



FUNDAÇÃO  
**renova**

# ACTIVITY REPORT

2016



# RENOVA FOUNDATION MANIFESTO

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Our story starts with a new beginning. The collapse of Fundão dam, in Mariana, was the event that triggered our existence. Right from start, we were faced with three major challenges: magnitude, urgency and information. There were no parameters, references or answers readily available. This is the reality ahead of Renova Foundation.

We firmly believe that the key to overcoming any challenges lies on one word: togetherness. Dialog is what bundles us in this quest towards collectively building the future. As we gather our efforts, we become stronger. Our ultimate role is to promote union and connection. Aligning past, present and future; People, initiatives and institutions; Skills, aspirations and visions. All converging to a common purpose that drives us and gives meaning to our work. We are certain that out of these connections there will come up solutions that perhaps none imagined possible.

From aspiration to achievement, our journey will involve:

- Ability to overcome adversity and steer in new directions as needed.
- Connecting ideas and diverging points, for when faced with complexity, there is seldom only one possible answer.
- Tentativeness in face of so many possibilities. Being humble enough to learn after the mistakes throughout the journey.

Our word stands as a commitment. Towards ourselves, communities and society. Every verb translates into actions. And every action takes place within the space of time and life.

We are committed to acknowledging, caring for and respecting people and communities. Wherever we are called upon to rebuild and provide infrastructure, we will innovate, develop and preserve. Land and water will each follow their only possible course: that of restoration, production and preservation. And each step will be taken with respect for diversity, with openness to listen and converse; with transparency to demonstrate integrity in everything we do.

May our mistakes serve as lessons on what to avoid; Our accomplishments, as inspiration for everything else to be done. And may our achievements – which will be shared by all of society – be regarded not as the end, but as the new beginning. Because life is continuity. A foundation can only be born out of a unifying purpose: a mission to be fulfilled to the best interest of society. And there can be no common purpose without people sharing a common goal. That is why Renova Foundation will always be open to all those who wish to help building our today and our tomorrow. Together.





Bento Rodrigues, first location impacted by the rupture of Fundão Dam

Ricardo Correa

# A STORY TOLD BY MANY VOICES

How should we tell the story of repairing the impact resulting from the collapse of the Fundão dam? How can we make the reporting process more accessible to all involved? How can we present each person's own experience? How can we materialize this moving, laborious story? These were just some of the questions that we asked when we were assigned the mission of preparing our latest activity report.

We decided to portray the current status of the process of recovering the impacts of the collapse of the Fundão dam as realistically as possible. Our approach involved listening carefully and engaging in meaningful dialogue. We also used graphical resources to present some of the complex issues to facilitate understanding. This has been combined with a graphic design inspired by regional icons to create a connection with the reality depicted in this report, providing a more reader-friendly experience and making the messages better understood.

Our information focuses on the activities undertaken by Renova Foundation upon its creation, without delving into the emergency actions taken by Samarco immediately after the dam collapse. The financial data embraces the period of time between the Foundation's creation on June 30, 2016 and December 31. Our description of the 42 programs to be further presented includes up-to-date information to March 2017, as a number of these programs are still waiting for the initiatives to be determined and approved in the Foundation's governance system.

This report showcases what we believe in - the truth, hard work, involvement and collective construction. After all, this is not just our story, but belongs to all of those who have played a role in it.

We thank everyone for their contributions.

We hope you find this report interesting and informative.

**ROBERTO SILVA WAACK**  
President of Renova Foundation





Arquivo Renova

# WHAT DRIVES US? THE PRESENT. THE FUTURE. TOGETHER.

Many people's lives changed in Minas Gerais and Espírito Santo on November 5, 2015. Zezim heard the commotion and left his house with his wife, Dona Maria, with just the clothes on their bodies, minutes after the mudslide flooded the lower district of Bento Rodrigues, in Mariana. Nearby, in the course of the Gualaxo do Norte river, Marcinho heard about the news from his cousin and moved his cattle to higher ground. He stayed there until late at night when he heard about the destruction of the Paracatu village, near to where he lived. In the early hours, trader Rômulo heard something that sounded like "a bear in a cave" and saw waves of mud descend on Barra Longa down the Carmo river. Days later, in the Ipatinga region of the Doce river valley, farmer Edilene panicked when she saw there was no water to irrigate her crops. This feeling was also experienced by Simião, a fisherman from Povoação, near Linhares, in Espírito Santo state, when he realized it would be a long time before he could make a living from fishing in the river again.

Thousands of people have been affected by this tragedy. We at the Renova Foundation speak to these families and communities on a daily basis. We try to imagine the magnitude of their suffering. There is a common wish amongst all those affected - to get back as much as possible of their way of living and working before the collapse. We understand this is also an opportunity to make the region an example of recovery and a sustainable way of living. Creating this legacy is our dream.

Tree struck by mud  
in the District of  
Paracatu, in Mariana'

This is what drives us.

Needless to say it is a complex task, with many supporting initiatives. Our focus was shifting from emergency activities, such as providing provisional housing to those left homeless, to delivering permanent solutions, including resettlement, health care, education and culture. We are also working to recover the rivers and rural areas, resuming the activities for sustaining people's livelihoods, combining each individual's work with environmental conservation.

We are dealing with unique and complex impacts. We are aware that we are sailing through uncharted waters, for we are dealing with issues that challenge science itself. We know we do not have ready-made answers to many of the challenges we have to resolve. These solutions have to be created in liaison with the people involved as well as with the help of experts, whom we have already engaged. The engagement and participation of all are the tools to help us build a better future for the whole affected region. We therefore invite everyone who identifies with the massive opportunity ahead and get on board to this journey with us.

*Welcome to the first activity report  
published by Renova Foundation.*



# MESSAGES



## BOARD OF TRUSTEES

The event took lives, affected numerous families and created impacts of all sorts.

While at the same time of the bereavement due to this huge impact, we should display the necessary balance to convert this enormous problem into a solution that goes beyond merely recovering areas and re-establishing the lives of the persons affected.

Our mission should embody a goal of combining the recovery process with an economic and social development project for the affected region, with its result being a legacy whereby this territory will acquire better conditions than prior to the collapse.

Much was achieved in 2016, yet we should humbly recognize that we are in a long-term building process and there is still much room for improvement. We are also aware that this progress should be obtained in perfect harmony with the community, focusing on the improved lives of individuals.

As members of Renova Foundations Oversight Board, we call on everybody involved in this process and who support this cause to join us in this vision of taking quality of life throughout the region, from Mariana to the mouth of the Doce river, to a whole new level.

**Wilson Nélio Brumer**  
Chairman of the Oversight Board

## ADVISORY BOARD

The Advisory Board is in charge of acting as society's voice in Renova Foundation's governance. No mean task, considering the array of impacts and possibilities in the mission entrusted to it which are to be carried out through actions of multiple nature and dimension.

The board's composition should react not only the interests of communities and landowners directly affected, but also to those communities with interests that are less evident at first sight. Due to their capillarity, the River Basin Councils will play an important role in the remediation of springs and riparian vegetation, sanitation, water conservation, agriculture and other initiatives. The academic community's representation will be one of these, as much of the expertise for what has been and will be done during the

recovery programs in affected areas is unprecedented, both due to the nature and scale of activities.

In defining its composition, the Advisory Board requires a considerable effort by the entities and communities that it represents and by the Renova Foundation team, with board members as its links. The first task will be to define forms of ensuring compliance with its role of representing and forwarding recommendations to the Oversight Board. Permanent awareness of what relevant actions are needed, construing requirements by represented parties and communications with executive and decision making instances will be permanent challenges.

**Cláudio Bruzzi Boechat**  
Coordinator of the Advisory Board

# MESSAGES



## MAINTAINING COMPANIES

The remediation of the damage caused by the Fundão dam breach in Mariana (MG) in November 2015 is a high priority for the companies that support the Renova Foundation – We are deeply sorry for what has occurred and remain committed to ensuring we do what is right and compliant with Brazilian law to remediate the environment and compensate those who have been affected.

The early efforts put forth by Samarco, and supported by the shareholders, following the accident were concentrated on providing immediate assistance to the affected population, with deployment of specialized technical teams to cover accommodation, the provision of drinking water to the localities supplied by the Doce River, animal rescue and shelter, bridge reconstruction and the clearing of roads. Less than a week after the tragedy, children were back in schools.

An important step towards the mid and long-term recovery and compensation was the signing of a Transaction and Conduct Adjustment Declaration (TTAC), by Samarco, Vale and BHP Brasil, the Federal government, the Minas Gerais and Espírito Santo State governments and various Brazilian administrative bodies and environmental authorities in March

2016. According to what was prescribed by the TTAC, Renova Foundation was created with the mission of implementing and managing remediation and compensation programs, preventing further delays in the implementation of solutions for the environment and impacted people.

Almost a year after the founding of the Renova Foundation, we are confident that the we have blazed the right trail. The complexity of the actions undertaken by Renova, the level of interaction with public officials and civil society, the long duration of some of its programs, could only be achieved through an organization with relevant social and technical competencies focused on those objectives and assured of having the financial resources to accomplish them.

We cannot change the past or bring back all that was lost, but the early work developed by Renova Foundation shows that it will be possible to restore the environment, rebuild communities and implement programs that will bring enduring benefits to the entire Doce River region.

**Samarco, Vale and BHPBilliton**



# MESSAGES



## INTER-FEDERATIVE COMMITTEE

The environmental, social and economic impacts from the Fundão dam incident will require an extended response over the coming years. There is a consensus among the organizations involved that containment, remediation and compensation activities are both urgent and complex, and therefore require sound governance. This governance has been provided using a collaborative and innovative approach through the inter-Federative committee (IFC) and its advising Standing Technical committees created under the Conduct Adjustment Declaration, the IFC has provided an inter-organizational, inter-state platform for coordinating the activities of the parties involved, each with often overlapping roles and responsibilities that need to be coordinated to develop solutions that will build on, rather than contradict with each other.

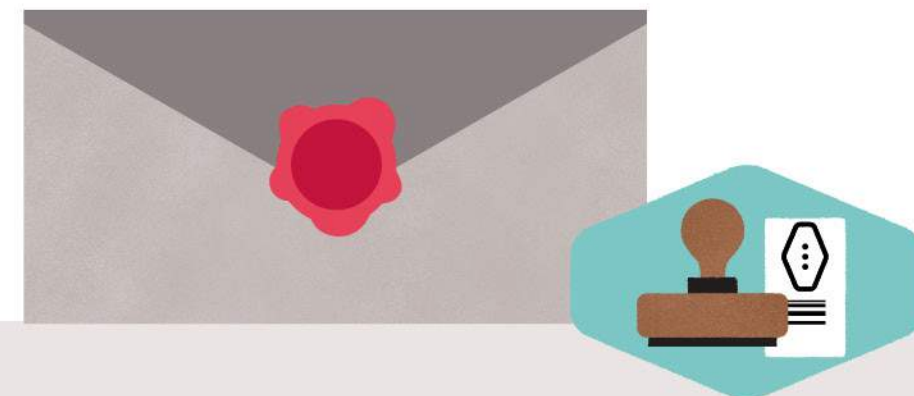
The Technical committees are responsible for advising and monitoring the remediation and compensation programs under the Conduct Adjustment Declaration, providing an appropriate venue for engagement and discussion among experts to achieve solutions that are suited to the magnitude of the issues stemming from the incident.

With this responsibility and the aspirations of society in mind, each of the federal, state and municipal bodies represented on the IFC and Technical committees are expected to achieve high standards of excellence in fulfilling their mission of performing the commitments under the Conduct Adjustment Declaration and the relevant programs. Key to the success of this monumental effort will be the interaction between the IFC and its Technical committees and Renova Foundation, which has been created specifically for the purpose of implementing the programs under the Conduct Adjustment Declaration. We believe that the governance structure created by the Conduct Adjustment Declaration, which places the Foundation as the primary agent for implementing the decisions of the IFC, is both innovative and capable of ensuring the effectiveness of the multiple initiatives within each program, in both the environmental and social dimension.

A monumental challenge lies ahead.

**Suely Mara Vaz Guimarães de Araújo**  
President of Ibama and the Inter-federative Committee - IFC

# MESSAGES



## MINAS GERAIS PUBLIC PROSECUTOR'S OFFICE

The creation of Renova Foundation is an unprecedented solution for the country, devised within the scope of a lawsuit in which the Federation, the state of Minas Gerais and the state of Espírito Santo sought to repair a large-scale damaging event, namely the collapse of the Fundão Dam, in Mariana.

The magnitude of this disaster caused the proposal of organizing a privately owned foundation - to manage remediation actions - to face a number of questions and opposing stances, under the argument that this would be a protective shield for the companies responsible for the event.

Guided by the understanding that the foundation was being organized in order to restore damages ensuing from the dam's collapse rather than to replace companies in any remediation liabilities, and with enough assets to

fulfil its primary purpose, not based on the full remediation assumption but sizeable with the proposed intention, the Belo Horizonte Public Prosecution Office, in charge of the Foundations division, approved the creation of Renova Foundation by means of Resolution PTFBH no. 16/2016 dated June 30, 2016.

Renova Foundation is a privately owned non-profit legal entity, with independent administration, assets, finances and operations, created as the executive arm for mining companies that do not have the expertise required to overcome the impacts caused by the dam failure.

Renova Foundation was organized with ambitious ends: to manage and execute 42 socio economic and socio environmental programs. Its managers and control agencies hold the great responsibility of maximizing the social

## Belo Horizonte Judicial Supervisors of Foundations

benefits arising from such an initiative. Following a slow transition process, the Foundation is currently taking over the full scope of the restoration programs and is entirely autonomous in defining the pace of its activities, relying on the dynamism, flexibility and principally the transparency which is of the very nature of the tertiary sector, seeking to involve the affected segments. We believe that Renova Foundation is capable of conducting the proposed programs more quickly, with greater quality and at a lower cost, thus bringing more satisfactory results to society.

The Public Prosecutor's Office prepared several punctual suggestions with regards to Renova Foundation's bylaws, aimed at improving control mechanisms and the assurance of an unbiased administration vis-à-vis to its founders. Having concluded its organizational procedures, yet in the

structuring stage, the Public Prosecutor's Office continues to investigate compliance with the commitment for an asset contribution assumed by the founders, as well as creation of its statutory bodies.

To the eyes of the Foundations Legal Supervisors of Belo Horizonte, Renova Foundation appears as an opportunity to grant resolute treatment to collective protection, whose goals will only be fully complied with by the actual participation of all players involved in the processes and the communities affected by the tragedy.

**Valma Leite da Cunha**  
Public Attorney

**Marcelo de Oliveira Costa**  
Public Attorney



# KNOW THE FOUNDATION

IN



## QUESTIONS



# 1

## WHAT ARE THE OBLIGATIONS OF THE RENOVA FOUNDATION?

Our mission is to rebuild, restore and repair all damage caused by the collapse of the Fundão dam on November 5, 2015, whilst fostering social, economic and environmental development of the impacted regions. Our obligations are set out in the commitment signed by the government and the companies Samarco, Vale and BHP on March 2, 2016, the Conduct Adjustment Declaration (TTAC). Renova Foundation was created some months later, on June 30, 2016, and came into operation on August 2, 2016. Since then it has undertaken the oversight and monitoring of the 42 programs established in the TTAc, each with its own theme. The Conduct Adjustment Declaration outlines 41 remediation and compensation programs. However, as work progressed, the decision was made to divide one of the programs into two to ensure a more focused and efficient management approach.

As a result, we are now working across 42 programs under the responsibility of Renova Foundation, as detailed throughout this report.

# 2

## WHAT IS THE TTAC?

This is the agreement which Samarco, Vale and BHP undertook to pay for the recovery of all damages caused. It was also signed by the Federal Government, the state governments of Minas Gerais and Espírito Santo, and a series of state institutes, agencies and foundations which technically regulate social, economic and environmental impacts of the [disruption](#).

*Read more  
on page 16*

# 3

## DOES RENOVA FOUNDATION BELONG TO SAMARCO?

No. Renova Foundation is an organization with a social purpose, namely to recover the impacts caused by the collapse of the Fundão dam.

Samarco and its shareholders Vale and BHP entered into a commitment with the federal government and state governments of Minas Gerais and Espírito Santo in which it agreed to pay for the entire cost of the recovery.

The foundation was created to implement the rebuilding, restoration and repair programs, using the funds provided by [financial donations](#) made by the companies every year, as determined in the public deed of incorporation and the TTAc and to deliver all the remediation and compensation projects. The companies are therefore sponsors of the foundation. Renova Foundation therefore has no relationship to the dam collapse nor does it represent the companies (Samarco, vale and BHP Billiton).

*See chapter [Financial data](#) on page 77 pointing to [financial donations](#)*

# 4

## SO WHO SHOULD RENOVA FOUNDATION REPORT TO?

Renova Foundation is overseen directly by the Public Prosecutor's Office of Belo Horizonte, Minas Gerais, that takes care of society's interests. There is also an inter-federative committee (IFC), whose members include the Federal Government, the State Governments of Minas Gerais and Espírito Santo, the Municipal Governments of Mariana, Rio Doce and Linhares and public institutions with expertise: Brazilian institute of the Environment and Renewable Natural Resources (IBAMA); Chico Mendes institute for Biodiversity conservation; National Water Agency (Ana); National institute of indigenous People (Funai) and the National Mining Production Department (DNPM); in Minas Gerais: State Forestry institute (iEF); Mineiro institute of Water Management (IGAM) and the State Environment Foundation (FEAM). In Espírito Santo: State Environment and Water Resources Agency (IEMA); Forestry and Livestock Defence institute of Espírito Santo (IDAF); and the State Water Resources Agency (AGERH). The committee operates as a permanent means of interaction with the foundation, monitoring and [overseeing its results](#), without prejudice to the legal authority of the respective agencies.

*Get to know the [governance of the Renova Foundation](#) on page 23*





## HOW ARE PEOPLE FROM THE AFFECTED COMMUNITIES HEARD AND HOW DO THEY PARTICIPATE IN DECISIONS?

In several ways: all recovery programs start by defining what needs to be done and all those involved are consulted, the community, local NGOs, experts, regulatory agencies and other stakeholders. This process is still in its early days, and we seek to enhance it through [daily practices](#). We have a principal: a solution will only be effective and improve living standards in the region if it is implemented in conjunction with the people.

[Read more in Involvement and participation on page 38](#)



## HOW CAN I CONTACT RENOVA FOUNDATION?

In several ways. See which is most convenient for you:

TEL — 0800 031 2303

EMAIL — [faleconosco@fundacaorenova.org](mailto:faleconosco@fundacaorenova.org)

WEBSITE — [www.fundacaorenova.org/fale-conosco](http://www.fundacaorenova.org/fale-conosco)

OMBUDSMAN — 0800 721 0717


[ouvidoria@fundacaorenova.org](mailto:ouvidoria@fundacaorenova.org)

[www.canalconfidencial.com.br/fundacaorenova](http://www.canalconfidencial.com.br/fundacaorenova)

 [www.instagram.com/fundacaorenova/](https://www.instagram.com/fundacaorenova/)

 [www.facebook.com/fundacaorenova](https://www.facebook.com/fundacaorenova)

 [www.youtube.com/fundacaorenova](https://www.youtube.com/fundacaorenova)

 [plus.google.com/+FundacaorenovaOrg](https://plus.google.com/+FundacaorenovaOrg)

 [www.linkedin.com/company/fundação-renova](https://www.linkedin.com/company/fundação-renova)



Service and information centres:

### MINAS GERAIS

#### AIMORÉS

Av. Doutor Américo Martins da Costa, 13, Loja 3, Centro

#### BARRA LONGA

Rua Matias Barbosa, 14, Centro

#### CACHOEIRA ESCURA

Rua Monteiro Lobato, 557, Alex Muller, Distrito de Belo Oriente

#### GOVERNADOR VALADARES

Rua Barão do Rio Branco, 480, Sala 601, Edifício Work Center, Centro

#### MARIANA

Av. Bom Jesus, 195, Centro

#### PEDRA CORRIDA

Av. Francisco Silveira Filho, 287, Casa A, Distrito de Periquito

#### RESPLENDOR

Rua Moraes de Carvalho, 831, Sala 4, Centro

#### NOVO SOBERBO

Rua Maranhão, 06, Distrito de Santa Cruz do Escalvado

#### TUMIRITINGA

Av. Amazonas, 980, Centro

### ESPÍRITO SANTO

#### BAIXO GUANDU

Rua Madame Albertina Holz, 165, Loja 4, Comercial Teles

#### COLATINA

Avenida Getúlio Vargas, 500, Colatina Shopping, Sala 812, Centro

#### LINHARES

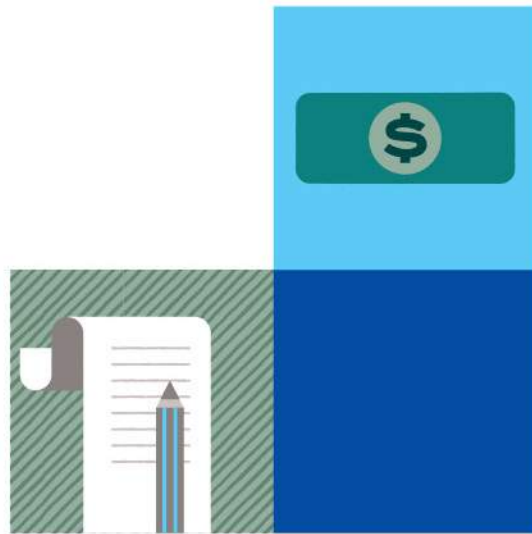
Av. Presidente Getúlio Vargas, 1.220, Sala 315, Torre A, Centro

#### REGÊNCIA

Rua Lídio de Oliveira, 3, Loja 2

# THE SIZE OF THE CHALLENGE

READ ABOUT THE EXTENT OF THE IMPACT, THE DIVERSE NATURE OF THE AFFECTED REGIONS AND THE KEY SOLUTIONS THAT WE MUST PUT IN PLACE TOGETHER WITH SOCIETY:



**Register and indemnify** all those who were affected.



Encourage increased **participation by communities** in decision-making and communicate efficiently with the society as a whole.



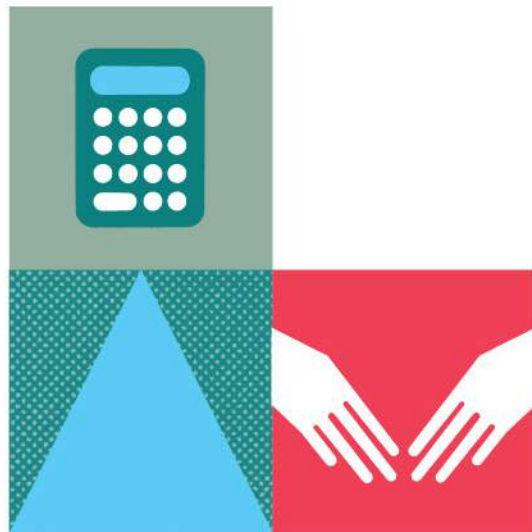
Approve projects, obtain licenses and put in place **resettlement efforts**. currently those persons who lost their homes are living provisionally in shelters chosen by them.



Address ensuing **physical and mental health** issues by those persons affected by the collapse.



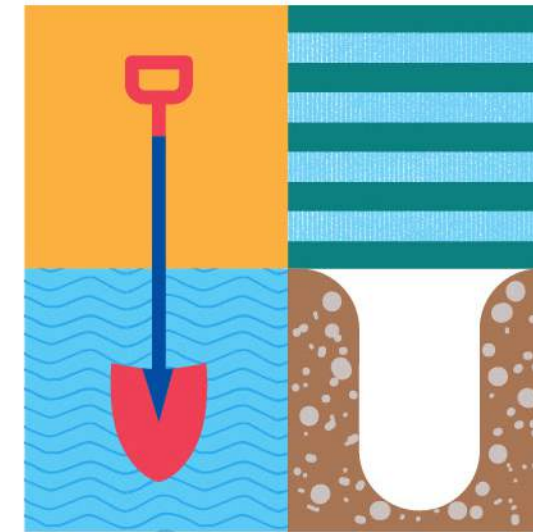
# THE SIZE OF THE CHALLENGE



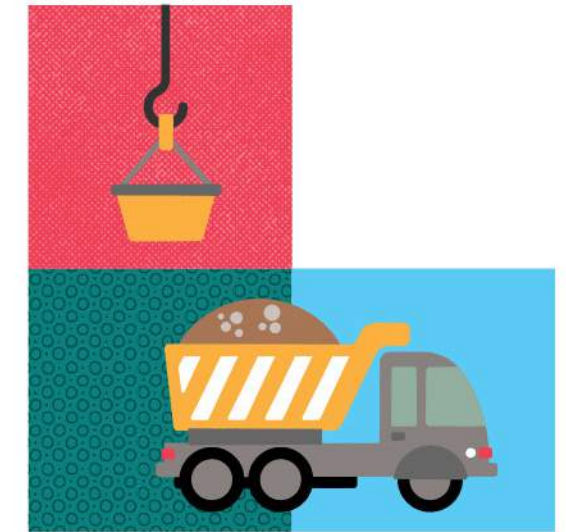
Re-establish conditions to **resume social and economic activities** along the river.



