the academy prepared the first Petrobras Women's Mentoring Program, with the purpose of leveraging the development of its female leadership and expanding the positive results promoted by gender equity. In this program, mentored employees (leaders and non-leaders) were developed under the supervision of mentor employees. The managers of these female mentored employees were also involved in order to raise awareness on the topic. This initiative contributed to Petrobras receiving the silver trophy in the large companies category for the WEPs Brasil 2021 Award – Companies Empowering Women, as part of Petrobras' Gender Equity Plan.

The UP Academy of Leadership and Competencies works not only in technical and management skills, but also in the Soft Skills of leadership and employees in general. In November 2020, the Petrobras Soft Skills Development Program was launched, with optional participation, with the theme of emotional intelligence, following 2021 with 10 more themes such as: communication, engagement and sense of work, creativity and innovation, management of stress, among others. There were more than 25,000 participations in live broadcasts, an average of more than 2,000 per theme, 5,000 realizations in Distance Learning events and 3,000 in dialogues. For 2022, it is planned to launch three more themes and hold 100 dialogue groups. The different themes are available to all company employees.

We highlight the following trainings carried out in 2021:

- Lectures on Prevention of Violence, Discrimination and Harassment at Work: 39 groups were held and 3,538 people were trained, including leaders from across the company and HR employees. HR employees were trained with the aim of providing knowledge on the subject to the area that has a direct relationship with the other employees;
- Corporate Challenges: mandatory training carried out by leaders in order to improve decision-making, by simulating situations related to conflict of interest, compliance, social responsibility, information security, HSE, cultural transformation, digital transformation and transparency;
- *Onboarding* Training: training for designated employees at the beginning of their managerial career, in which 323 leaders were trained. In this training, there is a culture lecture, with the purpose of presenting Petrobras' target culture and what is expected of leaders;
- Diversity module on the *Harvard Manage Mentor* platform: 4,719 leaders attended the module.

The administrators and audit committee members, including representatives of employees and minority shareholders, must participate, at their investiture and annually, in the Mandatory Training for Statutory Officers (TOPE), which addresses topics on corporate and capital market legislation; dissemination of information; internal control; code of conduct, Law No. 12,846/2013 (Anti-Corruption Law) and other matters related to

our activities. Board members and audit committee members who have not participated in annual training in the past two years cannot be re-appointed.

The Investiture TOPE seeks to provide a broad understanding of the challenges, duties and responsibilities related to the positions and provide material for reading, consultation and learning about the main governance instruments, in addition to management reports.

In the 2021 cycle of this program, the following topics were presented, among others: Code of Ethical Conduct; governance model and decision-making process; disclosure of information to the market; risk management; *compliance*; Brazilian anti-corruption legislation and duties and responsibilities of managers and audit committee members; and business performance.

In 2021, the Annual TOPE made available the following topics: competition *compliance*; ESG (environmental, social and governance); and information security.

The available training is provided to counterparties in a manner that prioritizes those who offer us the greatest risk. Although they are not mandatory, they assist in fulfilling the obligations entered into by these counterparties when signing a contract with us.

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>> **Information on other training on ethics and integrity, health and safety and human rights can be consulted in the Business Ethics and Fighting Corruption chapter, in the Safety and Commitment to Life chapter and in the Human Rights chapter, respectively.**

## Knowledge management

With the purpose of promoting the broad development of our employees, we have adopted knowledge management practices that also contribute to the sharing of experiences and knowledge and to the creation of new knowledge and its application in the company's business processes.

Among the actions carried out in 2021, the following stand out:

- 2,637 Workplace Training (TLT) actions, totaling 3,001 hours of training
- 160 mentoring actions, totaling 7,680 hours of training
- 58 tutoring actions, totaling 3,300 hours of training
- 19 technical rotations, totaling 6,592 hours of training
- 17 managerial rotations, totaling 1,408 hours of training
- Creation of *stream* channels for *storytelling*, capturing the experience and knowledge of experienced employees: Minha História (My History) Channel, Underwater Narratives and Technical Inventory.

Another highlight is the Retirement Preparation Program, which aims at developing with the participant a broad and critical understanding of retirement, contributing to the appreciation of employees and their quality of life. This program favors reflection and socializes information that allows them to carry out their retirement preparation process through informative and reflective lectures, such as: Health and Quality of Life, Financial Planning, Retirement Life Planning and Future Project. A PPA class was held in April 2021, with the participation of 137 employees.



With the purpose of leveraging corporate education, covering the largest number of employees, in 2021, there was a significant advance in the digital transformation agenda in our corporate education. We launched the digital authoring process, which offers the necessary resources for any employee to transform their knowledge into educational content. We acquired and experimented with new collaborative tools that support unique educational methodologies and implemented over 70 new Development Tracks, which support the technical needs of our businesses in a focused way, enhancing the autonomy of our employees with their own development. These deliveries materialize the evolution of our learning culture, with the strengthening of individual leadership in continuous learning, a fundamental vector for innovation.

[102-9] [102-10] [103-1] [103-2] [103-3] [201-1] [203] [203-1] [203-2] [204] [204-1] [413] [413-1] [413-2] [OG11]

# Socioeconomic Impacts

Socioeconomic impacts include any processes or social change brought about by interventions in one or more of the following elements: ways of life, economy, culture, community, political system, environment, health and well-being, individual and property rights, and people's fears and aspirations.

Among the positive impacts of our business, we can mention the distribution of added value to different audiences, such as governments, employees, shareholders, the generation of jobs through our direct activity and through the contracting of our supply chain, the availability of energy for the economic and social development of the country and the implementation of a wide portfolio of socio-environmental projects, in addition to other contributions to society.

Among the negative impacts associated with our business, we can mention those related to pollution, impacts on traffic, noise, proximity to pipeline installations and industrial units and risk of oil reaching the coast.

## Contributions to society

In 2021, we had an added value distribution of around BRL 403 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.

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:

### STATEMENT OF ADDED VALUE (in BRL million)<sup>1</sup>

Amount	2021
Direct compensation (staff and administrators)	32,052
Taxes	186,816
Financial institutions and suppliers	76,974
Shareholders (including retained earnings)	107,264
<b>Total value added distributed</b>	<b>403,106</b>

<sup>1</sup>Consolidated data.

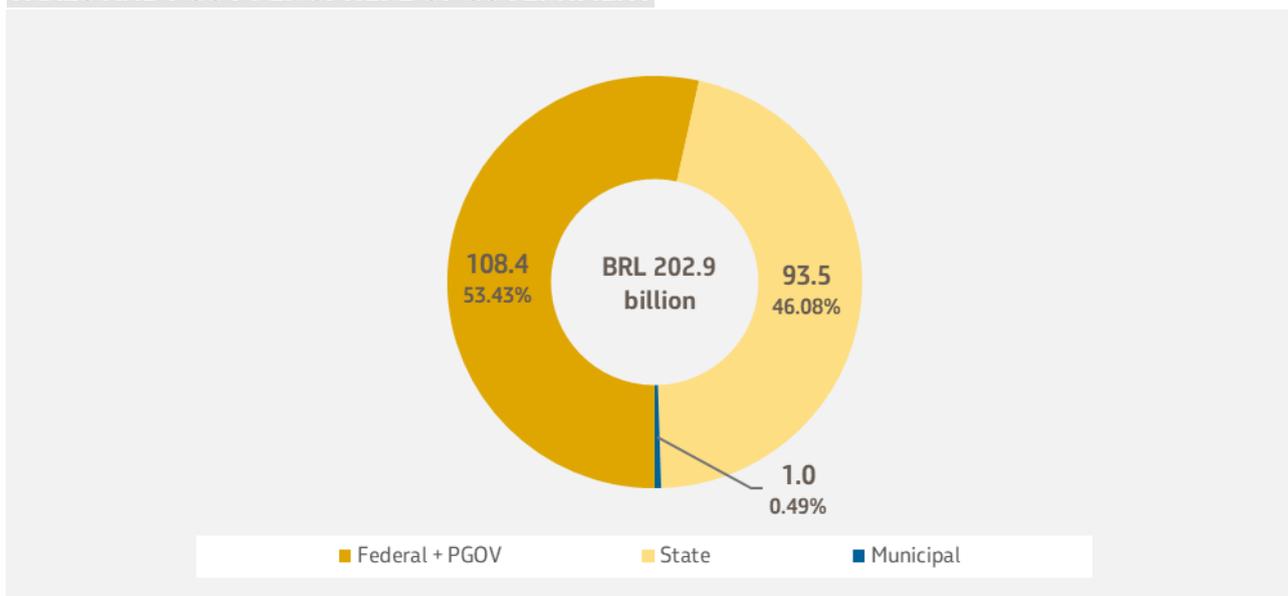
**OTHER CONTRIBUTIONS TO THE COMPANY** (in BRL million)

Amount	2021
Volunteer socio-environmental projects <sup>2</sup>	88
Cultural, sports and business, science, and technology projects <sup>3</sup>	50
Environmental monitoring programs and projects in environmental licensing processes <sup>3</sup>	221
Mitigation and compensation projects for socio-economic impacts <sup>3</sup>	108
Donations <sup>2</sup>	101
<b>Total</b>	<b>568</b>

>> **Information on environmental monitoring programs and projects in the environmental licensing processes can be seen in the Biodiversity chapter.**

### Payment of taxes and royalties

Among the positive indirect socioeconomic impacts, we highlight the collection of taxes and government participation (PGOV), especially royalties and special participation. On an accrual basis, the 2021 calculation totaled BRL 186.8 billion, as shown in the table above (“Distribution of Added Value”). On a cash basis, we paid BRL 202.9 billion in taxes and PGOV to the federal government, states, and municipalities. The collection of taxes and PGOV considerably increases the capacity of municipal, state, and federal investment, expanding the possibility of greater investment in urban infrastructure and services to serve the population.

**TAXES AND PGOV PER SPHERE OF GOVERNMENT**


<sup>2</sup> Consolidated data.

<sup>3</sup> Data only from Petrobras Parent Company.

In 2021, we launched the Cooperar para Transformar (Cooperate to Transform) project. In this project, we share knowledge and best governance practices, internal controls and integrity with the public managers of municipalities that receive *royalties* and special participation, with a focus on efficiency. The municipality of Quissamã, located in the North of the State of Rio de Janeiro, was chosen to receive the pilot project, through an agreement signed in September 2021.

Our multidisciplinary teams will work with the municipal public administration on different work fronts related to topics such as public governance, oil income funds, integrity plan, risk management, internal controls, transparency portal, Access to Information Law, among other matters capable of supporting the management of resources from oil revenues so that it becomes increasingly efficient, returning value to society.

Based on the pilot initiative with the city of Quissamã, we intend to expand the project to other cities in the coming years.

>> **Information on the payment of taxes can be found in the Regulatory Environment, Market Opening and Competition chapter.**

## Supply chain

Another important positive impact of our activity is the generation of jobs and income in the supply chain. In 2021, the parent company signed commitments with 9,751 suppliers and, considering the total value of contracts and orders signed during the year, 55.43% refer to contracts with suppliers based in Brazil. We highlight that, excluding the contracting of production vessels (FPSO), which include disbursements to be made in the next 20-25 years, the percentage in value of commitments assumed with national suppliers was 89.43%. We emphasize that the FPSO contracts signed this year have an obligation to carry out local content between 25% and 40%.

In the period, Transpetro entered into commitments with 3,878 suppliers and, considering the total amount of transactions carried out, 99.56% of them were entered into with suppliers based in Brazil.

Of the commitments made 2021 by our subsidiary Petrobras Biocombustível, 42.6% went to local suppliers. In this case, local suppliers are considered to be all those established in the same State as the destination of the product and/or service procured by the biodiesel plant.

## VOLUME SOLD

Company	Number of suppliers with commitments made in 2021	Contracts entered into in 2021	Orders made in 2021	Total Transactions (BRL millions)
Petrobras Parent Company <sup>4</sup>	9,751	4,292	207,481	239,854.92
Petrobras Biocombustível	733	301	4,345	1,775.76
Transpetro	3,878	488	67,312	38,618.53

<sup>4</sup>Of the total amount contracted by Petrobras Parent Company in 2021, BRL 4,882.15 million were signed with equity interests.

## PROFILE OF OUR CONTRACTS

Company	Suppliers with business up to BRL 100,000	Suppliers with business between BRL 100,000 and BRL 1 million	Suppliers with business between BRL 1 million and BRL 100	Suppliers with business over BRL 100 million
Petrobras Parent Company	67.80%	15.40%	14.93%	1.87%
Petrobras Biocombustível	77.61%	11.81%	9.75%	0.82%
Transpetro	65.29%	22.72%	11.78%	0.21%

Regarding the profile of contracting goods and services, there were no significant changes in 2021 compared to the previous year, and the main categories contracted throughout 2021 were:

- **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 services, infrastructure maintenance, logistics, inspection, docking and complementary services, such as transportation and property security.
- **Petrobras Biocombustível:** The supply chain for raw materials of Biodiesel Plants is comprised of national manufacturers and dealers of vegetable oils (soy, cotton, palm, and residual oils and fats), animal fats (from cattle, pigs, and poultry), in addition to methanol and sodium methylate. Also, to maintain the concessions to use the Social Fuel Seal (SBS) of the Biodiesel Plants, the subsidiary makes agreements with cooperatives of family producers to provide raw materials and technical assistance services.

Our contracts are governed by Law 13,303/16, also known as the State-Owned Company Law, which represented a regulatory framework for the performance of state-owned companies and mixed-capital companies and their subsidiaries, with the establishment of procedures and responsibilities. This law determines that all contracts must be done through public bidding, i.e., they will be open to any interested parties who are able to comply with the call to tender, as indicated in article 28.

In compliance with article 40 of the aforementioned law, the Petrobras Bidding and Contracts Regulation (RLCP) was edited, which came into force on the date of its publication (01/15/2018), whose last revision took place on 10/27/ 2021. The RLCP governs the forms of contracting, the steps to be taken in the bids, contractual management and auxiliary procedures, including the registration of suppliers.

>> [Information on Law No. 13,303/2016 and on contracting rules can be consulted on the internet, in our Supplier Channel.](#)



## SUPPLY CHAIN SUPPORT PROGRAMS

In order to support the supply chain and promote the improvement of contract performance, we have two development programs for the oil and gas industry: Progridir and Programa Mais Valor.

In 2012, we launched Progridir, 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. This solution is currently managed by fintech partner IDTRUST.

In order to complement the actions to promote the supply chain, in 2020 we launched the Mais Valor Program, which consists of a financial solutions tool for our suppliers, with a focus on stimulating the oil and gas production chain in Brazil, offering the opportunity to anticipate invoices for goods delivered or services already performed.

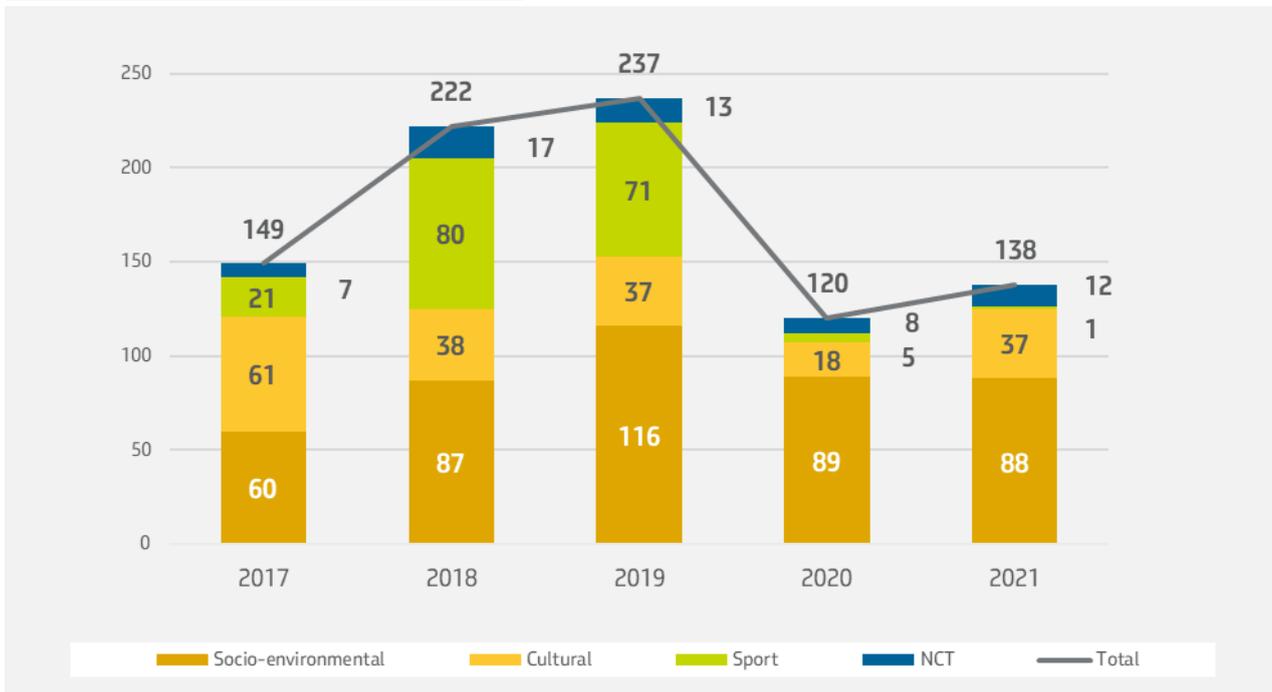
The new platform expands their access to working capital at more attractive rates with partner banks, using our company's payment risk (debtor risk) and adding a new concept: the reverse auction. Advances are made 100% online, simply, quickly and securely. The program is part of an agenda of financial solutions that aims at strengthening the supply chain and build productive relationships, so that we can implement projects more quickly and economically, being available for invoices in national currency. Interested suppliers must register at: <https://programamaisvalor.monkey.exchange/register>

The Mais Valor Program reached, in 2021, more than BRL 9.5 billion in operations carried out. Around 55,000 invoices were advanced, and 1,700 suppliers were registered in the program since December 2020.

