Integrated Report **2020**

VALE

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Eduardo Bartolomeo
Vale's CEO

Letter from the CEO

GRI 102-14

Since I took over the leadership of Vale, a few months after the tragedy of the dam rupture in Brumadinho, I have emphasized as priorities of the company: people, safety and repair. These three words inspired us to outline the direction that we believe is essential to build a better Vale.

We are determined to fully repair and compensate for the damage caused by the tragedy, and I will never get tired of saying that we will never forget Brumadinho. We are committed to contributing more and more to the improvement and development of the communities in which we operate. We know that there is a way to go. But we remain firm in establishing a New Pact with Society, a strategic pillar that we will adopt in 2019.

In February 2021, we took an important step towards the commitment to the full reparation of Brumadinho. We entered into a BRL 37.7 billion Global Agreement, which includes reparatory and compensatory projects, with the State of Minas Gerais, the Public Defender's Office of the State of Minas Gerais and the Federal and State of Minas Gerais Public Ministries. This Agreement brings greater transparency, legitimacy and legal certainty to all those involved. We will remain committed to entering into individual indemnity agreements, which already reach 9 thousand people.

As we progressed in repairing and resuming our iron ore operations, we saw, from 2020, the Covid-19 pandemic changing lives around the world.

We immediately started to do our part to contain the spread of the coronavirus, with the implementation of safety measures in all of our operations. We created internal prevention processes and instituted the use of equipment and technologies capable of mitigating the risk of contagion, following world-class protocols.

Remote work was adopted by us on March 13, 2020 and, in December, we had more than 15 thousand people working in this regime. There is no challenge of this size without change. We have already allocated more than USD 109 million to combat Covid-19. Everything we could was made available: cargo planes, millions of quick tests, masks, gloves and aprons, ambulances, tons of alcohol gel. We help expand the number of beds and field hospitals and renovate existing hospitals. In addition, we advance payments to small and medium-sized suppliers. We maintained all

of our cultural and social sponsorships even with the interruption of their activities.

We started an intense cultural transformation process and, throughout 2020, we reflected a lot on our role and objectives as a company. At the beginning of this journey, we understand today that we exist to improve life and transform the future of the people and communities where we operate, together! This is Vale's purpose. This is what will guide our journey from now on, which we know to be long, but we are determined to continue moving forward, with humility, listening and dialogue.

As a vector for the cultural transformation we are pursuing, we have institutionalized our integrated management model - Vale Production System , the VPS, in line with our strategic themes, acting as a catalyst for operational discipline in our activities.

We have also implemented, in 95% of Vale's units, Safety management with a focus on Hazard Identification and Risk Management (Hazard Identification and Risk Assessment - HIRA).

We recognize that climate change increasingly represents one of the greatest challenges facing society. We will invest more than USD 2 billion to reduce greenhouse gas emissions from our operations by 33% (Scopes 1 and 2) by 2030. It is the largest investment ever committed by the mining industry to mitigate climate change and is part of Vale's commitment to become carbon neutral by 2050.

For Scope 3 emissions, we have established the goal of reducing 15% of net emissions by 2035, based on 2018 emissions. This commitment considers that most of our emissions is in the value chain, more specifically in the processing of iron ore by the steel industry.

All of our goals are in line with the ambition of the Paris Agreement. We are firmly committed to contributing solutions that help limit the increase in global average temperature by up to 2 ° C, committing additional efforts to contribute to limiting this increase to 1.5 ° C.

In the social sphere, we have strengthened the governance of the Human Rights theme in the company. We started to carry out risk assessment processes and due diligence Human Rights in our operations and value chain.

In this report you will find more information about our key environmental, social, and governance results, as well as our remediation and risk management efforts. As president of Vale, I reaffirm my commitment to dedicate all possible resources to lead the company towards the transformations necessary to create and share value with society.

Eduardo Bartolomeo
Vale's CEO

We exist to improve life and transform the future. Together: Vale's new purpose was launched in 2021.

Letter from the Chairman GRI 102-14

Vale is determined to contribute to development in the regions where it operates, with the goal of generating positive environmental, social and economic impacts and to preventing and mitigating negative impacts on environmental, social and economic subjects.
To increase the effectiveness of our actions, our ESG Strategy is connected to the pillars of our business. Since 2019, the Board of Directors has played an important role in discussions on the company's multi-annual strategic planning, focusing on risk management and opportunities in ESG issues. The Board supported Vale's initiatives to further strengthen safety standards, delivered advances in governance, and developed a more conservative risk approach.

We publicly recognize our commitment to contribute to the agenda to reduce climate change impacts and to place people at the heart of our activities, and to prioritize the health, safety and human rights of our employees and communities in the regions where we operate.

Vale's global human rights management is aligned with the UN Guiding Principles on Business and Human Rights. The topic is part of Vale's policies, the company's Integrated Global Risk Map, and our management system (VPS).

We have public environmental targets to reduce our effects on climate change, energy and water consumption, and to preserve forests and biodiversity.

In 2020, we made these targets more ambitious and conducted important actions that improved our governance, guided by our shareholders' priorities, and we expanded our dialogue with them on managing and improving our communication about ESG topics.

We have terminated the Shareholders' Agreement aligned to national and international governance best practices and reflecting a deeper understanding of investors' perspectives on the company's management and decision-making, and as part of a transition to a dispersed capital company. The Board is conducting this process with balance and implementing the necessary changes.

In 2020, the Board of Directors created the Nomination Committee to propose improvements related to the structure, size and composition of the board, as well as to recommend the necessary skills, profiles and potential candidates for board members. We also set up the Audit Committee that oversees the quality of the financial statements, internal controls, compliance,

José Maurício Pereira Coelho
Chairman of the Board of Directors

integrity and risk management. We also extended for another year, until April 2021, the role of the Extraordinary Independent Consulting Committee for Dam Safety (CIAESB). The CIAESB will be discontinued in April 2021, when a final report will be issued and released. Committee members will be part of the Independent Tailings Review Board.

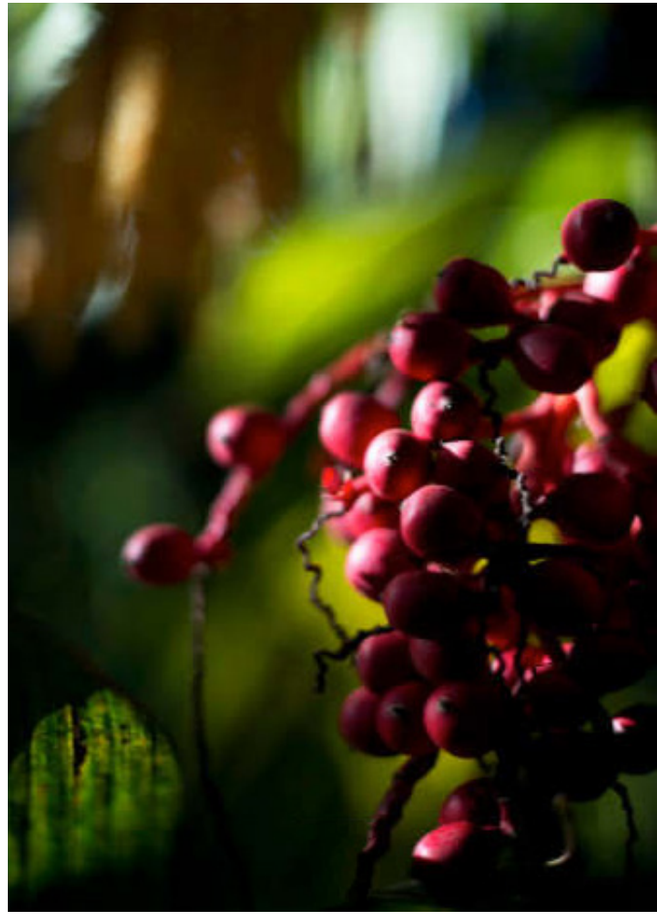
In an effort to improve governance in ethics and integrity, we created the *Compliance Office*, which brings together the Corporate Integrity area, the Whistleblower Channel and the Internal Audit, reporting directly to the Board of Directors. In 2020, we reviewed and updated Vale's Code of Conduct and Global Anticorruption Policy.

We also highlight the role of the Board of Directors in supervising dam management, supported by CIAESB and the Operational Excellence and Risk Committee. In 2020, we published the Dam Safety and Geotechnical Mining Structures Policy. We continue actively participating in associations and external organizations to contribute to discussions and action plans on the ESG agenda, such as the International Council on Mining and Metals (ICMM), the World Business Council for Sustainable Development (WBCSD), and aligning ourselves with best international practices, such as the Global Industry Standard on Tailings Management (GISTM).

This report consolidates Vale's advances in environmental, social and governance management since publicating our last Sustainability Report. More than a record of facts, data and figures, this report is an open and transparent disclosure of the directions that the company's Board intends to follow regarding ESG topics. We remain, as always, open to criticism and encouragement from society and our investors, based on a constructive and ongoing dialogue.

I invite you to review our main results and progress in 2020.

José Maurício Pereira Coelho
Chairman of the Board of Directors



Since 2019, the Board of Directors has played an important role in discussions on the company's multi-annual strategic planning, focusing on risk management and opportunities in ESG issues.

Integrated Report and other Publications

Vale discloses to the market its first Integrated Report, prepared according to the <IR> protocol of the International Integrated Reporting Council (IIRC), Vale's public accountability document to society and its main stakeholders. GRI 102-48 | 102-49

This report has been prepared in accordance with the GRI Standards: Comprehensive option, and the Mining and Metals Sector Supplement, with external assurance by Bureau Veritas Certification (BVC). GRI 102-54

The company actively participates in the International Council on Mining and Metals (ICMM) and is committed to conducting management adhering to the ICMM Mining Principles, which also guide this communication of results. GRI 102-56

The data in this publication refer to the operations conducted from January 1, 2020 to December 31, 2020, the financial results of which consider Vale and its subsidiaries, identified in form form 20-F, available at http://www.vale.com/brasil/en/investors/information-market/annual-reports/20f/pages/default.aspx, and environmental, social and governance data on topics prioritized according to the company's materiality matrix (read more about the materiality study on page 47), published annually. GRI 102-45 | 102-46 | 102-50

The report includes a 2020 performance approach and also an appendix - the ESG databook, with indicators from the Global Reporting Initiative (GRI); the Metals & Mining segment of the Sustainability Accounting Standard (SASB); the Task Force on Climate-related Financial Disclosures (TCFD); core metrics from the World Economic Forum (WEF); and Sustainable Development Goals (SDGs). Our adherence to the Mining Principles of the International Council on Mining and Metals (ICMM) is also disclosed in this annex.

Conversion adopted for the dollar amounts published in this report

Throughout the report, the amounts in Brazilian reais were converted to USD at the rate of BRL 5.16.

IR

The first Intergrated Report was also prepared in accordance with GRI Standards, comprehensive option, and the Mining and Metals Sector Supplement.

Note 1: This document includes statements that present Vale's expectations about future events or results. All forwardlooking statements involve risks and uncertainties. Vale cannot guarantee that these statements will prove to be fully accurate. These risks and uncertainties include, among others, factors related to: (a) countries where Vale operates, especially Brazil and Canada; (b) the global economy; (c) capital markets; (d) mining and metals prices and their dependence on global industrial production, which is cyclical by nature; (e) the high degree of global competition in the markets where Vale operates; and (f) mining operations. Vale cautions to the fact that in all of Vale's operations and activities, actual results may differ materially from the plans, objectives, expectations, estimates and intentions expressed in this document. Vale undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information or future events or for any other reason. To obtain further information on factors that may lead to results different from those forecasted by Vale, please consult the reports that Vale files with the U.S. Securities and Exchange Commission (SEC), the Brazilian Comissão de Valores Mobiliários (CVM)and, in particular, the factors discussed under "Forward-Looking Statements" and "Risk Factors" in Vale's annual report on Form20-F. For questions, comments or suggestions, please use the Contact Us channel at www.vale.com.

Note 2: Any differences in the total data and percentages in the graphs and tables must be attributed to the rounding of the values. Throughout the report, the amounts in Brazilian reais were converted to USD at the rate of BRL 5.16. Due to the complexity of the activities, there is no single criterion for reporting a business unit. For this reason, some disclosure items are not shown as a percentage of the business unit.

Read more about Vale's results at:

- 20-F, Report from Administration, Tax Transparency Report and Reference Form

Read more

http://www.vale.com/brasil/EN/investors/information-market/annual-reports/Pages/default.aspx

- Reparation Report

Read more

http://www.vale.com/brasil/EN/aboutvale/reports/atualizacoes_brumadinho/Pages/default.aspx

- ESG Portal

Read more

www.vale.com/esg

- Access other editions of Vale's Sustainability Report

GRI 102-51 |102-52

Read more

http://www.vale.com/esg/en/Pages/SustainabilityReports.aspx

Contact

Questions and comments about this publication should be sent through the channel Contact Us, available at www.vale.com.

GRI 102-53

Reparation

commitment is to fully repair Brumadinho

Brumadinho and evacuated territories

We will never forget Brumadinho. We know that the Integral Reparation Program will never compensate for the loss of family members, friends and colleagues, due to the breach of Dam I of the Córrego do Feijão Mine. We have the responsibility to fulfill a public commitment and, more than ever, create strategies that prioritize actions to create a positive social, environmental, and economic impact, paying special attention to the affected people and communities.

Our actions are guided by the commitments made for Integral Reparation, with strong attention to the recommendations of the Extraordinary Independent Consulting Committee for Investigation (CIAE-A in Portuguese) and the Extraordinary Independent Consulting Committee for Support and Reparation (CIAE-AR in Portuguese), with emphasis on engagement and dialogue, and active listeningof the community and all affected stakeholders.

Vale has been caring for impacted families by providing assistance to restore their dignity, well-being and livelihoods. In addition to meeting the most immediate needs of the people and regions impacted, Vale has also been working to deliver projects that promote lasting changes to restore communities and benefit the population effectively.

Despite the immense challenges brought on by the COVID-19 pandemic, throughout 2020, Vale maintained its commitments to Brumadinho and the region, adapted procedures to ensure the health and safety of all involved and remained committed to repairing those affected and the communities.

We are aware that pandemic preventions, mainly social distancing, compromised our professionals' efforts to maintain a constant and close presence to repair the affected territories and build personal relationships. Yet, we tried to to maintain virtual channels so that those affected could have direct contact with Vale whenever necessary.

Photo: Agência Nitro

The priority operation to search for the 11 victims not yet located was resumed by the Fire Department of Minas Gerais in August, after five months of suspension due to the social isolation imposed by the pandemic.

Vale is providing full support to this process and, during the shutdown period, made improvements to facilities and accesses and the drainage of impacted areas to keep firefighters safe.

Since it began, the Integral Reparation Program has carried out actions to assist people; build emergency projects, water security and infrastructure; compensate and restore the local economy; and pay indemnification.

More than 8,700[1] people have been individually indemnified by December 2020, and we have spent more than BRL 13 billion (USD 2.5 billion) for indemnfication payments, infrastructure projects, and environmental and socioeconomic reparation initiatives. This amount excludes expenses with dam de-characterization (read more on page 89).

Environmental reparation activities comprise

22

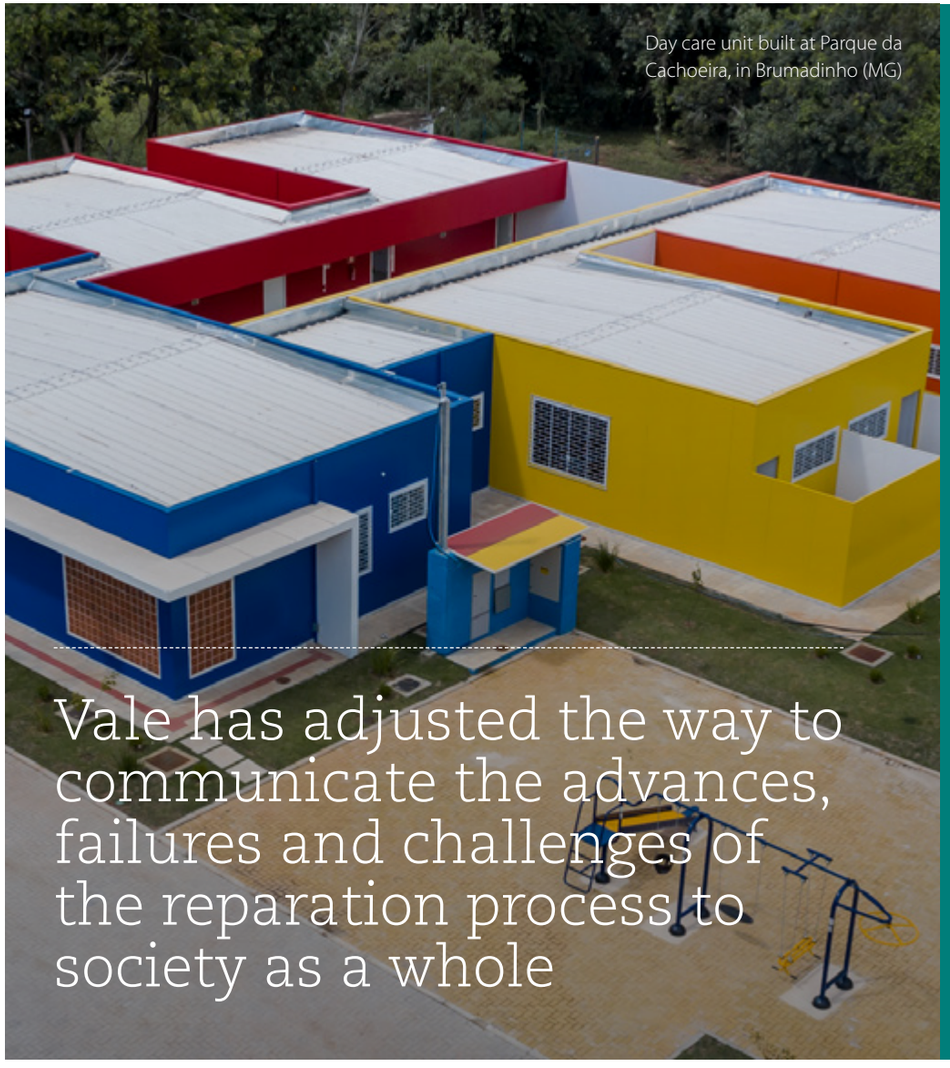
municipalities located along the Paraopeba River Basin.

Water quality monitoring

They involve river sediment containment and removal, water quality monitoring, and fauna and flora preservation

Social investment priorities are defined from dialogue with the local community and authority.

1 More than 9,100 people have been individually indemnified by February 2021



Day care unit built at Parque da Cachoeira, in Brumadinho (MG)

Vale has adjusted the way to communicate the advances, failures and challenges of the reparation process to society as a whole

The Reparation Program includes:

- Socio-economic structuring projects that seek full reparation and the well-being of the people affected, in addition to paying individual indemnities.
- Socio-environmental reparation actions.
- Investments in urban infrastructure and public equipment.
- Initiatives to improve the quality of life for people in the evacuated territories, and to reproduce their previous living conditions as much as possible.

We adjusted the way we communicate

The company has adjusted the way it communicates the advances, failures and challenges of the reparation process to society as a whole. Vale understood that it needed to expand its channels of contact with people and, most importantly, to adjust its language to increase clarity and transparency in information sharing. This includes opening a forum to present the demands, criticisms and views of the people affected.

This adjustment is a recent process that is in evolution. We continue working to improve the way we communicate and dialogue with all stakeholders and conduct constant research to hear the communities' perceptions and desires.

Main reparation plan actions conducted in 2020

Vale complied with the recommendations of the Extraordinary Independent Consulting Committee for Support and Reparation – CIAE-AR, addressing 82% of the actions by January 2021 and 16% in progress. Two recommendations were not considered by Vale (see the full report at <http://www.vale.com/PT/investors/Documents/Relat%C3%B3rio%20Final%20do%20CIAE-AR_english.pdf>).

With the closure of the CIAE-AR in February 2020, activities to monitor the Integral Reparation Program previously carried out by this Committee began to be monthly conducted by the Sustainability Committee.

The company has contracted an annual external and independent assessment of the reparation progress and CIAE-AR recommendations implementation. See below some of the actions taken in 2020.

Socioeconomics

In the area of socio-economic remediation, Vale believes that it is necessary to create more diverse opportunities for local communities, increasing the generation of employment and income for the affected populations. This work is aimed towards ensuring the social, economic and environmental sustainability of the impacted territories, by supporting initiatives that develop local vocations, such as investing in agriculture, tourism, sustainability and the environment.

For Brumadinho, we implemented the Propositional Study of the National Institute of Science and Technology in Public Policy, Strategies and Development (INCT acronym in Portuguese) of the "Strategies for the Transformation of Brumadinho." This was one of the external diagnoses that underpin the Integral Reparation Program and identifies ways to boost the municipality's economic diversification, reducing its dependence on mining and creating tools to transform the local reality.

Other actions to reduce Brumadinho's dependence on mining

In 2020, we made an investment of USD 390 thousand in 30 social initiatives, to develop actions to reduce Brumadinho's dependence on mining:

- Through Programa Valorizar, we trained 52 social organizations, and selected 30 projects to receive Vale's voluntary social investment.
- The Agricultural Incentive Program has already registered approximately 300 farmers in Brumadinho and Mário Campos and the Cultivar Project is helping to the restart of agricultural activity in Mário Campos.

USD 390 thousand

to develop actions to reduce Brumadinho's dependence on mining

Território-parque project: part of the challenge of re-signifying of the community of Córrego do Feijão, one of the regions impacted by the B1 dam breach

Urban requalification

In the community of Córrego do Feijão, in dialogue with local stakeholders, it is underway an intervention of urban requalification and investments in community and cultural infrastructure.

Such interventions foresee improvements in water supply conditions, sustainable sewage treatment through filtering gardens, paving roads with interlocked surfaces, signaling and complementing the landscaping, and completing five more public and community facilities.

As with all major construction work, the process will generate impacts such as dust and other emissions, noise and truck traffic. Vale has implemented several mitigation measures to reduce residents' discomfort during the works.

Cultivar project, at Mário Campos

Civil Construction and Gardening Officer Course

To address housing, in partnership with the Yara Tupynambá Institute, the residents of Parque da Cachoeira and Córrego do Feijão are taking practical classes to earn qualifications as Civil Construction Officers and gardeners. Graduates will be able to help revitalize local houses.

So far, 140 students are being qualified, and 230 houses are expected to be renovated. The company will invest about USD 2.7 million in this educational project and about USD 890 thousand in renovations.

Social

Since 2019, the Health Cycle Program - Vale Foundation's methodology for strengthening primary health care, has strengthened primary health care through training, provision of equipment, and support to health management in the cities of Brumadinho, Mário Campos and Sarzedo.

In August 2020, the program was extended to eight additional municipalities in the Paraopeba River Basin and evacuated territories: Inhaúma; Paraopeba; Pará de Minas; Pompéu; São Joaquim de Bicas; Barão de Cocais; Itabirito; and Nova Lima (Macacos).

By the end of 2020, 800 professionals have been trained and 3,200 items of equipment have been given to 122 Basic Health Units (UBS).

Since 2019, Vale has also offered to affected people the Family Reference program, which provides psychosocial support. Through a specialized professional, the families which joined the program receive support to strengthen its autonomy in the housing process, and repair emotional damage and life quality, until their income is re-established through compensation.

In addition to financial reparation, Vale carried out the Comprehensive Victim Assistance Program (PAIA) in 2020. About 3,000 people from 1,700 family units received specialized support to purchase real estate, finance education, resume agricultural activities, and receive rural technical assistance and assistance for micro-entrepreneurs, among other assistance.

Health Cycle Program:
800 professionals have been trained
3,200 items of equipment have been donated
122 Basic Health Units benefited

Another initiative in partnership with the Vale Foundation and the Antônio Dumont Cultural Institute is the project "Semeando Esperança" - in Portuguese, which includes 37 women who are resignifying pain and loss through the art of embroidery. The second cycle of the project began in September 2020, and was adapted to the remote format due to the pandemic. The project promotes group experience exchanges via a social network on an ongoing basis.

In relation to providing services to the traditional indigenous communities Pataxó and Pataxó Hã Hã Hãe, Vale has been carrying out the actions established by the agreement signed with the Federal Public Prosecutor's Office, the Brazilian National Indigenous Foundation (Funai in Portuguese) and indigenous people located in the city of São Joaquim de Bicas and Belo Horizonte. These actions involved the installation of Basic Health Units (UBS in Portuguese) with equipment and washrooms in the Naô Xohã village, the institution of an inter-institutional committee to monitor the health diagnosis, represented by the municipal health secretariats of Belo Horizonte, São Joaquim de Bicas, the State Department of Health, the Special Sanitary Health District of the Ministry of Health and the Brazilian National Indian Foundation, as well as the hiring of independent technical advice to support the indigenous people. As for the Quilombola communities of Marinhos, Sapé, Ribeirão, and Rodrigues, in Brumadinho, in the past year equipments to provide internet connection and laptops were installed for adapting the work plan and holding virtual meetings in order to prepare the impact studies and reparation plans.

Environment

Preparation began in 2020 for Risk Assessment studies related to Human and Ecological Health in 29 municipalities, beginning in Brumadinho, then following the Paraopeba River Basin and ending in the municipalities surrounding the Três Marias Reservoir. The studies are being carried out jointly by Vale, the federal, state and municipal governments and the Public Prosecution Service of Minas Gerais.

The company has also implemented efforts to contain, remove and dispose of tailings, and dredge the most impacted area of the Paraopeba River, in addition to installing containment structures along the Ferro-Carvão stream in an effort to reduce the entrainment of tailings to the Paraopeba River as much as possible. During removal, 3.1 million cubic meters of tailings have already been handled, about 30% of the total. The tailings removed and allowed to be released by the Fire Department are deposited in the Córrego do Feijão Mine pit.

Still in pilot format, the Marco Zero Project restored the Ferro-Carvão stream to its original conditions from the bridge in the Alberto Flores region to the confluence with the Paraopeba River in Brumadinho. Maintenance and monitoring were also carried out to recover environmental health at the mouth of the stream.

To normalize the water supply of the municipality of Pará de Minas, which has approximately 100,000 inhabitants, we completed the construction of a new water pipeline and a new water collection system in the Paraopeba River to supply the Great Belo Horizonte region.

In Brumadinho, we installed two Water Treatment Plants to return 20 billion liters of clean water to the Paraopeba River, with turbidity below 100 NTUs (legal standards determined by Conama).

To provide care to domestic and wild animals in the affected region, we maintained the operation of the Veterinary Hospital of Brumadinho. As of December 2020, 1,245 consultations were carried out.

We also maintained the operation of the Fazenda Abrigo de Fauna (Fauna Shelter Farm), which welcomes, shelters and treats the animals of the affected areas. By December 2020, 460 animals were sheltered on site, which has housed up to 674 animals (as of March 2020). Our Program of Adoption enabled 437 dogs, cats, horses, birds, pigs and ruminants to be adopted by the end of 2020.

Avenida Alberto Flores bridge, in Brumadinho (MG), near the confluence of the Ferro-Carvão stream and the Paraopeba river. There are the containment structures of the sediments resulting from the dam breach and the Marco Zero (Ground Zero), a project to reconstitute the original conditions of the Ferro-Carvão stream and revegetation with native plants of the riparian forest region

3.1 million cubic meters of tailings

removed and deposited in the Córrego do Feijão Mine pit.

We have recovered more than 50 hectares of degraded areas since the start of activities in 2019.

Our monitoring of aquatic and terrestrial biodiversity continued in 2020, studying and understanding the effects of the rupture and the mitigation actions in progress to determine possible environmental remediation.

Basic Health Unit at Parque da Cachoeira

Infrastructure

In 2020, we completed work on the Family Health Unit and the municipal daycare centre in the community of Parque da Cachoeira and the municipal daycare centre in the Cohab neighbourhood. We also finished renovations on the Multisports Gymnasium Complex and eight cemeteries, all in the city of Brumadinho.

We also performed work on the following dams: Menezes II; Capim Branco; the remaining structure of B1; and B6 – which obtained a positive Declaration of Stability Condition (DCE in Portuguese), removing the emergency level 1 of the Emergency Action Plan for Mining Dams (PAEBM in Portuguese) - read more about the management of dams on page 82.

Evacuated territories

We are aware that there is still dissatisfaction with the pace of the compensation processes and uncertainty about when people can return to their homes. However, we continue to make progress on these very important issues, while advancing with the construction and execution of compensation and development plans in evacuated or preventively relocated communities.

With regard to the evacuated territories, the following plans have been carried out.

Social compensation and development plan of Barão de Cocais

The community expressed its desires and needs through public consultation and, after 32 meetings held between May and October 2020, the committee of the Compensation and Development Plan for Barão de Cocais defined 36 possible priority actions for the municipality, in the areas of:

- Education;
- Health;
- Infrastructure and urban planning;
- Economic development;
- Sports;
- Environment and waterways;
- Tourism;
- Culture;
- Public security;
- Social assistance.

The actions which advance in the feasibility study will be completed within three years. For this phase, Vale will provide USD 7.8 million. Get to know the 36 actions at www.vale.com/baraodecocais.

Public consultation at Antônio Pereira

Social compensation and development plan for Antônio Pereira

The partial result of the public consultation for the construction of the Compensation and Development Plan of the communities of Antônio Pereira and Vila Antônio Pereira held in August 2020, indicated more than 2,100 suggestions for local investments.

Infrastructure and health were the areas of prominence, followed by tourism, social assistance, sports, education, environment and waterways, economic development, social participation, and public security. The proposals registered will be evaluated by a working group, which will consist of representatives of civil society, public authorities and Vale.

Rubem Costa Lima school, in Nova Lima, is one of the largest investment in education at Vale

Social compensation and development plan for Nova Lima (Macacos)

The new Rubem Costa Lima school in Nova Lima is one of the largest investment in education underway at Vale and was delivered in August 2020 to the Community of Macacos. So that more students could study near their homes, the assistance capacity was expanded from 190 to 400 children, currently from nursery to elementary school II.

The infrastructure was designed based on the principles of sustainability and accessibility and is the result of an achievement of the community and the Public Prosecution Office of Minas Gerais (MPMG) with Vale.

Social compensation and development plan for Antônio Pereira: Infrastructure and health were the areas of prominence in the result of the public consultation

Another delivery was the revitalization of the São Sebastião Chapel, an important tourist attraction in the community and listed by the Municipal Advisory Council of the Historical Heritage of Nova Lima. The church received USD 270 thousand in investments for the remodeling, which respected and maintained its original features, dating from the 18th century.

Indemnities

Vale remains committed to compensating, fairly and quickly, all people affected. The processes are treated individually, respecting the moment and the specificities of each person impacted, and being aware that the understanding of the eligibility criteria and the documentation required for the process is a sensitive point because it still generates doubts in part of the community.

By December 2020, more than 3,800 civil and labor agreements were signed, involving more than 8,700 people, which added up to the payment of more than USD 530 million in individual indemnity.

Since March 2020, the handling of indemnity processes was maintained, during the Covid-19 pandemic, with hearings held through videoconference.

In addition, monthly emergency payments were made throughout the year to more than 100,000 people living in Brumadinho and up to 1 km from the bed of the Paraopeba River. The resources earmarked for the emergency aid exceed USD 400 million.

Photo: Agência Nitro

Other information

- The information about all reparation actions carried out until December 2020 is public and is included in the Reparation Report, available at http://www.vale.com/brasil/EN/aboutvale/servicos-para-comunidade/minas-gerais/atualizacoes_brumadinho/Pages/RepairReport.aspx#DFLIP
- For more information about reparation in Brumadinho, access http://www.vale.com/brasil/EN/aboutvale/servicos-para-comunidade/minas-gerais/atualizacoes_brumadinho/Pages/RepairReport.aspx
- Read more about the causes of the breach at http://www.b1technicalinvestigation.com/

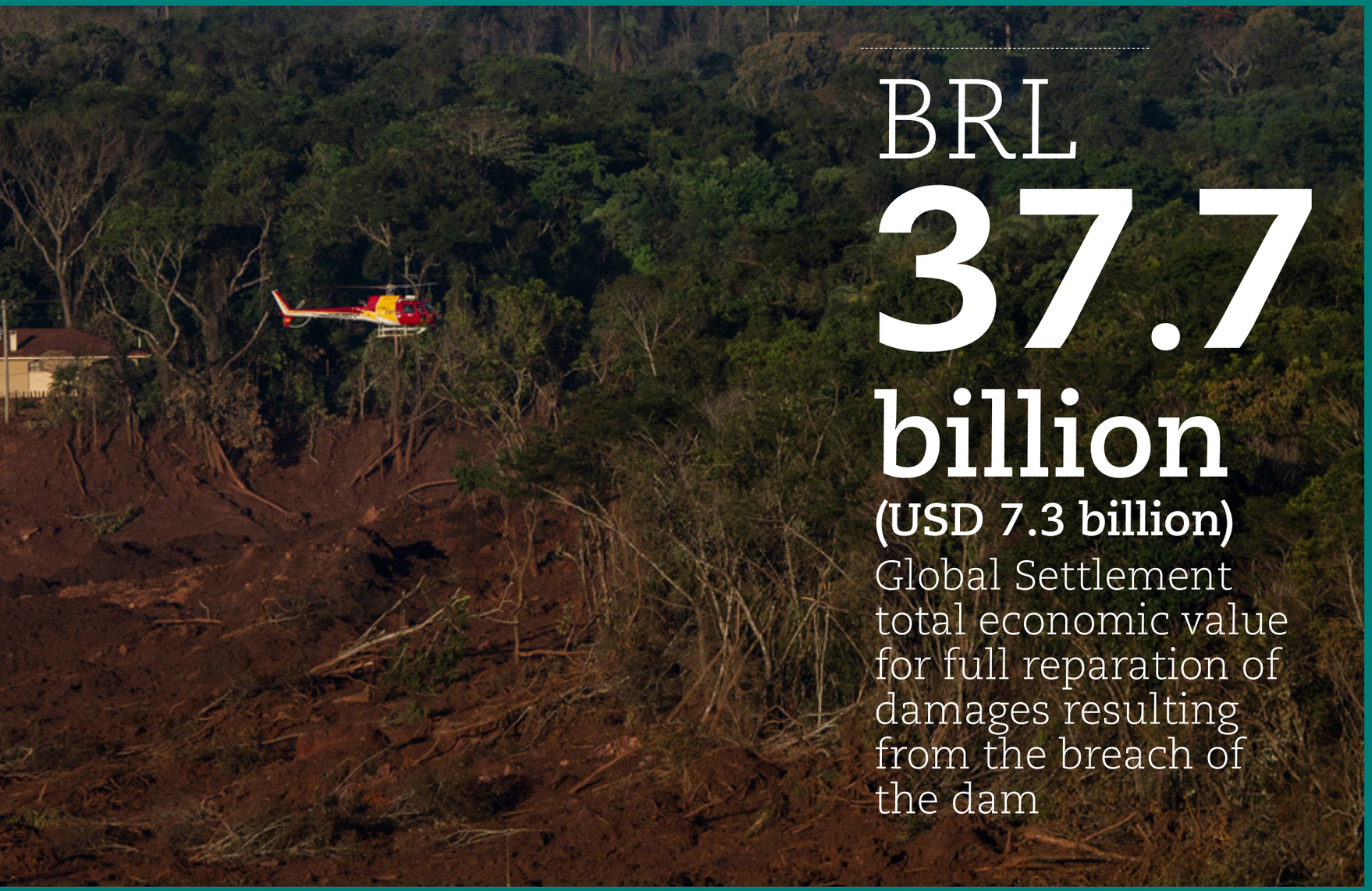


Photo: Agência Nitro

Integral reparation of environmental and social damage caused by the failure of Dam I, in Brumadinho

In February 2021, Vale entered into a Global Settlement with the State of Minas Gerais, the Public Defender's Office of the State of Minas Gerais, and the Public Prosecution Offices of the Federal Government and of the State of Minas Gerais for full reparation of environmental and social damage resulting from the breach of the Dam B1 in Brumadinho (MG).

The institutions that participated in the construction of the Global Settlement ensured fast, fair, and effective solutions, in a process conducted with transparency, legitimacy, and legal security.

The Global Settlement has an economic value of BRL 37.7 billion (USD 7.3 billion), covering socioeconomic and socio-environmental remediation projects.

Among the foreseen actions, some of them continue under Vale's responsibility for implementation and others will be conducted by the State and its institutions, financed with funds provided by Vale.

Of the amount to be disbursed, approximately one third corresponds to execution commitments, while two thirds correspond to Vale's payment obligation.

Renova Foundation

The Renova Foundation was created in 2016 through the Transaction and Conduct Adjustment Agreement (TTAC in Portuguese) for reparation of damage caused by the breach of the Fundão Tailings Dam in Mariana (MG) on November 5th, 2015, operated by Samarco, a joint venture between Vale and BHP (50%/50%).

More than 70 entities are part of Renova's governance model. The answers to each challenge are obtained jointly, and no party involved has control over the decision. In June 2018, a new commitment was signed, the Conduct Adjustment Agreement (TAC in Portuguese) Governance, which incorporates the participation of those affected in all instances of the reparation decision-making processes, improving the model of collective construction of solutions. The agreement includes the population in all the governance structures of the Renova Foundation, which now has an Interfederative Committee (CIF in Portuguese), Technical Chambers, Regional Chambers and Local Commissions, Curator of the Public Prosecution Office of Minas Gerais (MPMG in Portuguese), Independent Auditing, Compliance, Ombudsman, Observer Forum, Fiscal Council, Advisory Board and Trustee.

The Foundation carries out 42 reparation and compensation programs – defined by TTAC, and respective projects that have been implemented in the 670 kilometers of impacted area along the Doce River and its tributaries. These are long-term actions conducted in three areas:

- Pay the people;
- Lift the fishing ban;
- Build the houses. .

By December 2020, USD 2.2 billion (BRL 11.3 billion) had been earmarked for reparation actions, USD 678 million (BRL 3.5 billion) in 2020 alone.

There is also a great deal of discussion about paying indemnities. The indemnification program is a large-scale action, and a legal case unprecedented in the world due to the significant number of people to be indemnified, the vast territorial extent of the damages, and the lack of documentary evidence that clearly determines the extent of the damage. For these reasons, it is difficult for the Renova Foundation to deal with these cases properly.

Despite the informality of the work categories and the resulting lack of proof, the Renova Foundation disbursed approximately USD 595 million (BRL 3 billion) in indemnities and financial aid by December 2020. It compensated around 320,000 people for water damage, general damage, and emergency financial assistance (AFE, Portuguese acronym).

In 2020, the Renova Foundation committed to the Integrated Agenda, which allocates compensatory amounts to the states of Minas Gerais and Espírito Santo for investments in the infrastructure and tourism sectors, and investments and actions aimed at strengthening public education.

Construction work on the Bento Rodrigues and Paracatu resettlements are underway but has have been rescheduled due to the COVID-19 pandemic.

While the resettlement process is not completed, families are being accommodated in housing rented by the Renova Foundation and are receiving medical, psychological and social assistance, and reintegration into the school community, among other supports.

Since the beginning, the Renova Foundation's activities have been monitored by the Minas Gerais State Public Ministry of Foundations, which ensures the fulfillment of the objectives and the operation of this disaster remediation model, until then unprecedented in Brazil.

Works of the Resettlement of Bento Rodrigues, in Mariana (MG).
Photo: Guilherme Guedes

Paying indemnities

By decision of the 12th Federal Court, the Renova Foundation implemented the Simplified Indemnification System, conducting an agile process for paying indemnities.

The new system has already been adopted by 13 locations (among municipalities and districts), through committees representing the affected population. By December 2020, 12,837 people had made formalized requests for compensation, with 3,200 indemnities payment, totaling payments of BRL 290 million (USD 56 million).

The system facilitates payment to informal sectors of the economy that had difficulty proving the damage caused by the collapse of the Fundão Dam, enabling them to obtain full compensation.

Baixo Guandu (ES).
Photo: Agência Nitro

The COVID-19 pandemic has made the Renova Foundation redouble its care of employees, implementing remote work and testing policies for those who develop priority activities.

In addition, the health indicators in the territories where it operates began to be monitored in a weekly basis, analyzing the percentage of beds occupied in the health system, and allocating USD 29 million to help the municipalities fight the pandemic.

Learn more

Access the Renova Foundation's Annual Reports at https://www.fundacaorenova.org/en/

As part of the New Pact with Society, Vale allocated USD 109 million to combat the pandemic in Brazil and other countries where the company operates, in addition to providing support to Covid-19 response measures.

The logistics structure of Vale's operation in China was used to buy and transport to Brazil **30 million personal protective equipment and 5 million rapid tests** for the detection of the new coronavirus.

Covid-19 pandemic response plan

As of the publication of this report, Vale has donated over USD 109 million to local governments, representing the second largest volume of donations by a corporation to fight Covid-19 in Brazil.

In 2020, the company allocated more than USD 97 million to purchase and donate 5 million rapid test kits and almost 16 million PPEs (Personal Protective Equipments) to the Brazilian Ministry of Health, in addition to other actions such as the construction of field hospitals, health unit renovations, and equipment purchases in the states where the company operates.

Resources were also dedicated to governments and institutions in Canada, Indonesia and other countries where we operate. In addition to financial support, the company has committed actions and measures to protect health in all countries where it operates.

Suppliers

Vale anticipated payments from about 3,000 small and medium-sized suppliers to support them in coping with the effects of the pandemic. Announced in March 2020, the measure included contracts for services or materials delivered by May of the same year.

The supplier aid package has reduced by up to 85% the payment term to small and medium-sized companies for services performed or materials delivered. There are companies from all regions of Brazil among the beneficiaries.

The Company also provided financial support to contractors and construction workers of projects that were suspended, aiming to reduce the circulation of people at Vale's facilities, and, by so doing, increase the safety of outsourced workers and employees who continued to work in the essential functions of the operation. Dam safety works were not materially impacted.

Open Innovation Challenge

In partnership with Hospital Israelita Albert Einstein and Rede Mater Dei de Saúde, Vale promoted the Vale Covid-19 Challenge to support solutions that reduce the impacts of the new Coronavirus in society during the first semester of 2020.

Twelve solutions were selected through open innovation, benefiting about 600 thousand people in Brazil and Canada, with a total investment from Vale of about USD 1 million.

All the partners selected donated part of the material produced or the service offered to health institutions. Overall, more than 200 hospitals have benefited.

Potable water supply to the municipalities along the Paraopeba river

Brumadinho

Vale closed indefinitely Service Stations (PAs, Portuguese acronym), individual indemnity offices, and Emergency Indemnity Registration Stations (PRIs, Portuguese acronym), and assistance started to be provided remotely.

Remote assistance became the main form of interaction between the professionals of the Family Reference Program and the family groups that receive the company's psychosocial support. Community Relationship analysts prioritized attendance by telephone, through the Call Center (0800 031 0831) and the channel Alô Indenizações (0800 888 1182), which remained available.

The Comprehensive Victim Assistance Program (PAIA, acronym in Portuguese) – has also maintained its service in the areas of financial education, incentive to productive resumption, and support to the acquisition of residential or commercial properties with those that signed out-of-court agreements, as a priority remotely.

Vale continue to work on water supply to the municipalities along the Paraopeba river channel, in the stretch between Brumadinho and Pompéu, providing drinking water in a daily basis to the residents of both locations. To date, more than 1 billion liters of water have been delivered for human consumption, irrigation and animal consumption.

In the state of Minas Gerais, the State Department of Health allocated the USD 1 million transferred by Vale in March 2019, as part of the Reparation Plan – previously paid for the preparation of a study on the risks of tailings to human health – to strengthen actions to combat Covid-19. Vale conducted the studies to redirect the funds to pandemic mitigation measures. In addition, judicial deposits in the amount of USD 274 million destined to Brumadinho Reparation were released, with Vale's agreement, for actions to combat Covid-19 in the State.

The funds were used for the renovation, improvement of infrastructure, and expansion in the number of ICU beds at the Eduardo de Menezes Hospital, in Belo Horizonte (MG).

Indigenous Peoples

In 2020, the Covid-19 pandemic called for swift actions by Vale in support of indigenous peoples. The company made donations and changed its day-to-day relationship practices with these populations, in an effort to guarantee their health and safety. For this reason, operations and activities carried out close to the areas where these communities are located and/or carried out directly with the indigenous peoples were paralyzed.

Voisey' Bay, at Newfoundland and Labrador, Canada

Xikrin do Caeté Indigenous land.
Photo: Rafael Scherer

Canada

On March 16, 2020, Vale announced that the Voisey's Bay mine in the region of Labrador, Canada would enter a period of temporary shutdown due to its remote location and as a precaution to help protect the health and well-being of the Nunatsiavut and Innu indigenous communities in view of the pandemic

Brazil

In Brazil, Vale has no operations on indigenous lands. However, the company has established partnerships with governmental and non-governmental agencies to support the installation of quarantine infrastructure for indigenous and health professionals, with the donation of:

- More than 100,000 PPE;
- 6,000 rapid test kits;
- 470,000 cleaning items;
- 80 tons of food;

In the local communities, face-to-face activities were interrupted with the maintenance of relationship agendas and the continuity of distance projects, with all health and safety measures in place.