**Encourage dialogue** and create an action plan together with the local population.



Create a solution for **39.2 million** m<sup>3</sup> of tailings that overflowed from the Samarco property.



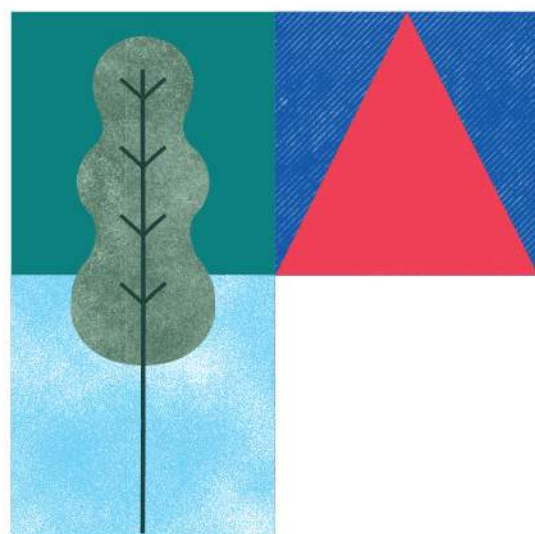
Mitigate the impact of **18.9 million** m<sup>3</sup> of tailings that flowed downstream from the Candonga dam along 537 kilometres to the mouth of the Doce river. Implement a permanent solution to contain these tailings.

\* Source: Golder, 2016. Assessment of Impacts from the Dam Breach Incident on the Physical Environment

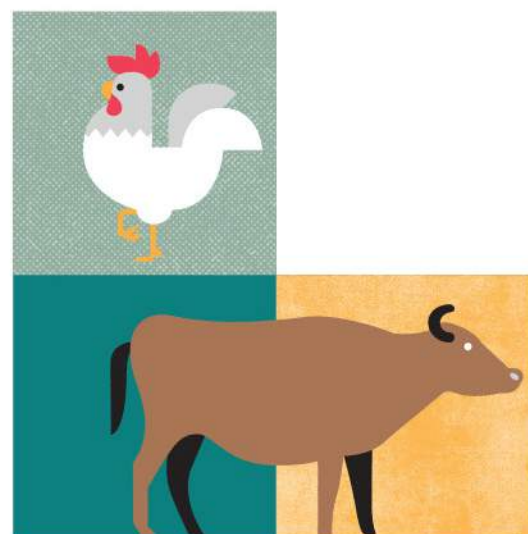
# THE SIZE OF THE CHALLENGE



Organize an integrated plan for **treating water and basic sanitation** in the affected municipalities.



Define a method and start implementing a **forestry restoration** process.



Plan the destinations of **1006** small and large animals rescued.



Develop and implement a detailed social and environmental recovery plan for:

**650 kilometers** of affected area between the States of Minas Gerais and Espírito Santo.

Roughly **15 thousand** families directly impacted.

**40 municipalities** affected.

**737 individuals** initially estimated to have lost their homes in Bento Rodrigues, Paracatu and Gesteira.



# THREE REGIONS WITH DIFFERENT IMPACTS

THE DAM'S COLLAPSE GAVE RISE TO DIFFERENT IMPACTS IN EACH REGION. SEE HOW INHABITANTS FELT THE CONSEQUENCES OF THE ADVANCING SLIMES ALONG EACH STRETCH.



Paracatu de Baixo



Governador Valadares



Mouth of the River Doce

## THE DAM'S SURROUNDINGS

There are small directly affected communities during the first 113 kilometres down to the Risoleta Neves Hydroelectric plant. Some were destroyed in part or in whole, such as Bento Rodrigues and Paracatu de Baixo (districts of Mariana) and the municipality of Barra Longa (district of Gesteira). Families had to be removed from these locations, productive activity was very much affected and there was great need for support.

## THE REGION OF THE DOCE RIVER IN MINAS GERAIS

This is the largest region affected, with almost 400 kilometres, and very populated towns such as Governador Valadares (263,000 inhabitants), Ipatinga (240,000), Caratinga (85,000) and Timóteo (81,000). Water supply was endangered in this area and economic activities related to the river came to a standstill. The impact was greater among fishermen, farmers, sand and gravel extractors, tradesmen and those involved in tourist activities.

## THE DOCE RIVER REGION IN ESPÍRITO SANTO

There are fewer towns in this last stretch of 150 kilometres, but generally more populated, with towns such as Linhares (141,000) and Colatina (111,000). The effects were restricted to the downturn in economic activities by fishermen, subsistence farmers, and workers in tourist activities.

Renova Archives

Renova Archives

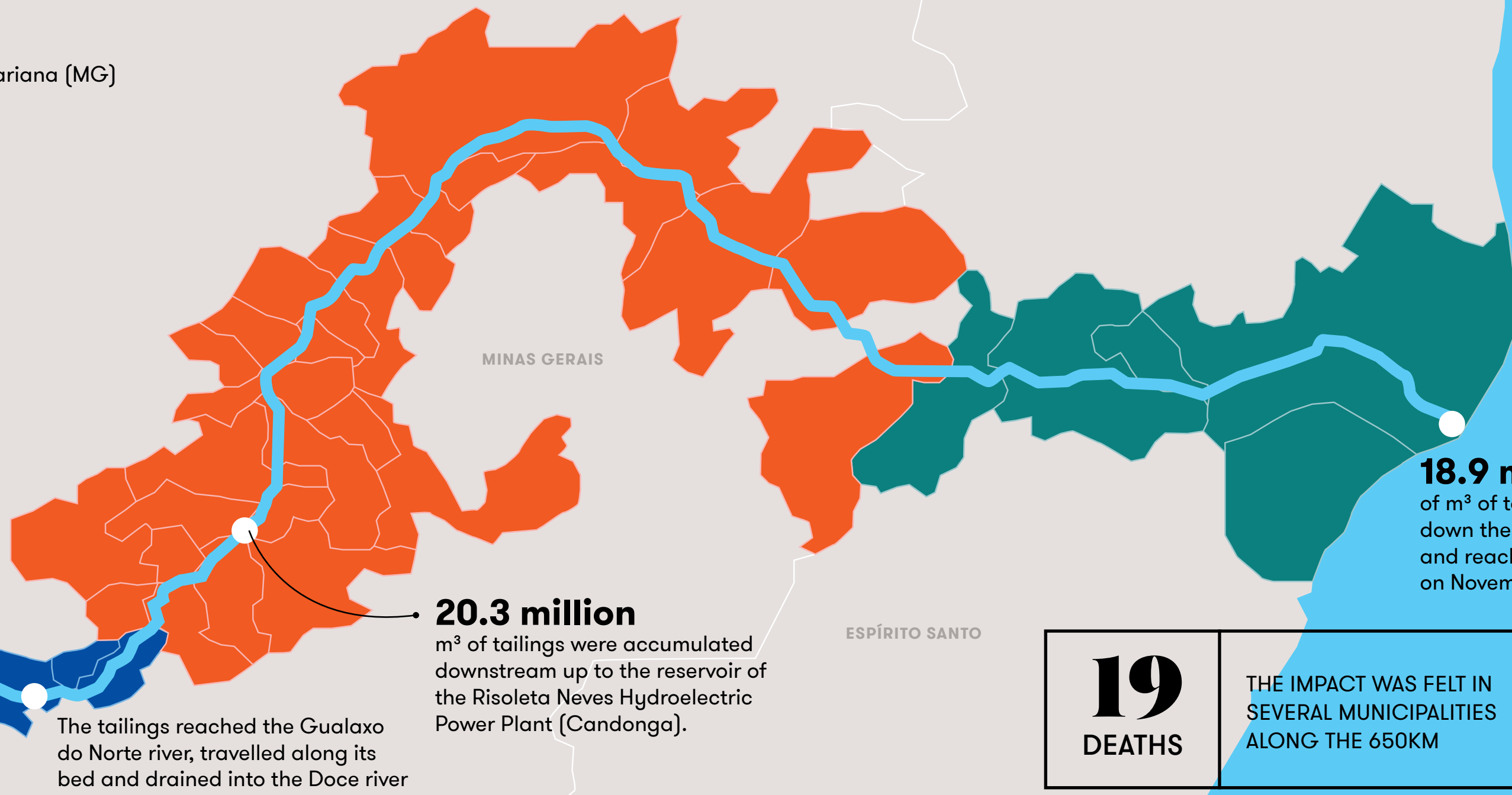
Renova Archives

# THE COLLAPSE OF THE FUNDÃO DAM



**NOVEMBER 5, 2015:**  
Fundão Dam Breach, in Mariana (MG)

Approximately  
**39.2 million**  
m<sup>3</sup> of tailings\*  
overflowed from the  
Samarco property.



**20.3 million**  
m<sup>3</sup> of tailings were accumulated  
downstream up to the reservoir of  
the Risoleta Neves Hydroelectric  
Power Plant (Candonguá).

The tailings reached the Gualaxo  
do Norte river, travelled along its  
bed and drained into the Doce river

**18.9 million**  
of m<sup>3</sup> of tailings flowed  
down the watercourses  
and reached the ocean  
on November 22, 2015.

**19**  
DEATHS

THE IMPACT WAS FELT IN  
SEVERAL MUNICIPALITIES  
ALONG THE 650KM

\* Source: Golder, 2016. Assessment of Impacts from the Dam Breach Incident on the Physical Environment.



# ONE REALITY, MANY TRUTHS

## “I TOOK OFF ON MY MOTORBIKE, BERENICE, TO WARN NEIGHBOURS”

When the dam collapsed I was in Samarco’s seedling nursery. I was a service provider. We heard some noises that seemed to come from an airplane or a helicopter, I’m not sure, a strange noise. Then somebody switched on the radio in the van and we started hearing people in panic shouting about the dam. I took off on my motorbike, Berenice, to warn neighbours in Bento. I didn’t know that my son João Pedro was at home. I drove down the streets shouting and sounding the horn. I ran out of gas but kept on running to warn everybody. Nobody questioned me, people simply left their homes to warn others. I had no idea that a tsunami of mud was heading for our area. I believed it to be water from the river that was flooding out, and that we would then return to clean our houses. It was not before I reached the higher part of the town that I realized the magnitude of the disaster. There I met my parents, my son and neighbours. Nobody could fall asleep. We were all vigilant for Bento that night.

The complexity arising from the dam’s collapse has caused us to accept and experience the multiple views on issues like which actions are the most urgent and how they should be implemented. These opinions are often conflicting, yet they all represent aspects that should be considered in the foundation’s efforts.



**PAULA GERALDO ALVES**  
**37 years of age**, who warned  
 a number of neighbors in Bento  
 Rodrigues and saved many lives

## UMA REALIDADE, MUITAS VERDADES

### “I NEVER HAD THE CHANCE TO CALL AND COMPLAIN, FOR THEY HAVE STEPPED AHEAD IN ORDER TO HEAR WHAT I HAD TO SAY”

“I had decided to live a farm owner life, was quite enthusiastic about it, and had actually hired a janitor to work here. But when the dam accident happened and the mud hit my property up to the front gate. I was very frustrated at the time, and thought of selling the property. Now I am excited again. I have resumed some of the works that had been interrupted. I would say that things are much better after Renova Foundation. All those issues I had complained about and that were stuck, suddenly started to be straightened out. I was about to file a complaint one of these days and then someone from Renova called asking me if I was having any issues with the works in my property. “I never had the chance to call and complain, for they have stepped ahead in order to hear what I had to say.”



**JOSÉ COELHO FARIA**  
*farm owner from Paracatu who had his property affected by the mud.*





## ONE REALITY, MANY TRUTHS

### “VICTIMS DO NOT ACKNOWLEDGE FUNDAÇÃO RENOVA”

I am a member of the committee of victims and editor-in-chief of The Siren. The newspaper has this name owing to the siren that did not sound anywhere on the day of the collapse, in order to save lives. There is a movement here known as “a minute of siren” from the first few days following November 5, instead of “a minute of silence”. Think that Renova uses legal words and expressions very difficult for people to understand.

This makes dialogue difficult. Actually, everything that we obtained was through legal means and not through dialogue, as there is no confidence in this relationship. The victims do not acknowledge Renova Foundation, they do not accept the Foundation for negotiations. Samarco was the cause of everything. So it should be liable for the entire proceedings, in the opinion of some. In my opinion, yes, the Foundation could be created but with participation and support by the victims. To us, the foundation is not representative, though it has been legally created.

We were told when it was organized that negotiations would be made easier. But this is not what is happening. They are dealing with country people, people who greatly value honesty and the word of commitment. I work with all the communities and I see a lot of pessimism in people regarding the future. There is the trauma of having lost everything, indifference and a high degree of discrimination in the town. The boys at school are known as muddy feet. In the beginning the welcoming was great. As time went by, people were blamed for Samarco having to stop its activities. There are groups in the town that encourage this prejudice. There are those who fear going to the market with their assistance cards, because they are discriminated against when they come to the payment counter. I believe that the most difficult part in this whole episode is not the resettlement, but what will happen in two, three years. My question is: will they be able to live in Mariana for this time?



Ricardo Correa

**MILTON MANUEL DE SENA**  
*is part of the committee affected by the dam and is Editor-in-chief of the newspaper The Siren, which portrays the reality of the affected population*



## ONE REALITY, MANY TRUTHS

### “MY DREAM IS TO GO FISHING AGAIN, BUT I DO NOT HAVE ANY HOPE”

I took up my father’s fisherman’s profession, just like other families. The community has always lived mainly from fishing. We never thought of living without the river, it never crossed our minds. The staff of ‘Dialogue’ [Renova Foundation] are always here, but the needs of the community are never resolved. Every time there is a different story. They always talk about the 40 projects for the recovery of the environment, but I do not see anyone solving anything. I think the foundation should look more closely at people who have been affected, think about a project for people to deal with. Before, people had work and this was taken from them. My dream is to go back to fishing, but I do not have any hope. The river may even go back to what it was, but there will always be the question of whether the fish are contaminated or not.



Alexandre Battibugli

#### MONIQUE RODRIGUES DOS SANTOS

**30 years**, belongs to the  
fishing colony of Mascarenhas,  
in Baixo Guandu (ES).





# ONE REALITY, MANY TRUTHS

## “BARRA LONGA HAS IMPROVED TREMENDOUSLY AND IT WILL BE EVEN MORE BEAUTIFUL THAN BEFORE”

We were used to the occasional passage of floods, having lived here for 70 years. But that night the sky was starry, with no rain, so I couldn't believe it when they said it was coming. In the middle of the night, I woke up to the strange noise and went to the bridge to see the mud wave approach. The area was soon bustling with activity. People from the Foundation have treated us very well. Things can sometimes take a while when not entirely within their control. Barra Longa has improved tremendously; the town square is a sight to see and will be even more beautiful than before” People from other parts comment about it. A little while back there was a procession through the streets and people's eyes all turned from the relic to admire the town.



Personal archive

**RAIMUNDO FERNANDES,**  
*from Barra Longa, who is already beginning to see the Results of the work of the Renova Foundation*



Ricardo Correa

## JOSÉ DO NASCIMENTO DE JESUS

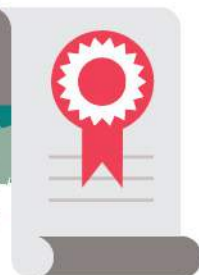
**71 years,** known as “Zezim”, a member of the Association of Residents of Bento Rodrigues and the Commission of the Affected by Dams

## “I KNOW THAT I WILL RETURN TO MY PLACE”

I was wearing only my shorts, flip-flops and with my cell phone. We only saw the mud knocking down everything that it took us 30 years to build. I used to take care of chickens, cows, pigs, and the vegetable garden. And I used to play fiddle and guitar in the Trio Maravilha and in the church choir. I am retired, but I was raised in the country, without luxuries. I can't wait for the new Bento to be built. It is scheduled for 2019, but something tells me that it will change in 2018. Things were slow because everything that depends on the government takes time. But after the community reached a consensus on the project, the child who was crawling will now walk. Most are like me, really anxious to return. Bento will be beautiful, with basic sanitation, education, a police station and town square with a bandstand. What is nice to know is that when you go out to walk you know that you will return to your lifelong home.



## ONE REALITY, MANY TRUTHS



**LEONARDO DEPTULSKI**  
*Chairman of the Doce River Basin Committee (CBH-Doce), during the workshop on fishing organized by the Renova Foundation.*



Renova Video

### “WE MAY BE POSSIBLY WORKING ON ONE OF THE PLANET’S LARGEST RIVERINE RECOVERY PROJECTS”

The catastrophe was enormous and the Doce river valley was already very degraded, thus the expectations for the Renova Foundation were exceedingly high. It is our hope that in the near future there may be a faster recovery of the sources and riparian forests, filtering the tailings from the river and increasing the flow of water to flush its course, thus allowing the river’s environmental recovery. This is a long-term process that requires large scale. We may be possibly working on one of the planet’s largest water recovery projects. The experience in the Doce river valley may be employed in other regions in Brazil and throughout the world. With the resources and the mandate of the Renova Foundation, the capacity of the Instituto Terra to execute and with the collaboration of the rural owners, we can recover the valley of the Doce river in 20 to 30 years. It will be the beginning of a new life for the Doce River.

### “TODAY WE HAVE A PLAN THAT, IF STRICTLY ADHERED TO, CAN CHANGE THE CONDITIONS OF LIFE IN THE DOCE RIVER BASIN”

We are in need of immediate answers. Fishermen had their lives severely affected by the disaster and we need to think wholeheartedly of how to find livelihood alternatives during this time during which resuming fishing is not possible. I have always believed in the Conduct Adjustment Declaration as a better alternative to a lawsuit. We currently have a working plan for the next 15 years based on demands detected in the Doce river basin, thinking of remediation, compensation, mitigation. A plan with a beginning, middle and end, with social, environmental and economic steps, which if strictly complied with over the next 15 years, will change conditions of life not only along the Doce river but over the entire river Basin. We need to persist, we cannot give in after four or five years, so that we will effectively have a river much better than prior to the accident, as the basin was already very degraded.



Arthur Nobre

**SEBASTIÃO SALGADO**  
*co-founder of Instituto Terra, partner institution of the Renova Foundation for the regeneration of river springs.*



# GOVERNANCE

## EVERYBODY TAKES PART IN DECISION MAKING

The activities and solutions proposed and implemented by the Renova Foundation follow a process of involvement, participation and joint cooperation with different stakeholders: the population affected, specialists and public officials - the latter, as representatives of the society.

## THE STEP-BY-STEP DECISION-MAKING PROCESS



We sought a dialogue with those involved to define what to do: by March, a total of 918 meetings, workshops, meetings with communities or with leaderships and assemblies (when there is a vote) with the affected populations - a total of about 130 meetings per month from the start of the foundation's operation.



The actions are taken for discussion in the Technical Chambers as well as the Inter-Federative Committee in order to be approved internally in the Renova Foundation.



The entire decision process is monitored by the Public Ministry of Foundations.

**SOCIETY**



**INTERFEDERATIVE COMMITTEE (IFC)**

Public agencies, representing society, accompany, monitor oversee the results of Renova

**10 TECHNICAL CHAMBERS**

 Social organization and emergency aid	 Reconstruction and recovery of infrastructure	 Communication, participation, dialogue and social control	 Economy and innovation
 Local and Indigenous Peoples Communities	 Restoration of forests and water sources	 Health, education, culture, leisure and information	 Waste management and environmental safety
 Conservation and biodiversity	 Water security and water quality		



**BOARD OF TRUSTEES**

Composed of members nominated by the board and IFC which ensures compliance with Renova's objectives



**ADVISORY BOARD**

It is the voice of society about the format and progress of programs



**FISCAL COUNCIL**

Controls and guarantees the adequate use of the financial resources associated with Renova's activities



**PANEL OF SPECIALISTS**

Helps in the search for a solution to existing disagreements between IFC and Renova



**OMBUDSMAN**

Receives positive and negative reviews about the work of Renova



**COMPLIANCE**

Creates rules for processes to comply with the law and actively monitors their application



**EXECUTIVE BOARD**

Manages the work and accounts for the activities of Renova



**CURATOR OF FOUNDATIONS OF THE MINAS GERAIS PUBLIC PROSECUTION OFFICE**

Supervises the activities of the Renova Foundation



**INDEPENDENT AUDIT**

Verifies the results of programs and projects managed by Renova and in compliance with TTAC



# PARTICIPATORY GOVERNANCE MODEL

Renova Foundation's activities are framed within an unprecedented governance model in Brazil. In view of the magnitude of the challenge, Renova Foundation decided to innovate as to how the decision making process would take place, involving communities, government officials and experts, who should have a voice along the remediation process.

The system is monitored by the Minas Gerais Public Prosecution and is included in the Conduct Adjustment Declaration (TTAC), a document whereby Samarco and its shareholders, Vale and BHP, commit to fund reparation activities as adjusted on in the agreement.

Aside to the legal obligations, Renova Foundation should be guided by the tenets of transparency, dialogue and participation by society. It is believed that this is the sole manner of creating long-lasting solutions that meet the affected population's interests and that will allow the affected area to develop and recovery. This commitment will enable social and environmental practices to be discussed, defined, absorbed, preserved and improved over time.



## EXTERNAL GOVERNANCE

### INTER-FEDERATIVE COMMITTEE (IFC)

This is the main external communication instance between public agencies and the Foundation.

This panel meets once every month and is composed of government representatives (see members on page 110). It discusses action plans, provides support in preparing the Terms of Reference for studies to be carried out and invites society representatives depending on the topics under discussion. Renova Foundation itself sits in this forum as a guest. It is noteworthy that the participation of regulatory agencies in the IFC under no circumstances limits their surveillance and police powers over Foundation activities within their jurisdiction. IFC is comprised of 10 technical chambers that provide advice for a detailed analysis of actions proposed and results obtained. Namely:

#### **Socioeconomic Technical Chambers**

- Social Organization and Emergency Assistance
- Infrastructure Reconstruction and Recovery
- Economics and Innovation
- Indigenous People and Traditional Communities
- Communications, Participation, Dialogue and Social Control
- Healthcare, Education, Culture, Leisure and Information

#### **Socioenvironmental Technical Chambers**

- Tailings Management and Environmental Safety
- Forestry Restoration and Water Supply
- Conservation and Biodiversity
- Water Quality and Water Safety

### INDEPENDENT AUDIT

One of the obligations defined in the TTAC involved the hiring of an independent audit firm subordinated to IFC by Renova Foundation. Since April 2016 the firm selected by means of a public bid has been supervising activities since program definition stage. This is a results-oriented audit, in other words, besides verifying scope compliance, it also audits the accounting activities and makes sure program criteria and goals, as defined by IFC, are being observed.

### EXPERT PANEL

As prescribed by the TTAC, this panel provides for another conflict solution instance in case of a relevant disagreement between IFC and Renova Foundation. In order to assist in finding solutions for these differences, the Expert Panel should be integrated by an IFC representative, one from Renova Foundation and another selected under mutual agreement by both organizations, in order to submit an independent opinion on the topic under discussion. This instance is composed as needed and has not been employed to date.

—————> Every decision taken by the IFC is made public on Ibama website in the following link: : [www.ibama.gov.br](http://www.ibama.gov.br) > Recuperação Ambiental > Rompimento da Barragem de Fundão – Desastre da Samarco > Comitê Interfederativo (IFC)



## INTERNAL GOVERNANCE

### BOARD OF TRUSTEES

The board of Trustees is responsible for ensuring that Renova Foundation’s objectives are being complied with. It is composed by two sitting representatives from each Maintaining Company, (Samarco, Vale and BHP), and by a representative appointed by IFC, in addition to deputy members appointed by the organizations. Board members should be unbiased from companies interests as to ensure Renova’s autonomy for decision making.

### OMBUDSPERSON

The **Ombuds Office** is aimed at receiving and handling unsolved requests by other service channels as well as Renova Foundation law suits. It is an independent entity and is directly related to the Board of Trustees. Out of the 413 requests received from August to December 2016, 155 cases were concluded.

### BOARD OF ADVISORS

A formal forum from society representatives within the Foundation’s governance structure. This board is composed by 17 members, of which: 5 are assigned by the Committee for the Doce River Watershed; 2 appointed by Interministerial Commission for Marine Resource; 5 representatives from Research Institutions or Professionals with renowned expertise in specific areas of activity; 5 representatives from affected communities; 3 from Minas Gerais and 2 from Espírito Santo. It’s supposed to advise the foundation, providing opinions on plans, programs and projects. Members of the Advisory Board do not have a defined term for holding office.


### FISCAL COUNCIL

Its main role is to inspect Renova’s accounting standards and management’s financial compliance. It is composed by 7 members, of which: 1 appointed by the Board of Directors, one by each of the sponsors, a Federal Government representative and one representative from each state, Minas Gerais and Espírito Santo.