## Social and environmental investments and in sponsorships and other contributions to society

We also emphasize the positive impacts of our social and environmental investments and sponsorships. The distribution and evolution of socio-environmental investment and cultural, sports, business, science, and technology sponsorship over the past five years can be seen in the chart below.

## SOCIO-ENVIRONMENTAL SPONSORSHIP INVESTMENTS AND IN CULTURE, SPORTS, AND BUSINESS, SCIENCE AND TECHNOLOGY (million BRL)



Of this total investment, 17.9 million reais were invested in social and environmental projects with incentives, while 37.4 million reais were invested in cultural, sports and business sponsorships with incentives, totaling 55.3 million reais in incentivized projects.

In addition to socio-environmental investments and sponsorship projects, to increase our contribution to society, in 2021 we made several donations in response to Covid-19 and other calamities, such as the donation of oxygen cylinders, oxygen micro plants, basic food items and kits containing drugs for intubating patients. As a result, we reached the amount of BRL 101 million in donations, of which 16.5% were donations of goods and services, while cash donations represented 83.5% of this total.

>> [Detailed information on all donations made can be found at the end of this report.](#)

In 2021, we also started the Janelas para o Amanhã (Windows to Tomorrow) project to donate computers to public schools and carry out training aimed at improving the quality of education in distinct locations across the country. The initiative takes place in the states of Rio de Janeiro, São Paulo, and Espírito Santo, in the municipalities and communities in the area covered by our operations and will benefit approximately 2,200 students between the ages of 4 and 18 and 2,000 teachers. This action seeks to increase the access of children and adolescents from public schools to new technologies, contributing to the reduction of inequality in education.

In the first year of the project, we achieved meaningful results. Over 3,800 computers were donated to 177 public schools in the communities with which we interact in the states of Rio de Janeiro and São Paulo. In partnership with the NGO Recode, students and teachers from 181 public schools in these states were trained in different information technology courses.

Despite the restrictions imposed by the Covid-19 pandemic, we also carried out several volunteer actions throughout 2021. Among them, we can highlight the Pro Bono Legal Project, created from the agreement between Petrobras and Instituto Pro Bono, with the purpose of encouraging voluntary legal counseling within our company, providing free legal assistance in favor of people and non-profit social institutions that do not have the resources to hire this service. Through this initiative, 20 non-profit social organizations have already started to receive, free of charge, legal support to become formally registered and thus be able to expand their operations and activities.

In addition to these initiatives, we implemented a digital platform for the dissemination and management of our volunteer actions. The new platform was launched on August 30, 2021. With the implementation of this tool, the Petrobras Volunteering Program moved into a new phase of action, in which registered employees can find different opportunities for volunteer work, in addition to suggesting new actions and interacting with the proposed actions. With this tool, we hope to expand the reach and engagement of our volunteer actions.

### **VOLUNTEER WORK RESULTS** (2021)

<b>Number of volunteers</b>	<b>313</b>			
<b>Hours worked by volunteers</b>	<b>Paid hours</b>	<b>Unpaid hours</b>	<b>Total hours</b>	<b>Total in BRL</b>
675	763	1,438		173,974.50

To manage our social and environmental projects, sponsorship, and other contributions to society, approximately 21.7 million reais were spent internally throughout 2021.

### **Voluntary social and environmental investments**

Our voluntary socio-environmental investment, structured within the scope of the Petrobras Socio-environmental Program, meets the 2022-2026 Strategic Plan as a tool to support the sustainability of our business. Through this program, we develop socio-environmental solutions on topics relevant to the oil and gas industry and in the territories where we operate, seeking positive socio-environmental transformations, consolidating relationships with stakeholders, generating technical and scientific information, and strengthening our reputation with our stakeholders.

The Program's lines of action are Education, Sustainable Economic Development, Ocean, and Forests and use as drivers the recurring demands of the territories where we operate, the strategy of transition to a low carbon economy and *offshore* operations. Through these lines, we prioritize the contribution to four Sustainable Development Goals (SDGs): (4) Quality Education, (8) Decent Work and Economic Growth; (14) Life below Water and (15) Life on Land. Early childhood, innovation and human rights are among the transversal themes to be considered in all the projects that make up the portfolio of socio-environmental projects that we support.

#### **Education and sustainable economic development**

Our Education and Sustainable Economic Development lines are intrinsically related to the demands of the communities and territories where we operate, in addition to supporting the treatment of social risks of our operations and risks of violation of human rights in areas of our business units, particularly in the area included in the Natural Gas Refinery

(RGN) and Exploration and Production (E&P) in onshore fields. It is worth noting that 100% of the social projects supported by us work directly in the area covered by our operations.

Through the analysis of socioeconomic diagnoses, it is possible to verify that, in the area covered by our business units, there are communities that show worrying data related to social vulnerability, precarious living conditions and insufficient public equipment and services, in addition to challenges related to the quality of education, income generation and training and employment opportunities. Violence and drug trafficking are also recurring issues in these communities.

In this sense, our projects in the Education line are related to the development of professional skills for teenagers and the expansion of opportunities for professional inclusion of young people and adults, with the purpose of directing them to the job market. We also support complementary educational projects whose purpose is to improve learning, digital inclusion, and integral development, in addition to providing training for educators, contributing to the improvement of the quality of teaching in these locations.

Training initiatives for the protection network for children and adolescents and educational activities with children in early childhood and their parents and guardians are also developed with the aim of strengthening family bonds and complementing educational activities, in line with our strategy of prioritizing investment for children 0 to 6 years old.

In the Sustainable Economic Development line, through the diagnoses, we found that the communities' demand for employment, income and use of local labor is recurrent in most of the locations where we operate. The communities in the area covered by our units are, in general, characterized by a population with a low level of education and elevated levels of informality. Promoting the development of local vocations, job and income opportunities and encouraging entrepreneurship contributes to greater autonomy in communities, to the development of individuals' potential and to the sustainable development of territories.

Through socio-environmental projects, we also seek to contribute to the dissemination of information on operational safety, through lectures, conversation circles and educational actions with a preventive approach and clarification of doubts of the residents of the communities. We have specific projects for the population that lives near our pipelines, focusing on community mobilization, risk communication and strengthening effective relationship channels between residents and the Petrobras Pipeline Protection Program.

## Ocean

The Ocean theme is intrinsically related to our *offshore operation*, where most of our activities are concentrated. This line aims at contributing to maintaining the sustainability of the business, as we prioritize environmental issues relevant to it and bring about positive socio-environmental changes in the places where we operate and, more broadly, in society. For over 40 years, we have supported projects for the preservation and recovery of coastal and marine ecosystems and species, which have a possible interaction with our activities, as well as collaborating for the management of the environment in these areas and for the protection of these species. We also contribute to the production of technical-scientific knowledge that is often unpublished, with potential for use by both companies and society.

By establishing partnerships with institutions that protect marine and coastal fauna, we contribute to the improvement of the preservation status of these species and increase the involvement of the local community for the preservation of biodiversity. The projects we support also benefit our *stakeholders*, such as traditional communities, particularly artisanal fishermen, helping to preserve the environment on which they depend and improve living conditions, including in the places where we operate.

### Forests

By supporting projects focused on forests, we reaffirm our interest in overcoming the challenges related to our business, including the transition to a low-carbon economy. We know that it is important to contribute to natural solutions by supporting projects for the recovery and preservation of Brazilian biomes. Therefore, since 2008, we have had a line of action for socio-environmental investments focused on this topic. These projects strengthen our commitment to sustainability, as they contribute to the reduction of CO<sub>2</sub> emissions, as well as produce other social and environmental benefits, such as income generation, environmental education, biodiversity preservation and microclimate improvements. Additionally, forest preservation or restoration initiatives in the hydrographic basins in which we operate possibly contribute to the maintenance and improvement of water bodies that supply the population and our units. In this line of action, the projects also develop and apply social technological solutions to improve the living conditions of communities allied to the reduction of environmental impacts, such as the use of eco-efficient stoves, which reduce the use of firewood and agroforestry, which, in turn, promotes food security, possible income generation and carbon sequestration. Also, projects supported on this topic produce and disseminate technical-scientific knowledge relevant to us and society.



## PROJECT TERRITORIALIZATION AND ACCELERATION OF THE SDGS

In addition to the contribution of the portfolio projects to SDGs 4, 8, 14 and 15, between 2019 and 2021, we supported the Territorialization and Acceleration of SDGs project, carried out by the United Nations Development Program (UNDP), with the aim of objective of strengthening the 2030 Agenda at the municipal level and, thereby, contributing to the achievement of sustainable development.

Through this initiative, local diagnoses and analyzes of the Multi-Year Plans (PPA 2018-2021) of 116 municipalities around our operations were prepared, with the purpose of contributing to the construction of more efficient public policies, aggregating information on the reality of each one of these locations to the global agenda. The 232 documents produced were made available to society throughout 2021 ([link](#)), with more than 73 webinars to deliver and discuss these technical productions, with the participation of 2,846 people. In addition to that, 5,107 people linked to local public management, organized civil society and the private sector were trained, as a way to deepen knowledge about the process of adopting the 2030 Agenda, the implementation of the 17 SDGs and their 169 goals, and learning about tools that promote territorialization of the Global Goals. The results of the Territorialization and Acceleration of the SDGs project can be accessed [here](#).

Our Social and Environmental Investment management process provides corporate guidelines for project portfolio planning. The planning of the socio-environmental project portfolio is annual and considers as a premise the alignment with the current Strategic Plan and the objectives and guidelines of our socio-environmental investment. As a first step in this process, a context analysis is carried out, where the diagnosis and analysis of the community relationship, social risks, the company's communication plan and social and environmental issues relevant to the business are considered, in addition to the evaluation of the portfolio of projects in force and closed in the period. Based on this information, we identify gaps and opportunities for the project portfolio in the following years. At the end of the process, the composition of the portfolio that best meets our needs and the channel of choice for these new proposals is defined.

In 2021, we carried out a public selection of projects from the Petrobras Socio-environmental Program. 23 new projects were contemplated to be implemented in the states of São Paulo, Rio de Janeiro, Espírito Santo, Santa Catarina, and Paraná. The projects will receive, in total, around BRL 41 million to develop their activities during the two-year period, complementing the current project portfolio. Such projects will operate predominantly in the surroundings of our units, in an integrated manner with community relationship activities, as well as on environmental issues relevant to the business.

The 343 proposals received went through several stages before being selected, in a participatory process that involved over 60 professionals from different areas of knowledge and sectors of society.

Among those selected, there are eleven projects that work in the Education line, six of which come from the use of tax benefits, representing approximately BRL 13.8 million in incentives; another six in the line of Economic and Sustainable Development, two projects linked to the Ocean theme and four working in the line of Forests.

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>> [Information on the list of selected projects can be found on our website.](#)



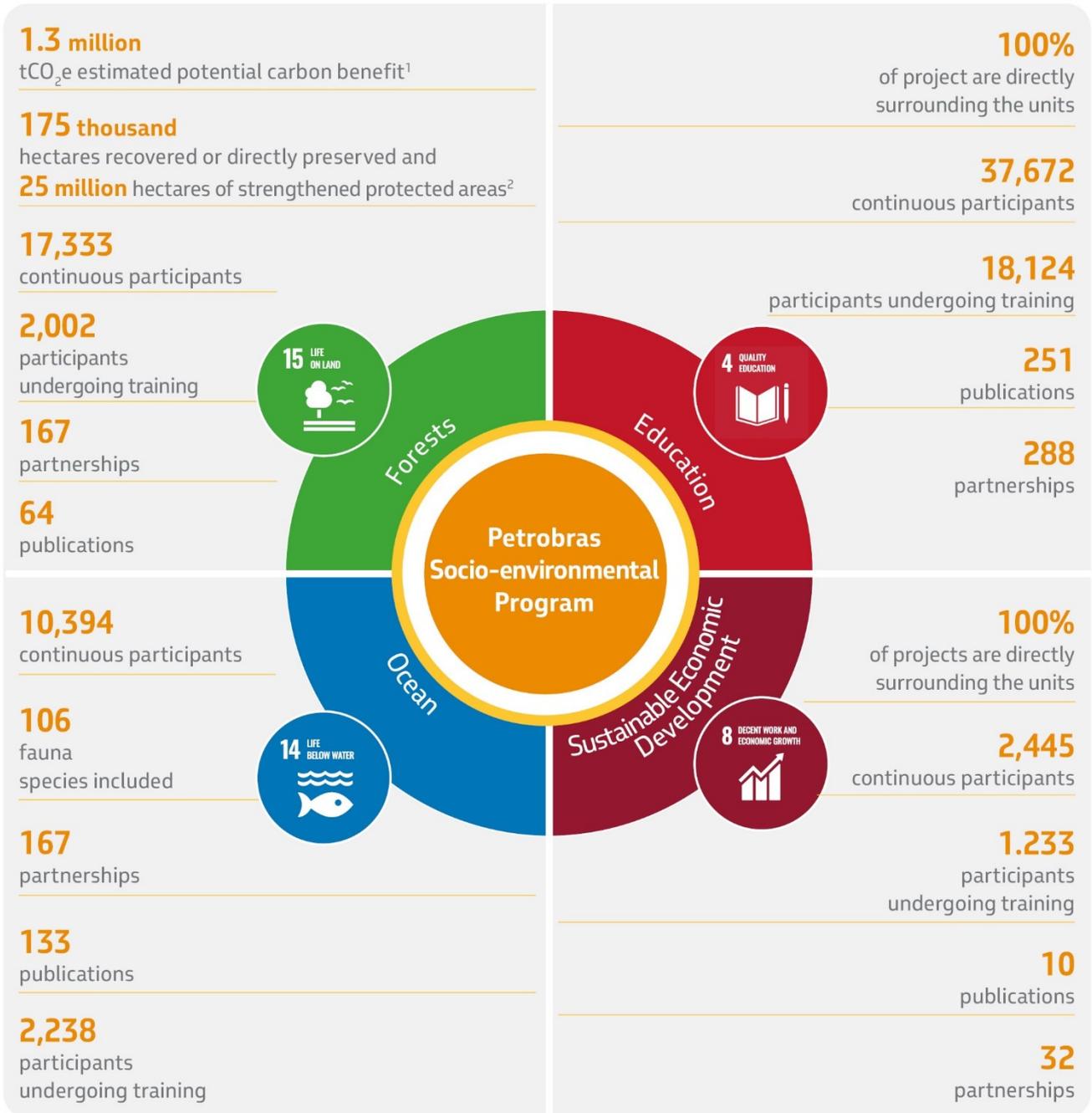
## LPG PURCHASE SUPPORT PROGRAM

In addition to the lines of action that were already being developed throughout 2021, in September 2021, the allocation of BRL 300 million was approved, over a period of 15 months, for the creation of a social program to support families in situations of social vulnerability to contribute to access to essential consumables, with a focus on liquefied petroleum gas (LPG), popularly known as cooking gas. The program aims at aligning our social action with that practiced by other market players and is justified by the effects of the exceptional and emergency situation arising from the Covid-19 pandemic.

Our socio-environmental projects have goals and indicators established from the moment they were authorized, which allow us to periodically assess their performance. The frequency of this evaluation is defined at the beginning of each project, as well as the means of verification. The collection of information may vary for each project, generally covering information on the public served, the engagement in the planned activities and

the results obtained in the socio-environmental actions. We highlight some of these results below:

**RESULT INDICATORS OF SOCIO-ENVIRONMENTAL PROJECTS**



1) Of which 95,500 tCO<sub>2</sub>e refer to net removal through recovery and productive reconversion actions and 1.2 million tCO<sub>2</sub>e refer to emissions avoided through actions that prevent deforestation and forest degradation. These amounts represent the results accumulated until 2021 in projects in force in that year, considering, on average, a period of 5 years, as reported by the projects.  
 2) Value referring to the area covered by the set of projects in force in 2021. The profile of projects and types of action affect this value and reflect the composition of the portfolio, whose dynamics can lead to annual variations.

The numbers mentioned above reflect the results of socio-environmental projects in effect in 2021. During this period, projects were partially impacted by the Covid-19 pandemic and social distancing measures, resulting in part of the activities carried out in a

remote model or even suspended. It is worth mentioning that, considering the dynamic nature of the portfolio, the profile of the projects and the degree of maturity of the execution of the contracts, annual variations may occur. In 2021, there was a 27% reduction in the number of projects that had their results evaluated. This is because 24 projects were closed this year and 36 new projects were contracted, the results of which can only be measured in 2022, as they are in the initial phase of execution. Conducting public selections processes and contracting projects from new civil society organizations periodically are part of our strategy of strengthening non-profit institutions, providing new institutions with access to company resources and carrying out customized projects to meet the demands of territories associated with business challenges.

## Destaque

### **BRL 226 million**

is the NPV of 11 socio-environmental projects evaluated

In addition to monitoring indicators, we also carry out analyzes of the socio-environmental return on investment (Social Return on Investment - SROI and its variant of Cost-Benefit Analysis - ACB) whose methodology converts the environmental, social and economic transformations that have occurred as a result of the project implementation into monetary values. Since the pilot project was carried out in 2019, we have expanded the use of the SROI-ACB to evaluate our socio-environmental investment projects, which currently total 11 projects and an NPV of BRL 226 million. On average, the projects evaluated return BRL 5.10 in social and environmental benefits for each real invested by Petrobras.