Operations and activities carried out close to the indigenous peoples **were paralyzed**

Arrival of the first syringes to combat Covid-19, donated by Vale to the Brazilian Ministry of Health, in March 2021

Vale transported kits and Personal Protective Equipment (PPE) to Brazil

To bring the kits and PPEs from China to Brazil, Vale chartered 13 aircraft (11 freighters and 2 commercial planes) that transported more than 600 tons of products.

Altogether, the flights covered 266,926 kilometers, equivalent to 80 times the distance between Porto Alegre and Macapá, and 314 flight hours.

The cargo logistics operation mobilized 116 employees, from nine areas of Vale in Brazil

Actions to support health and prevention in the pandemic

Health Cycle (Ciclo Saúde), a Vale Foundation program to strengthen basic care in municipalities, was adapted to contribute to the needs of municipalities in the fight against the Covid-19 pandemic. A total of 419 Basic Health Units (UBS Portuguese acronym) were supported in 29 municipalities - 100% of the UBS in these locations - through technical assistance and the donation of more than 460,000 materials and equipment, such as oximeters, masks, and gloves, among others, benefiting more than 1.8 million people.

In the field of productive inclusion, the Vale Foundation created and led the Mask + Income project in partnership with Rede Asta and 24 partner companies and institutions. The project remunerated around 2,000 women in situations of social vulnerability for a period of 3 months, from different regions of Brazil, who produced around 3 million masks for donation.

To reduce food insecurity and respond to hygiene and protection needs, the Vale Foundation, with the support of Wheaton Precious Metals, mobilized resources to intensify UNICEF's efforts to assist communities in Maranhão and Pará during the pandemic. In all, more than 6,000 families (and 24,000 people) were benefited with food and hygiene kits.

Arrival at Guarulhos (SP, Brazil) airport of the first batch of 5 million rapid test kits for new coronavirus (Sars-CoV-2), donated by Vale to the Brazilian Ministry of Health. Photo: Renan Simões.

The Knowledge Stations (Estações Conhecimento, in Portuguese), social and educational spaces maintained by the Vale Foundation and present in five municipalities, suspended their activities in person, and continued to provide remote assistance to the children and adolescents enrolled in the program. In addition, 10,600 food kits were distributed to the families of the registered participants.

460,000

materials and equipment, such as oximeters, masks, and gloves, among others, benefiting more than 1.8 million people

COVID-19 - genome sequencing

During the pandemic, the Vale Technological Institute - Sustainable Development (ITV-DS) joined Fiocruz and a network of researchers from Brazil to carry out the genome sequencing of more than one thousand samples of the new coronavirus, to better understand the virus and contribute to the fight against disease.

Genetic research on the new coronavirus involves the participation of more than 90 researchers and scholarship students linked to research and bioinformatics centres in Belém, Manaus, Natal, Belo Horizonte and Rio de Janeiro, in addition to a network of collaborators spread across the country and abroad.

The COVID-19 Genome Project is one of the most important initiatives in the history of the Vale Technology Institute, which has one of the most advanced genome sequencing laboratories in Latin America.

In four years, it has mapped the genome of more than 8,000 specimens of fauna and flora in the Carajás region. Among them is the sequencing of the genome of Jaborandi (*Pilocarpus microphyllus*), whose active ingredient is used in cosmetic and pharmaceutical products, such as a medication to treat glaucoma.

Donation for expansion works at the Multipurpose Center for Vaccine Production at the Butantan Institute (CMPV, from the acronym in Portuguese)

In keeping with its commitment to support Brazilian society as a whole in the fight against Covid-19, Vale will donate, in 2021, USD1.9 million to expand the Multi-Purpose Center for Vaccine Production at the Butantan Institute (CMPV).

Scheduled to be completed in September 2021, the new center will have 10 thousand m² and a production capacity of up to 100 million doses per year. Besides the Covid-19 vaccine, the unit will be able to produce other immunizers manufactured at Butantan.

These actions translate our strategic pillar New Pact with Society and are aligned with our value Life Matter Most.

Measures adopted internally

Vale has been working to combat Covid-19, aiming at protect the health and safety of its employees and service providers. In January 2020, Vale established a Crisis Management structure and governance, and developed Covid-19's Global Pandemic Preparedness and Response Plan, for the purpose of managing and implementing actions according to local risk classifications.

Serra Sul Complex, S11D. In the photo, Vale's employees Jobson Gomes Silva e Filipe Góes Silva Maciel (seated). Photo: Ricardo Teles.

The Company reinforces that it operates in accordance with the health and safety protocols set by the authorities and agencies of each of the countries where it operates, in an effort to prevent and combat the new coronavirus.

The pandemic has accelerated changes already adopted by Vale and caused the company's collaboration model and physical workspaces to be reconsidered. In March 2020, all eligible roles - administrative and operational support - switched to remote work system. Based on the successful experience of this model, Vale decided to globally adopt remote work on a large scale.

The company has also implemented health and safety measures in all its units, such as daily self-diagnoses by employees before leaving home, health screening at the entrance gates, frequent serological and molecular testing of employees who remain working at the sites, ongoing hygienic measures in environments and preventive quarantines. The following measures were taken.

General Measures

- Organization, in physically isolated teams, of the leadership and critical operational teams, with the adoption of minimum contigent for safe operation, backup teams and mobility restriction;
- Cancellation and postponement of all travel and business events;
- Provision of remote assistance technology and ergonomic assistance to employees in the remote work regime;
- Communication to employees, through webcasts and internal channels, on the Covid-19 Global Pandemic Preparedness and Response Plan and the necessary prevention measures;
- Monitoring and support to employees who presented symptoms of Covid-19, with immediate quarantine, medical evaluation for employees who returned from travel and preventive quarantine;
- Availability of online consultations in partnership with Hospital Israelita Albert Einstein, through Einstein Conecta, an online health care service accessible from any smartphone, tablet or computer, in which the patient can consult the doctor without the need to schedule an appointment;
- An Ergonomics Aid was offered to remote working employees in order to provide more quality and safety to the new routine;
- Resources to support emotional health care: Viki - self-assessment of emotional health; AMS Health Insurance with coverage for psychological treatment; Apoiar - Employee Assistance Program; Gympass - discounts on physical activity plans.

On the sites

In all operations, security, isolation and social distancing measures were implemented, in an effort to adhere to relevant world-class protocols. These measures included the following:

- **Measures for constant hygiene** of environments

- **Installation of barriers of protection and performance of complementary examinations in all locations where it is allowed by the Brazilian legislation.**

  » More than **780,000 immunochromatographic tests**

  » More than **100,000 RT-PCR tests**

- **81 thermal cameras installed in the units' entrance gates in four Brazilian states (MG, PA, ES and MA),**

  » Body temperature measurement

  » Limiting access to visitors and suppliers

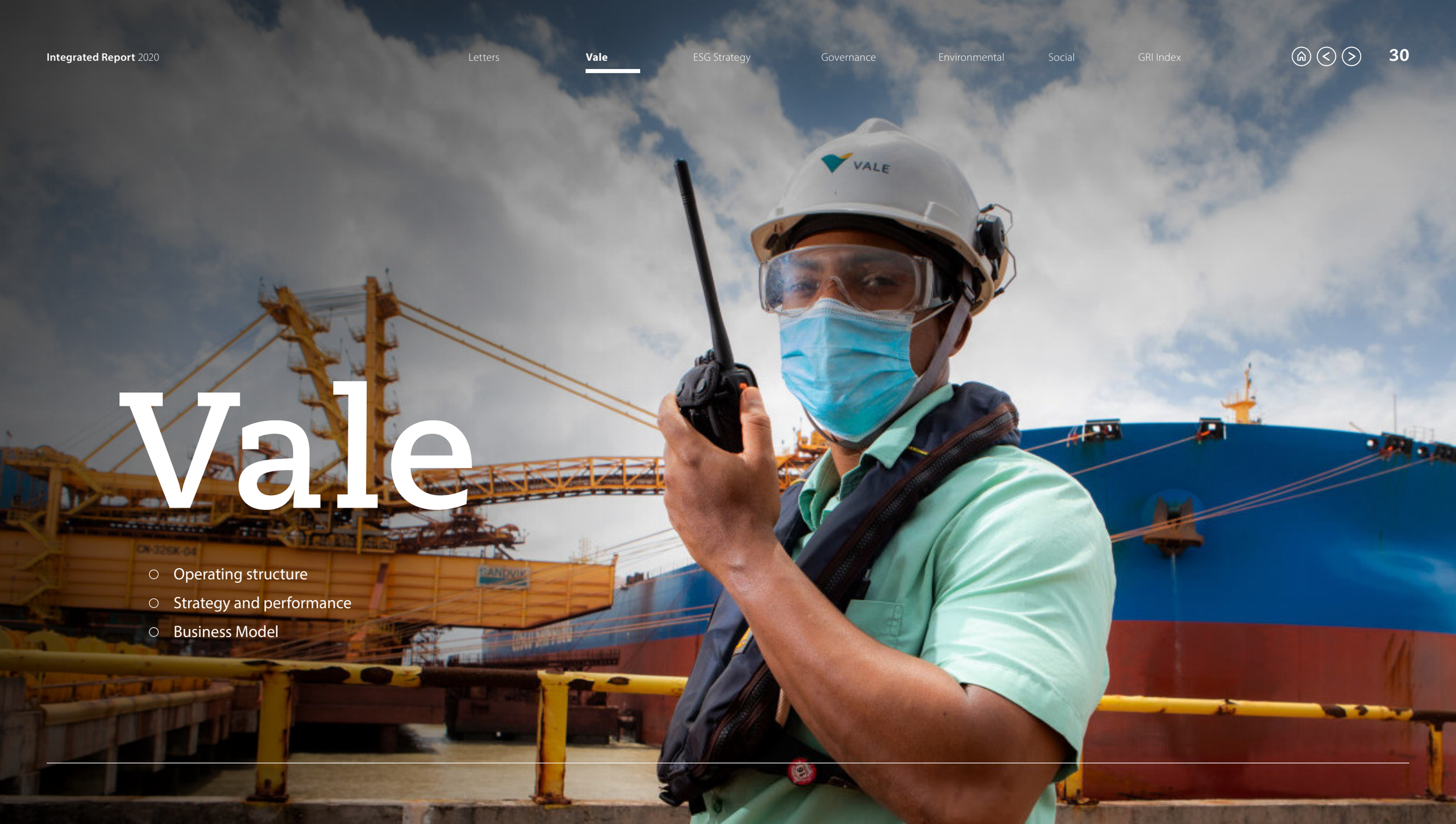
  » Preventive actions in cafeterias to reduce exposure to sources of contamination

- **Minimum protocol of access to the construction works, with body temperature measurement and medical interview with 100% of the staff;**

- Use of artificial intelligence tools to trace contacts in Vale's operational units, with measurement and prediction of the infectivity curves (Rt) in the cities where we operate;

Read more

about the actions to prevent and combat Covid-19 conducted by Vale in 2020, such as the construction and renovation of hospitals, PCR testing: http://www.vale.com/brasil/EN/people/coronavirus/Pages/news.aspx



Vale

- Operating structure
- Strategy and performance
- Business Model

Vale

A mining company founded in 1942, Vale is a publicly-held Corporation, with its principal place of business in the city of Rio de Janeiro, Brazil, and shares traded in Novo Mercado of B3, São Paulo Stock Exchange. Vale is also present in the financial markets of New York (NYSE) and Madrid (Madrid Stock Exchange - Latibex). Since November 2020, the company has no controlling shareholder, with a diversified and global shareholder base and delivers to the minority shareholders greater protection and expansion of decision-making power. GRI 102-1 | 102-5 | 102-7

Novo Mercado is B3's listing segment considered a standard of transparency and governance in the Brazilian capital market. Vale also pursues governance practices that go beyond those required in the domestic market, considering its global positioning. Read more about Vale's Governance on page 59.

Vale's Purpose is the driver of the company's journey forward GRI 102-16

The Brumadinho tragedy represented a starting point for us to rethink our processes. Vale is taking important steps to build a history with greater creation of positive impacts, and for this reason, is undergoing a process of cultural transformation.

Our values and key behaviors have been updated to reflect the changes we are experiencing.Our culture is changing, so that we can achieve our purpose as an organization. We believe that mining is essential for the development of the world, and that society is only served by generating prosperity for all and by caring for the planet.

This process seeks to promote culture as an enabler of strategy, influencing and shaping systems, integrating initiatives, and positioning leadership as a driver of change.

An independent external cultural diagnosis was conducted in 2020 and pointed out the need to build a culture of joint learning, with humility, discipline, a sense of collectivity, and, above all, the presence of a chronic discomfort about safety. At this moment, the scalability of behaviors is underway, with the measurement of progress.

An integrated plan directs the initiatives toward understanding the company's organizational culture and beliefs, including leadership development, review of organizational processes and systems (read more about the Vale management model on page 66).

In addition, the construction of Vale's purpose was carried out, involving the participation of 40 leaders who retraced the history and essence of the company, formalized in 2021.

Since
1942
in mining sector

1943
- Registered at the Rio de Janeiro Stock Exchange.

1968
Registered at Bovespa, current B3.

2000
- Registered at Latibex, a stock exchange based in Madrid, Spain.
- Registered at the New York Stock Exchange (NYSE).

2017
- Migration to Novo Mercado, B3 S.A.'s special listing segment.

2020
- Expiration of Vale's Shareholders' Agreement

2021
- Amendment to the Corporate Bylaws to foresee a Board of Directors mostly composed of independent members and individual election to the collegiate body.

Purpose

We exist to improve life and transform the future. Together.

Values GRI 102-16

- Life matters most.
- Act with Integrity.
- Value the people who build our Company.
- Make it happen.
- Respect our planet and communities.

Key Behaviors

- Obsession with safety and risk management;
- Open and transparent dialogue;
- Empowerment with accountability;
- Responsibility for the whole;
- Active listening and engagement with society.

Our Ambitions

A great company recognized by society for being:

- A benchmark in safety;
- Best-in-class reliable operator;
- Talent-driven organization;
- Leader in low carbon mining;
- Reference in creating and sharing value.

Shareholding composition

GRI 102-7

As of February 28, 2021, Vale S.A.'s share capital consisted of 5,284,474,770 common shares and 12 special class preferred shares (golden shares).

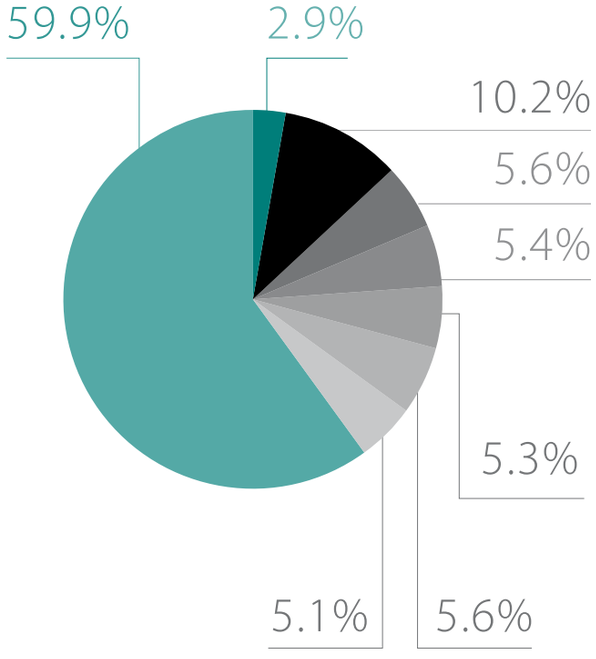
Expiration of the Shareholders' Agreement

GRI 102-10

In November 2020, the Shareholders' Agreement expired for the companies Litela Participações S.A., Litel Participações S.A., Bradespar S.A., Mitsui & Co., Ltd., and BNDES Participações S.A. – BNDESPAR. This concluded the phase of the company's transformation into a publicly traded company with no defined control. In February 2021, BNDESPAR reset its stock position in the company to zero.

See Vale's market press release at: http://www.vale.com/EN/investors/information-market/Press-Releases/ReleaseDocuments/1109_FimdoAA_i.pdf

Total shares
as of February 28, 2021



Others
- Shares in treasury
- Others

Shareholders with more than 5% total capital
- Previ
- Bradespar
- Mitsui&Co
- Blackrock, Inc.[2]
- Capital World Investors [1]
- Capital Research Global Investors [1]

Note: Previ holds a direct stake of 10.21% and an indirect stake of 1.37% in Vale through its 80.622% stake in Litel and Litela.

1 Updated position as of 31/12/2020

2 Updated position as of 03/12/2020

Learn more

The shareholdings are available for download at http://www.vale.com/brasil/en/investors/company/shareholding-structure/pages/default.aspx

Operating structure GRI 102-7 | 102-4

With operations in more than 20 countries and five continents, Vale is one of the largest mining companies in the global market. Our operating units are connected to modern integrated logistics systems, consisting of railroads, maritime terminals and ports. Affiliates, joint ventures or direct interest companies use assets in the energy, steel and bauxite segments in their operations.

Vale Infrastructure: GRI 102-4 | 102-7

Operations | Joint Venture | Offices | Headquarters | Exploration

1. In March 2021, Vale concluded the sale of its equity stake in Vale Nouvelle-Calédonie S.A.S (Vale New Caledonia - VNC) to Prony Resources New Caledonia consortium

Markets served

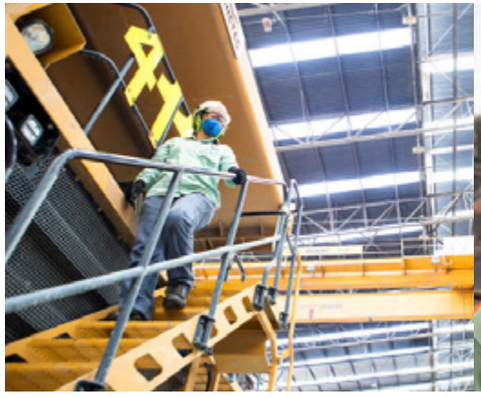
GRI 102-6 | 102-10

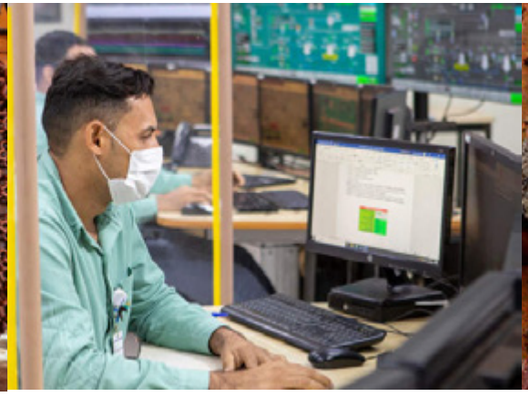
Vale serves industries, such as steel mills, on all continents:

- **Americas (South, Central and North America);**
- **Europe (including Turkey);**
- **Asia and Africa,** considering:
  - » Middle East, North Africa and India (Menai);
  - » China, Japan, Korea, Taiwan, Southeast Asia (Vietnam, Indonesia, Malaysia, Philippines);
- **Oceania** (Australia).

Strategy and performance GRI 102-7

Vale has five strategic pillars that guide the way we do business and operate




Safety and operational excellence

To transform the way in which we operate regardingthree interconnected themes: (i) safety and risk management, (ii) asset management, and (iii) organization, processes and culture – through Vale's Integrated Management System (VPS).

New pact with society

To positively impact society, going beyond taxes, social projects and reparation in Brumadinho, becoming a development enabler in the areas where we operate and fostering a safer and more sustainable mining industry.

Base Metals transformation

To keep on track with the transformation of the Base Metals business unit, applying best practices throughout all its operations.

Discipline in capital allocation

To keep a focus on value creation and safety of assets, investing in sustainable production and in protecting and increasing margins.

Maximize the "flight to quality" in Iron Ore

To leverage our strengths in Vale's world-class reserves, assets and logistics to maximize the value in our premium portfolio of products

Business strategies are evolving to consolidate Vale among the leaders in supplying essential products for the society's development, through solutions in iron ore, opportunities in nickel and growth in copper.

The Board of Directors is confident in Vale's economic and financial capacity, and in the long-term sustainability of Vale, based on its already demonstrated competitiveness and resilience to the price cycle of its products.

Fe^{26}

Iron ore

- Be a leader in iron ore with a production of +400 Mt
- Provide iron-ore solutions to the lowcarbon industry
- Increase dry processing and reduce reliance on dams

Ni^{28}

Nickel

- Be part of the Top 3 with +200 kt
- Lead the nickel supply for energy transition
- Inscrease production in North Atlantic and advance with investment opportunities in Indonesia

Cu^{29}

Copper

- Build solid platform for growth
- Deliver 500 kt in 5 years through a pipeline of organic projects
- Be a Top 5-6 within 10 years

ESG

- Brumadinho integral reparation
- Benchmark in safety
- VPS implementation
- Dam safety
- Reference in creating and sharing value

Sound cash flow generation

Discipline in capital allocation

Portfolio optimization

The company seeks to streamline its flow of operations, enabling a continuous focus on its main assets and reducing risks. Regarding Vale's operations in 2020, the company: GRI 102-10

- Terminated ferro-alloy operations at the Simões Filho plant (Bahia);
- Concluded the sale of Biopalma (PA), a palm oil company;
- Sold its minority stake in the Zhuhai pellet plant and Henan Longyu coal mine – received USD 169 million as part of the transaction consideration
- Transferred the shares of Potasio Rio Colorado to the Province of Mendoza, Argentina
- Signed a binding put option agreement with Prony Resources, a consortium led by the current management and employees of VNC with Trafigura as the non-controlling shareholder, for the sale of its stake in Vale New Caledonia (VNC). The deal is supported by the Caledonian and French governments and has been approved by VNC's works council. Since December 10, 2020, mine and plant production has been suspended.
- In March 2021, Vale concluded the sale of its equity stake in Vale Nouvelle-Caledonie S.A.S (Vale New Caledonia - VNC) to Prony Resources New Caledonia consortium. Vale's intention from the beginning of the divestment process was to divest from New Caledonia in an orderly and responsible manner and this transaction meets that premise.
- Signed a Heads of Agreement ("HoA") with Mitsui & Co. to divest the Moatize Mine and Nacala Logistics Corridor as the first step towards Vale's divestment of its coal business.

Vale anticipates extension of railroads concession

Early renewal of railway concession GRI 102-10

Vale has agreed to terms with the Brazilian Federal Government to extend its concessions to operate the railways Estrada de Ferro Carajás and Estrada de Ferro Vitória a Minas for 30 years, from 2027 to 2057.

The anticipation of the contracts with ANTT was signed on December 18, 2020, in a ceremony at the headquarters of B3, attended by the Minister of Infrastructure, Tarcísio de Freitas, and Vale executives.

We will assume total commitments estimated at present value of BRL 12.016 billion (USD2.312 billion) to be performed by 2057, of which (i) BRL 2.818 billion (USD 0.5 billion) are related to the payment of the grants (outorgas); (ii) BRL 7.826 billion (USD1.506 billion) are related to infrastructure work to be performed by us in the Ferrovia de Integra¸cao do Centro-Oeste (FICO) and the Ferrovia de Integraçao Oeste-Leste (FIOL) railroads; and (iii) BRL 1.372 billion (USD 0.3 billion) are related to other commitments, including the expansion of passenger train services and works to reduce urban conflicts.

Stabilizing production

In 2020, Vale partially resumed all iron ore fines operations, halted in 2019, which became even more challenging amid the COVID-19 pandemic and the need to adopt measures to protect employees and support communities. Vale ended 2020 with 322 Mt of iron ore production capacity and expects to reach 350 Mt of capacity by the end of 2021.

Vale expects to reach

350 Mt

of capacity
by the end of 2021

Iron Ore

Vale's iron ore fines production totalled 300.4 Mt in 2020, in line with 2019 and annual annual estimate of 300-305 Mt, mainly due to (a) the resumption of stalled operations such as Vargem Grande and Timbopeba (+12.3 Mt), (b) ramp-up of S11D (+9.5Mt) and (c) operation of the Alegria site for a full year (+6.7 Mt). The gains were fully offset by (a) restrictions in tailings disposal at Itabira and Brucutu (-20.7 Mt), (b) delays in the opening of new mine fronts at Serra Norte (-3.7 Mt); (c) impacts from COVID-19 (-3.5 Mt); and (d) stoppage for four months at Fazendão Mine (-2.9 Mt).

Vale's pellet production totalled 29.7 Mt in 2020, 29% lower than in 2019, as a result of lower pellet feed availability and production adjustments following market conditions.

Base Metals

In Base Metals operations, nickel (ex-VNC) production was 183.7 kt in 2020, in line with 2019, with a positive highlight for the fourth quarter in which Onça Puma operated at rated capacity throughout the quarter following extensive furnace maintenance work. Copper production reached 360.1 kt in 2020, 5.5% lower than 2019, mainly due to the impacts of COVID-19.

Coal

Coal production totalled 5.9 Mt in 2020, down 33% year-on-year, reflecting the impacts of the COVID-19 pandemic on demand and the postponement of the plant repair project from March to November 2020.

Economic and financial performance

Net operating revenues totalled USD 40.0 billion in 2020, representing an increase of USD 2.5 billion compared to 2019, reflecting higher realised iron ore prices and higher revenues from base metal by-products.

Costs and expenses, including the Brumadinho remediation, totalled USD 29.2 billion in 2020, being USD 7.1 billion below 2019.

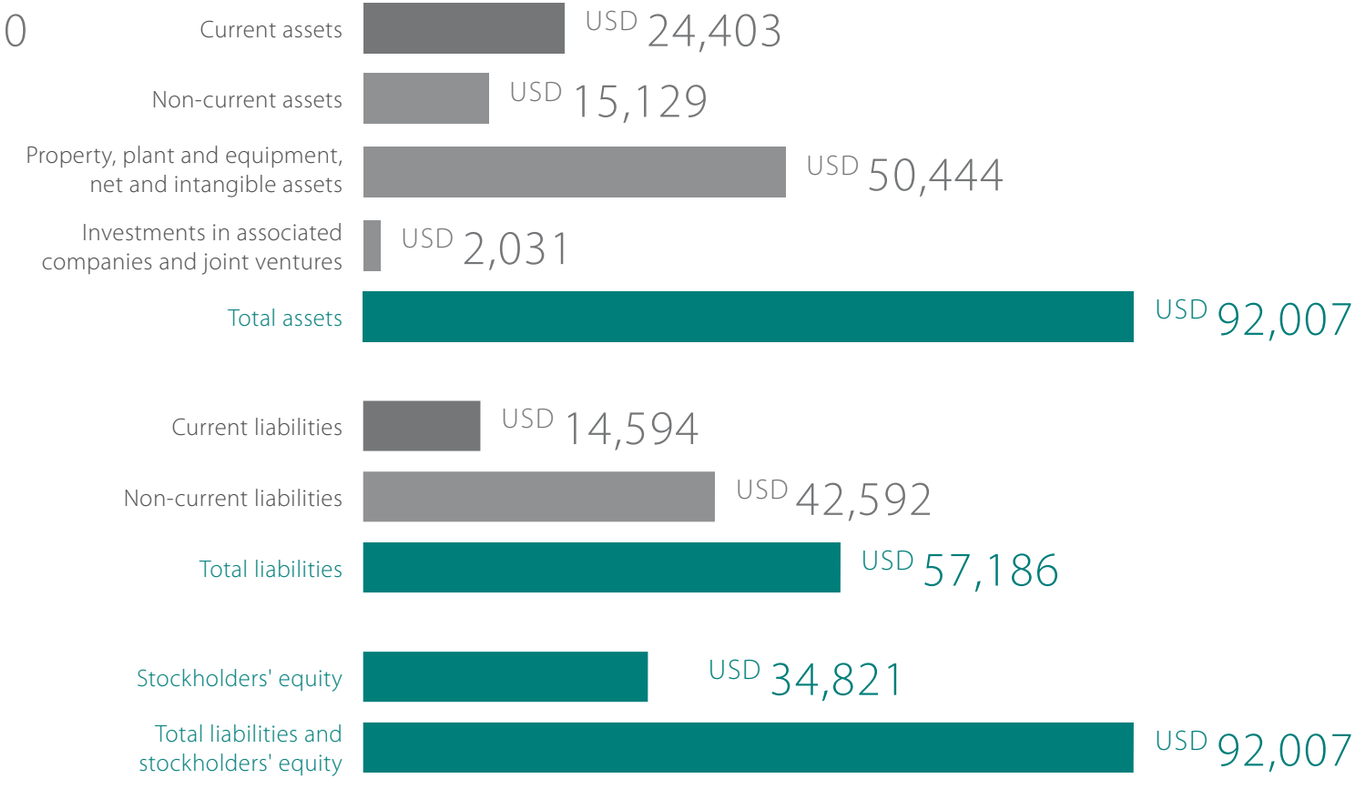
Adjusted EBITDA totalled USD 16.6 billion in 2020, representing an increase of USD 6 billion compared to the USD 10.6 billion recorded in 2019, mainly due to higher iron ore sales prices of 23%.

The fact that this effect was partially offset by other effects such as:

- Lower sales volumes of iron ore and pellets; and
- Higher third-party iron ore acquisition costs.
- Provisions regarding the Brumadinho Reparation global agreement.

Results of **equity holdings** by business area (in millions)

Balance sheet data (in millions)



Total liabilities and stockholders' equity

(in millions)

USD

92.007

Learn more

Financial results at

http://www.vale.com/brasil/EN/business/reports/4q20/Pages/default.aspx

Learn more

Tax Transparency at

http://www.vale.com/brasil/en/investors/information-market/annual-reports/pages/default.aspx

Direct economic value generated and distributed (in USD million)

GRI 201-1

including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.

The distributions of earnings for the balance sheet for the year 2020 total BRL 6.67 per share, between interest on capital and dividends

	NORTH AMERICA, EXCEPT CANADA	CANADA	SOUTH AMERICA, EXCEPT BRAZIL	BRAZIL	EUROPE	AFRICA	AUSTRALASIA	MIDDLE EAST	TOTAL
Recipes	--	2,055.0	3.1	2,768.5	32,268.5	-	2,922.6	-	40,017.7
Direct Economic Value Generated	-	2,055.0	3.1	2,768.5	32,268.5	-	2,922.6	-	40,017.7
Operational costs (excluding wages and benefits of employees)	-	2,421.1	22.6	8,131.9	4,285.2	1,425.9	836.5	239.7	17,362.9
Wages and benefits of employees	-	495.1	7.8	1,178.6	9.1	55.1	111.7	42.0	1,899.4
Research and Development	-	92.2	13.4	241.9	3.7	31.4	60.2	0.1	442.9
Payments to capital providers	365.7	286.0	-	3,380.0	73.4	-	-	-	4,105.0
Government Payments	1.9	(416.0)	3.2	3,925.3	(46,4)	7.8	52.1	5.4	3,533.3
Environmental Expenditures	-	166.6	0.4	371.1	4.9	13.8	49.7	3.4	609.9
Social Expenditures	-	2.8	0.2	370.4	1.8	4.7	7.3	2.8	390.0
Distributed Economic Value	367.6	3,047.8	47.5	17,599.1	4,331.7	1,538.7	1,117.5	293.4	28,343.3
Accumulated Economic Value	(367.6)	(992.76)	(44.5)	(14,830.6)	27,936.8	(1,538.7)	1,805.1	(293.4)	11,674.4

Business Model

Inputs

Financial Capital
> Financial resources

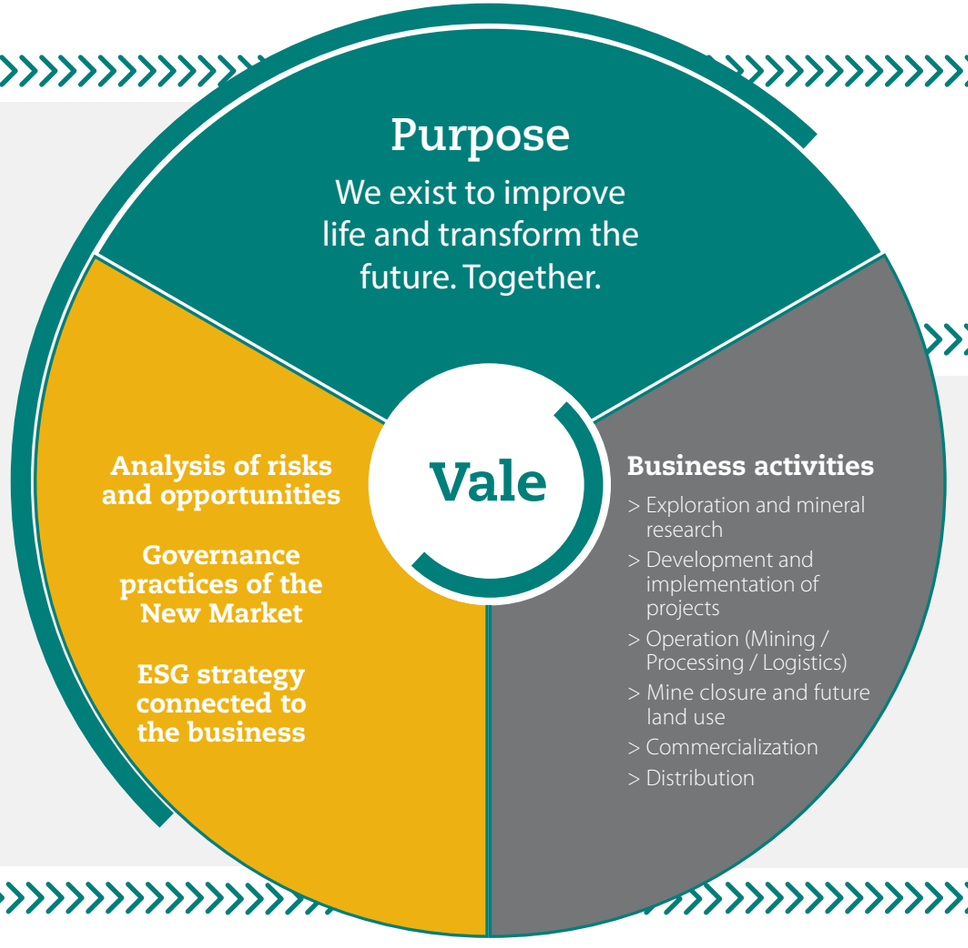
Natural Capital
> Minerals, water, forest and energy resources

Human Capital
> Employees and third parties

Intellectual Capital
> Technology: Vale Technological Institute, R & D & I and proprietary technologies

Social Capital
> Relationship with priority stakeholders

Manufactured Capital
> Logistical structure and infrastructure



Products

> Iron Ore
> Manganese Ore
> Nickel
> Cobalt
> Pellets
> Coal
> Copper
> Gold
> Energy
> Passenger transport on railways

The main impacts

Environmental

- Protected areas **(positive)**
- Reduction of emissions due to higher consumption of renewables **(positive)**
- Development of new technologies and solutions **(positive)**
- Derailment of dams and other structures **(neutral)**
- Impacts on water, soil and air **(negative)**
- Impacts on fauna and flora **(negative)**

Social

- Employment and income generation **(positive)**
- Knowledge transfer **(positive)**
- Income generation through the payment of taxes **(positive)**
- Social projects **(positive)**
- Conflicts over land use **(negative)**
- Fatalities and changed lives **(negative)**
- Impacts to local communities **(negative)**
- Reputation **(negative)**

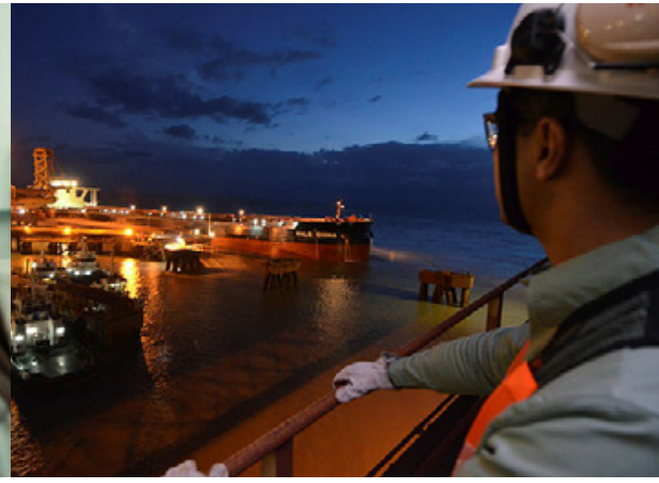
Economic

- Dividends and shareholder value **(positive)**
- Promotion of the local economy **(positive)**
- Infrastructure for society **(positive)**
- Migration caused by Vale's presence, increasing the demand for infrastructure, services and products **(neutral)**
- Payment of taxes and provisions **(negative)**

Learn more
About Vale ESG plan on page 46.

Innovation: Highlights 2020

Through the adoption of existing technologies into new forms or developing new technologies and processes in research and development (R&D) initiatives, Vale seeks to transform its businesses. At Vale, the use of technology seeks to redesign the way we work, helping to eliminate certain risk scenarios, positioning us as a leader in safety and risk management and promoting sustainability and adaptation to climate change.



Integrated Operations Center, at Ponta da Madeira Port, in São Luís (MA)

Currently, 19% of Vale's critical assets use AI to ensure reliability. It is expected that, in five years, this technology will be employed in 100% of critical assets

Digital workforce and automation

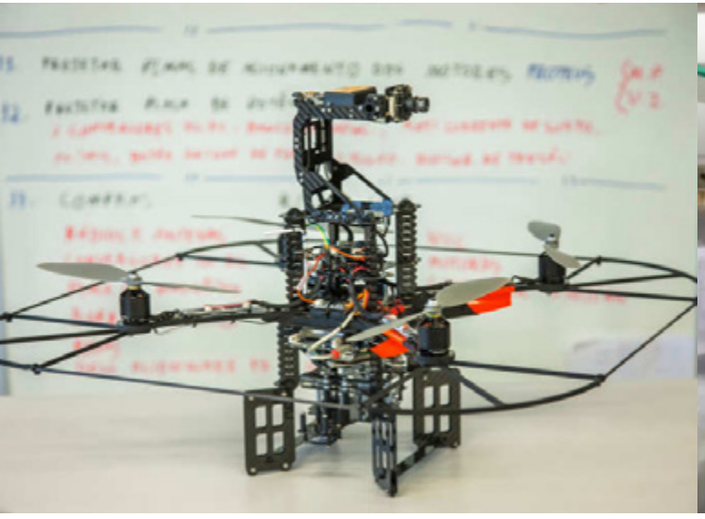
We will continue to use digital technologies to allow people to work remotely with efficiency, and to enable a future in which only essential functions are performed at operational sites, with other functions performed in remote work or low-carbon collaborative spaces (read more on page 105).

In 2020, we focused on using robotics and automation to increasingly enable people to perform activities remotely to increase safety and reliability in our day-to-day operations and reduce operational risks (read more on page 74).

Artificial intelligence (AI)

We expanded the use of artificial intelligence in our value chain to, for example, optimize the use of ship fleets, proactively identify risks in meeting production targets at each stage of our chain and optimize the reliability of our critical assets.

Currently, 19% of Vale's critical assets use AI to ensure reliability. It is expected that, in five years, this technology will be employed for 100% of our critical assets, read more on page 67.



Vale Open Innovation
seeks partnerships with universities, startups, government and other corporations

Geotechnics

We increased the use of drones, added an orbital radar and implemented image and video analysis to monitor the conditions of Vale's dams. These resources enable an integrated view of the Geotechnical Monitoring Centres, the latter including Base Metals South Atlantic and Iron Ore North Corridor, launched in November 2020. We have also automated sirens, providing mobile alerts through digital technologies.

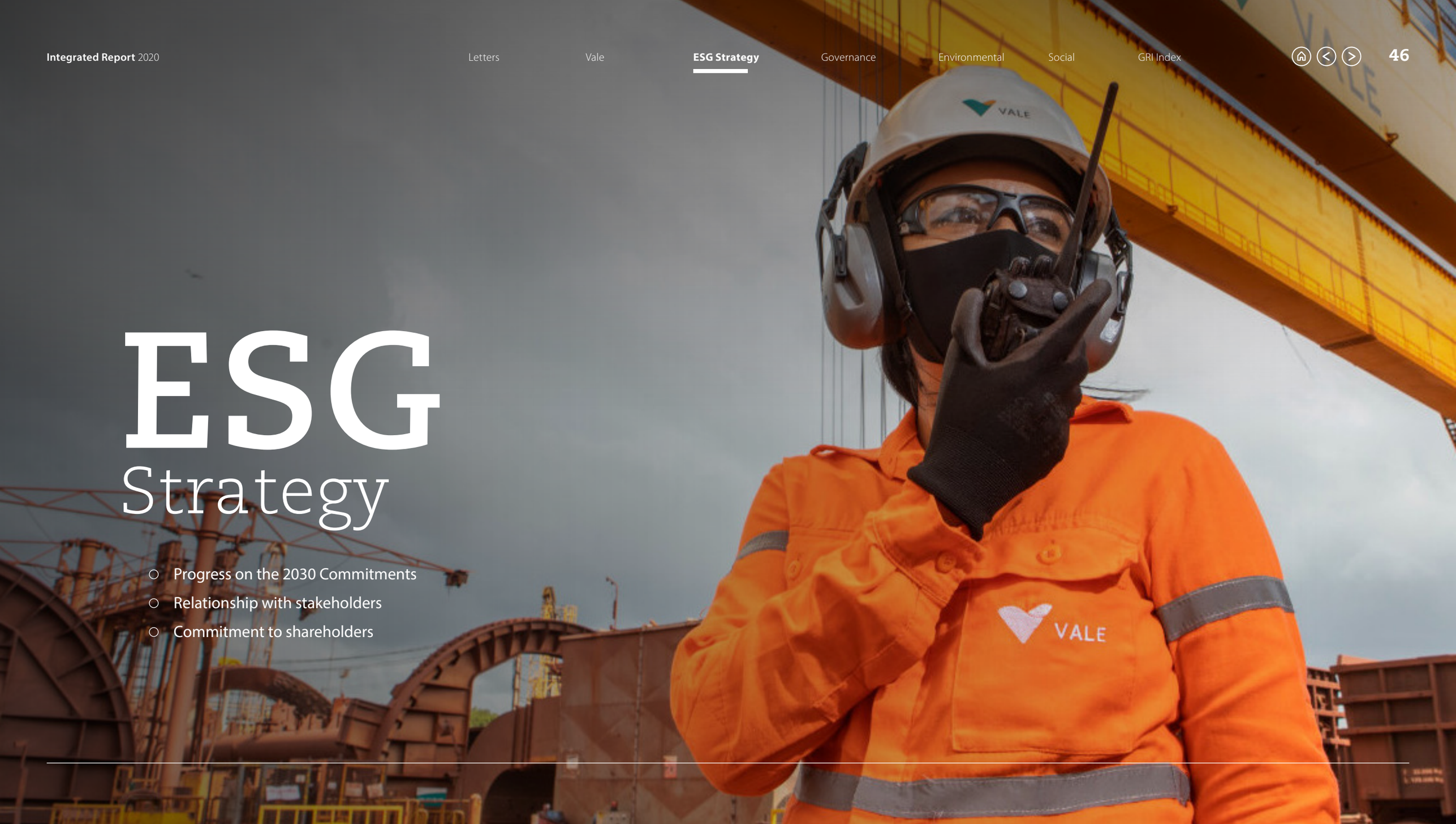
Open innovation

Vale has been working in collaboration with the open innovation ecosystem seeking partnerships with several universities, startups, government entities and other corporations to accelerate the fulfillment of innovation initiatives (read more on page 23).

New technologies to reduce dependence on tailings dams

Vale has begun projects for dry stacking and filtering systems at the Vargem Grande, Conceição and Brucutu sites. Over the next few years, this system will be implemented at other units that still use wet processing technologies, such as Itabira. USD 2.3 billion will be invested by 2025.

With a pioneering dry iron ore beneficiation technology, through New Steel, we are also developing a process route for concentrating iron ore fines through magnetic concentration. The process has the potential to obtain an ultra-fine product with iron content between 60% and 67%, from ores with low iron content. We are investing USD 125 million in a plant with the capacity for 1.5 Mtpa (read more on page 125).



ESG Strategy

- Progress on the 2030 Commitments
- Relationship with stakeholders
- Commitment to shareholders

ESG Strategy

Our governance model aims to realize the principles of clarity of roles, transparency and stability that guide our actions. In this sense, in addition to the forums that are established in our governance model, such as the Advisory Committees to the Board of Directors (focused on Sustainability; Finance; Operational Excellence & Risk; People, Compensation & Governance and Audit, Nomination and Innovation), we have multi-disciplinary thematic groups, with the participation of members from outside Vale, which function as a sounding panel and which support us on strategic themes, such as Climate Change, Diversity & Inclusion, Social Action, among others). We believe that this approach has contributed to the maturing of these agendas, bringing greater efficiency and competitiveness to the company.