### COMPLIANCE

By observing best governance practices, Renova Foundation’s compliance department reports directly to the Board of Trustees, and is functionally subordinated to the President. its activities are focused on proposing, supervising, organizing, implementing and monitoring Renova’s policies and activities (Renova has a code of conduct and an Anti-corruption Policy) as well as its service providers.

*In number of reports*

STATUS 	TOTAL <i>Nov 15 to Jul 16</i>	TOTAL <i>Aug to Dec 16</i>	TOTAL	
Concluded *	501	155	656	70,54%
Ombudsperson Scope	161	71	232	
Out of Scope	340	84	424	
To be concluded *	14	104	118	12,69%
Ongoing *	2	154	156	16,77%
Total	517	413	930	

\*

**Concluded:** calculation completed and closed in the system.

**To be Concluded:** calculation completed, currently awaiting implementation of critical recommendations reason why it is not closed in the system.

**Ongoing:** calculation initiated but not yet completed.

*Source: ICTS system, situation on March 24, 2017*

# HOW RENOVA FOUNDATION OPERATES

Except for the programs that have an emergency nature such as the financial assistance one, all other programs are submitted to an action definition stage, which relies on the participation of the affected people or specialists, whether to map expectations or to discuss and identify the best practices to be adopted.

For this reason, Renova Foundation is constantly searching for dialogue and developing studies and solutions for the remediation, restoration and reconstruction of the affected areas. This demeanour is supported by the highest reference standards, both in detecting a robust scientific basis for developing its solutions

and in efficiently performing its activities. This includes taking into account universal topics such as human rights in the decision making process.

🔴 Internal validation stage

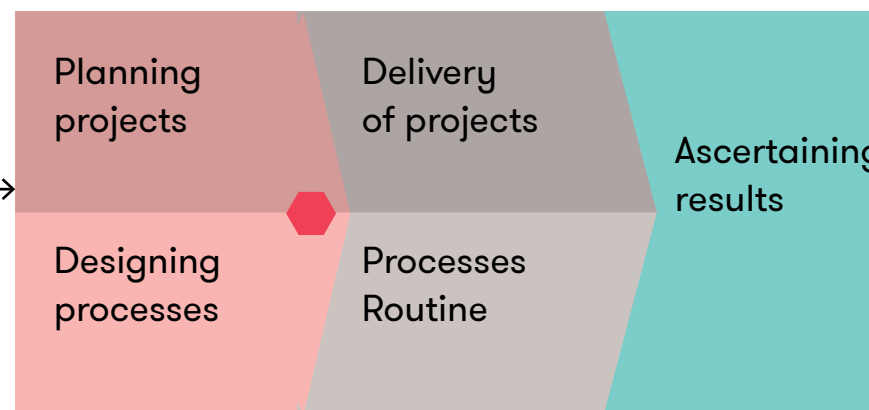
🟡 Approval of definition

🟢 Approval for closure

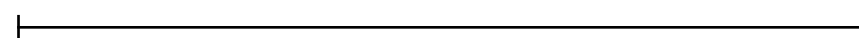
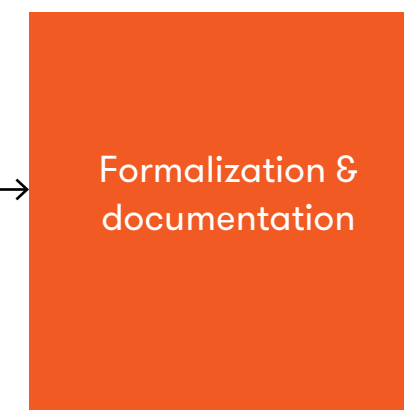
## DEFINITION



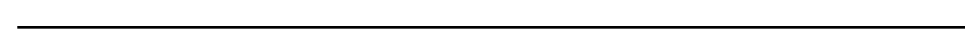
## EXECUTION



## CLOSURE



Stakeholder engagement






We all have a lot to learn with the progress of activities. By virtue of a greater knowledge and dialogue with all stakeholders, we are given the opportunity to find better pathways than those set forth in the initial commitment, last March. For this reason, and always observing the governance system principles, many achievements are yet to integrate the design of the recovery activities.

## OUR TEAM

During the first months of activities we have been focused in setting up a work team skilled enough to face the big challenges ahead of us. One of our priorities is to attract professionals with extensive technical expertise in the disciplines we have to work at, who are also equipped with open-mindedness and resilience to accept discussions, controversies and uncertainties, in addition

to having management and leadership skills in order to efficiently deliver the expected results. We place great value on professionals who are sensitive enough to understand both the human and environmental aspects involved. As of last January, we have started an internal process of collectively building our identity, values and culture, quite likely to expand in an outward engagement process.

 <b>RENOVA TEAM</b>	<b>MEN</b>	<b>WOMEN</b>	<b>TOTAL</b>
Permanent contracts	41	31	72
Shared services*	214	27	241
Permanent contracts	169	137	306

\* Employees who began the emergency repair works, at the funder companies, and who are still allocated to work on the restoration actions.

# INTERVIEW

## Roberto S. Waack

“We must reconcile production and reparation”

Biologist and business administrator Roberto S. Waack unites an extensive experience as an businessman in national and international companies, entrepreneur and manager in civil society non-profit organizations. As President of Renova Foundation, he is mainly focused in reconciling the management of the entire operation to the different perspectives of all parties involved in the reparation works. Allied to that, he is prepared to deal with complex situations, by shedding an expanded look at the legacy that will be built over time, as much as to add a sense of urgency in putting in place concrete actions, jointly devised with society, as quickly as possible.

## QUESTIONS FROM SOCIETY REPRESENTATIVES

**Dr. Valma Cunha, State Prosecutor in Minas Gerais**

### WHAT HAS RENOVA FOUNDATION BEEN DOING TO PROVIDE SOCIETY WITH TRANSPARENCY ON ITS ACTIONS AND STRUCTURES?

There are a number of actions in this regard. Programs and projects are discussed in conversation forums of different levels, and with a number of members of society, in order to understand problems, get suggestions of possible solutions, design a solution driven working program, develop result indicators and, finally, to create implementation and monitoring mechanisms. This modus operandi is complemented by discussing programs and projects in the Technical Chambers and the Inter-Federative Committee, forums which count on a major participation by society. Moreover, creating the Advisory Board with the participation of representatives from the affected communities, affected river basin committees and members of the academia, provides an account rendering routine as meetings are held monthly.

Renova Foundation also relies on a number of communication instruments, including a website, radio programs, social media activities and, in special, a strong presence in the field. A number of programs count on the participation of local organizations in their activities.

And last, but not least, activities are audited in different aspects including accounting and finance, under the supervision of the Fiscal Council, as well as processes and finalistic deliverables. Every audit is held by independent first-class auditing partners. We understand that transparency is not merely an obligation but an important substrate for rerouting whenever required. We are fully aware that the challenges have no simple and ready solutions. Transparency provides an access channel and a permanent dialogue with society, certainly the greatest source of knowledge for the solutions we will need to find and implement.



Roberto S. Waack, on a meeting with the community of Ilha Brava, Governador Valadares (MG)



## INTERVIEW Roberto S. Waack

## QUESTIONS FROM SOCIETY REPRESENTATIVES

**Simião Barbosa dos Santos, President of the Association of Fishermen and Alike from Povoação (APAP), Linhares (Espírito Santo)**

**WHAT ARE THE SPECIFIC DEVELOPMENT PLANS THAT RENOVA FOUNDATION HAS FOR THE COMMUNITY OF POVOAÇÃO, WHO LIVES ALMOST ENTIRELY FROM FISHING? I KNOW YOU HAVE THOSE AND 40 AND SOMETHING PROJECTS, BUT WHAT, IN FACT, WILL BE IMPLEMENTED IN THE COMMUNITY?**

Renova Foundation recognizes the importance of the fishing activity to the Povoação region and to several other Doce river valley regions. We are aware that some of our responses are quite below expectations. We are making progress in detecting and registering victims in order to accelerate the mediated compensation procedure. Although time-consuming, this action is necessary as it will ensure that everybody claiming some sort of comp will be actually heard.

**In the specific case of fishermen, the hydroponics pilot project (suspended fish tanks) is under implementation.**

In addition to this one, several other actions are being further developed, based on conversations with community members and diagnostic actions. The list of suggestions is being converted into a set of regional projects. One

example is the participation by fishermen in activities such as fishing for biodiversity and food safety scientific studies. Another possible action involves community participation in gathering seeds for forestry recovery programs. There are also alternatives such as involving fishermen in tourism activities with small boats. However, it should be clear that we have not defined yet this program as planned, hearing more and in a more structured manner, providing a broader answer to your query and that of a number of community members. We still expect that during the first half of the year this joint action plan will be completed.

**Paula Geraldo Alves, Resident of Bento Rodrigues**

**WHAT CAN THE FOUNDATION DO EMPLOYMENT WISE FOR THE AFFECTED POPULATION IN MARIANA? IN ADDITION TO THE CRISIS, PEOPLE ARE BEING STIGMATIZED WHEN LOOK FOR A JOB.**

Renova Foundation has been prioritizing the hiring of local people and local businesses. This is a first contribution for job creation, but we know this is far from meeting the demands of the population. For this reason, we have some programs focused on innovation, entrepreneurship and training in various activities that can be carried out by the local people for longer periods of time. They are aimed at increasing business opportunities, further reducing the dependence on sectors such as mining. Some of these programs are under way and we expect to start implementing them later this

year. They are part of our conversations with members of the community and organizations focused on training and innovation in the States of Minas Gerais and Espírito Santo.

With respect to stigmatization, Paula, it is unacceptable. It is not easy, however, to understand how these things happen in our society. The foundation is, little by little, implementing its communication program, which involves a number of forms and topics. Among them, this situation that you report will be addressed with due care, so that we can dream of a situation where the entire society that lives from Mariana to the mouth of the Doce river can participate, each in its own way,

in repairing the damage caused by the dam breach and in building a more balanced way of life for everyone. The world is undergoing important changes with respect to the relationship between people and nature. This situation will open new work alternatives, especially for a region with such a rich natural, human and cultural heritage landscape.

# INTERVIEW Roberto S. Waack

## QUESTIONS BY THE EDITORS

### THE PERCEPTION OF PUBLIC OPINION IS OFTEN ONE OF SLOWNESS, IF NOT INDIFFERENCE. WILL IT BE POSSIBLE TO CHANGE THIS IMAGE IN 2017?

We have to recognize that this perception of slowness does, indeed, make sense. And we need to speed up the implementation of recovery actions in order to revert this situation and, consequently, this image. No matter how much this is not an attempt to justify things, it is important to bear in mind that we are facing a significant change. We have begun to define and implement structural actions that have a slower rhythm of implementation if compared to the initial emergency actions. Aside to that, the whole process has undergone another transition period, which was the consolidation of Renova Foundation in August 2016, as an independent entity responsible for creating solutions that will have a lasting positive impact on the region affected by the dam breach.

### HOW CAN THE IMPLEMENTATION BE ACCELERATED?

We are facing a challenge for which there are no overt the counter solutions. On the contrary, we are facing a lot of ambiguity, contradictions between multiple views, and we need to build a consensus around solutions that will be at the frontiers of knowledge. Having said that, we

have adopted the premise of developing solutions from the involvement of society. More time is spent in this participatory process, but we shall gain efficiency in its implementation, which will have the support of the stakeholders. We are going to recover this time further ahead. Therefore, it is worth making this investment in collective construction in order to address this complexity in the development of solutions.

### IN FACE OF THIS SCENARIO, WHAT TARGETS HAVE BEEN SET FOR THE FOUNDATION IN 2017?

It is our goal that 37 of the 42 programs under the responsibility of Renova Foundation will have passed the stage of adjustment and adaptation of what must be done for their final execution.

In concrete terms, this means that a series of actions should already be experienced in the field. For example, we must test models on: how to recover water springs, how to start reforestation and promoting cultural events, among so many others. Similarly, all the containment structures need to be erected and consolidated,





# ENTREVISTA Roberto S. Waack

## QUESTIONS BY THE EDITORS

the solution for the dredging of Candonga (the reservoir of the Risoleta Neves Hydroelectric Power Plant, which lodged 10.5 million cubic meters of tailings), as defined by the public prosecutor, should be ready and in implementation, and this is an engineering challenge. We need to count on the guarantee that over the next rainy season tailings will not be washed down into the river and that, therefore, we shall have the impact under control with no incoming ones. From an internal perspective, our goal is to have an organization capable of dealing with long-term structural actions as a legacy – a team with this imprinted identity, with this long-term commitments, aided to the short term ones, that manages to promote the engagement and participation of society in a concrete solution generating process.

### WHAT ARE THE MAIN LESSONS FROM THE FIRST MONTHS OF THE RENOVA OPERATION?

Without a doubt, the definition of governance throughout the entire recovery process, which is highly innovative. How to put this big of a challenge under the umbrella of an incredibly complex governance system, with an average of 150 people and organizations sharing in the decision-making process. There was a widespread lack of belief in the functioning of this participatory model of governance and it is already working. As a matter of fact, we totally lacked such an experience in Brazil of how to respond to major disasters and this has been a highly valuable lesson.

### WHAT GUARANTEES RENOVA'S INDEPENDENCE IN RELATION TO THE MAINTAINING COMPANIES IN THE DECISION MAKING PROCESS?

First and foremost, for legal reasons, a private law entity ought to be structurally independent, directly reporting to the Public Prosecution Office. On top of that, there is the governance system, defined by the Conduct Adjustment Declaration (TTAC), which created the inter-federative committee (IFC), responsible for maintaining the dialogue and monitoring the actions of the Foundation. The Advisory Board is another a key element with representatives from society. The Board of Trustees should strive to achieve the Foundation's best interests and its core responsibilities are related to strategy, governance, risk management and budget allocation.

### WHAT ARE THE MAIN BARRIERS TO OVERCOME?

We are learning to deal with the complexity, in special, governance wise. But there are very serious obstacles from the technical solutions point of view in areas for which science still has no answer. There is no consensus, for example, with respect to the restoration of forests through planting native species. This is a technical barrier that will have to be overcome as quickly as possible. We need to come out of the dialogues with concrete solutions. It is important to remember that we operate 100% in third party areas and it will be in these areas that this restoration will occur. Therefore, in order to have a sustainable solution, it must make sense to the

owner from the economic point of view, both immediately and in the long run. The big challenge of the year will be to identify the best solution to reconcile production and restoration. After all, the plots of land of these owners, mostly small farmers, are their livelihood. Only with this combination (production and conservation) will these initiatives make sense to them.

### IS IT NECESSARY TO COME TO A CONSENSUS IN FINDING SOLUTIONS WITHOUT LOSING THE SENSE OF URGENCY?

We have no right to linger in the discussion with specialists and organizations for the sake of discussion. We need to make the shift to the practical application. We must translate all this diversity of opinions into concrete filed actions, which is a big challenge. Finally, we also have to understand how to reconcile our initiatives with the existing public policies.

# ENTREVISTA Roberto S. Waack

## QUESTIONS BY THE EDITORS

### WHAT PERSPECTIVES DO YOU ENVISION FOR THE USE OF LAND ALONG THE LENGTH OF THE DOCE RIVER?

We have to switch from the recovery perspective to the legacy one. In other words, not only rebuilding or recovering for the short term, but doing it aware that every action can, and should, entail the foundations of a sustainable future.

This is an opportunity for a developmental inflexion of the entire region. Based on the premise of reconciling production with conservation, we should leave the individual vision of each property, and look at the whole territory instead, developing innovative long-term territorial management strategy. Within this spatial logic, developing ecological corridors, integrating with the revitalization of the springs and democratizing the opportunity for all producers in the region,

bringing more advanced concepts of land use, logistics, disposal, access to markets, financial flows, payment for environmental services and etc., it is possible to dream of the legacy of a social technology, supported by a system of participatory governance that reduces the volatility of the process and which could be applied to many other degraded regions in Brazil.

### WHAT IS THE GREATER AMBITION THAT DRIVES RENOVA FOUNDATION?

Renova Foundation aims at being a facilitator of this recovery process which may lead to a new development model for the Doce river basin, for which there is no easy solution, since it is not based on paternalistic but rather on structuring actions. It is based on the search for environmental, social and economic balance by mobilizing society. Population is ultimately the one to buy this idea. The only caretaker of this model is society. If we manage to do this in the territory affected, we can think of something similar for other regions of Brazil.





A landscape photograph at sunset or sunrise. The sky is a mix of orange, yellow, and grey. In the foreground, a fence with wooden posts and barbed wire runs across the bottom. A grassy hill rises in the middle ground, where three cows are silhouetted against the sky. One cow is in the lower center, another is to its right, and a third is further up the hill on the right. A single tree stands on the hill to the left of the cows. The word 'THEMES' is written in white, uppercase letters across the center of the image, between two horizontal white lines.

# THEMES



# WHERE AND HOW WE WANT TO MAKE THE DIFFERENCE

## The 42 remediation and compensation programs

to be implemented by Renova Foundation were divided into three themes, which gather the main actions in the recovery process after the impacts caused by the dam failure.





The theme division methodology is very helpful in demonstrating the interrelationship between all programs prescribed by the TTAC, making it clear that they function as an interconnected system and may gain efficiency from an integrated work approach. Know the action fronts and programs that are part of our three themes:

## THEME 1

# PEOPLE AND COMMUNITIES

### Action Fronts

- Identification and Compensation
- Education and Culture
- Healthcare and Well-being
- Traditional and Indigenous Communities
- Economic development
- Engagement and Dialogue

### Related programs:

Registration of Affected Families / Compensation and Indemnification of Affected People / Protection and Recovery of the Quality of Life of Indigenous People / Quality of Life of other People and Traditional Communities / Social Protection / Dialogue, Communication and Social Participation / Restoration of Schools and Reintegration to School Community / Historical, Cultural and Artistic Memory / Tourism, Culture, Sport and Leisure / Physical and Mental Health of the Affected Population / Emergency Financial Aid / Environmental Education / Information for the Population / National and International Communication / Resumption of Aquaculture and Fishing Activities / Diversification of the Regional Economy / Micro and Small Size Businesses / Incentives for Local Hiring / Reimbursement of Extraordinary Public Expenditure

## THEME 2

# LAND AND WATER

### Action Fronts

- Land use
- Water Management
- Tailings Management
- Biodiversity
- Animal Rescue
- Innovation

### Related programs:

Animal Rescue / Risoleta Neves Hydroelectric Power Plant Reservoir / Resumption of Farming Activities / Tailings Management / Recovery of Environmental Area 1 / Recovery of Permanent Preservation Areas / Recovery of Water Springs / Conservation of Biodiversity/ Recovery of Wildlife / Terrestrial Flora and Fauna / Monitoring of the Doce river basin / Readiness for Environmental Emergencies / Conservation Units, Implementation of CAR and PRA / Socioeconomic Technologies

## THEME 3

# RECONSTRUCTION AND INFRASTRUCTURE

### Action Fronts

- Resettlement
- Tailings Containment
- Water and Effluent Treatment
- Urban Infrastructure and Road Access

### Related programs:

Reconstruction of Villages / Recovery of Other Communities and Infrastructures Affected / Improvement of the existing Water Supply System / Sewage Collection and Treatment / Tailings Containment System and River Repair Strategy / Environmental Risk Management

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KNOW THE INVESTMENT IN EACH THEME ON CHAPTER FINANCIAL DATA, ON PAGE 78.

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TO LEARN MORE ABOUT THE PROGRESS OF EACH PROGRAM, SEE PAGE 85.

# ENGAGEMENT AND PARTICIPATION

Restoring affected areas and re-establishing the lives of all those involved will only be effective if made by many hands. Therefore, it is our mission to guide all our actions based on engagement and transparency. Since the first day we took over the recovery activities of the areas affected by the dam breach, we have sought to jointly build solutions with those involved, attentively listening and structurally embracing all matters that were key to each issue.

And we do this in a couple of different ways:

**1** Our [management model](#) for the restoration programs counts on the involvement of people involved during the definition of strategies, development and implementation of solutions. Our concept of involved people considers local residents, communities representatives and different experts who should take part in the discussions as to guide the actions of Renova Foundation. This model is still under construction and it is aimed at involving society in the main structuring processes.

*[Learn more about this model on page 25.](#)*

**2** When faced with issues for which solutions are still to be discovered by science, we seek to involve knowledgeable specialists, in order to build together the knowledge basis required to solve that matter. Panels, workshops and brainstorming have been held, using methodologies that contribute to the collective construction of understandings. That was the idea on the panel on yellow fever, which sought to understand all possible connections between the disease outbreak in the Doce river basin and the dam incident; same thing for the Tailings Management Workshop, which involved the participation of tailings experts, water and remediation of degraded areas specialists, as well as representatives of environmental agencies that rule on the subject. Both meetings were broadcast in real time through our website, another knowledge sharing initiative focused on society.





**3** In matters with direct implications over the lives of affected people, collective construction methods are introduced from beginning to end. This multiple-hand strategy was the one we used to redesign the Bento Rodrigues urban resettlement master plan. Together, residents themselves concluded the [map design for the New Bento](#).

*Learn more about this process on page 70.*



**4** At the very front line of Renova Foundation, lie our [Dialogue teams](#), who deal very closely with communities, almost always addressing delicate issues like the dispersion of acquaintances after having left their villages, the difficulties in adapting to the new school, the lack of planting area, the homesickness and the simple fact that life unexpectedly followed new paths. Throughout the whole territory along the 40 municipalities, we seek to establish an individual dialogue with all those affected and learn about their needs and wishes.

*Learn more about the Dialogue activities on page 55.*


**5** We can also count on various [support channels](#), that work as points of contact between Renova and society.

*Learn more about the service channels on page 11.*


Along the following pages, we'll bring you some examples of how this continuous dialogue has already made a difference in the execution of the programs to be implemented. A multiple learning experience, often imperfect, but which we believe to be the most appropriate way to reach long lasting solutions, which are truly embraced by people.


# PEOPLE AND COMMUNITIES


## CHALLENGES

- 


To encourage greater participation of communities in the decision making process
- 


To identify the affected population
- 

To extend the epidemiological and toxicological studies to the entire Doce river valley
- 

To align actions with public policies
- 

To efficiently communicate with all society
- 

To compensate all populations affected
- 

To address mental health issues resulting from stress related causes
- 

To jointly build an action plan with indigenous communities

## HOW WE BUILT THIS CONTENT

The challenges presented in this chapter reflect the perception of Renova Foundation’s management team in March 2017 about the priority issues to be addressed in our remediation actions. After liaising with the affected population and program managers, we selected the topics in this theme which currently present the greatest challenges or progress. They do not embrace all the themes we are working on, but can be seen as a sample of the most critical topics raised during our first eight months of operations, from August 2016 to March 2017.





# 1 IDENTIFICATION AND COMPENSATION

## KNOWING THE IMPACT ON EACH INDIVIDUAL

Registering all of the affected people and families is a decisive step towards reaching a final solution those who have had their lives disturbed. This process is delayed in the worst-hit region - cities of Mariana and Barra Longa - and should have been completed in 2016, being one of the major challenges in the attempt to understand the problem. Initially, even before Renova existed, a joint effort was made to produce a very simple list of those affected.

The purpose of the redoing the registry is to have a more accurate measurement of the impact on the life and assets of each family. This will be a key component for estimating the reimbursements and compensations. However, a conceptual deadlock has been standing on the way to a good solution. Prosecution officials believe the Registry should include intangible assets.

We believe that this assessment should be made in a subsequent stage, during which the agreements will be defined.

Until a consensus is reached with the Prosecution for the people in Mariana, what covers around 1,000 families, we are advancing in other areas of the of Doce river.

10,000 registrations from the Doce river region have already been delivered for the appreciation of the Inter-Federative Committee.

This first campaign, including 14,000 registrations, was closed on march 30. A new campaign will begin in April 2017, scheduled to be concluded in September. Thus, by the end of 2017 we shall have 100% of the affected population fully mapped.



# 1 IDENTIFICATION AND COMPENSATION

## ADVANCING WITH THE PAYMENTS

“My dream is that they will send me the emergency card. You have no idea how difficult life has been, I would like to be able to buy something wonderful for my two daughters” says **Edilene Nunes de Jesus**, one of the affected people who lived from fishing and family agriculture along the margins of Café stream, in the rural zone of Belo Oriente. Now that she has been registered, Edilene has the chance of having her situation analysed and may be receiving the Emergency Financial Aid for those who have had their productive activity compromised the dam collapse. This aid has already reached 8,159 families by March 2017. Those who were affected receive a monthly debit card to withdraw money and pay for their expenses.

Indemnifying the losses and the damages caused to those affected is a key task for Renova Foundation. Meeting the specific claims of each family in the region more dramatically affected by the dam breach has also started in Barra Longa and Linhares (take a look our service units on page 11).

There are cases of shop owners and farmers who receive a compensation amount in accordance with a matrix developed by technical institutions that have been jointly appointed by the population, the technical chambers and the public defender’s office. These are agreements which are directly linked to the registration process. It is estimated that around 15,000 families are part of this universe.