Our experience in the evaluation of the socio-environmental return and the specificities found showed that each evaluation should be considered a new and interesting challenge. For example, the improvement in the management process of socio-environmental projects sponsored by the company with the application of the SROI-ACB led Petrobras to demand the introduction of the Theory of Change (TdM) in the roadmaps of all socio-environmental projects.

The results achieved by the evaluated projects are shown in the following figure:

**Project Main Impact Indicators<sup>1</sup> (summary)**


**16 ha**  
of reforesting

**145 people**  
with increased  
environmental  
awareness



**73 people**  
with more income

**164 fishermen**  
with an allowance  
during the defense  
period



**145 people**  
with a greater role as  
a leader in community  
development



**160 ha**  
were preserved  
and monitored,  
sequestering



**11,610 tons**  
of CO<sub>2</sub> from the  
atmosphere



**100 ha**  
reforested in the  
Atlantic Forest biome

**74 youth**  
with increased professional  
opportunities



**2,039 children**  
with increased  
environmental  
awareness



**479 children**  
with improved academic  
performance



**464 children  
and families** guaranteed their  
food safety



**436 children**  
with improved cultural  
exposure

**490 children**  
accessed safe  
socialization space



**1,007.45 km<sup>2</sup>**  
of protected reefs and corals



**155 youth**  
multiplying preservation practices  
and concepts



**183 researchers**  
accessed primary data  
collection research objects

**40,423 people** with expanded  
environmental awareness



**471 children and adolescents**  
with improved academic  
performance



**588 children and adolescents**  
with improved physical health



**86 youth**  
received professional artistic  
training

**412.810 spectators**  
had expanded cultural access



**97 youth** increased  
their interest level in  
continued studies



**72 children**  
with improved  
academic performance



**502 children e youth**  
ensured access to the  
teaching/learning  
process

## Project Main Impact Indicators<sup>1</sup> (summary)

	<p>2,108 people impacted by increased income, professional opportunities, and encouraged to return to their studies</p>	<p>4 organizations with increased consumer market</p> <p>1,798 tones of CO<sub>2</sub> sequestered by agro-forestry systems</p>	<p>133 ha of agro-forestry systems implemented</p>
	<p>14,618 whales saved</p> <p>2,433 students in the municipal system with increased future opportunities</p>	<p>36 youth tutors with greater responsibility</p> <p>1,089 workers from whale observation operations made more aware of the environmental cause</p>	<p>36 youth tutors with increase income</p>
	<p>188 people with greater construction know-how</p> <p>90 people with increase income</p>	<p>118 women released from situations of oppression</p> <p>111 people ressocialized with the outside public (not including family members)</p>	
	<p>147 artists with expanded citizen awareness</p>	<p>6,160 spectators with increased cultural access</p>	<p>147 artists with the right to access the city ensured and increased opportunities for work</p>
	<p>16 researchers and technicians developing professional skills</p>	<p>72 educators from the public schools with expanded environmental awareness</p>	<p>605 students from the public schools with enhanced environmental sensitivity</p>
<p>NPV<sup>1</sup> total for evaluated projects <b>BRL 226 million</b></p> <p>BRL 4.70 is the weighted average for the social return of each BRL 1 invested<sup>2</sup></p> <p>BRL 5.10 is the average social return of the projects for each BRL 1 invested<sup>3</sup></p>			

1) Net Present Value

2) Ratio between the average NPV of the projects by the average investment of the projects.

3) Simple average of the social return of the measured projects.

Note: Results referring to the cut of the evaluated contract, not representing the accumulated results of all project cycles already supported by Petrobras.

## Investment in cultural, sports and business, science, and technology sponsorship

In 2021, overcoming the difficulties brought about by Covid-19, we continue to be present in society through our sponsorships. We work with the portfolio of current projects and new projects were carried out in the cultural, sports and business, science, and technology segments. Sponsorship selection is carried out through the “direct choice” or “public selection” modalities. Each and every sponsorship opportunity undergoes an internal analysis, based on predefined criteria, in order to ensure transparency and compliance with the decision to contract the opportunity in question.

We highlight the sponsorship of Orquestra Petrobras, the Rio de Janeiro Book Biennial, the Petrobras Team at the Olympics, the *Supermaker* web series of the Manual do Mundo digital channel and our participation in the *World Petroleum Congress* (WPC) - and *Offshore Technology Conference* (OTC) - in Houston. In the cultural sphere, sponsorships are related to innovative Brazilian projects that are innovative, with potential for return, and alignment with our brand strategy. The sponsored projects follow lines of action with a focus on music, performing arts, audiovisual and multiple expressions. Two public calls were developed for the selection of cultural projects: the first for fairs and literary actions, with a selection process carried out in 2021, and the second aimed at valuing Brazilian culture in museums and similar spaces, which is in progress. The scope of this selection includes the themes: Brazilian art/culture, popular culture/regionalities, Brazilian folklore and Brazilian history, as a way of promoting them in society.

In sports sponsorships, the highlight was the continued support for the training of Olympic sports athletes who together form the so-called Petrobras Team and represented Brazil at the Tokyo Olympic and Paralympic Games. The project ensured broad visibility for our brand, participation of athletes in videoconferences or in-person actions and activation in social networks, always associating the company with positive attributes such as high performance, teamwork, reaching goals, overcoming challenges, among others.

Sponsorships for business, science and technology events intensify the relationship with partners, investors, customers, the academic and scientific community, among others. We sponsor several initiatives that arouse curiosity and promote experimentation and conversations on topics related to innovation and the changing world. We also sponsor projects related to activities in the energy business, with a focus on oil and gas, and in the corporate world, with emphasis on issues related to governance, compliance, and business excellence.

## Evaluation of the return in image of socio-environmental projects and sponsorships

Different methodologies are used to select, manage, and evaluate projects, individually and jointly, including technical assessments, potential assessment, scope realization assessment, generated media measurement and public surveys.

Using an established methodology to measure space or time occupied in the media, we were able to verify that the value achieved - in equivalent financial return from cultural, sports sponsorships and business, science, and technology events - was approximately BRL 192 million in 2021.

Another metric, generated every three months, is the assessment of reputational dimensions, carried out through the RepTrak™ survey, which assesses several reputation dimensions, including the targeted *recall* of social, environmental, cultural and sports

sponsorship initiatives. The study allows us to verify differences in the assessment of corporate reputation between those who had contact with our sponsorship projects (*recall*) and those who did not. Since the beginning of the historical series, in the 2nd quarter of 2016, the perception of our reputation among those who had contact with cultural and sports sponsorships, in relation to those who did not have contact, has an average positive difference of more than 5 percentage points, with the difference between these two groups (those who had and did not have contact with the projects) reaching more than 10 percentage points in the last quarter of analysis (3rd quarter of 2021).

Monitoring the perception of corporate reputation also reveals to us that those who have knowledge of our social and environmental projects have a superior perception in relation to those who do not have that knowledge. Although this reputational delta varies with each quarterly monitoring, in our RepTrak™ history, the difference in 2021 remains above 10.5 percentage points, which demonstrates the relevance of these projects to our reputation.

Also, we evaluate the return on investment of the main sponsorships, according to the Ibope Repucom methodology. In 2021, this monitoring analyzed, until the third quarter alone, about 54 hours of exposure of the brand on TV and *streaming*, identifying more than 14,000 appearances of the Petrobras brand. In the "Team Petrobras" project alone, for example, around 27.6 million reais in media value was obtained.

## Communities in our coverage area

We manage the socio-economic impacts and risks that may affect communities located in the areas where our activities are carried out through environmental licensing or through the management of social risks and local plans for Social Responsibility and Community Relations.

### 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 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 current regulations. For those impacts identified as negative, mitigation or compensation measures are developed and implemented, while for positive impacts, actions are defined to enhance them.

The assessment of impacts is carried out per 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 the respective monitoring, mitigation or compensation measures, in addition to the Environmental Compensation provided for in the SNUC Law.

As part of the environmental licensing process, the environmental agency involves social participation in a consultative manner, aiming at the analysis for issuing the license. Social participation takes place through public hearings held by us and with the participation of

several bodies and communities located in 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.

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) stand out, which are aimed at communities in the area of influence and are based on critical, dialogical and emancipatory training, as well as the Social Communication Programs (PCS), which maintain communication channels (Call Center, 0800 Channel and online information portals) that provide information on operational activities, social and environmental projects developed.

Large communication meetings were suspended during the pandemic, in order to preserve the health of the communities and teams involved. Online communication strategies were implemented in order to maintain communication and engagement of social groups.

We currently have 172 assets in installation or operation. Of this total, 94.2% (162 assets) had some type of consultation with communities. These consultations may take place through public hearings or public meetings at the time of implementation of the projects and/or through community committees or other social communication programs during the operation of the assets. Among the projects under development, we have 37 projects being implemented, of which 81% (30 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 of being 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.

In 2021, the total invested by us in projects to mitigate/compensate for socio-economic impacts was in the order of BRL 107.7 million.

### **Social risk management in projects**

In addition to the legal obligations of the environmental licensing process, we have defined an internal system for assessing social and environmental risks, in addition to other aspects, during the transition to the investment projects phase. The System requires the presentation of minimum information about the project, which must be included in the Technical and Economic Feasibility Study Report (EVTE) for each phase. Among the documents that make up the EVTE Report for investment projects over USD 100 million, the project must present a Social Responsibility Report and an HSE Report - Health, Safety, and Environment. The Social Responsibility report is comprised of information about the project, the characterization of the social context, and the matrix of the identified social risks. The HSE Report presents, in addition to other information, the description of the fulfillment of the applicable HSE requirements and the HSE risks of the project.

During the phase change, the projects are submitted to a technical group, comprised of external reviewers to the project, which evaluates the project's adherence to corporate standards and legislation, including compliance with the minimum requirements of Social

Responsibility and HSE, as well as indicating to decision-makers the most relevant points and risks of the project, whether positive or negative.

The main social risks identified in the E&P project review groups in 2021 were damage to fishing and tourism in the event of a major accident, restrictions on movement of vessels, and risk of human rights violations in the supply chain. In the case of the project review groups in the RGN segment, the social risks that stood out were the exaggerated expectation of generating labor, inconvenience to communities and the risk of human rights violations in the supply chain. In both E&P and RGN projects, the risk of resurgence of Covid-19 was identified and addressed. All social risks are recorded and dealt with by the actions of the local Social Responsibility Plans.

The social responsibility analysis of investment projects gives rise to recommendations that include the revision of emergency response plans, the monitoring of community occurrences and complaints, actions to publicize projects and operational activities, and the inclusion of social responsibility clauses in service provision contracts.

We also have systems for the development of decommissioning and divestment projects of assets and companies, in addition to HSE policies, guidelines and standards, which establish guidelines, processes and activities to plan and execute decommissioning or divestment of *offshore* and *onshore* assets.

The decommissioning of oil and gas production systems involves several activities, such as inspections, cleaning and disconnection of subsea systems, *riser pull-out*, unanchoring and destination of platforms and permanent plugging of wells, with authorization from regulatory bodies and in accordance with applicable legal requirements.

It is noteworthy that before starting the execution of any stage of the decommissioning projects, they are submitted for approval by IBAMA, the Navy, and ANP, as required by the current legislation, after carrying out studies to evaluate decommissioning alternatives. In accordance with ANP Resolution 817/2020, we started to include in the Installations Decommissioning Programs (PDI) a chapter with information on the social responsibility and sustainability system.

In 2021, we obtained approval from the Brazilian regulatory bodies that oversee the decommissioning plan for the FPSO Capixaba in the Jubarte field, and for the initial decommissioning activities of the P-33 platform in the Marlim field. We removed the FPSO Piranema in April, the three fixed platforms in the Cação field in June and the P-15 in December 2021. We completed the removal of *risers* from the P-07 platforms, which were removed in February 2022.

With regard to the decommissioning of oil production platforms, our position is that decommissioning actions always aim at the least impact from the environmental, social, technical, operational and economic risks standpoints, in line with the approach that technically underlies the environmental licensing processes. In 2022, we created an Executive Decommissioning Committee, with the purpose of monitoring the evolution of the best global practices and deliberating the strategic guidelines for the implementation of decommissioning projects.

In the case of divestments, strict criteria are applied in the selection of potential buyers to ensure the technical, financial and operational capacity to continue the business. The divestment system provides for the participation of several areas of the company, with the purpose of ensuring compliance with legal and regulatory requirements, in addition to the adoption of best HSE and Social Responsibility practices.

In view of the active management of the portfolio provided for in Strategic Plan 2022-26, the Social Responsibility area carries out assessments of social risks and impacts also on divestment projects. This assessment consists of the stages of establishing the territory's social context; workshops with a multidisciplinary group to identify social risks, analyze and qualify the severity of social risks (risk matrix and bowtie); proposal of an action plan for managing risks and monitoring of the entire process. Over the past year, we have valued several assets at distinct stages of our divestment portfolio. We can highlight the social risk assessments carried out on refineries and *onshore* E&P assets in the process of being sold. These assessments will support a treatment management plan with remediation, transfer and mitigation activities, if necessary, of the most severe social risks. With this management plan, the company can mitigate the risks or involve the purchaser of the asset in the process, in order to correctly deal with the main social impacts to be addressed.



## SHARING OF WATER WELLS IN THE NORTHEAST

With the purpose of providing a lasting solution for the water supply of the communities neighboring our operations, even in a future scenario in which we will not operate the onshore fields, solutions are being articulated with the public authorities of the respective localities that guarantee the continuity of the water supply, historically assumed by the company, given the circumstances of scarcity in some regions, mainly in the northeast of the country.

The discontinuity of water supply is a critical issue and requires attention to the mitigation of risks related to the violation of human rights, in addition to the need to settle social liabilities, compliance with changes and new publications of laws and regulations on the subject and improvement in the condition negotiation with possible purchasers of production areas.

With the need for a permanent solution for the supply of water, either through the observance of the industrial concession or for inventory for sale of fields in the portfolio management, we started the process of evaluating alternatives, in partnership with the public and related authorities and with listening to impacted communities, making a social commitment to keep families supplied with water in their homes.

Sharing water with communities is a predominant reality in the regions of land exploration concessions, where production water wells were drilled 20, 30 years ago, a time when public infrastructure and sanitation services took longer to arrive in rural areas, a reality in the places where there is sharing. In the absence of resources offered by the public authorities, we share some wells in order to improve water for communities neighboring our operations. We seek, whenever possible, to involve communities in approving projects and monitoring the progress of agreements and works, in a transparent manner. An example of this action is the municipality of Carnaubais, in Rio Grande do Norte, where the city administration presented the project for a pipeline that will be responsible for supplying water to 450 families in the communities of Mutambinha, Vila Nova and Arenosa. The water main will have works financed by us, while the management of the work and the continuity in the maintenance of the system will be the responsibility of the municipality.

## Local social responsibility and community relationship plans

We identify, analyze, and respond to the possible socioeconomic impacts of our operations using the diagnosis and social analysis of communities in the area covered by our operations as a management tool. In 2021, we started a new round of elaboration of the socioeconomic diagnosis of communities and municipalities with the purpose of subsidizing the management of social responsibility, identifying, and analyzing territorial strengths and weaknesses, history of (positive and negative) social impacts and prospecting associated future scenarios to our operations in these territories.

The socioeconomic diagnosis consists of a translation of the reality experienced by a population in a given geographic space, through the use of indicators of good reliability, validity and with the possibility of disaggregation that permeate several dimensions of social reality. During this process, municipal socioeconomic indicators are consulted, as well as specific data from the communities mapped in the territory, such as social actors, traditional peoples and communities, the existence of conflicts, and the existence of impacts and risks arising from our activities. In this new round of carrying out the diagnosis, we also included the collection of primary data, through focus groups, *survey*, social cartography, and perception studies.

Real or potential reason for conflicts with communities are also pointed out, such as complaints about air pollution, noise, odors, soil contamination; intrusion into our areas and waterways; daily interferences, especially traffic and dust, including blocking access routes by communities; protests and complaints resulting from the generation of expectations, such as jobs, local improvements, financial compensation for communities; and clandestine derivation.

With the systematization of this information, social responsibility and community relationship plans are drawn up in order to provide answers to community questions from the business units.

The plans are annual, and the process also provides for periodic reviews and updates. The actions provided for in the plans seek to respond to the social risks identified in the diagnosis and to increase the level of engagement of the communities with us, seeking to maintain permanent dialogue and expand community participation in the planning of actions.

In 2021, we established as one of our Sustainability Commitments that 100% of our operations have socio-economic diagnoses reviewed and finalized by 2025.

Currently, there are 22 local plans for social responsibility and community relations, covering 100% of our refining, exploration, and production units. With the removal of RLAM from our portfolio, the local plan for this unit was added to the local BA-NC plan (Bahia and Norte Capixaba). It was also decided to unify the RS plans of the APCAB and UO-BC, renaming it the Norte Fluminense local plan, which share the same prioritized communities in their territories. These plans were prepared and validated with each general manager of the business units. Planned actions are monitored by a management system (JIRA) that monitors the percentages planned and carried out.