Vale's material topics help inform the company's ESG agenda. These topics are connected to the pillars of the business strategy that directs our focus on risk management, finding opportunities and developing measures aimed to prevent and/or mitigate negative impacts, and creating positive value for the people and locations where Vale operates (read more about Vale's strategy on page 36 and Vale's risk management on page 68).

Vale updated its materiality matrix in 2020. The study was conducted according to the Integrated Reporting Guidelines of the International Integrated Reporting Council (IIRC), to identify priority topics that significantly impact the organization's value creation in the short, medium and long term.

It also followed the standards of the Global Reporting Initiative (GRI), thus involving the main stakeholders in identifying and prioritizing these topics, with final approval of the materiality matrix by the company's Sustainability Committee.

For each topic, GRI indicators, Metals & Mining indicators of the Sustainability Accounting Standard (SASB) and the United Nations' Sustainable Development Goals (SDGs) were identified. The materiality study involved the steps presented below.

The limit of the impact of material topics considers Vale, the companies over which the company has operational control and its activities. GRI 102-46

The materiality process was carried out according to GRI and IIRC protocols.

Preliminary research and survey of topics

» 30 topics identified from sustainability benchmarking

Consultation with stakeholders

» 328 responses in questionnaires for external audiences, employees and executives

Interviews with experts

» 8 qualitative interviews with experts from Brazil and abroad

Benchmarking analysis

» Topics covered by industry reports

Consolidation of the materiality matrix

» Two-axis tabulation and prioritization

» Validation workshop with Vale's Sustainability team

Stakeholders consulted in the materiality process

GRI 102-21

» Employees

» Vale executives

» Sustainability professionals

» Civil society

» Suppliers

» Local communities

» Universities and research centres

» Investors and financial institutions

» Non-governmental organizations

» Customers

» Others

Material topic GRI 102-47 | 103-1	Scope	Concerns raised by stakeholders GRI 102-44	Risks	GRI and SASB disclosures	Commitments x Strategy
Environmental					
Dams	Mining and metallurgical waste. Dam risk management. Emergency response	Audiences are concerned about the risk of disasters related to the disposal of mineral waste.	Geotechnical structures and dams	G4 MM3 SASB EM-MM-150a.1 SASB EM-MM-150a.2 SASB EM-MM-150a.3	Vale has an ongoing commitment to increase the efficiency of its processes and keep our dams management updated and in permanent alignment with international practices, the standards of which exceed many national legal requirements where we operate. Commitment: To de-characterize all upstream dams in Brazil and buttress and refurbish all upstream dams in the remainder of our portfolio of its Canadian operations.
Biodiversity	Conservation and restoration of biodiversity The Amazon	Deforestation and operations in protected areas or areas of great natural relevance, such as the Amazon	Sustainability, obligations and socio-environmental compliance	GRI 304 G4 MM1, MM2 SASB EM-MM-160a.1 SASB EM-MM-160a.2 SASB EM-MM-160a.3	Commitment 2030: To recover and protect 500,000 hectares beyond Vale's borders
Ecoefficiency	Consumption and efficiency in water management Disposal and quality of effluents Atmospheric emissions (except GHG) and air quality	Efficiency and optimization in the use of natural resources in the production process	Sustainability, waste, effluents and emissions of gases and particulate matter	GRI 303, 305 SASB EM-MM-120a.1 SASB EM-MM-140a.1 SASB EM-MM-140a.2	Commitment 2030: To reduce fresh water intake (use) by 10%.

Material topic GRI 102-47 | 103-1	Scope	Concerns raised by stakeholders GRI 102-44	Risks	GRI and SASB disclosures	Commitments x Strategy
Climate change 	Greenhouse gas emissions Energy consumption and efficiency Risks and opportunities related to climate change	Approach to help mitigate global warming and seek resilience and adaptation of the business model for a carbon-neutral economy	Sustainability and climate changes	GRI 201, 302, 305 SASB EM-MM-110a.1 SASB EM-MM-110a.2 SASB EM-MM-130a.1	To reduce scope 1 and 2 absolute GHG emissions by 33% by 2030, compared to the base year 2017. To reduce scope 3 net emissions by 15% by 2035, compared to the base year 2018. To become carbon neutral (scope 1 and 2) by 2050. To have 100% of global electricity consumption from renewable sources by 2030.
Social					
Human rights 	Promotion of human rights in the company and in its value chain	Respect and guarantee of human rights.	Sustainability and human rights.	GRI 406, 408, 409, 410, 412 SASB EM-MM-210a.1 SASB EM-MM-210a.2 e SASB EM-MM-210a.3	Commitment 2030: eliminate key ESG gaps in relation to best practices, including establishing due diligence process regarding Human Rights.
Local communities 	Impacts on local communities Conflict resolution mechanisms with communities Promotion of territorial development Direct and indirect economic impacts	Systemic approach to our relationship with communities in the territories where we operate to mitigate negative impacts and enhance sustainable development Active listening and community engagement throughout the business life cycle	Sustainability, engagement and relationship with communities	GRI 201, 202, 203, 207, 413 G4 MM6, MM7, MM9 SASB EM-MM-210b.1 SASB EM-MM-210b.2	Commitment 2030: To make a socioeconomic contribution through health, education, and income generation

Material topic GRI 102-47 | 103-1	Scope	Concerns raised by stakeholders GRI 102-44	Risks	GRI and SASB disclosures	Commitments x Strategy
Health and safety 	Health and occupational safety Promoting workers' health beyond occupational issues (e.g., chronic diseases, healthy habits)	Company management mechanisms to ensure the safety of all in operations and promote healthy habits between employees and third parties, focusing on well-being and disease prevention	Operational, Health and Safety.	GRI 403 SASB EM-MM-320a.1	To achieve zero high-potential injuries/ To reduce employee exposure to key health risks by 50%. To eliminate very high-risk scenarios.
People 	Attracting, retainting and training to develop employees' careers Work conditions of contractors and third parties Diversity and inclusion	Management model to promote decent working conditions and develop human capital to meet digitalization and diversity trends for work in the future	People, training, recruitment and retention Outsourcing Partnership, abusive and discriminatory practices	GRI 401, 404, 405, 407	Gender diversity: to double the female workforce by 2030,from 13% to 26%, and increase female leadership from 12% to 20%
Governance					
Governance and compliance 	Corporate governance Crisis and risk management, and cybersecurity Fight against corruption Legal compliance (social, economic and environmental)	Aligning our discourse with practices, our decision-making with risk and impact management, our corporate culture with voluntary commitments that exceed legal requirements for sustainable development	Strategic, cyber and compliance risks	GRI 205, 206, 307, 419 SASB EM-MM-510a.1	Commitment 2030: ESG Gaps – To eliminate key ESG gaps in relation to best practices. Learn more at: http://www.vale.com/esg/en/Pages/ESGActionPlan.aspx

Managing **ESG topics**

Vale has established policies to guide the management of the company's environmental, social, economic and governance issues, among which we highlight our:

- Sustainability Policy,
- Climate Change Policy,
- Human Rights Policy,
- Diversity and Inclusion Policy,
- Water Resources Policy,
- Socioenvironmental Investments Policy,
- Anti-corruption Policy,
- Risk Management Policy,
- Vale Production System (VPS) Policy,
- Policy for Dam Safety and Geotechnical Mining Structures, and
- Mining and Metallurgical Waste Management Policy.
- Nominations Policy
- CEO Succession Policy
- Compensation Policy

The details of our environmental, social and governance issues management are presented in their respective chapters in this Integrated Report 2020 and in the ESG Databook at http://www.vale.com/brasil/EN/sustainability/integrated-reporting-2020/Pages/default.aspx.

Learn more

All the policies can be accessed at http://www.vale.com/esg/en/Pages/PoliciesAndCorporateDocuments.aspx

Progress on the 2030 Commitments

Vale has publicly made commitments related to the UN 2030 Agenda and periodically monitors its progress.

Commitment 2030	Baseline (2017)	Target	Result by Dec. 2019	Result by Dec. 2020[1]
Climate change	14.1 MtCO2e	Reduce Scope 1 and 2 absolute GHG emissions by 33% by 2030 (compared with the base year of 2017). Be Scope 1 and 2 carbon neutral by 2050. Reduce Scope 3 net emissions by 15%, by 2035.	11% reduction of absolute GHG emissions, Scope 1 and 2, compared to the base year of 2017. (As the commitment related to Scope 3 emissions was formalized in December/20, monitoring was started in 2020).	26.6% reduction in Scope 1 and 2 emissions compared to the base year of 2017. 18% reduction in Scope 3 emissions, in comparison to the base year of 2018.
Energy[2]	Global: 69% of estimated consumption for 2030 Brazil: 40% of the estimated consumption for 2025	Global: 100% renewable electricity consumption Brazil: 100% self-production of renewable electricity by 2025	Global: 83% of estimated consumption for 2030 through supplier declarations attesting to their use of energy from renewable sources in their current consumption in Brazil Brazil: 49% of the estimated consumption for 2025 181 MW of installed capacity	Global: 85%2 of estimated consumption for 2030, through supplier declarations attesting to their use of energy from renewable sources for their current consumption in Brazil and their future consumption for the Sol do Cerrado project[3] Brazil: 62%[4] of the estimated consumption for 2025 947 MW of installed capacity
Water	0.350 m^3/t FeEq	Reduce new water use by 10%	8.4% reduction in relation to baseline	8.7% reduction in relation to baseline

Commitment 2030	Baseline (2017)	Target	Result by Dec. 2019	Result by Dec. 2020[1]
Forests	-	Recover and protect over 500,000 ha of forest areas beyond company boundaries	106 ha	53,899.8 ha
Socio economic contribution[5]	-	Health, education and income generation (note #4)	**Health:** 77 Basic Health Units receiving expanded services and assisting 955 families with social methodologies/technologies for better access to water and/or sanitation **Education:** 1,599 educational professionals trained **Income generation:** 461 supported entrepreneurs	**Health:** 496 Basic Health Units receiving expanded services and assisting 955 families with social methodologies/ technologies for better access to water and/or sanitation **Education:** 3,308 educational professionals trained **Income generation:** 1,860 supported entrepreneurs
Environmental, social and governance (ESG) gaps	-	Eliminate key ESG gaps in relation to best practices – 63 gaps mapped	26	37

1. Resultado apurado para Escopo 2 Marked-based.

2. For the Global target, information may vary due the changes in the volume and source of electricity consumption projected for 2030, as well as energy declarations. For the Brazilian goal, information may vary due to changes in electricity consumption projected for 2025 and the projection of hydroelectric generation depending on hydrological conditions.

3. The future energy generated from wind projects under implementation by partners (Acauã, Gravier, Folha Larga, among others) will only be accounted for in this indicator when declarations are obtained from suppliers attesting to the renewable origin of the energy intended for Vale.

4. Self-production estimated in Brazil in 2025, considering the additional energy from the wind projects destined to be used by Vale and the energy from the Sol do Cerrado project. The wind projects and the solar project add 16 p.p. to the baseline. The increase of the remaining 6 p.p is due to the variation in hydroelectric generation in the current portfolio due to hydrological conditions.

5. Throughout 2020, Vale revised its social positioning with a focus on becoming an inducer of social capacity in governments, communities and the private sector, aiming to drive the company's investments to meet the real needs for local development. Thus, from 2021, new indicators may be defined for better monitoring by theme, to increasingly contribute to Vale's commitments to sustainable development and to the New Pact with Society.

See the complete list and action plan to address ESG gaps

Seeking to improve its ESG practices, Vale revised its list of gaps at the end of 2020, adding 11 new gaps in addition to the 52 initially mapped, currently totaling 63 ESG gaps. All of these are to be closed by 2030. Of this total, 37 have already been completed, with 11 addressed over 2020:

- Increased disclosure about executive compensation
- Audit Committee
- Fiscal Transparency Report
- Creation of a Nominating Committee
- Consolidated disclosure on Environmental Violations
- Sensitivity analyses and/or water stress tests
- Water Resources Management Policy
- Waste Management Policy
- Disclosure of investments in projects that reduce CO_2 emissions
- Detailing of community involvement
- Analysis of climate change scenarios

Learn more

Find the full list of gaps available at http://www.vale.com/esg/en/Pages/ESGActionPlan.aspx

Learn more

Learn about the company's position on its main ESG disputes http://www.vale.com/esg/en/Pages/Controversies.aspx

Relationship with stakeholders GRI 102-43

Relationship and engagement actions are regularly conducted with key stakeholders. Part of the commitment of Vale's Sustainability Policy is to identify opportunities to help achieve our global ESG goals. These goals centre on ways the business can seek partnerships, solutions and technologies for sustainable development challenges.

To this end, Vale is committed to active listening to its stakeholders act to build a positive legacy for future generations, creating positive social, environmental and economic value throughout the business life cycle.

The damage of the breach of Dam I of the Córrego do Feijão Mine in Brumadinho (MG) reinforced the importance of and brought urgency to the need to continuously improve our engagement and relationships with stakeholders and aim for alignment with best practices and investor expectations in the ESG agenda.

Methods and reasons for engaging key stakeholders

Stakeholders[1] GRI 102-40 102-42	Reason for engagement	Method of engagement GRI 102-43
Communities	To share knowledge from stakeholders about our projects and their impacts, and to understand the expectations of the communities relative to Vale's performance in the territory, especially regarding decisions related to territorial development.	Making plans in collaboration with communities to form management groups, community visits, monitoring forums. Through the Grievance Mechanism - capturing, registering, responding to and addressing community manifestations and engagement. Ensuring these initiatives play a role throughout the entire business life cycle, from the preliminary phases and including the concept of progressive closure of enterprises in the territories.
Employees	To obtain commitment and performance in delivering production, while ensuring safety, health, respect for the environment and communities, all of which impact our reputation, knowledge generation and innovation.	Internal communications (Talk360, webinars, Vale@, Management Bulletins, Intranet, Teams cards, among others). Qualification/training/Sustainability Academy Thematic groups, Interactive dialogue, Joint action programs and Volunteering.
Customers	To support customers of strategic importance to our core business.	Business meetings, technical meetings, visits, contact by email and phone, Customer Portal, satisfaction survey, forums, seminars and congresses
Suppliers	To develop agility in purchasing materials and services; correct our choice of items; and manage the inventory of materials and health, safety and sustainability variables by suppliers.	Low-carbon forum Forum: "Chat with supplier" Business Rounds – FIEMG/ FIEPA/ IBRAM Workshop with global category suppliers
Investors	To make a commitment and improvie the company's financial performance and generate value for our shareholders.	Letters, questionnaires, meetings, webinars, conferences, roadshows, calls, ESG Portal, RI site, RI email
Partners, Academy, experts, and non-governmental organizations (NGOs)	To establish partnerships with and proximity to experts from various areas and with diverse expertise. To promote scientific production.	Meetings and events Expert panels from Vale Foundation and Vale Cultural Institute. Sounding Panel - an advisory board under the Executive Board composed of global ESG specialists.

Methods and reasons for engaging key stakeholders

Stakeholders[1] GRI 102-40 102-42	Reason for engagement	Method of engagement GRI 102-43
Public bodies	To maintain frequent relationship touchpoints, governed by government principles of legality, impersonality, administrative morality, publicity and efficiency aligned with Vale's mission to transform natural resources into prosperity and sustainable development. These stakeholders operate to make political decisions and develop public policies on which the company's businesses depend, and which are highly regulated. These stakeholders are relevant because they have influence over Vale's regulatory and/or normative risks, and act directly in our process to obtain required authorizations, grants, and licenses.	Strategic, political-institutional and technical meetings Thematic groups and events Operation through sector-specific entities
Press	To implement our accountability and transparency policy in our relationships with stakeholders, and manage our image and reputation.	Offering assistance to communication vehicles, answering requests for interviews with Vale executives, and providing information on the company's business and operations.
Institutions	To build engagement and relationship with key entities focused on analysis and mitigation of geopolitical and socio-political risks, on the ESG agenda, public policy discussion, sustainable development initiatives, and responsible investment and defense of interests at national and international levels.	Strategic, political-institutional and technical meetings. Thematic groups and events Sector-specific entities

[1] These are considered as the key stakeholders because they are the main audiences impacted by Vale's business and operations.

Participation in external organizations – ESG topics GRI 102-13

The company participates in external organizations to monitor and contribute to discussions regarding topics on the ESG agenda (see the full list on page 157).

Due to the breach of the Dam I of the Córrego do Feijão Mine in Brumadinho in 2019, Vale was temporarily suspended from the Ethos Institute, and is currently not a member of the UN Global Compact.

The Company remains aligned with the principles of both institutions and, in 2020, shared with them reports about our Brumadinho and Mariana reparations.

Commitment to shareholders

Vale wants to improve its ESG performance and to communicate these results to shareholders. To this end, we have been evolving our investor relations program and recognizing our opportunities for improvement and existing disputes. The company has evolved to establish a dialogue channel with our investor audience, who pointed out the relevance of the environmental, social and governance issues presented below, and for whom we have created goals and action plans.

Risk Structure

» We have heard that we should reinforce our risk structure

» We responded by establishing the Audit Committee in March 2020, composed of specialists, and appointing a Chief Compliance Officer

Board Nomination

» We have heard that the Nomination Committee must nominate the members of the Board

» We responded by establishing a Nominating Committee and a Nominating Policy

See the Nominating Committee's scope of action on page 62.

Compensation

» We have heard that adoption of the Malus clause should occur along with the Clawback policy

» We responded by adopting the Clawback policy from 2021, in addition to the Malus clause

Learn more about the goals connected to variable pay on page 65.

Transparency

» We heard that our ESG disclosure could improve

» We responded by launching an ESG Portal, disseminating the Proxy Statement, issuing a Tax Transparency Report, and preparing the first Integrated Report

See our ESG strategy on 46.

Gender Balance

» We heard that we should increase the % of women in the workforce

» We responded by setting a goal of doubling the female presence from 13% to 26% by 2030 and we have already reached 16.3% in 2020

See our gender diversity results and goals on page 128.

Individual Election

» We heard that the Board of Directors should be elected member by member and not on a slate

» We responded by amending the Bylaws to provide for individual election

Board independence

» We heard that our council should be composed of an independent majority

» We responded by adopting in the Bylaws that at least 7, of up to 13 members, will be independent

Understand our governance on page 58 and meet the members of the Board of Directors at http://www.vale.com/esg/en/Pages/BoardDirectorsAndLeadership.aspx

Climate Change

» We heard that we must be bold in our climate change goals

» We responded by setting goals for Scope 1, 2 and 3 In line with the Paris Agreement and aiming for carbon neutrality by 2050 (Scope 1 and 2)

See our emissions results on page 97.

Governance

- Risk management
- Compliance

Governance

Material topic

Governance and compliance

SDG 16

GRI 103 | 205 | 206 | 307 | 419
SASB EM-MM-510a.1..

This covers corporate governance, risk and crisis management, anticorruption, social, economic and environmental legal compliance, and cybersecurity.

Vale is managed by the Board of Directors and the Board of Executive Officers, guided by governance standards of B3's Novo Mercado segment.

The Board of Directors decides on the company's strategic plan. It is responsible for ensuring compliance with corporate governance, accountability and information disclosure rules. GRI 102-20 | 102-22 | 102-26 | 102-27

Vale has been investing in evolving its governance, seeking references in the best national and international practices, deepening the understanding of the investors' perspective on such topics, as well as adapting to the new requirements of the Novo Mercado regulation and to become a dispersed ownership company.

Currently, most member of the Board of Directors have experience in mining or a related industry, or expertise in sustainability and governance, and in addition we have three independent members.

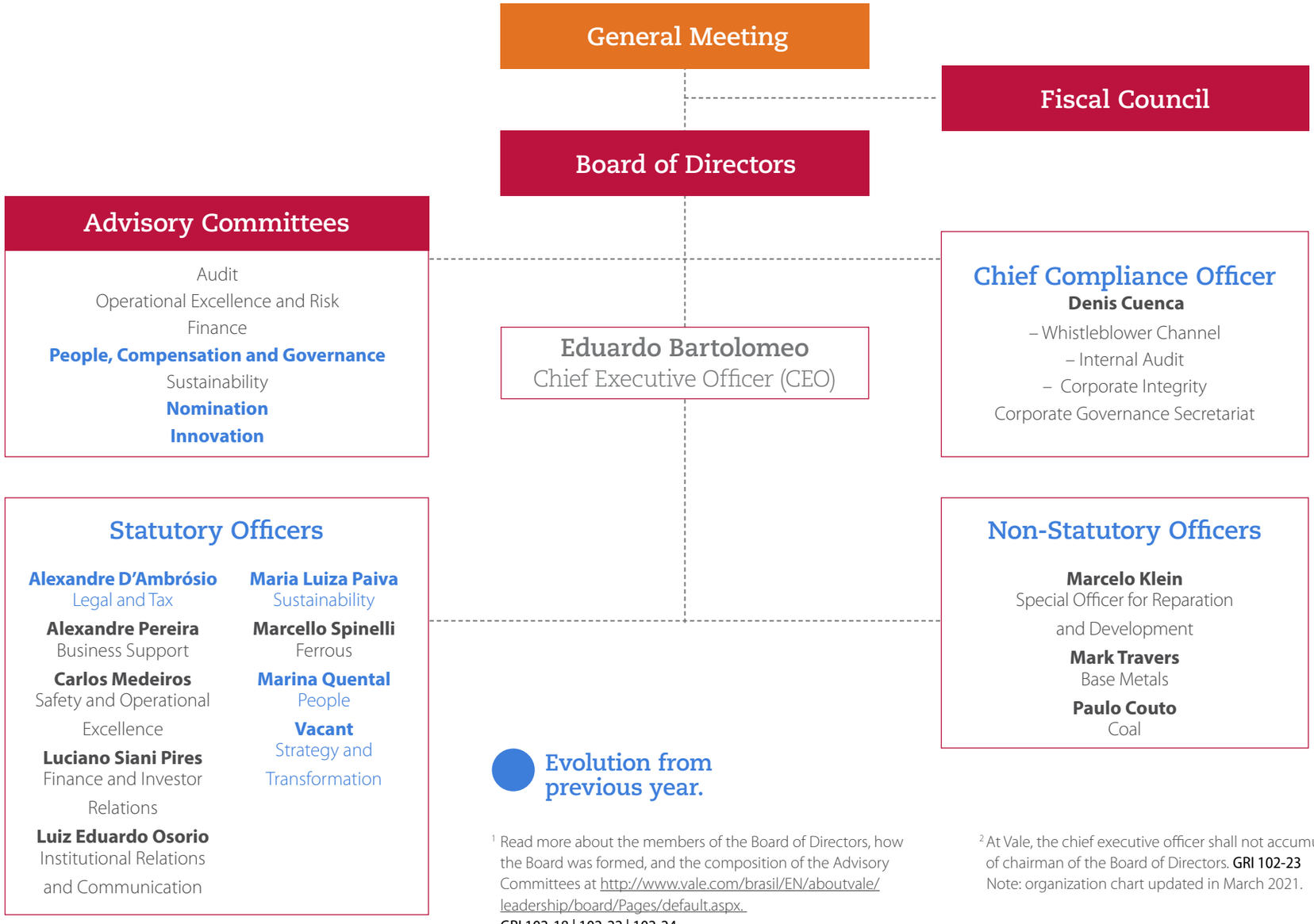
Along with the Nomination Committee and specialized international advisory companies, the Board of Directors have updated the important qualifications and experience that should be represented on the Board as a whole, according to Vale's business strategy and future needs.

Among the elements that were considered in defining the new competence matrix were: GRI 102-27

- the set of circumstances that reflect Vale's present and future situation and its opposable challenges;
- key competencies consistently observed in other mining companies;
- the five action levers set forth in Vale's strategy;
- the specificities and particularities of Vale's business;
- derivation of the strategy and vision for the future of Vale's businesses;
- preservation of knowledge and history about the company;
- emphasis on the current context, with Vale's current challenges;
- focus on competencies that are relevant to Vale with long-term developments;
- alignment with market expectations; and
- adequate characterization of the caliber and update level of each of the competencies.

B3's Novo Mercado governance standards guide Vale's management

On April 30, 2021 Vale's Board of Directors will be elected considering these new competencies. The Nomination Committee has proposed renewing five of the 12 members, bringing in additional independent members to reinforce the profiles of occupational safety, sustainability, China and digital transformation.



[1] Read more about the members of the Board of Directors, how the Board was formed, and the composition of the Advisory Committees at http://www.vale.com/brasil/EN/aboutvale/leadership/board/Pages/default.aspx.
GRI 102-18 | 102-22 | 102-24

[2] At Vale, the chief executive officer shall not accumulate the position of chairman of the Board of Directors. GRI 102-23
Note: organization chart updated in March 2021.

Fiscal Council

This permanent operating body within Vale supervises and verifies the actions of the Board of Directors and the Board of Executive Officers and their fulfillment of their legal and statutory duties, in accordance with current Brazilian legislation.

It also comments on the Annual Report from Administration; examines and comments on the financial statements for the reporting year; analyzes Vale's balance sheet and other financial statements at least on a quarterly basis; and maintains communication with the External Auditor.

This council holds periodic meetings to evaluate the results of the work of the Internal Control area and its respective remediation plans.

Advisory Committees to the Board of Directors GRI 102-10 | 102-29

The Technical Committees advise the Board of Directors in monitoring Vale's activities and oversee the performance and effectiveness of the enterprise risk management conducted by the Board of Executive Officers. On these Committees there are independent members not belonging to the Board, who have experience in the Committees' related areas. GRI 102-18 | 102-30

After the statutory changes that took place at the 2020 meeting, the Compliance and Risk Committee became the Operational Excellence and Risk Committee, strengthening its competencies to evaluate corporate risks management and absorbing the functions associated with monitoring operational risks, including geotechnical risks. The responsibilities related to compliance were transferred to the Audit Committee. GRI 102-30

Among the Extraordinary Independent Consulting Committee (CIAE, Portuguese acronym) established by the Board of Directors shortly after the Córrego do Feijão Mine dam breach in Brumadinho (MG), the Dam Safety Committee maintained activities throughout 2020, with a mandate to continue until April 2021. The other two committees, Support and Reparation and Investigation, delivered their final reports in February 2020.

To allow for an appropriate and orderly transition to become a dispersed ownership company that retains major reference shareholders, in July 2020 Vale announced it had formed its Nomination Committee, responsible for proposing improvements in the structure, size and competencies of the Board of Directors.

In September 2020, the Board of Directors approved Vale's Nominating Policy, which sets the minimum qualifications for the potential members of the Board, the Committees, and the Board of Executive Officers.

Advisory Committees GRI 102-29

oversee the performance and effectiveness of the enterprise risk management conducted by the Board of Executive Officers

Finance Committee

Evaluates the structure and conditions of investment and divestment operations, including acquisitions, mergers and spin-offs in which the Company is involved.

Sustainability Committee

Evaluates our sustainability and innovation strategies, making sure they are considered in the definition of the company's global strategy. This committee is responsible for monitoring the Sustainability Plan; defining, monitoring and analyzing indicators; performance ratings, socio-environmental investments; strategies for climate change and carbon pricing; recovering and protecting degraded areas; proposing improvement actions and evaluating the implementation of mine closure and future use precepts according to best practices. It is also responsible for approving Vale's Integrated Report. **GRI 102-20 | 102-29 | 102-30 | 102-32**

Operational Excellence and Risk Committee

Seeks to implement structures and practices that ensure effectiveness in identifying and managing operational, geotechnical and business continuity risks.

People, Compensation and Governance Committee

Evaluates: general Human Resources policies proposed by the Board of Executive Officers to the Board of Directors; the adequacy of compensation models for members of the Board of Executive Officers; and the proposal for distributing the annual global budget for the officers' compensation. In addition, it evaluates and periodically provides recommendations on best practices of corporate governance.
GRI 102-35

Audit Committee

A statutory advisory body to the Board of Directors with the objectives to oversee the quality and integrity of financial reports; the adherence to legal, statutory and regulatory standards; ensure the adequacy of risk management processes; and oversee the activities of internal and independent auditors. The committee's functions and responsibilities are performed in compliance with the applicable legal, statutory and regulatory attributions and defined in its Internal Regulation. The committee's assessments are based on information received from company management, independent auditors, internal auditors, those responsible for risk management and internal controls, as well as its own analyses arising from its supervisory and monitoring activities.

Nomination Committee

Evaluates and recommends the best practices in corporate governance in relation to the structure, size and composition of the Board of Directors, as well as the balance of experiences, knowledge and diversity of its members' profile, considering its needs, according to the criteria and guidelines of Vale's Nomination Policy.
GRI 102-24

Innovation Committee

Created in March 2021, to focus especially on new technologies and other initiatives that bring more sustainability, efficiency and competitiveness to Vale's businesses.

Extraordinary Independent Consulting Committee for Dam Safety (CIAE-SB)

A non-permanent committee, designed to monitor specific initiatives for the safety, management and risk mitigation of dams. Initiatives include diagnosing the safety conditions of dams and dikes used by the company in its operations in Brazil, placing priority upon structures raised by the upstream method or located in areas of special attention, recommending measures to the Board of Directors to strengthen the dams' safety conditions. The CIAE-SB will be discontinued in April 2021, when a final report will be issued and released. Committee members will serve on the Independent Tailings Review Board.

Performance appraisal GRI 102-28

The Board of Directors implements an annual performance appraisal with the support of the People, Compensation, and Governance Committee. It is usually conducted by a company hired by Vale that is a reference in senior management appraisals and with the participation of an Independent Consultant.

In addition to the performance appraisal, the Board of Directors also conducts the annual performance self-assessment. Based on both of these projects, they draw up the development plan for the Board and its members, to promote the evolution of Vale's governance.

The 2020 mid-term evaluation was carried out by the Board in the last quarter of the year. Among the results obtained, the following are noteworthy:

- Evolution in Most of the Items Evaluated: only 2 of the 22 aspects evaluated did not present an improved evaluation in relation to the end of 2019;
- Greater Involvement in Critical Issues: the Board has increased its engagement and performance in relation to critical issues such as strategy, capital allocation and business portfolio, executive succession and cultural transformation;
- Advances in Governance for the Transition to "Corporation": Implementation of actions relevant to the new corporate structure, resulting from the end of the shareholders' agreement, with the establishment of the Audit and Nomination Committees;
- Critical Training strengthening for the Board of Directors: To cover the identified gaps regarding the sufficient presence of board members with knowledge and experience in the mining sector, as well as relevant executive experience in leading large corporations;
- Improvement in Group Dynamics: The Board of Directors' discussion and deliberation dynamics have improved, the discussions are more objective and productive, there is more balanced participation among members and less competition for protagonism;
- More Productive Interaction with Executives: A better alignment is noticed between the Board of Directors and the executives, with a richer and more productive exchange in which the BoD contributes more and challenges the executives more in regards to their proposals.

Main opportunities for improvement

- **Improvement in Group Dynamics:** The Board of Directors' discussion and deliberation dynamics have improved, the discussions are more objective and productive, there is more balanced participation among members and less competition for protagonism;
- **More Productive Interaction with Executives:** A better alignment is noticed between the BD and the executives, with a richer and more productive exchange in which the BD contributes more and challenges the executives more in regards to their proposals;
- **Board Member Onboarding:** Resume and reinforce the onboarding process for new members, which was heavily impacted by the Covid-19 pandemic, in order to provide knowledge about the company, the industry, the executives, the company's governance, the priority agenda of the Board and the topics under discussion;
- **Information Provision:** Improve and optimize the information submitted for evaluation, seeking greater objectivity and focus on the most important messages;
- **Meeting Agendas:** Optimize the agendas of board meetings, in order to allocate more time to the debate and deepening of strategic issues for the company's business;
- **Critical competencies:** The definition of the required competencies set for the Board and the committees, being addressed by the Nomination Committee, will potentialize the reinforcement of Vale's Board, through the college composition, in line with the mapped competencies; Regarding the individual assessment of board members, there was a positive evolution, with a higher overall assessment by most board members. The People, Compensation and Governance Committee recommended addressing the improvement opportunities mapped out, through an individual action plan, prepared by each board member, after a feedback session with the chairman.

Executive Board

GRI 102-10

In 2021, the Company opted to readjust the organizational structure of the Executive Board, with the creation of new positions, the rearrangement of current positions and the consequent revision of the number of statutory executives, aiming at greater alignment with the company's strategy, equaling the level of responsibility and accountability, reinforcing Vale's commitment to the evolution of its Corporate Governance, through the standardization of contractual conditions for executives, alignment and clarification of responsibilities, creation of new positions and reorganization of remaining positions:

Reorganization of the former position of Executive Officer of Sustainability and Institutional Relations, promoting an even greater focus on the ESG agenda: segmentation between Executive Officer of Institutional Relations and Communication and Executive Officer of Sustainability, including the hiring of a new statutory officer;

Vale opted to readjust the organizational structure of the Executive Board, with the creation of new positions

Creation of a new position of Executive Officer of Strategy and Transformation, including the hiring of a new statutory executive;

Migration of two positions that were subordinated the Brazilian Labor regime to the statutory regime, becoming Legal and Tax Executive Officer and Executive Officer of People, for which the current officers will remain.

Besides the changes in the organizational structure that will take place in 2021, Vale has been making progress in changes to its executive compensation policy.

Compensation policy

GRI 103 | 202 | 102-35 | 102-36 | 102-37

Vale's shareholders establish the overall compensation that should be paid to the members of the Board of Directors, Board of Executive Officers, Fiscal Council, and Board Committees, according to the standards of the company's bylaws, and this compensation is approved at the Annual Shareholders' Meeting.

The Board of Directors, with the support of the People, Compensation and Governance, allocates the compensation among its members and the members of the Board of Executive Officers, Fiscal Council and Board Committees.

As a result of an ongoing comprehensive review of our compensation programs, which included investor feedback, external market research, and data analysis of various performance metrics, Vale has continued to advance its compensation practices, aiming to increase competitiveness and shareholder alignment, as well as support cultural transformation.

In 2020, Vale adopted metrics even more focused on environmental, social and governance (ESG) issues when considering its officers' short- and long-term variable compensation, seeking to strengthen our strategic pillars of Safety & Operational Excellence and the New Pact with Society.

Compensation Governance and Practices

GRI 102-35 | 102-36

The following aspects are considered in determining the remuneration:

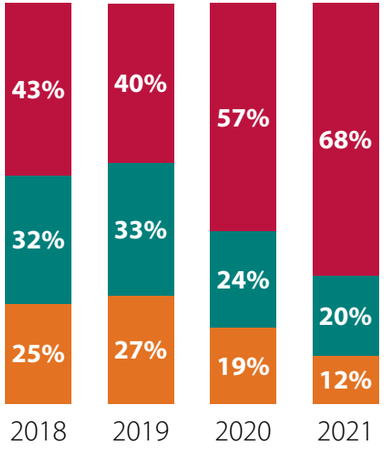
- Minimum shareholder position requirement: at least 36x the monthly base fee for the CEO and 24x the monthly base fee for the Executive Officers;
- Adoption of the Malus and Clawback rules, by which, upon facts or events of exceptional severity, the variable compensation may be eliminated, reduced or even returned by the executive to the Company;
- Compensation alignment with Vale's ambition to be a leader in low carbon mining, through the readjustment of the organizational structure, with impact on the short-term Annual Bonus, which in 2020 had 10% of the weight for the goals linked to this initiative, and the inclusion of ESG (Environmental, Social and Governance) goals in the share-based variable compensation (long-term programs);
- Short-term compensation with elements of risk management and inclusion of collective goals for Productivity, VPS Management Model and Cultural Transformation in order to strengthen a more integrated performance between the areas.
- Leadership of Health, Safety, Geotechnical, Reparation and Compliance areas, without goals linked to the company's financial and production results in their variable compensation;
- Compensation mix aligned with the profile of the international market, with more focus on long-term variable compensation components;
- A more complete individual performance evaluation process (360º for CEO and 180º for Executive Officers) and with individual actions that have an impact on compensation, based on meritocracy and pay-for-performance;
- More discretion for the Board of Directors regarding the application of the non-compete commitment after the executive's departure from the Company;
- Early renewal of mandates and contracts of statutory officers, providing continuity and stability to the business plan and ambitions outlined by the current management, reflecting the evolution of Vale's Corporate Governance.

For 2021, the short-term goals, associated with variable compensation, of the CEO and Executive Officers were established, considering:

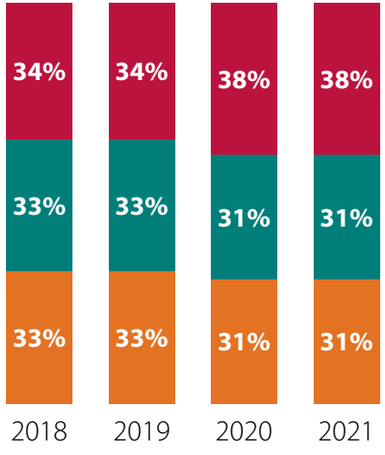
- 80% of the result based on Collective Goals - 20% Economic and Financial (EBITDA); 15% Health and Safety; 10% Operational Risk; 10% Sustainability; 10% People; 5% Productivity; and 10% Vale Management Model (Vale Production System - VPS);
- 20% refers to the individual goals defined for each of the executives, according to their focus and scope of activity - considers asset optimization; partnerships with customers; resumption of production; reparation and reputation of the company; dam management; ESG agenda; integrated innovation; diversity and inclusion (D&I); Safety and Risk; development of new products; replenishment of nickel reserves; plant operation; cavity; liberation for mining; implementation of transformative social projects.
- For the CEO, the productivity goal was not considered, and the weight was distributed to the EBITDA goal.
- For leaders connected to the Geotechnical, Reparation, Health and Safety and Compliance areas, financial or production indicators have not been used for variable compensation since 2019. This measure represents Vale's focus on risk management as a priority, allowing employees in these areas to be fully involved in the mission to reduce and mitigate operational risks, without suffering the impact of financial results.

Evolution of the composition of the Total Compensation package of the CEO and Executive Officers, now more focused on the long term:

CEO
Evolution Mix Total Compensation



Executives Officers
Evolution Mix Total Compensation



- Long Term Incentives (LTI)
- Annual Bonus
- Fixed

Governance Report

Every year, Vale publishes the Governance Report on the Brazilian Code of Corporate Governance – Publicly Held Companies ("Code") of Vale S.A. The report is required by the Brazilian Securities and Exchange Committee (CVM) - CVM Instruction No. 586, of June 8, 2017.

We currently fully comply with 89% of the practices recommended by the IBGC (Brazilian Institute of Corporate Governance) and partially comply with 10% of the practices recommended by the code.

The base date of the information is September 30, 2020 and is avaailable ***here***.

Cultural transformation supported by Vale's management model

Vale has been going through a process of cultural transformation. To this end, it institutionalized in 2020 its integrated management system - Vale Production System (VPS), with mandatory guidelines and protocols for all the company's ventures, developed according to legislation and best practices on environmental, social and economic topics (read more on pages 67).

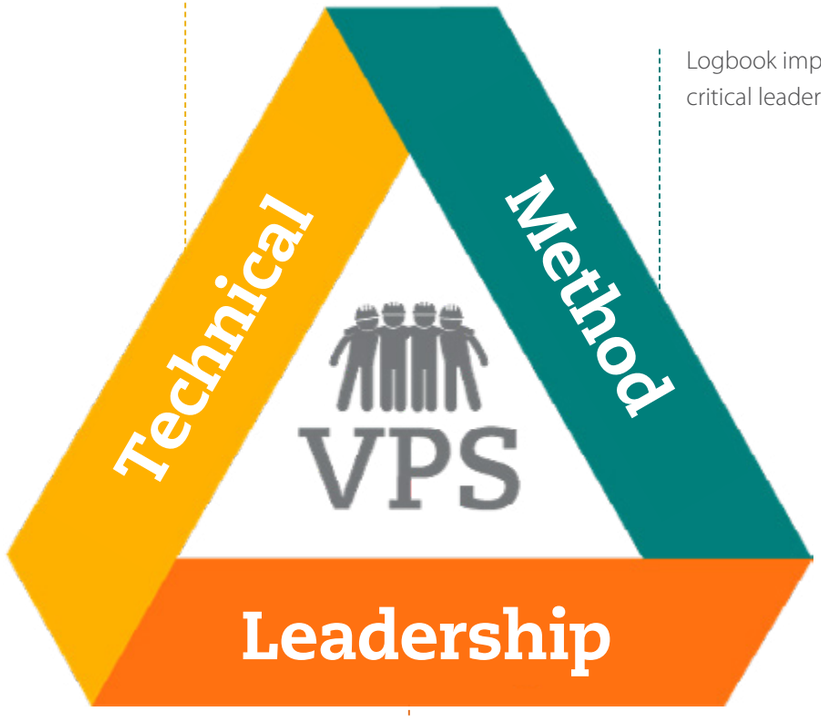
The publication of the Vale Management Model Policy in November 2020 made the VPS a commitment not just to stakeholders but also to the entire market.

Cultural transformation process is shaping Vale's recent history

The VPS management model strengthens the organizational culture through:

- People development
- Standardization of processes
- Operational discipline

23 p.p. Increasing in Vale's maintenance compliance



Logbook implemented with critical leadership routines

Kinesthetic training

85% of all Vale units worldwide have Safe Work Permits for preventive maintenance activities, with 100% expected by 2021.

95% adherence to Vale's systematic maintenance for critical assets [1]

+ 65,000
Continuous improvement projects developed by employees

[1] 91% of critical assets have maintenance plans

Risk management GRI 102-11

Vale's risk management is based on the lines of defense model and ISO 31000, ISO 55000 and COSO-ERM. There are three lines of defense that define the relationship between different areas and hierarchies of the company and its respective scope of responsibilities. GRI 102-15

The Operational Excellence and Risk Committee advises the Board of Directors on the risks of Vale's business and operations.

At the Board of Executive Officers level, Executive Committees promote and disseminate the risk management culture, support preventive monitoring management, and make preventive recommendations on potential risks.

To strengthen its risk governance Vale established the Audit Committee in March 2020 to oversee the quality and integrity of financial reporting, adherence to legal, statutory and regulatory standards, the adequacy of risk management processes, and the activities of internal and independent auditors.

Board of Directors

Deliberates on Vale's corporate and financial risk policies proposed by the Board of Executive Officers. GRI 102-22

Board of Executive Officers

Advised by Business Risk Executive Committees:

- Operational
- Geotechnical
- Strategic, Financial and Cybersecurity
- Compliance
- Sustainability and Reputation

Risk Management Policy

Reviewed and approved by the Board of Directors on March 15, 2021, this policy establishes that risk management shall:

- Support the business's strategic planning, budget and sustainability.
- Strengthen our capital structure and business asset management, covering management concepts and assumptions based on potential risks in operations, asset maintenance, and logistics modes.
- Strengthen our governance practices based on the lines of defense model.
- Adopt the concepts of ISO 31000, ISO 55000 and COSO-ERM as a reference in risk management. For Operational Safety, adopt RBPS (Risk Based Process Safety) as the operational safety management system;
- Measure and monitor Vale System's potential risks on a consolidated basis, considering the effects of the diversification of its group of businesses when applicable;
- Establish a specialized structure for dedicated and independent management, as the specialist 2nd line of defense, in the evaluation of potential operational risks, including geotechnical ones;
- Assess the impact on the Vale System's risk map and tolerance when deciding on new investments, acquisitions and divestments.

Read More

Read more about the Risk Management Policy at: http://www.vale.com/brasil/en/investors/corporate-governance/policies/pages/default.aspx

Risk management defense lines

First line of defense:

Operational, business, project, support and administrative areas

These areas are directly responsible for operating the assets and identifying, evaluating, monitoring and managing their risk events in an integrated manner.

Second line of defense:

Executive management of Internal Controls, Risk and Compliance and specialist second line of defense (Board of Operational Risks, Health and Safety, Executive Management of Environmental Management, Executive Management of Social Management)

These areas and executives oversee and provide support to the work of the first line of defense, providing qualification and instrumentation for risk management.

Third line of defense:

Compliance Board

Two areas of the Compliance Board act as the third line of defense: Internal Audit – responsible for independently evaluating the effectiveness of the company's internal controls and risk management; and the Whistleblower Channel, responsible for receiving, recording and investigating the complaints received through an independent channel, while preserving the anonymity of the whistleblower and ensuring non-retaliation.