Another major front of compensation that is being implementing addresses the damages caused by the water shortages in the days following the passage of the mud wave down the Doce river. Residents from Governador Valadares, in Minas Gerais, and Colatina, in Espírito Santo, have begun to close compensation agreements since October.



Alexandre Battibugli

Until march 11, 51,000 people had been contemplated in Governador Valadares (mg) and 15,000 have already received the debit card to withdraw the compensation amount. In Colatina, 28,000 people have also been supported, and 8,000 have been registered to cash out the value, which was established at around R\$ 1,000 per person – minors, elderly’s, pregnant women and people with special needs get an additional 10%. It is estimated that about 400,000 people will have access to their funds until July 2017.

### PROGRAMS INVOLVED:

1: Collecting of Data and Registration / 2: Compensation and Indemnification / 21: Emergency Financial Aid / 42: Reimbursing Extraordinary Government Expenditure



## 2

## EDUCATION AND CULTURE

IN SEARCH FOR  
NORMAL LIFE

18 year-old **Júlio César Salgado** is part of the group of young people from Bento Rodrigues who have been having a hard time in maintaining contact with friends as they were relocated with their families to houses in Mariana. His life, with a big enough change just by being an adolescent migrating to an adult world, has become even more challenging. “The destruction of my community and the moving to Mariana have forced me to grow up, to be more mature and taught me how to take on responsibilities. I have concluded my education and just turned 18. Actually, I never imagined my life outside of Bento Rodrigues. Not even going to university was such a big dream before”, he says, and his heart is now divided between studying Physical Education and Law, a new interest that has emerged after the dam episode.

“My life in the old Bento was good. I was free, there were fruits on the trees and today we have to buy everything in the city. We used to swim in the rivers and waterfalls. In addition, my friends were always nearby and now we live far from each other. I really



Ricardo Correa

miss that contact. Everything there was easier, including having a job. I used to weed for others, help on a construction site and things alike. In the city, in order to have a job you must have experience. But how can I find a job if I have never had a formal job before?” he asks. Even with the possibility of studying in Ouro Preto, Júlio César wants to return every weekend to the New Bento, once it is rebuilt. “The worst of all, in addition to the tragedy, was to have been prejudiced against. Many of us have already been accused by residents of the city that it was our fault that Samarco

has not resumed its operations. Who doesn’t want the company to get back to work? We all want this, but with greater responsibilities to avoid tragedies like this one.”

Júlio César is one of the 103 kids from the student community that includes Bento Rodrigues, Paracatu, Gesteira and Barra Longa that had to be referred to other schools in Mariana and Barra Longa, in collaboration with the Municipal Secretariat of Education.





## 2

## EDUCATION AND CULTURE



The main focus of the program was to get primary, elementary and high school students back to school, offering them psychological and pedagogical monitoring. All schools that have been directly affected are back to their activities in temporary facilities by now. **Gustavo Capanema Municipal School**, in Gesteira, has been fully remodelled and since the beginning of the school year of 2017 has been welcoming its students back. A 3.2 meters high panel with artworks done by the students and teachers stands at the school entrance, and exhibits their expectations for the space in the form of drawings.

With a broader look, we believe that young people have, through natural conditions, a transforming potential and we want to create conditions where they can, in the medium term, feel motivated and able to think about the future that they want to build on the territory they occupy. This process had already begun, although experimentally, in February with a group of young people from Bento Rodrigues who experienced all the difficulties of adaptation described by Júlio César. Right now, our goal has been to include young people from Mariana to promote integration and thus promote room for dialogue and co-creation. We want to stimulate a new look, expanding the field of view, the perspectives and awaken this collective transforming force. Accordingly, they will have more opportunity to assume a major role in the recovery of the regions in which they live.



## 2 EDUCATION AND CULTURE

### THE IMPORTANCE OF RECONNECTING PEOPLE AND NATURE

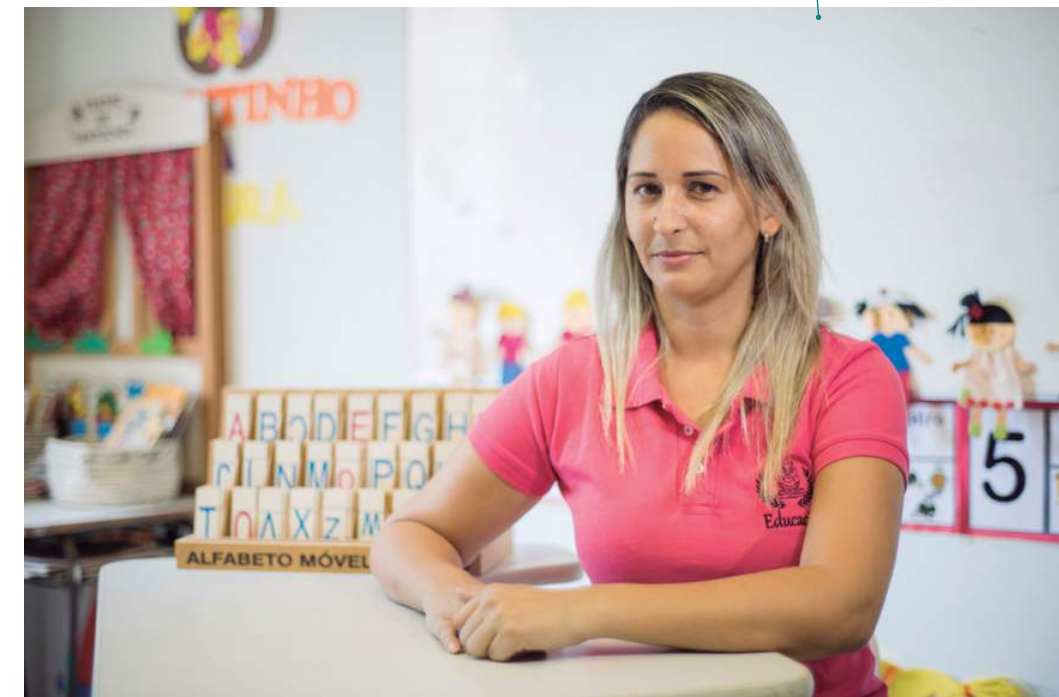
The impact of the dam breach has also generated the opportunity to carry out actions that integrate the environmental vision with a broader approach for education. We believe that it is necessary to re-establish people's connection with nature. In most of the territory, this loss of perception of cause and effect is directly related to the use of the land and the degradation of the rivers. Thus, we have identified partners that bring new ways of working with children, generating experiences, discoveries and interactions that can awaken in the new generations a more comprehensive look at the relationship with nature.



Alexandre Battibugli

This is a demand that is also present among the communities. “If I could make a suggestion to Renova, I would tell the team to concentrate on projects for recovering the biodiversity of the Doce river, that was already polluted even before the dam collapsed in Mariana. During my classes, I’ve always tried to emphasize to my students the importance of environmental education. It interferes in everything in life, in our livelihood and in our leisure”, says **João Carlos Binda**, an educator and member of the Child Guardianship Counsel in Itapina, district of Colatina, in Espírito Santo.

**Drielle Sousa Costa**, a teacher from the Vila Regência Municipal School, in Regência, is concerned about the lessons that children take from these events. “Today, they have become used to the idea of not having a river and a sea. Some are more outraged because their fathers can no longer fish. But our school has always worked with environment focused projects since we have a partnership with Tamar Project, and we address the subject in lectures and writing exercises. We have painted the school wall depicting the whole story, precisely to raise their awareness towards the importance water has in our lives.”



Alexandre Battibugli

## 2

## EDUCATION AND CULTURE

This feeling is similar to that of **Michel Gomes Pedro**, a teacher and Director of Professora Urbana Penha Costa Municipal School, in Povoação, a district of Linhares: “Before Renova Foundation, we didn’t have anyone to dialogue with. But I always say that the community has to be open to proposals, dialogue and negotiation. The allowance card caused a commotion around here. Even the children speak of this allowance. So, I call the attention to the educational aspect because it is the basis for new generations.”



Alexandre Battibugli

**At first, these efforts to include the environmental component in education began in the communities close to Mariana.**

Initiatives include conversation rounds, lectures and workshops in schools and communities to awaken the feeling of leadership in the population towards environmental impacts.

**Along the year of 2016, 631 people participated in 41 environmental education activities in Mariana and Barra Longa.**

Sensitive to the need to expand, together with research institutions, community representatives, water basin committees and governments, we started to plan an action for 2017 that will involve the 39 municipalities along the Doce river. One of this projects is already ongoing: the “Douradinho no Doce” Project, developed by Pelo Bem do Planeta Institute, will reach 12,000 students in the 4th year of elementary school of the whole municipal, state and private school network in the municipalities of Mariana, Barra Longa, Rio Doce, Santa Cruz do Escalvado, Governador Valadares, Colatina and Ipatinga ([www.projetedouradinho.com.br](http://www.projetedouradinho.com.br)). The book “Amiga Lata, Amigo Rio” will be distributed to students and teachers will be instructed to use it in classroom activities. At the end of the year, author Thiago Cascabulho will go around the seven cities visiting schools and doing outdoor roleplay presentations.



## 2 EDUCATION AND CULTURE

### PREPARED FOR NEW EMERGENCIES

“The only thing I would like to know is why we didn’t get a warning to leave the town?” asks Sinésio Carneiro. “Between the initial mud wave that flooded Bento Rodrigues and its arrival in Barra Longa 12 hours elapsed. Enough time to remove everything from the pizzeria and take it to another place. At the end of the day, I spent 14 days without being able to leave the house and nine months with the pizzeria closed. I had to buy some electric appliances out of my own pocket to be able to return to work. One of my daughters who studied in another town had to put her studies on hold at university because, for the time being, I can’t afford to pay her tuition fees”.

This is the same complaint as the shop owner and small farmer’s **Rômulo Fernandes**. “The sound was like that of a bear in a cave: uh, uh, uh! That is how I remember the noise of the mud arriving, while I was trying to save a few things. We remained here for so long after what happened in Bento Rodrigues because the information didn’t match. The police said it had received no warning, but the neighbour’s daughter, who works at Samarco, asked her family to leave town. They could at least have passed by with a truck asking us to leave. I lost everything in the house, in the bar, and I left only with the the documents in my pocket. I was amazed that the mud came in the form of waves. We thought it would stop because the river water level was very low. At least people had enough time to run to a higher place. And we saw it knocking everything over and carrying everything with it, buses, cars, bridges... it was terrifying.”



Ricardo Correa

## 2 EDUCATION AND CULTURE

Sinésio e Rômulo, like so many other residents of the municipalities of Mariana, Barra Longa, Santa Cruz do Escalvado and Rio Doce, now have an alarm system installed by Samarco in the event of another dam related environmental emergency. After adapting to the new legislation, this system consists of 31 sirens, installed during 2016,

which can warn people in the event of a flood in the basins of the Gualaxo and Carmo rivers, from the assessment of the civil Defence of the municipalities, based on data from instruments connected to an automated measurement system.

The Preparation for Environmental Emergencies Program will also enhance the competencies of those municipalities' Civil Defense Departments. In September 2016, a diagnosis effort was carried out on both the structure and response capacity of these teams and an action plan was prepared with three fronts: improving public risk management; creating civil defence community groups that would empower the community concerning risk management; and training the young people in the schools concerning the perception of risk. In April, the Civil Defense Departments of the four municipalities will have the new equipment delivered.



### PROGRAMS INVOLVED:

11: Reconstruction of Schools and Reintegration to School Communities / 12: Preservation of Historical, Cultural and Artistic Heritage / 13: Tourism, Culture, Sport and Leisure / 33: Environmental Education / 34: Readiness for Environmental Emergencies



# 3 HEALTH CARE AND WELL-BEING

## UPGRADING MUNICIPAL FACILITIES

A crucial part of the welfare initiatives is ensuring access to proper health care. Our work is focused in upgrading the existing municipal facilities, for both clinical treatment and social services, including psychological, psychiatric and welfare support. Emergency actions are maintained up to the present date with a team of physicians, nurses, social assistants, psychologists and psychiatrists, providing care for the affected population in the Basic Health Care Units (UBS). This includes buying materials and providing a car service for people with no means of transportation.

A new stage is commencing in 2017, when emergency actions will begin to be replaced by more structuring initiatives, such as providing specialized care services to the elderly, the young population and activities like occupational therapy, a request made by the local community based in Mariana and surroundings. Another main initiative involves carrying out an epidemiological and toxicological study, that is currently under the process of definition of its Terms of Reference, so



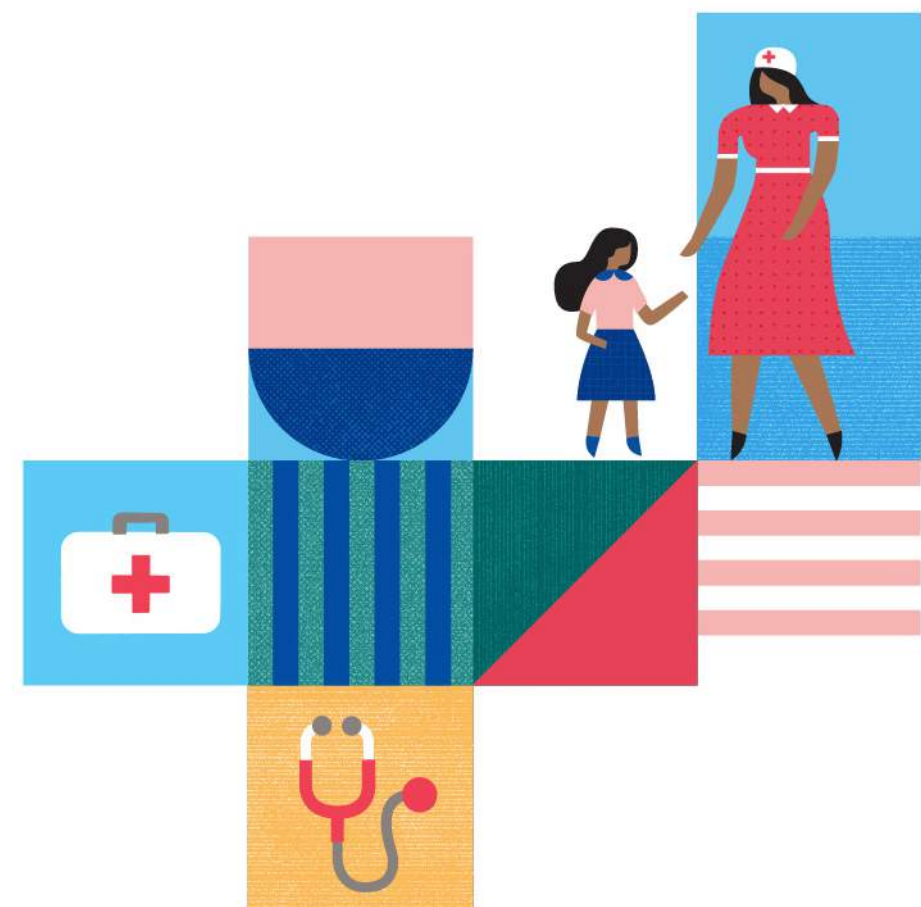
Renova archive

Healthcare services have been reinforced in directly impacted cities

that an expert consulting partner can be hired. This engagement will embrace the entire affected area and will help us determine the size of the impact on the health of this large population and the measures that need to be taken.

## THE PURSUIT OF KNOWLEDGE

Engagement and maximizing knowledge of the myriad complex issues facing us. it was with this in mind that we brought together an interdisciplinary panel on January 19 and 20, 2017 to debate the relationship between yellow fever and ecosystem changes in the Doce river basin. The meeting can be seen from start to finish on the website of Renova Foundation. it was attended by scientists and researchers from the fields of ecology, veterinary sciences, biology, microbiology and biodiversity. Experts determined there is no conclusive connection between the collapse of the dam and the outbreak of yellow fever.



**PROGRAMS INVOLVED:**  
5: Social Protection / 14: Physical and Mental Health of Affected Population  
Other People and Traditional communities.

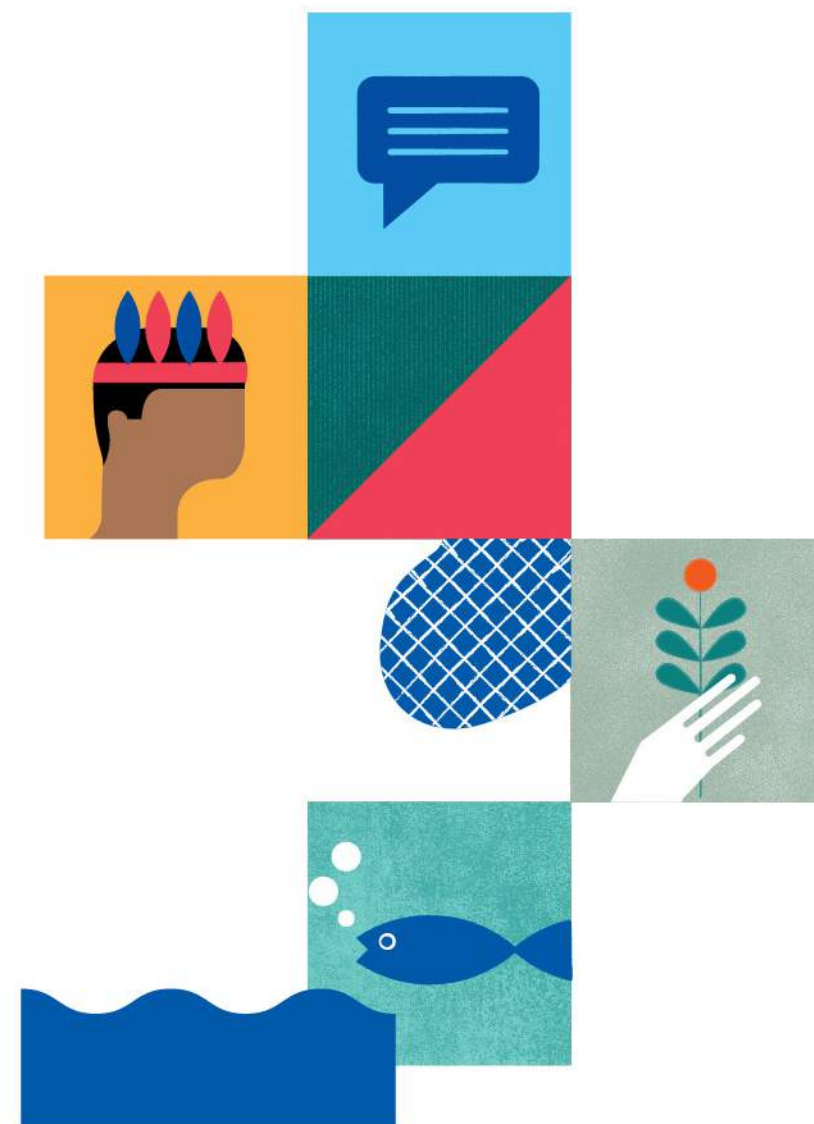


# TRADITIONAL AND INDIGENOUS COMMUNITIES

## LOOKING AFTER INDIGENOUS AND TRADITIONAL COMMUNITIES

The relationship with indigenous communities is based on the principles of free, prior and informed involvement. Through these principles we seek to facilitate engagement in order to develop short, mid and long-term solutions, avoiding paternalistic approaches, and that can create concrete initiatives to address local issues. The implementation of an engagement process with the Guarani and Tupiniquim peoples, located in the region of Aracruz, in Espírito Santo state, facilitated the creation of a positive agenda of activities and transparency in implementing emergency agreements. A good example of this is the inclusion of some of the communities in the water resources monitoring program. We have been helping to maintain access to the villages and water supply to homes, schools, health clinics, cultural centres and cattle watering systems in a Krenak indigenous reserve, in the area of Resplendor. The engagement channels are maturing, based on the respectful observation of the dynamics and decisions of the Krenak people.

The challenge for the future is to produce permanent solutions that can gradually replace the emergency ones. However, indigenous requirements (Estudo da Componente Indígena) will have to be studied before we can achieve this, in accordance with the guidance and with the consent of the indigenous communities, as well as FUNAI and SESAI (Indigenous Health Care Department) agencies. This will help us build a plan of action. We are in face of a great opportunity to mitigate, recover and develop this land based on indigenous peoples own interests. The field study conducted by Fundação Cultural Palmares and the Polifônicas consultancy firm identified impacts on the traditional Degredo quilombola population, in Linhares, Espírito Santo state. A detailed survey of the quilombola population is also being commissioned to determine the impacts and the socio-environmental programs to be implemented. Emergency actions are taking place in Minas Gerais state to mitigate the impacts on gold prospectors, which involves identifying and recognizing these communities with the significant participation of the State Commission for the Sustainable Development of Traditional Peoples and Communities of the State of Minas Gerais.



**PROGRAMS INVOLVED:**

- 3: Protection and Recovery of the Quality of Life of Indigenous Peoples/
- 4: Quality of Life of Other Peoples and Traditional Communities



## 5

# FOSTERING ECONOMIC DEVELOPMENT

## GETTING PEOPLE BACK TO THEIR BUSINESSES

Keila dos Santos was making preparations for the beak pepper harvest. The peppers were ripe, ready to make the preserve that pairs just perfectly with meat or cheese. “But the crops were buried under the mud along with almost the entire town of Bento Rodrigues. We managed to save some tools, stock and a handful of other items because the kitchen was in an area that was not affected”, she remembers. Keila is one of the producers in the Bento Rodrigues Horticulturalist Association (AHOBERO), subsequently relocated to Mariana.

“The preserve sells well because we handle the entire process, from the pesticide free planting, to the final product. The whole process is organic. We are looking for land to plant our crops here in Mariana until the new town of Bento is ready, but this is proving easier to be said than done”, she says. Keila has been helped by a work front dedicated to help small businesses affected by the dam collapse to get back on their feet. The problem now is that the association is located in the center of Mariana, far from any land available for plantation.

249 businesses were assisted in this first emergency stage, including stores that had been rebuilt or reequipped, and service providers who had lost their equipment. This initiative was based on the fundamental principle that the new business be better than the old one.

In 2017 a new stage commences: to encourage the emergence of businesses that will preferably generate a positive social impact. In other words, businesses that will involve and benefit the poorest extracts of society (at the bottom of the social pyramid). Events on entrepreneurship, business management and business rounds will take place in the municipalities that have been more directly impacted of the whole region.



Ricardo Correa

# 5

# ECONOMIC DEVELOPMENT

Local development is also fostered given Renova Foundation’s (and its service providers) needs to hire people in order to deliver the programs.

**In 2016, 61% of the labour force was locally recruited from the region, benefiting 1,759 people.**

This is not a job creation program per se, but rather a guideline to use our operating requirements to drive the local economy. It is our target to ensure local labour accounts for at least 60% of our total workforce. In order to achieve this we are currently seeking to anticipate future internal recruitment demands for the programs as to prepare people in the local community through training partnerships with various institutions. This will enable these people to fill these job positions and the payment for these services will circulate within the region itself. If not for this, job opportunities are very limited. “My husband began working as a bricklayer as there are no longer jobs in farming and fishing. Unfortunately, he is not a formally registered employee and work is not always available. I am a crochet artist, and I knit everything, blankets, clothes, bikinis, but always made to order”, said **Ivanildes Melo Campos**, who lives with her family in a country home adjacent to the Doce river, in Santana do Paraíso (MG).



Alexandre Battibugli

Restored commerce



Arquivo Renova

\* With 0.742, Mariana is ranked 52nd in Minas Gerais



# 5 ECONOMIC DEVELOPMENT

To identify and drive Mariana’s economic potential, we resumed the “Mariana 2030” study, conducted by Samarco, with the participation of the municipal government and community leaders. Two meetings have been held to discuss long-term social and economic development. The study was renamed “Mariana Present and Future” and now has a new mission: to rank Mariana amongst the top ten towns in terms of HDI in Brazil by 2030\*.

\*With 0.742, Mariana is ranked 52<sup>nd</sup> in Minas Gerais

Alexandre Battibugli



## THE GRADUAL RETURN OF FISHING

“I came to Povoação in 1973 to work in a beach hut and became a professional fisherman. I am retired now, but keep working because an fishermen cannot resist going into the river or the sea. In the old days, we used clew thread knitted fishnets. The Doce river used to be teeming with fish, but began losing its vitality, which was significantly aggravated by the mudslide. The fish disappeared and it was impossible to enter the river to work. The sea was also affected and the courts forbid us from fishing. People are afraid the fish is contaminated”, said **Simião Barbosa dos Santos**, 73, president of the Fishermen and Alike Association of Povoação (APAP - Associação de Pescadores e Assemelhados de Povoação), in the district of Linhares, Espírito Santo state.