**ACHIEVEMENT OF SOCIAL RESPONSIBILITY AND COMMUNITY RELATIONSHIP PLANS** (2021)

DESCRIPTION	Achievement Goal	Percentage Accomplished	Performance <sup>5</sup>
Improve knowledge about communities and strengthen community relationships	95%	98.30%	103%
Working with communities for emergency situations (Promoting actions to prepare communities for emergency situations)	95%	99.64%	105%
Manage the handling of conflicts and critical issues arising from operations, integrating our assets in the area covered	95%	100.00%	105%
Manage social risks in the business lifecycle	95%	100.00%	105%
Enhance socio-environmental projects as an instrument of community relationship	95%	100.00%	105%
Promote the dissemination of the RS culture through the involvement of the workforce	95%	99.43%	105%
Develop community relationship actions linked to environmental conditions and ANP	95%	100.00%	105%

<sup>5</sup> Percentage of goal achieved

## Social Responsibility in the REPAR maintenance shutdown



Photo: André Valentim



### CONTEXT

At intervals defined according to the characteristics of the assets, there are scheduled maintenance stops. These stops presuppose a thorough plan for the scope and contracting necessary to execute the services, which seek to guarantee the integrity of the assets, ensuring a high level of reliability during the campaign term. During maintenance shutdowns at refineries, several companies are hired to perform services at our facilities. During the maintenance shutdown of REPAR, carried out in 2021, around eight companies were hired, with the need for approximately **1,700 employees** to execute these activities. With the objective of seeking to increase the hiring of employees in local communities, we work on disseminating our culture of social responsibility to the contracted companies, encouraging the hiring of local labor by these companies, at the same time that we disclose to the local communities that job openings would be opened for the unit's maintenance shutdown.



### CHALLENGE

Our challenge, therefore, was to hire local labor during the REPAR maintenance stop.



### SOLUTION

The companies hired to carry out the maintenance shutdown provided job openings for residents of local communities through the local National Employment System (SINE). At the same time, our social responsibility team announced to the local community, during REPAR's community committees, that job vacancies would be open at the unit and that residents should register with the local SINE to learn about job opportunities that could arise.



### RESOURCES



Strategic planning meetings were held with those responsible for the hiring and the engineering and maintenance companies hired for the shutdown.



### RESULTS

The result was the hiring of

**73% from among local residents**

for the execution of the REPAR maintenance

shutdown, in other words, of the **1,700 people hired** (in the largest contracts),

**1,167 were local residents**

The management of socioeconomic impacts at Transpetro also includes social risk management and community relationship actions. The pipeline lanes are very present in the communities, since they are in the open, interacting with the environment, through cross streets and highways, as well as environmental, urban, rural, industrial and densely populated areas. In addition, several sections of the pipeline lanes are located remarkably close to different communities. In this context, community relations are essential, seeking engagement with communities through continuous and transparent dialogue, creating synergy and integration, as well as increasing the security of the facilities and their surroundings.

In the Pipeline Protection Program, a diagnosis was carried out in order to map the main communities to prioritize in Transpetro's Communication and Social Responsibility action plan, taking into account criteria such as population density and the critical nature of the transported products.

To build relationships with the communities in the places where we have assets, we carry out periodic activities involving residents and other stakeholders of the local society. These include drills with community participation, face-to-face communication with visits by representatives of Transpetro to the residents surrounding pipeline lanes, meetings at schools and community association sites, events for information and engagement on pipeline safety, and the relationship channel with Transpetro (dial 168), informational brochure distribution in the communities, and dissemination through an advertising campaign with sound cars, radio, and billboard ads. We also launched a new and extensive advertising campaign to increase public awareness of this type of risk, which encouraged the population to collaborate through the communication channel, telephone number 168, effectively reporting criminal actions.

In addition, we maintained our focus on exercising our crisis procedures and responding to emergencies caused by fuel theft from pipelines, by conducting the first integrated crisis drill between Petrobras and Transpetro. Through these actions, we seek to make communities aware of our operations and understand that the transport of fuels by pipeline is a safe activity as long as there are no unauthorized interventions in the assets. It is expected that the communities neighboring the pipelines are engaged in the fight against clandestine derivations and contribute by making complaints through the 198 hotline.

## Community Risk Management Program



Photo: Gaby Vieira



CONTEXT

In many of the areas where onshore fields are produced, the large number of communities close to our facilities is common. This reality took shape over many decades of production, during which originally rural communities took on an urban or semi-urban appearance and established themselves around industrial facilities, such as pumping units, industrial power grids, production lines and pipelines.

This situation gave rise to many initiatives to mitigate risks associated with the coexistence between the routine of communities and industrial activity. Even today, the scenario remains a challenge for security and prevention insofar as a culture of defense and social protection has not yet crystallized in most municipalities, not to mention social factors such as low adult education and lack of spaces for leisure activities for children and adolescents, which enhances possible interactions out of curiosity combined with a low sense of danger.

Our respect for the communities in the area covered by our operations, in view of the records of accidents and incidents of great potential, including fatalities, was decisive for the creation of a program that aims at harmonious coexistence through actions of empowerment and awareness. In this sense, in 2020, the Risk Management Program with Surrounding Communities (PGR-Comunidades) was implemented, which covers communities in the states of Bahia, Sergipe and Rio Grande do Norte, with periodic awareness-raising actions to increase the perception of risks, with a view to a safer attitude and rational coexistence with the facilities.

### SOLUTION



CHALLENGE

Surveys indicated that the surrounding communities demand information about the company's activities and have little perception of the risks in living next to our equipment. The topic of safety, as a safe attitude towards risks and behavior in accident situations, still needs to be constantly addressed. The biggest challenge in 2020 and 2021 was to broaden this program during the pandemic context.

PGR Comunidades is a multidisciplinary program that involves maintenance actions for the integrity of the facility fencing, safety signs, educational actions and community relations. For actions aimed at communities, the objectives are:

- \_Generate understanding of the safety measures that must be adopted to prevent accidents with regard to installations, equipment and the electrical network.
- \_Raise the awareness of communities in the coverage area regarding the perception of risk.

Strategies adopted in the PGR Communities:

- \_Development of an awareness campaign with stakeholders compatible with the pandemic scenario.
- \_Promotion of spaces for dialogue to deepen the topic and approach roles and responsibilities.
- \_Establishment of partnerships with institutions and community representations to address the issue and enhance social protection networks.
- \_Promotion of easily disseminated and understandable information on risk prevention, in order to sensitize families (children, young people and their guardians).

### RESOURCES



To achieve these objectives, tools were developed to bring communities, public authorities and formal and informal civil society organizations together, such as:



- \_Virtual meetings with communities and with multipliers from civil society organizations and municipal government
- \_In person workshops (from the reduction of social distancing restrictions resulting from the Covid-19 pandemic)



- \_Thematic series of cards with safety guidelines on facilities and equipment
- \_Broadcasting spots using sound trucks
- \_Distribution of parts for pedagogical integration activities for elementary school children



RESULTS

Despite the pandemic scenario having limited the actions of PGR Comunidades, the engagement program expanded the perception of risks and safe behavior in the communities, where the lectures and dissemination of the campaign circulated, leading to a greater knowledge of the communities in relation to the risks existing in coexistence with the company's industrial equipment. In 2022, we will continue the program, covering more communities and expanding dissemination actions.

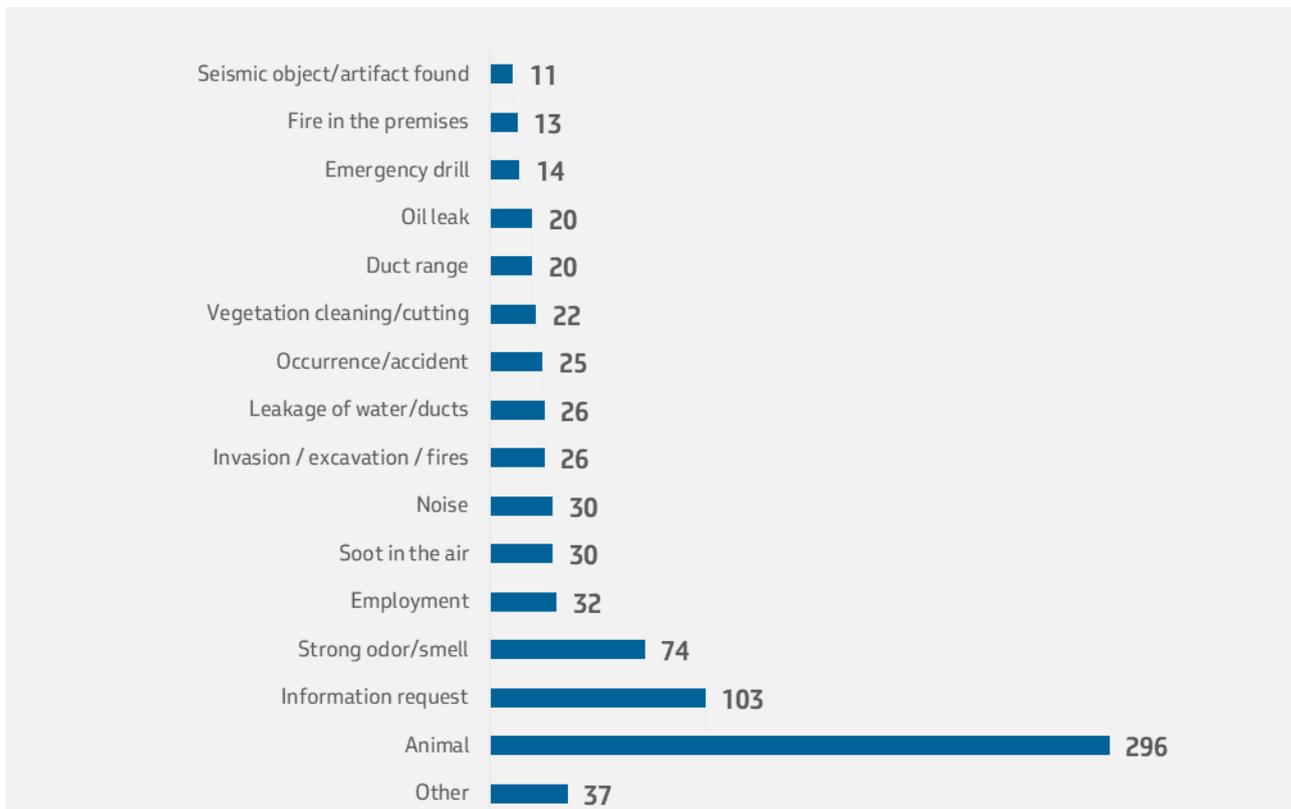
## Claims and complaints

In addition to community relationship actions, we also provide channels for direct contact with us to register complaints and claims, such as 0800 728 9001 (Customer Service) and an institutional email for the social responsibility teams that serve the Business Unit.

With regard to claims and complaints from the communities present in the coverage area, the records are made via Customer Service and through the Ombudsman's Office. We provide assistance through toll-free phones with 24-hour service coverage, seven days a week, through contact channels widely disseminated in the communities where we operate.

This information is categorized by unit and by topic and is monitored by the SAC Panel. In 2021, 804 requests were received through this channel. Among the requests received, the main topics addressed by communities throughout 2021 were:

### MAIN TOPICS ADDRESSED BY THE COMMUNITIES IN THE COVERAGE AREA



Animal: complaint regarding stranded, injured or dead animals

We answer and deal with the questions presented by the communities mainly through community committees, which take place in our operational units and in partnership with our social and environmental projects. We incorporated these recurring requests into the business units' social responsibility and community relationship plans.

The social responsibility actions carried out by the units are recorded and monitored by the JIRA System. We also hold periodic critical review meetings with the multidisciplinary teams responsible for social responsibility and community relationship plans.



The results of this process are discussed and disseminated to the communities through presentations made in the dialogue spaces and community committees of each unit. In these spaces, we discuss issues related to impacts from activities and operations in the communities, and measures that need to be developed to expand positive impacts and minimize negative impacts.

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# Human Rights

## Human rights guidelines and commitments

In 2021, we deepened the work of building and implementing an agenda of respect for human rights integrated into our business.

In June, we carried out the first review of the **Human Rights Guidelines**, giving greater emphasis to our commitment to respecting human rights in the relationship with the chain of suppliers and partners. The document guides our work on respect for human rights in all our activities and regions where we operate and throughout the life cycle of our projects and operations.

In addition to the Human Rights Directive, our policies regarding corporate **Social Responsibility, Health, Safety, and the Environment**, and **Human Resources** also reinforce our commitment to human rights. Our **Code of Ethical Conduct**, revised in August 2020, has a specific section on our duties and those of our employees with human rights.

**Petrobras Ethical Conduct Guide for Suppliers**, published in 2020, was the first document produced exclusively with our suppliers in mind, with guidelines on ethical values and behavior. This guide applies to all of our suppliers, regardless of whether they are residents or not in Brazil, including their affiliates and subsidiaries, who are involved in business processes (bidding, prequalification and direct contracting), as well as those who enter into legal instruments with us (contracts, agreements, cooperation agreements, among others).

Our commitment to human rights is expressed in our values of respect for life, people, and the environment and in our Strategic Plan. In the 2022–26 Strategic Plan, approved in November 2021, we established specific commitments in human rights.

- 100% employee training on human rights issues
- 100% of operations with human rights *due diligence*
- Promoting diversity by providing an inclusive work environment

### HUMAN RIGHTS INITIATIVES WITH EXTERNAL INSTITUTIONS

2003	2005	2010	2015	2018	2019
UN Global Compact	Gender and Race Pro-Equity Program	Women's Empowerment Principles  Corporate Statement Against Sexual Exploitation of Children and Adolescents	National Pact for the Eradication of Slave Labor	Open Letter Enterprises for Human Rights  Business Initiative for Racial Equality	Early Childhood National Network

## Human rights training and awareness

In addition to supporting external initiatives, we regularly disclose to our audiences' actions, campaigns and training on topics related to human rights, addressing issues such as gender, race, children's and adolescents' rights, among others.

In 2021, we started the Human Rights (DH) Training Plan, which aims at consolidating training and awareness-raising initiatives on this topic, ensuring the breadth and reach of the company's actions, in addition to promoting a culture of respect for human rights, in alignment with our guidelines for this topic. In 2021, we had 3,384 employees with 6,768 hours of training related to human rights, which represents 8.74% of the workforce.

We also started the construction of a Basic Distance Learning in human rights, with delivery perspective in the first half of 2022. The Distance Learning course brings topics such as "Human Rights Due Diligence", "Management of People and Human Rights" and "Communities and Human Rights", among others. Our goal is that by 2025, 100% of our employees will have been trained in Human Rights Basic Distance Learning.

With a focus on leadership, the Distance Learning Course entitled "Challenges for Leadership" was created, which addresses human rights issues, and specific training on diversity and lectures on violence at work were also made available. In 2021, this training was carried out by 98% of our leaders. In the 2022-23 scenario, Human Rights training is planned for specific audiences, such as health professionals, legal professionals, supply professionals, employees in training courses, training in Brazilian sign language (Libras), among others.

To raise awareness on the workforce in relation to Gender Equality, two live broadcasts were carried out. In March, the topic "Prejudice and discrimination against women" was addressed, in which the results of the perception survey with women from operational units on the obstacles to working and leading were presented and discussed. In June, the topic "Violence and harassment at work" was addressed with the participation of our Ombudsman's Office and a representative of the International Labor Organization (ILO).

In order to better understand the diversity of our workforce, we carried out a campaign on our internal channels with the aim of encouraging employees to self-declare information about their race/color in our records, and we sought to involve the highest leaders in the areas that make up the Human Rights Commission to encourage their teams to fill in this information in the employee register. As a result, in December 2021, the number of employees who filled in this information in the company's records rose to 87%.

To celebrate parenting, a live broadcast was held in August that addressed the concept of active parenting. The event had the participation of four parents, employees of different work regimes, one of which being a psychologist of the company.

On September 21, we held the National Day of the Struggle for People with Disabilities, a live broadcast for the launch of the Corporate Plan to Improve Accessibility at Petrobras, with the participation of Paralympic athlete Petrúcio Ferreira, who addressed the importance of accessibility for inclusion and personal and professional development. Planned as an action in the Accessibility Improvement Corporate Plan, the campaign "8 tips for you to make your events and meetings more accessible" was carried out on Workplace (internal social network) throughout the month of November.

On December 15, we held an event with the participation of around 90 employees with the purpose of debating the human rights *due diligence* scenario and presenting the *status of*

implementation of this theme in the company, the main challenges, advances and prospects for 2022.

Within the schedule of Meetings with Suppliers, promoted on a regular basis by our Procurement area, we held the lecture “Human Rights Agenda for Suppliers”, on 01/12/2022, with active contracts and the general public. Approximately 384 companies participated in the event.

In July 2021, we joined the Human Rights Work Group of the Brazilian Petroleum Institute (IBP). The Work Group (WG) is made up of around 15 companies in the oil and gas chain associated with the institution and was created with the aim of promoting an alignment of best practices in human rights in the sector and expanding a culture of protection, respect and reparation based on the UN guiding principles. Together with Equinor and IBP, we were responsible for structuring the WG, whose meetings take place monthly.

Regarding support for projects through the Petrobras Socio-Environmental Program, we believe that the promotion of human rights is a high-value attribute of those projects. Thus, the human rights theme is a transversal theme of the Program. Projects that carry out affirmative actions aimed at promoting Gender Equity, Racial Equality and Inclusion of People with Disabilities must demonstrate the association of their actions with the expected results in human rights.

In 2021, through these projects, we had the opportunity to address critical issues with communities, such as the increased risk of violence against women during the Covid-19 pandemic and the rights of children and adolescents.

## Our work on human rights

In January 2021, the Petrobras Human Rights Commission was created, responsible for managing the implementation and monitoring the agenda of respect for human rights, in order to ensure the integration of this agenda in a broad and transversal way in our business. The commission is made up of 20 business areas, totaling 40 members, and meets monthly to monitor the implementation of the Human Rights Plan and other guidelines related to the subject.

To facilitate the execution and monitoring of actions, the Committee was divided into 3 subcommittees: (1) Human Rights Training Subcommittee, (2) Diversity and Inclusion Subcommittee, and (3) Human Rights *Due Diligence* Subcommittee. Throughout 2021, these subcommittees met 28 times.

