

2018-2019 BIENNIAL REPORT

*We move forward because
we believe in the future, but
will never forget what we
have experienced*

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THE VALUE OF TRANSPARENCY



Maintaining a clear and open dialogue is a prerequisite for the reconstruction of relations between Samarco and society

Welcome to Samarco's 2018-2019 *Biennial Report*

This report lends continuity to an ongoing cycle of document production describing the management, strategy, culture, business model and results presented by the Company throughout its history. Together with the factual narrative, the Company also outlines its position on key topics in the mineral sector, such as safety, ethics and compliance, efficient use of natural resources, investments and innovation.

Since 2015, with the failure of the Fundão dam and, more recently, with the collapse of the Brumadinho dam in January 2019, society has been following the mining industry much more intensely. Transparency and a proven commitment to safety, remediation and compensation of generated impacts have become ever more critical. This is the only viable course for the Company's New Journey towards regaining and rebuilding the trust of society.

This report presents financial and non-financial indicators and information that illustrate Samarco's performance in 2018 and 2019. This was a decisive period for the reduction of uncertainty about the future of the Company, mobilization of its employees and leaders and strengthening of social dialogue, leading to a clearer vision of the steps already taken, the lessons learned and the history that we want to build over the coming years. These aspects are detailed in the subsequent chapters.

As always, the socioenvironmental data informed is in line with the methodology of the Global Reporting Initiative (GRI), an international reference in the communication of results, and cover all of Samarco's operations - from the Germano Complex, in Minas Gerais, to the industrial and port activities of the Ubu Complex, in Espírito Santo. The report also accounts for the Company's commitments to the United Nations Global Compact, to which it has been a signatory for 18 years.

Although mentioned in some parts of the report, the socioenvironmental and socioeconomic programs carried out in the regions affected by the collapse of the Fundão dam in Mariana (MG) have, since August 2016, been under the management and responsibility of the Renova Foundation, created for this purpose as part of the agreement entered into by Samarco, its shareholders Vale and BHP, the Federal and State governments of Minas Gerais and Espírito Santo, and other public entities. Thus, the reports regularly published by Renova (www.fundacaorenova.org) show the results and investments of these activities.

Therefore, this is a report that speaks about Samarco, its learnings and its commitments to the future, adopting a new approach to mining and seeking to fulfill its commitment to the transparency that supports its relations with Brazilian society. If you wish to clarify any doubts about the content presented, contact us at email relacionamento@samarco.com or 0800 344 8485. **GRI 102-53**

MESSAGE OF THE CEO

GRI 102-14

Feet on the ground And headed towards the future

When an organization defines a goal, it must make a real commitment to it and strive to attain it by doing business in a way that is recognized by the various stakeholders as legitimate and worthy of trust. At Samarco, we have established that engaging in different and sustainable mining, capable of generating results and building value for society, is the only way to go. This is how we see our participation in this world and how we want to operate, with greater safety and moving ahead to reconstruct our relations with society.

I can say that 2018 and 2019, the reference period for the indicators and data in this report, were major milestones in this journey. Taking into account the lessons learned after the collapse of the Fundão dam, which will forever mark our history, over the last few years we have outlined a plan that includes the review of all our procedures and safety standards and, with our feet firmly on the ground, we embarked upon a new journey, through a collaborative process that mobilized our employees and leaders. We revisited our Mission, Vision, Values, and defined our Purpose; we have also resumed projects like the Culture project, in order to map the behavioral features that contribute to the present and the future of the Company. Based on these actions, we have delivered projects essential to our operational restart and obtained the required licenses to do mining differently.

The year of 2019, in particular, started with a critical event for the mineral industry, with the collapse

of the Córrego do Feijão dam, in Brumadinho (Minas Gerais). This incident intensified widespread discussion and questioning by civil society and regulatory bodies, and put pressure on the immediate discussion of the levels of safety and stability of the tailings disposal structures of the entire sector. In this regard, we had already been making progress in engineering with geotechnical parameters aligned with international standards and the new protocols of the National Mining Agency defined in 2019. We had also structured, in response to the recent changes to environmental and regulatory legislation, plans for the decharacterization of upstream dams, delivered during the year, and in March and September 2019 we received a statement of stability (DCE) for our geotechnical structures from an audit company we had engaged. With this document, we reaffirm

the safety of our assets while at the same time intensifying efforts to resume operations.

We will never forget what happened in November 2015 and we are totally committed to a new approach to mining. To monitor our geotechnical structures in Minas Gerais and Espírito Santo, Samarco relies on its Integrated Safety System, which involves robust engineering and a 24/7 Monitoring and Inspection Center (CMI), equipped with approximately 840 state-of-the-art devices that transcend legal requirements, complying with best national and international practices.

Alongside these efforts, our leadership has been conducting a broad review of governance and management processes since 2018, with the structuring of an Executive Committee (EXCO),

With our feet on the ground, we embarked upon a collaborative process which mobilized employees and leaders

Rodrigo Alvarenga Vilela
CEO of Samarco



responsible for the dialogues that underpinned the construction of our New Journey, outlined in a document disseminated among all employees in 2019. Aware that the plans to resume operations would need some adjustment after the event in Brumadinho, we revisited our tailings disposal model and our business plan, postponing the schedule for restart and determining that the filtration system would be completed before the restart. In the first half of 2019, we concluded the preparation of the Alegria Sul Pit and, in the second half, we obtained our Corrective Operation License (LOC) - the main permit required to enable us to resume our activities, once its conditions are met - and we started the works to implement the tailings filtration system in Minas Gerais.

With the filtration system, 80% of total tailings to be generated will be dry stacked. The remaining 20%, made up of water and ore fines, will be disposed in Alegria Sul Pit, a natural structure with a solid rock formation and a higher safety index.

This disposal system is complementary to plans for the medium and long term: the Company is conducting studies for the development of new solutions for the treatment of tailings, and for the definition of new structures for long-term disposal, so as to allow the gradual resumption of its production. It is clear, from what we have seen so far, that the mining industry must find innovative and pioneering alternatives to manage the tailings generated by its production process.

In addition to these technical solutions, in 2018 and 2019 we undertook an intense process of social dialogue, with active and continuous listening to local and community leaders, as well as entities representing workers and public authorities, seeking to rebuild our relationship base. It is for this reason, for example, that we have opened our Ger-

We will never forget what happened in November 2015 and we are totally committed to a different form of mining

mano and Ubu units to receive visits from family members of employees and community members. The Alegria Sul Pit alone received more than 1,200 people in the last year, so that everyone could see up close how hard we work. In addition, we maintain our commitment to the safety culture, through an agenda of emergency drills and meetings with community leaders from the areas surrounding our units to reinforce preventive measures.

From the point of view of redress and monetary compensation for damages resulting from the collapse of the Fundão dam, we reaffirm our commitment to the communities and to the impacted areas. The indemnity measures are conducted by the Renova Foundation, which was created through a Framework Agreement named a "Conduct Adjustment Transaction Agreement" (TTAC) signed in March 2016 by and between Samarco, Vale, BHP, the federal government, Espírito Santo and Minas Gerais States, in addition to a series of independent government entities, foundations and institutes.

We started out 2020 intent on making steady progress and achieving our purpose of adding value through a systemic and shared model. We will make a comeback as a different, smaller company, delivering 26% of our original production capacity. Even so, we will be able to make an important contribution to the generation of work, income and tax revenue for Minas Gerais and Espírito Santo, promoting economic and financial results to assure the Company's continued existence.

This year, like everyone else, we were surprised by the pandemic of the new coronavirus (Sars-CoV-2). In March, we formed a Crisis Management Committee which, since then, has been continuously working to manage preventive actions to preserve the safety and health of our employees, and to help prevent the spread of Covid-19 in the communities where we operate. We are complying with all the protocols established by the health authorities and remain attentive to the scenario, constantly assessing risks and impacts. We continue to make efforts to assure that this difficult period can be overcome with safety and respect for people.

This *2018-2019 Biennial Report* describes a series of events that have given a new meaning to Samarco and its reason for being and operating in a new context for mining and for Brazilian society. We supply social, environmental and economic indicators for our operations and detail our strategy, governance and investments on the following pages, showing compliance with the various instruments, methodologies and commitments we follow - such as the Global Compact and the Sustainable Development Goals (SDGs) of the United Nations.

We invite you to understand and share this new journey of Samarco's that we are building with resilience, humility and a sense of responsibility, day by day.

Have a good read!

Rodrigo Alvarenga Vilela
CEO of Samarco

ABOUT SAMARCO

GRI 102-1, 102-2, 102-3, 102-4, 102-5, 102-6, 102-7



Our values, our purpose
and how we manage
the business

Learning and transformation

Operating in the mining market since 1977, Samarco Mineração S.A. is a privately held company, equally controlled by the shareholders BHP Billiton Brasil Ltda. and Vale S.A., having its principal place of business in Belo Horizonte (MG). The Company has two operating units: Germano, in the municipalities of Mariana and Ouro Preto (MG), with three concentrators for the extraction and processing of iron ore, and Ubu, in the municipality of Anchieta (ES), which has four pelletizing plants and a port terminal.

Three pipelines, each about 400 kilometers long, make the connection between the units for the transportation of iron ore slurry - the route crosses 25 municipalities in both States. In addition, the Company has a hydroelectric power plant in Muniz Freire (ES), and interest in the Guilman-Amorim plant consortium, in Antônio Dias and Nova Era (MG).

Samarco's main product is iron ore pellets, exported to the steel industry in countries in the Americas, the Middle East, Asia and Europe.

With the collapse of the Fundão dam, on November 5, 2015, the Company shut down its operations - currently, only the port terminal of Ubu continues to operate, along with support areas and asset maintenance and conservation activities. In 2015, Samarco was the country's 12th largest exporter, according to the Ministry of Development, Industry and Foreign Trade (MDIC), with a production of 25.453 million tons (including iron ore pellets and fines) and sales

of 24.918 million tons of products. The business consists in the production of direct reduction (DR) and blast furnace (BF) pellets and fines (pellet feed and sinter feed).

Immediately after the dam failure, the Company's efforts were directed to attend to the immediate needs of the affected population in Minas Gerais and Espírito Santo and along the path of the Rio Doce, including emergency and humanitarian measures, as well as to the funding of remediation and compensation actions.

In March 2016, in order to guarantee its commitment to social, environmental and economic recovery of the areas affected by the collapse of the dam, Samarco and its shareholders entered into the Transaction

Immediately after the dam failure, the Company's efforts were directed to attend to the immediate needs of the affected population in Minas Gerais and Espírito Santo and along the path of the Rio Doce, including emergency and humanitarian measures, as well as to the funding of remediation and compensation actions

and Conduct Adjustment Agreement (TTAC) with the Federal Government and the States of Minas Gerais and Espírito Santo, among other authorities, such as environmental agencies and Judiciary entities (see page 30).

The signing of the agreement led to the constitution of the Renova Foundation to carry out the redress and compensation efforts; under the agreement, Samarco is responsible for funding the Foundation, and its shareholders as well in the event the Company is unable to fulfill its commitments. Since August 2016, the Renova Foundation has been responsible for the management and execution of 42 socio-economic and socioenvironmental programs. Approximately R\$ 7.9

billion in resources were allocated to these programs between the years 2016 and 2019.

Concurrently to these efforts, Samarco has also sought to understand, assimilate and apply lessons learned to improve its business model. In recent years, measures to reorganize management, strategy, organizational structure and processes have been taken, in order to enable resumption of operations in a safe, efficient and economically feasible manner.

When it was in full operation, Samarco had approximately 2.9 thousand direct employees and 3 thousand indirect employees, generating approximately 6 thousand jobs in its production chain. At the end of 2019, the workforce totaled 1,312 employees and 4,684 contractors. The structure was reorganized gradually, after several efforts by the Company to maintain its personnel in a scenario of uncertainty regarding the resumption of operations. The actions included paid leave (two shifts), collective vacations, and three furlough periods (temporary suspension of employment agreements). After exhausting these

resources, voluntary (PDV) and involuntary (PDI) dismissal programs were carried out.

Today, Samarco employees work at the Germano (MG) and Ubu (ES) operating units, and at the Belo Horizonte (MG) office, with asset maintenance and conservation services, administrative and support areas.

In 2019, the Company recorded two major milestones: it completed in May the works for the Alegria Sul Pit Tailings Disposal System and, in October, obtained the Corrective Operational License (LOC) for the Germano Complex in Minas Gerais, a decisive step towards resuming its operations. In addition, it obtained a statement of stability for its geotechnical structures - a fundamental document to provide greater security to society regarding the conditions of the Company's structures.

With these achievements and holding ongoing dialogue with society, Samarco continues with its project for resumption of operations gradually, without a tailings dam and after the implementation of a pit disposal system and treatment of tailings for dry stacking.



Aerial view
Alegria Sul Pit,
in Minas Gerais



STATEMENT OF STABILITY (DCE)

Reports confirm the safety of Samarco's dam structures in a challenging year for mining.

UNITS AND OPERATIONS

Mines of Germano and Alegria

Where: Mariana and Ouro Preto (MG)

Activity: Iron ore extraction

4 Pelletizing plants

Where: Anchieta (ES)

Activity: Transformation of iron ore slurry into pellets

3 Concentrators

Where: Mariana e Ouro Preto (MG)

Activities: Beneficiation of extracted ore

Maritime terminal

Where: Anchieta (ES)

Activity: Production flow

Overburden piles and dams

Where: Mariana and Ouro Preto (MG)

Activity: Storage of water, tailings and overburden

Tailings dam: Germano and Matipó

Water dam: Nova Santarém

Where: Anchieta (ES)

Water dam: North Dam

3 Ore pipelines

Where: 25 municipalities, in Minas Gerais and Espírito Santo

Activity: Transportation of iron ore slurry

Hydroelectric power plants

Where: Muniz Freire (ES) and Antônio Dias and Nova Era (MG – consortium)

Activity: Power production

Corporate headquarters and offices

Where: Belo Horizonte (MG)

Activity: Business and administrative



Products

Consisting of ultrafine particles, with applications in the most diverse segments of the steel industry, the iron ore pellet results from Samarco's integrated production process. The Company's operations range from extraction of ore to shipment at its own seaport terminal, including beneficiation, transportation via pipelines, and pelletizing. Deliverables comprise direct reduction (DR) and blast furnace (BF) pellets and fines (pellet feed and sinter feed).

Governance model

GRI 102-18, 102-19, 102-20, 102-22, 102-23, 102-28

Based on the pillars of transparency, responsibility, equity and accountability, Samarco's corporate governance structure has undergone significant transformations in the last four years. Since 2015, the fulfillment of commitments related to the impacts of the collapse of the Fundão dam has taken center stage - these demands include socioenvironmental and socioeconomic aspects, investigation processes and dialogue with communities and government representatives. The review of priorities also took into account the negotiations necessary to resume operations.

The Company has restructured its governance forums, which advise the Board of Directors, adjusted the frequency of meetings according to the volume of activities, to ensure compliance with new demands, and had the support of its shareholders to make all necessary decisions.

Currently, the governance model contains three spheres of activity: the shareholders BHP Billiton Brasil Ltda. and Vale S.A.; Samarco's governance, consisting of the Board of Directors - the highest authority in the hierarchy, with four regular members and four alternates, appointed by the shareholders - and its advisory committees (Strategy; Risk Management; Infrastructure; Financial; Legal; Audit and Compliance, and People); and executive management, with officers and managers from key areas. This model seeks to promote integration and dialogue, and allow shareholders to effectively monitor the Company's results.

The main documents that govern this relationship are the Articles of Incorporation, the Shareholders' Agreement, the Code of Business Conduct, internal policies and procedures.

EXECUTIVE BOARD*

Rodrigo Alvarenga Vilela	CEO
Rodrigo Alvarenga Vilela	Chief Operating Officer
Cristina Morgan Cavalcanti	Chief Financial, Information Technology and Procurement Officer
Najla Ribeiro Nazar Lamounier	Chief Risk, Legal and Compliance Officer
Reuber Luiz Neves Koury	Chief Planning, Project and Sustainability Officer

*valid structure in December 2019.

The Company reflected on its guidelines and business enablers, taking into account the current situation and the necessary mobilization among employees in relation to safety, ethics, trust and efficiency, given the prospect of resumption of operations. This process was part of the movement to build Samarco's New Journey (*read more on p.20*).

The Board of Directors' meetings are held on a monthly basis and address the discussion and definition of strategic guidelines, the approval of business plans, investments and budgets, and the evolution of the performance of the executive board.

In 2019, the Executive Board consisted of the CEO and executive boards for the areas of Operations; Finance, Information Technology and Procurement; Risks, Legal and Compliance; and Planning, Projects and Sustainability. The latter, structured in 2019, mark the strengthening of aspects of internal and socio-environmental controls integrated into the Company's structuring and capital projects.

Another highlight was the review of the structure of the advisory committees of the Board of Directors, with seven committees and four subcommittees to better monitor Samarco's activities and provide technical advice to the group of directors.

BOARD OF DIRECTORS*

BHP BILLITON BRASIL LTDA.	VALE S.A.
REGULAR MEMBERS	
Paulo Souza – Vice-Chairman	Ivan Fadel – Chairman
David J. Crawford	Vagner Loyola
ALTERNATES	
Luis Madella	<i>vacante</i>
Atif Janjua	Josimar Pires

*valid structure in December 2019.

Monthly meetings of the Board of Directors address strategic guidelines and business plans

Ethics and integrity

GRI 102-25, 102-30, 103 | 205, 103|206, 103 | 406, 103|419, 205-3

Samarco believes that management focused on ethics and integrity is an important component for regaining the confidence of Brazilian society. The constant and disciplined practice of integrity is challenging and requires investments in measures to strengthen the value and consolidate it in the Company's organizational culture.

The Code of Conduct is the main document that guides those who carry out activities in and on behalf of the Company. Based on Samarco's values, the document, created in 2002 and revised in 2019, addresses critical management topics, such as the environment, relations with stakeholders (employees, customers, governments, suppliers, etc.), ethics, corruption, health and safety. Throughout the Code, the essential values for the Company are spelled out, as well as the way to preserve them in the behavior of employees and contractors.

In 2019, a thorough revision of the document was carried out, considering inputs such as Samarco's

New Journey, the prospects for resumption of operation, and the context of the organization in terms of culture and relations with stakeholders. This revision was carried out collaboratively and included suggestions sent by employees.

Other relevant documents are the Corruption and Fraud Prevention Policy; the Policy for Offering and Receipt of Gifts, Presents and Hospitality; the Antitrust Policy; the Corporate Approval Authority Policy; the Social and Institutional Investment Policy (*read more on p.67*); the Travel and Corporate Card Policy; and the Consequence Management Policy. To ensure access to the content and raise awareness about it, periodic training is carried out..

HOW WE MAP RISKS

In the current context of the Company, monitoring risks related to compliance, ethics and integrity is a management priority. Management of these topics is governed by the Risk Management Policy and the Corporate Risk Manual.

Revision of the Code of Conduct in 2019 considered inputs and learning from Samarco's New Journey

The policy highlights the purpose and general rules of the Company's risk management, defining the responsibility of the leaders to make sure that the risks are known and their controls are properly identified and managed. The manual describes Samarco's risk governance, its methodology with the stages of the risk management process, and the roles and responsibilities included therein.

The occurrence of an event of corruption, under the legal and business aspect, in addition to violating the legislation, may result in the loss of assets, rights or values, which represent an advantage or profit, directly or indirectly, obtained from the infringement. Moreover, it may cause the suspension or partial interdiction of the Company's activities, which could render the ongoing resumption plans unfeasible. From a reputational point of view, in the event of risk materialization, there is an express legal provision for inclusion in the national register of disreputable and suspended companies, and in the national register of punished companies.

Since 2016, the level of risk of corruption at Samarco has been treated as high, due to its continuous dialogue with various players, increasing the attention to preventive controls even more. Corruption risk assessment seminars are held periodically; the seminars took place in 2018 and 2019, with all critical controls being checked for their operation.

During the biennial, continuous monitoring assessments of sensitive disbursements were also carried out, such as hiring processes, travel account payments, spending on purchases, land acquisition, and socio-institutional investments, and contracts managed by several areas were also assessed.

There are no public lawsuits related to corruption filed against Samarco, nor is there knowledge of any lawsuits related to corruption against Company employees. To maintain this standard, Samarco's goal for 2020 is the training of all employees in the Code of Conduct and compliance policies; strengthening of the controls of third parties that provide services to the Company, and acting in potential or concrete dialogue with the public authorities; and strengthening of pre-contracting controls, with due diligence of suppliers.



96%

Of the Samarco employees trained in compliance, ethics and anti-corruption

100%

Of Samarco business partners* (828 in 2018 and 1,274 in 2019) were informed on the anti-corruption topic

* The number considered suppliers with agreements signed with Samarco in the period. It is important to emphasize that all our agreements contain compliance clauses.

QUALIFICATION GRI 205-2

In 2019, Samarco's executive board and 96% of all employees with an active employment agreement were trained in the content of the new Code of Conduct, the Corruption and Fraud Prevention Policy, and the Policy for Offering and Receipt of Gifts, Presents and Hospitality, and submitted to reinforcement of the topic Ombudsman. Qualification was conducted in person, for the purpose of fostering and cultivating a culture of compliance, making the topic more accessible, easy to understand and more effective to apply. Employees who have not taken the training will have the opportunity to do so in 2020.

As an internal rule, all training on the Code of Conduct and compliance policies for employees and members of the executive board and the Board of Directors must be carried out at intervals of no more than two years. The content also has an online version offered to newly hired employees, via Saber Samarco (*read more on p.55*).

In addition to training, professionals who have been in formal dialogue with public officials or with the potential to do so were appointed by managers and undertook face-to-face training on the topic of Interlocution with the Government. Thus, only appointed and trained employees are authorized to represent Samarco on these occasions. As a rule, all business partners - third parties who provide services to Samarco and interact, concretely or potentially, with employees or public authorities on behalf of the Company - must undergo training on the Code of Conduct and policies, with refresher courses every year.

With the intention of reinforcing training, Compliance topics are periodically addressed in the Company's internal communications. The messages bring, along with the content of the documents mentioned above, practical examples linked to the employees' daily activities - some even based on real facts. In addition to these disclosures, it is crucial for Samarco's compliance culture that the topic be present in the Company's routine communications and procedures.