Indeed, the initial analyses about water quality and fish stocks in the Doce river have not yet yielded a conclusion. Two panels were held with the main research institutions in the region to determine the criteria for a new study. “Our expectation is the same as all fishermen: that this tragedy can be turned into a huge asset, with better fishing conditions for the future, with new

technologies, new employment and income opportunities for the communities, better organization and market expansion. All of this will result in better socio-environmental quality for the Doce river basin,”, said Carlos Sangalia, of the Tamar Project, during the technical panel for resuming fishing activities organized by the foundation.

**It is our intention to temporarily foster alternative river-based employment, such as cleaning and monitoring, in addition to strengthening fishermen colonies and associations.**





# ECONOMIC DEVELOPMENT

“The fish tanks project have huge potential for success. I want to see it working, I want to see everyone working the way they used to”, said Simião, getting enthusiastic at the thought of it. However, he recognizes that dialogue is not always easy. “I think greater understanding is needed between the community and Renova Foundation. We fishermen have no problems at all with receiving professional help. I think they want to do a good job. In my opinion they should have spoken to people in groups: to fishermen and farmers, instead of the whole community at once. In this situation nobody gets on, some people are only interested in the card, it’s a bit of a mess. We fishermen form a segment and we want our river and sea life back”, he explains.

Some 4,000 fishermen are receiving financial assistance because of the interruption to production activities. We are also seeking to establish weekly conversations with fishing associations and colonies to devise a strategy for resuming fishing activities in an inclusive and transformational way.



Renova archive

Fishing workshop

## PROGRAMS INVOLVED:

16: Resuming Aquaculture and Fishing Activities / 18: Regional Economic Diversification / 19: Micro and Small Businesses / 20: Encouraging Local contracting g



# 6 ENGAGEMENT AND DIALOG

## BUILDING SOLUTIONS TOGETHER WITH ALL INVOLVED

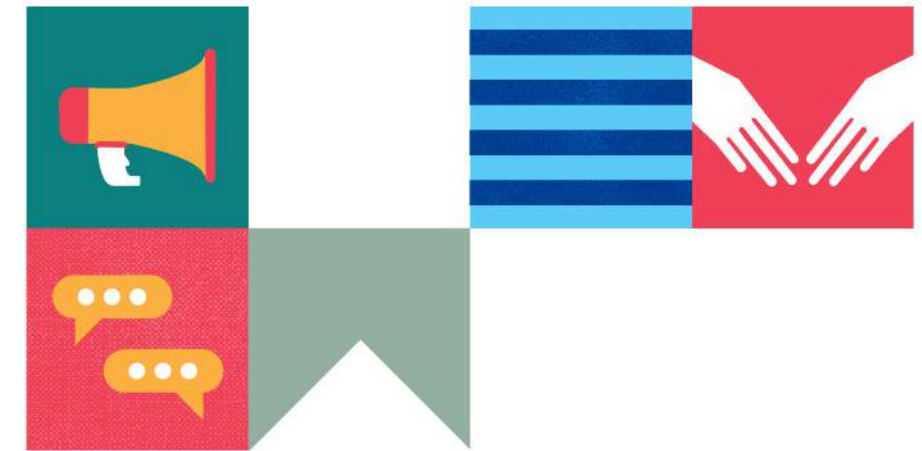
“Bruna, when will my honey house be ready? They came here, they measured the area, they said they would start soon, but nothing has happened so far”, says the farmer **Valdir Polak**, in Paracatu de Baixo, questioning Bruna Tropa, one of the members of the Dialogue team, in Mariana. According to him, this recovery is among his most urgent needs so that he can return to extracting honey taken from his apiaries and increase the income from his small farm.

“Tamara, we feel like invading the church in Paracatu (closed after the dam breach) so that we can celebrate our mass. People are getting angry,” warns Mrs. Isolina Isaias, who together with her daughter Vanessa, went to live in Mariana. “Look, I like these boys from the Renova Foundation very much (referring to the Dialogue team), but what can they actually do, beyond listening to and sending requests?” says Milton Manuel Sanchez, editor-in-chief of A Sirene newspaper.



Ricardo Correa

Since the bursting of the dam, **918 events** have already been held with the presence of **31,547 people**. Four principles guide this work: **social participation, transparency, respecting and listening to people.**



Renova archive







Meeting with affected people

In addition to this careful listening, taking care not to judge requests, being part of the Dialogue team (in March 2017, there were 60 people altogether) means giving up fixed working hours and weekends. It also means not being afraid of bouncing around in vehicles on dirt roads, opening and closing gates and always having a space saved in your stomach for one more cup of coffee, a slice of cheese and a chat - not always friendly, by the way. “It is being available and understanding that for various reasons not everyone has the same understanding,” says Thales de Toledo França, in Mariana. “When could I ever imagine that as an engineer, from the exact sciences field, I would be dealing with the feelings and expectations of so many people?” says Marcelo Werneck, who is operating in the region of Resplendor (ES). Over time, many links are created in the midst of so many conversations and requests. In the vast majority, they end up becoming big fans and supporters for the future of the people or of the communities on this journey where their stories have crossed.

“We have to talk, talk, talk. it’ is the only way that we can solve complex situations like this one we are experiencing. You can’t blame the foundation for the lack of quick solutions because they are also getting themselves organized... But the slowness is a complicated thing for those who were affected,” says Abdelazim Polak, who grows organic food in Paracatu de Baixo.

## CONTACTS THAT WE RECEIVED IN 2016

All residents in the region can also get in direct contact with the foundation through a number of channels: 0800 call center, 12 information and service centres, Ombudsman and central network, as described in detail on page 9. in total, we received over 64,000 calls in 2016:

 Number of calls registered	<b>64.245</b>
 Number of protocols registered by service centers (in person)	<b>4.996</b>
 Number of protocols registered on 0800 (telephone)	<b>56.027</b>
 Number of protocols registered by Talk to us (Site)	<b>674</b>
 Number of protocols directly recorded by field teams	<b>2.548</b>
 <b>Main topics registered</b>	
	REGISTRATION — New registration of affected people
	PIM — Mediated Indemnification Program
	FINANCIAL AID — Loss of Income (eligible)
	REGISTRATION — Information on the process
	FINANCIAL ASSISTANCE



**PROGRAMS INVOLVED:**

6: Engagement, communications and Social Participation / 35: information for the Population / 36: Nacional and international communications



# LAND AND WATER

## CHALLENGES



Determine how to go about the reforestation



Devise and implement a plan to restore 40,000 hectares along the Doce river



Prepare a Tailings Management Plan acceptable to the regulatory agencies



Find a technical solution for treating water downstream (from the spring to the river mouth)



Devise a plan of action to mediate the impact on biodiversity



Implement the long-term water Monitoring Plan

## HOW WE BUILT THIS CONTENT

The challenges presented in this chapter reflect the perception of Renova Foundation's management team in March 2017 about the priority issues to be addressed in our remediation actions. After liaising with the affected population and program managers, we selected the topics in this theme which currently present the greatest challenges or progress. They do not embrace all the themes we are working on, but can be seen as a sample of the most critical topics raised during our first eight months of operations, from August 2016 to March 2017.



# 1 LAND USE

## NATURE AND INDUSTRY IN HARMONY

We have been presented with a huge opportunity: to transform the region of the Doce river. We want to set an example for other places in Brazil and around the world. A place where people can work in agriculture, fishing and tourism in harmony with the environment. In other words, we will support and help to conserve nature while restoring socioeconomic conditions, guaranteeing its recovery and maintenance of its healthy status. This work will require resources, technology and the capacity to organize Renova Foundation's actions, but also requires the involvement of all people affected and those with a stake in recovering the entire Doce river basin. The main challenge lies in being persistent over time, as this project may take between 10 and 15 years, and to remaining united to understand that each property can play its part in the solution for the whole region.

We are well aware that this desired is shared by many farmers of the region. “The mudslide hit the best part of my land, where I used to plant sugarcane and other crops, and had some cattle. My home was also destroyed, so it is impossible for me to stay there. I moved five cows so my neighbours could milk them and send it to the dairy processing. It is impossible for these animals to stay on my land. Not even Chumbada, a warrior of a cow who got stuck in the mud and was only rescued after a super humane effort”, remembers João Bosco Gonçalves, 68, commonly known as [João Bigode](#) in the region of Paracatu, adjacent to the Gualaxo river. “All I want in the world is to have my land back and live there again. The guys (employees of Renova Foundation) have already told me that I cannot build my home where it used to be because the area is a risky site. They also told me I cannot grow crops on the riverbank because it contravenes environmental legislation. That's fine by me, I really don't understand any of this. All I know is how to grow crops”.



Ricardo Correa



# 1 LAND USE

The recovery of watercourses and quality of land use are mutually dependent from one another.

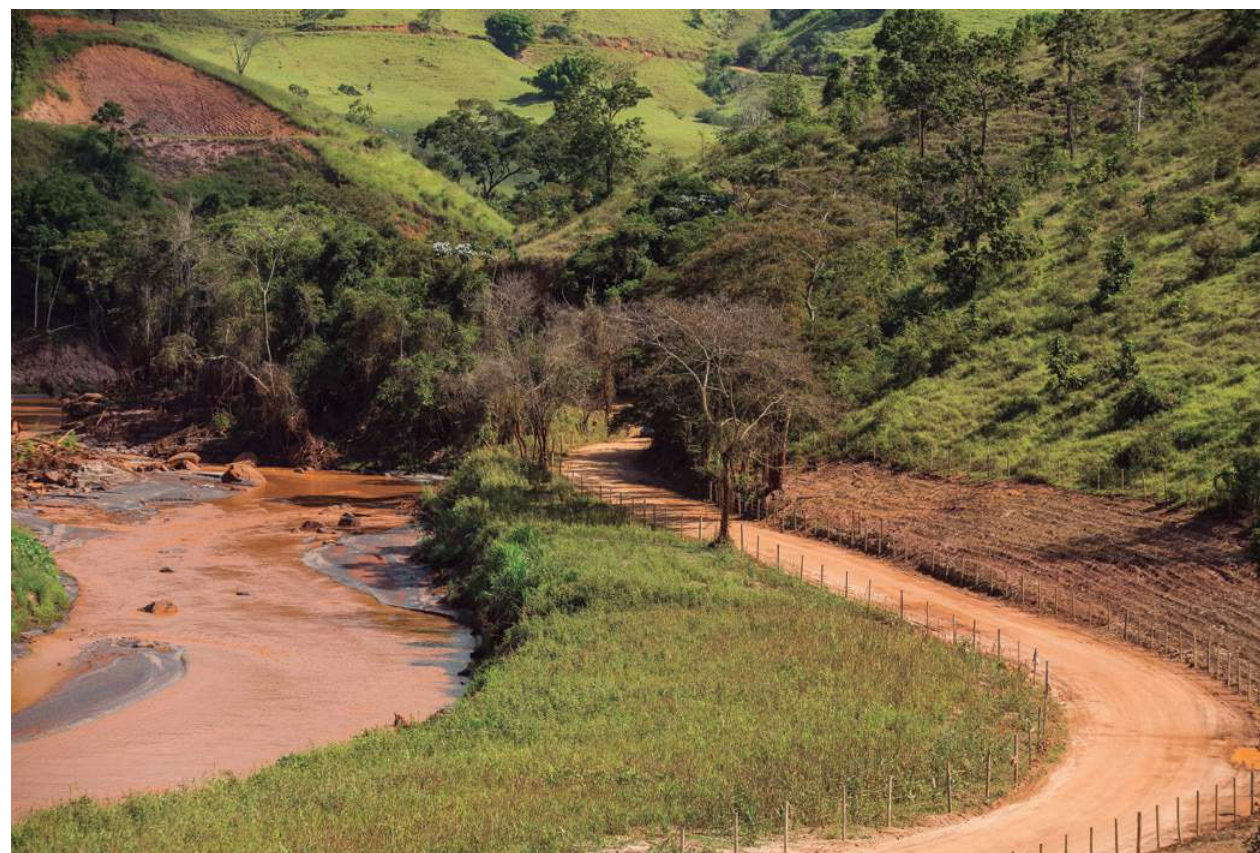
This is why we decided to combine all programs helping recover nature into a single front, which we call Land and Water. Needless to say, these programs will be more effective if they are implemented side-by-side. When we consider soil use, we have to think about cleaning out the stream beds and stabilizing the banks of the Gualaxo do Norte and carmo rivers, recovering the permanent conservation areas across the region up to the mouth of the Doce river, protecting and recovering the springs in general belonging to the raw properties located along the rivers, which need to be regularized in the rural environmental register and an environmental regularization plan. This means giving individual attention to each property, with a view to benefiting the entire region affected. See details of the programs on page 54.

The area nearest to the collapse is where the heaviest work is taking place to remove trees, branches and tailings from the river beds, to reconstitute the banks, minimize

the erosion process and protect meanders with small stone walls (gabions).

This is the area where farmer Márcio Ramos - known as Marcinho - 48, lives, in the district of Borba, near Paracatu. “We will not have to leave our place. The guys (from Renova Foundation) are only going to build homes in a safe area, on this very piece of land. They told me there will be a cellar and a house above it, really posh”, he said humbly. “Here we make a living by selling milk to the dairy processing, looking after the land and planting crops. I have heard that Paracatu is going to be rebuilt some distance from its original location. But I will keep going there to see my friends no matter what”.

Through the partnership with Emater technicians, all the 237 rural properties between Mariana and the Ri-soleta Neves power plant, including Marcinho’s, will have their own Socioeconomic and Environmental Adaptation Plan (known



Arquivo Renova

Step one: cleaning out the stream beds and stabilizing the banks

as Pasea), which regularizes the land according to the requirements of the new Forestry code to make it a sustainable property in social and environmental terms. This includes the rural environmental register (CAR) compiled and the documents already prepared for the environmental regularization plan (PRA), which is being prepared but is still undergoing regulatory

compliance adaptations. All the documents are completely legalized and suitable to combine rural activity with caring for the environment. Note that all Socio-economic and Environmental Adaptation Plans will be prepared with the active participation of property owners so that each Pasea is personalized and therefore meets the requirements and interests of each individual.

**PROGRAMS INVOLVED:**

25: Environmental Recovery / 26: Recovery of Permanent Preservation Areas / 27: Recovery of Springs / 40: Implementation of CAR and PRA.

# 1 LAND USE

## THE RECOVERY SHOULD REACH EVERYONE

Whether they own large or small rural properties does not matter, everyone has been equally affected by the dam collapse. Our engagement to re-establish the use of land and water in the Doce river basin must, therefore, democratically include all realities. Farmer Carlos Salgado Purger, known as “Seu Carlito”, from Governador Valadares, and farmer Marlene Fer-reira Martins, from the Primeiro de Junho settlement, in Tumiritinga, are two sides of the same coin.

## SEU CARLITO'S SECOND CHANCE

“I come from traditional family of farmers in this region and my farm is 28 kilometres far from Governador Valadares. On my 160-hectare property, I used to raise both dairy and beef cattle and had a hay production project. I had purchased machinery irrigation systems and just when I was about to start seeding my crops, the Mariana mudslide hit us. I had taken out a nearly R\$ 500,000.00 loan from Caixa Econômica Federal of to be paid in six years, with 1year grace period. I sold my cattle to pay the bank. One year later I had no money to afford the installments because I had no money for the crop. I had no income whatsoever, so I started using the credit card and overdrafts from the bank. I had to mortgage of the only asset I had because of this project.

After the river subsided [making reference to the mud],I leased out the pasture for cattle raising. And this is my only source of income at the moment because the card allowance is not enough to pay my bills. I really want to restart my hay project because at the end of the year I need to pay the bank. But

Alexandre Battibugli



The farmer Carlos Purger raises cattle in the region of Governador Valadares

in order to do that, I need technical support, seedlings, fertilizers, herbicides and money to buy oil and get to work.

I want to be compensated for the cattle I had to sell, for the milk I was kept from milking, and the ceasing profits resulting from interrupting my production. Seeing the river like that was heart-breaking, because in addition to the farm itself, I used to live in a paradise: a 2 km long sandy beach with crystal clear river water. You could catch dolphinfish, pacu, pacumã, and catfish, amongst other species. But I believe the river will recover, although in a gradual process. I was visited by an agronomist and an animal science technician from Renova who are part of the farm revitalization team. I am hopeful and will not give up”.



# 1 LAND USE

## MARLENE, ONE OF THE LOCAL FARMERS, WANTS TO REVEGETATE THE BANKS

“We arrived in the settlement in 1993 and spent eight years living under improvised shacks until we finally got our land plots from the National Institute of Colonization and Agrarian Reform (INCRA), which had expropriated this area. Here we plant beans, corn, greens, sugarcane and an orchard with oranges, coconuts and many other fruits. I rear dairy and beef cattle, produce honey and sugarcane rum (cachaça). The milk is sold to the cooperative and we sell the honey and the rum at the farmers’ fair in town, and occasionally in the state capital Belo Horizonte. My two sons are students but give me a hand.

The settlement is located over good land and has springs but the most important thing for us is the Doce river. The dam collapse made life difficult for us because we cannot plant along the riverbanks. And we are suspicious of the water because we don’t know how harmful to our health this might be. I drilled an artesian well to get water for the vegetable garden and made ponds to provide water for the cattle. Our products were rejected by consumers for a while, who were also a bit scared.

It was a surprise for us when Renova came and proposed meetings, explained about the programs for environmental recovery and started registering people. Most people here already get some financial assistance. We were suspicious because we were dealing with a company...

Everybody depends on this river and our settlement is at Renova Foundation’s service to rebuild the Doce river together. I am simply a farmer, but I would like to reforest the banks, to have this river back and make it beautiful again”.



Alexandre Battibugli

Farmer Marlene Martins was once homeless and now wants to recover the river

## RECOVERING PROPERTIES

See what has been done on the 237 rural properties between Mariana and the Risoleta Neves Hydroelectric Power Plant (HPP), allegedly, those areas were physically affected by the huge volume of tailings, having lost the best pasture fields:

**246 Km**  
of fences  
rebuilt to meet  
new planting  
requirements

**180 hectares**  
of higher  
productivity  
pastures planted

**12,6 mil**  
tons of silage  
distributed to  
feed livestock

**PROGRAMS INVOLVED:**  
17: Resuming of Agricultural Activities

## 2 WATER MANAGEMENT

### WATER TO CLEAN THE DOCE RIVER

As part of the compensation programs, efforts to restore 40,000 hectares of Permanent Preservation Areas (APP) along the entire Doce river basin in the next ten years are taking place in tandem with the recovery of 5,000 springs over the same period. These are the watersheds that will generate the water to clean the river streambeds and improve river quality.

The first step is to fence and protect the springs and to regenerate the vegetation to ensure there are 1,200 native plants per hectare.

**Through the partnership with Instituto Terra, in the 2 years ended March 2, 2017 we protected the first 511 springs, 251 in Minas Gerais and 260 in Espírito Santo.**

“Our expectation is that in the near future we will be able to speed things up and make scale gains to truly recover the springs and riparian vegetation, which will filter all mineral waste moving towards the river”, said Sebastião Salgado, the founder of

Instituto Terra, which mobilized 217 rural property owners containing the springs – 103 in Minas Gerais and 114 in Espírito Santo. “We are increasing this pace of recovery to expand the flow of water that will clean out the stream beds and therefore enable the river’s environmental recovery”.

At the same time, we are sourcing the organization that will help us decide where to plant 40,000 hectares, most of which will restore the sections of riparian vegetation along the Doce river. “This recovery will embrace the territory as a whole, including small and large rural properties”, stated Roberto Waack, president of Renova Foundation. We will also identify the nurseries that will produce the saplings of typical species in the Atlantic forest biome to be planted. “If I could make one suggestion, I would tell them to put these young people to work because in addition to studying they know the region like the back of their hands. I wish a speedy recovery for the Doce river, that trees be planted upstream and fish released. If you are kind to nature, it responds in kind. Nature is very grateful. I hope I

can swim in it and purify my soul”, said [Joelma Fernandes Teixeira](#), 42, a fruit and vegetable producer in the community Ilha Brava, in Governador Valadares.

Training young people and adults to work in this huge effort to protect springs and restore permanent conservation areas is an opportunity we have already identified and will be put into practice with the support of organizations like Instituto Terra.

Thousands of water and sediment samples have been collected since the dam breach to ascertain the impact and propose remediation actions. The long-term monitoring of the Doce river’s drainage basin and of Espírito Santo’s coastline requires an ongoing water quality monitoring system. The final definition of this permanent, systematic qualitative and quantitative water and sediment monitoring program (PMQQS) is nearing completion. We are installing a large network of meters in four sections of the basin and also in the coastal and estuary areas of Espírito Santo.



Alexandre Battibugli



# 2 WATER MANAGEMENT

 INSTITUTO TERRA

Photographer Sebastião Salgado and Lélia Deluiz Wanick Salgado founded Instituto Terra to recover the environmental degradation based from an old ranch owned by the family in the region of Aimorés, in Vale do Rio Doce.

With their mission being a resounding success in the last 18 years, Instituto Terra is partnering with Renova Foundation in the recovery of springs.

Renova archive



With 18 successful years behind them, Instituto Terra has become Renova Foundation’s partner in the recovery of spring prings to recover the rivers

**PROGRAMS INVOLVED:**

26: Recovery of Permanent Conservation Areas / 27: Recovery of Springs / 38: Monitoring of the Doce River Basin



# 3 HANDLING TAILINGS

## FINDING THE BEST TECHNICAL SOLUTION

The tailings that are still deposited in the stream bed and banks of the rivers have been repeatedly analysed and considered non-toxic in studies carried out by Samarco in conjunction with government agencies. This is an important conclusion that will influence decision-making on the steps to be taken. Other issues still need to be answered by experts: How should we handle the iron ore tailings lying at the bottom of the Doce river? Which solutions are feasible taking into account environmental, social, technical and time constraints? To broaden our expertise in light of this challenge, three events were held at the start of 2017, with the participation of environmental agencies, the Public Prosecutor's Office, consultants, and experts. The last [workshop](#), on March 13 was attended by: Public Prosecutor's Office, Department of Urban Development, Housing and Sanitation, Brazilian Institute of the Environment and Renewable Natural Resources (Ibama), National Water Agency (ANA), Project Tamar-ICMBio, Committee for the Doce River Drainage Basin, Integrated Development Institute of Minas Gerais (Indi), Minas Gerais Institute of Water Management (Igam), State Forestry Institute, the Environmental and Sustainable Development Office of Minas Gerais, Espírito Santo State Water Resources

and Environmental Agency (IEMA), Espírito Santo Department of Labor and Social Action, Espírito Santo State Secretary of Agriculture, Food Supply, Aquaculture and Fisheries, Forestry and Livestock Raising Defense Institute of Espírito Santo and the Healthcare Department of Espírito Santo. We jointly compiled guidelines, concepts, methods, techniques, governance and tools to help us determine the best way to handle each section of the river. While working on this solution we have made progress in other areas:

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[Geochemical and geomorphological classification of the tailings](#)

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[Identification, prioritization and stabilization of the tailings](#)

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[Removal of tailings from the banks of the rivers Gualaxo do Norte and Carmo](#)

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[Reshaping of stream beds and controlling erosion in priority areas](#)

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[67 tributary affluent recovered, out of a total of 101 charted](#)

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Renova archive

The tailings management workshop was broadcast live by the Renova Foundation's website



Renova archive

The first river recovery task concentrated on reshaping the stream beds

**PROGRAMS INVOLVED:**

9: Recovery of the Risoleta Neves power plant / 23: Handling tailings



# 4 INNOVATION

## DEVELOPMENT ALTERNATIVES

To expand business options, we are working on partnerships with Fapemig – Research Support Foundation of Minas Gerais – and Fapes – Research and Innovation Support Foundation of Espírito Santo. The agreements are being brokered by INDI (Minas Gerais Integrated Development Institute), aiming to foster and fund the production of expertise in the areas identified by Renova Foundation, while creating and bolstering technology research efforts, by insourcing experience gained in the recovery process. The aim is to map out opportunities for working together, especially to identify ways of using the tailings for economic gain. There already are experimental projects to produce blocks for surfacing and even pilot plants in Santa Cruz do Escalvado and Ponte Nova producing [bricks for civil construction](#). Barra Longa Square, for example, was built with bricks made from tailings.



Renova archive

# 5

# BIODIVERSITY

The biodiversity protection initiatives are being defined in conjunction with both state and federal environmental agencies. Initiatives include: studying aquatic fauna along the entire Doce river; analysing the [marine system](#) in Espírito Santo; building two wild-animal screening centres; assessing the impact on the endangered fauna and flora as well as assessing the impact on – and remediating initiatives in – conservation units.

Renova archive



**PROGRAMS INVOLVED:**  
 28: Conservation of Biodiversity / 29: Recovering wildlife /  
 30: Terrestrial Flora and Fauna / 39: Conservation Units



# 6 ANIMAL RESCUE

## TWO TREATMENT FRONTS

- 1** **Large animals** (swine, horses and bulls): are treated at two leased ranches in Acaíaca (MG) and will be returned as soon as the properties are ready to receive them.
- 2** **Small animals** (cats and dogs): are under the care of Renova Foundation at the temporary animal shelter (Cata). Adoption campaigns have helped find new owners for more than 100 cats and dogs.