In the first months of 2021, the subcommittees worked on the development of our Human Rights action plan. The plan was approved in June 2021 and has been in the execution phase since then. There are an average of 70 actions, with a term of completion until 2025. In December 2021, 96% of the actions planned for the year had already been implemented.



The actions developed for each of these audiences will be detailed in the topics below. In order to receive human rights related complaints and claims, we offer our service channels, through which we receive, treat, and report, statements received by all stakeholders with independence, impartiality, and confidentiality.

### Internal public and human rights

Keeping our focus on the prevention of conflicts in the corporate environment, a lecture on discrimination, violence and harassment aimed at leaders was customized and held by the Ombudsman's Office. A total of 44 lectures were given to several of our units and were attended by 2,947 leaders.

In 2021, we continued with the Gender Equity plan, whose main action was the implementation of the Corporate Mentoring Program for Female Leadership, which included awareness-raising workshops on the topic for female mentors, mentees, and mentees' managers, in addition to other meetings. As a direct result of the program's success, some units deployed the initiative and developed their own in-house programs. An indirect consequence of the program was the increase in the engagement of female leaders in the discussions of career committees and the appointment of successors to key positions.

To promote inclusive management in our work environment, and in line with the perspective of digital transformation, a diversity panel was created. Through this panel, our managers have access to data regarding the diversity profile of their teams. We consider that information of this nature is essential, as it allows managers to have a more detailed knowledge of the potential and specific needs of the components of their teams.



## CORPORATE ACCESSIBILITY IMPROVEMENT PLAN AT PETROBRAS

On September 21, 2021, we launched the Corporate Accessibility Improvement Plan, which aims to promote, in a coordinated manner, the diagnosis, proposition and implementation of actions to improve accessibility in the company, adapting to legal requirements and improving the inclusion of people with disabilities in the workplace, in the search for equality of conditions with other people.

For the structuring of the plan, a multidisciplinary team was formed comprised of more than 90 people: representatives of 11 executive managements and employees with disabilities, in addition to employees who are interested in the topic and willing to participate in a collaborative work model.

This team underwent training and carried out a diagnostic work, which sought to identify the main accessibility gaps in the company - in processes, environments and behaviors. Subsequently, the areas involved proposed short, medium and long-term actions (more than 80) and many are already being put into practice, as a way to remedy the gaps and barriers mapped. The plan is expected to be completed by December 2022.

The driving force of the plan is the search for the construction of an increasingly inclusive work environment that, in addition to meet legal accessibility requirements, respects diversity and provides increasingly dignified working conditions.

This is a milestone for the company, with the potential to positively impact our culture and organizational climate and contribute to productivity. A bold initiative, which may even inspire other companies in the country.

In our Ombudsman's Office we have specific group for receiving and following up on workplace violence reports. As of 2019, complaints of moral harassment and sexual harassment involving company employees started to be investigated by this team, and in 2020, accusations of discrimination involving company employees were added. The investigation of these cases by the Ombudsman's Office allows specialized treatment in the interactions with victims, the accused, and with witnesses, as well as in the analysis of the information collected. Confirmed cases are submitted to the Integrity Committee to define liability and consequences. Regarding the employees of service providers, any failure to comply with the guidelines of the Code of Ethical Conduct should be reported to your employer.

Our external and independent reporting channel is capable of handling complaints about violence at work, including topics such as moral and sexual harassment and discrimination. During 2021, 13 complaints were closed that presented the sufficient and necessary elements for the investigation process by the Ombudsman's Office. Eight of these processes started in 2020. After the investigation ended, 9 complaints were confirmed (6 about the same person) and 4 were not confirmed. In the accountability stage, 3 suspensions were determined: one for discrimination and two for moral harassment. For a confirmation of moral harassment, the Integrity Committee understood that the employee

was not punishable. At the end of 2021, there were 5 complaints for moral harassment and 2 for discrimination being investigated by the Ombudsman's Office.

With regard to lawsuits related to moral harassment, there is the filing of a Public Civil Action filed by the Public Labor Prosecutor (MPT) against Petrobras (Proc. 1000420-31.2020.5.02.0252, 2nd Labor Court of Cubatão / SP). The MPT alleges that, during the strike of the oil workers that began in February/2020, we kept a group of employees working in slave-like conditions, keeping them in their jobs for up to 132 straight hours, on the company's premises at the Presidente Bernardes Refinery in Cubatão (RPBC). It also states that the Company should have provided for the workers surrender, and that they were forced to remain working until the end of the strike. It is asking for BRL 100 million for collective pain and suffering, in addition to BRL 100 thousand in compensation for each of the 73 workers who allege harm, in addition to ensuring that such acts are not repeated in future strikes.

We affirm that the situation was caused by the Labor Union, which disobeyed repeated court orders of the Superior Labor Court, which imposed fines on the entity for noncompliance with the decision (the TST decided to maintain 90% of the employees in service, taking turns in regimes of uninterrupted alternating shifts). The company claims that employees remained at their jobs because they were aware of their responsibilities and that it was impossible to empty the refinery, under pain of serious risk to the safety of people, the environment, the surrounding community, and facilities. Furthermore, there was no impediment or barrier for employees to leave the refinery's facilities. Also, we demonstrated that employees alternated working hours and rest periods, under appropriate conditions, and were duly compensated for the extraordinary work hours performed, without slave-like conditions, an allegation that we strongly reject.

The sentence dismissed the request of the Labor Prosecution Office (MPT), accepting the company's defense and recognizing that there was no responsibility of the company for the permanence of workers in their workplaces during the period discussed in the lawsuit. The MPT appealed and the appeal, with the 12th Panel of the Regional Labor Court of the 2nd Region dismissing the appeal, fully maintaining the decision in favor of Petrobras. The case has not yet become final.

### Prevention of human rights violations in communities in our area of operation

We have adopted standards and processes that guide our performance in managing risks and socio-economic impacts in our operations, investment projects, decommissioning and divestments. These processes seek to prevent the violation of human rights and to strengthen the bonds of trust with the communities present in our coverage area.

We identify, analyze, and respond to the possible socio-economic impacts of our operations, including the risks of human rights violations, using as a management tool the diagnosis and social analysis of communities and the Social Responsibility and Community Relationship plans in the area covered by our operations. Currently, there are 22 local plans for Social Responsibility and Community Relations, which represent 100% of our refining and exploration and production units. These plans were prepared and validated for implementation in 2021, and their actions are monitored by a management system (JIRA) that tracks the percentages planned and carried out.

Regarding the evaluation of capital investment projects, in 2021, 28 projects were submitted to social responsibility and HSE evaluation, which include human rights issues,

during the phase change. This total represents 85% of the projects with investments above 100 million dollars evaluated for phase transition in 2021.

>> **More detailed information on managing social risks and preventing human rights violations in communities located in our area of coverage can be found in the Socioeconomic Impacts chapter.**

In 2021, our Ombudsman staff received 130 complaints from local communities. Of this total, 27 were accusations (8 confirmed, 15 unconfirmed, 2 closed and 2 that are still being processed), 53 were complaints (38 completed, 14 closed and 1 that is still being processed), 45 were requests (27 completed, 17 closed and 1 that is still ongoing), in addition to 4 completed suggestions and a compliment.

The most relevant issues reported in the accusations from local communities were: Invasion or irregular occupation of a Petrobras area by the community, impact on the health of the community around the facilities, environmental impacts and irregularities in the conduct of projects maintained by us. The other manifestations deal with land issues, pipelines, installations, and requests for donations.

We do not have oil and gas reserves in conflict areas, as defined by the *Uppsala Conflict Data Program* (UFDP). However, in 2021, we recorded eleven conflicts with local communities that we classify as significant, with the possibility of impacting operations, people, and the environment, requiring immediate attention and treatment. These conflicts were related to: blockades of roads by the communities, mobilization of communities for jobs, demonstration questioning the decommissioning of the platform and invasions of the operational area.

Regarding the blockages, the Social Responsibility teams contacted community leaders in order to learn about their motivations. On this occasion, our teams clarified the company's possibilities for action. The negotiations with the leaders of this region were successful, which resulted in the unblocking of the roads.

To meet the demands for jobs, meetings were held with the communities explaining the specifics of hiring labor by the company; however, the demand was addressed to outsourced companies that provide services to us, and the movement was ended.

In response to the movement against the decommissioning of Cação platforms at the UN-ES carried out by local communities, our teams acted to promote community clarification about the safety zone around the platforms and the risks associated with the development of activities in these areas. We also had a record of invasion of the reserve tanks area at REDUC. On the occasion, the local Social Responsibility team was informed about what had happened and carried out new community awareness activities to inform about the risks of invasion of tanks by the population.

Finally, there was a process of repossession in the municipality of Itaguaí-RJ between May and August 2021 on a company land located south of the urban area of the Municipality of Itaguaí-RJ

Part of this land was occupied on 05/01/2021 by a group of people led by a social group. From the first day of the occupation, we sought repossession, always attentive to the fundamental rights of the people who were there. The court order for repossession was initially issued on 05/05/2021. Following due legal procedure, there were several attempts at warnings and peaceful eviction. With the more peaceful solution not being possible, again by court decision, the eviction of the area took place on 07/01/2021, with the

support of the police of the State of Rio de Janeiro, Secretariats of the Municipality of Itaguaí, Public Defender's Office, and Public Prosecution Office and the people who wished to do so were sent to a temporary shelter organized by the Municipality of Itaguaí-RJ.

As part of our effort to seek the best possible solution, always attentive to people in situations of vulnerability, we systematically hold meetings with the State Department of Social Assistance and Human Rights, the Municipal Department of Social Assistance of the Municipality of Itaguaí, the Public Defender's Office of the State of Rio de Janeiro and the Public Prosecution Office of the State of Rio de Janeiro.

Some people chose to remain in the shelter until 08/06, when they were definitively demobilized, organized by the Municipality of Itaguaí-RJ and the Public Defender's Office of RJ. During this period, we worked together with public bodies, with actions that reinforce our commitment to respecting human rights. These actions included the provision of hand sanitizers and masks to the people sheltered; transport; mattresses; blankets; 4 daily meals; goods storage; potable water; chemical toilet; personal hygiene items; periodic monitoring of the shelter by our teams of professionals; in addition to providing basic food items; milk and diapers for children.

A possible negative impact associated with our projects is the need to carry out resettlement processes. In order to manage and mitigate this impact, in March 2020, we established a corporate approach for resettlement. We have established guidelines that apply to all our units regarding the removal and resettlement of individuals or communities affected by our projects and/or activities. Removal and resettlement of communities include cases of physical displacement (removal and loss of housing) and economic displacement (loss of assets or access to assets that leads to situations of loss of income or livelihoods) caused by land acquisitions or access and use restrictions.

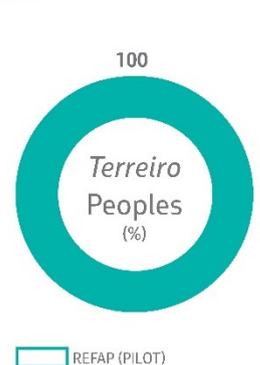
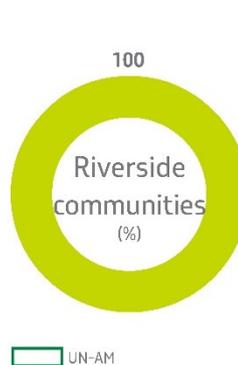
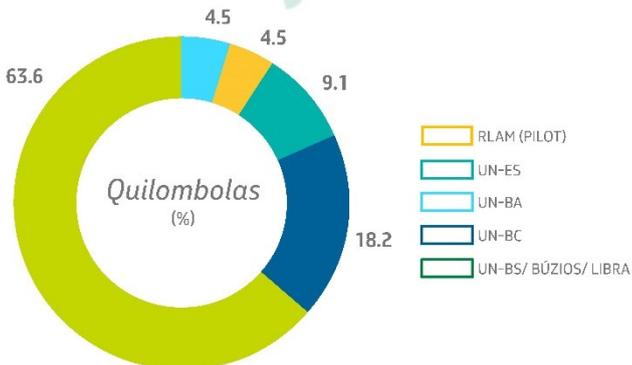
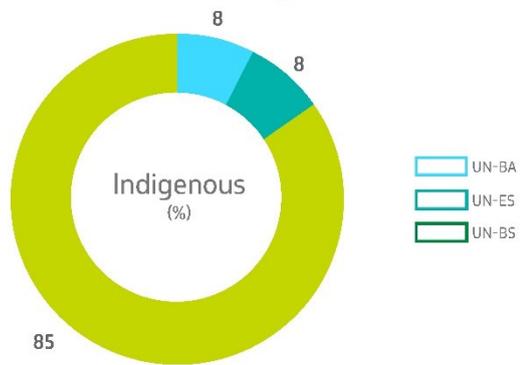
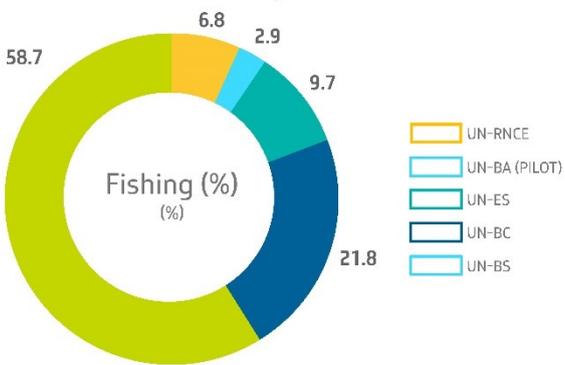
The guideline states that we must: i) avoid or minimize the need for physical and/or economic displacement of individuals and communities; ii) when inevitable, consider the costs of expropriation and compensation for improvements, as well as the costs of restoring the lifestyles of impacted individuals and communities; and iii) treating the affected social segments equally, attempting to guarantee similar or better living conditions than the existing ones, as well as the maintenance of social and cultural relations.

Indigenous peoples must be informed, in appropriate and accessible language, about projects that may occur on their land and have the opportunity to give or deny consent to a project before it starts. If the removal and resettlement of Indigenous or *quilombola* communities is absolutely essential, it will be necessary to first carry out a free and informed consultation directed at these communities.

In 2021, there were no resettlement activities associated with our projects and/or operations.

### Traditional Peoples and Communities

In our local Social Responsibility and Community Relations plans, we prioritize peoples and communities known as traditional such as fishermen, *caiçaras*, *quilombolas*, Indigenous, coastal 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:

**DISTRIBUTION OF TRADITIONAL COMMUNITIES PER OPERATING UNIT (%)**


We do not have oil and gas reserves in areas close to Indigenous lands, as defined by the SASB. We register reservations in Brazil, USA and Argentina. We do not register reserves in Colombia, where we operate only in exploratory projects. Pursuant to Bolivian legislation, we do not register oil and natural gas reserves in the country. *Petrobras Bolivia's* operations close to Indigenous communities are located in the Sábalo field, in the *San Antonio* Block. In this field, there are 70 families in the Tierra Comunitaria de Origen (TCO) *guaraní* Indigenous people called Tucuinty. The community area is 36 km long and is characterized by having scattered dwellings (with a distance of approximately 5 km between dwellings).

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 the Peoples Project, is a condition of the environmental licensing in the socioeconomic environment, carried out with *quilombola*, Indigenous and *caiçara* peoples in the Santos Basin area of influence, specifically in the municipalities of Angra dos Reis (RJ), Paraty (RJ) and Ubatuba (SP). The project's idea is to allow communities to get to know themselves 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 website](#).**

In Espírito Santo, we have the Environmental Education Program called Citizenship Networks, which seeks to train artisanal fishermen, shellfish gatherers and their families to exercise citizenship in environmental licensing processes and in the generation of work and income, using three thematic axes: Solidarity Economy, Environmental Education and Digital Literacy. The Citizenship Network serves communities in the north-central region.

The intention is to reinforce the production identities of these fishing communities, in order to mitigate the negative impacts that affect them and that result from the activities carried out in that region by the oil and natural gas exploration and production industry.



## REDE DE DIREITOS PROJECT

An example of voluntary action is the Rede de Direitos project, a partnership between Petrobras, the Public Defender's Office of the State of Rio de Janeiro and the Public Defender's Office of the State of São Paulo with the purpose of carrying out a remote course for the fishing communities included in our coverage area in the Campos and Santos Basins.

The project is a pioneer in articulating partnerships with public defenders' offices to promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels, in accordance with the Goal 16 of the SDGs (Sustainable Development Goals).

Additionally, we carry out voluntary socio-environmental investments that develop specific actions focused on recording and valuing Indigenous culture and traditional communities, based on strengthening the role of these populations. Through the Petrobras Socio-Environmental Program, we support 31 socio-environmental projects that aim at contributing to the institutional strengthening and autonomy of Indigenous peoples and traditional communities, combining preservation actions with sustainable use of natural resources, which consider ways of life, production systems and knowledge related to socio-biodiversity.

We highlight the performance of the Raízes do Purus project, supported by us since 2013, which, in its third cycle, continues the implementation of social technologies, in addition to technical monitoring and support for the sustainable management and commercialization of forest products (*açaí*, nuts and *copaíba*) and fish (pirarucu). Operating in the municipalities of Lábrea, Tapauá and Itamarati (Amazonas), its priority audience is the Apurinã, Banawa, Deni, Jamamadi, Kanamari and Paumari Indigenous peoples, and develops its actions in an area of about 275,000 hectares, contributing to the preservation of the forest through surveillance of the areas, associated biodiversity and the ways of life of six indigenous territories. In the last edition, the project contributed to the direct preservation of 83,000 hectares and generated more than BRL 500,000 in revenue from managed pirarucu fishing.