Risk Governance structure map

Business Risks Executive Committee ⟷ **Board of Directors Advisory Committees** ⟵ **1st Line of Defense** Risk Owner Vision ⟶ **Performance meetings**

2nd Line of Defense
Specialist Vision

- Operational Risks Executive Committee
- Geotechnical Risks Executive Committee
- Strategic, Financial and Cyber Risks Executive Committee
- Compliance Risks Executive Committee
- Sustainability and Reputation Risks Executive Committee

Executive Forums

People

- Outsourcing and Partnership
- Unions Relationship
- Organizational Structure and Culture
- Abusive and discriminatory practices
- Training, recruitment and Retention
- Staff Dependency / Succession
- Adherence to Labor Law

Sustainability and Reputation

Environment
- Climate Changes
- Waste, Effluents and Emissions
- Socioenvironmental obligation

Social
- Human Rights
- Institutional Relationship
- Community Relationship
- Blockings, Vandalism and Terrorism

Reputation
- Image and Reputation
- Communication and Disclosure

Reparation
- Renova Foundation
- Brumadinho

Strategic

Business Model
- Demand and Competition
- Budget and Planning
- Intellectual Property
- Sales / Commercial
- Mergers, Acquisitions and Divestments
- Projects and Investments
- Associated Companies and JVs
- Innovation and New Technologies

3 Cybersecurity

Information Safety
- Information theft or leakage
- Unavailability of technology assets
- Loss of data integrity

Finance

Market
- Currencies
- Interest Rates
- Commodities
- Freight
- Investor Relations

Liquidity / Credit
- Cash flow
- Capital availability
- Insurance Coverage
- Credit Grant and Default

Internal Controls
- Financial and Accounting Reports
- Adherence to Policies and Standards
- Fraud

Planning and Operational Continuity

Suport
- Unavailability of Critical Inputs
- Unavailability of Water Resources and Energy
- Licenses, Concessions and Mineral Rights

Operational Capacity
- Rail transportation
- Road transportation
- Sea and River Transportation
- Unavailability of tailing or wasterock deposit
- Port Structure
- Mine
- Availability and quality of reserves

Operational

Health and Safety
- Occupational Safety
- Occupational Health and Hygiene
- Health and Safety norms compliance

Operation
- Process Safety
- Production interruption / material losses

Geotechnical

Geotechnical structures
- Tailings Dam
- Piles
- Embankments, Cuts and Slopes
- Underground Mine

Compliance

Legal and tax
- Sanctions
- Antitrust
- Data Protection Law
- Government Official Corruption
- Tax and Fiscal
- Litigation
- Changes in Laws and Regulations

ERM – Enterprise Risk Management

Main Emerging Long-Term Risks mapped

Risk	Root Cause	Impact	Mitigation	Comments
Epidemics and Pandemics Collective manifestation of a disease that rapidly spreads, by direct or indirect contamination, to reach a large number of people in a given territory (e.g., COVID-19, Ebola, Avian Influenza...)	It is the presence of viruses, bacteria, and protozoa, carried by vectors or not, and that spread rapidly reaching a large number of people, aggravated by the absence of control and mitigation measures and sanitary/public health deficiency.	Outcomes: - Death Outcome (increased Claims, overload of the public and private health system); - Sanitary interdiction of operations (deterioration in the relations with inspection agencies); - An increase in medical abstentions; - Increased spending on supplementary health care; - Loss of productivity; - Partial or total shutdown of activities.	When controlling an epidemic of an infectious disease, it is important that cases are reported to the public health agency so that measures can be taken to prevent the spread of the disease to other locations. 1. Strategies that can be adopted to contain an epidemic or pandemic are: - Self-assessment of signs and symptoms related to the disease; - Rapid or diagnostic testing; - Health education; - Use of mechanical barriers of protection (masks and physical distance); - Identification and tracking of contacts; - Segregation of increased risk groups with higher potential for death; - Implementation of remote work where possible and feasible; - Restriction of domestic and international travel; 2. Humanitarian support actions in countries where Vale operates (community support): - Donation of medical supplies (e.g. diagnostic tests, health PPE etc); - Installation and maintenance of temporary field hospitals in most affected regions; - Implementation of remote laboratories for molecular diagnostics of infectious and contagious diseases	The epidemics' distinctive character is in their collective and singular manifestation; collective as a phenomenon that affects groups of individuals causing changes in the way of "walking through life" and singular as a unique occurrence in the unit of time and space. Based on information discussed at the World Economic Forum, infectious diseases and survival crisis lead the rank of predicted risks, ahead of other threats such as cybersecurity failures. Infectious diseases will pose a critical threat to the world in the coming years. As an example we can mention the COVID-19 Pandemic, which continues to cause devastation with an ever-increasing number of lives lost and impacting very heavily on world economies.

Risk	Root Cause	Impact	Mitigation	Comments
Dam failure during de-characterization process Collapse risk of tailings dams built by upstream method in the decommissioning process.	The works related to the decommissioning process of dams built by the upstream method can influence the geotechnical stability variables of these structures, and consequently increase the risk. In extreme hypothetical cases, this intervention process in the structure may be a potential contributor to the collapse of the dam, when associated with other conditions, especially considering the failure mode by liquefaction.	There may be fatalities and severe socioeconomic impacts occurrence in the regions affected by the rupture. In the event of a dam rupture, there may be significant impacts on the environment, including fauna, flora and water resources. Many of them irreversible. There may be significant impacts on Vale's reputation and credibility with multiple stakeholders, with severe risks to business continuity.	CONCLUDED: - Evacuation of communities located in the - Self Rescue Zones of the Dams at Emergency Level 3 and 2. - Periodic Realization of Drills; - Indemnity and assistance program for evacuated families; - Demobilization of operational infrastructure and support structures downstream of the dams; - Use of unmanned technologies for the works, avoiding the exposure of people to risks; - Readjustment of the Monitoring Plan, including the installation of new instruments and an automation program; - Implementation of the Geotechnical Monitoring Centers, interconnected to the automated monitoring and operating 24 hours a day; - Creation of a dam decommissioning area, independent from the operational areas; - Use of EoR - Engineer of Records; - Implementation of Specific Governance for the management of geotechnical assets, with formal appointment of risk owner and an executive committee establishment. ONGOING: - Review of the Hypothetical Rupture studies ("Dam Break" studies), using more conservative criteria; - Downstream Containments implementation ("Backup Dams") of the Dams on Emergency Level 3, capable of containing all the tailings in the hypothetical rupture scenario, significantly minimizing the consequences (in conclusion phase); - Rescue of fauna and historical, archaeological and cultural heritage, where applicable (in conclusion phase). - Implementation of works related to the adequacy os safety factors in the structures: peripheral drainage channels, new spillways, surface pumping maintenance, etc. - Prioritazation of development of engineering solutions for de-characterization that minimize the increase of risk in the structure. - Revision of Emergency Plans and improvement of warning systems	The risk reduction will occur gradually as the de-characterization process advances, reducing the probability (by reducing the stresses applied to the structure) and the consequence (by removing the tailings and reducing the volume). The final objective of the de-characterization program is to aim to provide greater safety to communities and to the environment, with the goal of increasing Vale's operational safety by reducing the risk related to upstream dams. Vale conducts continuous talks and dialogues with the main regulatory and institutional stakeholders related to dam de-characterization, in order to discuss and align expectations regarding the main risks involved, the principal impacts assessed, and related prevention and mitigation measures. Among the main stakeholders are the National Mining Agency, the State Department of Environment, and the Public Prosecutor's Office of the State of Minas Gerais. The latter associated with an independent technical audit, responsible for assessing the safety of the structures. .

Risk	Root Cause	Impact	Mitigation	Comments
Cybersecurity Vale's business relies heavily on technological systems for its operations. Therefore, cyber events or attacks can have a significant impact on business. The cyber risk management discipline deals with situations in which the availability of information and operational technology systems can be compromised, as well as the respective data integrity and confidentiality.	The growth of cyber threat scenarios is a natural trend in the world, and it's no different in the mining industry. The ever-evolving risks come from a variety of actors in this context, such as nation-state, cybercriminals, hacktivists and insiders, each with different motivations. It is noted that these cybercriminals continue - and sometimes increase - their activities in times of crisis such as in the case of the COVID-19 pandemic.	– Business process interruption, resulting in financial loss or safety damage. – Intellectual property loss. – Negative impact on market value, credit rating, and company reputation. – Lawsuits and fines, including criminal offenses.	A variety of measures are employed to manage this risk in order to protect, detect and respond to cyber events, including information security policies and standards, safety protection technologies, threat detection and monitoring, as well as testing of response and recovery procedures. We have sustained our investments in order to keep our cyber defenses within cyber risk tolerance levels for the enterprise systems layers. For the industrial systems and operational technology layers, we have significantly increased investments in order to increase the efficiency of cybersecurity controls in line with the threats growth in this area. We constantly maintain initiatives to strengthen the culture of information safety awareness in the organization. We run a recurring training program covering topics such as email phishing, information classification, and other information safety best practices.	We have experienced safety threats to our technology systems, but none of them impacted our business in 2020. Exposure to cyber risks is expected to increase due to our growing reliance on technology as well as the increasing sophistication and frequency of cyber attacks. Our risk management committee for cyber matters assists the executive board in continuously overseeing the progress of our Information Safety program as well as the effectiveness of our cyber security controls framework. The audit committee and other advisory committees also assist the board of directors in ensuring that internal controls are robust and sufficient to manage the company's information safety.

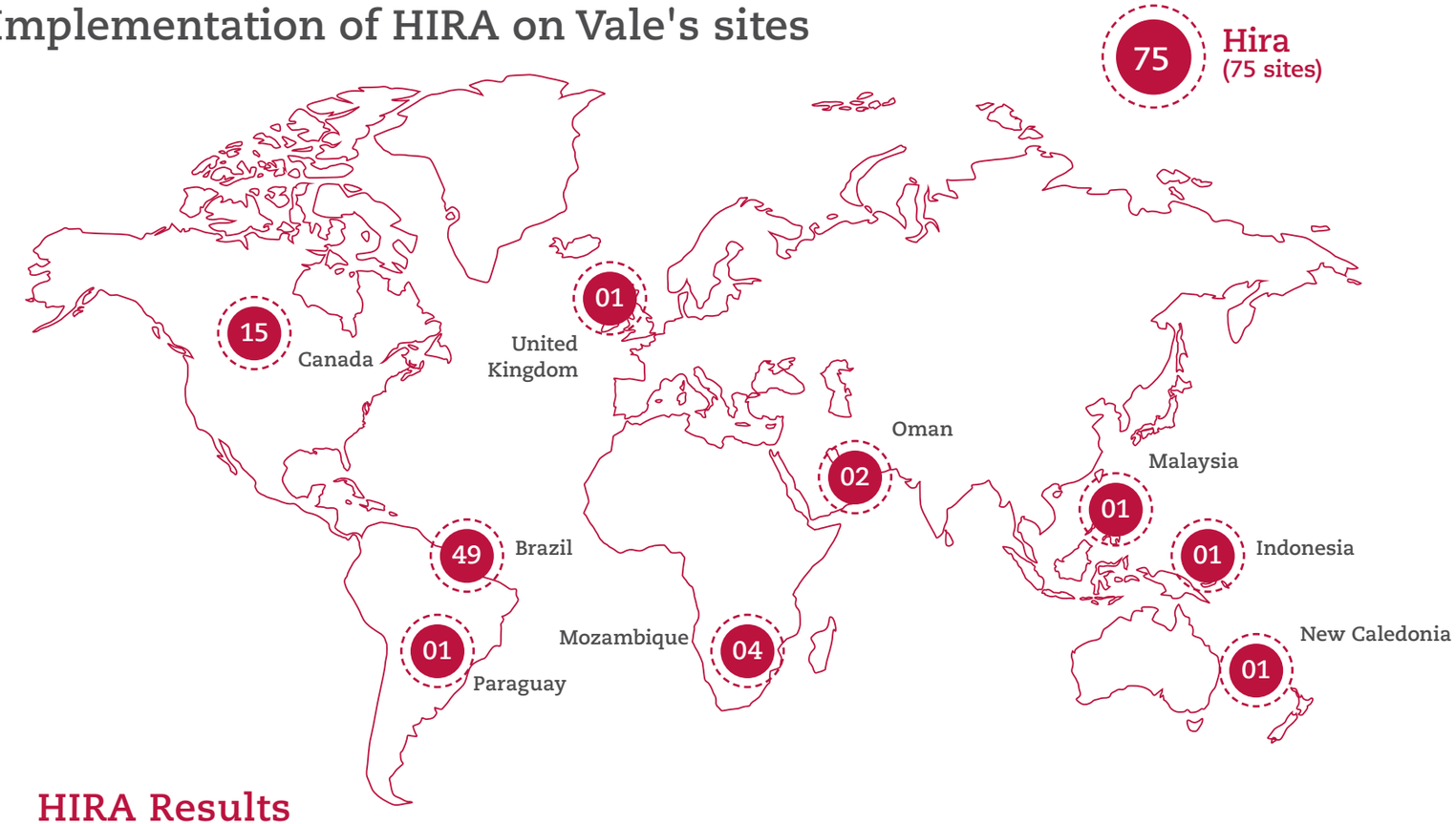
*Read more about the long-term risks associated with climate change on page 105.

Risk management program

By the end of 2020, 95% of Vale's operational sites – 75 out of 79 – implemented the Hazard Identification and Risk Assessment (HIRA) program as part of our strategy to improve operational risk management. The target is to evaluate 100% of the sites in the first half of 2021 and evaluate all geotechnical structures by the end of 2022.

HIRA maps and analyzes high-severity operational safety risks or very high-risk amplitude. It identifies and defines performance criteria and establishes the assurance of associated critical controls.

Implementation of HIRA on Vale's sites



The target is to evaluate 100% of the sites in the first half of 2021 and evaluate all geotechnical structures by the end of 2022

HIRA Results in 2020*

597 materials undesired events

6,757 critical controls identified

1,298 immediate actions completed

*Note: by March 2021, as part of HIRA, 790 material undesired events have been mapped, 8,574 critical controls identified, and 2,169 immediate actions completed.

Actions carried out by the Business Risk Management and Health, Safety and Operational Risk areas in 2020

Implemented the Integrated Risk Management tool (BWise) and included, on a single platform, information from the Risk Management area and other lines of defense.

Trained the first line of defense of risk owners and control owners, involving specific sessions for risk owners responsible for very critical risks in health and safety, on concepts of risk governance, legal aspects, risk management, and their roles and responsibilities.

Implemented the process of Certification (sign-off) of Very Critical and Critical severity risks, which attests that the risks related to the processes under the responsibility of each risk owner (first line of defense) are properly identified, evaluated and recorded in Vale's risk management system.

Performed simulations of the Emergency Action Plan for Mining Dams (PAEBM) in dams at Emergency Levels 2 and 3, respecting the restrictions imposed by the COVID-19 pandemic.

Performed 75 HIRAs – Hazard Identification and Risk Analyses – as part of Vale's operational risk management improvement strategy. Its first cycle, which will be repeated in periods of three to five years, will be completed in the first half of 2021.

Incorporated the crisis management and business continuity themes by the Health, Safety and Operational Risk area in August 2020, restructured the second line of defense, and performed the following actions:

- Developed a work plan to standardize and improve topics, including the crisis process and business continuity at Vale; and developed normative standards and a qualification path.
- Performed crisis management training for risk owners and control owners of the first line of defense, to reinforce Vale's fundamental concepts and response structure; and provided support in conducting crisis management simulations integrated to the emergency response simulations.

Compliance GRI 205-1 | 205-2

By determination of the Board of Directors, with the recommendation of the Extraordinary Independent Consulting Committee for Investigation, Vale created the Compliance Board in March 2020.

The Compliance Officer, appointed in July 2020, is directly linked to the Board of Directors and supervised by the Audit Committee, ensuring its autonomy and independence from the other executive structures of the company. The Compliance Officer is responsible for overseeing the Whistleblower Channel, Internal Audit and Corporate Integrity area. Both the Internal Audit and the Whistleblower Channel are responsible for the third line of defense.

In 2020, the Compliance Board reinforced the internal audit activities with the creation of a team focused on technical and operational safety issues, and restructured the functional activities of the Corporate Integrity and the Whistleblower Channel areas, implementing new methodologies and protocols. In addition, a general review of the Code of Conduct was carried out, making the latter document more principle-based and connected with the company's purpose and values. The Global Anti-Corruption Policy was also reviewed a review. All these changes were approved by the Board of Directors and will support Vale's new Ethics and Compliance Program, launched in March 2021, highlighting the launch of the New Code of Conduct, setting a new format in managing and training themes

Chief Compliance Officer (CCO) appointed in July2020, is subordinated directly to the Board of Directors

related to ethics, conduct and the Whistleblower Channel. Our Code of Conduct is available on our website: http://www.vale.com in 9 languages, and also has audiobook versions in Portuguese, English and Spanish. GRI 102-16

Compliance and ethics standards adhere to the recommendations of the United Nations, the International Council on Mining and Metals (ICMM), the eight Fundamental Conventions of the International Labor Organization (ILO), and the Extractive Industries Transparency Initiative (EITI).

Vale Whistleblower Channel GRI 102-17 | 103 | 406

Vale has an independent channel for receiving and recording cases of misconduct and non-compliance with the Code of Conduct, subordinated to the Compliance Office that reports directly to the Board of Directors. This channel is operated by an independent company and is structured to guarantee non-retaliation and the whistleblowers' anonymity.

All the investigations are carried out by the Whistleblower Channel team, which is independent from the company's executive structure.

Periodically, the Whistleblower Channel reports to the Board of Directors and to the Advisory Committees of the Board of Directors, in addition to providing the Conduct and Integrity Committee with information about the reports received, to help them make decisions when applying consequences and evolving the Ethics and Compliance Program.

Vale periodically announces on its website the number and type of reports received, to make the process transparent while always maintaining the confidentiality of the investigations.

In 2020, 4,670 records were made through the channel, of which 4,562 were closed in this cycle. All confirmed violations triggered correction plans. These investigations resulted in 2,261 corrective actions, including the dismissal of 181 employees.

Learn more

To register occurrences, access Vale's website: http://www.vale.com/brasil/EN/aboutvale/ethics-and-conduct-office/code-of-ethics/Pages/default.aspx

Public Agent Corruption Risk Management

GRI 103 | 205-1

There are three risks related to corruption in Vale's consolidated risk map:

- Corruption of a Public Agent.
- Liabilities of illicit acts related to corruption due to corporate transactions.
- Attempting to have undue influence during the investigation process, related to corruption, conducted by public agencies.

In total, 17 controls are related to Vale's anti-corruption rules, of which six are classified as key controls:

- Socio-environmental investments,
- Donations and sponsorships,
- Suppliers in general,
- High-risk suppliers,
- Hiring public agentes, and
- Training.

These controls are replicated for 41 risk owners (first line of defense), who must carry out closer monitoring in their areas, in view of Vale's risk methodology, based on the three lines of defense (read more on page 68).

In the last year, seven cases of private corruption were confirmed. In five of them the employees were dismissed and in the other two the employees are undergoing disciplinary proceedings and are under consideration for cause for dismissal. One supplier was blocked from establishing new contracts after investigation. There were no corruption-related lawsuits filed against the organization or its employees in the reporting period. GRI 205-3

Movement for Integrity

Vale recorded record participation in the Movement for Integrity, an annual event held to strengthen our culture of ethics and integrity. Employees from priority areas also participated in training on anti-corruption rules.

Training in ethics and integrity GRI 205-2

61,593
employees (82.88%)

17,944
contractors (16.03%)

Total of
79,537
audience participants (42.70%)

- **18,200 employees from priority areas responded to the annual conflict of interest form.**
- **1,603 employees from priority areas received specific and targeted training on Vale's anticorruption rules.**
- 54,940 employees watched Vale's educational video on anticorruption rules released in 2020.

Antitrust and unfair competition GRI 103 | 206

The main references in the management of antitrust issues are the guidelines and decisions of the jurisdictions in the regions where Vale operates. Vale highlights the decisions of the Administrative Council for Economic Defense in Brazil and the guidelines issued by the antitrust authorities of the European Community.

In 2020, Vale's Antitrust Policy was reviewed and approved by the Board of Executive Officers and the Board of Directors. During the year, no identification or record was made of critical antitrust or unfair competition occurrences.

Conflict of interest GRI 102-25

Conflict of interest management is the subject of Vale's Related Party Transaction Policy. The policy sets down rules and principles to ensure conditions of transparency and independence are upheld in transactions with related parties, and other situations where there are potential conflicts of interest.

The definition of related party is also guided by accounting standards. The Audit Committee issues reports on possible conflicts of interest between Vale and its shareholders or officers.

Socio-environmental compliance

GRI 103 | 307-1 | 419-1

The socio-environmental compliance processes are regulated by Vale's internal regulations – our Code of Conduct, Anti-Corruption Policy, Human Rights Policy, Sustainability and Socio-Environmental Investiments policies, in addition to our Sustainability Standard. These standards aim to build a relationship of respect and trust with the communities of the territories where Vale operates.

Environmental compliance GRI 307-1

Vale's internal environmental licensing processes include the Management of Licenses, Permits, Certificates or similar documents, and Environmental Conditionings and Demands. Compliance is assessed according to the environmental legislation in force in the area where the activity or venture takes place, and the specific terms of each license and its respective conditionings. Environmental compliance processes are carried out globally in all operations and projects to verify their regularity.

The environmental conditionings and the environmental compliance indicator are monitored monthly at performance meetings attended by the CEO, the Executive Board, Directors and Managers.

In 2020, the company disbursed approximately USD 30 million in significant fines (amounts above USD 10,000) for noncompliance with environmental laws and regulations.

Socio-environmental expenditures GRI 203-1

In 2019, Vale implemented the new Socio-Environmental Investment Policy, an investment in benefits and destined directly for third parties, mainly for society. The policy was approved by the Board of Directors and regulates an evaluation mechanism that involves registering investment requests in a system followed by an opinion on the merits of the investment. The requests are also analyzed in terms of Vale's anti-corruption rules, through checks conducted by Corporate Security, and adherence to the Anticorruption Policy by the Corporate Integrity area.

In the last year Vale invested USD 390 million in social investments, including projects related to the Dam I reparation in Brumadinho. Of the total amount, 69% was invested in voluntary and mitigating actions, of which 56% were made through our own initiatve, 13% through incentive laws, and 31% through mandatory actions.

Among the voluntary investments, the most noteworthy are those aimed at health (43%) – including actions to combat COVID-19; urban infrastructure (12%); culture (12%); education (6%); and social protection (6%).

In addition to these investments linked to the Social and Environmental Investment Policy, Vale contributed USD 609.9 million in environmental expenditures, with 80% in mandatory actions and 20% in voluntary actions, including Brumadinho-related expenditures. The main expenditures, of the total, were related to water resources (21%), environmental liabilities (18%), waste (13%), environmental conservation (13%), and atmospheric emissions (11%).

Read more

http://www.vale.com/esg/pt/Paginas/InvestimentoSocial.aspx

Environmental

- Dams
- Biodiversity
- Ecoefficiency
- Climate Change

Environmental

Vale depends on natural resources and ecosystem services in its operations. The management of environmental issues is conducted accordance to the VPS Integrated Management System (Vale Production System). Its processes are conducted in all operations of the company worldwide, in compliance with legislation, the guidelines of the International Finance Corporation (IFC) and the Sarbanes-Oxley Act. (Read more about Vale's integrated management system on page 67).

The socio-environmental programs and plans that support the process of analyzing and granting environmental licenses involve goals and indicators related to risk management; measures to prevent and mitigate impacts on water quality, air quality, soil or condition quality , community nuisance, biodiversity, and relevant regulatory issues.

Among the environmental themes, material topics for Vale are dams, biodiversity, eco-efficiency and climate change.

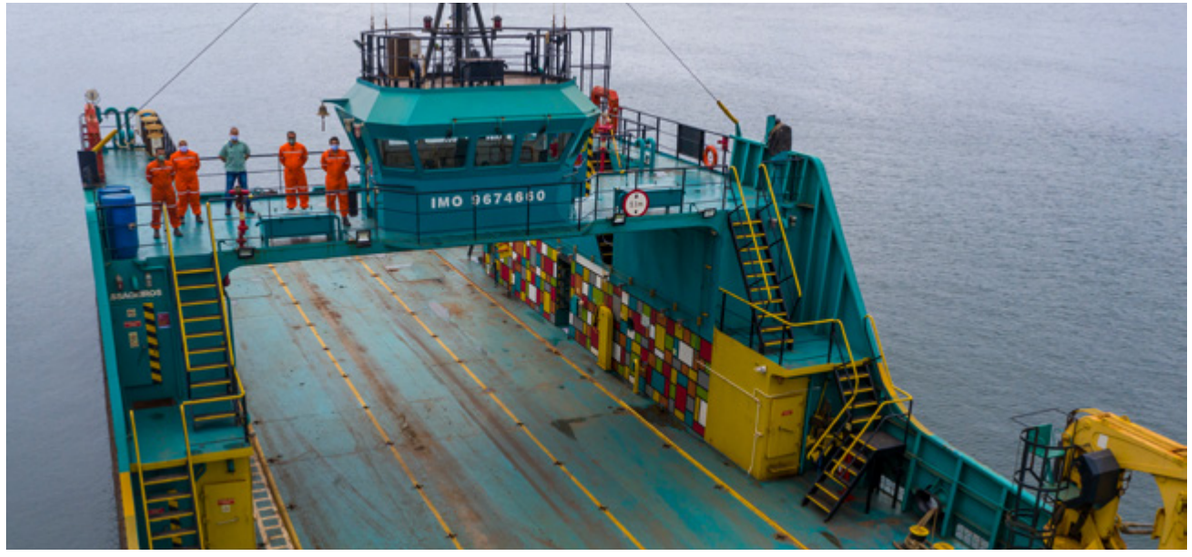
Environmental incidents

All environmental[2] incidents at Vale are recorded and treated. The company follows international guidelines to manage environmental incidents, governing everything from initial communication, to adopting immediate actions and investigating causes, to implementing corrective actions to eliminate the undesired effects of the event and recording lessons learned.

In 2020, there were three environmental incidents considered with critical environmental severity and thirteen with serious environmental severity according to the risk classification contained in the corporate standards.

The main environmental incidents were related to non-standard effluent discharges, all events are distributed according to the following table.

Vale Integrated Management System (VPS) conducts management of environmental issues at the company



Relationship between environmental incidents and negative impacts generated

Country	Incident classification (number)	Environmental impact
Brazil	1 critical	Changes in water quality
	8 severe	Changes in water quality
Canada	2 critical	Changes in water quality
	2 severe	Noise and vibration
	1 severe	Change in air quality
New Caledonia	2 severe	Changes or reduction in biodiversity

Note: All incidents were investigated by a multidisciplinary group. The adequate investigation enables us to identify contributing factors, reduce risk, include new environmental controls and improve industrial processes.

[1] Incident: An unplanned event that resulted, or could have resulted, in loss or impact.

[2] Environmental Incidents: Unplanned events that result in adverse environmental impact.

Dams

Environmental material topic

Dams

SDG 3 6 9 12

GRI 103 G4 MM3,
SASB EM-MM-150a.1 and
SASB EM-MM-150a.2

This section covers our dam risk management, emergency response, and mining-metallurgical waste management.

The Dam Safety Policy and Mining Geotechnical Structures approved in October 2020 by Vale's Board of Directors sets forth guidelines and commitments to manage critical assets and control the risks associated with management systems.

The Board of Directors also approved in December 2020 the Mining-Metallurgical Waste Management Policy, which sets down guidelines and commitments for sustainable and efficient management of mining-metallurgical waste throughout the production chain.

The dam management model follows standards and protocols of the ICMM, Global Industry Standard Tailings Management (GISTM), Mining Association of Canada (MAC), and Canadian Dam Association (CDA). **GRI G4 MM3**

See more information about the G4 MM3 (Mineral Waste) indicator in the ESG Databook at http://www.vale.com/brasil/EN/sustainability/integrated-reporting-2020/Pages/default.aspx.

The company has planned to significantly reduce the use of dams and will invest in solutions to replace wet processing with safer and more sustainable processes. This is the case of dry processing, which will reach 70% of our iron ore production by 2024. Regarding the rest of the wet production, 16 percentage points will use the dry filtering and stacking system for tailings treatment, which will require approximately USD 2.3 billion by 2025. The system is being implemented at the Vargem Grande, Itabira and Brucutu complexes, contributing to less dependence on the use of tailings dams.

Vale also plans to increase the development of new technologies, such as dry magnetic separation of iron ore, made possible by the New Steel acquisition in 2018, currently at the testing phase.

In addition, Vale has invested in new technologies to use tailings, within the logic of the circular economy; for example, by implementing the pilot block factory in 2020, at the Pico mine in Itabirito (MG).

Where Vale's dams are located GRI G4 MM3

At the date of publication of this report (Apr/2021), Vale had 157 dams in Brazil, of which 133 (including 2 drained piles) in the ferrous minerals business and 24 in basic metals, registered with the National Mining Agency (ANM, acronym in Portuguese). Of this total, 105 dams (94 of which are for ferrous minerals and 11 for base metals) are subject to the Regular Safety Inspection Report on a semi-annual basis covered by the National Dam Safety Policy, pursuant to Ordinance 70,389/2017.

In Ferrous Minerals, of the total 133, 32% are tailings dams and 86% are located in the state of Minas Gerais, southeastern region of Brazil.

In the North Atlantic Base Metals operations, there are 332 dam structures, mainly located in Canada (Ontario, Manitoba, Newfoundland and Labrador), totaling 356 structures for the business (added to the 24 in Brazil). Of these structures, 56 are tailings dams and 14 are inactive dams, most of which are located in Canada and have their performance publicly reported in accordance with the Mining Association of Canada's Tailing Dams Management Guideline (MAC).

105

dams covered by the National Dam Safety Policy

Learn more

Information about the G4 MM3 (Mineral Waste) indicator in the ESG Databook at http://www.vale.com/brasil/EN/sustainability/integrated-reporting-2020/Pages/default.aspx

Canaã dos Carajás, Pará, (PA), Brazil, 12/03/2020 - aerial photo, with drone of the Sossego mine dam
Photo: Ricardo Teles

Vale's Iron Ore Dams

All 133 located in Brazil:

registered with the National Mining Agency (ANM)

- **144 in Minas Gerais**
  in the cities of Nova Lima, Ouro Preto, Brumadinho, Sabará, Catas Altas, Congonhas, Jeceaba, Barão de Cocais, Belo Vale, Itabira, Itabirito, Mariana, Rio Acima, Rio Piracicaba, Santa Barbara and São Gonçalo do Rio Abaixo
- **13 in Pará**
  in the cities of Canaã dos Carajás and Parauapebas.
- **6 in Mato Grosso do Sul**
  in the city of Corumbá.

43 tailings dams all located in Brazil:

In the states of Minas Gerais, Pará and Mato Grosso do Sul, and in the cities of Jeceaba, Brumadinho, São Gonçalo do Rio Abaixo, Barão de Cocais, Itabirito, Sabará, Rio Acima, Santa Bárbara, Ouro Preto, Rio Piracicaba, Itabira, Mariana, Corumbá, Nova Lima e Parauapebas.

More data on dams

Learn more

Understand what they are and how they operate: http://www.vale.com/brasil/EN/aboutvale/reports/atualizacoes_brumadinho/Pages/Learn-more-about-Vales-dams.aspx

Access

Access lists of emergency-level structures, geotechnical structures, and tailings dam detailing projects: http://www.vale.com/esg/en/Pages/ControlManagementDams.aspx

New dam management system

In 2020, Vale prioritized the implementation of the new Tailings & Dams Management System (TDMS).

It also implemented the routine management, performance and risk system (RPR), which covers all strategic aspects of dam safety and tailings deposit.

Routine

Continuous verification of operational discipline

Basic Guidelines on Geotechnics

- Definition of routine indicators
- Periodic evaluation by the geotechnical team
- Panels with the main performance indicators presented at operational meetings

Performance

Continuous verification of dams' geotechnical performance

Engineer of Record (EoR)

The Engineer of Record is a licensed professional engineer (an individual) in the relevant jurisdiction. They are employed by an engineering firm and supported by a team of professionals, plus they oversee all aspects of a tailings storage facility or dam, including construction, operation, expansions or design modifications. The EoR also conducts periodic inspections to confirm that the facility or structure is working and being operated in accordance with the project's intent. 17 EoRs have been hired for the iron ore operations.

The Engineer of Record (EoR) is responsible for:

- Dam safety inspection;
- Safety report prepared monthly based on geotechnical monitoring and site inspections;
- Summary reports shared with senior executives;

Risks

Mapping failure modes and critical controls

Risk assessment of the dam portfolio through HIRA protocol

- Full integration with Vale's Business Risk Integrated Manegement, Enterprise Risk Management (ERM), with critical controls being monitored on the Bwise platform.
- Every dam portfolio covered by the end of 2022;
- Three global consultancies supporting Vale.

Purposes of dam management improvement

- Ensuring the physical stability and safety of the structures
- Meeting legislative requirements
- Promoting continuous improvement of management
- Communicating with transparency to stakeholders near dams about the risks to which they are potentially exposed.
- Properly allocating resources to prevent and/or mitigate impacts of geotechnical risks and implement management through a control framework.

Featured in performance

- All business units to have an Engineer of Record by 2021
- Inspections and ongoing monitoring performed
- Periodic and immediate reports for senior management developed
- Extensive investigation conducted of the current constructive conditions of all geotechnical structures

Having an Engineer of Record at the dams adds greater reliability and quality of safety

In 2020, Vale implemented the Engineer of Record (EoR) model in 100% of the dams that serve the Iron Ore business in Brazil.

An EoR is recommended by the Mining Association of Canada (MAC), the Canadian Dam Association (CDA) and the Extraordinary Independent Consulting Committee for Investigation. The engineer's role is to give greater reliability and quality to the dam safety monitoring and review process.

Dam risk management

Risk management is conducted according to the Global Industry Standard on Tailings Management (GISTM), and three monitoring centres that oversee more than 100 dams are part of the Vale's management structure.

Risk Assessment

- To be performed on 100% of Vale's risk assessment dam portfolio (HIRA) by the end of 2022
- 100% connected to Vale's Integrated Business Risk Management (ERM)
- Strict application of updated emergency level requirements

Safety in the construction of structures and storage of tailings

In 2019 and 2020, Vale participated as a member of the International Council on Metals and Mining (ICMM) Working Groups and in the developmento of the Global Industry Standard Tailings Management (GISTM). It has been adopted in order to improve its safety processes in all phases of tailings storage facilities construction, in their life cycle.

The year 2023 is the deadline for completing implementation of the new Vale System, the Tailings & Dams Management System (TDMS) for our Ferrous, Coal and Base Metals businesses. The alignment between Vale's TDMS and GISTM is high. When completed, all GISTM principles and recommendations shall be addressed in dam management and processes.

For now, Vale is in the process of implementing formal indicators to evaluate the effectiveness of our dams and tailings management. Currently, the company monitors the dams' structures, evaluating performance, routines and risks.

Initiatives undertaken to implement the GISTM

- Created an organizational structure, policies and processes, risk assessment and inclusion of the Engineer of Record.
- Achieved cultural transformation in the management process.
- Formalized the main normative documents and standardized protocols.
- Publicly disclosed dam information with transparency .

Learn More

Learn about the GISTM global standard at https://globaltailingsreview.org/global-industry-standard/

Emergency **Action Plans** for Mining Dams (PAEBM)

Part of our Dam Safety Plan (PSB) is the Emergency Action Plans for Mining Dams (PAEBM), a technical document filed with the City Halls and municipal, state, and federal Civil Defenses, with immediate actions for the case of an emergency. The protocol seeks:

- To avoid or minimize loss of life and social, economic and environmental impacts.
- To identify and classify situations and/or various events that may put the integrity of the dam structure at risk.
- To establish emergency actions.
- To inform the communication flow with the several agents involved.

Learn more

Read more about PAEBM at http://www.vale.com/esg/en/Pages/ControlManagementDams.aspx

PAEBM Measures

Local communities are involved in emergency preparedness and response processes, carried out according to GISTM principle 13 (preparing for emergency response in view of failures in tailings disposal structures), which comprise:

- Emergency response training with communities in regions exposed to the risk of damage.
- Partnership with the local Civil Defense to ensure the appropriate conditions in emergency protocol simulations.
- Sirens and alarms installed in strategic locations.
- Teams and communication channels dedicated to community dialogue.
- Full support to re-establish the living and working conditions of people affected by the resettlement in the event of mandatory removal.

Dam de-characterization

After the failure of Dam I at the Córrego do Feijão Mine in Brumadinho (MG), Vale accelerated our upstream dam de-characterization plan to definitively terminate the use of such dams. De-characterization (or decommissioning) is the process that eliminates the characteristics or function of the dam, mitigating the risk to neighboring communities and the environment. After the works have been completed, the structure loses its capacity to retain tailings and water, and is reincorporated into the local environment.

Status of the de-characterization plan

The upstream structure de-characterization plan was updated in September 2020, based on information and studies on Vale's structures that are being continuously updated, considering 29 geotechnical structures, comprising: 14 dams, 13 dikes and 2 drained stacks. In addition to the structures to be de-characterized, we have adopted another plan to build containment structures downstream from some dams to reduce their impacts on people and the environment. These structures act as a barrier to contain tailings in the event of dam failure.

In 2019, the de-characterization of the 8B Dam and Dikes 2 and 3 at Kalunga were completed. In 2020, Vale completed other important milestones:

- De-characterization of the Pondes de Rejeitos Dam– completed in September 2020, currently awaiting the evaluation of the de-characterization by the National Mining Agency.
- De-characterization of the Rio de Peixe Dike, completed in December 2020, waiting for the evaluation of the decharacterization by the National Mining Agency and the State Environmental Foundation;.
- Construction of the B3/B4 dam containment, a structure 33 meters high with the capacity to retain all tailings from the B3/B4 Dam in case of rupture, completed in October 2020.
- Phase 1 of the containment structure downstream from the Forquilhas and Grupo Dams, completed in September 2020, reaching the elevation 949 (77 meters) high with the capacity to retain all tailings of Forquilhas III or Forquilhas I and IV Dams, or Forquilhas II and IV Dams, in case of rupture. Phase 2 will be completed in 2021, with a height of 95 meters and the capacity to retain all the tailings of Forquilhas I, II, III, IV and Grupo Dams, in case of simultaneous rupture of all structures.
- Commencement in third quarter 2020 of preliminary and infrastructure works, which launch the de-characterization of the Sul Superior Dam, and the commencement in fourth quarter 2020 of the de-characterization of B3/B4 Dam with the first stage of the removal of PDE X, a structure upstream from this dam.

There are in the dam de-characterization plan:

29
geotechnical structures

14
dams

13
dikes

2
drained stacks

Serra Norte Dam, Carajás (PA)
Photo: Ricardo Teles

Geotechnical structures de-characterization prediction

Number of upstream geotechnical structures (cumulative)	Year of characterization
5	2019 - 2020
8	2021
14	2022
16	2023
16	2024
19	2025
19	2026
23	2027
27	2028
29	2029

Measures for upstream dams at emergency level 3[1]

Measures for upstream dams in critical safety conditions	Sul Superior	B3/B4	Forquilhas
Containment structure	2020	2020	2021[2]
Forecasted reduction in the emergency level	2025	2023	2021
De-characterization	2029	2027	2028

1 Upstream tailings dam is the type of dam whose body is built according to the use of tailings by means of progressive raisings on the deposited tailing. Raising is built in the opposite direction of the water flow (upstream). The dam requires coarse tailings so that the shell can be built. 2 Dam Level: Indicator for the volume of the material conditioned in the dam and its safety conditions. Currently, there are four: Level 0: It indicates the normal status. Level 1: It indicates some instability. The 24-hour reinforced monitoring begins. Level 2: It indicates everyone shall evacuate the Self-Rescue Zone as soon as the sirens are actuated. This evacuation procedure will be assisted by Vale and the Civil Defense. Level 3: This level indicates that the people in the Secondary Safety Zone shall be provided with assistance through educational measures and evacuation training. These trainings are scheduled by the Civil Defense and previously communicated to the local population. The sirens are also actuated to certify that there is no one in the Self-Rescue Zone. (Source: http://www.vale.com/brasil/EN/aboutvale/reports/atualizacoes_brumadinho/Pages/Glossary.aspx#LetraD)

2 Structure with capacity to retain the tailings from the Forquilha I, II, III, IV and Group structures, in case of a simultaneous rupture.

Learn more

See more at: http://www.vale.com/esg/en/Pages/de-characterization-plan.aspx

Implementation of the downstream containment (backup dam) of the Sul Superior Dam, in Barão de Cocais.

Biodiversity

Environmental material topic

Biodiversity

GRI 103 | 304,
GRI G4 MM1 | MM2
SASB EM-MM-160a.1,
SASB EM-MM-160a.2 and
SASB EM-MM-160a.3.

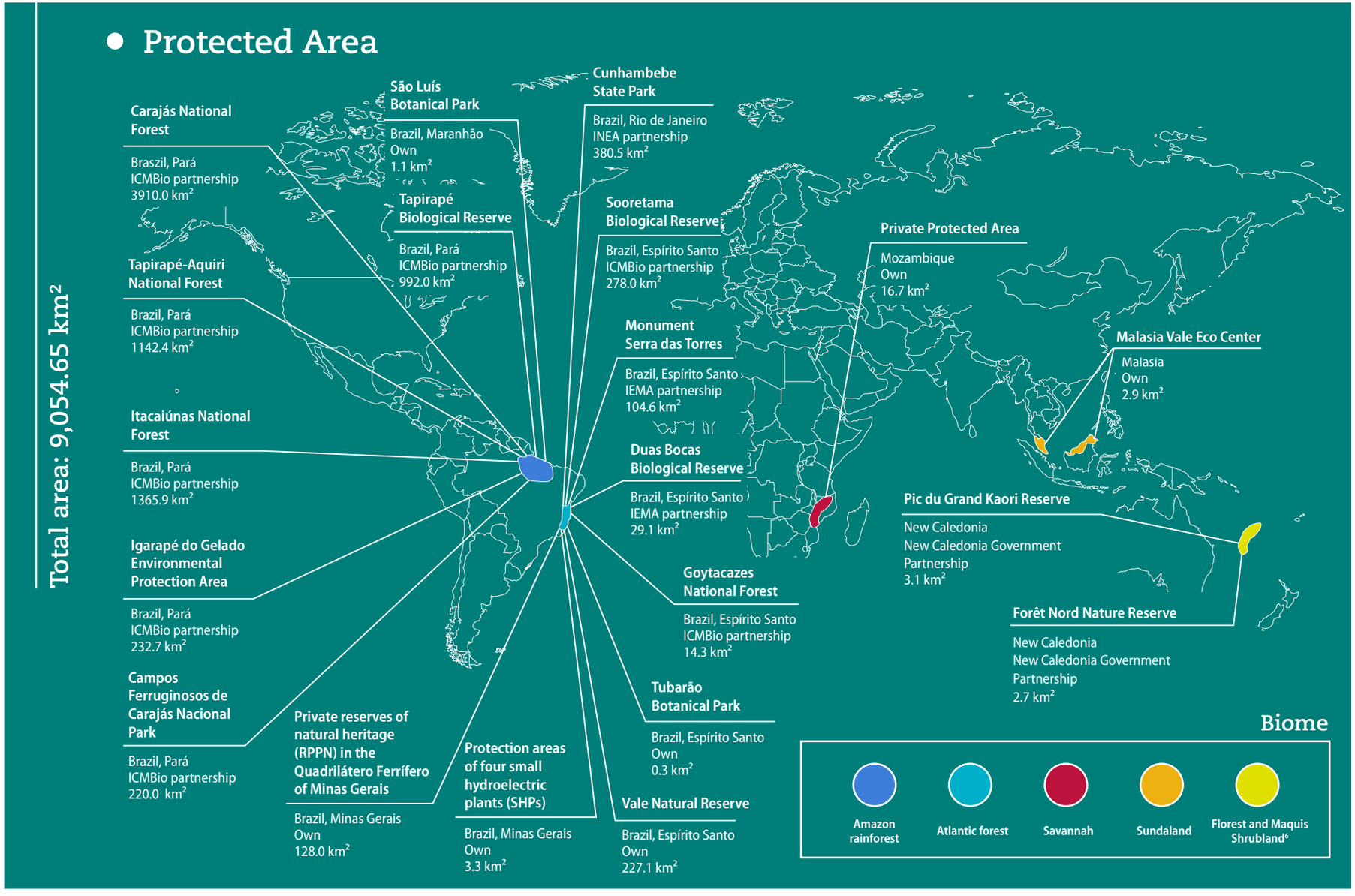
SDG 6 12 13 14 15

This topic covers conservation and restoration of biodiversity, and Mining in the Amazon.

Vale's operations currently occupy 818,39 km² in several regions, including areas of high cultural value and high relevance to biodiversity.

Vale actively participates in conserving 905 thousand hectares, in its own or third parties' areas. More than 80% of these areas are located in the Amazon, where Vale has been performing biodiversity conservation actions for more than 30 years. GRI 304-3

One example of our restoration efforts in Carajás (PA) stands out: restoring forest connectivity by recovering areas, restoring habitats and forming ecological corridors around the Eliezer Batista S11D Complex. Currently, almost five thousand hectares of forest are in the process of being restored.