**PROGRAMS INVOLVED:**  
7: Animal Rescue





# RECONSTRUCTION AND INFRASTRUCTURE


## CHALLENGES


- 


Complete the engineering work on the Governador Valadares water pipeline
- 

Structure the pass-through and monitoring of the use of funds from the sanitation program to municipalities
- 


Coordinate the basic integrated sanitation planning for stream beds with municipalities
- 


Replace temporary structures with permanent solutions
- 


Contain materials carried to rivers in the rainy season
- 

Approve projects, obtain licenses and initiate resettlement works
- 

Acquire land in Gesteira, in Barra Longa (MG)
- 

Complete the refurbishment of homes in rural areas
- 

Legalize property owners' documentation
- 

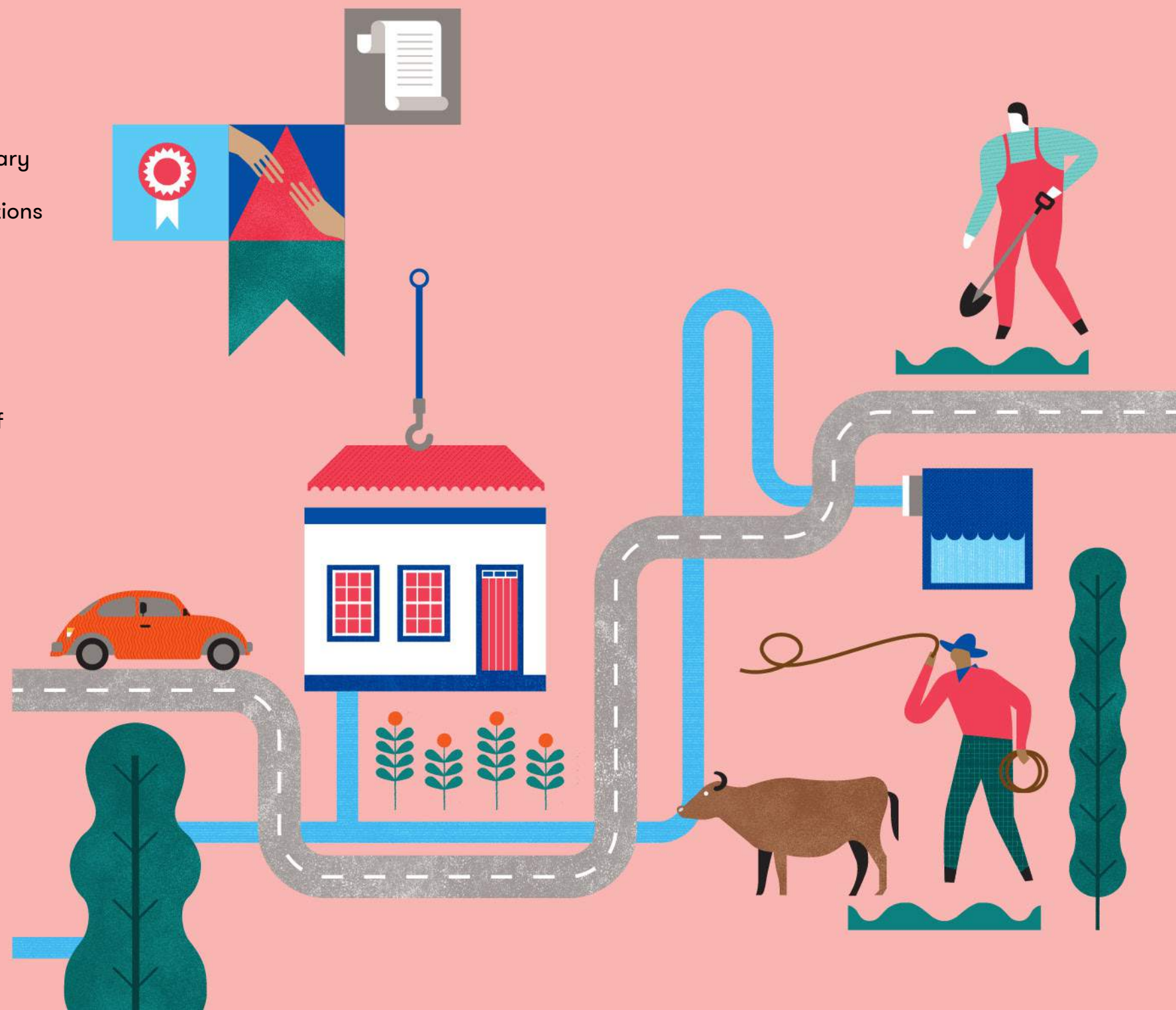
Generate the conditions to resume economic activities along the river
- 

Encourage the adoption of technology to allow using the tailings for economic gain.

## HOW WE BUILT THIS CONTENT

The challenges presented in this chapter reflect the insight of Renova Foundation management in March 2017 into the priority issues to be addressed by our teams in their recovery engagements.

After liaising with those affected and the program managers, we selected the topics in this stage which currently present the greatest challenges or progress. They do not embrace all the issues we are working on, but rather are a sample of the most critical topics raised during our first eight months of operations, from August 2016 to March 2017.





# 1 RESETTLEMENT

## THE WISH TO RETURN TO BENTO

Most residents of Bento Rodrigues, the town hit the hardest by the collapse of the Fundão dam, dream of the “new Bento”. “I have spent plenty of time courting underneath this mango tree, in front of my father-in-law’s house. This is where the square and Sandra’s bar was located, our meeting point”, said Manoel Marcos Muniz, 53, known as **Marquinho**, a pump operator and maintainer at Samarco who retired some twelve months before the tragedy. “I took advantage of this phase of my life to work the land and raise cattle, things I have always liked and done, even when I had a job. This is the life I will lead in the “new” Bento. This is the resurrection of the dream, because being unable to do anything is frustrating”. Marquinho visits what is left of Bento Rodrigues. Despite all the sad things that happened here, I recharge my batteries when I walk through the community. I really miss everything I experienced here”, he explains. “The new Bento will never be the same as the old town, but we will make it as true to the original as possible. I never thought we would experience everything that has happened, despite being aware of the risks of living near a dam. We had a good life”.



Ricardo Correa

The Village Reconstruction Program addresses one of the most sensitive issues in infrastructure recovery: restoring the community’s way of life and homes of residents in three districts devastated by the mudslide - Bento Rodrigues and Paracatu de Baixo, in Mariana; and Gesteira, in Barra Longa.



Ricardo Correa

These people had their homes destroyed or rendered unliveable and most are now living in rented properties. They are scattered across the region, far from relatives and neighbours. “Life is calm here and pleasant. When I came here there was plenty to do. Now I take care of my chickens and the allotment and my wife really likes flowers. We try and live our country life the way it used to be”, said José Gilberto Martins, 67, known as **Seu Deco**, who now lives in the district of Bandeirantes, in Mariana. “It was a real blow finding out we would have to move. Everything was organized there, our life was stable, we lived in a good house, much bigger than our current house, with a pool and 200 chickens and crops. My dream now is to move back to new Bento and lead the same life”.



# 1 RESETTLEMENT

## WHAT WE LEARNED FROM THE PROJECT

We learned a great deal from defining the process for rebuilding Bento Rodrigues. The first design, presented before our work started, was created by an experienced urban planning firm and called for a modern new-fangled village for the residents. It was turned down. “We want the same streets, the same neighbours, even if we are tired of each other, and the same Bento”, said Antônio Pereira Gonçalves, 47, known as Da Lua, one of the community leaders. We believe that if any solution is to last in all the recovery programs it will have to consider the input of those involved.

Based on a process of consultation, the new urban plans were designed in conjunction with the community, its commission of representatives, and Cáritas, the technical advisers who help in resettlement decisions. “Following the creation of the Renova Foundation dialogs have improved, they took note of the community’s expectations for the construction of the new community. **The plans were changed many times**

**to accommodate people and further adjustments are expected up until the end”, concluded Da Lua. The result? The design was unanimously approved on January 28, 2017.**

Reconstruction is painstaking and makes people anxious. The land was chosen by residents on May 7, 2016 and acquired from Arcelor Mittal, the former owner. Now we have to fight bureaucracy, including environmental and urban planning studies, the environmental license and the decree issued by the municipal government transforming the region into an urban area. Vegetation removal and landscaping will probably start in July 2017. All the collective issues to ensure the original plans of Bento Rodrigues are maintained, including preserving neighbourhood relations, were addressed at more than 70 meetings with residents. Now we are having one-to-one conversations with some 200 families to fine-tune the details of each home. Completion is expected by the end of March 2019.



Approval of the Bento Rodrigues urban plans



# 1 RESETTLEMENT

## BENTO ORIGINAL

**54**  
hectares

Level area

Subdistrict of Santa Rita Durão  
(Mariana - MG)

**23,5** km  
from Mariana (MG)

Rural community

Occupation without advance  
planning, starting in the 17th century

Plots in a range of sizes

## OUR PROPOSAL

**375**  
hectares

Area with slopes

District of  
Mariana (MG)

**8** km  
from Mariana (MG)

Urban community

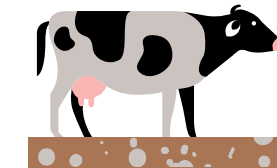
Two-way streets with  
sidewalks

Plots of at least 250m<sup>2</sup>  
complying with municipal  
legislation

## FEATURES OF THE LAND



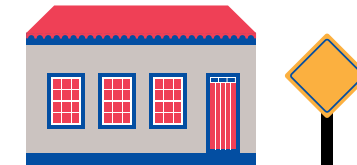
**LAND**  
chosen by more than  
90% of the population



**SOIL**  
suitable for plantation  
and raising livestock



**SOURCE OF WATER**  
supply of uncontaminated  
water in the proximity



**ACCESS**  
planned roads, closer and  
better connected cities

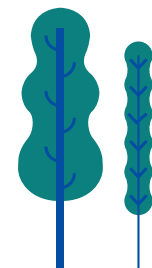
## FEATURES OF THE PROJECT



New squares  
and public  
areas



Neighbory  
relations  
maintained



Green areas  
preserved

# 1 RESETTLEMENT

## RECONSTRUCTION IN PARACATU AND GESTEIRA

Based on the adjustments and lessons from the negotiations with the community of Bento Rodrigues, the reconstruction of the district of Paracatu de Baixo is following the same process: the site of the new community has been chosen, the purchase of the area is being approved and we are preparing the urban plans with the participation of 108 local families. Paracatu is a unique case because there are more rural residents connected to the urban area. A total of 12 meetings were held between July 2016 and January 2017 to understand the expectations and demarcate plots. The final proposal is expected to be presented at the community by May 2017.

The delay has made people anxious in the community. “We didn’t need that many meetings. They already had the elements to determine what people wanted. People want houses the way they used to be, as each house had its own identity. They could provide the land, we could all work together and build it our own way. They also challenged Renova to speed it up. We want Paracatu to resemble us, with our festivities”, complained resident Luzia Nazaré Mota Queirós. **Vanessa Aparecida Isaías**, 21, is also concerned: “Many people

think we won’t be getting Paracatu back. I dream about this but sometimes we lose hope”.

Today, however, rural residents are returning to the region. “I thought about selling my land, but there was a great deal of interest in it so I thought: wow! I went back to my plan of having my country home at the week-ends. Progress began to be made on all the issues after Renova Foundation came into play. I am excited, I have refurbished a guest house and will now do up the caretaker’s house”, said trader Faria, who has a store in Mariana and a country home in Paracatu.

The smallest of the communities to be rebuilt, Gesteira was forecast for completion at the end of 2017, but we came across an unexpected obstacle: the owner of the land chosen by the residents changed his mind and no longer wished to sell. With the help of the Public Prosecutor’s Office, we will discuss the situation with the community again. However, the Gustavo Capanema municipal school has been delivered, in addition to the square and refurbished sports court. Altogether, there are eight homes, eleven plots and a square with the Nossa Senhora da Conceição church.

Ricardo Correa



**PROGRAMS INVOLVED:**  
8: Rebuilding villages



## 2 URBAN INFRASTRUCTURE AND ACCESS ROADS

### REBUILDING BARRA LONGA

Some 70 km from the Fundão dam and lying adjacent to the Carmo river, the municipality of Barra Longa and its 6,000 inhabitants was the only municipality to have its town hall directly impacted by the mudslide.

**Virtually all of the town's infrastructure, including homes, stores and public equipment, was recovered in 2016 (see table).**

**Sinésio Antônio Carneiro**, the owner of a small pizzeria, clearly recalls the night the mudslide came. "I had worked until 11 PM at the pizza restaurant on November 6, 2015.

I heard that the mudslide had hit the town, but neither I nor anyone else was aware of what was yet to come. We stayed in the square with other residents until 2 o'clock in the morning to see what was going to happen.

That was really dangerous. I went home and the mudslide arrived causing devastation at 4 AM. I lost my refrigerator, freezer, display stand and everything I needed to work at

the pizza restaurant", he recalled. "I see the people from Renova Foundation working to recover the town, but everything is very slow".

The main works forecast for 2017 involve the reconstruction of the Exhibition Hall, which should be finished in 2018. We have also had to resolve the deadlock regarding the José de Vasconcelos Lanna Municipal School, which is functioning on a provisional site, as the owner of the original property stated that he no longer intends to rent it out to the municipal government. We are currently elevating the football pitch and refurbishing the last homes and stores which still need repairs.



Ricardo Correa



Arquivo Renova



Ricardo Correa

Barra Longa affected by the mudslide and now recovered



# 2 URBAN INFRASTRUCTURE AND ACCESS ROADS



Ricardo Correa

Refurbished square in Barra Longa

## WORKS DELIVERED IN BARRA LONGA

<b>95</b> homes refurbished	<b>2</b> homes rebuilt	<b>34</b> stores refurbished
<b>1</b> school refurbished	<b>2,5</b> km of road surfaces relayed in the urban zone	<b>1,1</b> km of containment works on the Carmo river
<b>23</b> rural properties refurbished and cleaned	<b>71,5</b> km of surfaced roads recovered	<b>110</b> km of unsurfaced roads recovered
<b>8</b> bridges rebuilt	<b>9</b> suspension bridges	<b>93</b> backyards and plots reformed
<b>100</b> km of fences re-erected	<b>18</b> livestock pens rebuilt	<b>157</b> thousand m <sup>3</sup> of tailings removed

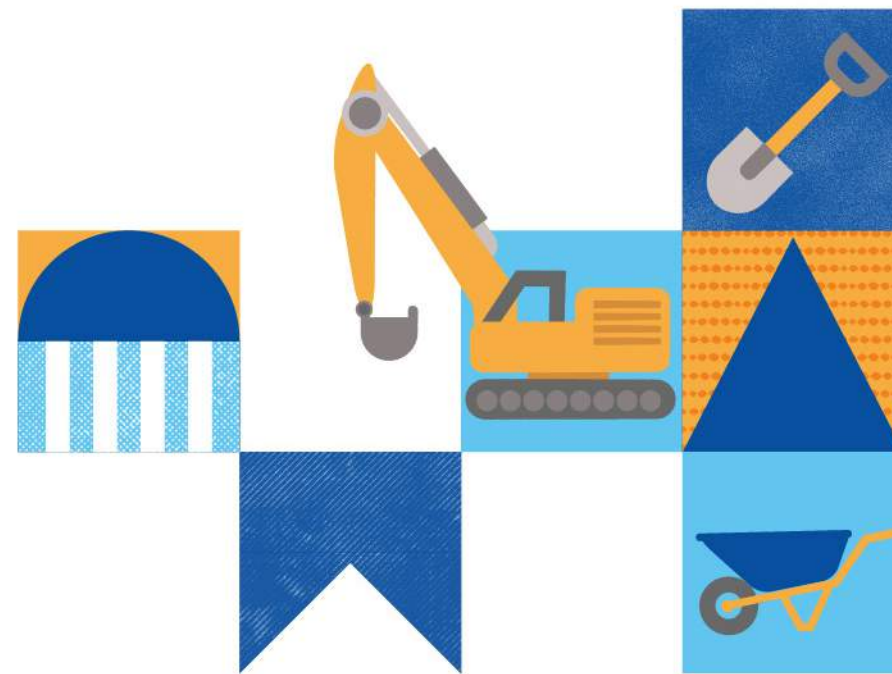
**PROGRAMS INVOLVED:**

10: Recovery of other Affected Communities and Infrastructure



# 3 TAILINGS CONTAINMENT

We are responsible for conducting the analyses on the structures impacted by the Fundão dam collapse. We presented a study to the technical environmental safety and tailings management chamber recommending preventive actions and controls already in progress or about to be adopted.



**PROGRAMS INVOLVED:**  
24: Containing Tailings and Treating Rivers / 37: Environmental Risk Management



# TREATMENT OF WATER AND WASTEWATER

## ALTERNATIVE SOURCES FOR CITIES

Since Renova Foundation took over the management of the activities to improve potable water sources in the municipalities located along the Doce river in August 2016, there have been no interruptions to the supply. The water offered to populations by the municipal treatment stations complies with all drinkability requirements, and is constantly inspected by the authorities.

Until the rivers return to their normal state and water quality studies are undertaken, we need to guarantee the supply of freshwater to municipalities along the Doce river. We are building **water pipelines** and artesian wells to enhance the efficiency of directing water to water treatment stations and waste treatment stations in the region;



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### GOVERNADOR VALADARES (MG)

22-km water pipeline to take water from the Suaçuí Grande river;

### RESPLENDOR (MG)

water pipeline of approximately 2.5 km will direct water to Córrego Barroso;

### LINHARES (ES)

9-km water pipeline will connect the treatment station to Lagoa Nova

### BAIXO GUANDU (ES)

1-km water pipeline will connect to the Guandu river

### COLATINA (ES)

two water pipelines: one 4 km, connecting the Rio Santa Maria river to water treatment station 1, and one 5.5 km, connecting the Pancas river to water treatment station 2.

As for wastewater treatment, on December 28, 2016 we allocated R\$ 51,895,016.76 to the municipalities lying on the banks of the Doce river, including the Risoleta Neves power plant and Regência, in Espírito Santo, to prepare the basic sanitation plans, sewage system projects, the implementation of collection and treatment works, eradication of landfills and implementation of regional landfills.

**PROGRAMS INVOLVED:**

31: Sewage Collection and Treatment / 32: Water Treatment and Alternative Extraction



# FINANCIAL DATA

See how Renova Foundation is using funds to implement programs to reverse the impact resulting from the collapse of Fundão dam.



## GLOBAL VALUES OF THE TTAC

The Settlement Agreement requires annual endowment contributions to be made to the Foundation to fund the programs under the agreement. There are two types of contributions: Compensatory and Remedial. The Settlement Agreement has preliminarily set endowment contributions between R\$ 9.46 billion and R\$ 11.86 billion, distributed as follows.

**COMPENSATORY FUNDS** have been set at R\$ 4.1 billion and include two separate parts. The initial contribution, worth R\$ 500 million, goes to the sewage collection and treatment and waste disposal program being implemented in municipalities along the Doce river. Contributions of R\$ 50 million, R\$ 200 million and R\$ 250 million will be made in 2016, 2017 and 2018 respectively. An additional contribution will go to compensatory programs amounting to R\$ 3.6 billion, payable in annual installments of R\$ 240 million over 15 years from 2016. These programs include protected area remediation, spring remediation and compensation initiatives in general.

**REMEDIAL CONTRIBUTIONS** have no cap; all remedial action that needs to be implemented must not be limited to the annual contributions originally set out in the Settlement Agreement. These include remedial actions to mitigate, remedy and/or repair social, environmental and economic damages.

The most important remedial programs include: Tailings Management, Tailings Containment and In Situ Treatment, Area 1 Remediation, Water Supply Systems, Water Investigation and Monitoring, Registration of Affected Parties, Compensation Program, Protection for Indigenous Peoples and Traditional Communities, Communication and Dialog, Resettlement of Bento Rodrigues, Paracatu and Gesteira, Remediation of Risoleta Neves Reservoir, Physical and Mental Health of Affected Individuals, Recovery of Agriculture and Financial Aid.

The annual contributions set out in the TTAC have been scheduled as follows:

2016 — R\$ 2 billion;

2017 and 2018 — R\$ 1.2 billion per year;

2019 and 2021 — between R\$ 800 million and R\$ 1.6 billion a year; according to the implementation schedule for programs and projects;

From 2022 to 2030 — amount to be determined based on the scheduled repair actions, plus R\$ 240 million a year for compensatory actions.

In addition to the amounts above, R\$ 500 million will be allocated to financing the solid waste disposal and sewage collection and treatment program in municipalities along the Doce river, in 2016, 2017 and 2018, in the amounts of R\$ 50 million, R\$ 200 million and R\$ 250 million respectively.



## FINANCIAL EXECUTION OF THE PROGRAMS IN 2016

The expenses incurred by Samarco as a result of the programs to repair the damage caused by the collapse of Fundão dam have been included in the amounts covered by the contribution allocated for 2016.

Renova Foundation was founded in June 2016 and came into operation in August. In September, Samarco's contracts began to be transferred to the Foundation in a seamless transition process, and the Foundation also conducted the direct sourcing.

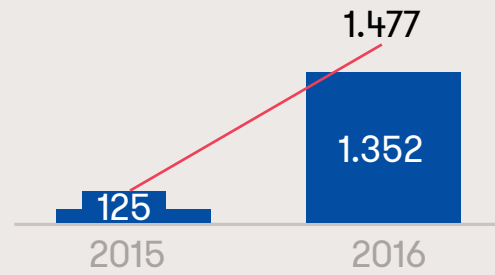
Therefore, the accumulated programs delivered by December 2016 consist of:

- amounts paid by Samarco during the emergency stage through March/2016;
- amounts paid by Samarco from April/2016 related to the TTAC programs;
- amounts paid by Renova Foundation from operational start-up in August/2016.

R\$ 1.477 billion was recorded in the TTAC programs through December 2016, R\$ 1.278 billions of which was paid by Samarco, with the remaining R\$ 199 million paid by Renova Foundation.