Another relevant initiative, working in traditional communities, is the Solidarity Network of Women of Sergipe project, developed by the Association of Collectors of Mangaba and Indiaroba – ASCAMAI. In its second edition, the project's actions contribute to the sustainability of extractive and urban communities, expanding income generation conditions, qualifying and innovating the work of 400 women in the municipalities of Carmópolis, Divina Pastora, Indiaroba, Estância, Barra dos Coqueiros, Pirambu and Japarutuba. This initiative also promotes gender and racial equality in the workplace, as well as the possibility of accessing public policies.

Specifically in relation to Indigenous communities or traditional peoples (artisanal fishermen, *quilombolas*, shellfish gatherers etc.), in 2021, our Ombudsman staff received 11 manifestations. There were 6 allegations of irregularities in the conduct of projects maintained by us (3 unconfirmed and 3 closed due to lack of elements for investigation), 1 complaint answered, and 4 requests answered with the necessary guidelines. The complaint addresses a course taught in a fishing and shell fishing community and the requests are related to compensation, donations, and sponsorships to these groups.

In 2021, we concluded the payment of the Conduct Adjustment Term - TAC for Fishermen and Street Vendors, referring to the spill that occurred in April 2019, which impacted municipalities in the lake's region of Rio de Janeiro. The Fishermen's TAC was signed on 07/23/2019 and the street vendors' TAC on 01/24/2020. The amount of damages paid in these two TACs totaled approximately BRL9.4 million. The agreement was signed in an unprecedented way, quickly, with the involvement of all interested parties, and by a multidisciplinary work team, which sought to repair the damage caused to approximately 1,600 fishermen and 250 street vendors after the incident.

After the signing of the TAC, in partnership with the Public Defender's Office and the fishermen's colonies, our teams worked on regularizing documents from the community members to enable the opening of bank accounts and guarantee the payment of indemnities for the affected communities. The results of the agreement were recognized by the local community, with the registration of several positive testimonies regarding our fast and effective performance. Finally, this experience consolidated for us a new way of

acting in dealing with community demands, which considers the culture of dialogue in the resolution of social conflicts.

In May 2021, *Petrobras Bolivia S.A. (PEB)*, operator of the *San Alberto* block, was ordered, in a lower court decision, to pay US\$ 61.1 million, in addition to interest and costs and the imposition of precautionary measures, in a lawsuit for damages filed by a person who claimed to be the owner of the area where the block's facilities are located.

The area, the target of individual action, was the subject of agreements with peasant communities that, according to the Bolivian Agrarian Reform Institute, would be the legitimate owners of the land since the beginning of our activities in Bolivia.

Also in June 2021, the First Panel of the Agro-Environmental Court (appellate court) annulled the trial court's decision due to evidence of violation of fundamental rights and constitutional guarantees, canceling all precautionary measures and annulling the entire case from the beginning, for having processed without evidence of the plaintiff's property right. In late December 2021, the plaintiffs attempted to reverse the Court's decision with the Supreme Court of Bolivia, but on January 6, 2022, the claim contained in that action was rejected, and that decision became final.

Due to the decision of the First Panel of the Agro-Environmental Court, in June 2021 the case was referred to the court of origin, and the plaintiffs must remedy the nullities recognized by the Court.

### Corporate security and human rights

The ISC Risk Management methodology explicitly addresses human rights aspects, notably the safety issues listed in the human rights *due diligence* process manual of the global oil and gas industry association for environmental and social performance - IPIECA. Therefore, it includes, in its analysis, intelligence and corporate security risks that, in some way, involve communities close to the units, especially the risks of social movements and intrusion, which can compromise the safety of people and the safety of the process. These risks are due to the interaction of the external and internal security scenarios at the unit. For the external scenario, we use intelligence analysis materialized in an opinion generated by our Intelligence and Corporate Security Monitoring and Analysis area, which includes crime rates, statistics, main types of crimes, and other information that seeks to anticipate and prevent possible conflict situations.

With this, it is possible to develop corporate security actions and procedures with a focus on preventing and responding to the risks of social movements, trade unions, and intrusions, among other occurrences contemplated around the unit, which are reflected in the Local Property Security Plan (PLSP). In the event of security situations that involve interaction with the communities, we propose recommendations to the unit manager that involve the Social Responsibility area in order to mitigate any risks and/or act preventively together with the unit, following human rights related laws and regulations.

The ISC studies, as well as other ISC risk products, are prepared also considering recommendations regarding the performance of the Social Responsibility area. Thus, it is possible to identify and anticipate possible interactions with nearby communities, so that the security and human rights protocols are included in the Local Property Security Plans (PLSP).

In order to reinforce our commitment to the evolution of the protective safety culture, aiming at guaranteeing the life and preservation of the physical integrity of our

employees, suppliers and visitors, in 2021 we promoted a series of visits by municipal, state public safety and federal authorities to our units. On such occasions, we were able to present the operations and strategic relevance of these assets, the sanitary aspects for fighting Covid-19, the performance of ISC and the numbers that point to a reduction in the occurrence of accidents and deviations in recent years. These visits highlighted the importance of developing an integrated planning, in an intersectoral way, for the prevention of events that could jeopardize the safety of people, production and supply, with consequences for the environment and public health, as well as some situations that pose potential risks to the safety of communities and that depend on our work together with the Military Police, Fire Department, Civil Defense and other public bodies, such as in cases of clandestine derivations.

Property security activities are subject to legal requirements, applicable both to organic security (consisting of company employees) and to contracted security monitoring companies. Both are subject to inspection by the Federal Police (PF/MJSP), the regulatory and supervisory body for private security activity in Brazil.

In addition to that, within our company, contracted security monitoring companies must undergo contract inspections. These contracts require that the companies maintain certified employees that have undergone professional training for them to work on our premises. The contracted companies are evaluated with regard to the quality of the services provided, compliance with legal requirements, and other items. The contractor's scores and other data from evaluations are recorded in corporate systems and analyzed in critical analysis meetings and remain available for internal audits.

Complaints, doubts, and reports related to asset security activities can be communicated through our General Ombudsman's Office, ensuring the anonymity of the communicator. Reports from the Ombudsman's Office are sent to Corporate Intelligence and Security (ISC) areas are dealt with, integrating periodic reports to senior management. If the demand refers to outsourced asset security, ISC investigates and analyzes them in order to mitigate risks in new contracts at the time of selecting suppliers, in addition to informing the contract manager, so that he/she can adopt the necessary measures in relation to non-compliance with contractual obligations, with possible application of sanctions.

Our own property security employees undergo training and refreshed courses, in compliance with the Federal Police Department (DPF/MJ) requirements. The course content includes aspects of Constitutional, Criminal, and Civil Rights, private security legislation, and interpersonal relations, based on respect for the human person and the correct and proportional application of force. The Training Course is mandatory, as well as a biannual refresher course that covers, among other items, the basic concepts of human rights and human relations.

The members of the security force take a training course with human rights content every 2 years, as determined by the legislation applicable to the private security staff, especially Ordinance 3.233/12-DG/DPF. That means that, on average, 50% of the security force is trained in odd years, and 50% in even years. This training is applicable to both company employees (organic security guards) and contracted employees (outsourced security guards). Our 3,770 members of the security force receive 60,320 class hours per year.

## Human rights in the supply chain and partners

Our commitment to human rights in the supply chain and in our partnerships is expressed in the following regulations: **Social Responsibility Policy, Human Resources Policy, Human Rights Guidelines, Code of Ethical Conduct, Ethical Conduct Guide for Suppliers** and **Quality Guide for Suppliers**.

Regarding our partners, in 2020, based on an internal working group, guidelines were prepared to manage HSE and Social Responsibility in partnerships in the *Joint Ventures* (JV) model, including human rights issues to be considered by us in the *Joint Operation Agreements* (JOA) negotiations. The purpose of these guidelines is to establish a governance model aligned with our Health, Safety and Environment (HSE) and Social Responsibility (RS) Policy and to standardize the HSE and Social Responsibility Management Plans (*HSE Plan*) and HSE and Social Responsibility Reports (*HSE Report*), for when we are operators and when we evaluate the management plans of partner operators in the business.

As set out in our Ethical Conduct Guide for Suppliers, we are committed to the highest standards of integrity, social and environmental responsibility, and ethical conduct. 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 laws and regulations. Based on this guide and on the standards with guidelines for the inspection of 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. Also, we monitor supplier compliance through the performance management system, as reinforced in our Supplier Quality Guide (<https://canalfornecedor.petrobras.com.br/en/>).

Before signing a contract with us, every supplier must complete and sign the Declaration of Compliance with the Code of Ethical Conduct, the Ethical Conduct Guide for Suppliers, the Quality Guide for Suppliers, and the Social Responsibility Policy.

### Registration and monitoring of suppliers

We have developed evaluation mechanisms that aim to ensure that suppliers have suitable technical, economic-financial, legal and HSE (Health, Safety and Environment) practices, in addition to having an ethical profile in their relationship with society and the environment.

Thus, we keep our supplier base active, with the purpose of evaluating, prior to signing any contracts, the companies regarding the fulfillment of the technical, economic-financial, legal, integrity risk and HSE requirements. Our supplier evaluation has been continuously optimized and simplified, seeking to generate more value for the process.

In 2021, we improved the active monitoring of the supplier market through the use of external databases that provide financial information, ratings, corporate structure and media monitoring of our suppliers. The use of these tools provides a more comprehensive and strategic analysis with the supplier market, enabling a closer relationship with it and the mitigation of supply risks.

With the advent of the State-Owned Companies Law (13,303/16), adopted as the basis for our contracts and those of our subsidiaries as of May 15, 2018, the registry became an auxiliary bidding procedure, maintained for the purpose of certifying companies participating in bidding processes.

As it is a prior assessment of the company's ability to provide us with goods and services, although not mandatory for participation in public bids, the register minimizes the risk of disqualification of bidders, in addition to providing more agility to the contracting processes and promoting high performance in contract execution.

In 2021, we evaluated 3,937 companies on technical grounds; 6,526 companies on economic and financial grounds; 10,013 companies regarding legal requirements; 8,694 companies regarding their Integrity Risk Level and 321 companies regarding HSE requirements.

### **Contract management and enforcement**

As provided for in our regulations and contracts, the relationship with suppliers during contractual execution takes place through:

- Contractual management and inspection, which monitors compliance with the obligations and responsibilities described in the contract and its annexes, in accordance with the scope, term, cost, technical quality, safety, environment and health requirements;
- Communicating, monitoring and evaluating the required level of performance from suppliers. This performance evaluation is represented by:
  - Supplier Performance Index (IDF): an indicator that represents the supplier's performance in the execution of services and in the supply of goods through the HSE, Management, Deadline and Quality macro-criteria;
  - Supplier Quality Index (IQF): an indicator that represents the supplier's performance regarding the supply of strategic and critical goods. Its purpose is to assess the conformity of manufacturing and inspection processes and products with regard to contractual technical requirements established through periodic audits;
- Issuance of records (such as the Anomaly Treatment Registry - RTA or the Occurrence Registry - RDO) in the case of supply of goods or performance of non-conforming services;
- Notice of Occurrence of Divergence (COD), which formalizes the occurrence of non-compliance with the technical conditions by the supplier, aiming at forcing corrections, identifying the causes, and implementing corrective actions in its Quality Management System.

In order to comply with articles 83 and 84 of Law 13.303/16, the need to open a Commission for the Analysis and Application of Sanctions (CAASE) is analyzed, in cases of contractual non-compliance, such as: non-conformities in labor, pension or HSE (with or without fatal accident), contract abandonment, unmotivated withdrawal from the bidding process, non-compliance with the Ethical Conduct Guide for Suppliers, among other types of conduct considered serious.

Throughout 2021, we conducted 69 sanctioning processes through CAASE, with 118 sanctions in force for suppliers. Also during this period, 54 companies were included in the list of companies prevented from contracting, due to the application of administrative sanctions. No company entered the list of companies prevented from contracting due to environmental issues in 2021. In terms of negative impacts on labor practices, six companies were sanctioned in 2021 for events considered to be of high severity.

We evaluate Health, Safety, and Environment (HSE) risks in service contracts and contracts for the supply of goods with related services. The analysis considers the health and safety risks for workers and neighboring communities, the risks to the environment of the contracted service, as well as the characteristics of the places where the service will be performed. The evaluation categorizes contracts into two groups, each with specific contractual requirements. These requirements are monitored throughout the execution of the contract. The most critical contracts require the application of an in person Check List, and any non-conformities found are the basis for an action plan for the contractor.

For contracts considered to be at greater risk for human rights violations, there is a social responsibility declaratory clause, which establishes social responsibility and human rights commitments for these suppliers.

In order to assess whether these requirements were met by contracted companies, in 2021, 17 social responsibility assessments were carried out with service providers through a checklist, which assessed whether all contractual requirements for Social Responsibility had been fulfilled. Among the contracts submitted to the checklist evaluation, no contractual breach was identified.

Our Reporting Channel is prepared to receive incident reports related to suppliers, such as those related to freedom of association and collective bargaining violations, among other labor practices and human rights issues. The report can be made through the link <https://www.contatoseguro.com.br/en/petrobras> or by phone, calling toll free at 0800 601 6925. The reports are investigated and, depending on the results, our Supplies area is alerted to mitigate risk in future contracts. If there is a breach of contractual clauses, the contract manager will adopt the appropriate measures.

### **Practices for the prevention of slave and child labor**

With the purpose of curbing any degrading work practice in our supply chain, our standard contractual draft for services has a clause demanding guarantee of compliance with the labor precepts provided for in the Brazilian legislation in force. Failure to comply with this clause gives us the right to terminate the contract with the supplier. In addition, there is also a clause on the prohibition of using child labor or slave-like labor in all activities related to the execution of the contract. This clause requires the supplier to extend this prohibition to its input suppliers and/or service providers, under penalty of a fine or contract termination, without prejudice to the adoption of other appropriate measures. In 2021, agreements were signed by 9,751 suppliers, all of which contained clauses to abstain from child labor and slave-like labor.

Also, since 2005, we are signatories of the National Pact for the Eradication of Slave Labor. In June 2015, we joined the National Pact for the Eradication of Slave Labor Institute - InPACTO.

InPACTO is a non-profit organization that mobilizes different sectors, such as industry, civil society and the public sector, to promote decent work. It is a space for debate, the exchange of information, and establishment of plans and joint actions for large companies operating in Brazil. It is also a means of relating with the Ministry of Labor and the International Labor Organization (ILO).

By joining InPACTO, the member company assumes the responsibility of fulfilling 10 commitments related to the prevention and eradication of slave labor. To meet these objectives, an action plan was drawn up by the areas of Social Responsibility, Legal and Supplies, in view of the critical nature of the topic throughout the supply chain. The plan

includes actions such as raising opportunities for improvements in internal standards and regulations related to contracting suppliers and developing an action plan to prevent and combat slave labor, in conjunction with partner areas, among other specific actions.

The channels made available by the Ombudsman's Office are also available to our stakeholders to register complaints about forced or degrading labor. These will be properly treated and may even help prevent new cases. In 2021, there were no reports of work in slavery-like conditions.

Additionally, we carry out Integrity Due Diligence (DDI) on our counterparts, considering the risk factors associated with slave-like, degrading, and child labor.



## BEST SUPPLIERS PETROBRAS AWARD

The Best Suppliers Award, created in 2018, is held annually and aims at recognizing the quality and high performance that some suppliers showed in the delivery of goods and services. The award encourages the search for excellence and strengthening the spirit of collaboration and partnership of suppliers with us, especially with regard to quality, management, ESG (Environmental, Social and Governance), R&D (Research and Development) and digital transformation.

The assessment of suppliers takes into account quality, deadline, management, HSE (Health, Safety and Environment), compliance and integrity criteria. All national or foreign companies that supplied goods or services to us in 2020 attended the latest edition of the award, held in December 2021, with 21 companies awarded in distinct categories. In the Human Rights dimension, there were awards after the evaluation of projects related to the following topics:

- Promotion of diversity and inclusion;
- Fighting discrimination, prejudice and harassment;
- Combating slave labor;
- Combating child labor;
- Combating the sexual exploitation of children and adolescents.

The result of the Award was widely publicized in several media outlets, including our Supplier Channel.