LEADERS TRAINED IN ANTICORRUPTION ASPECTS

REGION	EMPLOYEES	2018		2019	
		Informed	Trained	Informed	Trained
Minas Gerais	Total number of employees	8		7	
	Total number of employees informed/trained	8	8	7	5
	Percentage of employees informed/trained	100%	100%	100%	71%

1 Official and alternate members of the Company's Board of Directors were considered members of the governance body. Although there was training in 2019 on antitrust issues, not all members were trained on the occasion, but the terms of the antitrust policy were the subject of a board communication in September 2019.

2 Data from 2017 not available.

EMPLOYEES TRAINED IN ANTICORRUPTION PER REGION

REGION	EMPLOYEES	2018		2019	
		Informed	Trained	Informed	Trained
Minas Gerais	Total number of employees	742		880	
	Total number of employees informed/trained	742	742	880	841
	Percentage of employees informed/trained	100%	100%	100%	96%
Espírito Santo	Total number of employees	417		432	
	Total number of employees informed/trained	417	417	432	419
	Percentage of employees informed/trained	100%	100%	100%	97%
Southeast Region	Total number of employees	1,159		1,312	
	Total number of employees informed/trained	1,159	1,159	1,312	1,259
	Percentage of employees informed/trained	100%	100%	100%	96%

1 Data from 2017 not available.

2 This data does not consider trainees, interns and board members.

EMPLOYEES TRAINED PER FUNCTIONAL CATEGORY

REGION	EMPLOYEES	2018		2019	
		Informed	Trained	Informed	Trained
Executive Board	Total number of employees	2		4	
	Total number of employees informed/trained	2	2	4	4
	Percentage of employees informed/trained	100%	100%	100%	100%
Management	Total number of employees	25		29	
	Total number of employees informed/trained	25	25	29	26
	Percentage of employees informed/trained	100%	100%	100%	90%
Head/Coordination	Total number of employees	39		39	
	Total number of employees informed/trained	39	39	39	39
	Percentage of employees informed/trained	100%	100%	100%	100%
Technical/Supervision	Total number of employees	49		50	
	Total number of employees informed/trained	49	49	50	45
	Percentage of employees informed/trained	100%	100%	100%	90%
Administrative	Total number of employees	603		729	
	Total number of employees informed/trained	603	603	729	699
	Percentage of employees informed/trained	100%	100%	100%	96%
Operational	Total number of employees	439		461	
	Total number of employees informed/trained	439	439	461	452
	Percentage of employees informed/trained	100%	100%	100%	98%
Total	Total number of employees	1,159		1,312	
	Total number of employees informed/trained	1,159	1,159	1,312	1,259
	Percentage of employees informed/trained	100%	100%	100%	96%

1 Data from 2017 not available.

2 This data does not consider trainees, interns and board members.

TRAINED CONTRACTORS PER REGION¹

REGION	EMPLOYEES	2018		2019	
		Informed	Trained	Informed	Trained
Southeast Region	Total number of employees	828		1,274	
	Total number of employees informed/trained	828	828	1,274	1,274
	Percentage of employees informed/trained	100%	100%	100%	100%

¹ The total number of business partners included suppliers with agreements entered into with Samarco in which the purchase order (electronic agreement) contains a compliance clause.

COMPLIANCE PROGRAM

Another important instrument for systematizing integrity management at Samarco is the Compliance Program, consisting of tools and measures for prevention, detection and responses to cases of noncompliance. The prevention element comprises everything from the Code of Conduct to management by busi-

ness partners, active in different areas. In turn, detection comprises the Ombudsman and has the help of forms and reports related to contacts and records. Finally, the response element addresses the management of action and consequence plans, as well as reports related to the matter.

Through the program, the Company ensures training, communication, due diligence, management of conflicts of interest, risk and occurrence prevention, and appropriate negotiations with direct reporting to the Board of Directors on a quarterly basis, with assurance of independence of function and processes.

PREVENTION ELEMENTS

- Code of Conduct
- Compliance Policies
- Communication and training
- Fraud, corruption and antitrust risk management
- Due diligence of suppliers and partners
- Management of Business Partners

DETECTION ELEMENTS

- Hotline - Ombudsman
- Records - meeting with government agencies, gifts and hospitality, family members and conflict of interest
- Non-compliance report
- Continuous monitoring of sensitive disbursements

ELEMENTS OF RESPONSE

- Management of action plan
- Consequence management
- Reports



Audits and assessments

In 2018 and 2019, the shareholders conducted audits at Samarco, generating opportunities for improvement in the processes assessed, and the action plans are duly monitored by the Internal Controls area.

Periodic audits and risk assessments are part of the Company's routine, mobilizing improvement actions.



100% of operations assessed GRI 205-1

The risk analyses related to corruption covered in 2018 the industrial Complexes of Germano (MG) and Ubu (ES), i.e. the entire operation. In 2019, after conducting the multidisciplinary risk assessment seminar, a reduction in the likelihood of risk materialization was observed, given the implementation of internal controls over the past year; the seminar took place again in January 2020.

Compliance Guides

In 2019, two compliance guides were prepared with the topics Geotechnics - Germano Dam (Main Dam, Sela, Tulipa and Selinha) and Environment, in line with the strategic objective of the Company to ensure compliance with the legislation and Samarco policies and guidelines. The initiative consolidates the list of all requirements to be met for each stage of a given process. This is the concept of Control Self-Assessment by the business areas. The methodology adopted for the Compliance Guide built by Samarco in 2012 has been updated, in order to approximate the reality and current business needs. The new methodology considers the level of criticality of the requirements and recommends prioritizing actions. The effectiveness tests are carried out for the controls, allowing the verification of the general level of adherence of the area to the process requirements. This is a continuous program, with phases already planned until 2024, including processes such as Mine, Port, Human Resources, Health and Safety, Operations in Germano and Ubu, Fiscal/Tax, among others.

OMBUDSMAN

GRI 102-17, 102-33, 102-34, 406-1

The Ombudsman is the grievance channel for employees, communities, suppliers and other audiences to interact with the Company, allowing the reporting of misconduct, actual or potential (being possible to do so anonymously). In recent years, the focus has been on reducing the volume of open cases and reinforcing the agile handling of cases. In 2019, we highlight the high percentage of complaints handled and solved during the year.

The reports received at the Ombudsman cover the issues of moral harassment, sexual harassment, conflicts of interest, corruption, noncompliance with procedures that impact life, behavioral deviation, discrimination and other human rights violations, favoring, fraud, noncompliance with internal procedures and policies, theft, misplacement or destruction of assets and violation of laws.

The internal investigation follows investigation protocols, after approval of the strategy by the Conduct Committee. In critical cases, at the end of the investigation, a report is issued and submitted to the Conduct Committee for resolution on the closure.

The Conduct Committee has the participation of the following representatives: Chief Executive Officer, Human Resources Manager, General Legal Manager, Compliance Officer and Ombudsman.

Among the reports received in 2019, we identified two reports classified as discrimination/human rights violations. Both were evaluated by the Conduct Committee with recommendations for process improvements.

STATEMENTS & NEGOTIATIONS	2017	2018	2019
Total complaints	110	65	128
Directed	110	65	128
Solved	109	56	97
Recorded in previous periods and solved during the year	101	27	10

Conduct Committee is responsible for investigation of cases and proposal of response actions

OUR NEW JOURNEY



Our path towards the future requires an optimized business structure and reinforced commitments

How we plan our future

Samarco believes that it is necessary to build a new history over the coming years, considering the commitments assumed, the current macroeconomic and market situation, and its responsibility towards Brazilian society.

Based on its purpose and values, the lessons learned in recent years and the outstanding features of its organizational culture, the Company carried out a reflection that resulted in the construction of Samarco's New Journey, which in turn translates into a complete revision of the Vision, Mission and Values, as well as in the Strategy Map, guidelines and business enablers. All of these changes direct current efforts to resume operations at safer, more efficient and sustainable levels, fulfilling the purpose of **doing mining differently**.

In December 2019, Samarco New Journey completed its first stage, referred to as Feet on the Ground, and entered a new phase, called Starting Point - launched during a meeting with business leaders. At the beginning of 2020, the new stage was presented to all employees in a face-to-face event attended by the board and main leaders.

Throughout the year, the continuous work of dialogue and reflection was the basis for Samarco to build a statement, released at the end of the year. With it, the Company reaffirms its values and commitments aimed at reinventing the business model.



Our statement

Acknowledging is the first step to starting over.

Recognizing that today's mining has a lot of evolving to do.

Mainly, it is necessary to do things differently.

Thinking of new solutions. Believing in new ideas.

Understanding the changes in the industry, the aspirations and needs of everyone involved.

This way, we can make a difference.

Developing new safety standards in operations.

Working towards the recovery of the economy of an entire region.

Getting even closer to the communities where we operate.

Because we cannot rethink mining without thinking about people and the environment, with respect, integrity and, above all, safety.

This is what makes us promote a significant change in our company. A real restart marked by transparency, dialogue and innovation.

Only in this way and with thorough and efficient risk management, can we turn mineral resources into value for society.

Is it an easy way? No.

But it is a new way. And that is the path we will follow.

With our feet on the ground, one step at a time.

After all, more than going forward, it is necessary to do things differently.

Samarco

Essence and culture

GRI 102-16, 102-26

Samarco has more than four decades of history and, in that period, it consolidated values and a way of working and doing business that were tested to their utmost after the collapse of the Fundão dam. The years 2018 and 2019 were decisive in rebuilding these bases; our purpose, Mission, Vision and Values were revisited and resignified, based on the lessons learned after the collapse, and with them, the need arose to promote the evolution of the organizational culture, reinforcing the essence and identity of the Company.

The last few years have proven to be an intense challenge in addressing the demands of society, on the one hand, and rethinking the business, on the other hand, without giving up non-negotiable elements - such as respect for people, safety, ethics and integrity. This learning is fundamental in the current context, in which the mineral sector as a whole faces a delicate moment in terms of reputation and relationship with society.

With the construction of the New Journey, the Executive Committee (EXCO) was created, linked to the need to reorganize the structure and management, in order to streamline Samarco's decision-making processes, with the joint performance of the CEO, the Executive Board, and general managers of different areas.

The new business guidelines take into account the market environment, the organizational climate, and the positioning that Samarco seeks to consolidate in aspects such as efficiency, ethics, safety

and relations with society, in order to resume its operations with the confidence of Brazilian society, and in compliance with all legal and environmental requirements. This work was carried out collaboratively, through a meeting with more than 100 leaders of the Company, and was based on the methodology of systems thinking and shared value.

Samarco's Mission is now focused on turning mineral resources into value for society, in a safe, efficient and innovative manner, today and in the future. The Vision reflects what Samarco expects for the future: for it to be gradually recognized for its ability to overcome and rebuild relationships, with efficiency, humbleness and resilience.

On the other hand, the Values have also been revised and, in addition to aspects such as respect for people, integrity and mobilization for results, they highlight safety as a requirement to operate and do business, with a holistic vision which covers financial, legal, social and environmental aspects. This commitment is fundamental at a time when the operating bases of the mineral sector are being

widely discussed by companies, governments and society.

All of these definitions are anchored in the purpose of making mining different and sustainable, capable of generating results and building value for society.

The work model that supports the Company is also based on the Business Enablers - which include nine aspects related to the redress of impacts, recovery of trust, the efficient use of resources, risk management, and sustainable generation of value (see in the following pages).

More than a strategy speech, this is a clear position of the Company regarding its *raison d'être* and the role of each employee in this process, seeking to connect more clearly to the stakeholders and demonstrate the reasons for the existence of the business in the long term. Therefore, in 2020 one of the challenges is to promote the evolution of Samarco's culture, in order to translate, identify and reinforce the attributes that mobilize people around the purpose and mission of the business.

The Company mission reinforces that the transformation of mineral resources must benefit society

Samarco Culture: a new cycle to do things differently

Along its path, Samarco has accumulated lessons, challenges and achievements that reverberate and express the way of being of its employees, as well as the values built by the Company in the last decades. As part of the reflections on the business conducted in 2018 and 2019, a broad work of diagnosis of the organizational culture was conducted, and confirmed the strength of the values already defended by employees and leaders, in addition to indicating the importance of incorporating new cultural traits, in order to achieve objectives consistent with the Mission, Vision, Values, and Purpose of the organization of developing doing sustainable mining differently.

In all, more than 1,050 responses were collected, with 88.9% of total reach in the units of Germano, Matipó and Ubu, Belo Horizonte and Amsterdam offices. This new cycle, which resumed a robust history of culture management carried out by the Company in its trajectory, reinforced the importance of developing and reframing some cultural traits. Considering the complexity of this process, five traits were initially prioritized:

These cultural traits, understood as beacons for all occasions - including situations like the new coronavirus pandemic, faced since the first months of 2020 (*read more on p.44*) -, contribute for each employee and team to strengthen their ties with society, encourage dialogue, and reinforce Samarco's values, based on leadership and a sense of responsibility.

¹ Employee from Amsterdam, terminated in May 2019, but participated in the process.



Innovation



**Planning in the short,
medium and long term**



Humility



Austerity



**Partnering
and trust**

Throughout 2020, the expectation is to structure and implement the culture project based on the engagement of all employees - who will act as advocates, guardians, agents and spokespeople for culture in different areas

OUR MISSION

Optimize the transformation of mineral resources into value for society, in a safe, efficient and innovative manner, today and in the future

OUR VISION

Be recognized for resilience and capacity for rebuilding social, environmental and economic relationships

OUR VALUES

> Respect for people

We consider human life a non-negotiable value and treat all people equally, not accepting discrimination of any kind and welcoming the free expression of ideas and opinions

> Integrity

We take seriously all compliance with laws and respect for moral principles, striving for dignity and ethics in relationships. We adopt an honest and transparent attitude towards all parties involved in our business

> Mobilization for results

We are aligned with and committed to the guidelines, goals and objectives of the company and its commitments to society, working in a collaborative and systemic manner, with high-performance teams, seeking the best global results for the business

> Safety

We base our conduct and attitudes on safety based on the commitment to a broad and efficient risk management. The concept of safety permeates all aspects of the business: financial, legal, operational, labor and environmental

OUR PURPOSE

Do mining differently and sustainably, generating robust results and creating value for society

BUSINESS ENABLERS

- > Regain the trust of stakeholders
- > Excellence in managing risk
- > Ensure the redress of socioenvironmental and socioeconomic impacts
- > Operate with more robust processes, operations and management
- > Continuously evolve in the management, disposal and use of tailings
- > Optimize the generation of perennial value for society and shareholders
- > Ensure an efficient supply of natural resources
- > Achieve systemic business efficiency
- > Reduce the adverse socioenvironmental impacts of the business

Commitment and lessons learned

GRI 102-16, 102-26

November 5, 2015 will be marked forever in the history of Samarco and society as a whole. The collapse of the Fundão dam, in Mariana (MG), had a decisive impact on the lives of communities and on the environment

This fact brought several lessons for Samarco, from the redefinition of challenges associated to the safety and risk management of tailings dams, a work still in progress and with wide social debate, to the way the Company dialogues with the authorities, the population, its shareholders, and other stakeholders. In view of the impacts generated for thousands of lives, the company's organizational values were also tested, in particular, respect for people, giving rise to a series of agreements, negotiations and plans to carry out the redress and monetary compensation of damages. Based on the mobilization of various segments, such as the government and civil society, Samarco and its shareholders continue to honor their commitments to redress through concrete investment and action plans.

Defining clear governance regarding the processes of remediation and compensation was one of the

first challenges. The developments and complexity of the actions and deliberative instances make this governance still one of the main challenges continuously faced.

Four months after the collapse, Samarco, its shareholders Vale and BHP, and several public entities and bodies, including the Federal Government and the States of Minas Gerais and Espírito Santo, entered into the Transaction and Conduct Adjustment Agreement (TTAC).

With it, the Company assumed its legal, economic, social and environmental accountability, providing financing and management of socioenvironmental and socioeconomic impacts. The TTAC provides that Samarco and/or its shareholders must allocate funds to 42 programs, executed by the Renova Foundation - a legal entity created specifically for this purpose on June 30, 2016, operating since August 2 of the same year (*read*

R\$ 7.9 billion

This was the total amount provided by shareholders Vale and BHP Billiton Brasil to Samarco (2016-2019)

more details below). Up to March 2020, the Company and its shareholders had allocated R\$ 8.5 billion in resources for actions of redress and compensation of damages.

Concurrently to these programs, Samarco continues to work continuously to improve the governance of its agreements with public authorities and society. On June 25, 2018, two years later, Samarco, Vale and BHP, the Public Prosecution Offices of the Federal Government and of the States of Espírito Santo and Minas Gerais, the public defender's offices of the Federal Government and of the States of Espírito Santo and Minas Gerais, and the Office of the General Counsel for the Federal Government and for both States entered into, together with other bodies, the Governance Conduct Adjustment Agreement (TAC Gov).

The new instrument reaffirmed the principles of the TTAC signed on March 2, 2016 and reinforced the participation of people affected by the collapse of the Fundão dam in the redress and compensation programs.

The expansion of participation in governance as provided for in the TTAC involved the inclusion of four new members in the Interfederative Committee (CIF). The new structure, with 16 people, maintains its role of accompanying, monitoring and inspecting the results of the programs executed by the Renova Foundation, and is responsible for accompanying, monitoring and inspecting the conduct and results of the programs. The affected communities also became part of the Renova Foundation's Board of Governors, through the appointment of two members.

These instruments formalized the responsibility assumed by Samarco before authorities and society regarding the measures it will finance in the coming years, to make sure that the impacts caused by the collapse of the Fundão dam will be properly addressed, mitigated, remedied or compensated, in observance of the rights of the affected populations and the principle of appreciation of the Brazilian natural capital. There are also other initiatives voluntarily undertaken by the Company, such as adherence to the United Nations Global Compact and good practices of relationship with stakeholders based on ethics and integrity.

R\$ 4.2 billion

is the amount provisioned (as of December 31, 2019) by Samarco for future disbursements related to obligations arising from the collapse of the Fundão dam. To check the data in detail, access the Company's Financial Statements at www.samarco.com/relatorios

TRANSACTION AND CONDUCT ADJUSTMENT AGREEMENT (TTAC)



TAC Gov (2018) Signed on June 25, 2018 Ratified on August 8, 2018

- > Reinforces and recognizes TTAC principles
- > Dismisses a R\$ 20.2 billion lawsuit filed by the Federal Government, State of Espírito Santo and State of Minas Gerais against Samarco
- > Establishes the renegotiation of TTAC programs
- > Provides for the inclusion of four new members on the Inter-federative Committee (CIF) and two new members on the Board of Governors of the Renova Foundation

Read the agreement:

http://www.ibama.gov.br/phocadownload/cif/tac-gov/2018-06-25-cif-tac_governanca.pdf

TTAC (2016) Signed in March 2016

- > Secures financing of Samarco and/or shareholders for the redress and monetary compensation for the impacts of the collapse of the Fundão dam
- > Establishes the creation of the Renova Foundation, responsible for the execution of 42 programs
- > Defines, delimits the scope and indicates deadlines and objectives for each program

Read the agreement and know the signatories:

<https://www.fundacaorenova.org/sobre-o-termo/>

SUSTAINABILITY MANAGEMENT

Maturing and building a commitment to sustainability have been part of Samarco's trajectory in recent decades. With a sector of activity and a production chain that generate specific social, environmental and economic-financial impacts, the Company has focused on orienting the business towards contribution to communities, efficiency in the use of natural resources, and the development of human capital.

In operations, it also made investments in solutions to reduce environmental impact on mining and production, in addition to improvements in the dialogue processes with the so-called area of direct influence. However, this work was put to the test with the collapse of the Fundão dam and required, in the last four years, deep reflections on the part of the Company's leadership. Currently, after a long period of learning, sustainability is integrated with the guidelines and the business enablers of the Company.

Today, Samarco's Mission, Vision and Values translate a systemic look at sustainability in line with the current situation of the Company, which includes commitment to the responsible transformation of capital and resources, the fulfillment of all assumed responsibilities, and the generation of value for society, in a win-win relationship, with a robust and efficient management model, which is attentive to risks and impacts.

Samarco's Business Plan is directly linked to the dependence on the Company's ability to identify, develop and implement innovative projects for tailings and overburden solutions. The Strategy Map proposes a sustainable fulfillment of the plan, grouping aspects related to production, sales, projects and all other financial commitments assumed. From the first stages of its capital projects, Samarco ensures

the optimization of the generation of value for society and shareholders and seeks the systemic efficiency of the business, including aspects of cost-efficiency, safety and management.

For the short term, the Company's purposes include the reestablishment of the processes of engagement with stakeholders, focusing on the materiality process (*read more below*), considering the lessons learned in recent years, and the guidelines of Samarco's New Journey.

AGREEMENTS, PACTS AND INITIATIVES

GRI 102-12, 102-13

- > **Global Pact** – the Company has been committed to obeying the ten principles of the United Nations since 2002. Thus, it reports its progresses and challenges in the pillars of human rights, fight against corruption, environment and labor relations through the regular publication of Annual and/or Sustainability Reports or Communications of Progress (COP) (see all publications at www.samarco.com/relatorios and the Global Pact site).
- > **Sustainable Development Goals (SDGs)** in the coming years, Samarco shall strengthen the relationship of its business model with the principles of the United Nations.
- > **Open Letter to Brazil on Climate Change** together with 21 other companies, Samarco signed a public commitment to reduce greenhouse gas emissions in its activities.
- > **Business Pact for Integrity and Against Corruption** the Company has been a signatory to this pact since 2006, constantly making efforts to combat illegal acts in its production chain.
- > **Business Contribution to the Promotion of Green and Inclusive Economy** – Samarco signed the letter in 2012, when it was announced at the United Nations Conference on Sustainable Development (Rio+20).

MATERIAL TOPICS

GRI 102-42, 102-43, 102-44, 102-46, 102-47, 103-1

Samarco formally adopts the reporting guidelines of the Global Reporting Initiative (GRI) and, in line with them, regularly performs materiality processes - through which it assesses the relevance and magnitude of the social, economic and environmental impacts of the business, based on the perception of the different stakeholders. This activity, carried out regularly, allows the Company to identify the most relevant issues, prioritizing the contents of this report and other management actions.