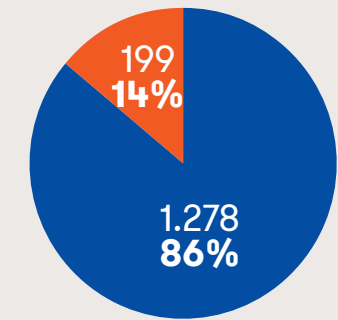
### Economic delivery – BRL MM

— Accumulated    ■ Annual amounts

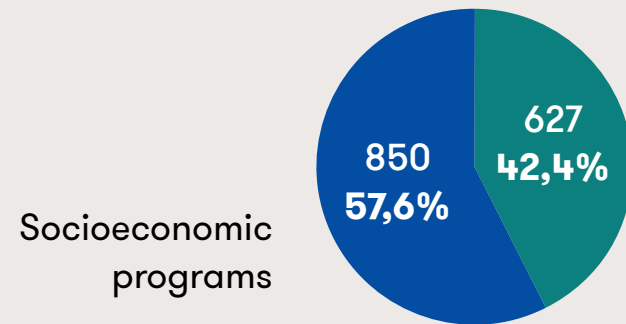


The total contribution amounts include activities carried out by Samarco prior to the establishment of the Foundation and during the transition period

Foundation

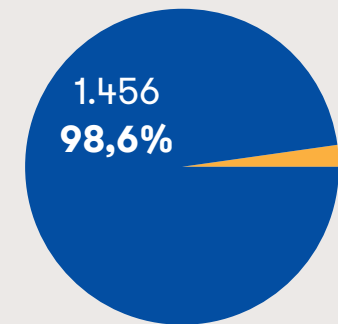


Samarco



Socio-environmental Programs

remediation Programs

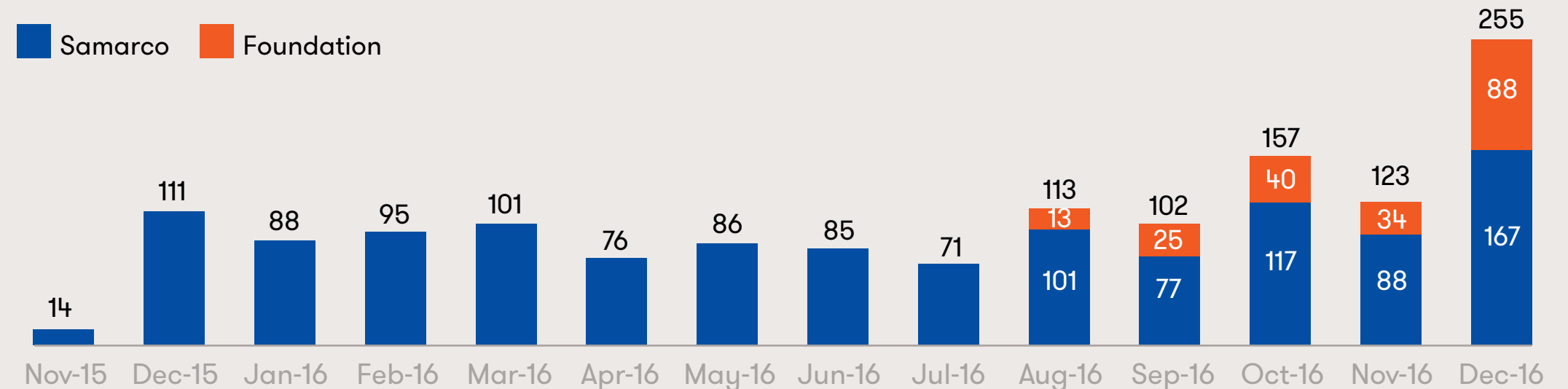


21 (1,4%)

Compensation Programs

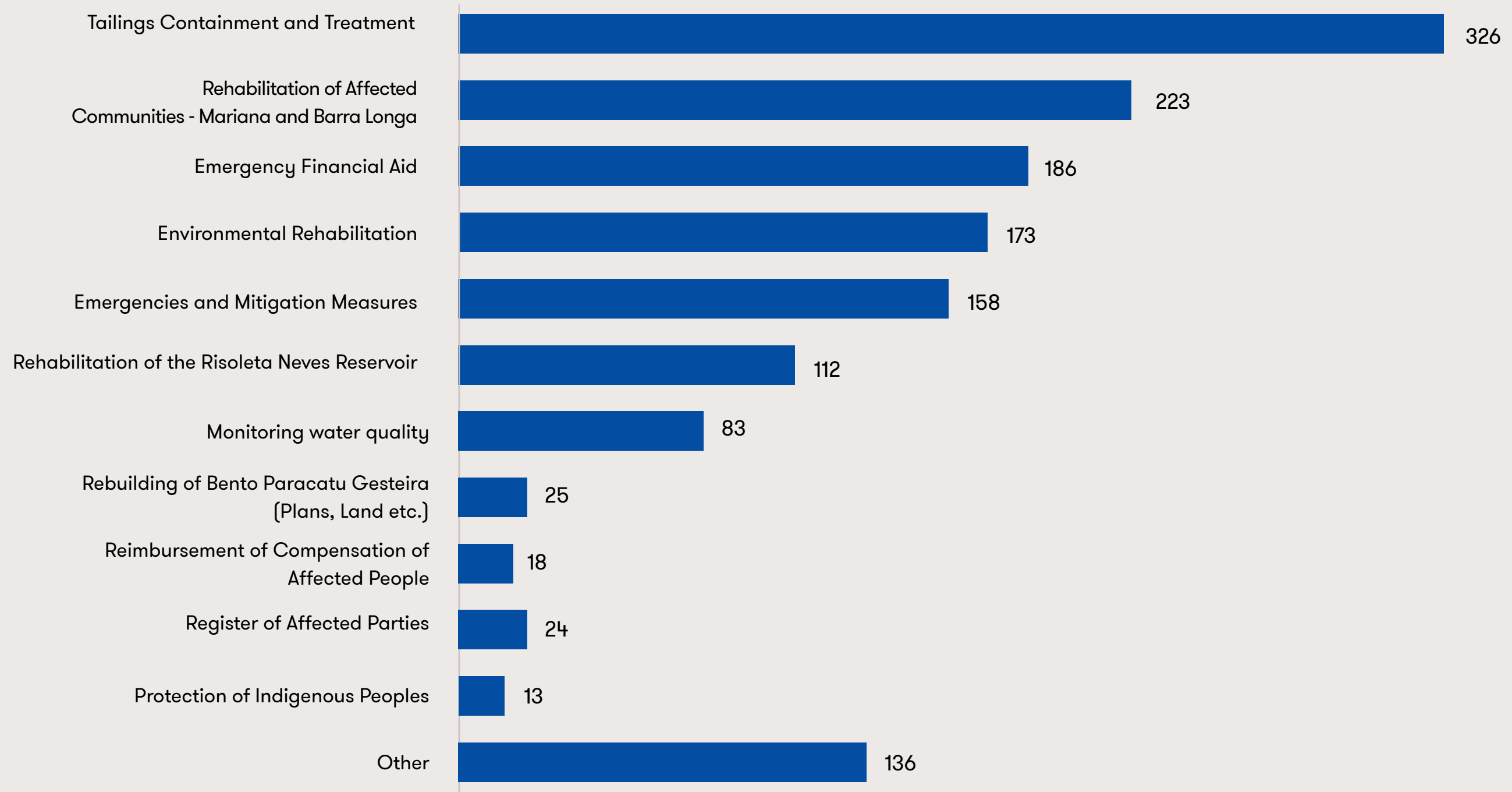
### Monthly economic delivery – BRL MM

■ Samarco    ■ Foundation



Each program has a specific account to permit proper planning and recording of the costs. The amounts accumulated through December 2016 are shown below:

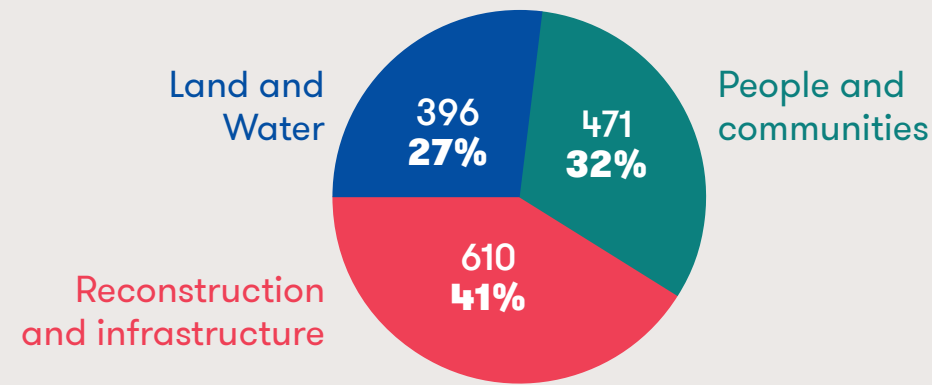
Costs incurred by program – BRL MM



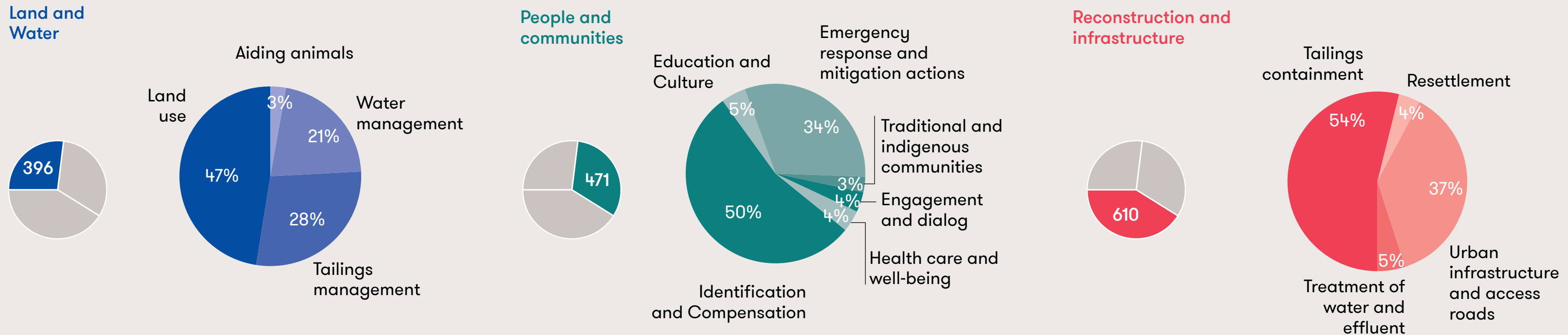


The programs were grouped into three themes, which depict Renova Foundation’s form of operation. See how much each theme used in 2016:

Costs incurred by THEME / BRL MM



Within the themes, the programs are grouped into different operating fronts. See how the funds were distributed in each of them in the course of 2016:

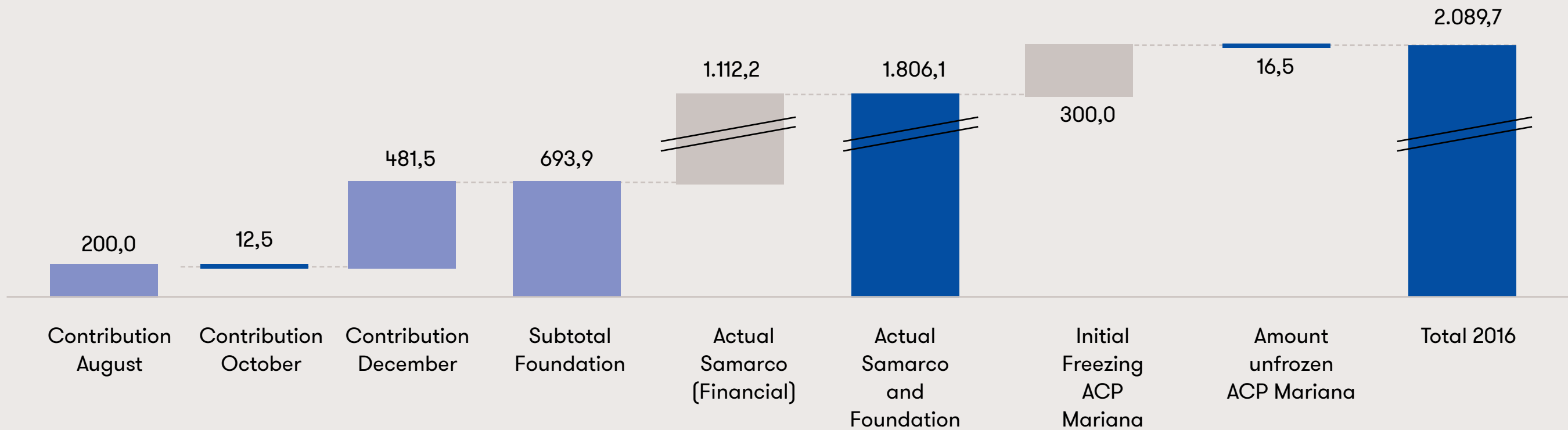


✔ See each Program’s initiatives from page 83 onwards.

## STATEMENT OF THE TOTAL PERFORMANCE OF CONTRIBUTIONS FOR 2016

The graph below shows the composition of the total contribution for 2016 to deliver the programs, amounting to R\$ 2.089 billion. In addition to the investments made in Renova Foundation and the amounts spent by Sa-marco to deliver the projects and programs, the total contribution for 2016 includes amounts frozen by ACP 0400.15.004335-6 (ACP Mariana):

### Contributions for implementing Programs / BRL MM

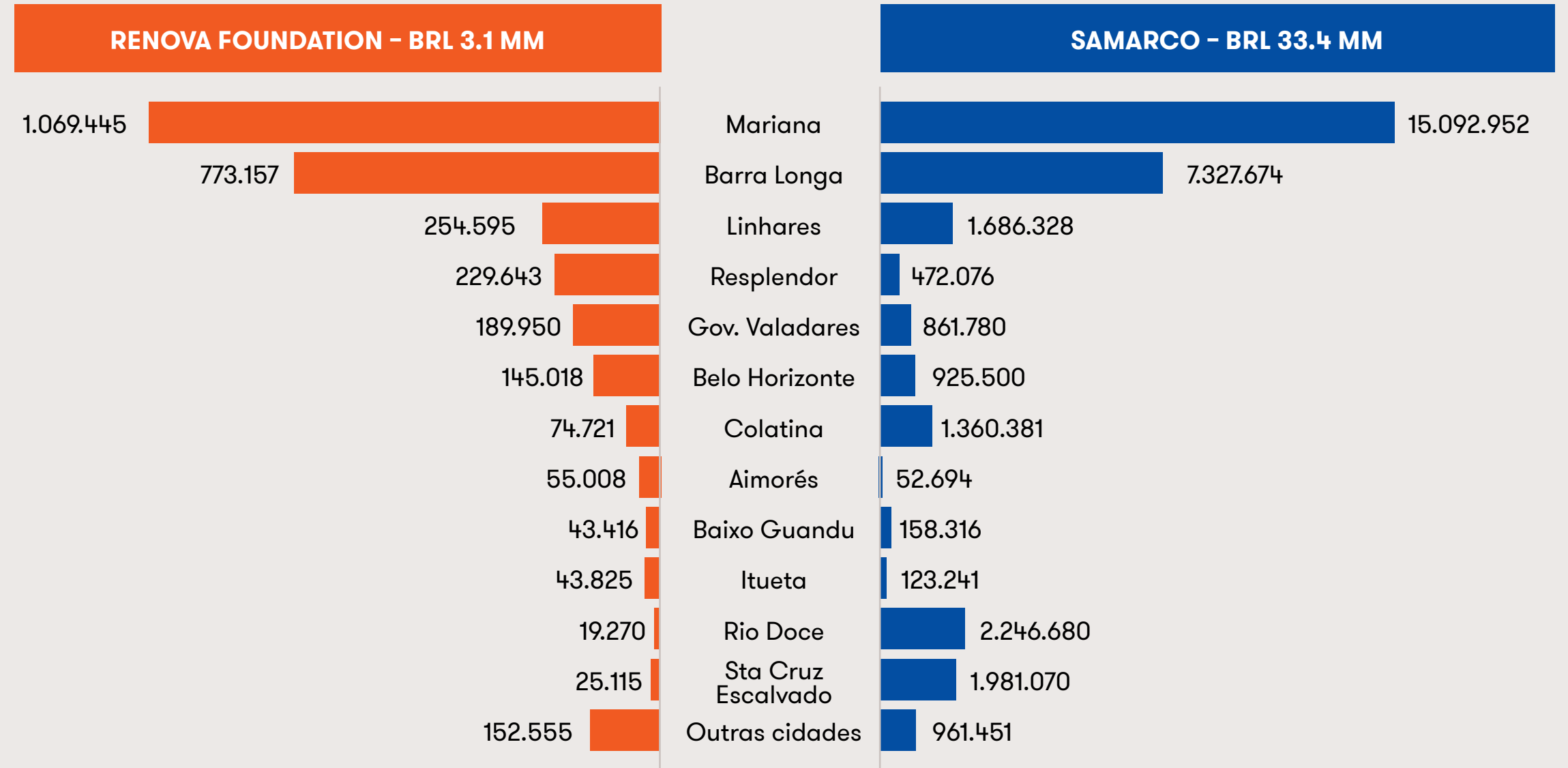




## GENERATING ISS REVENUE FOR MUNICIPALITIES

From November 2015 to December 2016, approximately R\$ 36.5 million was generated in ISS (Services Tax) for the municipalities on services reversing the impact of the collapse of the Fundão dam. The amounts have been earmarked according to delivery at Renova Foundation (R\$ 3.1 million) and Samarco (R\$ 33.4 million). In addition to those under the TTAC, the amounts paid by Samarco include the ISS derived from expenses on works not covered by the TTAC, but required to reinforce remaining structures and other activities related to the dam collapse.

### Generating ISS revenue for municipalities / BRL



### FURTHER INFORMATION

Attached as part of this Annual Activities Report, Renova Foundation’s financial statements merely reflect the accounting and financial transactions conducted by the foundation itself. The figures set out in this report concerning the transactions conducted by Samarco will be represented in the Company’s financial statements.





# PROGRAMS

Doce river in the Rio Doce  
municipal region, in Minas Gerais



# THE PROGRAMS

See the 42 recovery programs set out in the TTAC and conducted by Renova Foundation and the stage they are at:

**Themes:** ● People and communities ● Land and Water ● Reconstruction and infrastructure

## PROGRAM 1 DATA COLLECTION AND REGISTRATION

This census seeks to identify losses and define social parameters to be measured over time. We estimate this involves between 15,000 and 16,000 families. By March some 14,000 people had been registered (10,000 were submitted to the IFC for verification), mainly in the region along the Doce river. A new campaign is taking place between April and September 2017 to find anyone not yet registered.

The re-registration of roughly one thousand affected people in the municipalities of Mariana and Barra Longa awaits an agreement with the Public Prosecutor's Office, which questioned the contents of the questionnaire.



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## PROGRAM 2 COMPENSATION

This program is geared towards **compensating and indemnify** for damages caused by the dam collapse. It depends on registration process, as the amount is determined based on an estimate of each family's losses. Technical institutions nominated by the population built a matrix of values to be utilized and its use was overseen by the Public Prosecution Office.

A transparent and fair settlement was sought, thereby avoiding a slow court battle. Services began to be provided to those registered in the cities of Barra Longa and Colatina. The pain and suffering compensation program to address the damages resulting from the interruption of the water supply has started already and is estimated to cover 400,000 people. Services began to be provided in Governador Valadares (51,000 contacted and 15,000 payments) and Colatina (28,000 contacted and 8,000 payments) in October.

## PROGRAM 3 PROTECTING AND ENHANCING THE LIVING STANDARDS OF INDIGENOUS PEOPLES

This program is for three tribes located in the affected area: Krenak, in Resplendor (MG), and Tupiniquim and Guarani, in Aracruz (ES). Coming into effect after the emergency services, the program will implement structural socio-environmental initiatives with the participation of the communities themselves. Based on the guidance of Funai and Sesai (indigenous health care department), the criteria were determined to source a socio-environmental consultancy firm with the mission of understanding the impacts on and requirements of these people. This study includes a plan of engagement to find local solutions to problems in the region.



## PROGRAM 4 PROTECTION AND RECOVERY OF INDIGENOUS COMMUNITIES' QUALITY OF LIFE

A study conducted by consultancy firm Polifônicas and Fundação Palmares identified the impact on quilombo-la community of Degredo in Linhares (ES). The study is now being further developed to determine which socio-economic programs should be adopted. A partnership with the state commission for the sustainable development of traditional peoples and communities in the state intends to locate other affected communities in Minas Gerais state.

## PROGRAM 5 SOCIAL PROTECTION

Focused on bolstering the social welfare structure to look after the vulnerable sections of society and provide psychological support services to the municipalities of Mariana and Barra Longa. At first, we provided support so that municipalities could reinforce their public structures with social workers and psychologists in the Social Welfare Reference Centers (CRAS), responsible for providing psychosocial services to this affected population. Car services were also provided to help people at home. The

emergency actions began to be replaced by other more structuring actions, such as the provision of community services for the elderly, young people and adolescents, in addition to occupational therapy activities, requested by the community. Another initiative is the assessment of the social vulnerabilities that may have been aggravated by the dam collapse in the region. A consultancy firm will work on this survey which includes the 40 municipalities, identifying which types of vulnerabilities exist, where they are and who is affected. In the course of March and April 2017 workshops will be held with municipal health and social welfare departments to survey and collect the information. Another objective is to build a new program scope, assisted by the local administration.



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## PROGRAM 6 ENGAGEMENT, COMMUNICATIONS AND SOCIAL PARTICIPATION

We should ensure the **participation of the affected population** and those indirectly affected when devising the content of the programs. Engagement is at the center of our modus operandi to ensure people have access to comprehensive, transparent, complete and publicly available information,

in plain language that is appropriate and understandable by all stakeholders, supporting informed public participation. There are a series of hotlines: 0800 Call Center, 12 Service Centers, the Ombudsman, e-mail, Facebook (from May 2017), the Speak to us section on the Foundation's website and informative information. A total of 64,245 contacts were received in 2016. Through March 2017 the Engagement team had conducted 918 engagement events involving 31,547 people.



## PROGRAM 7

### AIDING ANIMALS

After an initial stage of rescuing and treating animals, this program cares for the animals until they can be re-released or their owners found. Large animals (swine, horses and bulls): are treated in two leased ranches in Acaiaca (MG) and will be returned as soon as the properties are ready to receive them. Similarly, small animals (cats and dogs): are also under the care of Renova Foundation at the temporary animal shelter (Cata). The program also aims to find homes for lost animals through adoption campaigns – more than 110 cats and dogs have already been adopted.

## PROGRAM 8

### REBUILDING VILLAGES

This involves the reconstruction of three locations: Bento Rodrigues, **Paracatu de Baixo** and Gesteira. Around 70 meetings have been held with the community in order to define what the new Bento Rodrigues will look like.

The first project suggested was turned down by residents, who actively participated in the new approved version. Engineering calculations and urban planning and environmental studies are taking place. In this manner, the environmental license implementation stages can commence in the latter half of the year. In Paracatu, a general meeting is expected to decide on the community's project by May, which involves some 120 families. In the smaller village of Gesteira, which has eight homes, 11 plots, a square and a church, we will have to re-visit the situation with the local community, because the owner of the first plot chosen has said he no longer wishes to sell. The Gustavo Capanema Municipal School, also in Gesteira, was delivered in the beginning of the year.



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## PROGRAM 9

### RECOVERY OF THE RISOLETA NEVES POWER PLANT

The main purpose of this program is to dredge and desilt the reservoir of the Risoleta Neves Hydroelectrically Power Plant and recover its operation capability. This unit has been under Samarco's responsibility until March 2017, after which it was assigned to Renova Foundation. The engineering, environmental, project management and planning teams are monitoring the execution of activities to avoid any delays or discontinuity of the knowledge acquired. A meeting on March 22 brought together the technical teams to determine the new strategies to complete stage 1 established in the TTAC (dredging the first 400 meters of the plant's reservoir) as quickly as possible.

## PROGRAM 10

### RECOVERY OF OTHER AFFECTED COMMUNITIES AND INFRASTRUCTURE

This program focused on the municipality of Barra Longa, whose town hall was directly hit. The entire recovery took place in 2016: all roads were resurfaced (including those that were indirectly impacted), we recovered the square, the Alameda Beira-Rio avenue, rebuilt seven bridges, carried out containment works along the Carmo river, refurbished 95 of the 99 homes, 34 stores and removed 157,000 cubic meters of tailings that had made their way into the town. In 2017 we are going to rebuild the exhibition hall, the year's major project, which will probably be completed in 2018, and are also working on the elevation of the football pitch.

**PROGRAM 11**  
**REINTEGRATION TO SCHOOL COMMUNITIES**

The focus was shifted to the reintegration of the school communities in Bento Rodrigues, Paracatu and Gesteira. In collaboration with the municipal education departments of Mariana and Barra Longa, schools were relocated to temporarily host the students and teachers until permanent facilities have been built. The **Gustavo Capanema Municipal School in Gesteira** has been delivered and by the beginning of 2017, students already started to attend classes at the new school. Other schools are still waiting for the implementation of the village rebuilding program. Students receive psychological support to help them settle into the new school environment.



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**PROGRAM 12**  
**PRESERVATION OF HISTORICAL, CULTURAL AND ARTISTIC HERITAGE**

To preserve the historical and cultural heritage of Mariana (Bento Rodrigues and Paracatu) and Barra Longa (Gesteira), an emergency action was agreed upon with the Public Prosecutor's Office to recover sacred art items affected by the mudslide and protect the four chapels and churches affected by the dam collapse: Nossa Senhora da Mercês and São Bento, in Bento Rodrigues; **Santo Antônio Church, in Paracatu**; and Nossa Senhora da Conceição, in Gesteira. We have also supported religious and cultural festivities in these communities. The decision whether to restore or rebuild the buildings, however, is out of the foundation's hands. This decision will result from an understanding between the leaders of the Catholic Church, IPHAM, IEPA, the Public Prosecution Office, the Municipal Heritage Council and the local residents.



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**PROGRAM 13**  
**TOURISM, CULTURE, SPORT AND LEISURE**

In March 2017 specialist consultants concluded the first version of an analysis of the Doce river streambed in all municipalities, to ascertain the impacts on sport, culture, leisure and tourism. This analysis will be enhanced by cross-referencing it with other programs and will lead to the production of a plan of action. The most evident cultural centres are Mariana, Resplendor and Linhares. It found that tourism was relatively underdeveloped in the region, which provides an opportunity for the future. We are also sponsoring the resumption of typical regional festivities, in addition to sports and leisure activities.

**PROGRAM 14**  
**PHYSICAL AND MENTAL HEALTH OF THOSE AFFECTED**

With more of a clinical approach, this program's structure is very similar to program 5, social protection. From the very onset we have sought to bolster the presence of the National Health Service (SUS) in the municipalities of Mariana and Barra Longa, with physicians, nurses and materials in the basic health care units (UBS). Vehicles were also provided for the home service. The next step is to conduct an epidemiological and toxicological study throughout the affected region to determine the magnitude of the impact on health care, guide actions and establish the parameters to measure progress over time.



## PROGRAM 15

### SOCIOECONOMIC TECHNOLOGY

This will sponsor research and development into technologies that can use tailings for economic purposes, in addition to other technologies and products arising in the course of the repair and restoration of the Doce river streambed. The program is seeking patented certified products which can boost the local economy. Partner-ships to this end have been made with Fapemig – Research Support Foundation of Minas Gerais – and Fapes – Research and innovation Support Foundation of Espírito Santo –, intermediated in by the integrated Development institute of Minas Gerais (iNDi). We should allocate more funds for research through grants to Masters and PhD students. This will also embrace projects entailing new means of handling and cultivating pastures and innovating in the recovery of degraded areas. A number of pilot plants are developing blocks for civil construction and servicing, but the most effective results will begin to emerge in 2018.