# Donations

Donor Company	Beneficiary	Project/Purpose	Amount in BRL
PEL	SEVENTH DAY ADVENTIST CHURCH: 37-39 BRENDON ST, LONDON	Donation of useless goods (utensils) arising from the closing of the office and closing of the company	BRL 2,250.00
Petronect	CUFA	Food donation - basic items	BRL 12,572.00
Petronect	LAR BAPTISTA	Food donation - basic items	BRL 8,980.00
Petronect	PARÓQUIA DE SANTÍSSIMO	Blanket donation - winter campaign	BRL 1,119.00
Petronect	RUAS DO RIO DE JANEIRO	Blanket donation - winter campaign	BRL 10,068.00
Petronect	OBRA SOCIAL DONA MECA	Donation of books and toys - Children's Day	BRL 13,014.50
Petronect	CASA MARIA MAGDALA	Donation of books and toys - Children's Day	BRL 13,014.50
Petronect	NATAL PASSEIO COORPORATE	Donation of books and toys - Christmas	BRL 13,014.50
PETRÓLEO BRASILEIRO S.A.	SENAI RJ	Donation of financial resources - Support in the fight against Covid-19	BRL 8,084.54
PETRÓLEO BRASILEIRO S.A.	STATE OF ACRE	Fuel donation - Support in the fight against Covid-19	BRL 4,019.27
PETRÓLEO BRASILEIRO S.A.	STATE OF BAHIA	Fuel donation - Support in the fight against Covid-19	BRL 73,765.00
PETRÓLEO BRASILEIRO S.A.	STATE OF ESPÍRITO SANTO	Fuel donation - Support in the fight against Covid-19	BRL 141,444.30
PETRÓLEO BRASILEIRO S.A.	STATE OF MARANHÃO	Fuel donation - Support in the fight against Covid-19	BRL 16,524.79
PETRÓLEO BRASILEIRO S.A.	STATE OF PARÁ	Fuel donation - Support in the fight against Covid-19	BRL 38,145.74
PETRÓLEO BRASILEIRO S.A.	STATE OF AMAZONAS	Donation of river transport, oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 3,311,166.23
PETRÓLEO BRASILEIRO S.A.	STATE OF PARANÁ	Donation of oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 1,163,889.49
PETRÓLEO BRASILEIRO S.A.	STATE OF CEARÁ	Donation of oxygen cylinders - Support in the fight against Covid-19	BRL 373,271.22

Donor Company	Beneficiary	Project/Purpose	Amount in BRL
PETRÓLEO BRASILEIRO S.A.	STATE OF RIO GRANDE DO SUL	Donation of oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 560,722.31
PETRÓLEO BRASILEIRO S.A.	STATE OF SÃO PAULO	Donation of oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 1,401,651.82
PETRÓLEO BRASILEIRO S.A.	STATE OF MINAS GERAIS	Donation of oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 1,114,018.70
PETRÓLEO BRASILEIRO S.A.	STATE OF ESPÍRITO SANTO	Donation of oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 1,137,279.18
PETRÓLEO BRASILEIRO S.A.	STATE OF BAHIA	Donation of oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 1,259,148.31
PETRÓLEO BRASILEIRO S.A.	STATE OF SERGIPE	Donation of oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 1,053,072.71
PETRÓLEO BRASILEIRO S.A.	STATE OF ALAGOAS	Donation of oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 2,503,811.44
PETRÓLEO BRASILEIRO S.A.	STATE OF PERNAMBUCO.	Donation of oxygen cylinders - Support in the fight against Covid-19	BRL 855,514.61
PETRÓLEO BRASILEIRO S.A.	STATE OF RIO GRANDE DO NORTE	Donation of oxygen cylinders and oxygen micro plant- Support in the fight against Covid-19	BRL 1,603,940.49
PETRÓLEO BRASILEIRO S.A.	APAE SÃO FRANCISCO DO CONDE	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,498,392.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO DE PROTEÇÃO À INFÂNCIA VOVÔ VITORINO	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 899,246.88
PETRÓLEO BRASILEIRO S.A.	GERAR - GERAÇÃO DE EMPREGO E RENDA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,097,712.00
PETRÓLEO BRASILEIRO S.A.	RESERVA ECOLOGICA DE GUAPIAÇU	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 285,768.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIACAO DOS PROTETORES DO MAR	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 201,474.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO DE ASSISTÊNCIA À CRIANÇA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 168,210.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO ENTER JOVEM	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,691,172.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO PROTETOR DOS POBRES	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,420,524.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO MEROS DO BRASIL	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,062,936.00
PETRÓLEO BRASILEIRO S.A.	MOVIMENTO DE MULHERES EM SÃO GONÇALO	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,381,491.67

Donor Company	Beneficiary	Project/Purpose	Amount in BRL
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO BENEFICENTE O PEQUENO NAZARENO	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 2,328,102.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO CULTURAL E ASSISTENCIAL UNICIRCO	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 109,242.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO MIRÍADE	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 83,160.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIACAO AGAPE	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 212,436.00
PETRÓLEO BRASILEIRO S.A.	CENTRO DE ESTUDOS DA CULTURA ECOMUSEU	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 277,074.00
PETRÓLEO BRASILEIRO S.A.	AAPQ - ASSOCIAÇÃO DE APOIO AO PROJETO QUIXOTE	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 521,640.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO DE MULHERES MULTIPLICAR	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,175,580.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO CANARINHOS DA TERRA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 398,412.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO DE LITERATURA E BENEFICÊNCIA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 228,312.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO RAMACRISNA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,229,256.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO CASA FAMILIAR RURAL	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 140,736.96
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO VOZES DA ARTE	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 623,596.41
PETRÓLEO BRASILEIRO S.A.	OFICINA ESCOLA DE LUTHERIA DA AMAZÔNIA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 176,223.60
PETRÓLEO BRASILEIRO S.A.	FUNDAÇÃO AMAZONAS SUSTENTÁVEL - FAS	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 167,832.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO SUPER ECO DE INTEGRAÇÃO	Donation of financial resources for the purchase of basic food items - Support in the fight against Covid-19	BRL 42,714.00
PETRÓLEO BRASILEIRO S.A.	INSPETORIA NOSSA SENHORA DA PENHA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 633,528.00
PETRÓLEO BRASILEIRO S.A.	SERVICO SOCIAL DA INDUSTRIA - SESI	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,993,194.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO DE PESQUISAS E ACAO	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 2,791,152.00
PETRÓLEO BRASILEIRO S.A.	VALE S.A.	Donation of financial resources to a consortium with the Ministry of Health	BRL 16,600,800.00

Donor Company	Beneficiary	Project/Purpose	Amount in BRL
PETRÓLEO BRASILEIRO S.A.	APAE SÃO FRANCISO DO CONDE	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 2,961,112.00
PETRÓLEO BRASILEIRO S.A.	AQUASIS	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 377,395.20
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO RAIZES	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 21,780.00
PETRÓLEO BRASILEIRO S.A.	FAPESE FUNDACAO DE APOIO A PESQUISA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 897,372.00
PETRÓLEO BRASILEIRO S.A.	FUNDACAO INSTITUTO DE ADMINISTRACAO - FIA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,422,600.00
PETRÓLEO BRASILEIRO S.A.	FIOTEC	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 3,573,372.00
PETRÓLEO BRASILEIRO S.A.	FUNDENOR	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 206,388.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO PERENE	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 877,390.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO BENEFICENTE O PEQUENO NAZARENO	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 239,096.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO BRASILEIRO DE PETROLEO	Donation of financial resources to a consortium with the Ministry of Health	BRL 1,335,700.00
PETRÓLEO BRASILEIRO S.A.	FUNDAÇÃO BANCO DO BRASIL	Donation of financial resources to the Petrobras Gas Donation Program	BRL 21,000,000.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO BENEFICENTE O PEQUENO NAZARENO	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,428,888.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO ENTER JOVEM	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 1,690,352.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO DE ASSISTÊNCIA À CRIANÇA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 206,248.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO DE PROTEÇÃO À INFÂNCIA VOVÔ VITORINO	Donation of financial resources for the acquisition of basic food items and LPG - Support in the fight against Covid-19	BRL 547,705.60
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO DE LITERATURA E BENEFICÊNCIA	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 140,128.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO DE MULHERES MULTIPLICAR	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 721,520.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO VOZES DA ARTE	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 380,508.77
PETRÓLEO BRASILEIRO S.A.	ASSOCIAÇÃO CASA FAMILIAR RURAL	Donation of financial resources for the purchase of basic food items - Support in the fight against COVID-19	BRL 86,378.00

Donor Company	Beneficiary	Project/Purpose	Amount in BRL
PETRÓLEO BRASILEIRO S.A.	INSTITUTO RAMACRISNA	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 204,392.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO CANARINHOS DA TERRA DE	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 244,528.00
PETRÓLEO BRASILEIRO S.A.	CDM COOPERAÇÃO PARA O DESENVOLVIMENTO E MORADA HUMANA	Donation of financial resources for the acquisition of basic food items - Support in the fight against Covid-19	BRL 550,072.00
PETRÓLEO BRASILEIRO S.A.	ASSOCIACAO DOS PROTETORES DO MAR	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 696,000.00
PETRÓLEO BRASILEIRO S.A.	MOVIMENTO DE MULHERES EM SÃO GONÇALO	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 685,998.60
PETRÓLEO BRASILEIRO S.A.	OFICINA ESCOLA DE LUTHERIA DA AMAZÔNIA	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 108,158.40
PETRÓLEO BRASILEIRO S.A.	FEST - FUNDAÇÃO ESPIRITO SANTENSE DE TECNOLOGIA	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 161,832.32
PETRÓLEO BRASILEIRO S.A.	INSTITUTO CULTURAL E ASSISTENCIAL	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 139,200.00
PETRÓLEO BRASILEIRO S.A.	INSTITUTO DE PESQUISAS E AÇÃO	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 2,168,294.80
PETRÓLEO BRASILEIRO S.A.	INSPECTORIA NOSSA SENHORA DA PENHA	Donation of financial resources for the acquisition of basic food items and LPG - Petrobras Gas Donation Program	BRL 388,832.00
PETRÓLEO BRASILEIRO S.A.	NOT APPLICABLE	Donation of financial resources to cover logistical costs for the acquisition of oxygen cylinders - Support in the fight against Covid-19	BRL 120,831.32
TRANSPETRO	13 COMMUNITIES OF PROJETO FAIXA SOLIDÁRIA - TOTAL 14,357 KITS DELIVERED	Donation of financial resources for the purchase of basic food items	BRL 999,965.05
<b>TOTAL</b>			<b>BRL 100,715,458.23</b>

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# Auditors' Limited Assurance Report



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## Limited assurance report issued by independent auditors

To the Board of Directors, Shareholders and Stakeholders  
**Petróleo Brasileiro S.A. - Petrobras**  
 Rio de Janeiro - RJ

### Introduction

We have been engaged by Petróleo Brasileiro S.A. ("Petrobras" or "Company") to apply limited assurance procedures on the sustainability information disclosed in 2021's Annual Report, related to the year ended December 31<sup>st</sup>, 2021.

### Responsibilities of Petrobras Management

The Management of Petrobras is responsible for adequately preparing and presenting the sustainability information in the Annual Report 2021 in accordance with the Standards for Sustainability Report of Global Reporting Initiative – GRI (GRI-Standards), as well as the internal controls determined necessary to ensure this information is free from material misstatement, resulting from fraud or error.

### Independent auditors' responsibility

Our responsibility is to express a conclusion about the information in the Annual Report 2021 based on a limited assurance engagement conducted in accordance with the Standards for Sustainability Report of Global Reporting Initiative - GRI (GRI-Standards) and the methodology developed globally by KPMG for assurance of social and environmental information disclosed in sustainability reports denominated KPMG Sustainability Assurance Manual - KSAM, applicable to historical non-financial information.

These standards require compliance with ethical requirements, including independence ones, and the engagement is also conducted to provide limited assurance that the information disclosed in the Petrobras Annual Report 2021, taken as a whole, is free from material misstatement.

A limited assurance engagement conducted in accordance with the Standards for Sustainability Report of Global Reporting Initiative - GRI (GRI-Standards) and the KPMG Sustainability Assurance Manual - KSAM consists mainly of questions and interviews with the Management of Petrobras and other professionals of the Company involved in the preparation of the information disclosed in the Annual Report 2021 and use of analytical procedures to obtain evidence that enables us to reach a limited assurance conclusion about the sustainability information taken as a whole. A limited assurance engagement also

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requires additional procedures when the independent auditor acknowledges issues which may lead them to believe that the information disclosed in the Annual Report 2021 taken as a whole could present material misstatement.

The selected procedures were based on our understanding of the issues related to the compilation, materiality and presentation of the information disclosed in the Annual Report 2021, on other engagement circumstances and also on our considerations regarding areas and processes associated with material sustainability information disclosed where relevant misstatement could exist. The procedures consisted of:

- (a) engagement planning: considering the material aspects for Petrobras activities, the relevance of the information disclosed, the amount of quantitative and qualitative information and the operational systems and internal controls that served as a basis for preparation of the information in the Petrobras Annual Report 2021. This analysis defined the indicators to be checked in details;
- (b) understanding and analysis of disclosed information related to material aspects management;
- (c) analysis of preparation processes of the Annual Report 2021 and its structure and content, based on the Principles of Content and Quality of the Standards for Sustainability Report of Global Reporting Initiative - GRI (GRI-Standards);
- (d) evaluation of non financial indicators selected:
  - understanding of the calculation methodology and procedures for the compilation of indicators through interviews with management responsible for data preparation;
  - application of analytical procedures regarding data and interviews for qualitative information and their correlation with indicators disclosed in the Annual Report 2021;
  - analysis of evidence supporting the disclosed information;
- (e) analysis of whether the performance indicators omission and justification are reasonable to be accepted associated to aspects and topics defined as material in the materiality analysis of the Company;
- (f) comparison of financial indicators with the financial statements and/or accounting records.

We believe that the information, evidence and results we have obtained are sufficient and appropriate to provide a basis for our limited assurance conclusion.

#### Scope and limitations

The procedures applied to a limited assurance engagement are substantially less extensive than those applied to a reasonable assurance engagement. Therefore, we cannot provide reasonable assurance that we are aware of all the issues that would have been identified in a reasonable assurance engagement, which aims to issue an opinion. If we had conducted a reasonable assurance engagement, we may have identified other issues and possible misstatements within the information presented in the Annual Report 2021.



Nonfinancial data is subject to more inherent limitations than financial data, due to the nature and diversity of the methods used to determine, calculate or estimate these data. Qualitative interpretation of the data's materiality, relevance and accuracy are subject to individual assumptions and judgments. Additionally, we have not examined data related to prior periods, to evaluate the adequacy of policies, practices and sustainability performance, nor future projections.

#### Conclusion

Based on the procedures carried out, described earlier in this report, we have not identified any relevant information that leads us to believe that the information in the 2021 Annual Report of Petrobras is not fairly stated in all material aspects in accordance with the Standards for Sustainability Report of Global Reporting Initiative - GRI (GRI-Standards), as well as its source records and files.

S, April 13<sup>th</sup>, 2022

KPMG Auditores Independentes Ltda.  
CRC 2SP014428/O-6

Sebastian Yoshizato Soares  
Principal

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# GRI Content Index

## GENERAL DISCLOSURES

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
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## ORGANIZATIONAL PROFILE

GRI Standards 2016	102-1	Name of the organization	Petróleo Brasileiro S.A. - Petrobras				Yes
GRI Standards 2016	102-2	Activities, brands, products, and services	Pages 7-8				Yes
GRI Standards 2016	102-3	Location of headquarters	Rio de Janeiro/RJ				Yes
GRI Standards 2016	102-4	Location of operations	Page 8				Yes
GRI Standards 2016	102-5	Ownership and legal form	Page 9				Yes
GRI Standards 2016	102-6	Markets served	Pages 7-9				Yes
GRI Standards 2016	102-7	Scale of the organization	Page 8				Yes
GRI Standards 2016	102-11	Precautionary Principle or approach	Pages 37 and 38				Yes

## STRATEGY

GRI Standards 2016	102-14	Statement from senior decision-maker	Pages 3-4				Yes
GRI Standards 2016	102-15	Key impacts, risks, and opportunities	Pages 41-42				Yes

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
<b>GOVERNANCE</b>							
GRI Standards 2016	102-18	Governance structure	Pages 36-37, 39-40 and 64			GOV-1	Yes
GRI Standards 2016	102-19	Delegating authority	Page 38				
GRI Standards 2016	102-23	Executive-level responsibility for economic, environmental, and social topics	Page 66	16			
GRI Standards 2016	102-24	Nominating and selecting the highest governance body	Page 66	5, 16			
GRI Standards 2016	102-26	Role of highest governance body in setting purpose, values, and strategy	Page 39			GOV-1	
GRI Standards 2016	102-29	Identifying and managing economic, environmental, and social impacts	Page 38	16		GOV-1	
<b>REPORTING PRACTICE</b>							
GRI Standards 2016	102-45	Entities included in the consolidated financial statements	<a href="#">Financial Statements 2021</a> , page 84				Yes
GRI Standards 2016	102-46	Defining report content and topic Boundaries	Pages 28-30				Yes
GRI Standards 2016	102-47	List of material topics	Page 29				Yes
GRI Standards 2016	102-48	Restatements of information	Page 6				Yes
GRI Standards 2016	102-49	Changes in reporting	Page 30				Yes
GRI Standards 2016	102-50	Reporting period	Page 5				Yes

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2016	102-51	Date of most recent report	Page 5				Yes
GRI Standards 2016	102-52	Reporting cycle	Page 5				Yes
GRI Standards 2016	102-53	Contact point for questions regarding the report	Page 288				Yes
GRI Standards 2016	102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core option				Yes
GRI Standards 2016	102-55	GRI content index	Pages 270-284				Yes
GRI Standards 2016	102-56	External assurance	Pages 267-269				Yes

## TOPIC-SPECIFIC STANDARDS

### ACTIVE AND TRANSPARENT COMMUNICATION

GRI Standards 2016	103-1	Explanation of the material topic and its Boundary	Page 24		SOC-8		
GRI Standards 2016	103-2	The management approach and its components	Pages 24-27		GOV-4		
GRI Standards 2016	103-3	Evaluation of the management approach	Pages 24-27		SOC-12		
GRI Standards 2016	102-21	Consulting stakeholders on economic, environmental, and social topics	Pages 11-23, 28-30	16			
GRI Standards 2016	102-40	List of stakeholder groups	Page 11				Yes
GRI Standards 2016	102-42	Identifying and selecting stakeholders	Page 11				Yes