In the last process, carried out in 2016, the focus was on bringing to Samarco's materiality the changes in context and environment, related to the collapse of the Fundão dam. A strategic review of the list of topics mapped in 2014 was carried out, with a subsequent a process of consultation of different audiences (community, government, suppliers, employees and leaders), based on image monitoring surveys, main press and

social media topics associated to the Company, TTAC and the Sustainable Development Goals (SDGs).

The work resulted in the survey of seven material topics, among which are transparency in business, recovery of the infrastructure of affected communities, socioeconomic development, and rehabilitation of terrestrial and aquatic biodiversity.

In this reporting cycle, we worked with the same matrix of critical themes; however, a new materiality process will be started in 2020, comprising wide consultation with stakeholders. The idea is to move forward in collecting society's perceptions of Samarco in the context of preparing for its resumption, with a reliable picture of its impacts and most urgent sustainability topics. The new materiality shall be adopted in the next reporting cycle.



Dialogue with employees of the Germano Complex (MG). Completion of the preparation works for the Alegria Sul Pit.

MATERIAL TOPICS*	Our efforts	Material aspects	Who we impact	Indicators
Transparency in communication and business	Clear communication about current and future mitigation actions; diffuse dissemination and easy access to information, through its own website, dialogue meetings, press etc.	*Compliance *Restoration * Mechanisms for complaints and claims related to environmental and social impacts	Community Public authorities NGOs and entities Employees Shareholders Contractors	GRI 103-2 GRI 307-1, GRI 419-1 GRI 205-1, 205-2, 205-3
Tailings: disposal management and mitigation of impacts caused by the collapse	Indicators to monitor the reliability, safety and stability of the dams; indicators, goals and disclosure of progress on the removal of tailings from the affected locations; projects aimed at reuse	* Effluents and waste	Community Public authorities NGOs and entities Environment	GRI 306-1, GRI 306-5 G4-MM3
Management and mitigation of impacts on terrestrial and aquatic biodiversity	Indicators to monitor the Company's programs and initiatives in the environmental pillar; Promotion and financing of environmental recovery actions, both terrestrial and aquatic, under execution by the Renova Foundation	*Water *Biodiversity *Effluents and waste *Products and services *General	Environment Community Public authorities NGOs and entities	GRI 303-1, GRI 303-2 GRI 304-2, GRI 304-4 GRI 306-1, GRI 306-5 G4-MM2
Community engagement and participation	Participation of representatives of the affected communities in discussions and decision-making, as well as ongoing dialogue and engagement	*Local communities	Community Public authorities NGOs and entities	GRI 413-1, GRI 413-2 G4- MM7
Job creation and development of the local economy	Fostering the structuring of new businesses, independent from mining, and the return of socio-economic conditions in the affected regions	*Presence in the market *Indirect economic impacts *Labor relations * Local communities	*Presence in the market *Indirect economic impacts *Labor relations * Local communities	GRI 202-2 GRI 203-1, 203-2 GRI 402-1 GRI 403-2, GRI 404-1
Infrastructure management in affected communities	Resources for public infrastructure, seeking to meet both the needs of new economic activities and those of communities, such as housing, schools and health services	*Indirect economic impacts *Transports *Local communities * Restoration	Community	GRI 203-1, 203-2 G4- MM9 G4-MM6, G4-MM10
Financial sustainability	Economic-financial feasibility for Samarco to return to operate, generating revenue for shareholders and financial resources to work on mitigating the impacts caused by the collapse of the Fundão dam	*Economic performance	*Economic performance	GRI 201-1

* Although they were not considered material in the last cycle of review of topics, the aspects of Energy (GRI 302), Emissions (GRI 305) and Employment (GRI 401) were included in this report considering the relevance of these aspects to stakeholders and the industry as a whole.

ABOUT THE COLLAPSE OF THE FUNDÃO DAM

The collapse of the Fundão dam occurred on the afternoon of November 5, 2015, forever marking the history of Samarco. Located in the Germano unit, in Mariana and Ouro Preto (MG), the dam belonged to the set of geotechnical structures of the Company and held about 55 million cubic meters of tailings, within the limit allowed and licensed by the Regional Superintendence for the Environment and Sustainable Development (Supram).

Samarco and its shareholders made it a priority to understand the technical reasons that led to the dam failure. To this end they engaged an independent external investigation to be carried out by the American law firm Cleary Gottlieb Steen & Hamilton LLP, based in New York. Cleary Gottlieb formed a panel with experts to perform field inspections, data analysis, laboratory tests, modeling research and interviews with the parties involved.

The results were made public in August 2016 at a press conference attended by executives from Samarco and its shareholders. To access the results of the investigation, go to <https://www.samarco.com/resulta-do-da-investigacao/>.

With the collapse, a total of 32.6 million m³ of tailings were released from Fundão and flowed over the Santarém dam, a structure used to store water and sediments that retained most of the tailings. Then the overflow reached the district of Bento Rodrigues, in Mariana (MG), 8 kilometers downstream of the Fundão structure.

After advancing over Bento Rodrigues, the tailings reached the Gualaxo do Norte and Carmo rivers, impacting the city of Barra Longa (MG), and then arrived at the Doce river. On the way, they passed through the Risoleta Neves hydroelectric power plant, better known as Candonga Plant, which retained part of the tailings in its dam and reservoir. Another portion of the tailings continued down the Doce river until reaching its mouth in the district of Regência, in Linhares (ES), in November 2015.

The material that leaked from the Fundão dam traveled about 680 km along the waterways of the Doce river system, causing the interruption of water supply in nine cities, increased turbidity, flooding of rural properties, and loss of houses and equipment.

In addition to the environmental impacts and disruption to the lives of thousands of people, the failure of the Fundão dam unfortunately caused 19 deaths: 1 Company employee, 13 outsourced professionals, four residents of the community, and one person who was visiting the town. All possible rescue efforts were carried out and Samarco sought to provide full support to the victims' families. Read more about the collapse at <https://www.samarco.com/rompimento-de-fundao/>

Check all indicators of humanitarian and emergency actions in response to the collapse in the 2015-2016 Report: [click here](#)

RENOVA FOUNDATION

Created in June 2016 and operating since August of the same year, the Renova Foundation is a private, non-profit institution responsible for managing autonomously and independently the measures of redress and monetary compensation provided for in the Transaction and Conduct Adjustment Agreement (TTAC) and in the rehabilitation plans of the regions affected by the collapse of the Fundão dam.

Headquartered in Belo Horizonte (MG) and with offices in Mariana (MG), Governador Valadares (MG) and Linhares (ES), the foundation has its own structure of governance, inspection and control, with a management and resolution model that ensures participation of public authorities, civil society and those responsible for its funding and operation.

Now over four years in activity, the Renova Foundation handles the needs of individuals and legal entities directly affected by the collapse of the Fundão dam, duly assessed and registered, according to the provisions of the TTAC. Its program execution model is governed by

the principle of understanding of the needs of the affected regions, dialogue with public authorities and society, and efficient planning of allocation of resources. In all, 42 socio-environmental and socioeconomic programs are being conducted.

The operation fronts for remediation and compensation are divided into three thematic axes, promoting the intersection between the actions provided for in the TTAC. Namely:

- **People and communities:** includes identification and indemnity; Education and culture; Health and wellness; Traditional and indigenous communities; Promotion of the economy; and Engagement and dialogue.
- **Land and water:** includes Land Use; Water management; Waste management; Biodiversity; Assistance to animals; and Innovation.
- **Reconstruction and infrastructure:** focuses on the programs of Resettlement; Tailings containment; Water and effluent treatment; and Urban infrastructure and accesses.

The numbers of the Renova Foundation actions can be accessed on the [website](#)

As previously reported, this Biennial Report 2018-2019 is focused on Samarco's own investments, projects and performance indicators, and does not cover reporting on the results of projects carried out by the Renova Foundation. The Foundation is funded by Samarco and its shareholders, the parties legally responsible pursuant to TTAC and TAC Gov. Renova's numbers are periodically released and monitored through financial statements.

RESETTLEMENT OF COMMUNITIES GRI MM9

Also in 2018 and 2019, the three resettlement processes related to the territories affected by the collapse of the Fundão dam took place. The communities included in this process are from the cities of Mariana - district of Bento Rodrigues and Paracatu de Baixo (subdistrict of Monsenhor Horta) - and Barra Longa (community of Gesteira). All resettlements are under the responsibility of the Renova Foundation.

According to the Renova Foundation's Annual Activity Report, in

2019, 63 permits for 122 buildings were issued for the beginning of the works of the Bento Rodrigues community. The main access to the locality is already paved, the works of the school and health care unit are in progress, and several houses are at different stages of construction.

In Paracatu de Baixo, the land that will house the 32 new homes has been cleared, and five houses have already started the foundation phase. The focus of the works is on the main access to the resettle-

ment, essential to handle the flow of machinery and trucks involved in the construction, and the external power grid is ready.

The community of Gesteira has chosen to develop its urban project with local technical assistance, AEDAS, without the participation of the Renova Foundation, which forwarded to the group the documents that demonstrate the conditions and restraints inherent to the land. The discussions about the resettlement guidelines have not yet been closed, but an artesian well has already been drilled that confirmed the local

capacity to be self-sufficient in water supply to future residents, and the bore holes have been completed for preparation of land use and occupation studies.

More Information

To see updated indicators and results of the resettlement programs, see:

- [2018-2019 Biennial Report](#)
- [Bento Rodrigues](#)
- [Paracatu](#)
- [Gesteira](#)

Safety as a value

GRI 102-11, 102-15, 102-30

Samarco is of the understanding that a safe and responsible resumption of its operations is a requirement for the rebuilding of trust with society and public authorities regarding its ability to operate. In addition to the immediate actions for sediment control, attention has been focused on the reinforcement of the remaining structures of the complex of dams and the review of the Emergency Action Plans for Mining Dams. The Company strengthened its Risk Management process, with measures of prevention, dialogue and drills in the communities, in partnership with the Civil Defense, in addition to conducting actions to assure the stability of its assets and facilities and reinforce the value of safety in its New Journey.

Supported by the expertise of its technical teams, specialized consultants, the guidelines of regulatory agencies, and the lessons learned in recent years, the Company revisited all the processes and procedures for the safety of its activities, from the Germano unit, in Minas Gerais, to the Ubu complex, in Espírito Santo.

Monitoring geotechnical structures in Minas Gerais and Espírito Santo is a priority for Samarco - which has the Monitoring and Inspection Center (CMI) as part of its Integrated Safety System. Operating 24 hours a day, seven days a week, the center has 840 state-of-the-art items of equipment, robotic and weather stations using radars, cameras and drones, among other resources. The system provides more than is required by

law and regulations, and follows the best practices of international dam safety management.

Also part of the focus on safety is the training of professionals from public agencies, such as Firefighters, Civil Defense and Military Police, and training of nearby communities in emergency situations. Since 2016, the installation of mobile and fixed sirens has been adopted in the Germano and Nova Santarém dams, and in the communities of Bento Rodrigues, Ponte do Gama, Camargos, Paracatu de Baixo, Paracatu de Cima, Borba, Pedras, Campinas, Gesteira and Barra Longa seat, in Minas Gerais.

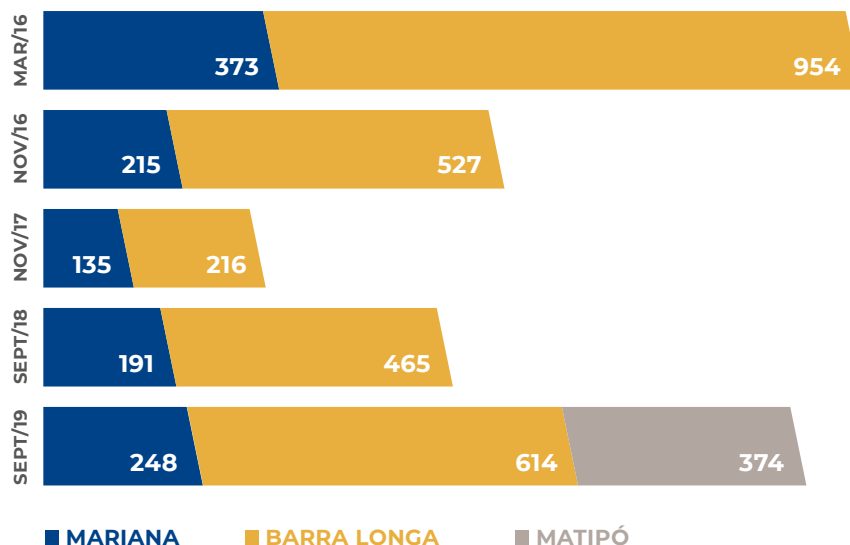
In order to prepare the population, agencies and authorities and Samarco itself for hypothetical situations of

dam breaks, investments were also made in emergency drills. In line with the Emergency Action Plan for Mining Dams (PAEBM), these actions prepare communities and public agents (municipal and state) on how to proceed in emergencies.

Since 2016, there have been seven exercises, with the participation of almost 4 thousand people from the communities in the region. In 2016, two drills were carried out, one in March and the other in November. In Mariana, in the districts of Bento Rodrigues, Camargos, Ponte do Gama, Borba, Pedras, Campinas, and in Barra Longa in the town itself and in its districts of Barreto and Gesteira, with the participation of 373 and 954 people, respectively. Drills were also carried out in 2017 and 2018, in the same cities and their districts.

In 2019, in addition to the drills in the Mariana and Barra Longa communities, there was also a drill in the district of Padre Fialho, in Matipó, with the participation of 374 residents. Its organization was led by the Munic-

PARTICIPATION OF THE COMMUNITIES IN THE PAEBM DRILLS
QUANTITY OF PEOPLE



ipal Civil Defense and had the support of the Military Fire Department, Military Policy, students from Univer-tix, and Samarco. The drill took place near Samarco’s pump station II. In the case of Mariana, the emergency drill involved the Municipal

Civil Defense, the State Civil Defense, the Military Fire Department, the Military Police, the Municipal Guard, and Samarco.

NUMBER OF PARTICIPANTS

	2016	2017	2018	2019
Bento Rodrigues	245	NA	15	NA
Camargos	37	21	27	42
Ponte do Gama	38	21	16	40
Subtotal – Mariana	320	42	58	82
Paracatu de Baixo	49	12	63	6
Paracatu de Cima		11	15	13
Borba	15	6	9	8
Pedras	22	16	19	22
Campinas	88	38	27	117
Barreto	44	7	7	7
Gesteira	124	27	42	50
Barra Longa Sede	910	168	416	557
Subtotal – Barra Longa	1,252	285	596	780
Padre Fialho – Matipó	NA	NA	NA	374
Total	1,572	327	656	1,236

These drills assure the population’s preparedness to face emergencies

DAM STABILITY

The collapse of the Fundão Dam established a new sequence in the dam safety process at Samarco. Several initiatives have been defined, including the review of all geotechnical designs by a third party (design review), the use of international design criteria, in addition to those recommended in Brazilian standards, audits every year by the Public Prosecution Office, every quarter by Canadian consultants, and every semester by the shareholders, in addition to the activities of the Monitoring and Inspection Center (CMI), operating 24 hours a day, seven days a week, throughout the year. Reports on the conditions of these structures are sent periodically to the competent bodies.

Currently, the management of the

safety of geotechnical structures at Samarco is based on:

- > Engineering, technologies and instruments for monitoring and projects;
- > Specialized technical team and more than 800 items of equipment and instruments, including radars, accelerometers, robotic stations, inclinometers and drones, pressure and water level meters, most of these instruments integrated into the Monitoring and Inspection Center (CMI), in addition to monitoring of the main structures with video cameras;
- > Mining Dam Emergency Action Plan (PAEBM);
- > Crisis Management Support Plan (PAGC);
- > Emergency drills and training, with the participation of public agencies and the community mobilized on seven occasions since 2015; and
- > Sirens installed in the areas of the dams and in the communities of Mariana and Barra Longa, tested on the 10th day of every month, at 10 am.

The work routine is intense and seeks to assure the maximum safety of the structures and operations. The Germano unit focused on a series of projects aimed at environmental compliance and mainte-

nance of the safety of the structures. Among the measures of the last four years are the implementation of tailings containment structures, such as the Nova Santarém Dam, the dikes S3 and S4 in the Santarém stream valley, as well as water pumping systems to avoid the entrainment of tailings. Together, the projects represented R\$ 640 million in investments. As a result of the projects, the water that flows from dike S4 today, the last structure before the Gualaxo river, has maintained an adequate turbidity index, as attested by the audits.

Up to December 2019, approximately R\$ 383.7 million were allocated to robust engineering works, following the recommendations from independent technical audits. The document, issued after data analysis and field surveys, attests to the efficiency of the integrated safety system prepared for all dams with this classification. As part of the commitment to the seriousness and accuracy of statements such as these, today the CEO of Samarco undersigns, together with the experts, all the stability reports of the dam structures. Obtaining of the Statement of Stability - DCE every six months, with reports issued in March and September 2019 and March 2020, demonstrates the Company's effort and commitment to the safety of its geotechnical structures.

More than R\$ 383 million were invested in robust engineering works up to the end of 2019

UPSTREAM DAMS: DECHARACTERIZATION AND FUTURE

On January 30, 2019, a few days after the collapse of Vale's dam of Córrego do Feijão in Brumadinho, the State Secretariat for the Environment and Sustainable Development (Semad) and the State Environmental Foundation (Feam) of Minas Gerais published Joint Resolution No. 2,784, determining the decharacterization of all tailings and waste containment dams raised by the upstream method. The resolution eventually regulated article 13 of the State Dam Safety Law 23,291/2019.

A period of two years has been granted for all existing structures to be decharacterized, i.e. no longer used to contain tailings. In Minas Gerais, almost 50 structures use the upstream raising method, of which some 22 have been shut down, according to the agencies, distributed in 16 cities.

Samarco's Germano dam was built using this method, but has been inactive since October 2015 and its safety is attested by a stability report issued in September 2019 (the most recent is March 2020) (*read more on p.36*). It is one of the largest iron ore tailings dams in Latin America raised by the method - and it has, in addition to the main dike - divided into an upper dam and lower dam - three saddle dikes, known as Sela/Tulipa and Selinha, also to undergo decharacterization.

Thus, Samarco presented to the National Mining Agency (ANM) the detailed engineering design for the decharacterization of the Dam and Pit of Germano, in Mariana (MG), which includes the schedule for carrying out the activities, based on Resolution 13/2019.

The decharacterization plan had already been filed, also with the State Foundation for the Environment (Feam), in compliance with Semad/Feam Joint Resolution No. 2,784/2019, divided into stages to assure long-term stability of the structures, the reshaping of the reservoir, and environmental rehabilitation of the area. The work continues throughout 2020 and is among the Company's core projects in the context of its restart.



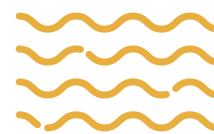
Long-term physical and overall stability

- > construction of sandy tailings and overburden reinforcement structure



Reshaping and revegetation

- > in the reservoir area, the structures will no longer have a dam function, with no formation of permanent ponds



Implementation of a water management and flood control system

- > construction of internal channels to safely direct water to other environments

Resuming operation

The years 2018 and 2019 represented a period of clarifications, investments and intense preparation for a safe and sustainable resumption of Samarco's operations. In line with its purpose, the Company has studied, planned and is executing projects that will allow it to resume its mining operations in a different way, with models of lower environmental impact and maximum levels of safety.

Evolution in the agreements related to funding of socioenvironmental and socioeconomic redress and compensation for the collapse of the Fundão dam through the Renova Foundation, added to the obtaining of the stability statements of the dams, environmental licenses, and projects to renew the operational model, allowed the Company to provide its shareholders with a structured and feasible business plan, to support its return to operation in 2020.

The thorough investigation of the causes of the collapse was accompanied by reviews of all risk and safety management processes of the Company's activities, in addi-

tion to technological and economic-financial studies to design models for operational resumption. One of the guidelines was to find solutions capable of doing mining differently, with the least impact on the environment and communities, including minimizing the generation of tailings and overburden, the use of pit for the disposal of slimes, and the cessation of the use of tailings dams raised by the upstream method.

Currently, Samarco's restart proposal provides for the use of the Alegria Sul Pit Tailings Disposal System and the implementation of a sandy tailings filtration system, and dry stacking in Alegria Sul. Together, they will allow return to operation in a safer and more sustainable model. As a result, 80% of the tailings volume will be filtered (for subsequent dry stacking) and the remaining 20% stored in a pit, also allowing for reuse of water generated in the filtration process.