Commitment to Recovery and Conservation

Vale

- Protects or helps protect an area almost 11 times larger than the total area occupied by the company's operational units.
- Has its Forestry Goal as to recover and protect over 500 thousand hectares of areas beyond the company's borders by 2030. At least 100 thousand hectares of these areas will be through socio-environmental impact businesses, with special emphasis on Agroforestry Systems (SAFs acronym in Portuguese), in line with the international scenario of a low-carbon economy.

Forestry Goal – Results 2020

- 1,053.78 ha – Pilot of the R&D of Natives[1]
- Agroforestry and agrosilvopastoral systems as a lever for environmental recovery
- 13,368.9 hectares – In partnership with IEMA/ES, Serra das Torres State Natural Monument at Duas Bocas Biological Reserve

1 To ensure that this goal is met by 2030, and to seek innovative solutions and new ways of "thinking about reforestation", the Vale Fund and the Vale Natural Reserve, maintained by Vale, have together developed this pilot project for large-scale forest recovery.

- **52,846 thousand** hectares protected in 2020
- 38,053.05 hectares – In partnership with INEA/RJ, Cunhambebe State Park
- 1,425 hectares – In partnership with ICMbio, Flona de Goytacazes

Mapping risks and impacts to biodiversity

Vale depends on natural resources and ecosystem services, such as water supply and climate regulation. At the same time, Vale impacts biodiversity and these services. This demonstrates the importance of natural capital to our business.

Biodiversity management is based on the guidelines of our Sustainability Policy and prioritizes the analysis of risks, preventive measures and mitigation of impacts; the neutralization of impacts to biodiversity; and the creation of positive environmental and social impact in the locations where we operate. **GRI 103 | 304**

To manage risk, create preventive measures and mitigate biodiversity impacts, Vale prioritizes species and habitats. To reduce risks to habitat and our interference in populations of these species, we identify interventions and define actions to reduce them, rescue species, produce seedlings, re-establish new populations of species, and recover habitats.

In 2020, Vale published the normative standard that regulates our biodiversity management – risks and impacts – for all areas of our business, operations and projects.

The document adheres to the ICMM principles and IFC performance standard six, which address biodiversity management guidelines to protect and conserve habitats. These guidelines sprang from processes developed in partnership with The Biodiversity Consultancy (TBC) in a pilot project at the S11D Complex Mine in 2019. **GRI 103 | 304**

Biodiversity Management: Actions taken in 2020

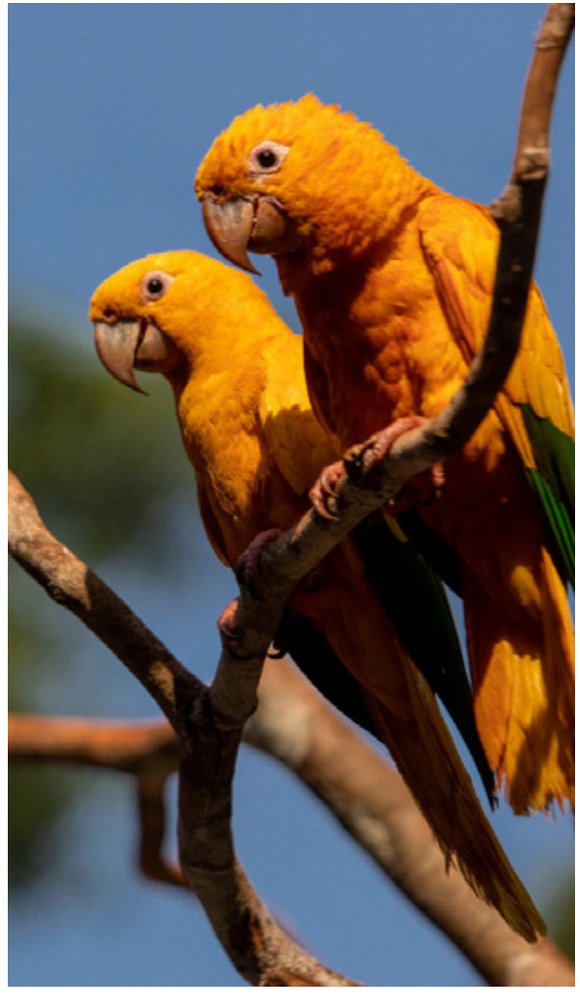
- Qualifying business units in Brazil.
- Implementing guidelines and processes in pilot projects in Carajás (PA) and in project planning, prioritizing species and risk assessment.
- Elaborating on action plans to prevent and/or minimize impacts on critical and priority species and to plan recovery and restoration actions.

In 2020, we analyzed 61 operational units' need for management plans to address legal requirements and/or the value of biodiversity. Of this total, 51 units (84%) were identified that require the elaboration of management plans. To of these units, 58 plans have already been implemented, some of which include more than one plan. The plans mainly cover actions related to impact mitigation, restoration, compensation, and monitoring.

Only two international units require a biodiversity management plan, one is being implemented and the other has a future proposal. GRI G4 MM2

In the last year, 6,234 species whose habitats were affected by or near Vale's operations were registered: 2,925 of fauna and 3,309 of flora.

Out of this total, considering the main threat categories (Vulnerable, Near-Threatened, Endangered and Critically Endangered), 144 are on Brazil's Ministry of the Environment list of threatened species and 135 are on the global list of the International Union for Conservation of Nature (IUCN). Detailed data, with all categories analyzed according to IUCN methodology, are presented in the table below.



Species included in red lists have habitats affected by our national and international operations GRI 304-4	MMA (2014)	IUCN (2018)
Vulnerable (VU)	74	60
Near-Threatened (NT)	0	41
Endangered (EN)	57	28
Critically Endangered (CR)	13	6

Relevant impacts of activities, products and services on biodiversity

GRI 304-2

Even though we are always looking for the best technologies and methods that interfere less with natural resources, our operations impact natural habitats and their biota directly or indirectly. Impacts mainly include habitat conversion, loss and/or reduction, air quality alteration, and specimen loss.

Impacted and recovering areas GRI 304-1	km²
Deployment of full permanent recovery areas	16.98
Deployment of full interim recovery areas	2.20
Total area suppression	12.80
Recovery deployment in wilderness areas	3.58
Recovery deployment in hotspots	15.15
Suppression in wilderness areas	4.28
Suppression in hotspots	7.68
Areas that Vale protects or helps protect	9,054.65

Impacted areas and categories of relevance/ value for biodiversity GRI 304-1	km²
Total impacted area	818.39
Total impacted area in wilderness	324.82
Total impacted area in hotspots	381.77
Impacted areas in protected areas	260.24
Impacted areas adjacent to protected areas	384.19
Impacted areas in priority areas for conservation outside protected areas	103.89

Note: It is important to highlight that protected areas impacted by Vale's operations refer to conservation units for sustainable use (according to Brazilian legislation and referring to IUCN categories V and VI), with creation decrees that allow Vale activities to be executed on site.

Recovery of Degraded Areas

Opening and closing balance G4 MM1	km²
Impacted areas (opening balance)	628.10
Impacted areas in the reference year	12.73
Areas in permanent recovery in the reference year	16.03
Impacted areas (closing balance)	624.79
Impacted areas adjacent to priority areas for conservation outside protected areas	156.36

Knowledge expansion and research

Actions to prevent biodiversity risks and impacts depend on research investments. We highlight the following Vale projects:

- Expanding knowledge, reproduction and reintroduction of endemic and threatened species of Carajás (PA);
- Applyng environmental DNA to characterize Amazonian biodiversity;
- Conserving endangered and endemic species of the Quadrilátero Ferrífero flora (Biofactory);
- Reproducing endangered species of the Amazon fauna in Vale Zoobotanic Park;
- Studying the genetic diversity and conserving endangered species of bats in Carajás (PA);
- Sustainably using jaborandi in the Carajás National Forest – applying scientific knowledge to conservation and income generation for the local community; and
- Studying big cats' competition, coexistence and general health in the Atlantic Forest.
- The Vale Technological Institute – Sustainable Development (ITV-DS Portuguese acronym) generated 86 publications in 2020 profiling our research on the Amazon's physical, social and biodiversity aspects (read more about ITV-DS on page 149).

Vale's biodiversity management is aligned with the commitments and goals of the Convention on Biological Diversity (CBD)

Participation in external organizations for biodiversity GRI 102-12 | 102-13

Vale's biodiversity management is aligned with the commitments and goals of the Convention on Biological Diversity (CBD). In 2020, the company actively participated in discussions on the global biodiversity agenda, conducted in the Brazilian Business Council for Sustainable Development (CEBDS acronym in Portuguese) and ICMM forums.

As a member of ICMM, Vale remains committed to the Council's principles, specifically Principle 7 on biodiversity conservation and land use planning. Vale is committed to Performance Expectation 7, not to operate in World Heritage Areas, and to implement and reinforce the impact mitigation hierarchy, without significant losses of biodiversity. In 2020, the company carried out a self-diagnosis in its operations and corporate areas.

During the year, the company also served as co-leader of the CEBDS Technical Chamber of Biodiversity, supporting and participating in discussions, helping to evolve the Brazilian Biodiversity Business Commitment and to elaborate the disclosure platform.

Vale also joined the Call for Action of Business for Nature, a union of companies and institutions seeking to reduce biodiversity loss.

More information about the results of the self assessment can be found in the ESG Databook at http://www.vale.com/brasil/EN/sustainability/integrated-reporting-2020/Pages/default.aspx.

Ecoefficiency

Environmental material topic

Eco-efficiency

GRI 103 | 303 | 305
SASB EM-MM-120a.1,
SASB EM-MM-140a.1 and
SASB EM-MM-140a.2

SDG 3 6 12 14 15

This topic covers consumption and efficiency processes in water management, effluent quality and discharge, atmospheric emissions (except GHGs) and air quality.

Atmospheric emissions and air quality

GRI 103 | 305

Vale is constantly improving its operational processes, environmental controls and monitoring and management systems to minimize the impacts of atmospheric emissions from its production processes.

Meeting one of the mapped ESG GAPs (see more on page 54) the company will announce, in 2021, global targets to reduce particulate matter, nitrogen oxides (NOx) and sulfur oxides (SOx), the main air pollutants emitted by its operations. The deadlines for compliance range up to 2030.

As a result of this commitment, we will make investments in process improvements, control technologies, monitoring, and management systems.

In partnership with environmental agencies, Vale is also responsible for monitoring the air quality around some units. To manage environmental monitoring, we have dedicated teams and environmental control centres operating 24 hours a day.

NOx, SOx and particulate matter emissions

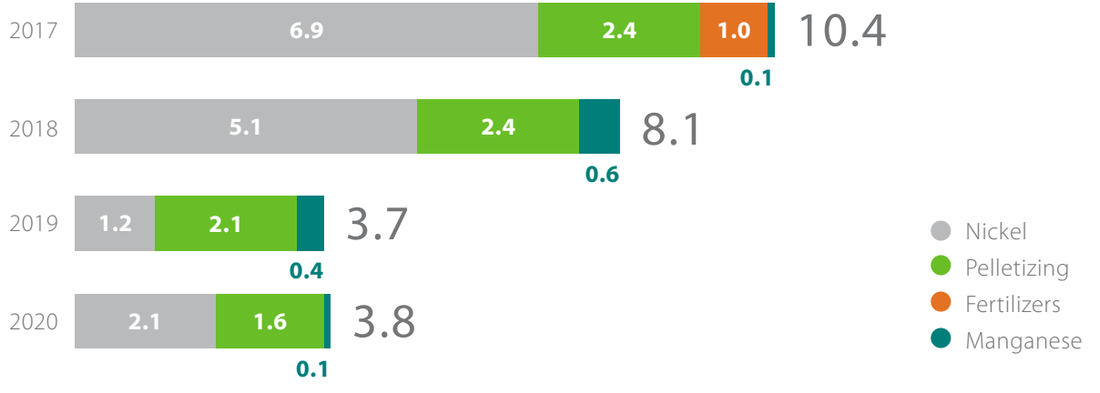
GRI 305-7

Vale invested approximately USD 69.7 million in operational improvements and adoption of new technologies to control and manage atmospheric emissions in 2020. See the results of these investments below.

Emission of particulate matter in 2020 remained at the 2019 level. All businesses, with the exception of Nickel, saw reductions. For operational reasons and increased production, the PTVI unit in Indonesia contributed to increased emissions of this parameter for the business.

Vale invested approximately USD 69.7 million in operational improvements and adoption of new technologies to control and manage atmospheric emissions in 2020

Emission of particulate matter (in a thousand tons) GRI 305-7



SOx Emission (in a thousand tons)

GRI 305-7

Business Area	2017	2018	2019	2020
Nickel	264.6	132.5	71.0	90.2
Logistics	3.4	2.5	2.3	0.5
Pelletizing	15.6	28.6	11.4	7.5
Fertilizers	6.7	5.8	0.0	0.0
Other business[1]	1.4	1.4	1.5	0.9
TOTAL	291.8	170.7	86.3	99.1

[1]Other businesses: Coal, Copper, Corporate, Manganese, Iron Ore and Energy

Emissions of sulfur oxides in 2020 increased by 15%. The Nickel business was the main contributor to this increase, particularly the Sudbury unit in Canada, due to operational variables. This unit quantifies SOx emissions using the mass balance methodology, which is subject to variable input and process characteristics.

NOx Emission (in a thousand tons)

GRI 305-7

Business Area	2017	2018	2019	2020
Logistics	26.6	22.4	11.8	3.5
Pelletizing	34.4	35.0	11.5	14.1
Iron Ore	6.9	6.8	1.6	0.5
Nickel	12.8	10.2	6.9	7.7
Other business[1]	6.1	7.5	3.2	0.9
TOTAL	86.8	81.9	35.0	26.6

[1]Other businesses: Coal, Copper, Corporate, Energy and Manganese

Emissions of nitrogen oxides was significantly reduced by approximately 24%. Key reasons include the railroads' operational efficiency and projects to change the energy matrix.

Dust emissions in Vitória (ES) GRI 305-7

The Tubarão Complex, located in the municipality of Vitoria (Espírito Santo State), is one of Vale's operational units, where a wide range of activities are carried out, including the rail transportation of ore from the Iron Quadrangle of Minas Gerais, the pelletizing industrial process, as well as port activities in a complex of terminals and piers focused mainly on coal imports and iron ore exports.

The movement of large volumes (about 100 million tons/year) of ore, pellets, coal, grains and fertilizers, and the production of pellets (the largest pelletizing complex in the world) have the potential to generate particulate matter (dust) in our operations.

It is not rare to see public agencies questionings seeking the reduction of the impacts, based on the improvement of the efficiency of the environmental controls along the production chain. As an example, on February 23rd, 2015, the Espirito Santo Legislative Assembly established a Parliamentary Inquiry Commission (CPI - Acronym in Portuguese) to investigate the origin of air pollution in Greater Vitoria. Vale was pointed out as one of the companies responsible for contributing to the dust emissions in the region. The CPI remains active, with periodic sessions in the Espirito Santo Legislative Assembly.

At the same time, as a result of an environmental investigation conducted by the Federal Police through Police Inquiry 523/2014, investigating the practice of environmental crime, an injunction was filed against the company. In a precautionary measure in which the Federal Police requested the temporary suspension of the exercise of economic activity by Vale, in the Port of Tubarão, until effective measures were applied to avoid potential environmental damage resulting from the fall of iron ore and emission of particulate matters into the atmosphere and the maritime area.

The Federal Justice of Espirito Santo ordered the suspension of Vale's activities at Pier II and Coal Pier of Tubar.o Port. Vale's operations were paralyzed for four days, when, after a judicial appeal filed by Vale, the Federal Regional Court of the Second Region suspended the effects of the injunction. Due to the environmental control measures implemented by Vale, and mainly due to the signing of the Environmental Commitment Term, which will be explained in more depth below, both the Police Inquiry and the Precautionary Measure were closed.

Vale acts and invests continuously in the improvement of environmental control systems. The entire production system at Tubarão Complex - from the arrival of the ore to loading onto ships - is carried out using available environmental control technologies. To improve atmospheric emissions control, in 2018 Vale voluntarily signed an Environmental Commitment Term with the Public Ministry of the State of Espirito Santo, the Federal Public Ministry and the State Government to implement 48 dust reduction targets, as recommended by the Environmental Company of the State of Sao Paulo (Cetesb) and the State Environmental Agency, after a technical assessment of the Tubarão Complex.

Vale will invest, until 2023, approximately USD 200 million for the implementation of these measures, which foresee the implementation of more than 6 km of new wind fences in the product storage yards; adequacy and/or enclosure of around 40 km of conveyor belts and more than 1,000 transfer points. The company will also invest in the installation of 14 fog cannons with a range of up to 150 meters in the pellet yards; coverage of more than 13,000 m2 of product and input handling areas; and sprinkling, with a cellulose-based product, on ore and coal stockpiles. With these investments, Vale expects to reduce, in comparison to 2010, 93% of its dust emissions from diffuse sources, such as yards, piers, belt conveyors, among others, going from an emission rate of around 300 kg/h (2010) to 21 kg/h in 2023. For the pelletizing plant chimneys, although complying with legal limits, Vale is seeking, as an emission limit, a concentration standard lower or equal to 15 mg/Nm3 from the European Community, much more restrictive than the national limit (70 mg/ Nm3) and the one established in the Operation License - LO 123/18, of 40 mg/ Nm3.

Learn more about the actions taken on the QR Code below.

Learn more

http://www.vale.com/brasil/PT/sustainability/vale-nas-comunidades/espirito-santo/Paginas/default.aspx

Actions taken in 2020 to reduce atmospheric emissions

Infrastructure

Made physical and electrical improvements in process and environmental controls at the Pellet Plant in Oman

Improved and expanded the use of artificial intelligence tools in analyzing and predicting environmental monitoring, with more effective preventive control

Fuel

- Used fuel with lower sulfur content in operational equipment

Planning

- Continued the Environmental Master Plan –Plano Diretor Ambiental (PDA) in Portuguese – a set of more than 150 initiatives that reinforce our commitment to sustainable operations in Tubarão, Vitória/ES, emphasizing improvements to our automatic particulate matter monitoring network

Research

- Partnered with educational institutions to study and develop dust controls.

Water resources

GRI 103 | 303

In 2020, we developed our Water and Water Resources Policy that establishes risk management and impact prevention processes for the entire production chain. It helps to preserve the volume and quality of surface and groundwater in hydrographic basins and marine areas, continuously improving the sustainable management and responsible use of water resources, and supports water accessibility and sewage processing projects for communities.

Vale has also adapted its global internal standard for management of water resources and effluents to the guidelines of the International Council on Mining and Metals ICMM.

The company also participates actively, directly or through representative entities, in forums on managing water resources in the hydrographic basins of regions where we operate, mainly in our area of influence, to contribute to discussions on water safety strategies.

Vale acknowledges that there is still room for improvement in effluent management. The company committed to set a target in 2021 to improve effluent management public reporting, in line with our commitment to eliminate the main ESG gaps by 2030.

Internal benchmarking

Vale created the Water Resources Forum that integrates operational unit teams to conduct technical discussions on how to manage water resources and effluents in a standardized way.

Teams present problems, propose solutions, discuss goals, and define and monitor the respective action plans.

Meetings take place every two months, with the participation of the operations' Water Resources Coordinators and other professionals. Relevant matters are presented to Vale's top leadership through Performance Meetings and the appropriate Risk Executive Committees.
Annually, advances in the management of these topics are presented to the Sustainability Committee.

Learn more

Read more at: http://www.vale.com/brasil/PT/Documents/arquivos_links/Plano_detelhado_GAPS_expansao_PT_15012021_1.pdf

2030 Water Goal

In 2018, Vale established the 2030 Water Goal to reduce the specific use of water by 10% (base year 2017). By 2020, it had achieved an 8.7% reduction. This goal is part of our 2030 Structural Plan for Water Resources. Its pillars are:

- Governance (responsible and responsibilities),
- Technical knowledge (monitoring plan, water balance, water availability and information analysis system),
- Water risk management,
- Strategy for responsible water resource management.

After reaching the goal, we will define new challenges, adhering to the performance expectations defined by the ICMM, which seek:

- Responsible water resource management that engages stakeholders in managing the hydrographic basin;
- Mapping of water risks and opportunities of the operations,
- Monitoring of the volume, quality, reuse and recirculation of water resources in all operations.

In 2020, Vale maintained our 2019 water reuse rate of 80%[1]. The company understands that its management strategy is the way to reduce water withdrawal from the environment.

8.7%

reduction of specific water use by 2020. The 2030 goal is **10%** of reduction

In 2020, we invested USD 125.3 million on water resource management.

Considering the high and low quality standards adopted by ICMM[2] for disposal, Vale disposed 52% of its effluents in high quality in 2020. The other 48% discharged, despite being considered low quality, comply with the disposal limits established by local legislation.

1 Stored volume does not count in the percentage of water reused.
2 ICMM standards:
- High quality: total Dissolved Solids < 5,000mg/l and pH between 4 and 10 and no components, chemical compounds and contaminants in concentration harmful to human health.
- Low quality: Total Dissolved Solids > 5,000mg/l or pH < 4 or >10 or have components or chemical compounds or contaminants in concentration harmful to human health.

Hydrical stress

	Region			Withdrawal volume
	Africa, Asia and Oceania	North America and Europe	South America	Overall Total
Withdrawal (in millions of m^3)				
High (40-80%)	1	0	0	1
Medium – high (20-40%)	0	0	3	3
Low – medium (10-20%)	0	0	10	10
Low (<10%)	33	47	51	130
Overall total	34	47	64	145
Consumption (millions of m3)				
High (40-80%)	2	0	0	2
Medium – high (20-40%)	0	0	0	0
Low – medium (10-20%)	0	0	9	9
Low (<10%)	15	41	56	112
Overall total	17	41	65	124
Disposal (Millions of m3/year)				
High (40-80%)	0	0	0	0
Medium – high (20-40%)	0	0	3	3
Low – medium (10-20%)		0	0	0
Low (<10%)	19	6	1	26
Overall total	19	6	4	29

Source: World Resources Institute (WRI)

For water resources, data is generally obtained through direct measurement, but in some operating units it is estimated using the nominal flow rates of the pumping systems and operating time. Vale has expanded its monitoring network and is working on the continuous improvement of the measurement processes, updating its equipment, measurement automation, and an integrated water data management system throughout the process cycle.

Water balance (in millions of m³)

Withdrawal

145

Use and reuse

699

Discharge after treatments

29

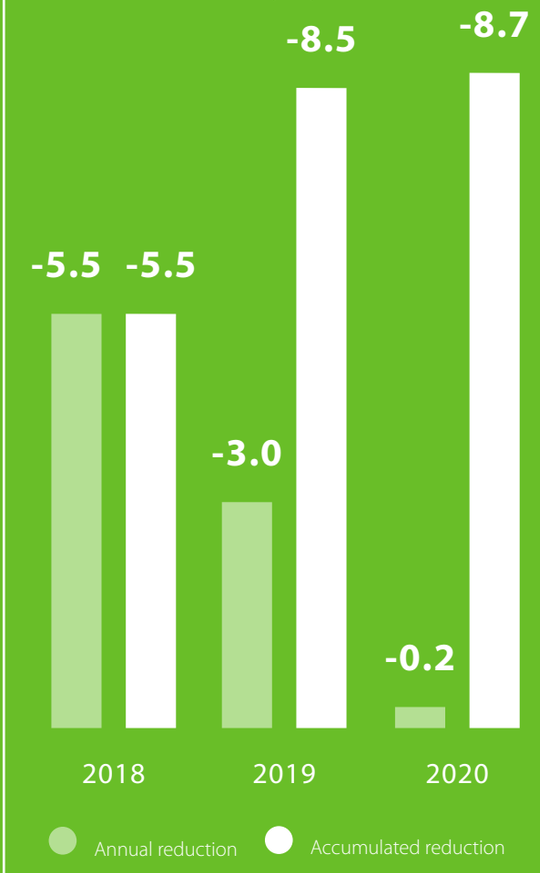
Reuse

554

80% of reuse[1]

1 Stored volume does not count in the percentage of water reused.

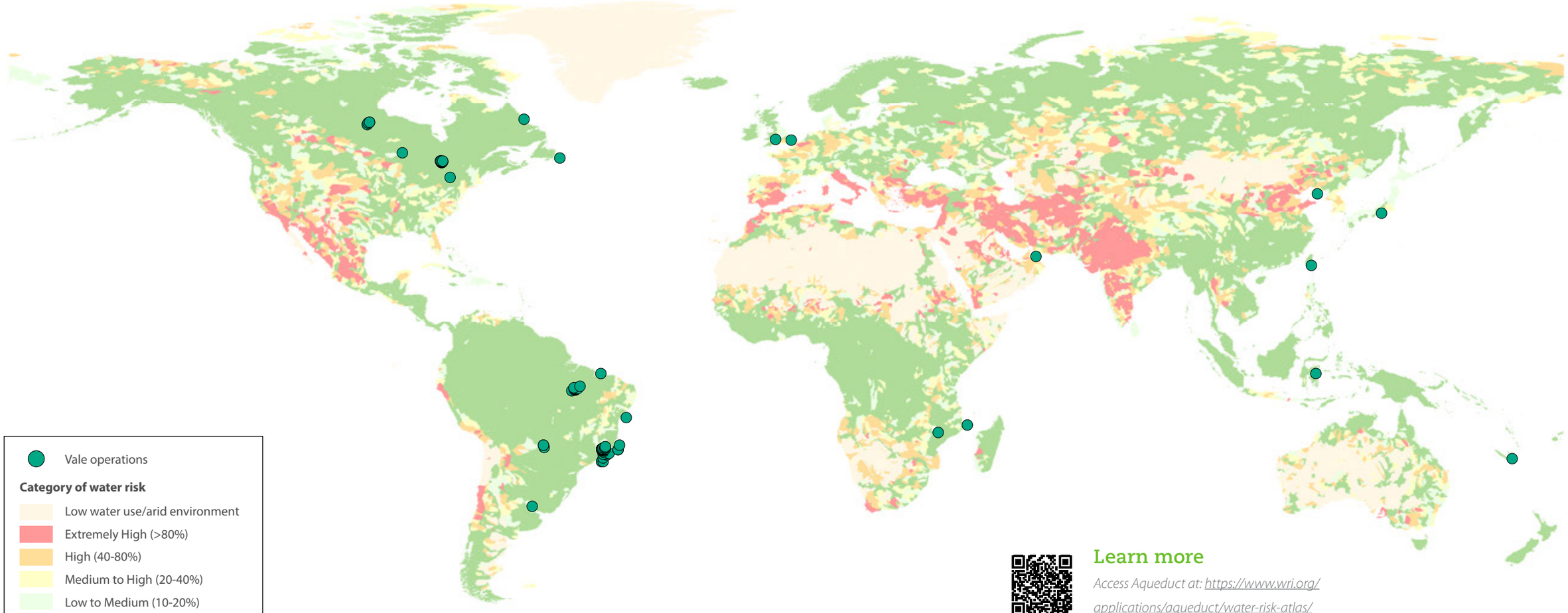
2030 Goal
Reduction* (%)



* Base year 2017

Water stress map

Source: World Resources Institute (WRI)



Learn more

Access Aqueduct at: https://www.wri.org/applications/aqueduct/water-risk-atlas/

Main **water resources** management actions in 2020

Technical Knowledge – Innovation and R&D

- Developed a continuous online water quality monitoring system (metals), for analysis through the Vale Institute of Technology Sustainable Development, and
- Developed equipment to continuously monitor water quality through sponsorship of and participation in a startup through Mining HUB in collaboration with the Brazilian Mining Institute.

Technical Knowledge – Management and monitoring

- Expanded and improved the quantitative monitoring network, with electromagnetic meters, fluviometric stations and real-time data transmission.
- Expanded the water resources data management system in the operational units.

Governance – Standards and processes

- Prepared and published the Water and Water Resources Policy.
- Adapted the Internal Global Standard for Water Resources and Wastewater Management to ICMM guidelines.
- Verified our operational units' adherence in Brazil to the global internal standard for water resource and effluent management.
- Instituted the Water Resources Forum.
- Managed water risk.
- Analyzed water risks and sensitivity to operations.
- Practiced responsible management strategy.

Disclosure of Results

Vale also reports its results by disclosing Global Reporting Initiative (GRI) indicators (available in their entirety in the ESG databook), the Carbon Disclosure Project (CDP) Water Security Questionnaire and the ESG Portal.

Climate Change

Environmental material topic

Climate Changes

GRI 103 | 201 | 302 | 305
SASB EMMM-110a.1,
SASB EM-MM-110a.2 and
SASB EM-MM-130a.1.

SDG 7 13

This topic covers energy consumption and efficiency, greenhouse gas (GHG) emissions and risks and opportunities related to climate change.

Vale acknowledges that climate change represents one of the greatest challenges faced by society. To respond to this challenge, the company is committed to limit the increase in the global average temperature to less than 2° C, as defined in the Paris Agreement.

Vale's Climate Change Policy presents the guidelines and management processes to uphold this commitment, focusing on reducing greenhouse gas (GHG) emissions, environmental preservation and reforestation, the use of renewable energy, and energy efficiency and alignment of the business portfolio with the transition to a low-carbon economy.
GRI 103 | 302

To guide the implementation and delivery of our climate change commitments, the company created the Low-Carbon Forum, a group led by the CEO and composed of vice presidents and their technical teams. The initiative reflects top leadership's engagement on the topic, helps to monitor performance in upholding our commitments, and drives constant advances in Vale's climate agenda.

In 2020, goals related to the climate agenda represented 10% of our employees' short-term variable remuneration, including our CEO and executive vice presidents. A goal composed of indicators of greenhouse gas emissions, forest recovery and protection, and renewable energy was also linked to leadership's long-term remuneration.

Vale created the Low-Carbon Forum, a group led by the CEO and composed of executive vice presidents and their technical teams

Corporate areas that work on climate change and operational areas that implement the decarbonization strategy also have specific additional variable compensation targets for project implementation, emissions management and/or risk management associated with climate change.

Vale has invested efforts and resources to reduce GHG emissions and mitigate impacts related to climate change. In 2020, investments total was USD 81 million, encompassing a series of initiatives distributed over three main solution routes:

- Energy efficiency and renewable electricity,
- Use of bioenegy, and
- Electrification and implementation of innovative technologies.

These initiatives are at different stages of maturity, from conceptual studies, pilot projects, or already implemented, with a longer implementation timeframe for those considered disruptive.

To account for its GHG emissions, Vale follows GHG Protocol guidelines – for corporate inventories and the specific Scope 3 standard – developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).

Annually, Vale publishes its strategy and results in the CDP Climate Change program, communicating the main material risks and opportunities related to climate change. The score Vale obtained in the CDP 2020 (A-) for 2019 shows an evolution in management and alignment with the main reference guidelines on the topic, such as GHG Protocol, the Task Force on Climate Related Financial Disclosures (TCFD) and the GRI.

Vale also helped to build the TCFD framework, an initiative we have supported since 2017. Read more about management risk and climate change opportunities indicators recommended by TCFD on our ESG Databook at http://www.vale.com/brasil/EN/sustainability/integrated-reporting-2020/Pages/default.aspx, in the 'TCFD' tab.

Vale recently joined the Task Force on Scaling Voluntary Carbon Markets, an initiative that brings together more than 40 leaders and companies from around the world with the objective to expand voluntary carbon markets in a robust and transparent manner, making them a structured and viable alternative to combat climate change (https://www.iif.com/tsvcm/).

Read more about management risk and climate change opportunities indicators recommended by TCFD on our ESG Databook.

Vale's Carbon-Neutral Strategy establishes the following commitments:

- To become a carbon-neutral mining company (Scopes 1 and 2) by 2050.
- To reduce Scope 1 and 2 absolute emissions by 33%, by 2030, compared to the base year 2017, in line with the Paris Agreement. This goal was defined based on the calculation tool of the Science Based Target Initiative (SBTI), and is therefore a level compatible with the limitation of the increase in global temperature of less than 2°C (scenario well below 2° C) and considered a science-based goal. Of the total of 14.1 million tons of CO_2 equivalent $MtCO_2e$ (2017), a reduction of 4.6 $MtCO_2e$ is expected, in order to achieve 9.5 $MtCO_2e$ by 2030. For Scopes 1 and 2, no compensation is considered; the entire strategy is related to reducing internal emissions.
- To reduce Scope 3 net emissions by 15%, by 2035, compared to the base year 2018. The reduction volume was defined using the Science Based Target Initiative (SBTI) calculation tool, the Absolute Contraction Approach method, so it is also considered a science-based goal and compatible with limiting the global temperature increase to 2°C.
- To adopt a carbon shadow price of USD 50 per ton of CO_2e, in new projects and investments, which has already adopted since 2020.
- To adopt a carbon shadow price of USD 10 per ton of CO_2e, for carbon sequestration in forest restoration and reforestation projects, which has already adopted since 2020.
- To consume 100% of our electric energy from renewable sources by 2025 in Brazil and by 2030 globally.
- To recover and protect an additional 500,000 hectares by 2030.

By 2050, Vale wants to become a carbon-neutral mining company (Scopes 1 and 2)

Greenhouse gas (GHG) emissions GRI 103 | 303

In 2020, Vale's activities resulted in the emission of approximately 490.8 million tons of CO_2e[1] . The company acknowledges that it is only possible to lead the mining industry towards a low-carbon economy if we transform the value chain to meet this objective.

Vale's Scope 3 emissions (from our suppliers and customers) represent most of its total emissions, but they are not under our direct control. They represent almost 98% of the total emissions of 2020.

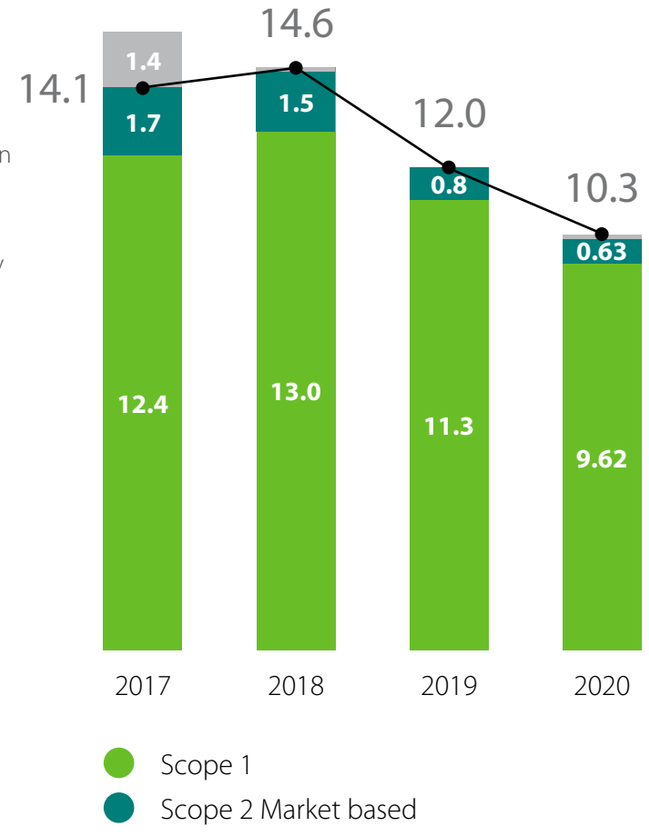
Scope 1 direct emissions (fuels, industrial processes and other smaller sources) and Scope 2 indirect emissions Market-based[2] (purchase of electricity) totaled around 10.3 million tons of CO_2 equivalent in 2020, a reduction of 14.9% in relation to the previous year and of 27.2% in regards to 2017, the base year of Scope 1 and 2 reduction goal. **GRI 305-1 | 305-2 | 305-5**

The reduction in total emissions observed between 2019 and 2020 is due, especially, to the fact that the company still has a reflection in production volume as a result of the Brumadinho dam collapse and the Covid-19 pandemic effects. However, the emissions intensity per ton of iron ore equivalent[3] in 2020 was 25.9 kg CO_2e/t MFe-eq. It was slightly lower than the intensity in the year 2017, which was 26.6 kg CO_2e/t MFe-eq. This shows that Vale's emissions profile is still strongly correlated to production, despite a marginal improvement in energy intensity. **GRI 305-4**

The company's emissions are also expected to peak by 2023, due to the 400 Mtpa expected production of iron ore capacity by the end of 2022. Thereafter, the absolute emission reduction trajectory and its consequent decouple from the production process will occur with the implementation of the new initiatives of larger scale emission reduction under development.

More information about the variation in production volumes in 2020 is presented in Vale's Production Report. Read also about the impact of production on energy consumption[4] in the Energy and Energy Efficiency section, page 111.

Scope 1 and 2 GHG emissions[1] (million tCO_2e)



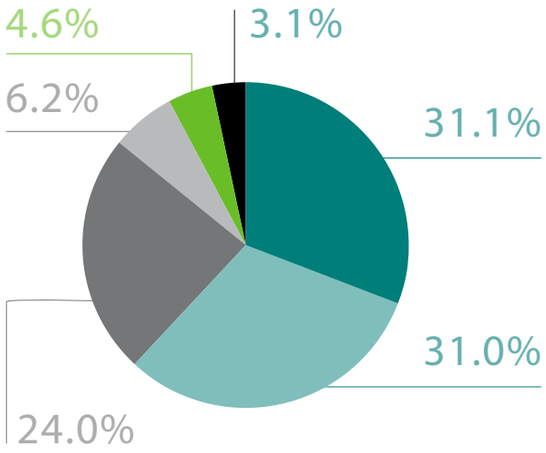
* The results presented consider Scope 2 Marked-based; for historical results considering Scope 2 Location-based, please access the ESG Databook at http://www.vale.com/brasil/EN/sustainability/integrated-reporting-2020/Pages/default.aspx.

1 Sum of Scope 1, Scope 2 Marked-based (the "purchasing choice" approach), and Scope 3 Emissions.
2 Considering Scope 2 Location-based approach, the emissions of Scope 1 and 2 added together totaled 10,6 tCO_2e in 2020, since Scope 2 Location-based in 2020 resulted in 1.0 million tCO_2e. Scope 2 Location-based is based on grid emission factors (interconnected electrical system), of a country or region. to calculate the emissions from the electricity purchased, while Scope 2 Marked-based is based on free market electricity contracts, considering specific emission factors for the type of generation technology and energy source, when applicable.

3. The iron ore equivalent indicator takes the production of iron ore, our main product, as a parameter to account for the production of the company's other products, such as coal, nickel and copper. Therefore, all our production is converted into tons of iron ore equivalent. The indicator of emissions per equivalent iron ore, on the other hand, is an indicator used only to monitor the emissions profile and not for determining the emissions reduction target of scopes 1 and 2.

4. Furthermore, the emission intensity relative to energy consumption was in line with the previous year, 2% higher, totaling 51.7 tCO_2e/TJ (combustion and electricity emissions per total energy consumption).

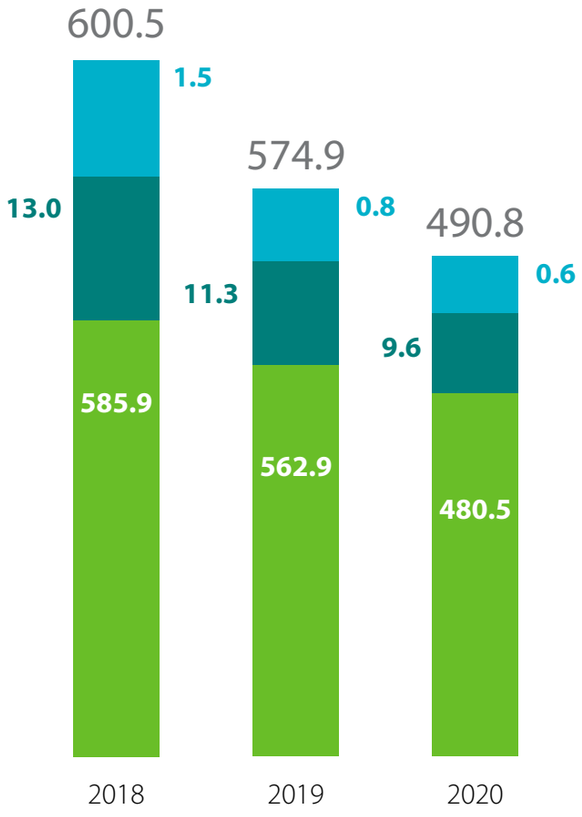
Total emission (Scope 1 and 2) by source, in 2020



- Stationary Combustion[1]
- Mobile Combustion
- Industrial Process[2]
- Purchase of electricity and steam
- Fugitive[3]
- Agriculture and land use[4]

1 Stationary Combustion: fuel consumptions and use of explosives.
2 Industrial Process: production of pellets, nickel, copper and by-products and ferroalloys.
3 Fugitive Emissions: CH4 in coal mining and post mining; and release of refrigerant (HFCs) and insulating gases (SF6).
4 Emissions from fertilizer application and land use changes.

Vale Total GHG Emission (million tCO_2e)



- Scope 3
- Scope 1
- Scope 2 Market based
- Total

About 97% of these Scope 3 emissions are downstream in our value chain, in other words, they were due to the processing, transport and use of products sold by Vale in 2020. In the upstream, emissions are associated with suppliers of raw materials, products and services, as well as their transport (notably shipping), totalling around 3.3% of Scope 3 in 2020. **GRI 305-3**

In 2020, there was a 14.6% reduction in the company's Scope 3 emissions compared to 2019, and an 18.0% reduction compared to the emissions of the 2018 base year. This fall in Scope 3 emissions is due to the reduction in sales, especially pellets by 27.7% and iron ore by 5.4%, justified by the production decrease already mentioned above.

Scope 3 emissions are expected to increase due to the production levels growth to ~400 Mtpa of iron ore. On the other hand, Vale is dedicated to driving emission reductions throughout its value chain. More details on the Scope 3 emissions reduction strategy can be found in the "Looking to the Future" section.

In relation to renewable emissions, Vale emitted 482.5 thousand tons of biogenic CO_2 in 2020, with an increase of 18.9% compared to 2019. These emissions were mostly (66.6%) originated from the burning of renewable fuels and another portion (33.0%) from vegetation suppression of non-native areas (anthropized). 35.7 thousand tons of CO_2 were also removed from the atmosphere through the revegetation of degraded mined areas and/or forest compensation.

All GHG emissions and removals inventoried by Vale are subject to external verification by a third party.

Looking at the future

To achieve its Scope 1 and 2 emission reduction commitment, the company has mapped more than 35 projects by 2020 and uses the marginal abatement cost curve (MACC) to prioritize the most cost-efficient and emission reduction potential initiatives to be implemented.

To achieve our Scope 3 goal, Vale has a portfolio of products with solutions that contribute to reducing emissions from customers and suppliers.

Vale's own initiatives (15% a 25%)

- Direct-charge iron ore products
- Mix of high-quality products
- New solutions for steel
- Balance addressed through nature-based solutions and reliable carbon markets

Partnerships and engagement with suppliers and customers (75% a 85%)

- Valemax 2G and Guaibamax: fuel efficient vessels;
- Ecoshipping, with the deployment of innovative pilot technologies, such as spark plugs and air bubbles to reduce fuel consumption;
- Reduced emissions intensity by 40% by 2020 and absolute emissions by 50% by 2050[1];
- Customer engagement to promote new emissions-reduction technologies (e.g. bioenergy, hydrogen, CCUS - Carbon Capture, Utilization, and Storage);
- Partnership platforms focused on steel decarbonization.

[1] Aligned to IMO targets.
Note: Harvey balls indicate reduction potential.