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2016	<b>102-43</b>	Approach to stakeholder engagement	Pages 11-23			SOC-6	Yes
GRI Standards 2016	<b>102-44</b>	Key topics and concerns raised	Pages 11-23, 28-30				Yes
<b>ECONOMIC-FINANCIAL RESILIENCE</b>							
GRI Standards 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Page 54				
GRI Standards 2016	<b>103-2</b>	The management approach and its components	Pages 54, 61-62				
GRI Standards 2016	<b>103-3</b>	Evaluation of the management approach	Pages 54-55				
GRI Standards 2016	<b>102-10</b>	Significant changes to the organization and its supply chain	Pages 55-58 and 222				Yes
GRI Standards 2016	<b>201</b>	Economic Performance	Page 58				
GRI G4 - Sector Standard Oil and Gas	<b>OG1</b>	Volume and type of estimated proved reserves and production	Page 61				
GRI G4 - Sector Standard Oil and Gas	<b>OG11</b>	Number of sites that have been decommissioned and sites that are in the process of being decommissioned	Pages 57, 236-237	1, 2		ENV-8	Yes
<b>BUSINESS ETHICS AND FIGHTING CORRUPTION</b>							
GRI Standards 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Pages 67, 75, 82-84				Yes
GRI Standards 2016	<b>103-2</b>	The management approach and its components	Pages 68-71, 74-81			GOV-2	Yes
GRI Standards 2016	<b>103-3</b>	Evaluation of the management approach	Pages 73, 75-76, 81				Yes

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2016	102-16	Values, principles, standards, and norms of behavior	Pages 67-68	16	10		Yes
GRI Standards 2016	102-17	Mechanisms for advice and concerns about ethics	Pages 69-70	16	10		
GRI Standards 2016	102-25	Conflicts of interest	Pages 70-71, 73-74, 78				
GRI Standards 2016	205	Anti-Corruption	Pages 67-69, 75-84			GOV-3	
GRI Standards 2016	205-1	Operations assessed for risks related to corruption	Page 75	16	10	GOV-3	Yes
GRI Standards 2016	205-2	Communication and training about anti-corruption policies and procedures	Pages 71-72	16	10	GOV-3	Yes
GRI Standards 2016	205-3	Confirmed incidents of corruption and actions taken	Pages 81-82	16	10		Yes
<b>REGULATORY ENVIRONMENT, MARKET OPENING AND COMPETITION</b>							
GRI Standards 2016	103-1	Explanation of the material topic and its Boundary	Pages 90-94				
GRI Standards 2016	103-2	The management approach and its components	Page 91-92				
GRI Standards 2016	103-3	Evaluation of the management approach	Page 91				
GRI Standards 2016	206	Anti-competitive Behavior	Page 91				
GRI Standards 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Page 92	16			Yes
GRI Standards 2019	207	Tax	Pages 97-98 and 100				

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2019	<b>207-1</b>	Approach to tax	Pages 95-97				Yes
GRI Standards 2019	<b>207-2</b>	Tax governance, control, and risk management	Pages 98-99				
GRI Standards 2019	<b>207-3</b>	Stakeholder engagement and management of concerns related to tax	Pages 101-102				
GRI Standards 2019	<b>207-4</b>	Country-by-country reporting	Pages 99-100				
GRI Standards 2016	<b>307</b>	Environmental Compliance	Pages 102-104				
GRI Standards 2016	<b>307-1</b>	Non-compliance with environmental laws and regulations	Pages 105-108	16	8		Yes
GRI Standards 2016	<b>419</b>	Socioeconomic Compliance	Pages 102-104				
GRI Standards 2016	<b>419-1</b>	Non-compliance with laws and regulations in the social and economic area	Pages 102-108	16			
GRI G4 - Sector Standard Oil and Gas	<b>OG8</b>	Benzene, lead and sulfur content in fuels	Pages 102-104	3, 12			
<b>CLIMATE RESILIENCE AND THE TRANSITION TO A LOW CARBON ECONOMY</b>							
GRI Standards 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Pages 111, 113-117				Yes
GRI Standards 2016	<b>103-2</b>	The management approach and its components	Pages 111, 113-117			CCE-1; CCE-2	Yes
GRI Standards 2016	<b>103-3</b>	Evaluation of the management approach	Pages 111, 113-117				Yes

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2016	<b>201-2</b>	Financial implications and other risks and opportunities due to climate change	Pages 42-43, 111-112	13	7		Yes
GRI Standards 2016	<b>302</b>	Energy	Pages 128-129				
GRI Standards 2016	<b>302-1</b>	Energy consumption within the organization	Pages 128-129	7, 8, 12, 13	8	CCE-6	Yes
GRI Standards 2016	<b>302-2</b>	Energy consumption outside of the organization	Page 130	7, 8, 12, 13	8		
GRI Standards 2016	<b>305</b>	Emissions	Page 117-118			CCE-2; CCE-3; ENV-5	
GRI Standards 2016	<b>305-1</b>	Direct (Scope 1) GHG emissions	Pages 117 and 119	3, 12, 13, 14, 15	7, 8	CCE-5	
GRI Standards 2016	<b>305-2</b>	Energy indirect (Scope 2) GHG emissions	Pages 117 and 119	3, 12, 13, 14, 15	7, 8		
GRI Standards 2016	<b>305-3</b>	Other indirect (Scope 3) GHG emissions	Pages 124-125	3, 12, 13, 14, 15	7, 8		
GRI Standards 2016	<b>305-4</b>	GHG emissions intensity	Pages 120-124	3, 12, 13, 14, 15	8	CCE-4	
GRI Standards 2016	<b>305-5</b>	Reduction of GHG emissions	Pages 117-118	3, 12, 13, 14, 15	8, 9		
GRI Standards 2016	<b>305-7</b>	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Pages 125-126	3, 13, 14, 15	7, 8	ENV-5	Yes
GRI G4 - Sector Standard Oil and Gas	<b>OG2</b>	Total amount invested in renewable energy	Page 128	7, 9, 17			Yes
GRI G4 - Sector Standard Oil and Gas	<b>OG3</b>	Total amount of renewable energy generated by source	Pág. 127-128	7			

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI G4 - Sector Standard Oil and Gas	<b>OG6</b>	Volume of flared and vented hydrocarbon	Pages 122, 126-127	3, 7, 8, 12, 13, 14		CCE-7	

### ACCIDENT AND LEAK PREVENTION

GRI Standards 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Page 157				
GRI Standards 2016	<b>103-2</b>	The management approach and its components	Pages 159-160, 165-167			ENV-6	
GRI Standards 2016	<b>103-3</b>	Evaluation of the management approach	Page 164				
GRI G4 - Sector Standard Oil and Gas	<b>OG13</b>	Number of process safety events, by business activity	Pages 157-158 and 164	3, 6, 8, 11		SHS-6	

### SAFETY AND COMMITMENT TO LIFE

GRI Standards 2016	<b>103-1</b>	Explanation of the material topic and its Boundary	Pages 170-171				Yes
GRI Standards 2016	<b>103-2</b>	The management approach and its components	Pages 171-172, 177, 179			SHS-7	Yes
GRI Standards 2016	<b>103-3</b>	Evaluation of the management approach	Page 185				Yes
GRI Standards 2018	<b>403</b>	Occupational Health and Safety	Pages 171-172				
GRI Standards 2018	<b>403-1</b>	Occupational health and safety management system	Pages 171-172 and 177	8			
GRI Standards 2018	<b>403-2</b>	Hazard identification, risk assessment, and incident investigation	Pages 177-180	3, 8			Yes
GRI Standards 2018	<b>403-3</b>	Occupational health services	Pages 171-172 and 176	3, 8		SHS-1	

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2018	403-4	Worker participation, consultation, and communication on occupational health and safety	Pages 176-177	8			
GRI Standards 2018	403-5	Worker training on occupational health and safety	Pages 180-185			SHS-1	
GRI Standards 2018	403-6	Promotion of worker health	Pages 171-174			SHS-1; SHS-2	
GRI Standards 2018	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Pages 174, 177-178			SHS-4	Yes
GRI Standards 2018	403-8	Workers covered by an occupational health and safety management system	Págs. 171 and 175			SHS-2	
GRI Standards 2018	403-9	Work-related injuries	Pages 175, 179, 185-186			SHS-3	
GRI Standards 2018	403-10	Work-related ill health	Pages 175, 179, 185-186			SHS-2	Yes
<b>SOCIOECONOMIC IMPACTS</b>							
GRI Standards 2016	102-9	Supply chain	Pages 221-222				Yes
GRI Standards 2016	102-10	Significant changes to the organization and its supply chain	Pages 55-58 and 222				Yes
GRI Standards 2016	103-1	Explanation of the material topic and its Boundary	Page 219				
GRI Standards 2016	103-2	The management approach and its components	Pages 222-229				
GRI Standards 2016	103-3	Evaluation of the management approach	Págs. 228-230				

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2016	<b>201-1</b>	Direct economic value generated and distributed	Pages 47, 219-220				Yes
GRI Standards 2016	<b>203</b>	Indirect economic impacts	Page 221			SOC-13	
GRI Standards 2016	<b>203-1</b>	Infrastructure investments and services supported	Pages 223-224, 229-232				
GRI Standards 2016	<b>203-2</b>	Significant indirect economic impacts	Pages 220-221, 223-224, 230-232	1, 2, 3, 8, 10			
GRI Standards 2016	<b>204</b>	Procurement Practices	Pages 222-223				
GRI Standards 2016	<b>204-1</b>	Proportion of spending on local suppliers	Page 221	12		SOC-14	
GRI Standards 2016	<b>413</b>	Local Communities	Page 219			SOC-9	
GRI Standards 2016	<b>413-1</b>	Operations with local community engagement, impact assessments, and development programs	Pages 234-237, 243		1		Yes
GRI Standards 2016	<b>413-2</b>	Operations with significant actual and potential negative impacts on local communities	Págs. 236-241	1,2			
GRI G4 - Sector Standard Oil and Gas	<b>OG11</b>	Number of sites that have been decommissioned and sites that are in the process of being decommissioned	Pages 57, 236	1, 2		ENV-8	Yes

## OTHER TOPICS

### PUBLIC POLICIES, INITIATIVES AND ASSOCIATIONS

GRI Standards 2016	<b>415</b>	Public Policy	Pages 85-86			GOV-5	
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SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPECA CORRELATION	ASSURANCE
GRI Standards 2016	<b>415-1</b>	Political contributions	Page 86	16	10	GOV-5	Yes
GRI Standards 2016	<b>102-12</b>	External initiatives	Pages 86, 88-89				Yes
GRI Standards 2016	<b>102-13</b>	Membership of associations	Pages 86-88				Yes
<b>BIODIVERSITY</b>							
GRI Standards 2016	<b>304</b>	Biodiversity	Page 132			ENV-3	
GRI Standards 2016	<b>304-1</b>	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Pág. 134-136	6, 14, 15	8	ENV-4	Yes
GRI Standards 2016	<b>304-2</b>	Significant impacts of activities, products, and services on biodiversity	Pág. 136-137	6, 14, 15	8		
GRI Standards 2016	<b>304-4</b>	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Page 138-141	6, 14, 15	8		
GRI G4 - Sector Standard Oil and Gas	<b>OG4</b>	Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored	Pages 132-133	6, 14, 15		ENV-3	
<b>WATER RESOURCES, EFFLUENT AND WASTE MANAGEMENT</b>							
GRI Standards 2018	<b>303</b>	Water and Effluents	Pages 142-143				
GRI Standards 2018	<b>303-1</b>	Interactions with water as a shared resource	Pages 143-146	6	7, 8	ENV-1	

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2018	<b>303-2</b>	Management of water discharge-related impacts	Page 146	6	8		
GRI Standards 2018	<b>303-3</b>	Water withdrawal	Pages 146-149	6, 8, 12	8		
GRI Standards 2020	<b>306</b>	Waste	Pages 150-151				
GRI Standards 2020	<b>306-1</b>	Waste generation and significant waste-related impacts	Pages 150-151	3, 6, 12, 14	8		
GRI Standards 2020	<b>306-2</b>	Management of significant waste-related impacts	Page 153	3, 6, 12	8		
GRI Standards 2020	<b>306-3</b>	Waste generated	Pages 151-153	3, 6, 12, 14, 15	8	ENV-7	
GRI Standards 2020	<b>306-4</b>	Waste directed to disposal	Pages 154-155	3, 12	8		
GRI Standards 2020	<b>306-5</b>	Waste directed to disposal	Pages 154-155	6, 15	8		Yes
GRI G4 - Sector Standard Oil and Gas	<b>OG5</b>	Volume and disposal of formation or produced water	Page 150	3, 6, 8, 12, 14		ENV-2	Yes
GRI G4 - Sector Standard Oil and Gas	<b>OG7</b>	Amount of drilling waste (drill mud and cuttings) and strategies for treatment and disposal	Page 156	3, 6, 12			

### PEOPLE MANAGEMENT

GRI Standards 2016	<b>102-8</b>	Information on employees and other workers	Pages 188-189, 197-198	8			Yes
GRI Standards 2016	<b>102-35</b>	Remuneration policies	Pages 194, 199-204				
GRI Standards 2016	<b>102-36</b>	Process for determining remuneration	Page 199				

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2016	102-38	Annual total compensation ratio	Page 202				
GRI Standards 2016	102-41	Collective bargaining agreements	Pages 211-212	8	3		Yes
GRI Standards 2016	401	Employment	Page 189			SOC-4; SOC-5	
GRI Standards 2016	401-1	New employee hires and employee turnover	Pages 191-194	5, 8	6		
GRI Standards 2016	401-3	Parental leave	Page 206	5, 8			
GRI Standards 2016	404	Training and Education	Page 212			SOC-7	
GRI Standards 2016	404-1	Average hours of training per year per employee	Pages 212-213	4, 5, 8	6		
GRI Standards 2016	404-3	Percentage of employees receiving regular performance and career development reviews	Pages 198-199	5, 8	6		
GRI Standards 2016	405	Diversity and Equal Opportunity	Page 206-207			SOC-5	
GRI Standards 2016	405-1	Diversity of governance bodies and employees	Pages 207-209	5, 8	6		
GRI Standards 2016	405-2	Ratio of basic salary and remuneration of women to men	Pages 209-211	5, 8, 10	6		
<b>HUMAN RIGHTS</b>							
GRI Standards 2016	406	Non-discrimination	Pages 248-249				
GRI Standards 2016	406-1	Incidents of discrimination and corrective actions taken	Pages 249-250	5, 8, 16	6		

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2016	408	Child Labor	Page 260				
GRI Standards 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	Pages 260-261	8, 16			
GRI Standards 2016	409	Forced or Compulsory Labor	Page 260				
GRI Standards 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Pages 260-261	8			Yes
GRI Standards 2016	410	Security Practices	Pages 256-257			SOC-3	
GRI Standards 2016	410-1	Security personnel trained in human rights policies or procedures	Page 257	16	1		
GRI Standards 2016	411	Rights of Indigenous Peoples	Pages 252 and 255			SOC-10	
GRI Standards 2016	411-1	Incidents of violations involving rights of indigenous peoples	Pages 255-256	2	1		
GRI Standards 2016	412	Human Rights Assessment	Pages 247-248			SOC-1	
GRI Standards 2016	412-1	Operations that have been subject to human rights reviews or impact assessments	Page 250-251		1	SOC-1	Yes
GRI Standards 2016	412-2	Employee training on human rights policies or procedures	Page 246-247				
GRI Standards 2016	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Page 250-251				

SOURCE	REFERENCE	INDICATOR DESCRIPTION	LOCATION, RESPONSE OR REASON OF OMISSION	SDG CORRELATION	UM GLOBAL COMPACT CORRELATION	IPIECA CORRELATION	ASSURANCE
GRI Standards 2016	<b>414</b>	Supplier Social Assessment	Page 258			SOC-2; SOC-14	
GRI Standards 2016	<b>414-1</b>	New suppliers that were screened using social criteria	Page 258	5, 8, 16	2		
GRI Standards 2016	<b>414-2</b>	Negative social impacts in the supply chain and actions taken	Page 258-259	5, 8, 16		SOC-2; SOC-14	
GRI G4 - Sector Standard Oil and Gas	<b>OG9</b>	Operations where indigenous communities are present or affected by activities and where specific engagement strategies are in place	Pages 252-253				
GRI G4 - Sector Standard Oil and Gas	<b>OG10</b>	Number and description of significant disputes with local communities and indigenous peoples	Pages 251-252	1, 2			Yes
GRI G4 - Sector Standard Oil and Gas	<b>OG12</b>	Operations where involuntary resettlement took place, the number of households resettled in each and how their livelihoods were affected in the process	Page 252	1, 2		SOC-11	

# 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	10
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	117-120
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	125-127
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	113-125
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)	125-127
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	146-148
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	150
EM-RM-150a.1	Hazardous Materials Management	Amount of hazardous waste generated, percentage recycled	151-152
EM-EP-160a.1 EM-MD-160a.1	Ecological Impacts	Description of environmental management policies and practices for active sites	132-141
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	157-158

Code	Topic	Metric	Pages
EM-MD-160a.3	Ecological Impacts	Terrestrial acreage disturbed, percentage of impacted area restored	137-138
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	157-158
EM-EP-210 a.1	Security, human rights & rights of indigenous peoples	Percentage of proved and probable reserves in or near areas of conflict	251
EM-EP-210 a.2	Security, human rights & rights of indigenous peoples	Percentage of proved and probable reserves in or near indigenous land	254
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	247-261
EM-EP-210 b.1	Community relations	Discussion of process to manage risks and opportunities associated with community rights and interests	234-244
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	180-187
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	177-185
EM-EP-420a.3	Reserves valuation & capital expenditures	Amount invested in renewable energy, revenue generated by renewable energy sales	127-128
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	42-43 111-117
EM-EP-510a.2	Business ethics & transparency	Description of the management system for prevention of corruption and bribery throughout the value chain	67-84

Code	Topic	Metric	Pages
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	85-86
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)	164
EM-EP-540a.2	Critical incident risk management	Description of management systems used to identify and mitigate catastrophic and tail-end risk	160-167
EM-RM-540a.2	Critical incident risk management	Challenges to Safety Systems indicator rate (Tier 3)	157
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	160-167 177-185

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