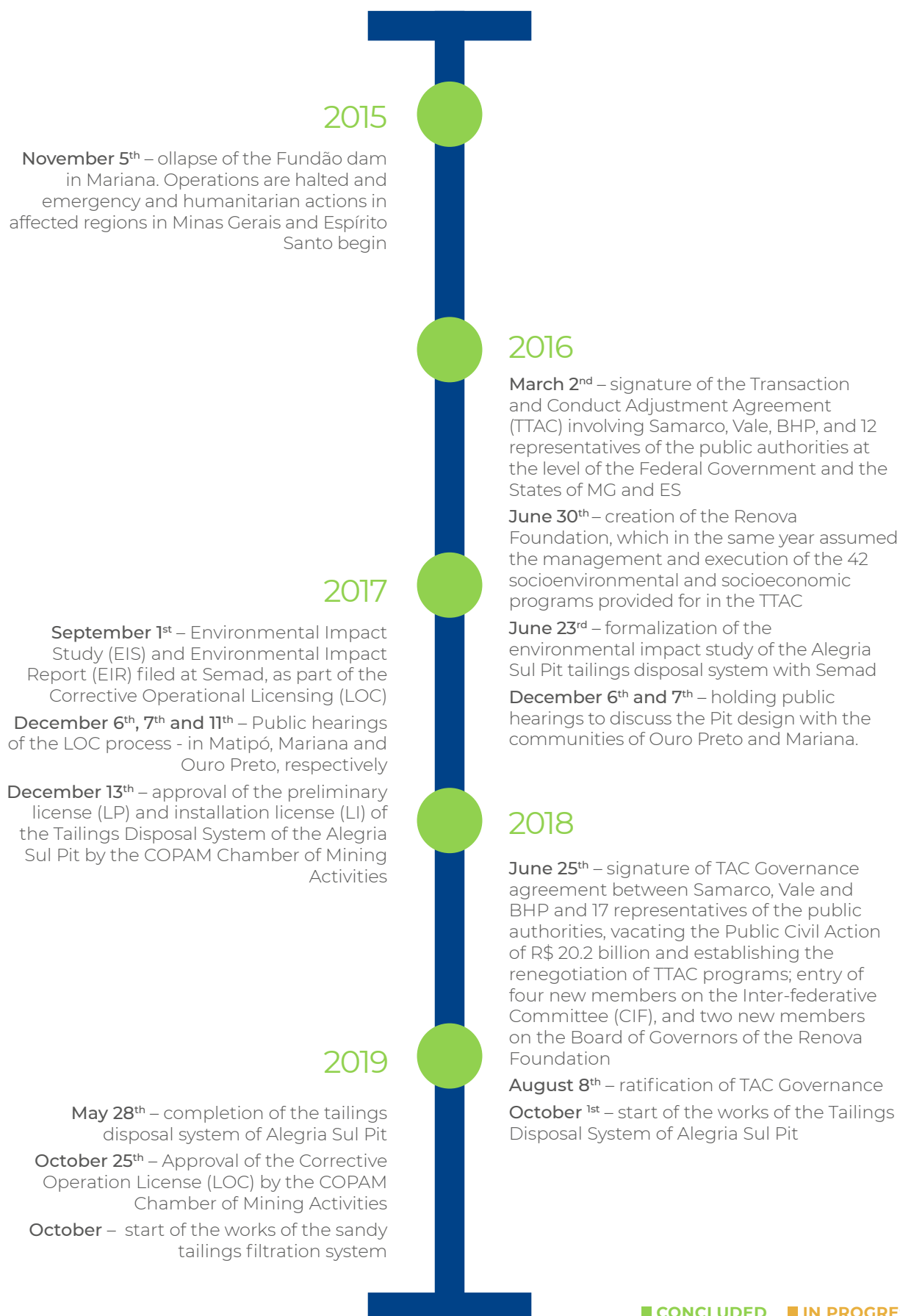
In October 2019, a crucial element for the resumption of operations was the issue of the Corrective Operation License (LOC) for the

operational activities at the Germano Complex, located in Mariana and Ouro Preto, Minas Gerais. The Chamber of Mining Activities (CMI) of the State Council for Environmental Policy (Copam) approved the license. The resumption of the extraction of iron ore and its beneficiation, in Germano, as well as the pelletizing operations of Ponta Ubu in Anchieta, Espírito Santo, will occur gradually and only after the startup of the sandy tailings filtration system, scheduled for the end of 2020.

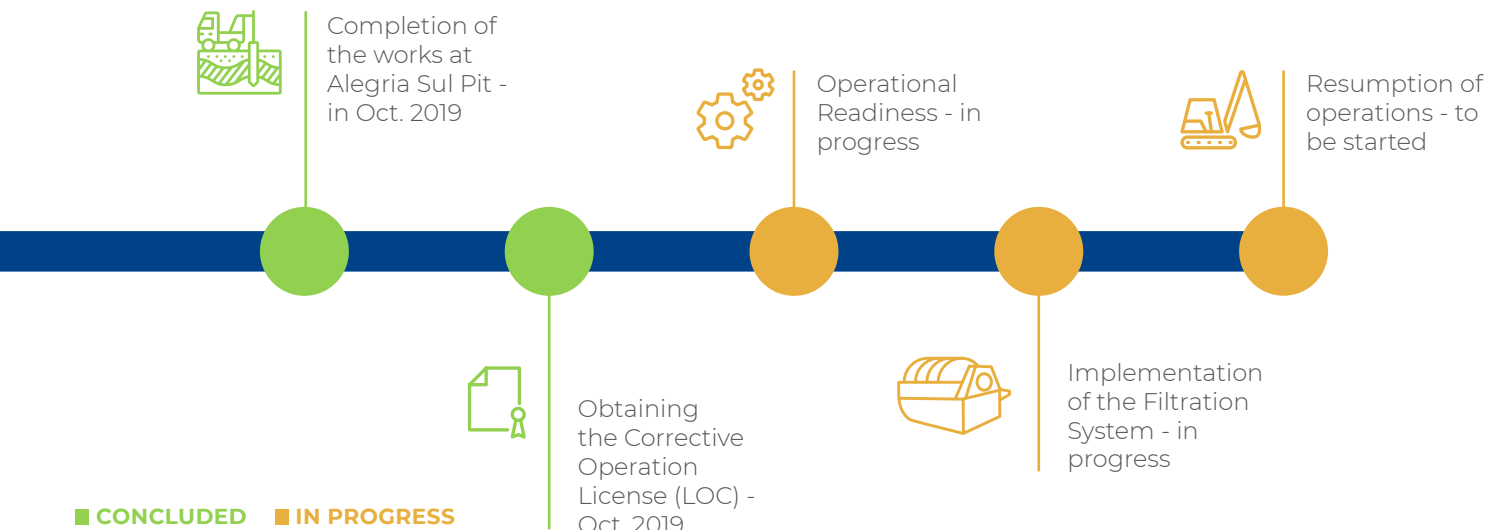
It is important to note that Samarco now holds all the environmental licenses needed to allow its restart, for in addition, in May 2020, Ibama unified the licenses for Samarco's pipelines, issuing an operational license valid for 10 years.

Today, the Company has the required environmental licenses for the resumption of its operations

RESUMPTION STEP BY STEP



STATUS OF OPERATIONAL RESUMPTION



ALEGRIA SUL PIT

The works of the new tailings disposal system were completed in May 2019. It is a confined pit model, with a high level of geotechnical safety - it is a natural structure from where ore had been previously extracted, with a rocky and stable formation that allows the containment of the tailings, without any connection with the structures affected by the collapse of Fundão.

Once the iron ore extraction and beneficiation process at the Germano Complex resumes, the disposal of the slimes portion of the tailings will be in the Alegria Sul Pit, which has the capacity to hold approximately 10 million cubic meters.

Since 2016, several steps have been taken to implement the new tailings disposal system, including the

R\$ 192.4 million

Invested in Alegria Sul pit

presentation of the environmental study for licensing (EIS/EIR) and holding of public hearings with the communities of Mariana and Ouro Preto, in Minas Gerais, in 2016; obtaining of the Preliminary License (LP) and Installation License (LI), granted in December 2017 by the State Secretariat for the Environment and Sustainable Development (Semad) of Minas Gerais; and the signing of a Commitment Agreement with the Public Prosecution Office of Minas Gerais (MPMG), to monitor the pit works through an independent external audit.

SANDY TAILINGS FILTRATION

Among the actions provided for in the LOC and established as a prerequisite for resumption of operation, Samarco developed a new model of mineral management with the filtration of sandy tailings - which represent 80% of the total tailings generated by the beneficiation of iron ore - and the thickening of slimes, which represent the other 20%.

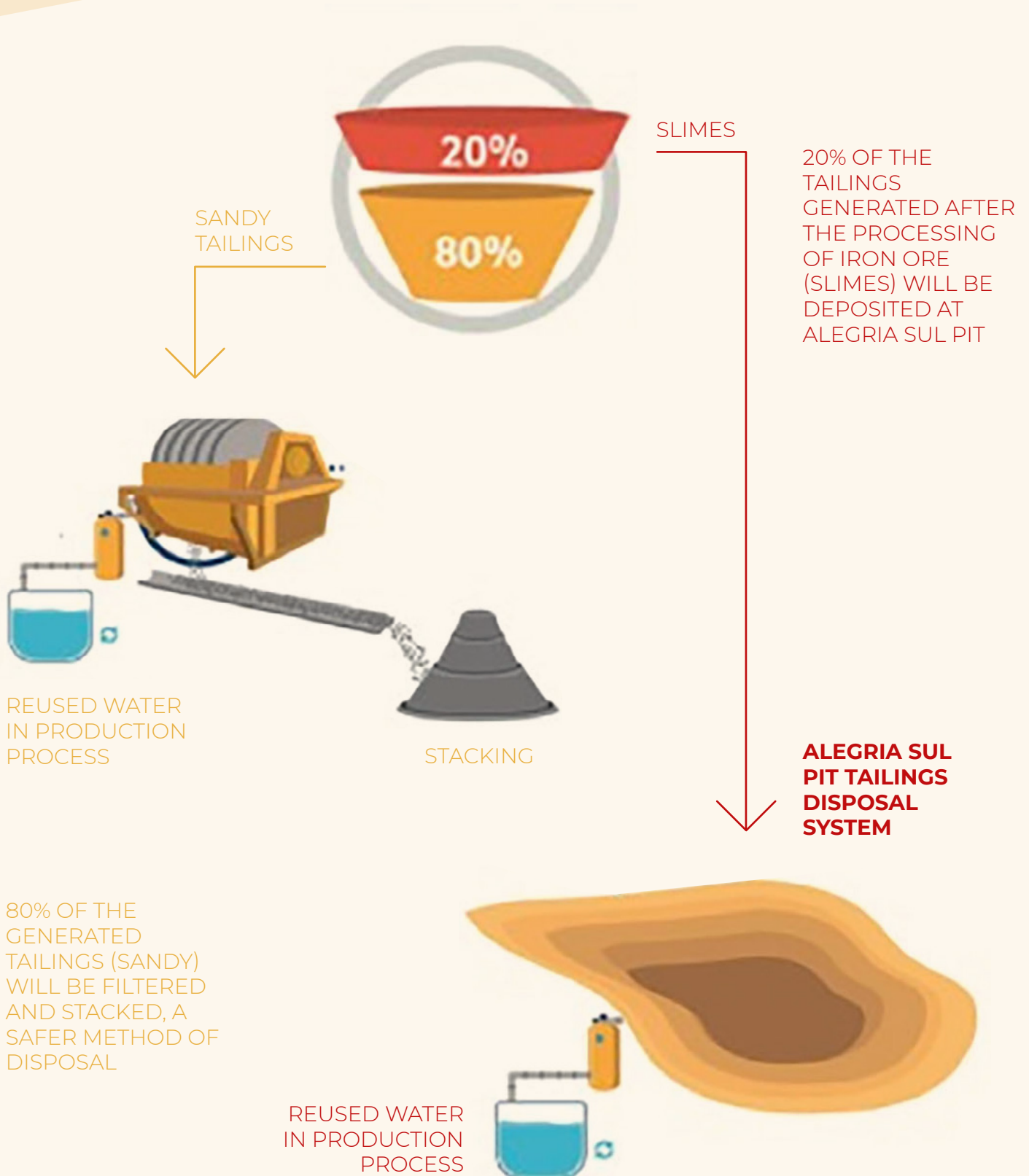
The solution contributes to a relevant mitigation of environmental impacts. The filtration technology uses vacuum disc filters, allowing

R\$ 302.5 million

Being invested in the Germano Filtration System

a significant increase in the percentage of solids and dry stacking of the sandy tailings, obviating the need for dams. In the case of the slimes, after the resumption, disposal will take place in a confined pit (Alegria Sul Pit), without the use of dams. Both cases increase the recovery and recirculation of water in the production process, reducing the intake of new water. Samarco is also engaged in studies of new technologies for the beneficiation of tailings, either with the use of new equipment, or the use of technological routes or other type of use of tailings, without direct disposal. The projects involve thickening of slimes, disposal of overburden and slimes in other models, and stacking.

SANDY TAILINGS FILTERING SYSTEM



BUSINESS OUTLOOK

GRI 102-15

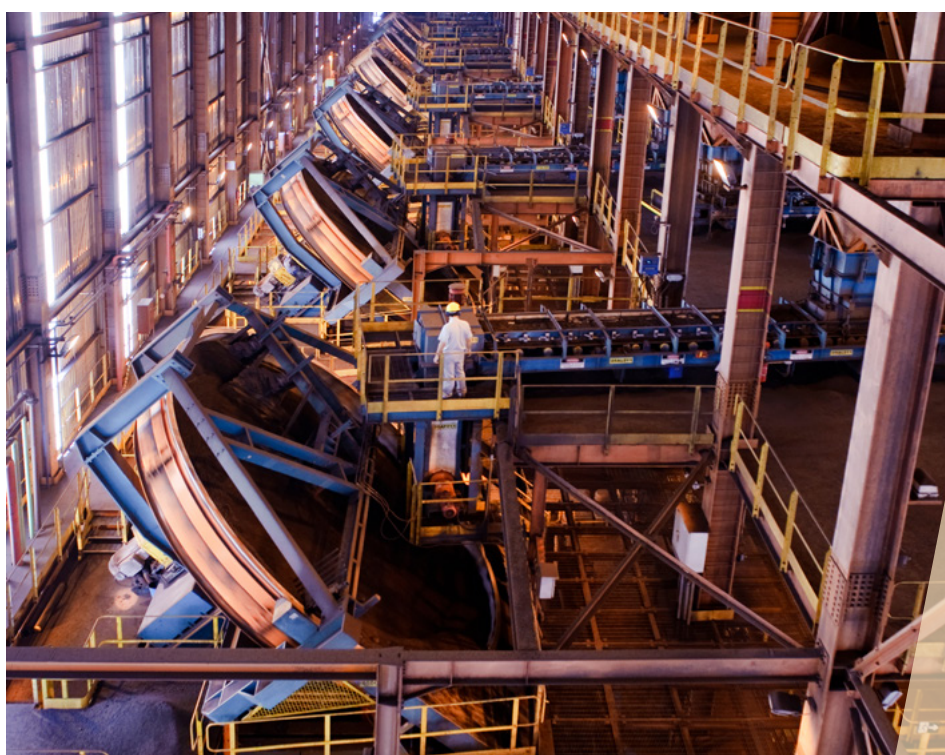
The reconstruction of the Company's strategic goals is another commitment made to public authorities, communities, business partners, and Samarco employees. In line with the revision of the Mission, Vision and Values, this work resulted in the construction of a Strategy Map - which summarizes and directs the Company's vision on its new journey.

The work was carried out throughout 2018, reflecting the collaborative performance of leaders from different areas, within the scope of the Executive Committee (EXCO). The process was based on the methodology of systems thinking and shared value, in order to incorporate into the business plan, the commitment to growth at safe, efficient and sustainable levels to generate value, and thus provide funds for the processes of socioenvironmental and socioeconomic redress and compensation due to the impacts generated by the collapse of the Fundão dam.

The Strategy Map considers the prospects of the business environment in which Samarco expects to resume operations in 2020, with the gradual resumption of its activities and the resulting reopening of business relations. The analysis of the challenges, risks, opportunities and market scenarios is a major item - and mobilizes leaders to ensure the Company's competitiveness in an increasingly complex and competitive global market.

According to data from the Brazilian Mining Institute (Ibram), the mineral sector represents around 16.7% of the Industrial Gross Domestic Product (GDP) and 4% of the country's GDP. It generated revenues of R\$ 153.4 billion in 2019 in Brazil, 39.2% above the R\$ 110.2 billion reported in 2018, and reached a production volume of around 410 million tons in 2019, against 450 million in the previous year (data from Ibram/Mining Portal).

Its production chain generates about 180 thousand direct jobs and more than 2 million indirect ones. There are more than 9 thousand



Pellet plant, Ubu Complex.
Anchieta, Espírito Santo

mines in Brazil that, together with other mining companies' facilities, occupy an area equivalent to 0.5% of the entire national territory (dados from Ibram/publication "[Economia Mineral do Brasil](#)"). In the case of iron ore, the segment in which Samarco operates, the participation is 80% of the Brazilian mineral GDP. Other important production segments are those of mineral water, aggregates from the construction sector, bauxite, phosphate and manganese.

In recent years, the sector has faced a crisis of global proportions, with the fall in prices of iron ore in view of the slowdown in the economic activity of key markets, such as China. After a cycle of significant price increases, exceeding the amount of US\$ 100 per ton, there was a slump and the iron ore market finally showed signs of recovery in 2018, reaching US\$ 69/ton. In 2019, the trend was consolidated at US\$ 93/ton, according to data from the Brazilian Mining Institute (Ibram).

Another good sign is that investments in the mineral sector have registered a significant recovery. According to the survey of the 200 Largest Brazilian Mines 2018, conducted by *Minérios & Minerales* magazine, after the R\$ 561.7 million reported in 2017 (invested by 42 mines), the total investment in 2018 reached R\$ 1.3 billion, considering 34 mining operations.

Taking this scenario into account, the Strategy Map points to the need for significant investments in order for Samarco to be competitive in its segment. With a profile of exporter and a portfolio of clients operating in industrial and steel hubs in 20 countries in Europe, Africa, the Middle East, the Americas and Asia, the Company will seek in

its journey to execute economically feasible models, with benchmarks in efficiency and safety. To this end, the company has invested in the preparation of its industrial units to return to activities gradually (at 26% capacity) and with less environmental impact (*read more below*).

Technological studies: new solutions for tailings and overburden

Finding other solutions for mining tailings, going beyond safe disposal models and the pursuit of innovative alternatives, is one of the objectives described in Samarco's Strategy Map. In order to comply with the business plan in a sustainable manner, the Company seeks not only the resumption of its operations, but also their continuity and the gradual recovery of its historical production levels. With this in mind, Samarco is conducting technological studies for the application of tailings in new products and businesses.

These activities, which have already been part of Samarco's strategy since 2010, become even more relevant in a context of resumption with the Alegria Sul Pit Tailings Disposal System and the sandy tailings filtration system, ready for immediate restart using one of the three concentrators.

The company is conducting studies for the development of new solutions for the treatment of tailings, and for the definition of new structures for tailings disposal in the long term. The expansion of the company's production capacity will depend on the definition of new spaces for the disposal of tailings, still under study by Samarco, and on the availability of water.

Upon resumption, a concentrator will be able to produce around 7-8 million tons per year (Mtpy). The company concentrates efforts on studies and designs that will allow the restart of the second concentrator, increasing production to around 17 Mtpy. The restart of the third concentrator, also when made possible by the implementation of new approaches, will result in the achievement of the production level of about 28 Mtpy of concentrate.

Pandemic in 2020

The expectations of a recovery of the Brazilian economy in 2020, the year in which Samarco plans its return to activity, were impacted by the announcement by the World Health Organization (WHO) of the global pandemic of Sars-CoV-2, a new coronavirus that causes an infectious (Covid-19) and highly contagious disease that up to September 2020 had already caused more than 890 thousand deaths and 27,4 million confirmed cases in the world.

The pandemic started to impact Brazil in the month of March, when several state governments - including those of Minas Gerais and Espírito Santo -, in addition to the federal executive branch and municipal governments - announced quarantine decrees and measures aimed at social isolation.

Samarco took a series of preventive measures and started to comply with all protocols established by health authorities. The purpose is to preserve the health and safety of direct and indirect employees, and prevent the spread of Covid-19 at its industrial units and in the communities surrounding its facilities. With the actions already implemented in order to maintain only the priority and essential activities, Samarco reduced the flow of people in its units by approximately 60%.

Externally, the Company invested approximately R\$ 1 million in kits with products and equipment for neighboring municipalities in the Germano and Ubu complexes, in order to assist frontline professionals in health units. Approximately 88,000 surgical masks, 67,000 caps, 33,000 pairs of latex gloves, 4,700 disposable aprons, 2,500 liters of 70% gel alcohol, 6,500 liters of 70%

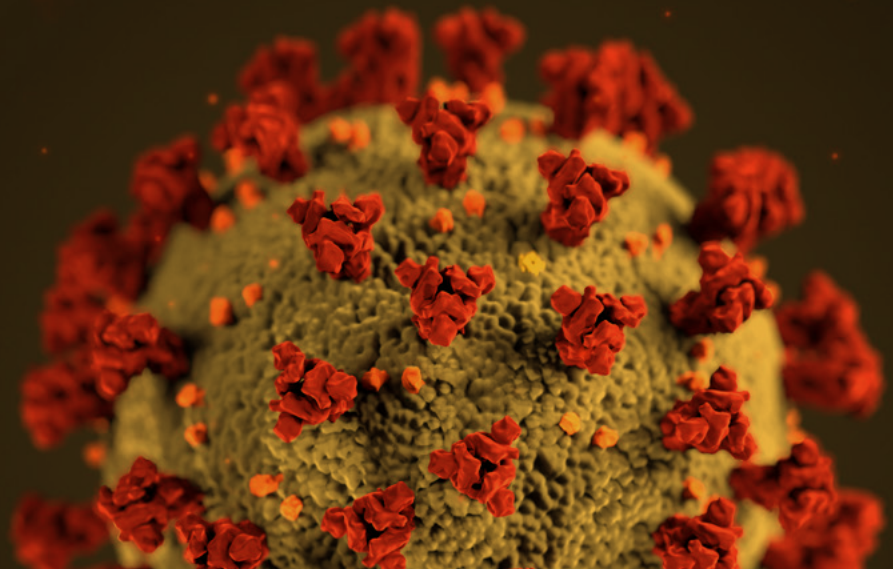
alcohol disinfectant, 288 goggles, and 160 thermometers, in addition to quick tests.

Beginning in April, a series of court decisions allocated part of the proceeds from the agreements signed by Samarco to fund the redress programs resulting from the collapse of the Fundão Dam, to public health actions in the states of Minas Gerais and Espírito Santo due to the new coronavirus pandemic. As such, it was initially announced that there would be a release of R\$ 120 million from the agreement made with Samarco, Vale and BHP within the scope of TAC Gov. Additionally, subsequent decisions authorized states to withdraw amounts for the purchase of equipment from suppliers approved by the courts. At the request of the Labor Public Prosecution Office (MPT) of Minas Gerais, for example, the Court authorized the allocation of R\$ 11 million from the R\$ 40 million agree-

ment to fight the coronavirus in several Minas Gerais municipalities. The MPT of Espírito Santo demanded an advance payment of R\$ 500 thousand, to be deducted from the value of the agreement, for the acquisition of goods required for the protection of health care and other professionals from essential public sectors to meet the needs of the population of Espírito Santo that could be infected by Covid-19.

Like all other Brazilian companies and society in general, Samarco does not yet have clear scenarios or projections of the impacts of Covid-19 on its plan to resume operations and its business results, once it is completed. However, Samarco undertakes to take measures in the defense of the health and integrity of its employees and business partners, and contribute to emergency projects and actions to support communities in facing the worst phase of the pandemic in the Country.