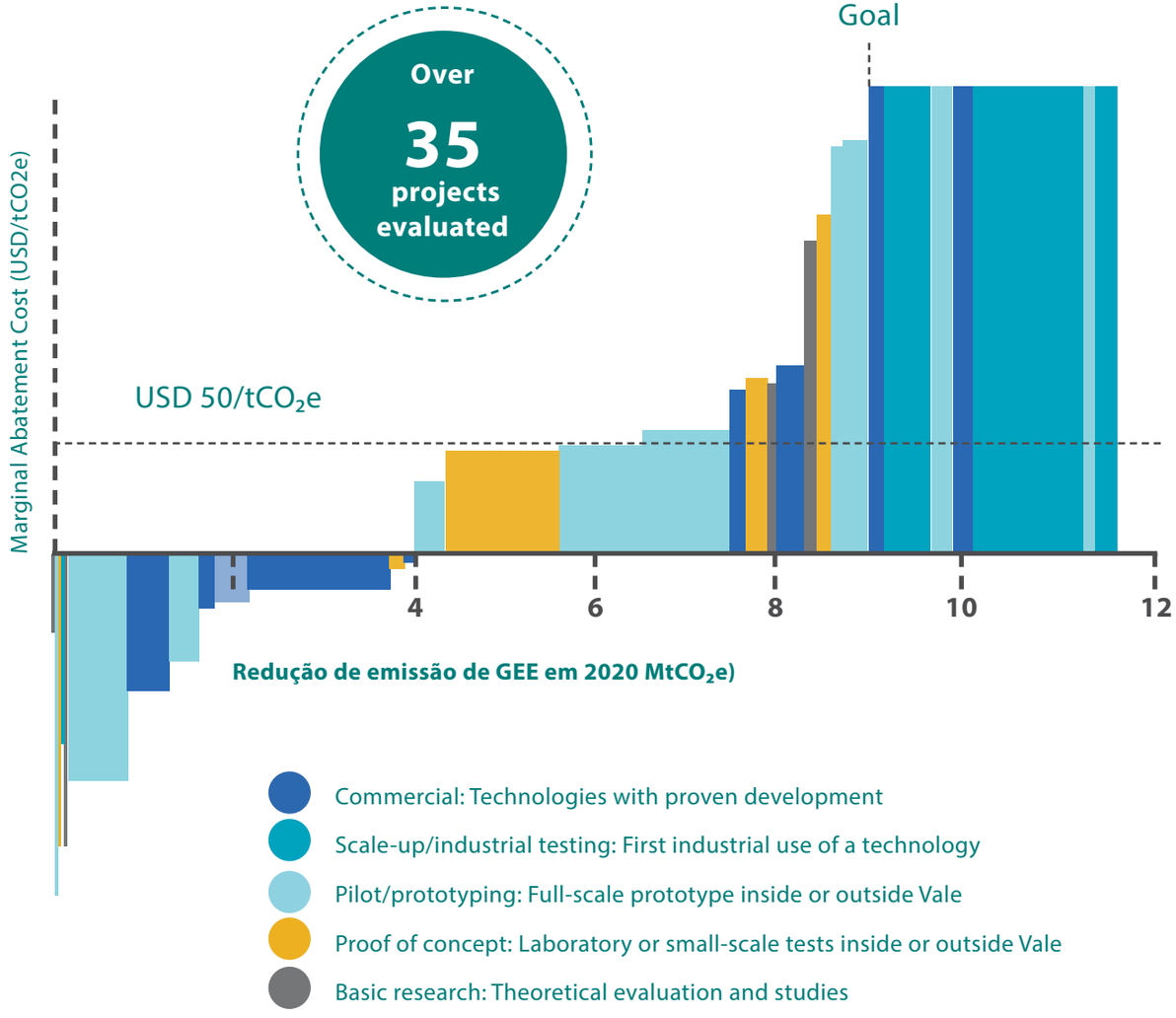
Today, the company supplies iron ore products that require less energy use in steel blast furnaces, reducing emissions. One example is Brazilian Blend Fines (BRBF, Portuguese acronym), a blend of ores produced in Carajás and Minas Gerais, with a higher iron content and fewer contaminants.

Vale announced its intention to establish a platform in partnership with Kobe Steel and Mitsui & Co. The objective will be to offer low-carbon solutions and technologies to the steel industry. These solutions are based on technologies to produce hot-briquetted iron (HBI) with natural gas and pig iron based on biocarbon (Tecnored). A product with a high iron content, HBI would be supplied by Midrex, a company that belongs to Kobe.

Moreover, Vale recently completed an investment of USD 6 million in Boston Electrometallurgical Company[1] to acquire a minority stake and promote the development of a technology focused on steel decarbonization by using electricity .

1 Boston Metal is a pre-operating company, founded in 2012 by professors from the Massachusetts Institute of Technology (MIT), whose objective is the development of an innovative technology called molten oxide electrolysis (MOE), which reduces metallic oxides such as iron ore with the use of electricity. This MOE process will enable the transformation of iron ore for steel production with zero CO_2 emissions.

Marginal Cost of Abatement (Curve under development)

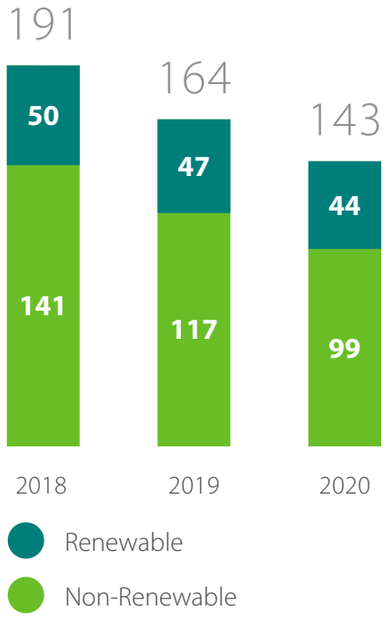


Energy and energy efficiency GRI 302-1 | 302-4 | 305-5

Energy management and supply are priorities for Vale, given the uncertainties associated with regulatory changes and the risks of rising tariffs. The company acts throughout its chain, from supply to efficient management of final consumption, to ensure the security of supply and our competitiveness in obtaining energy for our operations.

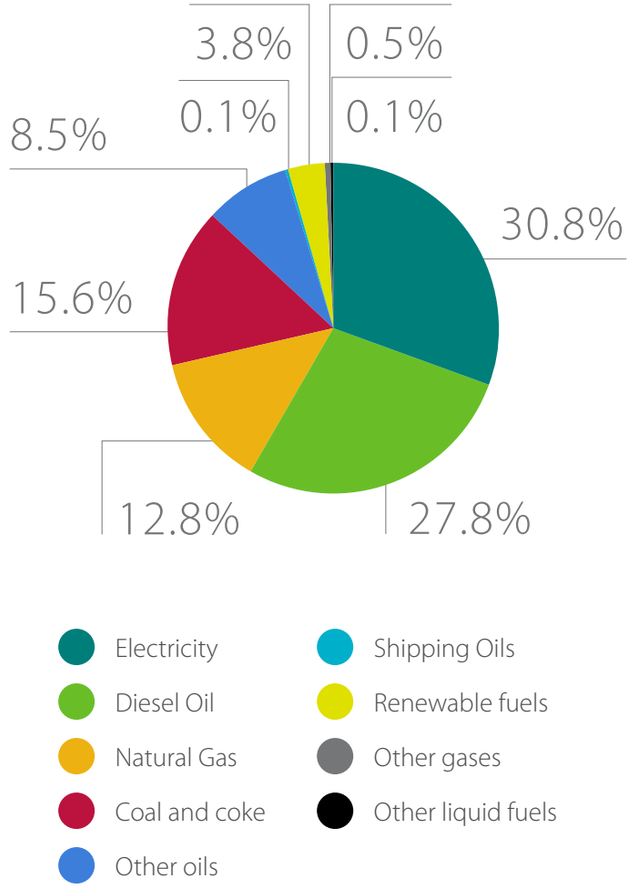
Our energy consumption in 2020 was lower than the previous year, mainly attributable to reduced production volumes. This was especially true for pellet production, which was 29% lower than 2019 as a result of lower pellet feed availability at Vale sites and production adjustments due to market conditions.

Participation in **Renewable Source 2020** (in thousand TJ)



In 2020, despite the reduction in Vale's energy consumption, the composition of the energy matrix continued with similar percentages as in 2019. With regard to overall energy intensity, we report for 2020 the advance to 0.362 TJ/thousand tons of iron ore equivalent, an energy intensity 4.5% lower than in 2019. **GRI 302-3**

Energy consumption matrix by source 2020



Electricity represented 30.8% of Vale's energy consumption matrix, of which 87% came from renewable sources. The consumption of operations in Brazil (24,100 TJ), Indonesia (8,800 TJ) and Canada (7,300 TJ) stands out, which together accounted for 91% of global electricity consumption.

In Brazil, of the total of 6.7 TWh electricity contracted and consumed by operations via Grid, 99% are from renewable sources, with 94% of this energy being ensured by concession contracts for own assets and by Vale's energy acquisition contracts and had its renewable origin confirmed by generators' certificates or declarations, which have been audited by a third party.

Vale's electricity generation portfolio is 99.9% renewable and is therefore one of the company's competitive advantages on the climate agenda. The installed capacity in 2020 was 2.3 GW, coming from hydroelectric generation assets located in Brazil, Canada and Indonesia. These plants supply about 60% of Vale's global electricity consumption – 68% of Vale's consumption in Brazil[1] – and help reduce production costs and CO_2 emissions by ensuring renewable hydroelectric power use.

1. Historical averages of the percentages of self-production globally and in Brazil. In 2020, due to Vale's lower electricity consumption, these percentages represented about 70% and 90%, respectively.

Commitment to **renewable electricity**

In the quest for leadership in low-carbon mining, we are committed to achieving 100% self-production of electricity from renewable sources in Brazil by 2025 and 100% renewable electricity consumption globally by 2030.

As an important contribution to this goal, Vale announced the Sol do Cerrado Solar Power Generation Project in the municipality of Jaíba (Minas Gerais state) in Brazil in December 2020. With an installed capacity of 766 peak megawatts and scheduled to come on stream in the fourth quarter of 2022, the project will produce approximately 193 average megawatts (MWmed) of energy per year for Vale's operations. The solar project is part of a total of USD 2 billion in investments made by Vale to reduce carbon emissions, which will be one of the largest in Latin America.

Vale's roadmap of self-production projects also includes participation, through Aliança Geração de Energia S.A., in the Gravier and Acauã wind projects in Ceará and Rio Grande do Norte states, respectively, which total 181 MW of installed capacity, with 55% of their output going to Vale, starting in 2022.

Vale also has an option to purchase 60% or 100% of the shares of the Folha Larga Sul wind project in Campo Formoso (Bahia State). It has an installed capacity of 151.2 MW and is already in operation, with 60% of its production destined for Vale or its subsidiaries by 2023.

Generation of solar energy with storage in lithium-ion batteries

In 2020, at the Ilha Guaíba Port Terminal (in Mangaratiba, Rio de Janeiro state), Vale installed the largest energy-storage system with lithium-ion batteries in the country to supply its electrical demand. In addition to strengthening energy supply management and reducing costs, this initiative is part of our strategy to replace fossil fuels.

Electric locomotive GRI 103 | 302

As part of Vale's Powershift* program to replace energy sources with clean sources, the company has developed a new, 100% electric, battery-powered shunting yard locomotive in partnership with Progress Rail. It is currently in the testing and commissioning phase. The equipment also reduces noise emissions.

1 A structured program to coordinate and execute initiatives and strategies to achieve the company's GHG goal.

Energy-Efficiency Program

A large part of GHG emissions is directly linked to our operations' energy consumption, so we know that energy efficiency is a key factor for reducing GHG emissions and optimizing costs.

Vale's Energy-Efficiency Program aims to include the topic of energy efficiency in a structured way into operational routines, making employees think systematically about initiatives that promote energy efficiency in their processes. This work is being developed globally through multidisciplinary groups in each operation and supported by SmartEnergy, the platform responsible for managing electricity consumption throughout the company, providing automated energy-efficiency indicators.

In addition to making a significant contribution to reducing GHG emissions, the Energy Efficiency Program also addresses ESG issues by creating indicators of energy intensity consumed by product, as well as by setting targets for increasing energy efficiency, which will occur throughout 2021. In 2022, with centralized governance and energy-efficiency indicators in the management routine, the goal is to obtain certification in ISO 50,001, the main international reference in energy management.

Aiming to ensure transparency, traceability and reliability of the data needed to manage energy consumption, by 2021 we intend to automate both the collection and monitoring of indicators for 80% of Vale's energy matrix.

Risks and Opportunities in Climate Change

GRI 102-11 | 201-2

Continuous monitoring

The Sustainability Board, through the Environmental Executive Management Committee acting as the second line of defense, continuously monitors physical and transition risks, besidesthe opportunities in climate change.

Identification of risks from the business

Based on Vale's strategic planning, and on the analysis of climate change scenarios, are identified considering the risk management process itself and the monitoring of the regulatory framework on the subject.

Analysis of the Executive Risk Committee and reporting to the Board of Directors

We periodically present material risks and opportunities to the Executive Risk Committee for analysis and report quarterly to the Board of Directors.

Disclosure of data to stakeholders

We publish consolidated data on climate change risks and opportunities management in Vale's Integrated Report, ESG Portal and reporting to the Carbon Disclosure Project (CDP).

Risk matrix

Vale's risk matrix considers the severity and probability of each occurrence (read more about Vale's risk management policy at http://www.vale.com/PT/investors/corporate-governance/policies/Documents/docs/POL-0009-G%20-%20Risk%20Management%20Policy_Rev%2005_EN.pdf).

In the case of risks related to climate change, Vale has developed specific analysis methodologies divided between impacts resulting from the transition to a low-carbon economy and physical impacts, in line with the guidelines of the Task-force on Climate-related Financial Disclosures (TCFD[1]), an initiative led by the Financial Stability Board, with guidelines for reporting financial risks related to climate change by companies and financial institutions.

[1] In 2017, Vale adhered to the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) with the aim to increase transparency about the risks and opportunities related to climate change

Main risks monitored related to climate change

Transition Risks

In its disclosures, the TCFD recommends analyzing the strategy's resilience against different scenarios, including at least one that is aligned with the Paris Agreement. As the TCFD itself suggests, Vale chose to use the scenarios of the International Energy Agency (IEA) in 2020, which are acknowledged by the industry and have international support.

Regulatory and Legal

- Changes in policies to restrict emissions or adapt to the effects of climate change, imposing costs on issuers.
- Disputes over non-compliance with policies to mitigate climate impacts.

Technological

- Having to replace products and/or processes with more efficient and/or current technologies.

Market

- Changes in supply and demand due to alternative products.

Reputation

- Perceptions of consumers and investors about the company's adherence to policies that consider the perspective of environmental, social, and governance value creation.

Physical Risks

Direct damage to assets and indirect impacts on the supply chain caused by a higher incidence of floods, droughts, strong winds and lightning strikes.

Port Operation at Ponta da Madeira

Physical risks and the Vale Climate Forecast

Based on scenarios of the Intergovernmental Panel on Climate Change (IPCC), Vale developed the Vale Climate Forecast in partnership with the Vale Institute of Technology. It is a methodology for analyzing risks and opportunities related to climate change. The Vale Climate Forecast enables:

- Short-term analysis and seasonal forecasts for physical risks associated with climate change, with the main focus on impacts on our operations and product shipment.
- Long-term analysis for physical risks associated with climate change, with a focus on identifying necessary investments in facilities to adapt to and/or mitigate impacts due to climate change.

Physical impact of climate change – mapped risks in Vale's operations

CAUSES

Atmospheric discharge
Strong winds
Temperature increase

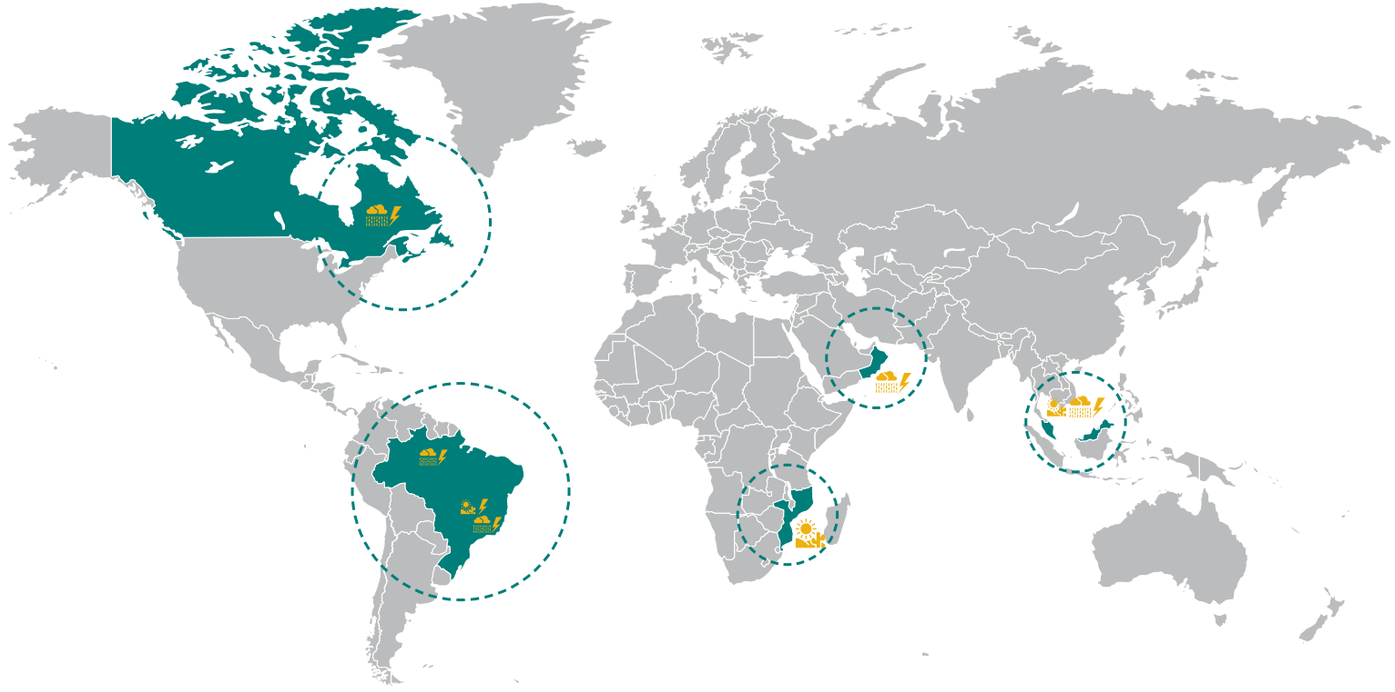
Itabira
North Corridor
Railroads (EFC and EFVM)
Mariana
ES Ports (Tubarão)
Tubarão Pelletizing
Oman and Malaysia
Canada

Heavy rains
(above expected volumes)

Itabira
Brucutu
Vargem Grande
Serra Sul Ferrous
EFC and EFVM
North Corridor Plant
Minas Pelletizing
Oman and Malaysia
Canada

Water restriction

Mozambique
Malaysia
Southeast Brazil



Use of technology in dam management

Vale's Geotechnics area is currently developing, with the Vale Institute of Technology, a climate-forecasting system that will assist in dam management, a solution that meets the recommendations of ICMM and Vale's Executive Board.

The short-term work includes climatic variables in the decision-making processes of the company's operations, seeking to provide greater control over climate change impacts that are already being perceived today.

Climate Change Scenarios

The different supply and demand behaviours in the three IEA scenarios result in changes in the competitiveness dynamics that affect the long-term price of Vale's main commodities and its strategy.

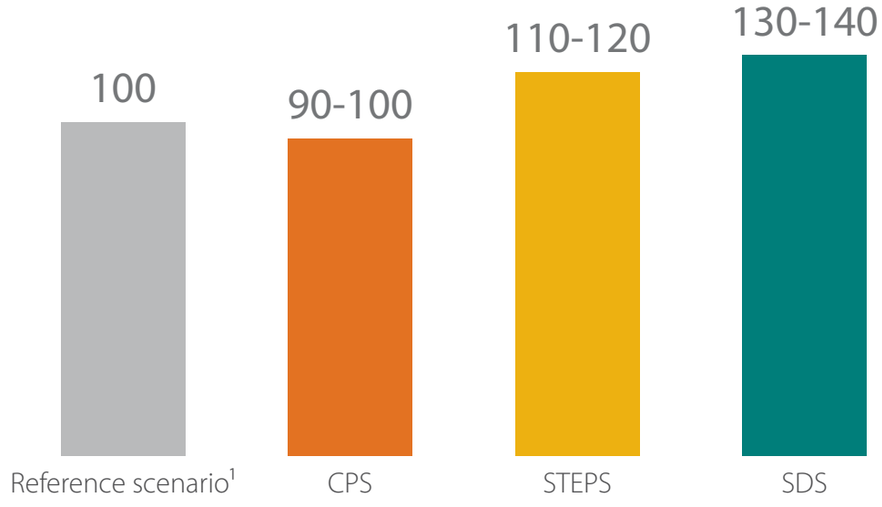
For the company, the Current Policies Scenario (CPS) impacts, in part, its ability to generate value. In addition to greater exposure to physical risks, the CPS does not consider the opportunity for growth in renewables, electrification of transport and the need to decarbonize the steel industry, which are today fundamental parts of Vale's strategy.

In turn, the Sustainable Development Scenario (SDS) creates an ecosystem that encourages the company's growth options and amplifies the relevance of its strategic pillars, namely, the transformation of base metals and the maximization of iron ore's flight to quality.

The coal asset is negatively impacted in the scenario analyses, but due to its low relevance in Vale's portfolio, it does not interfere significantly in the company's consolidated result. On the path towards carbon neutrality, Vale has evaluated its portfolio of assets and announced in early 2021 the divestment of its coal business.

Under a variety of climate change scenarios, Vale's EBITDA performs in a range of 90% to 140% compared to the base case used in our strategic planning. Such resilience is the result of a flexible portfolio, capable of adapting to different market conditions and which has a strategic positioning well aligned with energy transition trends for a low carbon economy[1].

1 Further details can be found in the report Analysis of Portfolio Resilience at: http://www.vale.com/esg/en/Documents/cenarios-de-transicao-energetica-en.pdf



- This analysis was performed based on the production volume considered in the Strategic Plan in 2040.
- The simulations considered, in addition to the volume, other implications from each scenario, such as commodity prices and cost impacts.
- The STEPS and SDS scenarios embrace the maximization of high-quality ferrous products and opportunities for additional volumes in nickel and copper.

Note 1: Base case – Volumes from Strategic Plan in 2040, considering prices from Wood Mackenzie in September 2020.

Social

- Health and safety
- People
- Social Performance
- Human Rights
- Territorial Development
- Local communities

Social

The Code of Conduct and Anti-Corruption, Human Rights, Human Resources, Sustainability and Socio-Environmental Investment Policies establish guidelines for Vale's actions related to the social aspects of the ESG agenda, which include health, safety and human resources issues.

These standards guide the construction of a respectful and trusting relationship with communities, in the territories where Vale operates. They also aim to strengthen our risk and impact management and guides Vale's performance as a contributor to local, socioeconomic and environmental development that develops and hires local workers and suppliers and establishes, whenever possible, cross-sectoral partnerships to create a positive legacy.

Standards guide the construction of a **respectful and trusting** relationship with communities

Health and safety

Social material topic

Safety and Health

GRI 103 | 403 and
SASB EM-MM-320a.1

SDG 3 8

This topic covers health and safety at work and the health promotion of workers in addition to occupational issues (i.e., chronic diseases, healthy habits).

Life Matters Most is one of our values. The obsession with safety and risk management is one of our key behaviours. Vale's entire health, safety and risk strategy believes that every accident is preventable.

The constant search to identify and control risks is an integral part of our routine, and our main objective is to eliminate fatalities in the workplace in a sustainable manner. In addition, important objectives of our strategy are to reduce injuries and chronic illnesses related to work activities to a great extent.

Vale's strategy aims to develop an environment where:

- Employees have chronic unease about safety risks and ensure individual and collective safety before they think about acting;
- The risks associated with tasks are analyzed from the planning stage, through defined work procedures, issuing a safe work permit (SWP) before work begins, to ensure that everyone understands the risks and implements the controls for a safe execution;
- The requirements for critical activities (RACs) are clear, objective, non-negotiable, known and practiced by all;
- Process safety scenarios are identified (HIRA), periodically reassessed, and critical controls that prevent or mitigate them are always available;
- Health Hazardous Agents are mapped, eliminated or mitigated, so that performing work tasks does not harm anyone's health;
- A detailed investigation is conducted when an undesired event occurs, and the lessons learned are shared systematically throughout the organization.

In addition to reporting events for their actual impact, we treat events classified as high potential in a special way. To proactively learn how to improve our processes and systems to create a safe, fatality-free environment.

Our Health and Safety performance is assessed and improved according to the needs identified by Vale's management system, of which the following processes are part. **GRI 103 | 403**

Vale's health and safety initiatives in 2020

Safe Work Permit (SWP)

With implementation beginning on May 1, 2020, the process connected the planning , execution, and closure of activities. With the SWP, we seek to start identifying and mitigating risks as early as the service planning stage, continuing during execution by identifying situational risks for each activity, and concluding at the completion of the work.

Critical Activity Requirements (CARs)

These present minimum health and safety requirements to preserve people's lives while performing activities classified as critical.

Activities are categorized as critical considering the history of fatalities and serious accidents at Vale and the mining sector. These requirements deal with controls concerning equipment and facilities, work procedures, and training and qualification in these activities. They also highlight everyone's roles and responsibilities in implementing these requirements.

Occupational Hygiene Program (OH)

Mapping all agents harmful to health related to work activities, measuring the intensity of exposures and development of strategies aim at eliminating or mitigating exposure to levels below the Occupational Exposure Limit (OEL).

Ergonomics

Vale also has global ergonomics guidelines and health and welfare protocols. It carries out health promotion campaigns such as flu vaccinations, provides health and well-being assistance to employees, monitors pregnant women, promotes emotional health and habits for a healthy life, and provided ergonomic information and supports for employees working in remote environments during the COVID-19 pandemic.

Emotional health

Vale offered structured initiatives to support employees' emotional health, such as: psychological self-assessment with active contact (according to the results of the self-assessment); online emotional support for quarantined employees; increased supply of psychologists for distance therapy; and expansion of the employee assistance program to some countries.

Vale built transparent dialogue about emotional health throughout the company, giving visibility to the theme in its communications and teams interactions. We organized webinars, talks and provided current content on the subject.

Disability prevention guidelines

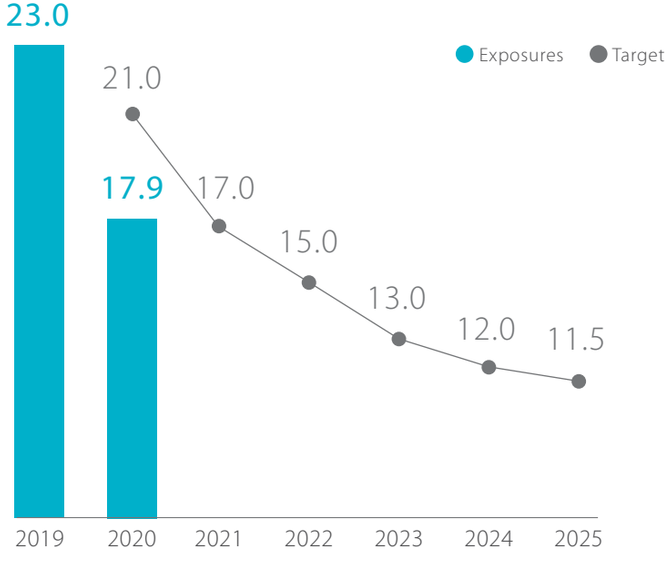
In August 2020, Vale published new guidelines for multidisciplinary action by health, HR and leadership teams in cases of common mental disorders (CMD) and musculoskeletal disorders, the two main causes of reduced working capacity and quality of life for employees.

These guidelines expand preventive action and place additional focus on disease prevention, the promotion of well-being and care of functional capacity.

Aligned with the strategy, the following health and safety goals have been set for 2025:

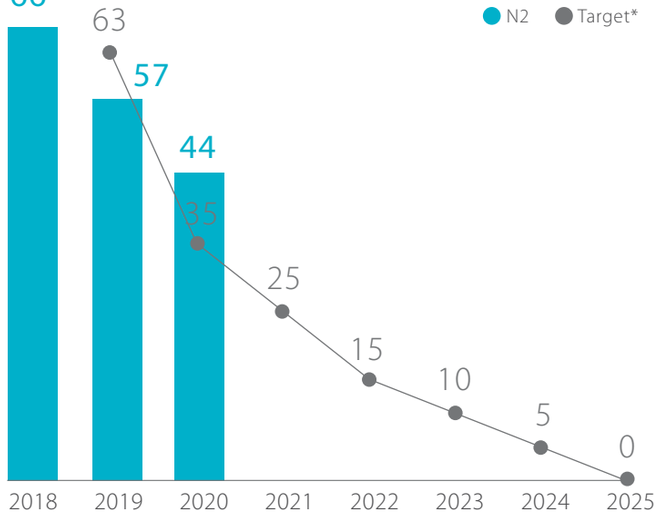
- Reduce by 50% the number of exposures to health-damaging agents in the workplace by 2025.
- Reduce to zero the number of recordable high-potential injuries (N2) by 2025.

Reducing the number of exposures above the Occupational Exposure Limit (OEL)



Reduction of high-potential recordable injuries (N2 - absolute values)

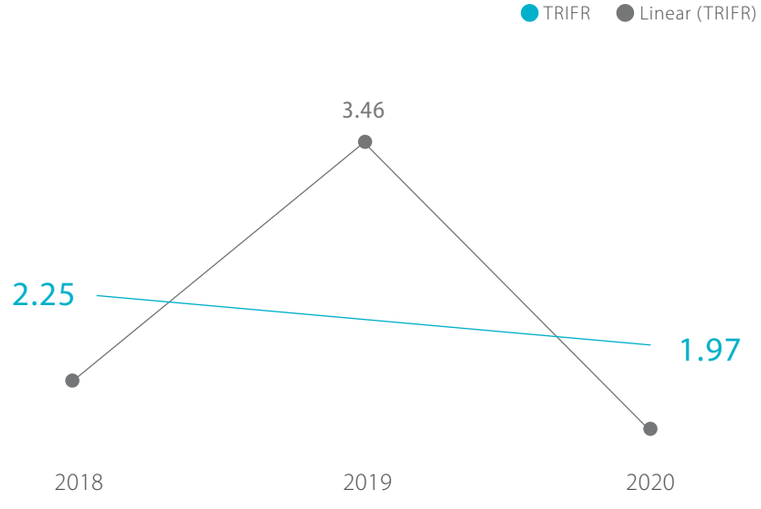
N2 History and Goals: Global



* Considers own employees and third parties.

Life Matters Most is one of our values. The obsession with safety and risk management is one of our key behaviours

In addition to these indicators, Vale monitors the total accident rate (per 1 million hours worked). See the performance below.



Shutting down operations

As a result of more stringent health and safety protocols, in 2020 Vale promoted relevant changes – which include temporary or definitive shutdowns of operations – in an effort to reduce risks in the following operations:

- Operations at Sossego
- Operations at Onça Puma
- Operations at Voisey's Bay
- VNC Refinery
- Simões Filho Plant
- Mina Azul
- Project Salobo III
- Project VBME
- Port Colborne Refinery

Vale New Caledonia GRI 102-10

The New Caledonia site had its operations shut down and was in the process of being sold, which has motivated some manifestations.

In December 2020, Vale Nouvelle-Calédonie S.A.S. operations (VNC) were safely evacuated after a night of protests by pro-independence activists at and near the plant.

A fire was started in the mine and in the mine's infrastructure area, but it was controlled by the fire department. The VNC plant was not affected, located 7 km away from the area.

Operations were halted until safe working conditions and community conditions prevailed. There were no victims, environmental damage or industrial accidents. After the evacuation of the VNC, the operation was protected by military forces (Gendarmes).

Vale repudiates these acts of violence and reaffirms its commitment to the safety and protection of the unit's employees and the local community, and unconditionally supports efforts to resolve this situation peacefully.

Fatalities and causes

Even with advances in implementing health and safety measures, there were four fatalities at Vale in 2020. These incidents show that we still have a long way to go to create a fatality-free environment.

Of a total of four fatalities, one involved a direct employee (in Salobo) and three involved outsourced employees (in Moatize, Salobo and Mina do Feijão).

The following table shows the number of fatalities of our own and outsourced employees at Vale in 2018, 2019 and 2020, followed by a brief description of the accidents that occurred in 2020.

Fatalities

Year	Contractors	Employees
2018	1	1
2019	118	124
2020	3	1

In January, at the Tete Mine in Moatize (Mozambique), a fatal accident occurred when a contractor's employee was making cuts on the edge of a conveyor belt near the tensioning car drum.

In November, a fatal incident was reported in the mine equipment workshop at Salobo, Pará (Brazil), during the replacement of a dump truck's weighbridge cylinder.

In December, another fatal accident occurred in the centralized maintenance workshop at Salobo, Pará (Brazil), during a hydraulic cylinder change.

A worker operating a hydraulic excavator to perform berm/ slope cleaning was also hit by a landslide from the localized and contained slope at the Córrego do Feijão Mine in Minas Gerais (Brazil) in December.

All investigations were conducted by internal investigation teams, led by an executive from another operation in a neutral and impartial position. Global subject matter experts, employees and the Internal Commissions for Accident Prevention (CIPA) were directly involved.

The cases and lessons learned are shared in a webcast session and, following these incidents, mandatory comprehensive actions now must be executed across Vale as a whole. These actions are now the focus of round table discussions involving all leaders and their work groups.

People

Material topic

People

GRI 103 | 401 | 404 | 405 | 407

SDG 5 8

This topic covers the attracting, retaining, training and developing the careers of employees; working conditions of contractors and third parties; and inclusion and diversity.

Vale has both employees and contractors working in its operations. It also maintains relationships with public and private entities that represent them.

In its relationship with these stakeholders, the company maintains a permanent dialogue to guarantee working conditions according to Vale's Code of Conduct, labour law, the eight Fundamental Conventions of the International Labor Organization (ILO) and guidelines from the Organization for Economic Cooperation and Development (OECD).

People management covers financial considerations, productivity, occupational health and safety, organizational climate and labour agreements, placing a focus on conflict resolution.

In December 2020, Vale had approximately **74.3 thousand** employees and **111.9 thousand** contractors

Workforce

The work of each of Vale's employees is essential for the company's success and growth. In December 2020, Vale had approximately 74.3 thousand employees and 111.9 thousand contractors, of which 57.7 thousand in operations/administrative and 54.2 thousand in projects. GRI 102-8

In 2020, there was a 43% growth in the total of outsourced workers, as a result of: the work of the Reparation Board; the increase in the current projects' portfolio; resumption of works after pandemic delays, given the pandemic scenario; and the inclusion of third parties associated with contracting by service level. Outsourcing data has not been reported in previous years.

Read more about GRI 102-8 data on our ESG Databook at http://www.vale.com/brasil/EN/sustainability/integrated-reporting-2020/Pages/default.aspx.

Number of employees – by business unit	2020	2019
Ferrous	44,342	42,077
Coal	3,320	2,927
Base Metals	13,762	13,738
Energy	3,954	3,809
Corporate	8,938	8,598
Total	74,316	71,149

Number of contractors – by business unit	2020	2019
Ferrous	34,042	27,749
Coal	6,076	5,900
Base Metals	10,395	10,828
Energy	-	496
Corporate	61,408	33,170
Total	111,921	78,143

Number of employees – by geographic location	2020	2019
Brazil	58,249	55,439
South America	190	202
North America	6,169	6,082
Europe	293	308
Asia	4,454	4,455
Oceania	1,263	1,384
Africa	3,698	3,279
Total	74,316	71,149

Number of contractors – by geographic location	2020	2019
Brazil	90,877	57,388
South America (formerly Brazil)	140	89
North America	4,617	3,892
Europe	109	106
Asia	7,964	6,855
Oceania	198	1,082
Africa	8,016	8,731
Total	111,921	78,143

The turnover rate is calculated based on data from Vale S.A. and its subsidiaries in the following countries: Brazil, Canada, Indonesia, New Caledonia, Australia, United States of America, China, Mozambique, Peru, Colombia, Chile, Argentina, Austria, Dubai, India, Japan, Korea, Malaysia, Oman, Paraguay, Philippines, Singapore, Switzerland, United Kingdom and Uruguay. **GRI 401-1**

Turnover rate	2020	2019
Turnover rate	7.48%	6.69%

Turnover rate is equal to the termination rate in the year; that is, a rate of 7.48% means that for 100 active employees in 2020, almost eight employees were terminated.

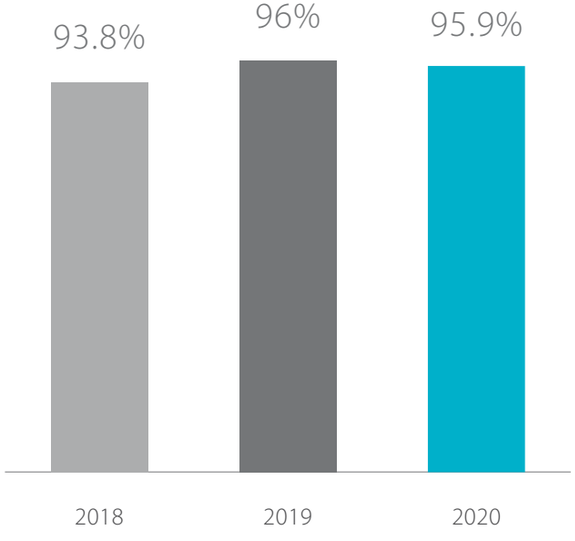
Remuneration GRI 103 | 202 | 201-3

Vale's remuneration is designed to be competitive in the markets where it operates and to allow the company to attract and retain talent compatible with its needs. The company adopts performance-based compensation that balances growth opportunities among employees.

Vale respects the local minimum wage and base wages do not differ between men and women who perform the same function, according to our Human Resources Policy. Variations may occur due to employees' seniority and maturity levels.

Vale's remuneration, paid to employees, complies with each country's legislation. It consists of salaries and the following benefits (which vary according to legislation): medical assistance; dental care; life insurance; private pension; personal accident insurance; transportation assistance; educational assistance; food assistance and the employee assistance program. With the new COVID-19 pandemic scenario, some additions and adaptations were made to the benefits package.

Employees covered by **collective agreements**



Collective Negotiation Agreements GRI 103 | 102-41

To seek a balanced and productive relationship with the entities that collectively represent its employees, Vale has participated in meetings with these institutions' representatives to address the relevant issues. These meetings strengthen dialogue and transparency and contribute to our operations' stability for the company. All Vale employees are free to join the unions. This commitment is stated in the company's Code of Conduct. In some localities, the percentage of voluntary association with unions exceeds 50% of the workforce.

Vale does not impose any restriction or discrimination on employees who join labour unions, in accordance with the company's Code of Conduct. In some locations, the percentage of voluntary association exceeds 50% of the workforce.

Vale negotiates and concludes collective agreements with all representative unions. Company representatives build balanced and productive relationships with unions, with regular meetings throughout the year to discuss relevant issues. Vale believes that these meetings strengthen dialogue and transparency and contribute to the stability of operations.

In Brazil, 100% of our employees were reached through collective agreements with unions in 2020. Considering all the countries where Vale operates, the percentage remained above 95%. 55 Collective Work Agreements (National ACTs, Specific ACTs and PLR ACTs) were forged with 14 unions in 2020. Many of these were to change procedures to prevent COVID-19.

We also concluded labour negotiations related to the collapse of the tailings dam in Brumadinho (Minas Gerais state), with the participation of State inspection bodies, such as the Labour Prosecutor's Office. Collective negotiations were carried out by video call, due to the COVID-19 pandemic.

Training GRI 103 | 404-2

Through its corporate university – Valer – Vale has structured a portfolio of training and development actions for its diverse audiences. Valer focuses on technical, management and leadership skills, and transversal, related to central themes for the company's strategy, such as safety, the Vale Integrated Management Model (Vale Production System - VPS), risk management and sustainability.

In response to the challenges imposed by the COVID-19 pandemic, with the migration of a large part of the company's workforce to remote work, we expanded our digital learning platform, Valer Digital, to more than 30 thousand employees globally. By providing this technological solution and updating some internal instructors to use these technologies, Vale made it possible to keep on track with the training plan by delivering massive amounts of training in virtual formats. This increased the average number of training hours compared to 2019 for the leadership (14%) and specialist (11%) audiences with the massive delivery of training in virtual formats.

An example that conveys how quickly we adapted to the new scenario was the Annual Meeting of Experts and Operational Improvement. Presented in a 100% virtual format, it attracted about 8 thousand participants over two days and included project presentations, lectures, an exhibition fair, and networking.

In 2020, we maintained our focus on the technical specialization of engineers and geologists through post-graduate programs adapted for virtual formats. Topics included Geotechnics, Open Pit Mining, Mining Process Automation, Maintenance, Process Safety Management and Operational Risks, in addition to Master's degrees in the Sustainable Use of Natural Resources and Instrumentation and Control and Automation of Mining Processes, aimed at around 170 employees globally.

The strategies for training in safety, risk management and the Vale Integrated Management Model were reinforced with the launch of new programs globally. These include the new introductory VPS - Vale Integrated Management System Course, attended by more than 14 thousand employees, and the Global Risk Program, launched in 2020, aimed at improving Vale's readiness in risk management and making our activities safer and more predictable, which has already trained 22 thousand employees. Also in the safety dimension, we conducted training on the Critical Activity Requirements (CARs) in an interactive, digital format, aiming to reinforce employees' understanding of the safety controls needed to perform high-risk activities.

Vale continued its commitment to develop more than 130 young talents, members of the Global Trainee Program 2020, while actively managing the leadership pipeline. The entire program, designed before the pandemic, was revised to avoid interrupting the group's development and to ensure high-quality training.

Average hours of training per year (2020) GRI 404-1

Gender	Functional Category	Number of hours of training	Number of employees	Average hours of hours per employee	Total hours (average)
Female	Leadership	40,778	829	49	
	Specialist	184,953	4,823	38	
	Technical-Operational	388,922	6,726	58	50
	Staff		0	0	
	Total	**614,653**	**12,378**	**50**	
Male	Leadership	240,144	4,202	57	
	Specialist	316,442	7,603	42	
	Technical-Operational	2,294,889	46,228	50	49
	Staff		0	0	
	Total	**2,851,476**	**58,033**	**49**	
All employees	Leadership	280,922	5,031	56	
	Specialist	501,395	12,426	40	
	Technical-Operational	2,683,812	52,954	51	49
	Staff	0	0	0	
	Total	**3,466,129**	**70,411**	**49**	

Diversity and Inclusion GRI 103 | 405

In 2019, Vale signed its commitment to value diversity and promote inclusion by approving a global diversity strategy. Drivers of this strategy include promoting a safe environment and respecting the singularities of each person. The objective is to become an inclusive and authentic company, grounded in open and transparent dialogue, where all employees are respected and can be proud of who they are, feel recognized, have a voice and have the opportunity to develop their potential - regardless of race, ethnicity, skin color, gender, sexual orientation, gender identity, age, religion, social condition, origin or disability. In addition, Vale seeks to guarantee transparent, fair and prejudice-free processes for hiring, evaluating, promoting, and involving a diverse workforce; to prohibit any type of harassment, discrimination or prejudice; and to stimulate discussion about and increase awareness of diversity.

In this sense, Vale has adopted the goal to double the number of women working in the company from 13% to 26% by 2030, and increase their presence in senior leadership from 12% to 20%. This commitment is in line with our Global Policy on Diversity and Inclusion, Global Human Rights Policy and Code of Conduct.

- We reached 16.3% representation of women in 2020 compared to 13.5% in 2019.
- We reached 15.9% of women in senior leadership (executive manager positions and above) compared to 12.4% in 2019, a 28% increase of women in senior leadership positions.
- We reduced the rate of voluntary termination of women by 33.5%.

Vale employees Rosivânia Franca de Oliveira and Maria Dorilene Cunha da Silva, Pará (PA) in the Serra Sul Complex, S11D (from right to left). Photo: Ricardo Teles

Learn more

Access the Diversity and Inclusion Policy at http://www.vale.com/esg/en/Pages/PoliciesAndCorporateDocuments.aspx

The company acknowledges that it is beginning a long journey. Therefore, it focuses on creating conditions and opportunities to enable all talents to reach their maximum potential and thus contribute to materializing results for all stakeholders. To do this we must establish a relationship of respect and inclusion, anchored in an open and transparent dialogue, which are also essential for constructing psychologically healthy environments and for sustainably developing our business.