The company put in place measures for health protection and support to communities



Our focus on combating Covid-19



Implementation of weekly rotation, with alternating shifts



Work from home for administrative areas, elderly employees and pregnant women



Restriction of access to visitors



Creation of the Crisis Management Committee



Suspension of national and international travel



Availability of gel alcohol



Temporary dismissal of trainees, apprentices and professionals from risk groups



Covid-10 Mental Health Program, with several preventive and therapeutic actions



- Internal campaigns
- Sanitization of common areas
- Buses running at 50% passenger capacity
- Temperature measurement of everyone accessing the units
- Application of quick Covid-19 tests to Samarco's own and contractor employees

Restaurants

- Adoption of distancing measure
- Supply of lunch boxes
- Extended serving hours

To learn about the company's actions, please access <https://www.samarco.com/noticia/coronavirus-saiba-mais-sobre-as-medidas-preventivas-adotadas-pela-samarco/>

OUR PERFORMANCE IN 2018-2019



Check the indicators that summarize Samarco's financial and non-financial results in the biennium

Economic-financial indicators

GRI 102-7, 103 | 201

Still under the effect of the context of inactivity of operations since the collapse of the Fundão dam in November 2015, and suffering the impacts of the pressure of its economic-financial commitments and responsibilities, related both to the costs of its activities and the terms of agreements with authorities, Samarco registered negative indicators in 2018 and 2019.

Revenues were R\$ 57.191 million in 2019 and R\$ 104.887 million in 2018, with net loss of R\$ 19.22 billion and R\$ 2.47 billion, respectively. In 2019 and 2018, the Company sold to the domestic and foreign markets, marketing pellets to Brazil and pellet feed to countries in the Americas. In addition to revenues from products and byproducts, there were revenues from surplus electricity and revenues from logistic services at the port of Ubu (such as rental of tugs and provision of airlines).

As of December 31, 2019, Samarco's net equity was negative, R\$ 37,078,141 (in thousands of reais); on December 31, 2018, R\$ 17,116,614 (in thousands of reais).

In order to honor its commitments, including the transfer of funds to the Renova Foundation, in this difficult situation, Samarco has received financial support from its shareholders BHP Billiton Brasil and Vale over the past three years. In 2019, contributions were made by shareholders in the amount of R\$ 3,313,530 (in thousands of reais), including the Renova Foundation

and Samarco (support to operating activities and expenses of the TTAC programs still under the responsibility of the Company).

Financial status of the company is still a reflection of its shutdown

Short-term loans to Samarco supported the works to adapt the dam structures and working capital needs. The Company has failed to meet certain obligations in its loan and financing agreements. As a result, all loans and financing have been reclassified to the short term, which also reflect the accrued interest on overdue installments and the application of interest on arrears. The Company has loans and financing (including financial charges payable) in the total amount of R\$ 23,064,846 (in thousands of reais), which are classified as current as of December 31, 2019 in the Balance Sheet; and were R\$ 20,374,555 on December 31, 2018.

MAIN FINANCIAL INDICATORS (IN THOUSANDS OF REAIS – R\$) ¹ GRI 201-1	Parent		Consolidated	
	2019	2018	2019	2018
Revenue	57,191	104,887	57,191	104,887
Cost of products sold and services rendered	(955,981)	(680,793)	(956,009)	(680,754)
Gross loss	(898,790)	(575,906)	(898,818)	(575,867)
OPERATING EXPENSES				
Sales	(56,604)	(40,457)	(56,337)	(38,877)
General and administrative	(59,752)	(55,435)	(59,752)	(55,435)
Other operating revenues (expenses), net	(16,630,166)	699,448	(16,630,180)	698,485
Equity in earnings	99	595	-	-
Operating revenue (loss) before profit/loss	(17,645,213)	28,245	(17,645,087)	28,306
FINANCIAL EXPENSES, NET				
Financial revenue	78,038	91,257	78,042	91,260
Financial expenses	(1,845,919)	(2,342,228)	(1,845,925)	(2,342,233)
Net Exchange variations	890,517	412,568	890,454	412,563
Loss before income tax	(18,522,577)	(1,810,158)	(18,522,516)	(1,810,104)
Current income tax	-	-	(61)	(54)
Deferred income tax	(701,354)	(666,950)	(701,354)	(666,950)
Loss in the year	(19,223,931)	(2,477,108)	(19,223,931)	(2,477,108)
Loss in the year per share – basic and diluted			(3,666.68)	(472.43)
Quantity of shares at the end of the year (in numbers)			5,243,298	5,243,298

¹ More information presented in the explanatory notes to the Company's Financial Statements, available at www.samarco.com/relatorios.

ADDED VALUE STATEMENT (IN THOUSANDS OF REAIS – R\$) ¹ GRI 201-1	2019	2018
REVENUE		
Sales of goods, products and services	65,279	116,414
Other revenue	877,353	827,384
Provision (reversal) for credit risk	(3)	10,948
Financial income	1,056,500	1,124,448
Economic value generated	1,888,129	2,079,194
INPUTS ACQUIRED FROM THIRD PARTIES		
Costs of products, goods and services sold	(445,950)	(482,537)
Materials, energy, third-party services and others	(7,678,585)	(1,203)
Loss of assets	(202,127)	(177,442)
Payment to the government	(1,048,313)	(743,980)
Return on third party capital	(1,933,929)	(2,962,858)
Economic value distributed	(11,308,904)	(3,402,926)
Economic value withheld	(9,309,775)	(1,323,732)

¹ Consolidated indicators of Samarco Mineração S/A

For the calculation of retained economic value we excluded revenue and costs related to the construction of equity

Closure plans

GRI MM10

The Germano and Ubu units and the Samarco Pipelines (100% of operations) have a conceptual closure plan. The Company's Management, with the assistance of external consultants, reviewed the conceptual plan for closure of 100% of its operating units: Germano Complex in Mariana (MG), Ubu Complex in Anchieta (ES), and the three ore pipelines between both complexes, in March 2020. On December 31, 2019, the calculated amount of the liability of the costs necessary for closure totaled R\$ 1,477,776,689.50. The port of Ubu is not part of the plan to close operations.

Thinking about the transition for workers, socioeconomic programs are proposed for implementation taking into account the loss of work stations by employees, the needs and concerns of local populations, and the potential for municipal

development, seeking the socioeconomic independence of municipalities in the long term.

On February 25, 2019, State Law No. 23,291 was published in Minas Gerais, which determines the decharacterization of all tailings and waste containment dams raised by the upstream method for mining activities. This decision motivated plans delivered by Samarco to the competent bodies, regarding the structures of the Germano dam and Germano pit. The provisions related to the decharacterization in Samarco's Financial Statements in 2019 were R\$ 2.28 billion, an amount to be disbursed between the years 2020 and 2029.



Concentrator 3,
Germano Complex,
Minas Gerais.

People and valuation of life

GRI 103 | 401

The process for resumption of operations and rebuilding of society's trust in Samarco is based on human assets as an essential resource. Today, the Company believes that its direct employees, distributed across the units of Germano, Matipó and Ubu, and the Belo Horizonte office, are the main agents of transformation of the business, contributing to the structuring and implementation of Samarco's New Journey, the performance and management of projects to assure the safety of the geotechnical structures, the conservation of assets, and resumption on a safe and sustainable basis.

Samarco's people management has been developed over four decades, supported by periodic surveys of Climate, Culture and Reputation, which provided inputs for the improvement of projects of engagement, relationship, development and career management. Topics such as leadership development, productivity, and retention of key personnel for the business, had been a priority for the Company until the collapse of Fundão, in November 2015.

However, this process was impacted by the shutdown of activities since the end of that year. In view of the need to reduce its workforce, uncertainty regarding the future of the Company, and the long and necessary process of preparation for resumption of operations, workforce reduction programs - voluntary (PDV) and involuntary (PDI) - were carried out, after a series of measures that included paid leave, collective vacations, and periods of temporary suspension of the employment agreements (furlough). In all, about 1,590 employees have left Samarco under the PDV and PDI since 2016, making the staff more aligned with the current size of the organization, and considering its scenario of resumption at 26% capacity.

The challenging environment made the Company look for a new strategy to regain internal trust in the business, reinforce the vision of learning and maturity, and encourage systemic, collaborative and innovative thinking among people, preparing Samarco for its New Journey. The years of 2018 and 2019 were

of intense reflection, in an effort that strengthened the construction of a new Mission, Vision, Values and Purpose (*read more on p.25*), and took shape especially in the last year, in view of the more concrete prospects of resumption of operations. As part of this process, a broad and detailed diagnosis of culture resulted in the study and cultural traits that have accompanied Samarco in its history so far, which shall be revisited and incorporated into the business, in order to execute its new strategy and fulfill its purpose (*read more in Our New Journey*).

Regaining internal trust in the Company has been one of the priorities in recent years

OUR TEAM

GRI 102-8, 103 | 202, 103 | 401,
103 | 402, 401-1, 402-1

In total, 1,312 employees, 890 in Minas Gerais and 432 in Espírito Santo, made up the Company's workforce at the end of 2019, 100% of them working full-time. Collective agreements cover the entire workforce, except in the case of shift rotation agreements - applicable exclusively to employees in this type of work.

Due to the scenario of shutdown and performance of workforce reduction programs in previous periods, there was no significant turnover in 2018 and 2019; in 2017, the indicator was influenced by the shutdowns occurred. As established in article 476 of the Consolidation of Labor Laws (CLT), the furlough was among the priorities for preservation of workers in the Company and was completed during 2018. Still during the year, there were 482 employees in this initiative, who were returning to work over the months, with the program closing in September.

With regard to hiring practices, which have a special impact on the context of the communities and regions in which the Company operates, a recruitment and selection policy, which has existed since 2010, defines requirements and criteria. Since 2017, open positions at Samarco have been disclosed through base category bodies and institutions. In 2019, strategic hirings aimed at fostering intellectual capital and supporting the Operational Readiness project were registered, in addition to the Apprenticeship Program - which has remained active in recent years, including a partnership with the National Service for Industrial Learning (Senai) in Minas Gerais and Espírito Santo for dissemination and selection of young apprentices. The courses last for two years, and the new classes started in February 2019 and ended

in December 2020. The resumption of the Internship Program was another highlight during the year.

Regarding notifications of operational changes, Samarco has a change management plan for any situations that may have an impact on employees. The duration is not specified in number of weeks, except in formal negotiations with this requirement. All cases are handled with the unions and accompanied by employee representatives. In terms of dialogue, various actions are developed for employees, such as workshops, climate and Culture surveys, face-to-face communication with top leadership, and for employees under the furlough program (completed in 2018), online and call meetings, press releases and extranet for monitoring of Company information.

GRI 102-40, 102-43, 102-44

Employees of Germano Complex. Completion of preparation of Alegria Sul Pit, Minas Gerais.



EMPLOYEES PER TYPE OF JOB CONTRACT AND GENDER ¹									
	2017			2018			2019		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Definite period	2	9	11	3	8	11	9	3	12
Indefinite period	992	158	1,150	985	163	1,148	1,098	202	1,300
Total	994	167	1,161	988	171	1,159	1,107	205	1,312

PER TYPE OF JOB CONTRACT AND REGION ¹									
	2017			2018			2019		
	Definite period	Indefinite period	Total	Definite period	Indefinite period	Total	Definite period	Indefinite period	Total
Anchieta - ES	1	443	444	1	416	417	1	431	432
Mariana - MG	0	620	620	2	645	647	10	753	763
Belo Horizonte - MG	10	87	97	8	87	95	1	116	117
Total	11	1,150	1,161	11	1,148	1,159	12	1,300	1,312

PER AGE BRACKET ¹			
	2017	2018	2019
Below 30	167	93	97
Between 30 and 50	920	963	1,094
Above 50	74	103	121
Total	1,161	1,159	1,312

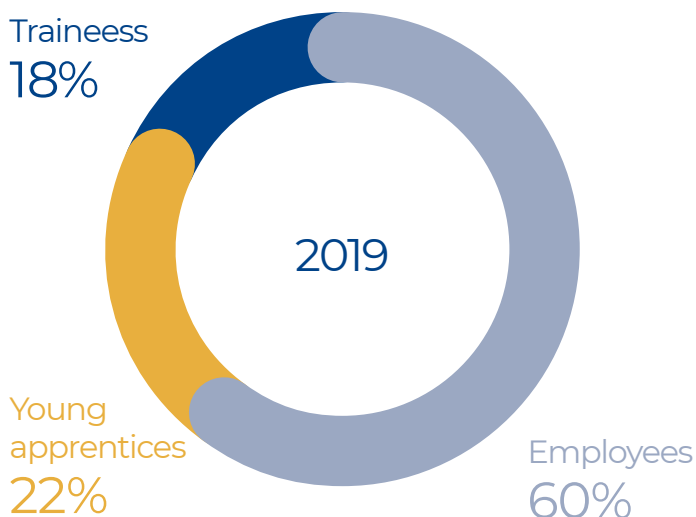
PER FUNCTIONAL CATEGORY ¹			
	2017	2018	2019
Board	5	2	4
Management	32	27	29
Leadership/coordination	39	39	39
Technical/supervision	53	49	50
Administrative ²	614	603	729
Operational	418	439	461
Trainee	0	0	0
Total	1,161	1,159	1,312

¹ This data does not consider trainees, interns and board members.

² Data retrieved from the SAP system - Transactions: ZHR076 – Flexible employee data.

Includes Higher level technician, technician, assistant and secretary

HIRING OF THE YEAR



53%
Of positions were operational technical level

49%
Of our hiring in 2019 were professionals from local communities

TOTAL AND RATE OF ADMITTED EMPLOYEES

PER AGE BRACKET	2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate
Below 30	6	0.01	6	0.01	29	0.02
Between 30 and 50	25	0.02	67	0.06	172	0.13
Above 50	1	0.001	3	0.003	8	0.01
Total	32	0.03	76	0.07	209	0.16

PER GENDER	2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate
Men	14	0.01	58	0.05	161	0.12
Women	18	0.02	18	0.02	48	0.04
Total	32	0.03	76	0.07	209	0.16

PER REGION	2017		2018		2019	
	Per region	Rate	Total number	Rate	Total number	Rate
Anchieta - ES (Southeast Region)	6	0.01	4	0.003	40	0.03
Mariana - MG (Southeast Region)	10	0.01	53	0.05	133	0.10
Belo Horizonte - MG (Southeast Region)	16	0.01	19	0.02	36	0.03
Total	32	0.03	76	0.07	209	0.16

TOTAL AND RATE OF EMPLOYEES WHO LEFT THE COMPANY

PER AGE BRACKET	2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate
Below 30	67	0.06	2	0.002	2	0.002
Between 30 and 50	532	0.46	68	0.06	48	0.04
Above 50	90	0.08	18	0.02	6	0.005
Total	689	0.59	88	0.08	56	0.04

PER GENDER	2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate
Men	623	0.54	72	0.06	40	0.03
Women	66	0.06	16	0.01	16	0.01
Total	689	0.59	88	0.08	56	0.04

POR REGIÃO	2017		2018		2019	
	Total number	Rate	Total number	Rate	Total number	Rate
Anchieta - ES (Southeast Region)	273	0.24	29	0.03	23	0.02
Mariana - MG (Southeast Region)	380	0.33	35	0.03	17	0.01
Belo Horizonte - MG (Southeast Region)	36	0.03	24	0.02	16	0.01
Total	689	0.59	88	0.08	56	0.04

CORPORATE EDUCATION

GRI 103 | 404

Historically, the Company has made investments in the development of leaders, high performance teams and results aligned with the Mission, Vision and Values, in the Saber Samarco platform. Since the collapse of Fundão, the training and education process has been geared to the needs and priorities of the moment - one of the factors for this has been the temporary suspension of the performance evaluation and Climate Survey processes.

While the focus of 2018 was on training related to the furlough, with

technical topics and English in a 100% online model, and on training related to safety for maintenance and conservation teams of industrial assets, in 2019 the focus was on the necessary topics for the context of resumption of operations. Themes related to the sustainability of the business were also provided - such as the training course for mine operators, in partnership with Senai.

Other points of action were training linked to the new Code of Conduct and compliance policies; and the development of supervisors and co-

ordinators with a leadership program based on four modules that had an average participation of 75 leaders each. Equally important were the emotional health workshops (Connecting People for the New Journey), held in two modules in 2018 and 2019,

informing all employees on actions to enable socio-emotional balance in the current business environment.

TRAINING HOURS OF EMPLOYEES PER GENDER¹ GRI 404-1

NUMBER OF EMPLOYEES	2017			2018			2019		
	Total number of employees	Training hours	Average of training hours	Total number of employees	Training hours	Average of training hours	Total number of employees	Training hours	Average of training hours
Men	994	120,664.22	121.39	988	43,696.79	44.23	1,106	56,540.62	51.12
Women	167	3,322.3266	19.89	171	2,999.15	17.54	206	4,494.76	21.82
Total	1,161	123,986.55	106.79	1,159	46,695.94	40.29	1,312	61,035.38	46.52

¹ This data does not include trainees, interns and members of the Board

TRAINING HOURS OF EMPLOYEES PER FUNCTIONAL CATEGORY¹ GRI 404-1

	2017			2018			2019		
	Total number of employees	Training hours	Average of training hours	Total number of employees	Training hours	Average of training hours	Total number of employees	Training hours	Average of training hours
Higher education management ²	98	1,101.46	11.24	92	3,215.02	34.95	120	6,370.47	53.09
Higher education technical	285	2,035.10	7.14	269	5,268.93	19.59	314	5,908.48	18.82
Operational technician	778	120,850	155.33	798	38,211.99	47.88	878	48,756.43	55.53
Total	1,161	123,986.55	106.79	1,159	46,695.94	40.29	1,312	61,035.38	46.52

¹ This data does not consider trainees, interns and members of the Board.

SAFETY AND HEALTH

GRI 103 | 403

Employee recognition through enrollment in the FCA loyalty card Program

A Nova Jornada Samarco tem, entre Among its strategic objectives, Samarco’s New Journey is the promotion of a safe and healthy work environment. This goal is part of the People and Knowledge perspective of the Strategy Map and, by recovering and reinforcing the Company’s historically established practices, it combines projects to enhance physical and psychosocial health with structured actions for risk management and safety at work.

The Manual for the Occupational Health and Safety Management System, available on the Company’s intranet, focuses on the pillars of leadership, behavior and systems, reinforcing all actions aimed at defending the integrity of people.

Safety is a value for Samarco; therefore, performance is directly related to existing preventive tools (observation of safe work, checking activities, inspections, behavioral approaches, change management, work permits, etc.) to which the entire leadership is committed. The Health and Safety committees, which involve the board of directors, contractors and all operational managers, are the specific forums for critical analysis of the indicators generated by the Safety area and the results of the application of preventive tools by the leaders.



Critical risk control standards (PCRC) establish guidelines that must be followed by the organization. There are 18 PCRCs. Each month, in addition to checking the minimum standards, the critical controls of each one is evaluated, with management focused on deviations.

Between 2018 and 2019, a highlight was the launch of the FCA Safety Program - Strengthening the practices of Falaad and Active Care. The

Easy Check-list

Implemented in 2019, it consists of a tool to record all inspections and behavioral approaches not only for the safety team, but for all managers.



ACTIVE CARE

Take care of yourself, your workmate and allow your workmate to take care of you



FALAAD

Acronym for Front, Back, Sides, Above, Below, Inside

program’s purpose is to encourage teamwork so that the level of attention of employees remains high throughout the workday, in order to reduce the number of incidents. This program makes it possible to positively recognize and highlight employees who make a difference in Safety on a daily basis.

One of the indicators monitored as a goal at Samarco is the recorded accident rate (number of accidents x 1,000,000/number of man hours worked). This rate includes all accidents (lost-time, without loss of time and medical treatment) for employees and third parties. We concluded 2019 with an accident rate of 1.0, exactly equal to the

reference value. This value serves as a parameter for managing reactive indicators; the rate below 1 is a worldwide reference.

Other safety actions that remained active in 2018 are the Safe Work Observation Program (SWO), inspections, preliminary risk analyses, permits for hazardous work, safety committees and daily health and safety dialogues (DDSS). Among the new approaches implemented in 2019 and 2020 are training in risk perception using virtual reality and the adoption of mobile devices for mapping hazards and risks.

INDICATORS AND RATES^{1,2} GRI 403-2

RATES	2017	2018	2019
	Rates	Total	Total
Type of injuries	9	7	11
Injury rate – typical accident	1.25	0.95	1.0
Injury rate – commuting accident	0	0	0
Occupational Illnesses Rate	0	0	0
Rate of lost days – typical accident ³	9.3	0.14	0.18
Rate of lost days – commuting accident	0	0	0
Absenteeism rate ⁴	0.53	0.32	0.46
Absenteeism rate Germano-MG	0.50	0.31	0.40
Absenteeism rate Ubu-ES	0.58	0.34	0.59
Number of typical accidents with lost time	1	1	2
Number of typical accidents without lost time	8	6	9
Number of commuting accidents with lost time	0	0	0
Number of commuting accidents without lost time	0	0	0
Number of fatalities	0	0	0

1 Reason for omission: The organization does not monitor health and safety data by gender.

2 Rates take into account all injuries, including minor injuries. “Days” means calendar days. For the calculation of lost days, counting begins one day after the event.

3 Severity rates (Lost + Deducted).

4 Absenteeism rate calculation: Statistical monitoring of sick leave (Medical Certificate). Methodology: Total days lost X 8.33 hours/Total permanent employees X 200 hours X 100. Target: Rate <1.

FOCUS ON HEALTH

Responsibility of the Health and Quality of Life area, with indicators monitored in an integrated computerized system. The Health pillar has also been the target of investments.

Among the efforts to enhance the psychological well-being of employees, in 2018 health assessments were intensified, as well as the offer of the Multidisciplinary Support Program for Employees (AME). The strengthening of the programs for the Prevention of the Misuse of Alcohol and Other Drugs and the Management of Fatigue is also noteworthy.

AME is a free and confidential support benefit for employees and family members (dependents) in personal, psychological, legal or financial aspects. It works through the call center 0800 718 7815, every day of the week, 24 hours a day.

As a result of these efforts, the absenteeism rate indicators remained at low levels in 2018 (0.36%), with 87% of employees in the "satisfactory" health profile. In 2019, the rate was 0.41%.

Conformity assessments

A Samarco, through the Health and Quality of Life area, applies a methodology for the identification, interpretation, treatment, validation and updating of applicable legal requirements for occupational health and safety at work. To this end, it adopts a computerized system for managing legal requirements, allowing access to the full text of the applicable legislation, commented checklist for monitoring legal compliance, record of evidence of legal compliance, description of the actions necessary to enable compliance with obligations arising from the analyzed standards and the correlation of each standard with the risks/dangers present in the processes.

Compliance with occupational health and occupational safety legislation in the Company occurs through checklists of applicable legal requirements, audit standards, compliance with the technical instructions contained in the Occupational Health and Safety Management System manual and the monitoring of existing issues in the Management System of Legal Requirements.

In addition to the financial benefits, the OH&S conformity assessment process acts to reduce the number of legal and administrative liabilities, increase the harmonization of the Company's climate and make it safer and healthier, reducing the risks of occupational accidents and diseases.

RESPONSE TO PANDEMIC

In 2020, the new coronavirus pandemic stimulated Samarco's coping measures to prevent the spread of the disease in its operations. With steps taken at the Germano, Matipó and Ubu units and offices in Belo Horizonte, it was possible to reduce the circulation of people by up to 60%, maintaining only essential activities. At the same time, measures were adopted in line with the recommendations of the World Health Organization (WHO) and the Ministry of Health to ensure the sanitization of the Company's spaces and minimize risks. Moreover, support actions were provided to communities surrounding the units with R\$ 1 million in donations (*read more on p.44*).

Communities and territories

GRI 102-43, 102-44, 103 | 203, 103 | 413, 203-2

In the context of active operation, Samarco is an important catalyst for economic development in the territories where it operates. It is a major generator of tax revenue in the municipalities where its industrial complexes are located, in Minas Gerais and Espírito Santo. In addition, it plays a strong role in generating employment and income, through its own jobs and among its contractors who are part of the production chain, and contributes significantly to Brazil's trade balance.

The Company's Communication and Institutional Relations area maintains a strategic plan based on several premises and action fronts for 2020 and the coming years, including press relations, corporate communication, visits to the Company units and initiatives for inter-sectoral articulation, intelligence and relationship with territories. The central premise is guided by the Mission, Vision, Values and the Purpose of the Company, as well as by the objectives described

in the Strategy Map that address the trust of the interested parties, the obtaining of the environmental and social license to operate and the reestablishment of relations with key stakeholders.

The basis for Samarco's institutional relations includes the area of direct influence (AID), the Ubu and Germano units and the pipeline right of way which crosses 29 municipalities in Minas Gerais and Espírito Santo.

The past two years have been marked by initiatives aimed at rebuilding relations with the government, the business sector and community leaders in the areas of direct influence. The agendas carried out included a transition between reports about the company's actions immediately after the Fundão dam broke, followed by the debates and definitions that resulted in the Transaction and Conduct Adjustment Term and at the Renova Foundation, in order to finally move towards presentation and discussion of Samarco's proposal to resume operations.

Today, actions in communities and regions directly affected by the collapse of Fundão, from Mariana (MG) to the mouth of the Doce River, in Linhares (ES), are under the responsibility of Renova Foundation. Communication and dialogue in the territories neighboring Samarco's industrial complexes and operational structures, even when overlapping the affected areas, were performed in 2018 and 2019 with two main objectives: provide clarification on the licensing processes that were in progress (Disposal of Alegria Sul Tailings and Corrective Operational Licensing) and comply with current legal and regulatory obligations, as steps toward the company's operational restart.

Presence in several communities in Minas Gerais and Espírito Santo mobilizes Company's social dialogue actions

SOCIOECONOMIC INFLUENCE

The generation of tax revenue is one of the main impacts inherent to Samarco's activity, especially in the cities of Mariana and Ouro Preto - where the Germano Complex is located - and in the municipality of Anchieta, in Espírito Santo, site of the Ubu Industrial Complex.

Tax collection occurs in the form of Financial Compensation for the Exploration of Mineral Resources (CFEM), in the case of Minas Gerais, the Service Tax (ISS) and the State Tax on Circulation of Goods and Services (ICMS).

The effects of the shutdown on the level of income deriving from the supply of goods, material and services and the generation of employment for the population are reflected in the decrease in economic activity. The economic recession resulting from this shutdown also affected the dynamics of companies located in these regions and of service providers

and, in some cases, caused emigration, with families moving out of the area of influence looking for new professional opportunities. The prospect, with the resumption of operations, is to go back to contributing to the tax revenue of the municipalities gradually, considering that the restart of the company will initially be at 26% of its original capacity.

An example of our impact: our suppliers

GRI 102-9

Today, Samarco maintains approximately 5.2 thousand active suppliers, considering only records of current negotiations (the recorded historical base has more than 20 thousand registered business partners). This chain is comprised of companies active in supply of services and materials (indirect); projects (Capex); and inputs and operating materials (direct). In 2018, the volume of purchases was R\$ 634 million. In 2019, already under the influence of the construction and preparation processes for the future resumption, the value reached R\$ 1.386 billion.

RELATIONSHIPS WITH SOCIETY

GRI 102-43, 102-44, 103-2, 103-3 | 205, 413-1, 413-2

In its routine, Samarco offers social dialogue channels, including the Relationship Center (*read more below*) and specific meetings with communities, business partners, contractors and employees. However, it is in projects maintained in the area of direct influence that contact with stakeholders is intensified, with a focus on engagement and mobilization.

The perception of social impact is closely linked to the economic pillar and the safety of the production process. The disposal of the tailings resulting from the mining of iron ore is a matter of concern for the communities - a direct reflection of the Fundão collapse, which gener-

ated a suspicion regarding the stability of the Company's geotechnical structures, which was increased after the collapse of the dam in Brumadinho, owned by Vale. To know, align and agree on a vision of the future for the affected regions, with the cooperation and co-responsibility of the stakeholders, should begin with the strategies that will guide the company's relationship with the territory, the responsible management of impacts and, consequently, the generation and sharing of business values.

Relations with territories, according to Samarco's understanding, must be guided by a clear understanding of such questions and the demands

Dialogue meeting with the community of Antônio Pereira, Ouro Preto (MG)



arising from society to which the Company and the mineral sector as a whole have to answer to. At the initiative of the Brazilian Mining Institute (Ibram), in 2019 around 200 professionals in the sector were consulted for the drafting of Ibram's Letter of Commitment to Society. The document reinforces priority action fronts for organizations, including aspects of local and future development of territories and relationships with communities.

The entire assessment of social and institutional investments is based on the Social and Institutional Investment Policy and includes a stage of checking the compliance of organizations with which Samarco establishes links. The initiatives are approved by the Executive Committee for Social and Institutional Investments. In all cases, the Legal Department, the Compliance and Ombudsman Department and the Risk Management Department are involved. Donation and sponsorship requests must be approved by the Company's management.

In 2018 and 2019, 100% of Samarco's operations had actions of engagement with the community implemented or in progress. The main highlights, in 2018 and 2019, were

the drills at Port of Ubu, in Anchieta (ES), with the involvement of authorities and neighboring communities; and the drills linked to the Mining Dams Emergency Action Plan (PAEBM), carried out in the regions close to the Germano Complex, in Mariana and Ouro Preto (MG). The actions developed in communities directly affected by the dam collapse are under the responsibility of the Renova Foundation.

Also, continuation was given during 2018 and 2019 of the projects and programs related to licensing preconditions, such as Samarco Mining Pipeline Environmental Education Program, the Pelletizing Plants Communication and Social Dialogue Program and the Samarco Environmental License Monitoring Forum (FALAS). Conditions linked to the licensing process in Germano also resulted in social dialogue initiatives in neighboring communities.

Nowadays, the main challenge for the Company in the execution of its projects is to find harmony among local interests, the collective demands pertinent to each region and the vision of the competent authorities, agreeing on a clear future vision, considering Samar-

co's responsibilities, limitations and potential to contribute to changes in the territory.

Samarco recognizes the existence of several potential and real impacts of its operations on the lives of the communities. The safety of the production process, especially with regard to the disposal of waste resulting from iron ore mining, is the main one, in addition to the increase in noise pollution and the blocking of public roads and changes in the travel routine around the units due to traffic. On the positive side, there is the important aspect of boost to regional economies. Continuous investments and dedication in risk management, at all stages of the production process, are being treated as a priority and should be part of the internal evaluation discussions. These should address, in addition to the operational aspects of Samarco itself, the externalities, that is, the direct and indirect effects of the activities.

CHANNELS, TOPICS AND CHALLENGES GRI 102-40, 102-43, 102-44

Engagement tools:

- 1. Disclosure of job opportunities

Frequency:

Occasional

Motivation of engagement:

Requirement made by the union in the agreement for POS/PDI at the end of 2017 and in the Collective Bargaining Agreement 2018

UNIONS

Ícone mais associado na relação de representante do trabalhador



LOCAL COMMUNITY

Engagement tools:

- 1. Emergency drills
- 2. Programs linked to conditions

Frequency:

Continuous

Motivation of engagement:

Performance of drills, legal obligation of the Company

FEDERAL GOVERNMENT, SECTOR LEADERSHIPS, SOCIAL LEADERSHIPS

Engagement tools:

- 1. Direct interactions with federal government

Frequency:

- Occasional, including:
- 1. Meetings of Samarco's environmental license monitoring forum (Speeches)
 - 2. Social Dialogue Meetings
 - 3. Environmental Education Program

Motivation of engagement:

Part of the Licensing process

Topics and concerns raised:

- 1. Safety requirements in the construction process of dams and other industrial facilities
- 2. Efficiency and effectiveness of risk management, involving affected parties
- 3. Economic importance of mining and dependence on local communities

RELATIONSHIP CENTER

GRI 102-43, 102-44

The 0800 toll-free number and the 'Fale Conosco' email are part of the Samarco Relationship Center, managed by the Communication and Institutional Relations area. The demands are registered and categorized as Compliment, Information, Complaint, Request, Suggestion and Other (sending of resumes, invitations, catalogs of products and services and advertisements).

For forwarding the demands, there is a tree for the distribution of topics by areas; the contact is received by calling 0800 033 8485 or by e-mail (relacion@samarco.com), recorded in a spreadsheet and sent to the area in charge. After feedback from the area, the response is sent to the person who made the contact. The total number of contacts received in 2018 continued high, including topics such as general doubts and job opportunities, information on resuming operations, supplier registration and complaints about the Company.

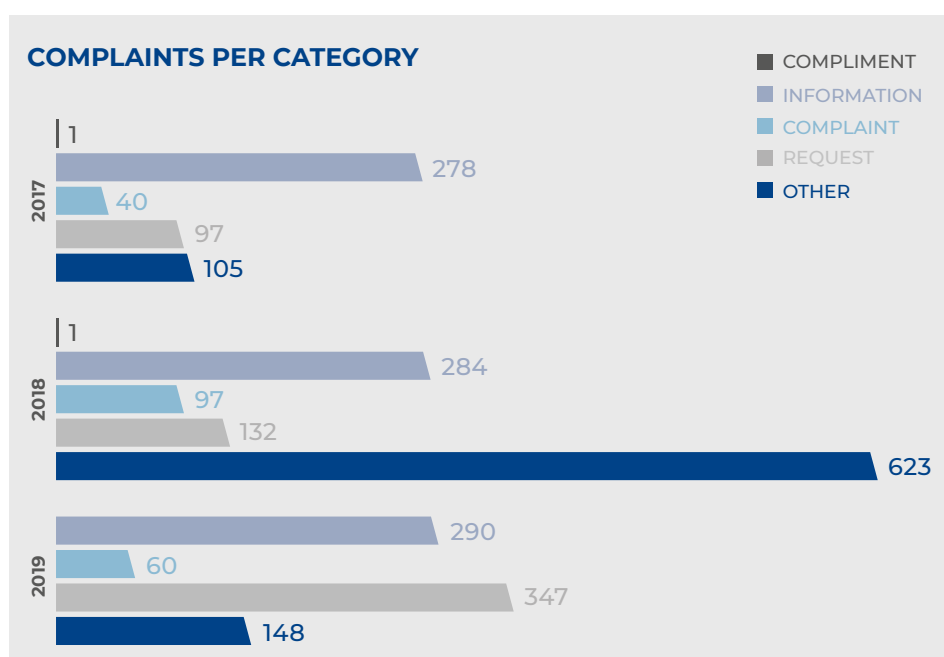
After obtaining the Corrective Operation License, in October 2019, and with the purpose of improving so that, in the scenario

of increased demand caused by the operational restart, it could help strengthen contact with the public and offer treatment of demands in a closer and assertive way, the Relationship Center process was restructured. Nowadays, it has the support of a specialized company, which has an online tool for registering, categorizing, forwarding, monitoring and assessing demands, as well as a qualified team for cordial and trained service. The actions are in line with the Socioinstitutional Communication and Relationship Program, based on criteria of accessibility, democratization and territorial coverage.



Contact Samarco
0800 033 8485

COMPLAINTS – RELATIONSHIP CENTER AND CONTACT US	2017 ¹	2018 ²	2019 ³
Total of complaints	521	1,137	845
Complaints that were addressed	521	1,137	845
Solved complaints	500	1,051	816
Complaints recorded in the period solved during this period	0	21	29



Main Projects

GRI 413-1

External Environmental Education Program

It addresses topics such as the conscious use of natural resources and waste management among public school students, with the involvement of teachers and schools, with the broader objective of strengthening environmental awareness and a sense of belonging on the subject. In Minas Gerais, the Environmental Education Program was resumed in 2018 with a Participatory Social Diagnosis (DSP) in which the communities themselves listed their environmental priorities. The workshops took place in Antônio Pereira (Ouro Preto), Camargos and Santa Rita Durão (Mariana), considered areas of direct influence, and they defined lines of work to be carried out in later years. In 2019, the planned actions were developed, seeking the active participation of the management group of each community that dedicated itself to activities starting with participatory diagnosis. In Ubu, in 2018 and 2019, the development of an initial diagnosis was highlighted for the development of proposals and actions that will prepare a new program, with focus on non-formal education and increase of environmental awareness. Since 2017, "Baú EConhecimento", an itinerant environmental library has been available for schools.

Training Program for Rural Producers

Active for a decade and linked to the Environmental Education Program, the program reaches 600 properties and 1,300 rural producers from 31 communities in 11 municipalities in Minas Gerais and Espírito Santo with consulting, short courses, product analysis, lectures and sharing of good practices with producers of key crops in the region, such as coffee.

In 2019, when it evaluated a decade of fulfilled activities, the program showed positive results during the 3rd Caparaó Coffee Culture Symposium, held from October 24th to 26th at the Federal Institute of Espírito Santo (IFES), Alegre campus. The action demonstrated the positive results in quality of produce, in the increase in productivity and the income productivity of coffee producers, with social, economic and environmental benefits. At Samarco, an exhibition was held with the presence of rural producers in Ubu and Germano, in addition to the Matipó and Belo Horizonte units, with coffee tasting.





Emergency drill at the Port of Ubu, Anchieta (ES)

Individual Emergency Plan (PEI) of the Port

Every six months, the Maritime Terminal in Ubu goes through a drill of emergency actions, testing several scenarios of crisis situations. In 2019, the simulation involved approximately 80 people.

Emergency Plan for Mining Dams (PAEBM)

In the context of PAEBM, several drills were performed aimed at preventing and handling emergency situations, as a way of preparing the population of communities in self-rescue and rescue zones. The actions were developed with the participation and leadership of the Civil Defense of the municipalities and states. Read more in the chapter Safety as a Value.



Emergency drill in Barra Longa, Minas Gerais



Employees and family members visit Germano Complex, Minas Gerais.

Visiting Program

The program was restructured in 2019 to strengthen transparency regarding the Company's processes and, in particular, regarding initiatives aimed at dam safety and new operational solutions for resuming activities. Employees and family members at the Germano unit were the main focus of action during the year. In total, approximately 1,200 people were included in visits to the units, 80% of them in Germano. In this same unit, there were 12 visits by employees and family members, in a total of 325 people. In surveys, 99% of respondents who participated in the program were satisfied with their perception of safety when visiting Samarco.

Approximately
1,200 people visited
Samarco's facilities,
with focus on safety of
the structures

Social and Institutional Investment Policy

Although a large part of the investments was suspended due to the context of continuous shutdown of the operation, Samarco voluntarily maintained some contributions. Since 2017, support has been maintained to fund the Padre Ângelo Promotional Center, which assists families in socially vulnerable situations in Antônio Pereira district (Ouro Preto municipality). Fundação Marianense de Educação maintains the daycare center, which serves more than 70 children and their families in cognitive, physical, psychological and socioemotional development activities.

Environment

GRI 103 | 307

Due to the size and nature of its business, Samarco is responsible for managing a series of environmental impacts - which include presence in regions of high biodiversity, energy and water consumption, land use, and tailings and overburden generation, arising from production processes. With a history of investments and relevant projects in this field in Minas Gerais and Espírito Santo - and considering the R\$ 15 million invested in 2018 and the R\$ 25 million in 2019, focused on various environmental aspects (compliance with licensing conditions, environmental studies, expenses with legal requirements and purchase of equipment), the Company was compelled to re-think its operations and rebuild its reputation after the failure of the Fundão Dam in November 2015. Investments in technology and efficient use of resources continue as

fundamental premises for regaining society's trust in the Company - as seen in the tailings filtering and dam decharacterization projects, part of the new operational model in the context of the future resumption (*read more on p.38*).

Environmental management takes into account the use of resources in projects to improve and minimize impacts; the enhancement of systems and tools for risk control and treatment of environmental incidents; compliance with the conditions, resolutions and licensing processes of the units; and training employees and contractors on key business issues, such as water management, tailings disposal, dams, emissions and energy efficiency.

In recent years, the Company worked in different management spheres: between 2015 and 2016,

until the creation of Renova Foundation, it directly enforced emergency programs to minimize the environmental impacts on the Rio Doce Watershed; from 2016 onwards, there was an intense work on environmental studies related to licensing processes; and, in a continuous manner, in compliance with Samarco's Environmental Policy, the regulations of the mineral sector and the commitments established with public agencies and entities (*read more on the subject on p.30*). Even with the shutdown of most of its activities, Samarco maintained its main environmental control and monitoring programs in Germano and Ubu units and in the pipeline right of way. At the port of Ubu, in the maintenance of structures and at the Muniz Freire Plant, the Environmental Management System remained active.



Electrostatic precipitators.
Ubu Complex,
Anchieta/ES

Assessment of operational controls and preparation for the future were focal points in 2018 and 2019

The initiatives in 2018 and 2019 were related to assessing all environmental controls and keeping them in operational conditions to resume production. The main progresses were linked to efforts to obtain a declaration of compliance with various conditions with the licensing body and the Corrective Operational License (LOC), issued in October 2019. Furthermore, programs and investments related to the Ubu port's licensing processes and the renewal and unification of the pipeline license were maintained.

Samarco also monitors its environmental indicators, following methodologies such as the Global Reporting Initiative (GRI), in addition to metrics specific to the sector. With the prospect of resumption of operations, one of the focuses is to ensure the monitoring of all environmental risks and compliance with the terms of the necessary licenses for the resumption (read more on p.38).

The pursuit of environmental compliance has been translated in recent years into a system for

managing legal requirements for all operations and units. Moreover, in daily routines, field inspections, reports of environmental incidents, training of all employees (own and contracted) and waves of periodic recycling are enforced.

At Ubu, audits are performed every three months in compliance with current legislation, in addition to internal review work based on the Compliance Guides for processes. In Minas Gerais, the Germano unit is assessed in terms of compliance with preconditions and in monthly audits by a company hired by the Public Prosecution Office. The Muniz Freire unit, in Espírito Santo, (hydroelectric power plant) and the Matipó unit, in Minas Gerais, have their conformity assessed by compliance with pre-requisites.

Fines and sanctions during 2018 and 2019 were imposed due to the Fundão dam collapse and its environmental impacts. There were no cases solved through arbitration mechanisms. The payment amounts increase from year to year, as the most significant amount is related to Semad's installment plan. The number of fines and sanctions reduces over time as it gets farther away from 2015, when the collapse took place.

SIGNIFICANT ENVIRONMENTAL NON-MONETARY FINES AND SANCTIONS GRI 307-1

		2017	2018	2019
Monetary value of significant fines	Fines paid in period	R\$ 11,093,383.98 ¹	R\$ 27,898,737.29 ²	R\$ 29,645,313.41 ³
	Fines received in the period, which may be appealed	R\$ 181,810,517.29	R\$ 645,438.22	R\$4,043,263.4
Total of monetary sanctions		3⁴	0	0

The amounts are periodically updated.

1. Amount referring to SEMAD Fine Installment (AI 4803/2015) R\$ 11,026,343.00 + R \$ 67,040.98 (AI 68050 acid min. Divino-MG).

2. Fines settled 2018: amount based on proof of payment of the 28 DNPM AI's fines 963/2015, 964/2015 and 965/2015; 966/2015, 967/2015 and 968/2015; 972/2015, 973/2015 and 974/2015; 975/2015, 976/2015 and 977/2015; 978/2015, 979/2015 and 980/2015; 981/2015, 982/2015, 983/2015 and 984/2015; 86/2016, 87/2016, 88/2016, 89/2016, 90/2016; 96/2016, AI 97/2016; 30/2016 and 31/2016 (R \$ 90,699.28) + proof of payment of the SEMAD AI Installment 4803.15 (R \$ 27,808,038.01).

3. Fines settled 2019: amount based on proof of payment of the 4 fines of ANM AIs 992, 993, 994 and 1066/2018 (R \$ 26,351.20) + Fine AI IEF 7602/2017 (R \$ 11,688.86) + Fine AI IEMA 147/2015 (R \$ 194,536, 82) + proof of payment of the SEMAD Installment AI 4803.15 (R \$ 29,412,736.53).

4. Fine and warning notices without attributed value.

WATER USE GRI 103 | 303, 303-1

Guided by the principles of responsible and optimized use in its production processes, Samarco based its activities on the Water Resources Management Plan, which aligns corporate actions with the pillars for monitoring surface and groundwater quality as well as wastewater.