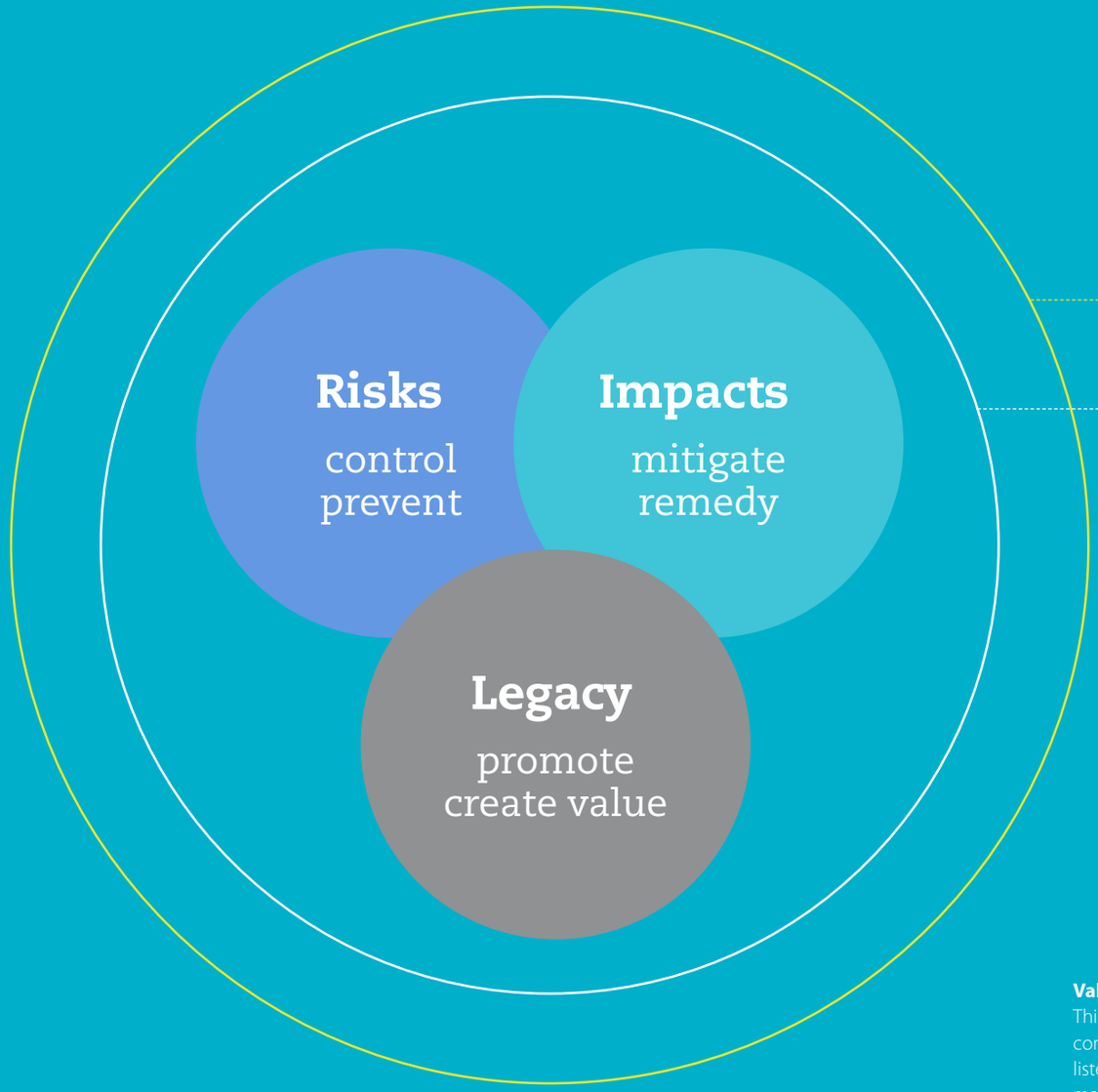
In September 2020, we launched the Ethnic-Racial Equity Affinity Group. Formed by Vale's employees, it aims to promote ethnic-racial discussions and propose practical actions.

The group's strategy focuses on four guidelines: starting employees on the learning journey at Valer Digital to reduce stereotypes about our ethnic-racial population; holding Vale events in an ongoing agenda to raise awareness to help people understand inequalities; engaging leadership in ethnic-racial equality; and carrying out a recruitment program, career progression, training and talent development based upon ethnic and racial inclusion and diversity. Among the initiatives and results of 2020, these are our highlight accomplishments:

- Launched the Global Diversity and Inclusion Policy, formalizing our commitment to building psychologically healthy, respectful, inclusive environments and equal access to opportunities;
- Conducted workshops, campaigns, webinars and conversation circles on topics such as gender, racism, sexual orientation and disability, which reached more than 15 thousand participants;
- Conducted a workshop on diversity and inclusion with Vale's senior leadership to broaden the vision of our leadership on the agenda and make it possible to identify opportunities for projects and actions in the company;
- Trained more than 2,580 leaders on issues related to diversity and inclusion, such as unconscious biases, inclusive leadership and gender intelligence;
- Hosting reverse mentoring sessions for conceptual deepening with the Executive Board on gender, racial-ethnic equity and LGBTQIA+;
- Formed the Ethnic-Racial Equity Affinity Group and an LGBTQIA+ affinity group that have been fundamental to accelerating Vale's Diversity and Inclusion journey;
- Implemented training programs for the HR team.;
- Implemented the Trainee Program with a blind selection process – thinking of a pipeline of future leaders, 50% of the vacancies were allocated to men and 50% to women;
- Created a Professional Training Program exclusively for women in operations in Brazil and Canada, and hired approximately 500 women;
- Professionally trained Indigenous people to work in our Voisey's Bay operations, increasing their representation by 41% in the workforce of this location;

Social Performance

Vale's Social Performance model is effective through risk management, which aims to identify and prevent risks to communities and the company; managing negative impacts and promoting social legacy, which generates benefits and contributes to territorial development.



Respect for Human Rights

Relationship with Stakeholders

Vale Social Performance Model
This model is supported by the relationship with communities that is based on gaining trust, active listening, transparent posture, engagement in decision making and is guided by respect for Human Rights.

Human Rights

Material topic

Human Rights SDG 3 8 16

GRI 103 | 406 | 408 | 409 | 410 | 412
SASB EM-MM-210a.1, SASB EM-MM-210a.2 and SASB EM-MM-210a.3

This topic covers the promotion of human rights in the company and in its value chain.

The Human Rights Guide and documents on the topic, focusing on the mineral exploration sector, deepen the topic for employees.

Holding webinars on the topic of **Business and Human Rights** with Harvard Professor John Ruggie with the Board of Directors, Executive Board, leaders and Vale employees.

Vale's commitment to respect Human Rights is integrated into the Company' new management model and must adhered to by all the Company's professionals, starting with the Board of Directors and extending to all employees and contractors. This commitment is reflected in the main documents of the company, such as the Bylaws, where the responsibility of the Board of Directors is prepared to act as guardian of the commitments related to respect for Human Rights.

The management of the topic at the Company is regulated by the Global Human Rights Policy - prepared in accordance with the UN Guiding Principles on Business and Human Rights - and the Code of Conduct. Both policies approved by Vale's Board of Directors and Executive Board, and which involved technical areas in their preparation.

A roadmap was developed in 2020 to improve all of the macro-processes adopted by the Company in managing the topic over the next 5 years.

Human Rights is a topic addressed in more than nine internal policies and norms, as part of Vale's protocols in the risk management, supply, corporate security and human resources processes.

In order to reinforce internal policies and train Vale employees to manage the topic in their day-to-day operations, new strategies were developed, and improvements were made to the content and training formats, considering specific cases and audiences.

In 2020, approximately 7.9 thousand of our employees undertook Human Rights training, totaling more than 8,800 hours. Since 2017, this number reaches more than 26,000 hours of training. GRI 412-2

Specific training for Corporate Security teams, aligned with the Voluntary Principles on Security and Human Rights, was carried out in more than 2,600 sessions (individual or collective) for employees and contractors, in both face-to-face and virtual models, representing, in 2020, 69% of this workforce. GRI 410-1

Read more

At ESG Portal: http://www.vale.com/esg/pt/Paginas/DireitosHumanos.aspx

Read more

Read the article "Human rights belong to everyone", written by Prof. John Ruggie for Vale's Walk magazine, by Vale, Aug/2020: http://www.vale.com/brasil/PT/Documents/Revistal_walk_EN_valecom.pdf#search=walk

Human Rights Risk Management

GRI 412-1

Since 2019, the risk of Human Rights Violations has been part of the Integrated Global Risk Map and Vale's risk management system.

Throughout 2020, the Human Rights area of the Social Performance Executive Management, 2nd Line of Specialist Defense in the topic, carried out training and provided advice to Vale's operations on the management of the topic. It also monitored the status of the plans' actions and carried out quarterly reports to the Board. GRI 103 | 410

Also, in 2020, based on feedback from the operational areas, and seeking alignment with Vale's Business Risk Management model, the evaluation process was revised and optimized.

The Bowtie method of risk analysis was adopted to structure the risk of Human Rights Violations, allowing its registration and monitoring in Vale's operations through the new global unified risk management platform, the BWise system.

Through the Bowtie method, the risk situations analyzed in 2019 were reorganized in 2020, in a list of causes of the risk of Human Rights Violations. The causes were grouped into six critical human rights themes:

- Degrading Work Conditions and Modern Slavery; GRI 103 | 409
- Child Labor and Child Sexual Exploitation; GRI 103 | 408
- Violation in Labor Relations;
- Violation of Communities;
- Violation Resulting from the Private or Public Security Conduct;
- Large-scale violation.

In 2019, 82% of operations carried out the Human Rights risk assessment. In 2020, 100% of Vale's operations inserted their risks in the Company's risk management system. The causes considered applicable by Vale's operations have preventive or mitigating control measures, or an action plan to review existing controls or adopt new controls. GRI 412-1

When assessing the risk, calculating its probability of occurrence and the severity of its impact, if the result presents a high or very high criticality, the operation is obliged to develop and implement an action plan with the objective of reducing its risk exposure for keeping it within an acceptable level.

Due diligence GRI 103 | 412

In 2020, as part of the Human Rights management, Vale developed a methodology for carrying out verification or due diligence processes.
During the year, four types of operational due diligence were carried out - one in an operational site (still in progress), another with critical suppliers (pilot project considered the verification and evaluation of 15 suppliers), a third in the Brumadinho Reparation process (MG) (expected to be completed in 2021), and another in 127 Vale's worker´s lodging, in Pará, Maranhão, and Minas Gerais. GRI 102-9

The results of these evaluations are integrated into the management of Vale and its projects, in a process of continuous improvement.

Regarding critical issues such as forced labor, child labor, child sexual exploitation and human trafficking, Vale establishes risk management at all stages of the life cycle of its projects. There is a special focus on respecting and promoting the human rights of children and adolescents and vulnerable groups. To this end, the Company prioritizes and establishes a continuous engagement process with communities in the areas of influence of the projects, implements partnerships with Childhood Brasil and InPacto with preventive and mitigating actions, acts through Vale Foundation in structuring social programs, contributes to the strengthening of the public social protection network and works directly with children and their families. GRI 103 | 408

In 2020, there was no record or complaint involving Vale and child labor or modern slavery, nor young people exposed to dangerous work, forced or compulsory labor and human trafficking in any of the Company's operations. GRI 103 | 412

Partnerships on the Human Rights agenda

GRI 102-13

In 2020, Vale participated in discussions on Human Rights in organizations, for which it developed materials on critical topics and presented case studies.

The Company was also invited to be part of the Global Future Council on Human Rights of the World Economic Forum (WEF) and returned to the Business for Social Responsibility (BSR).

As a member of the Global Business Initiative on Human Rights (GBI), Vale participated in the annual meetings, sharing case studies and lessons learned in human rights training and risk assessment in human rights.

Vale has maintained partnerships since 2019 with Childhood Brasil and InPACTO - Instituto Pacto Nacional pela Erradicação do Trabalho Escravo. These reinforce the Company's commitment and mobilization, both in defending the rights of children and adolescents, with a focus on preventing and fighting child sexual exploitation; and in combating modern slavery and child labor in its value chain. Vale and Childhood Brasil are now partners in implementing the Na Mão Certa Program, which aims to combat the sexual exploitation of children and adolescents on Brazilian highways. By joining the program, Vale adhered to the Business Pact Against the Sexual Exploitation of Children and Adolescents on Brazilian Highways.

Vale has maintained partnerships since 2019 with Childhood Brasil and InPACTO – National Pact Institute for the Eradication of Slave Labor

Suppliers GRI 102-9 | 204-1 | 308-1

Vale's suppliers are consumer goods companies, service providers, and consultants, among others.

The Company prioritizes the hiring and development of local suppliers, in the states where its operations are located. In 2020, around 10,000 suppliers were part of Vale's supply chain, with over 40% being local suppliers, representing a financial volume of 50% of the percentage of local purchases in relation to the total purchased. GRI 103 | 201 | 203

Aiming to foster the socioeconomic development of the communities where we operate, in 2020 Vale launched Programa Partilhar, an initiative that brings an innovative methodology to recognize and value the suppliers that contribute most to the social progress of each region. In the second half of 2020, the first pilot of the program was conducted in Brazil involving more than 300 suppliers who will initially benefit 10 municipalities by generating jobs and increasing local business opportunities, in addition to encouraging voluntary social investments by these suppliers. http://www.vale.com/brasil/EN/suppliers/sustainable-supplier/Pages/programa-partilhar.aspx

Vale selects suppliers considering objective, technical, economic criteria in accordance with the legislation and internal regulations - Supplier Code of Ethics and Conduct, Sustainability Policy, Vale's HSE Guide for Suppliers, anti-corruption guide for suppliers and contractors, Global Human Rights Policy and Guide for Mobilizing Service Providers.

The Company does not maintain commercial relations with suppliers that do not comply with its Code of Ethics and Supplier Conduct (read more about ethics on page 76) and in the Global Human Rights Policy at http://www.vale.com/EN/suppliers/code_conduct/Documents/codigo-etica-conduta-fornecedor-EN-BR.pdf.

Supplier due diligence

GRI 103 | 308 | 414

During the supplier's life cycle at Vale there is risk management and documentary and on-site verification. The main stages of this process are presented below.

Vale prioritizes the hiring and development of local suppliers, in the states where its operations are located

In the photo, Vale civil engineer Carlos Edilmar Bacurau (orange vest) with the employees of the company Barbosa Mello, Sonia Marcia Souza dos Santos (left) and Ivan Souza da Costa (right), at Gelado Program, in Parauapebas, Pará, (PA), Brazil. Photo: Ricardo Teles

Evaluation criteria part of Vale's Procurement process:

Certification and Registration
Upon being registered at Vale, all suppliers undergo a risk analysis, which includes assessment on Human Rights issues, Health and Safety and Environment (HSE) and Integrity. In addition, the Company encourages suppliers to implement compliance programs and follow the same guidelines in their production chains. At this stage, a due diligence of contractors is carried out, globally, in 100% of the new registered suppliers

The Global Anti-Corruption Program applies to all employees, administrators, suppliers, distributors, consultants, representatives, agents, brokers or any other intermediaries or third parties contracted to represent Vale or to act in the name, benefit or interest of Vale.

Selection, Quotation and Contracting
Suppliers commit to expected standards of behavior in accordance with Vale Policies, and to provide, through contractual clauses, decent working conditions, combat forced labor or modern slavery, child labor and child sexual exploitation and not to tolerate discrimination, respect freedom of association, and collective bargaining. Vale's standard contract also includes anti-corruption, HSE, and Human Rights clauses.

Management of Contracts and Suppliers
Vale carries out periodic monitoring of suppliers in terms of social, environmental, humanitarian, performance, and government relations.

The Center for Evaluation of Third-Party Contracts (NACT) monitors suppliers in Brazil, selected in terms of health and safety issues and labor conditions. The practice will be extended to all suppliers with applicable contracts in 2021.

The Supplier Performance Index (IDF) monitors the performance of suppliers at the sites in Brazil and Mozambique based on technical criteria of health and safety, environmental protection, respect for labor rights and continuous improvement through an action plan. It was revised and improved in 2020.

The company periodically monitors updates to the Dirty List of Slave Labor, both in the certification and registration phase and throughout the supplier's life cycle, cross-referencing the information with 100% of its suppliers in Brazil.

If any Vale supplier is included in this list, an internal process with the Human Rights, Procurement, Integrity, Legal and Security areas is opened to evaluate the case and establish an action plan or other measures to be taken. For more information about the evaluation criteria for the Vale Procurement process, please visit http://www.vale.com/esg/en/Pages/Suppliers.aspx

100% of Brazil's active suppliers **are assessed on a weekly** basis in the Brazil Transparency Portal

The government's public sanctions list initiative cross-references Vale's register of active suppliers with the public sanctions list of the Brazil Transparency Portal (CEIS, CEPIM, CNEP).

In the first half of the year, Vale created a new area in Procurement, the Global Supply Management System (SMS) for Suppliers, in order to establish the global processes for management of Health, Safety and Environment (HSE), covering all company suppliers.

These processes aim to improve the safety culture and provide solid support to reduce accident rates. One of the area's first deliverables is to establish an external audit of all suppliers at the start of the contract cycle, aiming to ensure that HSE requirements are correctly met. Vale conducted the first Pilot Audit Cycle suppliers in sites in Brazil, Mozambique, and Indonesia in 2020.

In 2020, Vale also established a pilot process for Human Rights risk management for suppliers in Brazil, carrying out an assessment of the criticality of its contracts under three aspects:

- Supply segments;
- Operation location;
- Manpower mobilized.

It also evaluated the vulnerability of its suppliers' management based on the response to a self-diagnosis questionnaire covering seven dimensions:

- Policies and regulations;
- Management of risks and impacts;
- Whistleblowing Channel;
- Work relations and conditions
- Relationship with communities;
- Supplier management;
- Diversity and inclusion.

The result of this work culminated in the pilot Due Diligence of suppliers considered critical from a Human Rights standpoint. An action plan is being developed to address the risks identified.

Anti-corruption rules in video

In 2020, Vale released a video with anti-corruption rules, part of a set of initiatives to guide suppliers and third parties on how to act in accordance with the highest standards of ethics and integrity. The video is available on the Vale website and on the ESG Portal in eight languages: Portuguese with Libras, English, Spanish, Arabic, Bahasa Indonesia, Bahasa Malaysia, Mandarin and Japanese.

Territorial development GRI 103 | 203

Vale aims to promote Territorial Development in the locations where it operates based on dialogue with society, participative planning and convergence of actions, public policies and government, private and/or civil society territorial plans. Some assumptions must be considered to promote Territorial Development, such as: (i) reading the social reality of the territory with internal and external information, from a systemic and integrated view; (ii) building the social capacity of stakeholders; (iii) promoting intersectoral partnerships between companies (private sector), public authorities (governments) and civil society; (iv) encouraging economic diversification and equal social opportunity; and (v) preserving and recovering the environment in alignment with the company's business plan.

Aiming to facilitate the process of Territorial Development, Vale established the "the Vale way to perform" – a systematic action for social and environmental performance. It requires the integration of all the company's areas and consists of listening, understanding, planning, executing, monitoring, and evaluating the impact of its structuring social investment actions and projects, whether voluntary, mitigating or mandatory. The model developed is in its initial stage of execution and aims to define the priority themes for action in the territories, build the local transformation view and make its implementation feasible. It is done on the basis of the territorial reality understanding and together with all actors involved.

In this sense, it is Vale's responsibility to establish short-, medium- and long-term goals focused on the social transformation of the territory, and aligned with local talents, plans and desires and the company's strategic planning - tying these goals to the respective metrics of the Sustainable Development Goals (SDGs).

This way we will promote a continuous improvement process seeking to improve the use of resources, leverage results and maximize mining's positive impacts, encouraging local transformation and generating shared value according to Sustainable Life of Mine (SLOM) stages.

To position sustainability as a responsibility that is attributed to everyone, Vale will have the Social Forum starting in 2021, responsible for encouraging, guiding and following up Vale's integrated action with strategic vision (operational, sustainability and support areas) in social and environmental issues in the territories (read more on page 79).

Associated with this internal integrated action, Vale seeks to build Social Capacity through joint actions with other interested parties, either through intersector partnerships or multilateral agreements, to develop projects that empower and develop society's resilience.

Visit by representatives of Vale's Executive Board to communities in Parauapebas, Pará.

The **Vale** way to perform

Social Reality Screening

» Differential diagnosis
» Understanding the CRs and IR
» Internal diagnosis
» Local risks and impacts

Operation thematic prioritization

To establish territorial goals

Climate Change
Energy
Forests
Water
Health
Education
Income generation
Develop and promote alliances

Development promotion

Territorial development

Prosperity and economic diversification
Equality and social opportunity
Environmental preservation and recovery

Vale way to perform

Internal integration

Vale

Operation
Sustentability
Support

Building the social capacity of stakeholders

External

Empowered **Communities**
Efficient **Government**
Private Sector Partnerships

Measurement and evaluation of impacts

Private social investment: Social, cultural, environmental and scientific

Through its voluntary investments, Vale reaffirms its commitment to society by carrying out actions in the social, cultural, environmental and scientific research areas. Our main voluntary social investment vehicles are: the Vale Foundation, Vale Cultural Institute, Vale Fund, Vale Institute of Technology – Sustainable Development, and Vale Volunteer Network.

In 2020, Vale signed important partnerships for the development of **social programs**

Partnerships

Vale signed important partnerships for the development of social programs in 2020. Companies such as Wheaton Precious Metals and Grupo Hidrau Torque (GHT), for example, contributed resources for the Vale Foundation's Territories Network education project, focused on school inclusion and reducing dropout rates, in addition to the previously mentioned Mask + Income project. In the cultural sector, it supported, for example, around 60 culture points in Pará during 2020 in partnership with local institutions.

Still in the context of the partnerships, along with Imazon (Institute of Man and Environment of the Amazon) and Microsoft, through the Vale Fund and the Vale Technological Institute, we have been implementing a platform to identify the risk of deforestation in the Amazon using artificial intelligence.

Vale Foundation

Vale Foundation's activities are focused on social development through partnerships with public authorities, companies and third-sector organizations to strengthen public policies. Its actions seek to contribute to positive social transformations in the territories where Vale is present in Brazil, with initiatives in Education, Basic Health, Productive Inclusion and Social Protection.

Results of Vale Foundation's social initiatives in 2020:

2 million
people impacted

52
municipalities
from 6 Brazilian states

164,000
students from 645 education units benefited, which represents about 30% of the students[1] and 50% of the public schools[2] in the 17 municipalities served by the education projects;

419
Basic Health Units supported, which represents 100% of the UBS[3] of the 29 municipalities served by Ciclo Saúde, which provide care to 1.8 million people;

2,500
entrepreneurs supported

3,600
children and young people enrolled in the Knowledge Stations (Estações Conhecimento, in Portuguese)

(1) Source: 2018 School Census, QEdu
(2) Source: 2019 School Census, INEP
(3) Source: Primary Care Coverage, Technical Notes from CNES - Cadastro Nacional de Estabelecimentos de Saúde (SUS Portuguese acronym)

Quality literacy

During the year, the Vale Foundation entered into a partnership with the state government of Maranhão, with Associação Bem Comum, Fundação Lemann and Instituto Natura, to join the Partnership for Literacy in Collaboration Scheme (in Portuguese PARC – Programa de Alfabetização em Regime de Colaboração), which seeks to support and develop policies focused on literacy, alongside state and municipal governments.

In addition to the initiative at the state level, Vale started, in partnership with Getúlio Vargas Foundation (FGV in Portuguese), a literacy project for Maranhão municipalities along the Carajás Railroad (EFC). The project, that was developed together with the municipal secretaries of education and schools, involves teacher training, management, and the production of teaching material to promote quality literacy for 70,000 children.

In partnership with Getúlio Vargas Foundation (FGV in Portuguese), Vale has started a literacy project focused on Maranhão municipalities along the **Carajás Railroad (EFC)**

Read More

More information on the Vale Foundation's results is disclosed on its website http://www.fundacaovale.org/ and in its Activity Reports, published annually

Vale Cultural Institute

We launched the Vale Cultural Institute in September 2020 to value Brazilian heritage, foster artistic expression and democratize access to culture. In addition to playing a role in social transformation, the Institute seeks to generate a positive impact on people's lives and build a legacy for future generations.

In 2020, the Institute held the first Call for Cultural Sponsorships, a public notice that allocated USD 4.8 million to projects throughout Brazil through the Federal Law for Cultural Incentive. In total, more than 2,800 projects were registered, and 68 were selected by a committee of external specialists – artists, researchers, journalists, art critics, leading professionals in the cultural sector, and Vale employees.

Seeking a balanced participation in the call for proposals, which included projects from new cultural producers of different sizes and locations, the Institute developed a free online training course to help cultural producers format and register projects for the Federal Law for Cultural Incentive, before the call for proposals was launched.

Receiving video classes structured in five modules and consultation materials, the participants had the opportunity to learn step by step how to enroll a cultural project in the Federal Law for Cultural Incentive.

Read more

http://www.vale.com/brasil/PT/sustainability/patrocinios/Paginas/treinamento-vale.aspx

(avaliable in Portuguese only)

BRL 25 million (USD 4.8 million) available in 2020, via the 1st Vale Call for Cultural Sponsorships

2,814 projects registered

68 projects selected:

3 projects
BRL 1 million to BRL 2 million (USD 194,000 to USD 387,000)

8 projects
BRL 500,000 to BRL 1 million (USD 97,000 to USD 194,000)

22 projects
BRL 500,000 to BRL 250,000 (USD 97,000 to USD 48,000)

35 projects
up to BRL 250,000 (USD 48,000)

The Vale Cultural Institute allocated more than USD 30 million of resources incentivized through the Federal Law of Incentive to Culture and more than USD 6 million in projects with its own resources, all in Brazil. In total, more than 160 projects – in the areas of heritage, music, festivities and circulation, museums and cultural centres – from all Brazilian regions, will be executed in 2021.

The projects include Rio's Modern Art Museum, São Paulo's Modern Art Museum, Grupo Galpão, the Museum of the American Man, Inhotim Institute, and Parque Lage's Visual Arts School. The Institute also performed essential actions to celebrate regional culture, such as NALATA, the International Percussion Festival – held in Bahia; the Amazon Biennial in Pará; and the Meeting of Creole Drum (Tambor de Crioula) Groups from Maranhão's Quilombola communities.

It also supports the [spell out OSB] (OSB), The MG Philharmonic and Ouro Preto Orchestras, musical education centres such as Vale Música Belém, Vale Música Serra, and Moinho Cultural and the Vale Música Brumadinho and Vale Música Canaã dos Carajás centers.

Reconstruction of the National Museum

Some initiatives supported in 2019 and 2020

Between 2019 and 2020, we supported and sponsored more than 60 projects in more than 50 municipalities in Brazil. Among the initiatives are the:

- Reconstruction of the National Museum and the Ipiranga Museum.
- Management of our own cultural spaces – four museums and cultural centres with free admission: the Vale Minas Gerais Memorial (MG), Vale Museum (ES), Vale Maranhão Cultural Centre (MA) and House of Culture of Canaã dos Carajás (PA), with exclusively digital.
- Training and virtual presentations of the Vale Music Program.
- Sponsorship of the Círio de Nazaré and Penha Party, both virtual and other local festivities and programs.

USD 30 million of resources incentivized through the Federal Law of Incentive to Culture and more than USD 6 million in projects with its own resources, all in Brazil

More than 160 projects – in the areas of heritage, music, festivities and circulation, museums and cultural centres – from all Brazilian regions, will be executed in 2021

Recovery of historic centre

Through the Vale Cultural Institute and a Cooperation Agreement with the Government of Maranhão, Vale is helping to restore the historic centre of São Luís. Three buildings listed as National Heritage sites are in the process of restoration:

- **Building 1**:
  Rua da Palma, 489
  área 825 m²;
- **Building 2**:
  Rua do Giz, 476
  área de 605 m²;
- **Building 3**:
  Rua Rio branco, 404
  área 913 m².

Total investment
USD **1.9 million**

Read more

www.institutoculturalvale.org

The Vale Fund

Vale supports an investment fund that promotes solutions with a positive socioenvironmental impact to strengthen a sustainable, fair and inclusive economy.

In **ten years** of operations, the Vale Fund:

Supported **75 socio-environmental projects**

Ranked among the **TOP 10 Amazon conservation funders, from the Gordon and Betty Moore Foundation – twice**

Contributed to the sustainable development of more than **23 million hectares** of protected areas by the end 2020

Boat on Marajó Island, in the Amazon region of Pará.
Photo: Marcelo Lelis/Archive Fundo Vale

Innovation and sustainable business in the Amazon

The Vale Fund seeks to promote sustainable solutions, especially in the Amazon, through innovative arrangements with several partners and paying special attention to business entrepreneurs with a socio-environmental impact.

In response to the economic challenges imposed during the year, the Vale Fund conducted the initiatives below.

Socio-environmental Response Plan

Due to the COVID-19 pandemic, the year was challenging due to negative impacts on small businesses, especially those that depend on the products of socio-biodiversity and family farming. As a response to the economic challenges imposed by the pandemic, in partnership with the Conexsus Institute, a Socio-environmental Response Plan and an Emergency Credit Line were launched, making available, until December 2020, USD 1.2 million in resources for 82 associations and cooperatives, benefiting 10.5 thousand rural producers and extractivists, in approximately 32.6 thousand hectares with a third of them located in the Legal Amazon. In addition to the loan, the family farming and extractivist associations and cooperatives had access to services to strengthen management, legal advice, training in marketing and commercialization, and services to facilitate market access.

Products from family farming and extractivism, such as flour, were the focus of the Conexsus Fund's Emergency Credit Line and Response Plan to COVID-19. Photo: Vale Fund archive

USD 1.2
million in available credit extended

10,500 rural and extractivist producers benefited from 82 associations and cooperatives

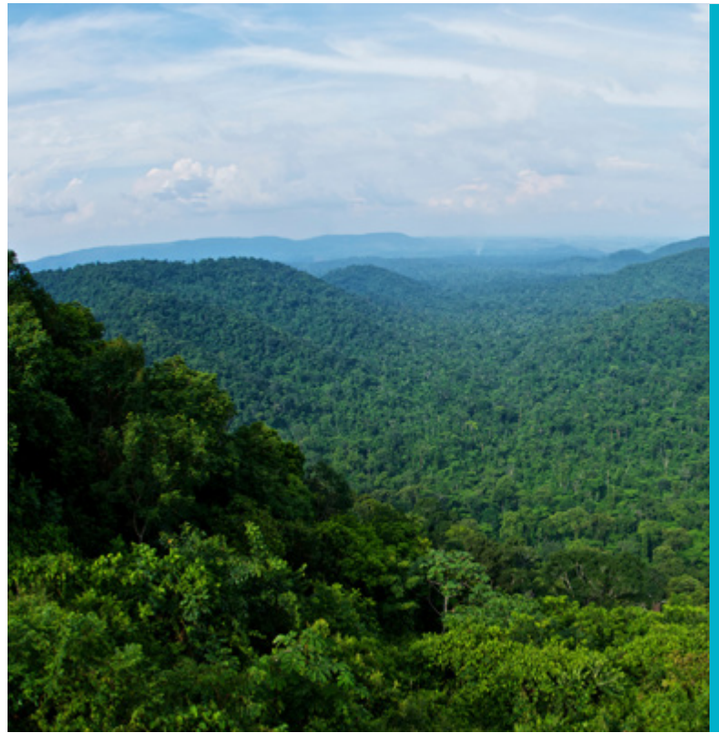
Covering an area of **32,600 hectares** – 1/3 of which is located in the Legal Amazon

Business Acceleration Program – Partners for the Amazon Platform (PPA in Portuguese)

15 Amazonian businesses strengthened on topics such as financial and administrative management, human resources, marketing, logistics, commercialization, legal aspects, among others. Among them is the Extractive Cooperative of Flona de Carajás (COEX Carajás), covering an area of 15 thousand hectares.

Support for strengthening the business ecosystem and impact investments

In partnership with the Institute for Cooperative Corporate Citizenship of Extractive Workers in Flona de Carajás (ICE) and the Phi Institute of Intelligent Philanthropy, the Vale Fund contributed to strengthening networks such as the Brazilian Alliance for Impact Investment and Impact Businesses and Latimpacto. Among the activities carried out are studies, courses and events on the subject, in addition to programs to improve the capacity of investors and impact incubators and accelerators.



Deforestation risk technology and mapping

The project is the result of a partnership between the Vale Fund and ITV – Sustainable Development with the Institute of Man and the Environment of the Amazon (Imazon) and Microsoft to identify Amazonian areas at risk of deforestation and fires, using artificial intelligence.

Learn more

Learn more about the Vale Fund at: www.fundovale.org

Training in financial and administrative management, human resources, marketing, logistics, commercialization, legal aspects

In 2020, we recovered more than 1,000 hectares of degraded areas through productive businesses in agroforestry and silvopastoral systems under the leadership of the Vale Fund. This was accomplished through a pilot project as part of Vale's Forestry Goal.

Sustainable products from the Amazon are the focus of the work of the logistics and commercialization laboratory for sociobiodiversity products, developed by Climate Ventures. Photo: Vale Fund archive

Logistics and commercialization laboratory

In 2020 we provided support to the Climate Ventures Institute to develop the Laboratory for Logistics and Commercialization Challenges of Sociobiodiversity of the Amazon. The project launched a collective campaign called "Amazônia em casa, Floresta em pé", in partnership with Mercado Livre, which delivered more than a thousand products in 93 cities in the country with an approximate value of USD 15,000 in revenue for small businesses.

Bioeconomy

We strengthened the Priority Program for Bioeconomics (PPBio – Programa Prioritário de Bioeconomia), developed by the Amazon Conservation and Sustainable Development Institute (IDESAM in Portuguese), raising USD 1.2 million for eight research and development projects for the use of Amazonian biodiversity assets, in addition to creating a project bank with 80 mapped businesses, which could be invested in the future.

Agroforestry Challenge

In the context of Vale's voluntary 2030 forestry commitment, the Vale Fund launched the Agroforestry Challenge to map and accelerate solutions to the challenges of Agroforestry Systems (SAFs), in partnership with the Vale Natural Reserve and the accelerator Troposlab. 130 ideas were mapped, almost 70 were registered, and six startups were accelerated through 140 hours of mentoring.

USD 1.2 million

raised for eight research and development projects for the use of Amazonian biodiversity

Vale Technology Institute - Sustainable Development (ITV-DS Portuguese acronym)

ITV-DS (Portuguese acronym) is a private scientific and technological institute located in Belém (PA). With no economic purpose, it performs research and generates knowledge to support Vale's activity and sustainable development. For 10 years, it has worked to produce knowledge about and preserve the Amazon.

ITV's research areas

- Environmental conservation
- Biodiversity knowledge
- Genetics and genomics of biodiversity
- Sustainable occupation of the territory
- Socio-economics and the bioeconomy
- Water resources management
- Reforestation
- Recovery of degraded areas
- Monitoring of environmental chemical risk
- Weather forecasting and climate modeling
- Geoinformatics
- Scientific computing and artificial intelligence

ITV in 10 years (2010-2020)

- Over 450 published scientific papers
- 36 researchers
- About 100 scholarship students
- Established network of employees in Brazil and abroad

Learn more

Learn more about ITV at:

www.itv.org

Incentive to scientific research

The Vale Technology Institute also encourages research and shares scientific knowledge with society through postgraduate courses. One example is the professional Master's degree in Sustainable Use of Natural Resources in Tropical Regions, created in 2013. Ten scholarships are awarded each year to students residing in the state of Pará to develop research on topics connected to the 17 SDGs of the UN 2030 Agenda.

Science, research and creation of social value

ITV-DS is looking towards a more sustainable future.

Research on endangered species

Among ITV-DS's achievements in recent years, one of the highlights is the first description of the flora of the canga environment in the Amazon (the set of plant species in a region). The research identified new endemic species and today a program to characterize and conserve this flora is in progress.

ITV-DS also develops actions to characterize cave fauna. Together, these and other actions contribute to local biodiversity management and to industrial activity planning in the region.

Vale Volunteer Network

We created Vale's corporate volunteering program in 2004 to unite people in their desire to contribute to improving society through voluntary action. It is organized into Regional Committees in seven states.

In 2020, during the COVID-19 pandemic, we created a digital platform to safely ensure greater scope for action and agility in mobilizing initiatives from employees and society as a whole, and the program was renamed the Vale Volunteer Network: www.redevoluntariavale.com.br.

In 2020, the Vale Volunteer Network carried out and mobilized 238 actions in the territories where Vale operates and in other locations in Brazil, mobilizing 3,400 volunteers, in addition to online training and webinars on citizenship, childhood, racism, and solidarity. It was invested approximately USD 430,000, including resources from Vale with donation matching, volunteers, companies and partner institutions. We mobilized one of the initiatives, Christmas Without Hunger (Natal Sem Fome, in Portuguese), in partnership with Citizenship Action (Ação da Cidadania), which collected the equivalent of 1.1 million plates of food in December 2020 with the logistical support of the companies Della Volpe, VLI and MultiLift Terminal to ensure the distribution of food. The food baskets reached families in communities along the Carajás Railroad and the Vitória-Minas Railroad, reaching 21 municipalities in Maranhão, 4 in Pará, 20 in Minas Gerais, and 7 in Espírito Santo.

Local communities

Social material topic

Local communities

SDG 3 8

GRI 103 | 411 | 413
G4 MM5 | MM6 | MM7 | MM9
SASB EM-MM-210b.1 and
SASB EM-MM-210b.2

This topic covers Vale's positive and negative impacts on local communities and mechanisms for resolving conflicts with communities, promoting territorial development and its positive direct and indirect economic impacts, and Indigenous Peoples and Traditional Communities, always in line with the principles of respect for Human Rights.

Community relationship management is a strategic process for Vale's social performance and seeks to promote engagement with our main stakeholders and, in particular, with local communities.

For the 2020 cycle, highlights include our internationalization of the standards that guide the relationship with communities, to help guide/ improve the management of community relations; the strengthening of the Community Security process; and consolidation of the Grievance Mechanism.

Internationalization of Relationship Standards with Local Communities

GRI 413-1

In 2020, Vale standardized to all countries where the company has operations the standards of relationship with communities for all countries where the company has operations, to help guide and improve our management of community relationships, except in Malaysia, which is scheduled for 2021. This initiative made it possible to qualify the global management of social performance – based on the integration of information data – and to promote greater transparency in our reporting to stakeholders. Currently, Vale has mapped 1,726 local relationship communities, distributed as follows: Brazil – 1,215, North Atlantic – 32, Mozambique – 243, Malawi – 99, Peru – 46, Oman – 12, Indonesia – 74 and Chile – 05. GRI 103 | 413

The Social Relationship and Investment Plan is one of the engagement strategies created to mobilize social actions and participate in defining and prioritizing which of them to implement in the territories.

In Brazil, according to data consolidated in October 2020, of the 1,215 local communities, distributed among 120 municipalities, 411 are priority communities for engagement. The company's goal is to prepare a Relationship Plan for all priority communities. In 2020, 236 of these priority communities had a plan, totaling 57% coverage. For 2021, the coverage rate is expected to increase to 62%. The expectation is that 100% of the priority communities are covered by Relationship and Investment Plans by 2030.

Engagement with local communities GRI 413-1

Indicator/ Country	Brazil	Mozambique	Malawi[1]	Andean America (Peru and Chile)	Oman	Indonesia	Canada
Total communities	1,215	243	99	51	12	74	32
Total Relationship Plans[2]	372	28	-	12	1	22	-
Total projects/initiatives	393	4	-	10	4	15	-
Total interactions	10,295	4,130	867	78	65	-	124
Total Indigenous peoples and Traditional Communities	54	-	-	-	-	1	5

1 Countries with unpublished data are still in the process of implementing the Social Action management tool (SDI)
2 Among the total number of priority communities that have a Relationship Plan prepared, some of them have more than one Plan

In the photo, Community Relations team meeting with community of APA do Gelado, in Carajás/PA

Grievance Mechanisms GRI 102-34 | 103 | 413

The Grievance Mechanism is a formal Vale process for managing demands globally, which can be used by any stakeholder to communicate/interact with the company, and which requires a response and/or action by the company.

In 2020, in line with the international principles defined by the United Nations (UN) and the International Council on Mining and Metals Council (ICMM), Vale established a standard with guidelines and requirements to operationalize our Listening and Response mechanism. During this year, we highlight our training of various Community Relations representatives responsible for the grievance channels in Brazil, Mozambique and Malawi, to adhere to the formalized standards and to the pilot research project to assess stakeholder satisfaction. In addition, due to the pandemic, we developed online community relations (CR) – a support tool that the community can access via computer or cellphone, to register demands. This will facilitate accessibility and demand registration process.

In the context of communities, in 2020, 15,559 community demands from communities were registered. Of these, 99.01% were answered and 72.6% were addressed.

With respect to human rights allegations, Vale assessed and responded to 100% of cases registered in 2020, 5 in total, giving visibility to the responses through the Business and Human Rights Resource Centre.

Piquiá de Baixo

Regarding the complaints of pollution caused by steel mills installed near the community of Piquiá de Baixo, located in the Chemical Industrial Park of Açailândia, in the state of Maranhão, Vale clarifies that it does not have any steel mill dedicated to the production of pig iron in Açailândia and that it acts as a supplier of iron ore to steelmakers. Despite the impact generated by the production of pig iron having no direct relationship with Vale, the Company has maintained a permanent dialogue with all stakeholders involved in the Piquiá de Baixo issue, in order to contribute to a sustainable joint solution, in favor of the community and the territory of which it is a part. The pig iron plants have been carrying out actions to address the socio-environmental issues mentioned in the report issued by the International Federation of Human Rights (FIDH).

Relationship with **Indigenous Peoples and Traditional Communities** GRI 411 | G4 MM5

Indigenous peoples have a relationship with the territory that involves not only physical and socioeconomic aspects, but also cultural and spiritual ones. In this regard, Vale acknowledges the importance of respecting the rights of these populations and the management of risks and impacts of the Company's activities on these communities.

Vale's relationship with indigenous peoples and traditional communities is aligned with the main industry and international standards and commitments such as the ICMM position statement on Mining and Indigenous Peoples, Convention 169 of the International Labor Organization (ILO), and the United Nations Declaration on Rights of Indigenous Peoples.

In Brazil, the Company has a multidisciplinary Indigenous relations team, with more than 20 professionals dedicated to the engagement, dialogue, and active listening. In other countries, Vale has different structures, always with qualified professionals who work guided by the above-mentioned references and the Global Human Rights Policy.

Vale incorporates the indigenous and traditional communities' topic in a transversal manner in the various internal analysis processes regarding project risks and feasibility, seeking to consider the rights and interests of these communities in the decision making.

When planning its projects, we seek to encourage the active participation of Indigenous Peoples and Traditional Communities in resolving issues related to Vale's activities that generate risks and/or impacts on these populations, allowing free, prior and informed consultation and consent, as well as monitoring compliance with control and/or mitigation measures.

With a presence in different countries, cultures, and legal requirements, one of the Company's challenges is to define operational procedures, training, and tools to guide its performance on the topic. To face this challenge, in 2020, a management area was created to standardize the theme globally, to act as the 2nd Line of Defense, providing support, training, and visibility to the relationship processes with indigenous peoples and traditional communities.

Currently, Vale has relationship plans for all indigenous peoples and traditional communities that inhabit the areas of influence of its activities. In addition to Brazil, in Newfoundland and Labrador in Canada, Vale partners with the Canadian government and others through the Labrador Aboriginal Training Partnership, to develop skills and training opportunities for hiring. This program has helped more than 2,000 Aboriginal participants explore their career choices and paths and help improve their employment prospects. The Voisey's Bay mine, in Labrador, also conducts a Job Readiness Training Program to help qualify and prepare Aboriginal participants to enter the job market.

Committed to this agenda, Vale defined as one of the pillars of its strategic planning to expand engagement in the indigenous agenda, consisting of three main fronts of action: Preservation of cultural memory; Support for Indigenous Protagonism; and implementation of Sustainable Programs.

Read more

http://www.vale.com/esg/en/Pages/IndigenousPeoplesAndTraditionalCommunity.aspx

Photo: Rafael Scherer

Relationship with the Xikrin do Cateté Indigenous Peoples GRI G4 MM6 | MM7

Vale's relationship with some Indigenous peoples has a long history and, therefore, may go through convergences and divergences, always guided by respect and dialogue.

In 2020, Vale signed a Transitional Agreement with the Xikrin do Cateté and Kayapó Indigenous peoples.

In a conciliation hearing held at the Federal Court of Redenção in southeastern Pará, the Federal Public Ministry (MPF), Vale and the Xikrin do Cateté and Kayapó Indigenous peoples reached a preliminary agreement on Mineração Onça Puma – a subsidiary that explores nickel – regarding the social and environmental potential impacts caused on Indigenous lands.

The agreement suspends the lawsuit filed by the MPF and other lawsuits filed by Indigenous associations against Vale for one year, to create a favourable and harmonious environment for building reconciliation in a joint and participatory manner that may eventually close the lawsuits.

This step is very important for resolving this controversy and for consolidating a relationship of partnership and trust with these communities.

Involuntary resettlement

GRI G4 MM9

Involuntary resettlement is a social performance process for managing the impacts of involuntary displacement of people and/or economic activities due to the acquisition of rights over land by Vale, preventing the impacts of works that result in risks to the physical integrity of communities among others. Vale's commitment is that the execution of the process guarantees the return of livelihoods in conditions equivalent to or better than those verified before the involuntary resettlement. The process follows guidelines and standards from international organizations such as International Finance Corporation - IFC, World Bank, UN and ICMM.

In Brazil, 637 families were served in 2020 in the North (Maranhão and Pará) and South (Espírito Santo and Minas Gerais) Systems. Dam de-characterization led to the care of 171 families in the municipalities of Rio Preto, Itabirito, Barão de Cocais, Mariana and Nova Lima, all located in the state of Minas Gerais.

At EFVM (Estrada de Ferro Vitória à Minas), the involuntary resettlement of 73 families that are irregularly occupying the EFVM domain, in the municipalities of Nova Era and Antonio Dias, in Minas Gerais, is in progress.