The suspension of mining activities after the Fundão dam collapse fostered intense work aimed at the process of environmental remediation; these efforts reached another level with the receipt of the Corrective Operation License (LOC) for the operational activities in the Germano Complex, located in Minas Gerais (MG), at the end of 2019.

The resumption of the company's production process is conditioned to a series of investments that involve the construction of a sandy tailings filtering system. Water resources continue to be fundamental to the production process - allowing the transportation of ore slurry through the pipelines that connect the Germano (MG) and Ubu (ES) units - but in Samarco's new operational structure they will be used with even greater efficiency.

In Germano, the shutdown of operations means that the groundwater withdrawal today focuses on meeting the demands of the works

to decharacterize the Germano dam, among other structures, and on maintaining assets and assuring human consumption needs. However, with the resumption of mining activities, the Company will also make use of surface collection, in addition to underground withdrawal. Water use licenses are in effect and in compliance with state water resources legislation.

Since the shutdown of the plant's operations in November 2015, in Espírito Santo, there has been no water abstraction from surface impoundments for industrial purposes. The collected water comes exclusively from tubular wells for human consumption. The Company's practices fully comply with what is stipulated in environmental licenses such as 417/2010 - still in force at the Ubu unit, in Espírito Santo, responsible for conditioning the use of water by the Company to the presentation of the volume and quality of the total abstraction. The abstraction flowrate is based on aquifer tests performed in the wells, so as not to compromise the quantity of the resource. The quality parameters follow the standards of the National Health Surveillance Agency (Anvisa) and the Ministry of Health.

Both abstraction from wells and from rivers do not consider a map-

ping of the value of biodiversity and the importance of water sources for local communities, but all abstraction is performed in accordance with reference flowrate regulations.

GRI 303-2

Germano – In the years 2018-2019, the Germano unit did not reuse/recycle wastewaters, due to the operational shutdown. Upon resumption, the wastewater treatment system will be interconnected in the thickeners and used in the ore beneficiation process.

Ubu – The Ubu unit reuses wastewater treated by the domestic and industrial wastewater treatment system; however, with the interruption of operations, the equipment for measuring recirculated water is closed down, to be remobilized in 2020, therefore it is impossible to quantify the reused volumes.

GRI 303-3

ABSTRACTION OF WATER PER SOURCE (M ³) ¹	2017		2018		2019	
	Germano	Ubu	Germano	Ubu	Germano	Ubu
Surface waters (humid areas, rivers, ponds and oceans)	3,004,327.24	4,153,164.00 ²	782,269.20	6,815,855.15	1,881,176.90	6,514,364.21
Groundwater	6,862,712.12	42,449.00	4,966,490.00	41,243.00	3,873,741.39	51,230.00
Total	9,867,039.36	4,195,613.00	5,748,759.20	6,857,098.00	5,754,918.29	6,565,594.21

¹ There was no abstraction and storage of rainwater, wastewaters from other organizations and consumption by municipal supply and/or by other supply companies. The company used surface and underground waters that have a license to use within the site, with no need to resort to third parties to obtain the water.

² Measurement value of April and December /2017.

SOURCES AFFECTED BY ABSTRACTION OF WATER IN 2018-2019 GRI 303-2	SIZE OF WATER SOURCE (M ³)	SOURCE ASSIGNED AS NATIONALLY OR INTERNATIONALLY PROTECTED AREA	WATER SOURCES SIGNIFICANTLY AFFECTED BY ABSTRACTION OF WATER BY THE ORGANIZATION
Germano/MG – Drawdown of water level in Alegria Norte mine	1,100m ³ /h - 24h/dia	no	Not Applicable
Well PTR 05	75m ³ /h - 20h/dia	no	Not Applicable
Well PTR 08	195m ³ /h - 20h/dia	no	Not Applicable
Matipó Abstraction (Matipó river)	118.80m ³ /h - 2h/dia	no	Not Applicable
Brumal Abstraction (Santa Bárbara river)	2,048.40m ³ /h - 24h/dia	no	Not Applicable
Piracicaba River Abstraction	339.84 m ³ /h - 24h/dia	no	Not Applicable
Ubu/ES – Supply Well 03 ¹	Abstraction is made by tubular well, removing water from an aquifer, There is no modeling with the quantity of the entire aquifer, due to its large proportions, but pumping tests were performed to know the ideal abstraction of the well	no	Not Applicable
Ubu/ES -	927,863.00m ³	no	Abstractions that correspond to an average of 5% or more of the average annual volume of a certain water body

DISCHARGE OF WATER GRI 306-1					VOLUME OF WASTEWATER GENERATED (M ³)		
Discharge	Quality of disposed water	Treatment method	Other method of treatment	Water reused by another organization?	2017	2018	2019
Treatment of sanitary wastewater in ETEs for disposal in soil or watercourses (Germano)	The quality of the discharged water has a limit of parameters according to CONAMA Resolution 430/2011 - Wastewater discharge	Biological treatment	Treatment in ETE	No	16,691.50	23,751.00	107,028.60
North Dam (UBU) ²		Physical-Chemical treatment	-	Não	963,591.23	11,825,348.11	8,868,223.97
Mãe-Bá Lagoon		Physical-Chemical treatment	-	Não	0.00	0.00	451,344.79
Total volume of wastewater generated					980,282.73	11,849,099.11	9,426,597.37

WASTE AND WASTEWATERS

GRI 103 | 306

At Samarco, environmental management aims at complying with national policies on solid waste and water resources when disposing, or guaranteeing the disposal, of material. Physical-chemical and biological analyses are performed regularly. At Ubu, wastewaters are discharged into the North Dam, undergoing treatment at its own plants (ETEI). The dam has its water quality monitored regularly.

At Germano, four wastewater treatment stations - three compact and one with an optional aerobic pond system - make up the infrastructure, along with 15 water and oil separating boxes, floor sump, filter and sink systems and a septic tank in Matipó (MG).

Pursuant to legal and conditioning requirements of the current licenses, all physical, chemical and biological parameters are monitored. The results show compliance with legal parameters at 77% regarding the BOD in the WWTPs, with monitoring in the four structures. In 2018, several improvements were made to the wastewater treatment plants of the pelletizing plants.

OVERBURDEN AND TAILINGS

GRI 103 | 306

In view of Samarco's production shutdown after the Fundão collapse, in November 2015, sandy tailings and slimes are not being generated by the beneficiation process at the Germano unit - responsible for enriching the iron content of the ore, which is subsequently transported in the form of via pipelines to the Ubu pellet plants.

However, from 2016 to 2018, mining and transportation activities took place in Alegria mines owned by

Samarco, with a focus on the generation of material that was used in emergency works to reinforce geotechnical structures, as well as for the maintenance of embankments, accesses and work sites of the mines. This resulted in the movement of overburden - material present in the mine without feasible economic use - and ores, even if not used in production.

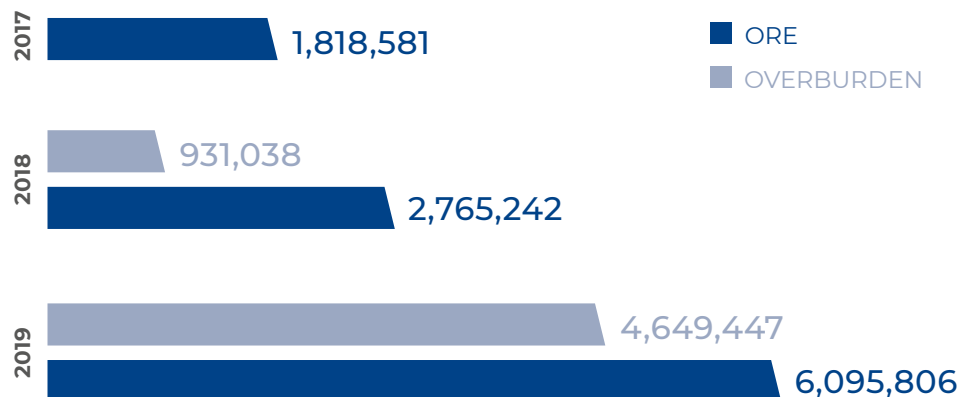
In 2018, based on the issue of the Preliminary (LP) and Installation (LI) licenses, work began on preparing the Alegria Sul Pit for a new tailings disposal system. These interventions consist of the removal (mining and transportation) of ore and overburden, the geometrical shaping of the structure and the expansion of the volume available for slimes disposal - meeting the demand of resumption of the operation with a high level of efficiency, with a

Civil works for the preparation of the Alegria Sul pit generated renewed transport of overburden and ore in the last two years

filtering system that will allow 80% of the tailings to be disposed of in piles of sandy material (dry stacking), with only 20% in the form of slimes, which will be discharged in a confined pit (*read more on p.40*).

Thus the indicator of movement of overburden and ore started recording results again during the year. The pit preparation works were completed in 2019 and the overburden was disposed of in piles properly designed for this purpose; the ore was stored in defined areas, with expected use according to sequencing of mining when the Company resumes operations.

TOTAL QUANTITIES OF MOVEMENT IN MINING ACTIVITIES
(IN TONS) GRI MM3



ENERGY AND CLIMATE

GRI 103 | 302, 103|305, 302-1, 305-2

The efforts made towards energy efficiency seek to minimize the influence of the business on climate change, reinforce operational efficiency and prepare the Company for a resumption on a cost-efficient basis and with low environmental impact. The internal policies of Health and Safety and Environment and standards of the regulatory bodies of the energy sector are guiding principles on the subject.

Energy management is monitored by performance indicators, with the continuous collection of data also subject to monitoring by regulatory and inspection agencies and bodies. The Company's priority is to guarantee the reliability of its supply systems, a high level of occupational safety and well-being for employees and the generation of energy with high performance. As the owner of power generating plants, Samarco works in line with all the requirements of regulators such as the National Electric System Operator (ONS), the National Electric Energy Agency (Aneel) and Furnas regula-

tions. For the Muniz Freire Hydro-power Plant, internal and regulatory policies of the National Water Agency (ANA), EDP Energia and Aneel guide its management.

With regard to emissions, the main production sources are monitored, as well as the control of diffuse emission sources; however, as production activities are currently interrupted, many sources also do not have an impact. On the other hand, other sources of emissions have become more significant. Thus, in 2018 and 2019 the initiatives focused on mapping relevant sources in the current context of the Company.

In addition to greenhouse gases, the topic of particulate matter has been the focus of investment in recent years, with specific controls that include wetting of roads and isolation of transfer towers and storage areas as well as the tarping of vehicles.

The Company's non-operational status does not allow a comparative analysis with historical series - such

as 2016-2017 - of the emissions generated by production volume. The data related to the topic of emissions, presented in the graphs below, are taken from Samarco's Greenhouse Gas Emissions Inventory.

For 2019, efforts were focused on the reinforcement and stabilization works of the Germano complex and the maintenance of the Ubu structures. The lack of production and the intermittent nature of the activities carried out between 2018 and 2019, in preparation for resumption of operation, prevent appropriate compar-

isons of history. One should mention the change in land use which occurred in the area of farms at Ubu, with eucalyptus forestry contributed with 37.78% of total emissions.

TOTAL OF ENERGY CONSUMED (GJ)	2017	2018	2019
fuel from non-renewable source (Ubu) ¹	5,170.55	9,847.53	5,543.37
fuel from non-renewable source (Germano) ¹	122,757.35	99,198.62	228,192.90
Consumption of fuel from non-renewable source (GJ)¹	127,927.90	109,046.15	233,736.27
Consumption of renewable source fuels (GJ) - UBU	449.61	987.52	596.89
Consumption of renewable source fuels (GJ) - GERMANO	10,674.55	9,947.73	24,570.97
Consumption of fuel from renewable sources (GJ)	11,124.16	10,935.25	25,167.86
Energy consumed (GJ)²	340,454.66	315,573.69	288,127.81
Total	479,506.72	435,555.09	547,031.94
Energy sold (GJ)²	623,121.05	880,563.60	705,549.60

1 The fuel used was Diesel S500. For the conversions of liters to Gigajoules, the factors of BEN 2019 and PCI - Conversion factors and densities were used.

2 Samarco has two hydropower plants that meet its current energy demand.

Hydropower plants managed by the company ensure its current power supply

TOTAL OF INDIRECT EMISSIONS IN 2017 (SCOPE 2)¹
(tCO₂e)



1. GHG Protocol methodology (version 2019.1.2 for 2019; v2019.2 for 2018; and v2018.1.3 for 2017). Approach by operational control and in scope 2 choice of sub-approach of location (Germano, Matipó, Ubu and Muniz Freire sites) between Germano and Ubu units.

DIRECT EMISSIONS (TCO ₂ EQUIVALENT) ^{1,2} GRI 305-1	2017	2018	2019
Generation of electricity, heat of vapor	0	10.00	0
Industrial processes	0	0	0
Change of land use	1.19	7,852.34	21,059.87
Total Farming activities	1,739.94	1,928.00	1,951.38
Wastewaters	Não contabilizado	86.90	301.58
Fugitive emissions ³	49.76	21.67	99.21
Stationary combustion	Não ocorreu	Não ocorreu	5.58
Mobile combustion	9,873.01	8,774.94	20,839.68
Total gross emissions of CO₂	11,663.90	18,673.84	44,257.30
Biogenic emissions (tCO₂ equivalent)¹	1,738.75	636.00	2,209.29

1 The spreadsheet tool of the Brazilian GHG Protocol Program (version 2019.1.2 for 2019; v2019.2 for 2018; and v2018.1.3 for 2017) was used for the calculation. The operational control approach was chosen and the company divided into its Germano, Matipó, Ubu and Muniz Freire sites, that is, four sites between the Germano and Ubu units.

2 The calculations above consider the gases: Carbon Dioxide (CO₂), Nitrous Oxide (N₂O), Methane (CH₄)

3 Emissions that occur in areas where there is no containment system; they can be leaks, but they may also be resuspension of particulate material. Fugitive emissions that were accounted for in Samarco's inventory are emissions of particulate matter that occur in various locations, such as emissions from vehicles (trucks) in transit on the company's roads (paved or not), the resuspension of dust on roads during transit of vehicles, the wind carrying of material from the stockpiles and non-revegetated surfaces. There was no emission of substances that destroy the ozone layer.

OTHER EMISSIONS (tCO ₂ EQUIVALENT) ^{1,2,3} GRI 305-3	2018	2019
Transportation and distribution (outsourced fleet)	2,489.66	0
Waste generated in operations ⁴	577.78	3,597.23
Business travels	0.00	69.52
Transportation of employees	377.28	1,809.24
Total	3,444.71	5,475.99
Biogenic emissions of CO₂¹	38.90	206.26

1 There are no data for 2017. This year, scope 3 was not considered, which is optional in the GHG, due to the current situation of the Company.

2 The spreadsheet tool of the Brazilian GHG Protocol Program (version 2019.1.2), base year 2019, was used for calculation. The operational control approach was chosen, with the company divided into its Germano, Matipó, Ubu and Muniz Freire sites, that is, four sites between Germano and Ubu units.

3 Calculations consider the gases Carbon Dioxide (CO₂), Nitrous Oxide (N₂O) and Methane (CH₄).

4 Considered solid waste sent for disposal by third parties.

42.49

GRI 305-4

total volume of greenhouse gas emissions in 2019, considering the relationship between workers and the total volume of emissions in the year (in 2018, the intensity was 33.77 and, in 2017, 16.51). The metric calculation was not adopted as per the quantity of pellets produced due to the Company's inactivity in the years; there were variations in activities and volume of employees, with an increase in the number of people and emissions in 2019.

ATMOSPHERIC EMISSIONS (IN TONS) ¹ GRI 305-7	2017	2018	2019
NOx	156.79 t	204.07 t	1,266.74 t
SOx	2.68 t	0.64 t	1,266.09 t
Persistent organic pollutants (POP)	zero	zero	zero
Volatile organic compounds (VOC)	51.43t	37.04 t	140,91 t
Hazardous atmospheric pollutants (HAP, acronym in English)	zero	zero	zero
Particulate material (MP) ²	3,762.03 t	2,295.92 t	2,711.98 t
Other standard categories of atmospheric emissions identified in regulations	N/A	N/A	N/A

¹ Data source: European Environmental Agency. Storage, handling and transportation of mineral products. EMEP/EEA air pollutant emission inventory guidebook, 2016. Samarco's licensing conditions require the company to use the USEPA methodology for calculating atmospheric emissions, also used to calculate scope 1 of greenhouse gas inventory according to the GHG Protocol. Standards and methodologies adopted: MRI, Midwest Research Institute. Particulate Emission Measurements from Controlled Construction Activities, EPA/600/R-01/031. ² 2001.2 Total particulate material (MPT).

BIODIVERSITY AND LAND USE
GRI 103 | 304, MM2

The nature of the mining activity requires companies like Samarco to adopt effective practices to ensure the preservation or protection of the biodiversity of affected areas, as well as the monitoring of fauna and flora and the management of inevitable impacts on biomes. Environmental impact studies and programs linked to preconditions for the units' environmental licensing, are the main management tools.

Today, the industrial units (Germano and Ubu) are subjected to assessments of Samarco's impacts on biodiversity and have a management plan on the subject. This includes, in the current context, the asset maintenance processes and port activities, as well as projects aimed at resuming operations and the preconditions of environmental licenses.

At the Ubu (ES) and Germano (MG) units, a high biodiversity environment is ensured by green areas and the Espírito Santo coastal zone, in addition to the permanent protection areas of the Ubu and Mãe-Bá ponds and the Environmental

Protection Area of Turtles, in Anchieta (ES). The existence of species threatened with extinction in the areas of influence of the Germano Complex also bears emphasizing.

In order to monitor possible impacts on Biodiversity, the Company performs several initiatives, with emphasis on:

- **Aquatic Fauna Monitoring Program:** covers quarterly campaigns and monitoring populations of marine aquatic microorganisms; daily monitoring of sea turtles in the Ubu port area; and monitoring of fish fauna in the Pardo River (municipality of Muniz Freire);
- **Fauna Management Program - Germano:** fostering actions that seek to minimize impacts on the present fauna, including endangered species, due to the increase in traffic and vehicles and machinery through asset maintenance activities, emergency works and projects aimed at operational resumption, such as the Alegria Sul Pit. These include action by teams of specialized biologists and field assistants, trained in fauna management and on a provisional basis of support, in addition to an

agreement with a veterinary clinic specialized in wild animals and training with internal and contracted employees;

- **Fauna Management Program - Ubu:** also addresses the minimization of impacts on the local fauna through rescue actions, attendance at a specialized clinic on wild animals and an agreement with an animal rehabilitation center;
- **Environmental Education Program:** involves continuing education for communities in the area of direct influence in Minas Gerais and Espírito Santo, employees and contractors in Ubu and Germano;
- **Fleet Speed Control and Signaling and Warning in the Territory:** encompasses actions aimed at safety in vehicle traffic in all operational and access areas of the Company;
- **Vegetation Rehabilitation Program:** performed in 2018, the program covered the rehabilitation and maintenance of an area of 24.44 hectares around the Ubu Pond (Anchieta/ES); in Muniz Freire (ES), the revegetation work totaled an area of 59.78 hectares;

· **Terrestrial Fauna and Aquatic Biota Monitoring Program:** in Germano, including quarterly campaigns, complementing the inventory of local fauna, characterizing local communities, estimating and monitoring local diversity, wealth and abundance; assessing the impacts of the resumption of the operation of the Germano Complex on terrestrial fauna com-

munities over time; assessing the occupancy rate of *Puma concolor* in the area surrounding the project and performing the Monitoring of Endangered, Endemic and Rare Species.

· **Operative Plan for the Prevention and Fighting of Forest Fires:** carried out at the Germano unit, it focuses on controlling the speed

of response and effectiveness in the face of forest fires and ensuring the protection of the properties maintained by the Company, especially those intended for environmental offset.

Fauna and flora receive protection and conservation actions in territories under the influence of Samarco

ACTIONS IN 2018 AND 2019 GRI 304-2

With the interruption of the Company's operations, no significant impacts are expected on aspects such as pollution, species reduction, changes in ecological processes and/or the introduction of species. The Muniz Freire hydro-power plant, on the other hand, has the maintenance of ichthyofauna monitoring for its assessed aspect.

As part of the corrective Licensing process, between the years 2018 and 2019, there was an increase in the area of studies on impacts on biodiversity, as these began to comprise the mining complex. For 2020, Samarco should plant the equivalent of 185 hectares to offset threatened species.

Among the environmental indicators linked to aquatic fauna, there are changes in the abundance of key species and changes in the wealth of the species of communities; with regard to terrestrial fauna, potential changes in the abundance of key species and changes in the species wealth of the communities are assessed. The results indicate that there is no change in local biodiversity, before and after

the shutdown of activities, but rather seasonal changes common in aquatic environments.

The results obtained in the integrated monitoring, linked to the Marine Monitoring and Sea Turtle Monitoring Program (Ubu), demonstrate that there is no change in the communities. Regarding the studies of the ichthyofauna biota in Muniz Freire, it was proven that the fish fauna remains stable throughout the last monitoring actions performed.

In its first year, the Terrestrial and Aquatic Fauna Monitoring Program for Germano Complex brought results that do not indicate variations relative to local biodiversity communities as a whole. With the continuation of monitoring campaigns, it will be possible to accumulate data from historical series, and Samarco will be able to analyze the results linked to the indicators and, if necessary, propose mitigation measures.

Endangered flora species GRI 304-4

Regarding the Total number of flora species included in the World Union's Red List for Nature Conservation (IUCN, 2013) and in national conservation lists with habitats located in areas affected by Samarco's operations, eight endangered species were mapped, two vulnerable and four almost threatened in 2018; in 2019, 12 endangered species were mapped in the region of the Germano complex. No critically threatened, vulnerable or near endangered species have been mapped.

ABOUT THIS REPORT

A photograph showing three workers in safety vests and hard hats walking on a construction site. The sun is low in the sky, creating a strong silhouette effect and a lens flare. The workers are walking from left to right. The background shows a hilly construction site under a cloudy sky.

Commitment to periodic publication of reports has been a norm of the Company for decades

Methodology, scope and structure of the report

Lending continuity to a 16-year cycle of publications, this report presents Samarco's strategy, social, economic and environmental performance as well as governance and management practices during the period between January 1st, 2018 and December 31st, 2019.