Vale is committed to carrying out existing agreements with resettled communities in Indonesia. Near the Sorowako mine, Vale has renovated 7 houses for residents of the Ledu-Ledu resettlement area, is improving infrastructure to support social and economic activities like road and drainage facilities, and is helping with the availability of clean water for residents.

In Mozambique, Vale invested USD 2 million to improve resettlement in Moatize, helping to restore the livelihoods of 712 families resettled in Cateme and 289 resettled in 25 de Setembro. Highlights include urban infrastructure projects, strengthening food security, income generation and a project to provide technical support, quality inputs and access to markets for more than 600 families.

In 2021, the preparation of the Involuntary Resettlement Assistance Plan (PAR) will be continued, involving the negotiation of agreements with 154 families residing in 2020 in the expansion area of the Moatize Coal Mine Section 2 PIT 3, a process that was delayed due to the COVID-19 pandemic. Engineering alternatives were found to minimize the resettlement of 1,349 families in Section 5. A new physical and socioeconomic survey will be initiated this year to update the number of families.

Mobility Project, Mozambique

In 2021 the development of the Involuntary Resettlment Assistance Plan (PAR) for 154 families in the expansion area of the Moatize Coal Mine will be continued

In the Nacala Corridor, in a partnership between Nacala Logistics and the World Food Programme* (WFP), an initiative linked to the United Nations (UN), school lunches are distributed to more than 25,000 elementary school students in the province of Nampula, northern Mozambique (activity partially suspended due to the pandemic, but resumed in March 2021). In addition, farmers supported by the Livelihoods Restitution Program, which is promoted by Vale and includes more than 13 thousand families, are being included in the list of suppliers for this program.

A program for restoring livelihoods for the fishermen impacted in Nacala Bay is also being developed, with the engagement of 400 families, who migrated from artisanal fishing to safe and responsible offshore fishing and to complementary income generation activities, such as commerce, poultry farming, and agriculture.

* World Food Programme (WFP), which operates within the UN system and is the world's largest humanitarian organization that addresses hunger and promotes food security.

Vitória-Minas Railroad (EFVM)

Vale's operating units are installed in regions where land use disputes are part of the territorial context

Land use **disputes**

GRI G4 MM6 | MM7

Vale's operating units are installed in regions where land use disputes are part of the territorial context. Currently, Vale is managing the relationship with communities that occupy areas of the company in four regions of Brazil, Mozambique, and Indonesia, through conflict prevention actions and permanent dialogue with stakeholders, especially public institutions, communities and social movements.

In June 2020, in the southeastern region of Pará, Brazil, members of a structured social movement illegally connected electrical power in the Carajás Railroad (EFC), putting the community and the railroad's operations at risk.

After repeated attempts at dialogue, the demobilization of the clandestine installation, in accordance with the due legal guarantees, generated a violent reaction from a small number of peasants, with the use of firearms against the company's team. Two families filed a complaint of bodily injury, registered in an "Boletim de Ocorrência" (BO). The case was quickly resolved and dialogue was re-established. Vale is currently carrying out actions to support land title regularization in irregularly occupied areas.

Vale has a formal partnership with government entities and social movements to expand the opportunities for inclusion of peasant families in land regularization programs for rural areas in the north of the country.

In Indonesia, open dialogue between Vale, community and government resulted in an agreement that reclassified an area of land within PT Vale's Contract of Work as a temporary settlement for the Dongi Karunsie people. This is an important resolution of a long-standing issue. The agreement led to the installation of electricity in the area by Vale and the Dongie Karunsie people agreeing to restrict the size of the area, helping ensure the safety and well-being of people living there.

Appendix I
Interests in Entities and Associations

GRI 102-13

- Brazilian Association of Scientific Editors (ABEC BRASIL), via ITV
- Brazilian Academy of Sciences (Academia Brasileira de Ciências / ABC)
- Citizenship Action (Ação da Cidadania)
- Aspen Network of Development Entrepreneurs (ANDE), via the Vale Fund
- Brazilian Association of Metalurgy, Materials and Mining (Associação Brasileira de Metalurgia, Materiais e Mineração / ABM)
- Brazilian Foreign Trade Association (Associação de Comércio Exterior do Brasil / AEB)
- Association of Private Port Terminals (Associação dos Terminais Portuários Privados / ATP)
- National Railway Transport Association (Associação Nacional dos Transportes Ferroviários / ANTF)
- Brazil Canada Chamber of Commerce
- France Brazil Chamber of Commerice (Câmara de Comércio França Brasil)
- CNRT Nickel and its Environment (Centre National de Recherche Technologique Nickel et Son Environnement)
- Brazilian Centre for International Relations (Centro Brasileiro de Relações Internacionais / Cebri)
- Reference Centre for Integral Education, via the Vale Foundation
- Childhood Brasil
- Collective COVID Radar
- Columbia Centre for Sustainable Investment (CCSI)
- OECD Business and Industry Advisory Committee (Comitê Consultivo de Empresas e Indústria da OCDE / Biac)
- National Conferation of Industry (Confederação Nacional da Indústria / CNI)
- Brazilian Council for Corporate Volunteering (Conselho Brasileiro de Voluntariado Empresarial)
- Brazil-China Business Council (Conselho Empresarial Brasil-China / CEBC)
- Brazilian Business Council for Sustainable Development (Conselho Empresarial Brasileiro para o Desenvolvimento Sustentável / CEBDS)
- Brazil-Japan Business Council (Conselho Empresarial Brasil-Japão / CEBJ)
- BRICS Business Council (Conselho Empresarial do BRICS / CEBRICS)
- European Association of Metals (Eurometaux)
- National Forum of Deans of Research and Graduate Studies (Fórum Nacional de Pró-reitores de Pesquisa e Pós-graduação / FOPROP), via ITV
- Foreign Trade Studies Centre Foundation (Fundação Centro de Estudos do Comércio Exterior / Funcex)
- Global Business Initiative on Human Rights (GBI)
- Group of Institutes and Company Foundations (Grupo de Institutos e Fundações de Empresas / GIFE), via the Vale Foundation
- Extractive Industry Transparency Initiative (Iniciativa de Transparência da Indústria Extrativa / EITI)
- National Pact Institute for the Eradication of Slave Labour (Instituto Pacto Nacional pela Erradicação do Trabalho Escravo / INPACTO)
- Instituto Acende Brasil
- Brazilian Mining Institute (Instituto Brasileiro de Mineração / IBRAM)
- International Council on Mining & Metals (ICMM)
- International Council of Museums Brasil (ICOM)
- Latin American Venture Philanthropy Network (Latimpacto), via the Vale Fund
- Mining Hub
- National Pact for Early Childhood (Pacto Nacional pela Primeira Infância), via the Vale Fund
- Partners for the Amazon Platform (PPA)
- Sustainable Development Solutions Network (SDSN)
- National Teaching and Research Network / RNP), via ITV
- Task Force on Climate-related Financial Disclosures (TCFD)
- The Cobalt Development Institute
- The Indonesian Mining Association (IMA)
- The Mining Association of Canada (MAC)
- The Nickel Institute
- All for Education, via the Vale Foundation
- Voluntary Principles on Security and Human Rights
- Wise Group
- Women in Mining Brazil
- World Business Council for Sustainable Development (WBCSD)
- World Economic Forum (WEF)

Independent Reader's Letter

Dr. Rosa Maria Fischer,
Senior Full Professor, School of Economics, Business Administration and Accounting Department of Administration, USP (University of São Paulo)

As per their commitment of 2019, Vale presents the Integrated Report 2020 (IR) in line with the ESG precepts, which, according to the International Integrated Reporting Council (IIRC), must be different from their annual Sustainability Report. The IR does not replace the usual corporate reports, but complements them and expands their transparency, as it proposes to explain the narrative of how the company generates value over time for itself and for the various stakeholders in its relationship universe. To this end, it must integrate information about the strategies that have been adopted to manage financial, natural, manufactured, human, intellectual and social capital – and explain the goals and metrics that have allowed Vale to measure the challenges it faced and the interventions it implemented.

It must be recognized that, by adopting the Integrated Report, Vale is moving positively towards increasing transparency in its internal and external communications. At the same time, the IR establishes the integrated thinking paradigm that is the foundation of Vale's management mode, which governs the company's process of reporting on the actions and decisions of each and every one of its managers and also extends their responsibility.

The text has not yet acquired the most suitable format and content for fluid reading, as much important information is communicated in other documents and reports, making it difficult to understand details. However, since this is the first time that this type of report has been published, it is understandable that its preparation requires a herculean effort to systematize data, considering the size of the company that operates in five continents and more than 20 countries.

It is very significant that the narrative, right at the beginning with the Repair chapter, opens with the sentence "We will never forget Brumadinho," which reinforces the purpose expressed in the CEO's letter – "to improve the lives and transform the future of people and communities." The meaning goes far beyond the mission of generating prosperity through the transformation of natural resources. It indicates that the painful events of 2019 generated irrevocable learning for the entire company: that Life is the essential and priority value among all its assets. And, by adding to the phrase the vocative "Together," he calls on all people to carry out a process to transform the organizational culture, favouring the attitude of generating shared value and seeking to eliminate the connotation of omnipotence in relation to the company's communities and nature.

However, it is necessary to point out that, in the business model and in the formulation of the strategy that guides Vale's performance, technical aspects with a focus on engineering and product prevail, without incorporating socio-environmental dimensions, even though these are disseminated throughout the report. In this sense, it is recommended that socio-economic dimensions be integrated into the core of the company's worldview, expressing that they are intrinsically linked to its business and management models. Although the design of the model clarifies the relationship between its processes and the respective impacts, it is not clear what the company's value proposition is. This absence allows questions such as: what is the socio-environmental value contributed to the communities affected by Vale's operations? What is your value proposition to customers? Or, to suppliers belonging to your production chain; and so on, in relation to your various stakeholders?

It cannot be ignored, however, that the Report describes the company's multiple efforts to improve the formulation of these guidelines. In this sense, the strategic pillar defined as "New Pact with Society" is the one that best summarizes the progress of this integrated thinking. It materializes, simultaneously, in Vale's role as a facilitator of sustainable development in the locations under its influence and in its high safety and sustainability standards that have been established in its operations.

However, it is important to emphasize that this engagement with society in constructing a common future does not happen automatically, with the simple manifestation of an innovative purpose. And here, Vale has a learning path to follow along which it needs to divest itself of its dominant position, and to value the knowledge and experiences of community members to recognize and legitimize their empowerment. It needs, with them, to build solutions to the social, economic, environmental and cultural problems they experience, as well as to outline the possible routes to achieve multidimensional sustainable development in the territories.

The company's efforts to improve its business and management strategies are evident in some of the aspects highlighted in this report. They include constructing a materiality matrix from the opinions and expectations of various stakeholders, which allows Vale to direct and prioritize actions; active listening and technical diagnoses to guide its social investments; maintaining and strengthening commitments to global agreements; and, making investments in innovation, especially those aimed at carbon-neutral mining and technologies that reduce dependence on dams.

The topic most frequently highlighted by the

stakeholders consulted was the one that deals with managing and controlling the safety risks of geotechnical structures. Attesting to its political commitment to the sustainability strategy, Vale declares that it intends to exceed legal requirements, replacing dams with safer processes in line with international practices. This statement provokes relief and enthusiasm, mainly because it presents a decommissioning schedule for these structures; however, it is recommended that Vale share its goals to implement these practices with the populations involved, allowing them to monitor this solution and collectively build this future scenario.

Some points to be highlighted in the company's environmental goals are: to use 100% renewable energy in its production by 2025 in Brazil and by 2030 in other countries; to achieve carbon-emission neutrality by 2050; and, to recover and protect relevant areas in biodiversity. Vale is expected to assume a leading position, appropriate to its size and representativeness in the business world, going beyond mitigating the impacts generated by its operations. It is suggested that the company should assume more ambitious goals, such as the one mentioned in the letter from the CEO to join the most recent movement of international companies to limit the growth of global warming to 1.5°C. Or it is suggested that they incorporate biodiversity regenerative practices into their strategies in their own areas and those of third parties, especially those in the Legal Amazon region. Currently, such strategies have only developed within the scope of the Vale Fund.

With regard to risk management, the role of the Operational Excellence and Risk Committee, which advises the Board of Directors and the Executive Committees, are emphasized in the IR. These are responsible for disseminating preventive monitoring and the culture of continuous management, as well as the model of lines of defense referenced by strict standards. In this context, the implementation of Hazard Identification and Risk Assessment (HIRA) shows a tendency for the company to invest in raising the level of the parameters used to analyze operational safety, although it is not clear what types of critical controls have been identified and what respective solutions have been implemented.

The IR highlights important advances Vale has implemented in damage recovery measures, such as improving technical and operational safety strategies and relationships with communities, mainly from the tragedies experienced in Mariana and Brumadinho. However, specific information is scarce in the text, which indicates what remains to be done, as well as when and how it will be done. In short, complete information is very necessary in this topic. For example, when justifying the delay in works in Bento Rodrigues and Paracatu due to the epidemic, it would be necessary to design updated targets and schedules to highlight the company's commitments to the families affected by the evacuation of the damaged territories. Or, when reporting on actions to support the small farmers of Brumadinho, it would be enlightening to indicate the increase in income generation that has been achived for these beneficiaries, the perspectives of expanding this type of service to the other workers affected, and the effective possibilities of promoting new local small and medium-sized enterprises. As well as admitting the complexity inherent in paying indemnities, this is not sufficient justification for omitting more precise and agile schedules and goals to accelerate these processes.

Also noteworthy is Vale's improved communication channels that facilitate qualified listening and agile responses. In communicating with shareholders through the ESG Portal, the recommendations for the criteria to establish managers' remuneration should be weighted by the executives' adherence to collective goals and their fulfillment of individual goals. In this sense, one of the answers was to attribute a significant percentage of managers' remuneration to their efforts to achieve the collective goal of cultural transformation, which indicates the importance attributed to this process of change.

It would be advisable for the company's people management practices to contemplate the prospect of gradually increasing the weight of adherence to the desired cultural standards when grading employee performance, using objective metrics to assess "key behaviours." It is also important, to internalize the company values, that Vale invests in personal and professional development actions focused on the themes of generating socio-environmental value, biodiversity conservation, and respect for diversity and human rights.

This is because the company's organizational culture faces a process of transformation that is quite bold and that may suffer from slowness and obstructions if it is not promoted in a persistent manner and politically legitimized by the leadership. With investments in citizenship training for its employees, Vale will be able to advance in improving its ESG agenda and consolidate the cultural transformation announced in this Integrated Report.

Independent Assurance Statement Bureau Veritas

Introduction

Bureau Veritas Certification Brazil (Bureau Veritas) was engaged by Vale S.A. (Vale), to conduct an independent assurance of its Integrated Reporting for the year 2020 (hereinafter referred to as the Report).

This assessment was conducted by a multidisciplinary staff with expertise in non-financial data.

Scope of Work

The scope of this verification encompassed the Standards and Principles[1] of the *Global Report Initiative*™ for Sustainability Reports, including GRI's Mining and Metals Sector Disclosures (2013), and covered the period between January 1 and December 31, 2020.

Additionally, we assessed: (1) A set of Vale's self-assessment forms, specially prepared to comply with the Mining Principles of *the International Council on Mining & Metals (ICMM)*, updated in 2020; (2) The adherence of Vale's Integrated Reporting to the requirements of *the International (IR) Framework of the International Integrated Reporting Council (IIRC)* 2020.

The assessment of the ICMM forms aimed at verifying the completeness and clarity of the data disclosed by Vale and did not cover an in-depth verification of the implementation of policies and practices described by the company in the forms.

The analysis of adherence of the Report against the IIRC requirements aimed at verifying, in a generic way, the compliance with the Guidance Principles of the Integrated Reporting, since there is still no normative Protocol defined for its verification.

Vale's and Bureau Veritas Responsibilities

The collection, calculation and presentation of the data published in the Reporting are Vale's management sole responsibility. Bureau Veritas is responsible for providing an independent opinion to the Stakeholders, pursuant to the scope of work defined in this statement.

1 Materiality, Stakeholder Inclusiveness, Sustainability Context, Completeness, Balance, Comparability, Accuracy, Periodicity, Clarity, and Reliability

Methodology

The assurance work covered the following activities:

1. Interviews with the personnel responsible for material topics and Report content;
2. Analysis of documentary evidence provided by Vale in relation to the Reporting period (2020);
3. Verification of performance data relating to the principles that ensure the quality of the information, pursuant to the GRI Guideline and the Mining and Metal Sector Disclosure;
4. Review of Vale's internal systems for data aggregation;
5. Remote verification of the following sites: Global Head Office (RJ, Brazil); Tubarão Complex – Port and railway (ES, Brasil); Vargem Grande Complex (MG, Brazil); Onça Puma unit (PA, Brasil); Serra Norte and Mina do Azul Complex (PA, Brazil); Corumbá Complex (MS, Brazil); Vale Oman Pelletizing (Liwa, Oman).
6. Desk review of Vale's stakeholder engagement activities.

The level of verification adopted was Limited, according to the requirements of the ISAE 3000 Standard[2], which were incorporated to the internal assessment protocols of Bureau Veritas.

2 ISAE 3000: International Standard on Assurance Engagements and the GRI G4 guidelines

Limitations and Exclusions

Excluded from the scope of this work was any assessment of information related to:

- Activities outside the defined Reporting period;
- Statements of position (expressions of opinion, beliefs, goals, or future intentions) on the part of Vale;
- Economic and financial information contained in this Report which has been taken from financial statements verified by independent financial auditors;
- Brumadinho Repair information and data, as well as evacuated territories;
- Information published on Vale's website (http://www.vale.com/esg/pt/Paginas/Home.aspx), except the PDF Report and Data Book ESG;
- Disclosure of results obtained in 2020 regarding the 2030 Commitments published by Vale in its Report. Where GRI indicators include the results obtained in 2020, our team verified the reliability and accuracy of the data;
- Activity and projects of Fundação Vale and Instituto Cultural Vale;
- Other data and information concerning operations and activities that are not in the scope of the Report.

Technical Report

- Vale prepared the Report in accordance with the GRI Standards and Principles, including the Mining & Metals Sector Disclosures. The verified Report includes a PDF edition and a ESG databook, both published on Vale´s website (http://www.vale.com.br)

- Vale presents data and information regarding companies that are under its operational control, as shown in the Report;

- Regarding the information prepared to comply with the ICMM Mining Principles, we are of the opinion that the forms assessed are complete and clear with respect to the content defined in each Principle. We evidenced the implementation of a consistent self-assessment system that demonstrates sufficient compliance to all Principles;

- Vale updated its Materiality matrix in 2020 following the IIRC and GRI guidelines, identifying priority topics that significantly impact the company's value creation. The final validation of the process was in charge of the Sustainability Committee and resulted in nine material topics;

- The data presented to meet the GHG emissions indicators are part of Vale's GHG emissions inventory. This inventory was verified by Bureau Veritas through an independent assurance process. The disclosure of data regarding the inventory followed the methodology of the GRI standards;

- Vale published on its website a list of its main Controversies on socio-environmental issues. In our opinion the information on the year 2020 is sufficiently clear and complete;

- The company published its remuneration and governance practices, bringing transparency regarding its focus on ESG issues;

- We evidenced relevant actions in the field of Diversity and Inclusion, such as the launch of the Global Diversity & Inclusion Policy. In 2020 Vale achieved 16.3% of women in the company, an increase of 2.8% compared to the year 2019;

- Vale used generic information to disclose its significant indirect economic impacts (GRI-203-2), reaching the objective of this indicator in a minimalist way;

- During our verification, we did not evidence the presentation of the number of cases of work-related ill health and the number of fatalities as a result of work-related ill health, related to workers who are not employees (GRI 403-10 indicator);

- Vale has a system for the control and treatment of the communication process (complaints, questions etc) of local communities and presents the quantitative data in this regard. These communication records shows , among other issues, the complaints about the impacts of the company's operations, which may reflect a more assertive accountability for indicator 413-2 (Operations with significant negative impacts - real and potential - on local communities;

- We evidenced an intensification in the controls and management of the withdrawal and consumption of water from the operational units. However, there is still some use of estimated data in the quantification of water resources;

- In the chapter on Vale's dams, we noted the presentation of specific information regarding a new risk assessment system adopted by the company, called HIRA (Hazard Identification and Risk Assessment), whose total implementation, comprising 100% of the assessed dams portfolio, is scheduled for the year 2022. In the same chapter, Vale also presents information on the actions taken in relation to the dams that offer the greatest risk (Alert Level 3);

- In the course of our Assurance the inconsistencies found in the Report, regarding one or more principles of the GRI and the sector supplement, were satisfactorily corrected;

- Vale published data or justified the absence of data regarding the indicators associated to material aspects of the GRI and the sector supplement.

Our Findings Against The Mining Principles Of The International Council On Mining & Metals (ICMM)

- During the documentary verification of compliance against the Mining Principles, we found sufficient evidence regarding the adherence to the policies and procedures adopted by Vale, through a self-assessment process carried out by the company;

- Regarding the information prepared to comply with the ICMM Mining Principles, we are of the opinion that the forms assessed by our team are complete and clear, with respect to the content defined for each Principle;

- We evidenced that the self-assessment carried out demonstrates sufficient compliance to all ICMM Principles.

Our Findings Against The International <IR> Framework

- **Strategic focus and future orientation:** The Report presents in a very brief way the creation of Vale's value, whereas the IR requires a demonstration, for each of the 8 capitals, in the short, medium and long term. We recommend discussing with stakeholders the need for an approach to each of Vale's business separately, since the IIRC aims to focus on stakeholders with predominantly economic interest;

- **Connectivity of Information:** IR requires analysis towards the future with a certain emphasis on economic issues, related to the capitals. The current model of Report is largely focused on accountability and does not, systematically, project future scenarios based on information connectivity;

- **Stakeholders Relationships:** Although we have evidenced a mature stakeholder consultation process for defining material topics and addressing internal actions, the Report does not demonstrate the interests and needs detailed by engaged stakeholder groups. The IR focuses on this accountability and requires insights about the nature and quality of relations with key stakeholders, including how and to what extent Vale responds to their demands;

- **Materiality:** The materiality assessment could further analyze the value perspective, guiding the engagement process always in the short, medium and long term vision, since this issue of temporality is applicable to several IR requirements;

- **Conciseness:** Considering to the material topics reported and recommendations described in this Statement, we understand that there is great adherence to this Principle;

- **Reliability and Completeness:** We understand that the information in the Report is consistent with the Principle of reliability and Completeness, with due regard for the other recommendations in this Statement;

- **Consistency and Comparability:** We are of the opinion that the Report is adequately consistent. Regarding Comparability, we understand that there is still space to analyze and report information with a focus on the IR Content Elements, such as risks and opportunities and Outlook, where the uncertainty factors shall be taken into account.

Recommendations

- Deepen the understanding and disclose in a consistent way the significant indirect economic impacts (indicator GRI-203-2);

- Report the number of cases of work-related ill health and the number of fatalities as a result of work-related ill health, related to workers who are not employees (GRI 403-10 indicator);

- Improve the disclosure of data on the significant negative impacts of Vale´s activities (indicator 413-2), extracting information from the existing system of control and treatment of communication (complaints, questions etc) of local communities;

- Continue the installation of water meters at points that are relevant to water resources indicators (GRI 303), reducing the use of estimates;

- Plan actions to increase adherence to the IIRC Guideline.

Conclusion

As a result of our assurance, the evidence presented to us and in accordance with the scope of work defined in this statement, nothing has come to our attention that would indicate that:

- The information presented in the Report is not balanced, consistent and reliable;

- Vale has not established appropriate systems for the collection, aggregation and analysis of quantitative and qualitative data used in the Report;

- The Report does not adhere to the Comprehensive option and does not comply with the Principles for defining content and ensuring the quality of the GRI Standards, including the Mining & Metals Sector Disclosures;

- Vale does not comply with the ICMM Mining Principles, based on a defined process of self-assessment.

Declaration of Independence and Impartiality

Bureau Veritas Certification is an independent professional services firm specializing in Quality, Health, Safety, Social and Environmental Management, with more than 185 years' experience in independent assessment.

Bureau Veritas has a quality management system that is certified by a third party, according towhich policies and documented procedures are maintained for the compliance with ethic, professional and legal requirements.

The assessment team has no links with Vale and the assessment is performed independently.

Bureau Veritas implemented and follows a Code of Ethics throughout its business, in order to assure that its staff preserve high ethical, integrity, objectivity, confidentiality and competence/ professional attitude standards in the performance of their activities. At the end of the assessment, a detailed report was drawn up, ensuring traceability of the process. This Report is kept as a Bureau Veritas management system record.

Contact

Bureau Veritas Certification is available for further clarification on www.bureauveritascertification.com.br/faleconosco.asp or by telephone (55 11) 2655-9000.

São Paulo, Brazil, April 2021.

Alexander Vervuurt

Lead Auditor; Assurance Sustainability Reports (ASR)

Bureau Veritas Certification – Brazil

GRI Content Index GRI 102-55

For the *Materiality Disclosure Services*, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report. The service was performed on the English version of the GRI content index and the Portuguese version of the report.

GRI 101: FOUNDATION 2016

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	SDG	ICMM Principles	SASB
GENERAL DISCLOSURES							
GRI 102: General Disclosures 2016	**ORGANIZATIONAL PROFILE**						
	102-1 Name of the organization	Page 31	Mandatory				
	102-2 Activities, brands, products, and services	Page 34	Mandatory				Activity metrics; EM-MM-000.A
	102-3 Location of headquarters	Page 35	Mandatory				
	102-4 Location of operations	Page 34	Mandatory				
	102-5 Ownership and legal form	Page 31	Mandatory				

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	SDG	ICMM Principles	SASB
GRI 102: General Disclosures 2016	102-6 Markets served	Page 35	Mandatory				
	102-7 Scale of the organization	Page 31, 33, 34 and 36	Mandatory				
	102-8 Information on employees and other workers	Page 127	Mandatory				Activity metrics; EM-MM-000.B
	102-9 Supply chain	Page 137	Mandatory				
	102-10 Significant changes to the organization and its supply chain	Page 35, 38, 63, 65 and 125, more information can be found at Form 20F -2020 Section: SIGNIFICANT CHANGES IN OUR BUSINESS	Mandatory				
	102-11 Precautionary Principle or approach	Page 116, more information can be found at Form 20F -2020 Section: OPERATIONAL RISKS	Mandatory			2; 4	
	102-12 External initiatives	Page 98, more information can be found online at vale.com (http://www.vale.com/brasil/EN/initiatives/Pages/default.aspx)	Mandatory			10	
	102-13 Membership of associations	Pages 58, 98, 136 and 160, more information can be found at Institutional partnerships online at vale.com (http://www.vale.com/brasil/EN/aboutvale/institutional-partnerships/Pages/default.aspx)	Mandatory			9	
	STRATEGY						
	102-14 Statement from senior decision-maker	Pages 3 to 5	Mandatory			2	
	102-15 Key impacts, risks, and opportunities	Page 70	Mandatory			2; 4	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	SDG	ICMM Principles	SASB
GRI 102: General Disclosures 2016	**ETHICS AND INTEGRITY**						
	102-16 Values, principles, standards, and norms of behavior	Pages 31, 32 and 76	Mandatory		16	1; 2	Business Ethics & Transparency; EM-MM-510a.1
	102-17 Mechanisms for advice and concerns about ethics	Page 77	Mandatory		16	1; 2; 4	Business Ethics & Transparency; EM-MM-510a.1
	GOVERNANCE						
	102-18 Governance structure	Page 60	Mandatory		16	1; 2; 4	
	102-19 Delegating authority	Page 59 and 64	Mandatory		16	1; 2; 4	
	102-20 Executive-level responsibility for economic, environmental, and social topics	Pages 62 and 64	Mandatory		16	1; 2; 4	
	102-21 Consulting stakeholders on economic, environmental, and social topics	Page 47	Mandatory		16	1; 2; 10	
	102-22 Composition of the highest governance body and its committees	Pages 60, 61 and 62	Mandatory		5; 16	1; 2	
	102-23 Chair of the highest governance body	Page 60	Mandatory		16	1; 2	
	102-24 Nominating and selecting the highest governance body	Page 60, 61 and 62	Mandatory		5; 16	1; 2	
	102-25 Conflicts of interest	Page 78	Mandatory		16	1; 2	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	SDG	ICMM Principles	SASB
GRI 102: General Disclosures 2016	102-26 Role of highest governance body in setting purpose, values, and strategy	Page 60	Mandatory		16	1; 2	
	102-27 Collective knowledge of highest governance body	Page 60	Mandatory		4	1; 2	
	102-28 Evaluating the highest governance body's performance	Page 63	Mandatory		16	1; 2	
	102-29 Identifying and managing economic, environmental, and social impacts	Pages 68 to 75	Mandatory		16	1; 2	
	102-30 Effectiveness of risk management processes	Pages 61 and 62, more information can be found at Form 20F -2020 Section: RISK MANAGEMENT	Mandatory		16; 6	1; 2; 4	
	102-31 Review of economic, environmental, and social topics	Page 61	Mandatory		16	1; 2; 4	
	102-32 Highest governance body's role in sustainability reporting	The information can be found at Form 20F -2020 Section: ADVISORY COMMITTEES TO THE BOARD OF DIRECTORS	Mandatory		16	1; 2	
	102-33 Communicating critical concerns	The information can be found at Form 20F -2020	Mandatory		16	1; 2; 10	
	102-34 Nature and total number of critical concerns	Page 47	Mandatory		16	1; 2; 10	
	102-35 Remuneration policies	Pages 64 and 65, more information can be found at 2020 Reference Form	Mandatory			1; 2	
	102-36 Process for determining remuneration	Pages 64 and 65, more information can be found at 2020 Reference Form	Mandatory			1; 2	
	102-37 Stakeholders involvement in remuneration	Page 64, more information can be found at 2020 Reference Form	Mandatory			10	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission			SDG	ICMM Principles	SASB
GRI 102: General Disclosures 2016	102-38 Annual total compensation ratio		Mandatory	Omitted	Confidentiality Constraints	Information subject to specific confidencial restrictions: Vale does not disclose the amount of paid salaries.	8; 10	1; 2	
	102-39 Percentage increase in annual total compensation ratio		Mandatory	Omitted	Confidentiality Constraints	Information subject to specific confidencial restrictions: Vale does not disclose the amount of paid salaries.	8; 10	1; 2	
	STAKEHOLDER ENGAGEMENT								
	102-40 List of stakeholder groups	Pages 55 and 56	Mandatory					10	
	102-41 Collective bargaining agreements	Page 125	Mandatory				8	3	
	102-42 Identifying and selecting stakeholders	Pages 55 and 56	Mandatory					10	
	102-43 Approach to stakeholder engagement	Pages 55 and 56	Mandatory					10	
	102-44 Key topics and concerns raised	Pages 54, 55 and 56	Mandatory					10	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	SDG	ICMM Principles	SASB
	REPORTING PRACTICE						
GRI 102: General Disclosures 2016	102-45 Entities included in the consolidated financial statements	Page 7 - More information can be found at Vale 20-F FY2020/Lines of Business	Mandatory				
	102-46 Defining report content and topic Boundaries	Page 7 and 47	Mandatory				
	102-47 List of material topics	Pages 48, 49 and 50	Mandatory				
	102-48 Restatements of information	No restatements of information.	Mandatory				
	102-49 Changes in reporting	No changes in reporting.	Mandatory				
	102-50 Reporting period	Page 7	Mandatory				
	102-51 Date of most recent report	Page 8	Mandatory				
	102-52 Reporting cycle	Page 7	Mandatory				
	102-53 Contact point for questions regarding the report	Page 8	Mandatory			10	
	102-54 Claims of reporting in accordance with the GRI Standards	Page 7	Mandatory				
	102-55 GRI content index	Page 164	Mandatory				
	102-56 External assurance	Page 7 and 159	Mandatory				

MATERIAL TOPICS

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
GRI 200 ECONOMIC STANDARD SERIES							
ECONOMIC PERFORMANCE							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Pages 47	-				
	103-2 The management approach and its components	Page 47 to 50	-				
	103-3 Evaluation of the management approach	Page 52 to 54	-				
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	Page 42	Material		2; 8	9	
	201-2 Financial implications and other risks and opportunities due to climate change	Page 113 and 114, more information can be found at Form 20F -2020 Section: OPERATIONAL RISKS	Material		13	4; 6	Greenhouse Gas Emissions; EM-MM-110a.2
	201-3 Defined benefit plan obligations and other retirement plans	Page 125	Material		3	3	
	201-4 Financial assistance received from government	No government assistance was received	Material				

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
MARKET PRESENCE							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 123	Material				
	103-3 Evaluation of the management approach	Page 123	Material				
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	Page 123	Material		5	3	
	202-2 Proportion of senior management hired from the local community	Page 123	Material		8	3	
INDIRECT ECONOMIC IMPACTS							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Pages 137 and 151	Material				
	103-3 Evaluation of the management approach	Pages 137 and 151	Material				
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	Pages 79, 137 and 151	Material		7; 9; 11	9	
	203-2 Significant indirect economic impacts	Pages 43, 137 and 151	Material		1; 2; 3; 8	9	
PROCUREMENT PRACTICES							
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Page 134	Non-material				

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
ANTI-CORRUPTION							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Pages 76 to 78	Material				
	103-3 Evaluation of the management approach	Pages 76 to 78	Material				
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Pages 76 to 78	Material		16	1	Business Ethics & Transparency; EM-MM-510a.1; EM-MM-510a.2
	205-2 Communication and training about anti-corruption policies and procedures	Pages 76 to 78	Material		16	1; 2	Business Ethics & Transparency; EM-MM-510a.1
	205-3 Confirmed incidents of corruption and actions taken	Page 78	Material		16	1	Business Ethics & Transparency; EM-MM-510a.1
ANTI-COMPETITIVE BEHAVIOR							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 78	Material				
	103-3 Evaluation of the management approach	Page 78	Material				
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Page 78	Material		16	1	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
GRI 300 ENVIRONMENTAL STANDARDS SERIES							
ENERGY							
GRI 302: Energy 2016	302-5 Reductions in energy requirements of products and services	Disclosure not applicable to mining setor	Material		7	6; 8	Energy Management; EM-MM-130a.1
WATER AND EFFLUENTS							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 100	Material				
	103-3 Evaluation of the management approach	Page 100	Material				
GRI 303: Water and effluents 2018	303-3 Water withdrawal	Page 101	Material		6	6	Water Management; EM-MM-140a.1
	303-4 Water discharge	Page 101	Material		6	6; 8	Water Management; EM-MM-140a.1
	303-5 Water consumption	Page 101	Material		6; 12		
BIODIVERSITY							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 91	Material				
	103-3 Evaluation of the management approach	Page 91	Material				

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Page 95	Material		14; 15	2; 7	Biodiversity Impacts; EM-MM-160a.1
	304-2 Significant impacts of activities, products, and services on biodiversity	Page 95	Material		14; 15	7	Biodiversity Impacts; EM-MM-160a.1; Community Relations; EM-MM-210b.2
	304-3 Habitats protected or restored	Page 91	Material		14; 15	6; 7	Biodiversity Impacts; EM-MM-160a.1
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Page 94	Material		14; 15	7	
EMISSIONS							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 105	Material				
	103-3 Evaluation of the management approach	Page 105	Material				
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Page 108	Material		3; 12; 13; 14; 15	6	Greenhouse Gas Emissions; EM-MM-110a.1
	305-2 Energy indirect (Scope 2) GHG emissions	Page 108	Material		3; 12; 13; 14; 15	6	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
GRI 305: Emissions 2016	305-3 Other indirect (Scope 3) GHG emissions	Page 108	Material		3; 12; 13; 14; 15	6	
	305-4 GHG emissions intensity	Page 108	Material		3; 12; 13; 14; 15	6	
	305-5 Reduction of GHG emissions	Page 108	Material		3; 12; 13; 14; 15	6	
	305-6 Emissions of ozone-depleting substances (ODS)	Page 108	Material		3; 12; 13; 14; 15	6	Air Quality; EM-MM-120a.1
	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Pages 97 to 99	Material		3; 12; 13; 14; 15	6	Air Quality; EM-MM-120a.1
ENVIRONMENTAL COMPLIANCE							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 79	Material				
	103-3 Evaluation of the management approach	Page 79	Material				
GRI 307: Environmental Compliance 2016	307-1 Non-compliance with environmental laws and regulations	Page 79	Material			6	Water Management; EM-MM-140a.2
SUPPLIER ENVIRONMENTAL ASSESSMENT							
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Pages 134 and 135	Non-material				
	308-2 Negative environmental impacts in the supply chain and actions taken	Pages 134 and 135	Non-material				

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
GRI 400 SOCIAL STANDARDS SERIES							
EMPLOYMENT							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 125	Material				
	103-3 Evaluation of the management approach	Page 125	Material				
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Page 125	Material		8	3	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Page 125	Material		8	3	
	401-3 Parental leave	Page 125	Material		8	3	
LABOR/MANAGEMENT RELATIONS							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 125	Material				
	103-3 Evaluation of the management approach	Page 125	Material				
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	The collective bargaining agreements entered into with all unions in Brazil establish the need for advance notice to unions of material operational changes. The agreements do not establish a minimum prior notice for this communication, which may vary from case to case. As an estimate, we work with 4 weeks on average. For countries like Canada, Oman, and New Caledonia we also average 4 weeks. Mozambique and Paraguay an average of 2 weeks. For the other countries where Vale is present the average was not informed.	Material		8	3	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
OCCUPATIONAL HEALTH AND SAFETY							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 119	Material				
	103-3 Evaluation of the management approach	Page 119	Material				
GRI 403: Occupational Health and Safety 2018	403-8 Workers covered by a health management system and work safety	Page 119	Material		3; 8	5	
	403-9 Accidents at work	Page 119	Material		3; 8	5	Workforce Health & Safety; EM-MM-320a.1
	403-10 Professional diseases	Page 119	Material		3; 8	5	
TRAINING AND EDUCATION							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 126	Material				
	103-3 Evaluation of the management approach	Page 126	Material				
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Page 126	Material		8	3	
	404-2 Programs for upgrading employee skills and transition assistance programs	Page 126	Material		8	3	
	404-3 Percentage of employees receiving regular performance and career development reviews	Page 126	Material		8	3	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
DIVERSITY AND EQUAL OPPORTUNITY							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 128	Material				
	103-3 Evaluation of the management approach	Page 128	Material				
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Page 128	Material		5	3	
	405-2 Ratio of basic salary and remuneration of women to men	Page 128	Material		5	3	
NON-DISCRIMINATION							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Pages 78 and 128	Material				
	103-3 Evaluation of the management approach	Pages 78 and 128	Material				
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Pages 78 and 128	Material		5; 8; 16	3	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 125	Material				
	103-3 Evaluation of the management approach	Page 125	Material				
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Page 125	Material		8	3	Labor Relations; EM-MM-310a.1
CHILD LABOR							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 131	Material				
	103-3 Evaluation of the management approach	Page 131	Material				
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	Page 132	Material		3; 8; 16	3	
FORCED OR COMPULSORY LABOR							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 131	Material				
	103-3 Evaluation of the management approach	Page 131	Material				
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Page 132	Material		3; 8; 16	3	

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
SECURITY PRACTICES							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 131	Material				
	103-3 Evaluation of the management approach	Page 131	Material				
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	Page 131	Material		16	3	
RIGHTS OF INDIGENOUS PEOPLES							
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	Page 153	Non-material		11	3	Security, Human Rights & Rights of Indigenous Peoples; EM-MM-210a.2; EM-MM-210a.3
HUMAN RIGHTS ASSESSMENT							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page s132 and 133	Material				
	103-2 The management approach and its components	Pages 132 and 133	Material				
	103-3 Evaluation of the management approach	Pages 132 and 133	Material				

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
GRI 412: Human Rights Assessment 2016	412-1 Operations that have been subject to human rights reviews or impact assessments	Page 132	Material		16	3	
	412-2 Employee training on human rights policies or procedures	Page 131	Material		16	3	
	412-3 Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	There were no significant agreements and contracts, i.e. investments related to transactions involving acquisitions, mergers or incorporation of companies, in 2020. All of the company's contracts include Human Rights clauses.	Material		16	3	
LOCAL COMMUNITIES							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 151	Material				
	103-3 Evaluation of the management approach	Page 151	Material				
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	Page 151	Material		8; 11	9; 10	Community Relations; EM-MM-210b.1
	413-2 Operations with significant actual and potential negative impacts on local communities	Page 151	Material		8; 11	9; 10	Community Relations; EM-MM-210b.1
SUPPLIER SOCIAL ASSESSMENT							

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	Page 134	Non-material			9	
	414-2 Negative social impacts in the supply chain and actions taken	Pages 134 and 135	Non-material			9	
SOCIOECONOMIC COMPLIANCE							
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 79	Material				
	103-3 Evaluation of the management approach	Page 79	Material				
GRI 419: Socioeconomic Compliance 2016	419-1 Non-compliance with laws and regulations in the social and economic area	Page 79	Material			9	
SECTOR SPECIFIC DISCLOSURES							
Biodiversity - GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Pages 91 to 94	Material				
	103-3 Evaluation of the management approach	Pages 91 to 94	Material				

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
Biodiversity	MM1 - AMOUNT OF LAND (OWNED OR LEASED, AND MANAGED FOR PRODUCTION ACTIVITIES OR EXTRACTIVE USE) DISTURBED OR REHABILITATED	Page 95	Material		6; 12; 15	6; 7	Biodiversity Impacts; EM-MM-160a.3
	MM2 - THE NUMBER AND PERCENTAGE OF TOTAL SITES IDENTIFIED AS REQUIRING BIODIVERSITY MANAGEMENT PLANS ACCORDING TO STATED CRITERIA, AND THE NUMBER (PERCENTAGE) OF THOSE SITES WITH PLANS IN PLACE	Page 94	Material		14; 15	2; 6; 7	Biodiversity Impacts; EM-MM-160a.3
Efluents and Waste - GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 82	Material				
	103-3 Evaluation of the management approach	Page 82	Material				
Effluents and Waste	MM3 - TOTAL AMOUNTS OF OVERBURDEN, ROCK, TAILINGS, AND SLUDGES AND THEIR ASSOCIATED RISKS	Pages 82 to 85	Material		3; 6; 9; 12	6	Waste & Hazardous Materials Management; EM-MM-150a.1; EM-MM-150a.2; EM-MM-150a.3; Biodiversity Impacts; EM-MM-160a.2

GRI Standard	Disclosure	Page number(s) and/or URL and/or direct answers	Material / Non-Material	Omission	ODS	ICMM Principles	SASB
Indigenous Rights	MM5 - TOTAL NUMBER OF OPERATIONS TAKING PLACE IN OR ADJACENT TO INDIGENOUS PEOPLES' TERRITORIES, AND NUMBER AND PERCENTAGE OF OPERATIONS OR SITES WHERE THERE ARE FORMAL AGREEMENTS WITH INDIGENOUS PEOPLES' COMMUNITIES	Page 153	Non-material		11	3	Security, Human Rights & Rights of Indigenous Peoples; EM-MM-210a.2
Local Communities - GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 156	Material				
	103-3 Evaluation of the management approach	Page 156	Material				
Local Communities	MM6 - NUMBER AND DESCRIPTION OF SIGNIFICANT DISPUTES RELATING TO LAND USE, CUSTOMARY RIGHTS OF LOCAL COMMUNITIES AND INDIGENOUS PEOPLES	Pages 154 to 156	Material		11	3	Security, Human Rights & Rights of Indigenous Peoples; EM-MM-210a.1
	MM7 - THE EXTENT TO WHICH GRIEVANCE MECHANISMS WERE USED TO RESOLVE DISPUTES RELATING TO LAND USE, CUSTOMARY RIGHTS OF LOCAL COMMUNITIES AND INDIGENOUS PEOPLES, AND THE OUTCOMES	Page 154 to 156	Material		11	9; 10	Security, Human Rights & Rights of Indigenous Peoples; EM-MM-210a.3
Resettlement - GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Page 47	Material				
	103-2 The management approach and its components	Page 155	Material				
	103-3 Evaluation of the management approach	Page 155	Material				
Resettlement	MM9 - SITES WHERE RESETTLEMENTS TOOK PLACE, THE NUMBER OF HOUSEHOLDS RESETTLED IN EACH, AND HOW THEIR LIVELIHOODS WERE AFFECTED IN THE PROCESS	Page 155	Material		11	3	Community Relations; EM-MM-210b.1; EM-MM-210b.2

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ESG Consulting in Integrated Reporting and integrated editorial project
grupo report – rpt.sustentabilidade and rpt.com

Materiality
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Technical support GRI, SASB, WEF indicators
EY

External verification
Bureau Veritas Certification (BVC)

Photos
Vale Image Bank

Cover: In the photo, employee Mayara Ribeiro Ventura, a haul truck operator at the Sossego mine. Photo: Ricardo Teles

We would like to thank all employees who were directly or indirectly involved in preparing the Integrated Report 2020.

Published on April, 2021.