The data, based on the Global Reporting Initiative (GRI) methodology, was collected and structured around the list of social, environmental and economic issues most relevant to the Company from the perspective of its internal and external audiences, obtained from the materiality process. The GRI guidelines were used in the Standards version, Essential option, combined with some sectoral and operational indicators.

This report gives an account of the projects, investments and results of all Samarco Mineração S.A.'s operations in Brazil: Germano Complex, in Mariana (MG); Industrial units and Ubu Port Terminal, in Anchieta (ES); administrative headquarters, in Belo

Horizonte (MG); ore pipelines, which connect the two units and cross territories of Minas Gerais and Espírito Santo; and Muniz Freire hydropower plant (ES); the exceptions for some environmental and labor indicators are described in footnotes. This is the same basis used for the development of the Financial Statements, available at www.samarco.com/relatorios. The option for the biennial format is due to the need for a more complete, integrated and comprehensive presentation of the projects and indicators, in the context of a broad reflection and reconstruction of the Company's bases, strategy and operating model.

The results of the 42 socioenvironmental and socioeconomic programs carried out in the regions affected by the Fundão dam collapse, which have been under the responsibility of the Renova Foundation since August 2016 (the institution's activity reports are available at www.fundacaorenova.org/files-and-reports) are not included in the scope of this report.

As it presents periods of inactivity at Samarco, which is now making headway in resuming its operations after the completion of the works of the tailings filtration system, the report contains indicators with results that differ widely from the bases presented until 2015, when the Fundão dam collapsed, in Mariana (MG). Possible recalculations of previously disclosed data, limitations on data reporting and scope variations are described in footnotes or throughout the text.

This edition was published in a PDF version, in English and Portuguese. Its release is related to the Mission, Vision, Values and Purpose of the Company, which advocate transparency and the gradual reconstruction of the base of trust in relations with its stakeholders - including communities, public authorities, shareholders, customers, employees, community leaders and business partners.

Materiality and New Journey themes guide the definition of the document's content

Table of Contents of GRI Contents GRI 102-55

GENERAL PUBLICATIONS

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
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GRI 101: FOUNDATION 2016

GRI 101 has no publications

ORGANIZATIONAL PROFILE

GRI 102: General publications 2016	102-1 Name of organization	8			
	102-2 Activities, brands, products and services	8			
	102-3 Location of headquarters	Addresses available at https://www.samarco.com/fale-conosco/			
	102-4 Location of operations				
	102-5 Nature of property and legal form	8			
	102-6 Markets supplied	8			
	102-7 Size of the organization	8, 49			
	102-8 Information on employees and workers	54		8, 10	6
	102-9 Supplier Chain	63			
	102-10 Significant changes in organization and its supplier chain	There have been no significant changes in 2018 and 2019.			
	102-11 Approach or principal of precaution	36			
	102-12 Initiatives developed externally	31			
	102-13 Participação em associações	31			

STRATEGY

GRI 102: General publications 2016	102-14 Statement of senior decision-maker	6			
	102-15 Main impacts, risks and opportunities	36, 44			

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
ETHICS AND INTEGRITY					
GRI 102: General publications 2016	102-16 Values, principles, standards and rules of behavior	25, 28		16	
	102-17 Advising mechanisms and concerns on ethics	21		16	
GOVERNANCE					
GRI 102: General publications 2016	102-18 Governance structure	12			
	102-19 Delegation of authority	12			
	102-20 Executive level responsible for economic, environmental and social topics	12			
	102-21 Advising to stakeholders on economic, environmental and social topics		There was no recent materiality process; the current one refers to the 2014 context and underwent a review in 2016, without consulting the public. A new materiality process will be performed in 2020. These processes are validated by the Company's leaders.	16	
	102-22 Makeup of highest governance body and its committees	12		5, 16	
	102-23 Chairman of the highest governance body	12		16	
	102-24 Selecting and appointing the highest governance body and its committees		The appointment of the members of the Board takes place by election guided by the shareholders, in accordance with the terms of the Bylaws and the Shareholders' Agreement	5, 16	
	102-25 Conflicts of interest	14		16	
102-26 Role of the highest governance body in the definition of purpose, values and strategies	25, 28				

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
GRI 102: General publications 2016	102-27 Collective knowledge of the highest governance body	The Company's executive officers and leaders are trained on ethics, integrity and compliance. In 2019, the entire board was submitted to training.		4	
	102-28 Assessment of performance of the highest governance body	12			
	102-29 Identifying and managing the economic, environmental and social impacts	The Company's executive officers and leaders are responsible for impact management when approving the business plan and strategy, as well as their respective impact management requirements.		16	
	102-30 Effectiveness of risk management processes	14, 36			
	102-31 Review of economic, environmental and social topics	Samarco works, throughout 2019 and 2020, in a new materiality process, as part of the review of its most relevant social, economic and environmental topics. In 2018, a highlight in this regard was the construction process of Samarco's New Journey, including several social, environmental and economic topics (<i>read more on p.25</i>).			
	102-32 Role of the highest governance body in the reporting process	The report is submitted to a validation process that includes the leadership			
	102-33 Communicating critical concerns	21			
	102-34 Nature and total number of critical concerns	21			

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
GRI 102: General publications 2016	102-35 Compensation policies	All of the remuneration policies of Samarco's top executives and general human resources policies undergo a vetting process by the People Committee, Advisory Body to the Board of Directors.			
	102-36 Processes for determining compensation	All compensation policies for Samarco's main executives and general human resources policies are submitted to the Personnel Committee, the body that advises the Board of Directors.			
	102-37 Involvement of stakeholders in compensation	External stakeholders (community members, governments, institutions, suppliers, etc.) are not involved in the processes for definition of leadership compensation.		16	
	102-38 Proportion of total annual compensation		Data not calculated in this reporting cycle (Information not available).		
	102-39 Percentage increase of proportion of total annual compensation				

ENGAGEMENT OF STAKEHOLDERS

GRI 102: General publications 2016	102-40 List of groups of stakeholders	54, 65			
	102-41 Collective bargaining agreements	100% of employees are covered by collective bargaining agreements.		8	3
	102-42 Identification and selection of stakeholders	32			
	102-43 Approach for engagement of stakeholders	32, 54, 62, 63, 65, 66			
	102-44 Main topics and concerns raised	32, 54, 62, 63, 65, 66			

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
REPORTING PRACTICES					
GRI 102: General publications 2016	102-45 Entities included in the consolidated financial statements	Samarco Mineração S.A., Samarco Iron Ore Europe B.V. ("Samarco Europe"), Samarco Asia Ltd. ("Samarco Asia"), Samarco Finance Ltd. ("Samarco Finance").			
	102-46 Defining the content of the report and topic limits	32			
	102-47 List of material topics	32			
	102-48 Reformulations of information	None			
	102-49 Changes in report				
	102-50 Period of report	From 01 January 2018 to 31 December 2019			
	102-51 Date of latest report	Bianual			
	102-52 Reporting cycle	From 01 January 2018 to 31 December 2019			
	102-53 Point of contact for questions on the report	relacionamento@samarco.com			
	102-54 Option of agreement with GRI Standards	This report was developed pursuant to the guidelines of the GRI Standard: essential option			
	102-55 Summary of GRI Content	82			
	102-56 External guarantee	Yes. See page 97.			

MATERIAL TOPICS

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
ECONOMIC PERFORMANCE					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 49			
	103-2 Management approach and its components	49			
	103-3 Evolution of management approach	49			
GRI 201: Economic performance 2016	201-1 Direct economic value generated and distributed	The data presented on pages 50 and 51 do not include the investments cited under indicator 203. The investments in communities, cited under indicator 203-1, show the resumption, in 2018 and 2019, of the discussions with and obtention from the agents involved related to documents required for the works in question. In 2020 the engineering design work will be concluded, and the execution of the works is scheduled for 2021. In the next cycle of the report we will present more information as well as the numbers of the investments related to these initiatives.		8, 9	
PRESENCE IN THE MARKET					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 54			
	103-2 Management approach and its components	54			
	103-3 Evolution of management approach	54			

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
GRI 202: Presence in the market 2016	202-2 Proportion of top management members hired in the local community	0%, considering chairman and officers. In 2019, the organizational structure was adapted and two management-level employees were promoted to the position of officers. The increase in the number of officers (from two to four) is due to an internal promotion.		8	

INDIRECT ECONOMIC IMPACTS

GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 62			
	103-2 Management approach and its components	62			
	103-3 Evolution of management approach	62, 63			
GRI 203: Impactos econômicos indiretos 2016	203-1 Development and impact of investments in infrastructure and services offered	There are still two investments to be made (square in the Chapada do Á community, municipality of Anchieta, and daycare center in Porto Grande, district that belongs to Guarapari). The actions are projected in a specific schedule and segmented by phase, with engineering designs to be completed in 2020 and construction works in 2021.		5, 9, 11	
	203-2 Significant indirect economic impacts	62		1, 3, 8	

FIGHTING CORRUPTION

GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 14			
	103-2 Management approach and its components	14			
	103-3 Evolution of management approach	14			

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
GRI 205: Fighting corruption 2016	205-1 Operations submitted to risk assessment related to corruption	20		16	10
	205-2 Communication and training on policies and procedures for fighting corruption	16		16	10
	205-3 Confirmed cases of corruption and measures taken	14		16	10

UNFAIR COMPETITION

GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 14			
	103-2 Management approach and its components	14			
	103-3 Evolution of management approach	14			
GRI 206: Unfair competition 2016	206-1 Lawsuits filed for unfair competition, antitrust and monopoly practices		There were no lawsuits filed for unfair competition, antitrust and monopoly practices in the reporting period.	16	

ENERGY

GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 75			
	103-2 Management approach and its components	75			
	103-3 Evolution of management approach	75			
GRI 302: Energy 2016	302-1 Energy consumption within the organization	75		7, 8, 12, 13	8
	302-2 Energy consumption outside the organization		Information not available for there was no production in 2018 and 2019	7, 8, 12, 13	8

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
WATER					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 72			
	103-2 Management approach and its components	72			
	103-3 Evolution of management approach	72			
GRI 303: Water 2016	303-1 Total water output per source	72		6, 7	7, 8
	303-2 Water sources significantly affected by water output	72, 73		6	8
	303-3 Total percentage and volume of recycled and reused water	72		6, 8, 12	8
BIODIVERSITY					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 78			
	103-2 Management approach and its components	78			
	103-3 Evolution of management approach	78			
GRI 304: Biodiversity 2016	304-2 Significant impacts of activities, products and services on biodiversity	79		6, 14, 15	8
	304-4 Species included in the IUCN red list and national conservation lists with habitats located in areas affected by the organization's operations	79		6, 14, 15	8
Mining sector - Biodiversity	MM2 Number and percentage of operational units that require biodiversity management plans according to established criteria and number (percentage) of these units with plans in force	78		6, 14, 15	

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT	
EMISSIONS						
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 75				
	103-2 Management approach and its components	75				
	103-3 Evolution of management approach	75				
GRI 305: Emissions 2016	305-1 Direct emission of greenhouse gases (Scope 1)	77		3, 12, 13, 14, 15	7, 8	
	305-2 Indirect emission of greenhouse gases (Scope 2)	75		3, 12, 13, 14, 15	7, 8	
	305-3 Other emissions of greenhouse gases (Scope 3)	77		3, 12, 13, 14, 15	7, 8	
	305-4 Intensity of emissions of greenhouse gases	77		13, 14, 15	8	
	305-5 Reduction of emissions of greenhouse gases			Information not available. It was not possible to calculate the reduction in emissions, for the variances observed are a reflex of the operational shutdown. Furthermore, in recent years the changes in activities and number of employees have been significant.	8, 9	
	305-6 Emissions of substances that destroy the ozone layer (SDO)		There are no substances that fall into this classification that have been issued between 2016 and 2019.		3, 12	7, 8
	305-7 Emissions of NOx, SOx and other significant atmospheric emissions		78		3, 12, 14, 15	7, 8

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
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WASTEWATER AND TAILINGS

GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 74			
	103-2 Management approach and its components	74			
	103-3 Evolution of management approach	74			
GRI 306: Wastewater and tailings 2016	306-1 Disposal of water, discriminated per quality and destination	73		3, 6, 12, 14	8
	306-3 Significant leakages	There have been no significant leakages in 2018 and 2019.		3, 6, 12, 14, 15	8
	306-5 Water bodies affected by discharges and/or drainage of water	<p>At the Germano unit, there was no discharge of wastewater or water that affected water bodies and their habitats.</p> <p>At the Ubu unit, wastewater discharges have been reduced since the shutdown of operations in November 2015. The one that was discarded comes from the cleaning of roads, rainwater and maintenance of the plant, in addition to the dredging carried out at the North Dam, in Anchieta/ES, according to the agreement in item 269 of water TCA 394/2010. The disposal carried out at the North Dam corresponds to an average of 5% or more of the average annual volume of the water body (1,171,600.00 m³ of freshwater class 3) and, according to the guidance of competent professionals (such as municipal authorities), it is known for causing or presenting a high probability of generating significant impacts on the water body. Therefore, the discharge is monitored in order to maintain the quality of the water body within the standards recommended for the class 3 freshwater class.</p>		6, 14, 15	8
Mining Sector Supplement – Wastewater and tailings	MM3 Total quantities of overburden, tailings and slimes and its associated risks	75		3, 6, 12	

ENVIRONMENTAL COMPLIANCE

GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 70			
	103-2 Management approach and its components	70			
	103-3 Evolution of management approach	70			

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
GRI 307: Environmental compliance 2016	307-1 Non-compliance with environmental laws and regulations	71		16	
EMPLOYMENT					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 53, 54			
	103-2 Management approach and its components	53, 54			
	103-3 Evolution of management approach	53, 54			
GRI 401: Employment 2016	401-1 Rates of new hiring and turnover of employees	54		5, 8, 10	
LABOR RELATIONS					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 54			
	103-2 Management approach and its components	54			
	103-3 Evolution of management approach	54			
GRI 402: Labor relations 2016	402-1 Minimum deadline for notice of operational changes	54		8	
OCCUPATIONAL HEALTH AND SAFETY					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 59			
	103-2 Management approach and its components	59			
	103-3 Evolution of management approach	59			
GRI 403: Occupational health and safety 2016	403-2 Types of injuries, rates of injuries, occupational diseases, lost days, absenteeism and number of work-related fatalities	60		3, 8	

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
TRAINING AND EDUCATION					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 57			
	103-2 Management approach and its components	57			
	103-3 Evolution of management approach	57			
GRI 404: Training and education 2016	404-1 Average of training hours per year per employee	58		4, 5, 8	6
NON-DISCRIMINATION					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 14			
	103-2 Management approach and its components	14			
	103-3 Evolution of management approach	14			
GRI 406: Non-discrimination 2016	406-1 Cases of discrimination and corrective measures taken	21		5, 8	
LOCAL COMMUNITIES					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits	32, 62			
	103-2 Management approach and its components	62			
	103-3 Evolution of management approach	62			
GRI 413: Local communities 2016	413-1 Operations with programs implemented of local community engagement, evaluation of impacts and local development	63, 67			1
	413-2 Operations with potential significant impacts or real negative impacts on local communities	63		1, 2	1

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
Food Sector Supplement– Local Communities	MM6 Number and description of significant conflicts regarding land use and customary rights of local communities and indigenous peoples	Within Samarco's routine scope, there were no significant conflicts regarding land use. With regard to indigenous peoples, they are not in Samarco's area of influence.		1, 2	
	MM7 To what extent mechanisms for forwarding demands and complaints have been used to resolve conflicts over land use, customary rights of local communities and indigenous peoples	Within Samarco's routine scope, there were no significant conflicts regarding land use. With regard to indigenous peoples, they are not in Samarco's area of influence.		1, 2	
SOCIOECONOMIC COMPLIANCE					
GRI 103: Management approach 2016	103-1 Explaining on material topic and its limits		32, 14		
	103-2 Management approach and its components		14		
	103-3 Evolution of management approach		14		
GRI 419: Socioeconomic compliance 2016	419-1 Non-compliance with social and economic laws and regulations	In 2019, there were no non-monetary sanctions, and no cases were resolved through arbitration. The fines recorded were R\$ 139,378,166.90 (2017), R\$ 49,617,207.56 (2018) and R\$ 927,217,119.16 (2019). The oscillation of values from 2018 to 2019 is mainly due to the assessment of the Financial Compensation for the Exploration of Mineral Resources (CFEM), calculation base of which is high due to the company's gross revenue up to 2015 ¹		16	

The data are periodically updated and the values reported here refer to the data as of 31 July 2020

GRI STANDARD	PUBLICATION	PAGE/URL	OMISSION	PURPOSES OF SUSTAINABLE GROWTH	CORRELATION PRINCIPLES GLOBAL PACT
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REALLOCATIONS

Mining Sector Supplement – Reallocations	MM9 Places where settlements took place, the number of domiciles in each of them and how their livelihoods were affected in the process			1, 2	
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PLANEJAMENTO DE ENCERRAMENTO

Mining Sector Supplement – Closure planning	MM10 Number and percentage of operations with plans for closure of activities				
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OBJETIVOS DE DESENVOLVIMENTO SUSTENTÁVEL

1. Eradication of poverty
2. Zero hunger and sustainable agriculture
3. Health and well-being
4. Quality education
5. Gender equality
6. Drinking water and sanitation
7. Clean and affordable energy
8. Decent work and economic growth
9. Industry, innovation and infrastructure
10. Reduction of inequalities
11. Sustainable cities and communities
12. Responsible consumption and production
13. Action against global climate change
14. Life in the water
15. Life on earth
16. Peace, justice and effective institutions
17. Partnerships and means of implementation

Assurance report

GRI 102-56



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Limited assurance report issued by independent auditors

To the Board of Directors, Shareholders and Stakeholders
Samarco Mineração SA
Belo Horizonte - MG

Introduction

We have been engaged by Samarco to apply limited assurance procedures on the sustainability information disclosed in 2018 and 2019 biennium Report.

Responsibilities of Samarco's Management

The Management of Samarco is responsible for adequately preparing and presenting the sustainability information in the Biennium Report 2018 and 2019 in accordance with the Standards for Sustainability Report of Global Reporting Initiative – GRI (GRI-Standards), as well as the internal controls determined necessary to ensure this information is free from material misstatement, resulting from fraud or error.

Independent auditors' responsibility

Our responsibility is to express a conclusion about the information in the Biennium Report 2018 and 2019 based on a limited assurance engagement conducted in accordance with the Standards for Sustainability Report of Global Reporting Initiative - GRI (GRI-Standards) and the methodology developed globally by KPMG for assurance of social and environmental information disclosed in sustainability reports denominated KPMG Sustainability Assurance Manual - KSAM, applicable to historical non-financial information.

These standards require compliance with ethical requirements, including independence ones, and the engagement is also conducted to provide limited assurance that the information disclosed in the the Samarco's Biennium Report 2018 and 2019, taken as a whole, is free from material misstatement.

A limited assurance engagement conducted in accordance with the Standards for Sustainability Report of Global Reporting Initiative - GRI (GRI-Standards) and the KPMG Sustainability Assurance Manual - KSAM consists mainly of questions and interviews with the Management of Samarco and other professionals of the company involved in the preparation of the information disclosed in the Biennium Report 2018 and 2019 and use of analytical procedures to obtain evidence that enables us to reach a limited assurance conclusion about the sustainability information taken as a whole. A limited assurance engagement also requires additional procedures when the independent auditor acknowledges issues which may lead them to believe that the information disclosed in the Biennium Report 2018 and 2019 taken as a whole could present material misstatement.

The selected procedures were based on our understanding of the issues related to the compilation, materiality and presentation of the information disclosed in the Biennium Report 2018 and 2019, on other engagement circumstances and also on our considerations regarding areas and processes associated with material sustainability information disclosed where relevant misstatement could exist. The procedures consisted of:



- (a) engagement planning: considering the material aspects for Samarco's activities, the relevance of the information disclosed, the amount of quantitative and qualitative information and the operational systems and internal controls that served as a basis for preparation of the information in the Biennium Report 2018 and 2019. This analysis defined the indicators to be checked in details;
- (b) understanding and analysis of disclosed information related to material aspects management;
- (c) analysis of preparation processes of the Biennium Report 2018 and 2019 and its structure and content, based on the Principles of Content and Quality of the Standards for Sustainability Report of Global Reporting Initiative - GRI (GRI-Standards);
- (d) evaluation of non financial indicators selected:
 - understanding of the calculation methodology and procedures for the compilation of indicators through interviews with management responsible for data preparation;
 - application of analytical procedures regarding data and interviews for qualitative information and their correlation with indicators disclosed in the Biennium Report 2018 and 2019;
 - analysis of evidence supporting the disclosed information.
- (e) analysis of whether the performance indicators omission and justification are reasonable to be accepted associated to aspects and topics defined as material in the materiality analysis of the company;
- (f) comparison of financial indicators with the financial statements and/or accounting records.

We believe that the information, evidence and results we have obtained are sufficient and appropriate to provide a basis for our limited assurance conclusion.

Scope and limitations

The procedures applied to a limited assurance engagement are substantially less extensive than those applied to a reasonable assurance engagement. Therefore, we cannot provide reasonable assurance that we are aware of all the issues that would have been identified in a reasonable assurance engagement, which aims to issue an opinion. If we had conducted a reasonable assurance engagement, we may have identified other issues and possible misstatements within the information presented in Biennium Report 2018 and 2019.

Nonfinancial data is subject to more inherent limitations than financial data, due to the nature and diversity of the methods used to determine, calculate or estimate these data. Qualitative interpretation of the data's materiality, relevance and accuracy are subject to individual assumptions and judgments. Additionally, we have not examined data related to prior periods, to evaluate the adequacy of policies, practices and sustainability performance, nor future projections.

Conclusion

Based on the procedures carried out, described earlier in this report, we have not identified any relevant information that leads us to believe that the information in the Biennium Report 2018 and 2019 is not fairly stated in all material aspects in accordance with the Standards for Sustainability Report of Global Reporting Initiative - GRI (GRI-Standards), as well as its source records and files.

Belo Horizonte, October 20th, 2020

KPMG Assessores Ltda.



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Partner

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