## PROGRAM 16

### RESUMING AQUACULTURE AND FISHING ACTIVITIES

This embraces the entire streambed of the Doce river and the Regência and Provação marine areas in Espírito Santo. The program is geared towards the full environmental recovery of the basin and clearance for fishing which is currently banned. The first studies into water quality and fish stocks were discrepant and inconclusive. Two panels were therefore held with the main research institutions in the region to determine the criteria for a new study. Temporarily we are fostering alternative river-based employment, such as cleaning and monitoring, in addition to strengthening fishermen colonies and associations.

## PROGRAM 17

### RESTART OF AGRICULTURAL ACTIVITIES

This program embraces **237 rural properties** between Mariana and the Candonga reservoir, which were physically impacted by the volume of tailings, with the best pastures being lost. - in addition to the properties ranging from Candonga to Regência (ES) primarily impacted by restrictions on using water from the Doce river for irrigation and raising livestock. Emergency works included re-erecting knocked-down fences, ring-fencing areas containing mud to prevent livestock getting bogged down and protecting substitute crops, totalling 246 kilometres offenses. We planted 180 hectares of pastures with greater productivity and distributed more than 12,000 tonnes of silage to feed livestock. In March 2017 the permanent stage of the program commenced, which will analyse each property in terms of balancing economic activity and environmental conservation. It is embedded in program 40 (implementation of CAR and PRA) to jointly define solutions.

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## PROGRAM 18

### REGIONAL ECONOMIC DIVERSIFICATION

This program focuses on Mariana, which is the only mining activity dependant municipality in the region. This program is based on Mariana 2030, a project involving the municipal government and community leaders which outlines long-term social and economic development trajectories. Renamed Mariana Present and Future, this revision process included two workshops which made it possible to determine the core target to be achieved by 2030: Mariana is ranked amongst the top ten cities in Brazil in terms of HDI (human development index). It is currently ranked 52nd in Minas Gerais.

## PROGRAM 19

### SMALL BUSINESS

This aims to recover and restore small businesses directly affected by mudslide, by rebuilding and renewing the equipment affected, including freelancers and service providers who lost their working materials. We are also benefiting tourism activities in Regência and Povoação. The core principle is that activities be resumed in a better condition than before the collapse. A new stage starts in 2017: we want to incentivize **entrepreneurship** and the emergence of businesses that have a positive social impact, primarily benefiting low-income communities (at the bottom of the social pyramid).

## PROGRAM 20

### ENCOURAGING LOCAL CONTRACTING

The funds used by the foundation in recovery programs can also nurture the local economy. This program has become a systematic process between the foundation and the companies providing services. Our target is to have more than 60% of the workforce sourced from the impacted region. We had met the 61% by December 2016, with 1,759 local professionals hired. We are now seeking to foresee the requirements of the other programs to prepare the community through training partnerships with entities like SENAI and Instituto Terra, for example. A consultancy firm is also analysing local labour potential.

## PROGRAM 21

### EMERGENCY FINANCIAL AID

Those considered within the so called affected population which demonstrates their earnings were compromised due to the interruption to production activities are entitled to monthly financial aid until they can get back to work. By March 2017, 8,159 people had received such aid, which can be withdrawn using a debit card. New applications continue to be analysed.

## PROGRAM 22

### MANAGEMENT OF SOCIOECONOMIC PROGRAMS

This monitors the process of determining activities, information systems, databases, result measurement benchmarks, approval according to the governance model and budget allocation, all to ensure efficiency and full compliance with the settlement agreement (TTAC).

## PROGRAM 23

### HANDLING TAILINGS

In 2016, geochemical and geomorphological environmental studies were carried out to assess the composition of tailings and impacts, such as erosion of banks, the main areas where the tailings are deposited or could return to the river with the rain. Three events at the start of 2017, with the participation of environmental agencies, the Public Prosecutor's Office, consultants and experts, resulted in the preparation of a Management Plan, which will be sent to the regulatory agencies and then to the IFC Technical Chamber. The plan contains guidelines, concepts, methods, techniques, governance structure and tools to decide on the best approach to managing each river section. At the end of May we will apply the proposed methodology and will have the first Plan of Action implemented.



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**PROGRAM 24**  
**CONTAINING TAILINGS**  
**AND TREATING RIVERS**

The task of building and operating emergency sediment containment structures in the area between the Fundão dam and Risoleta Neves HPP is still under Samarco’s responsibility. The transition plan has been prepared to assign a number of obligations to Renova Foundation from March 31, 2017 onwards. In the Ger-mano region, we are working in two different areas: Axis 1 and Dike S4. In Axis 1, we are responsible for sourcing the company to carry out the works, to acquire materials and to implement construction plans until their final elevation. In the region of Dike S4, we will decommission dike S4 (forecast for 2019), built as the last sediment containment barrier before the Gualaxo do Norte River and which is currently inundating a part of Bento Rodrigues. Renova Foundation will also be responsible for any new dike requirements due to the future definitions of tailing management programs and the recovery of the Risoleta Neves power plant. The operation of the Nova Santarém dam and dike S3, located in an area owned by Samarco, remain under the company’s responsibility.



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**PROGRAM 25**  
**ENVIRONMENTAL RECOVERY**

This program consists of **cleaning the river main channel and free it from trees, branches and sediments**, as to physically stabilize the 600 hectares of banks in the initial section running through Risoleta Neves Power Plant, and planting vegetation with 15 species of grasses and legumes to avoid soil erosion. In 2018 we will begin planting native forest species to recover the riparian vegetation. This will be especially helpful in recovering areas where the mudslide resulted in erosion of riverbanks. River meanders are being reinforced by rock armouring, which is the placement of small pieces of rock on the sides of the river, to stop water from destroying the riverbanks. The TTAC originally estimated an operational area of 2,000 hectares. New measurements will determine more accurately the impacted areas.

**PROGRAM 26**  
**RECOVERY OF APPS**

Restoring 40,000 hectares of Permanent Preservation Areas (APPs) along the entire Doce river basin over ten years is an opportunity to strategically think about the territory as a whole. A company will be hired to identify where these plantations should occur, mainly aiming to **recover the riparian vegetation**, a topic also addressed in program 25. The inter-federative committee (IFC) is analysing a technical operating procedure detailing the actions. We also wish to identify where there are sapling nurseries along the Doce river

to produce the native spaces of the forest biome to be planted. We are researching a forest management system (SGF), as the in-formation needs to be collected in a standardized manner in the field to enable monitoring with managerial reports and indicators. A meeting has been organized in May with specialist entities to debate the best forest restoration practices for economic purposes, i.e. to evaluate systems that encourage farmers to combine economic use with forest restoration, which will encourage farmers to production with forest restoration.



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## PROGRAM 27

### RECOVERY OF SPRINGS

This program aims to recover 5,000 springs in ten years in the Doce river's entire drainage basin, at a pace of 500 per year. The first step is to protect them, before working out what would be considered a recovered spring. On March 2, 2017 we completed the protection of the first 511 springs in conjunction with Instituto Terra, which mobilized 217 rural property owners. We provided the materials and hired the labour to set up a fence in a radius of 50 meters around the springs in the **Rio Pancas**, Suaçuí Grande and Santa Maria do Doce basins. The next step is to regenerate the vegetation, planting 1200 native plants per hectare. More than 500 will be protected by the end of 2017.



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## PROGRAM 28

### CONSERVATION OF BIODIVERSITY

This program will study the aquatic fauna along the entire course of the Doce river and the watercourses that flow into it. A company has been contracted and the Work Plan was submitted to the IFC on March 31, 2017. The Rede Rio Doce Mar university consortium has also been hired to analyse the marine environment, water and sediment in Espírito Santo. While the studies are taking place, emergency actions are being discussed by the Biodiversity and Conservation Technical Chamber.

## PROGRAM 29

### RECOVERING WILDLIFE

This program aims to install two Wildlife Screening and Rehabilitation centres (Cetas) along the Doce river. The Ibama offices in Espírito Santo and Minas Gerais requested that the location be changed due to logistical difficulties, which would require an amendment to the TTAC. The Biodiversity and Conservation Technical Chamber should refer this requirement for analysis and decision by the inter-federative committee by midway through 2017. The foundation is responsible for building the facilities and operating them for a period of three years.

## PROGRAM 30

### ENDANGERED TERRESTRIAL FAUNA AND FLORA

Details of the program are still being defined. We delivered a report assessing the environmental impacts on endangered fauna. A meeting in April, to take place in Brasília, will align the project with a plan of action for endangered species. Meetings with scientific specialists will then determine the methodologies and species to be monitored. Following completion, the Action Plan will be submitted to the IFC for analysis and subsequent implementation.

## PROGRAM 31

### COLLECTION AND TREATMENT OF SEWAGE AND SOLID WASTE

This program follows the destination of funds as determined by the IFC to the municipalities lying along the banks of the Doce river, from the Risoleta Neves power plant to Regência, in Espírito Santo, in order to design the basic sanitation plans, sewage system projects, the implementation of collection and treatment works, eradication of waste dumps and implementation of regional landfill sites. The prioritizing criteria and cap values to be transferred to municipalities have been set by the IFC. However, the requirements municipalities are supposed to meet in order to become eligible to get the funds are still being defined.





Arquivo Renova

### PROGRAM 32

## WATER TREATMENT AND ALTERNATIVE SOURCING

We should work to reduce the risk of water shortages in cities located along the Doce river and build sustainable solutions for alternative water supply systems. **Water pipelines and artesian wells** are being built to enhance the efficiency of directing water to water treatment stations and waste treatment stations. In Governador Valadares (MG) a 22-km water pipeline is planned to take water from the Suaçuí Grande river; in Resplendor (MG), a water pipeline of approximately 2.5 km will direct water to córrego Barroso; in Linhares (ES), a 9-km water pipeline will connect the treatment station to Lagoa Nova; in Baixo Guandu (ES) – 1-km water pipeline will connect to the Guandu river; and in Colatina (ES) – two water pipelines: one 4 km, connecting the Rio Santa Maria river to water treatment station 1, and one 5.5 km, connecting the Pancas river to water treatment station 2.

### PROGRAM 33

## ENVIRONMENTAL EDUCATION

According to the TTAC terms, the environmental education focuses on the municipalities of Mariana, Barra Longa, Rio Doce and Santa Cruz do Escalvado. 41 activities were carried out between August 2016 and January 2017, including lectures, meetings and discussions, with the participation of 631 people. We are putting together an environmental education program encompassing the 39 municipalities alongside the Doce river, with the participation of research institutions, third sector institutions, basin committees and government agencies.

## PROGRAM 34

### PREPARING FOR ENVIRONMENTAL EMERGENCIES

In order to alert the population in the case of another environmental emergency related to dams in the region extending to the Risoleta Neves power plant, a **system with 31 sirens** has been installed in the populated areas on an urgent basis. The Civil Defense can also use the system to warn people in the event the Gualaxo and Carmo basins are inundated, which now has instruments connected to an automatic system measuring the level of rivers and accumulated rainfall. In September 2016, an analysis was conducted on the structure and response capacity of the Civil Defense teams in the municipalities of Mariana, Barra Longa, Santa cruz do Escalvado and Rio Doce. The analysis and a plan of action for the next five years have been submitted to the IFC. There are three operating fronts: enhancing public risk management, creating civil defence community groups to empower the community in terms of risk management; and coaching young people in schools regarding risk perception.

Arquivo Renova



## PROGRAM 35

### INFORMATION FOR THE POPULATION

In order to provide greater transparency for the population, the settlement includes the construction of three information centres, one in each macro region of the affected territory: Mariana and Barra Longa; in the Minas Gerais section of the Doce river; and in Espírito Santo. The centres will be maintained for ten years.

There are currently 12 information and service centres, operating as access channels for the communities. We are fully aware that although they meet populations basic needs they haven't been totally structured and we are planning to create three more didactic and interactive centres, which can supplement the work of the environmental education program.

## PROGRAM 36

### NACIONAL/INTERNATIONAL COMMUNICATIONS

This program consists of a website to ensure everybody can read about our activities with complete transparency. This electronic address ([www.fundacaorenova.org](http://www.fundacaorenova.org)) has been active since August 2016, as required by the TTAC. We want this website to be another instrument for engaging with society, also meeting the international

demand for public information, which is available also in English. In January 2017, we began providing real-time coverage of public discussions, lectures and other activities to further expand the reach of these interactions with the communities. Along 2017 we will expand our presence in social networks and this development is currently being planned. We lastly hope this website will record the dialogue and the recovery of the Doce river over the course of time.

## PROGRAM 37

### ENVIRONMENTAL RISK MANAGEMENT

On March 2, 2017 we submitted to the inter-federative committee the analysis of environmental risks posed by Samarco facilities impacted by the collapse: the Germano and Santarém dams, the latter now immersed by the Nova Santarém dam reservoir, in addition to the slurry pipeline. This material will be presented to the Environmental Safety and Tailings Management Technical Chamber. The work was conducted based on a specific methodology and recommends controls and preventive actions that are already in place or will be adopted.





### PROGRAM 38

## COMMITTEE OF THE DOCE RIVER BASIN

This program aims to monitor over time the recovery of the Doce river drainage basin and coastline and the effectiveness of permanent interventions made by **systematically evaluating the quality of the water and sediment**. To achieve this, we created the permanent, systematic qualitative and quantitative water and sediment monitoring program (PMQQS) in the Coastline and Estuaries, which the Water Quality and Water security Technical Chamber has been analysing since March 06. The sampling frequency depends on

the substance being analysed, and can be hourly (automatic monitoring stations), monthly or quarterly. The basin's automatic measurement network is divided into four sections: 18 sampling points between the Fundão dam and the Risoleta Neves power plant, including the Gualaxo do Norte and Carmo rivers and Santarém creek; 10 sampling points between the Risoleta Neves power plant and the Baguarí power plant, including the Piracicaba, Matipó and Santo Antônio rivers; 7 sampling points between the Baguarí and Aimorés power plants; and 4 sampling points between the Aimorés power plant and the mouth of the Doce river - there are also 36 sampling points in the estuaries and coastal zone of Espírito Santo.

### PROGRAM 39

## CONSERVATION UNITS

The program was originally created to assess the impact and remediation actions in the Conservation Units affected: Parque Estadual do Rio Doce (MG), Reserva Biológica de Comboios (ES), Área de Proteção Ambiental Costa das Algas and Refúgio de Vida Silvestre de Santa Cruz (ES).

This study will now encompass the 39 conservation units in the entire region impacted. The Biodiversity and Conservation Technical Chamber will send guidelines for the new engagement plan. We will simultaneously work on consolidating Parque Estadual do Rio Doce (MG) and Refúgio de Vida Silvestre de Santa Cruz (ES) and on implementing and building the head office of the new Environmental Protection Area (APA) at the mouth of the Doce river (ES), occupying an estimated 43,400 ha, which has yet to be created by the federal government.

### PROGRAM 40

## CAR AND PRAS

Through the partnership with Emater and IEF (State Forestry institute), all the 237 rural properties between Mariana and the Risoleta Neves power plant will have their own Socioeconomic and Environmental Adaptation Plan - Pasea, which rectifies land ownership documents according to the requirements of the new Forestry

code, with the rural environmental register (CAR) ready and prepared to have the environmental legalization plan (PRA), which is still undergoing regulatory compliance adaptations.

### PROGRAM 41

## MANAGEMENT OF SOCIO-ENVIRONMENTAL PROGRAMS

As is the case with program 22, this program coordinates the management of the socio-environmental programs, monitoring the process for defining activities, information systems, databases, result measurement benchmarks, approval according to the governance model and budget allocation, all to ensure efficiency and full compliance with the settlement agreement (TTAC).

### PROGRAM 42

## REIMBURSING EXTRAORDINARY GOVERNMENT EXPENDITURE

In the course of 2017, a consultancy firm E&Y will conduct audits as part of the criteria for reimbursing federal, state and municipal government agencies, provided that all supporting documents are submitted. The TTAC establishes the amount of R\$ 27,463,793.00 for the reimbursement of state and federal government, adjusted by the IPCA price index. The payments schedule will be defined until October 2017.



Escola Municipal Gustavo Capanema - Gesteira / Barra Longa



APPENDIX  
2016 FINANCIAL  
STATEMENTS

Gráfico criado com a participação dos alunos:  
Celiqur Junior de Costa  
Mary Henrique de Costa  
Jefeo Vitor de Silva Costa  
Luiz Paulo Torres  
Miguel Francisco Olini de Castro  
Rafaela Vitória Santos Luz  
Ryen Roberto Costa  
E das professoras:  
Andréia Aparecida de Araújo Costa  
Genilda Caetano de Araújo Costa

Gesteira school has been rebuilt and has a panel made by students



# AUDITOR'S INDEPENDENT REPORT ON THE FINANCIAL STATEMENTS



*To the Renova Foundation Board  
of Directors and Shareholders*

## OPINION

We have audited the financial statements of Renova Foundation (“Foundation”), which comprise the statement of financial position as at December 31, 2016 and the related statements of surplus or deficit, the statement of changes in shareholders’ equity and statements of cash flows for the year then ended, including significant accounting policies and other explanatory information.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Foundation on 31 December 2016, and its financial performance and its cash flows for the financial year then ended, in accordance with accounting practices adopted in Brazil.

## BASIS FOR OPINION

We conducted our audit in accordance with Brazilian and international auditing standards. Our responsibilities under those standards are further described in the Auditors’ Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Foundation in compliance with the ethical requirements that are relevant to our audit of the financial statements in Brazil, and we have fulfilled our ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## OTHER INFORMATION ACCOMPANYING THE FINANCIAL STATEMENTS AND AUDITORS’ REPORT

Foundation Management is responsible for this other information that

comprises the Management Report.

Our opinion on the financial statements does not cover the Management Report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the Management Report and, in doing so, consider whether the report is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work that we have performed, we conclude that there is a material misstatement of this Management Report, then we are required to report that fact. We have nothing to report in this regard.

## RESPONSIBILITIES OF MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE FINANCIAL STATEMENTS

Foundation management is responsible for preparing and adequately presenting these financial statements in accordance with the accounting practices adopted in Brazil and the internal controls necessary to ensure the financial statements are free from material misstatement, whether due to fraud or error.

Foundation management is responsible for preparing and adequately presenting these financial statements in accordance with the accounting practices adopted in Brazil and the internal controls necessary to ensure the financial statements are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Foundation’s ability to continue as a going concern, disclosing, as applicable, matters

related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Foundation or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Foundation's financial reporting process.

## AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. 'Reasonable assurance' is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Brazilian auditing standards and ISAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Brazilian auditing standards and ISAS, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Foundation's ability to continue as a going concern. If we conclude that a material uncertainty exists, then we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Foundation to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

PricewaterhouseCoopers  
Auditors Independents  
CRC 2SP000160/O-5 "F" MG

Guilherme Campos e Silva  
Accountant  
CRC 1SP218254/O-1 "S" MG



## Statement of Financial Position

Assets	NOTE	2016	Liabilities	NOTE	2016
<b>CURRENT</b>			<b>CURRENT</b>		
Cash and cash equivalents	3	567,465	Trade payables	7	47,746
Recoverable taxes	4	853	Salaries and payroll contributions	8	608
<b>Total current assets</b>		<b>568,318</b>	Taxes payable	9	3,839
<b>NONCURRENT</b>			Other provisions	11	19,989
Assets under construction intended for donation	5	5,022	Socio-environmental and socioeconomic obligations	12	499,561
Property, plant and equipment	6	38	Other liabilities		1
<b>Total non-current assets</b>		<b>5,060</b>	<b>Total current liabilities</b>		<b>571,744</b>
			<b>EQUITY</b>		
			Equity	13	693,950
			Transfer to socio-environmental and socioeconomic obligations	13	(693,950)
			Surplus for the year		1,634
			<b>Total shareholders' equity</b>		<b>1,634</b>
<b>TOTAL ASSETS</b>		<b>573,378</b>	<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>		<b>573,378</b>

## Statements of Surplus (Deficit)

	NOTE	2016
<b>REVENUE</b>		
Operating revenue - contributions	14	194,389
Contribution revenue	14	4,928
Voluntary service revenue	14	27,993
<b>Total revenue</b>		<b>227,310</b>
<b>OPERATING EXPENSES</b>		
On programs	15	(194,389)
General and administrative	16	(33,826)
Other net operating expenses		(40)
<b>Operating deficit before financial income/loss</b>		<b>(945)</b>
<b>FINANCE INCOME</b>		
Finance revenue	17	2,585
Financial expenses	17	(6)
<b>Surplus for the year</b>		<b>1,634</b>

## Statements of Changes in Shareholders' Equity

	NOTE	Equity	Accumulated deficit	TOTAL
At June 24, 2016		-	-	-
Funders' contribution	13	693.950	-	693.950
Transfer to socio-environmental and socioeconomic obligations	13	(693.950)	-	(693.950)
Surplus for the year		-	1.634	-
Balance at December 31, 2016		-	1.634	1.634

## Statement of Cash Flow

	NOTE	2016
<b>SURPLUS FOR THE YEAR</b>		1.634
<b>ADJUSTMENTS TO RECONCILE THE DEFICIT FOR THE YEAR TO THE CASH PROVIDED BY OPERATIONS:</b>		
Provision for other liabilities	11	19.989
		21.623
<b>(INCREASE) DECREASE IN OPERATING ASSETS:</b>		
Recoverable taxes	4	(853)
<b>INCREASE (DECREASE) IN OPERATING LIABILITIES:</b>		
Trade payables	7	47.746
Payroll, provisions and social contributions	8	608
Taxes payable	9	3.839
Socio-environmental and socioeconomic obligations	12	499.561
Other liabilities	12	1
Net cash provided by operations		572.525
<b>CASH FLOWS FROM INVESTMENT ACTIVITIES</b>		
Assets under construction intended for donation	5	(5.022)
Acquisition of property, plant and equipment	6	(38)
Net cash used in investment activities		(5.060)
Net increase in balance of cash and cash equivalents		567.465
Cash and cash equivalents at beginning of year	3	-
Cash and cash equivalents at end of year	3	567.465
		567.465



*Management notes to the financial statements  
as of December 31, 2016*

(In thousands of Reais - R\$, unless stated otherwise)

## 1. REPORTING ENTITY

Renova Foundation (“Foundation” or “Entity”) is a private non-profit company incorporated on June 24, 2016 with principal place of business at Avenida Getúlio Vargas 671, 4o andar, Belo Horizonte – MG. The “Foundation” is supported by Samarco Mineração S/A (“Samarco”), as the “Principal Maintaining Company”, Vale S/A (“Vale”) and BHP Brasil Ltda. (“BHP”) (jointly “maintaining companies”), responsible for donating the funds necessary to carry out its activities.

It is governed by its Bylaws and the applicable legislation. Its sole activity is the management and delivery of the measures set out in the socio-economic and socio-environmental programs, including the provision of social assistance to those affected by the collapse of the Fundão dam owned by Samarco, as detailed in the Framework Agreement (TTAc) entered into on March 2, 2016 by Samarco, Vale, BHP and various government agencies.

The “Foundation” holds the following registers and titles:

- Public deed of incorporation registered at

the Registry Office of the 2nd Notary Office of Belo Horizonte, book 2800N, pages 052 and 053, on June 29, 2016;

- Bylaws registered at the civil corporate registry office of Belo Horizonte under no. 138160 on July 5, 2016;
- CNPJ Corporate Taxpayer Registration Number no. 25.135.507/0001-83.

The Foundation is a social assistance entity and as such is exempt from taxes on its assets, income or services under article 150 (VI, 'c') of the Federal Constitution and the incidence of contributions on social security financing as stated by article 195 (7) also of the Federal Constitution.

As required by the TTAC, an audit firm has been hired to conduct an assurance engagement on the socioeconomic and socio-environmental projects to be delivered by the Foundation. Given the Foundation’s recent creation, the assurance engagement for FY 2016 is in progress and expected to be completed in the second half of 2017.

The Board of Trustees approved the issuance of these financial statements on April 27, 2017, and the Audit committee issued its favourable opinion on April 18, 2017.

## 2. PRESENTATION OF THE FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING PRACTICES

The main accounting policies used to prepare these financial statements are as described below.

### 2.1 Basis of preparation

The financial statements have been prepared in accordance with accounting practices adopted in Brazil, including the provisions of Resolution 1409/12, issued by the Federal Accounting Council, which approved the Technical Interpretation “Non-profit Entities – ITG 2002 (R1)” and the pronouncements issued by the Accounting Pronouncements Committee (“CPC”), ratified by the Federal Accounting Council - CFC, and reflect all material information related to the financial statements only, which corresponds to that used by it in its management.

The preparation of the financial statements requires that Foundation Management use its judgment in determining and recording accounting estimates. The Foundation reviews the estimates and assumptions at least once a year. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note

### 2.2.

#### Changes in accounting policies and disclosures

There were no amendments or new pronouncements and amendments in force for the financial year commencing 1 January, 2016 that had material impacts on the Foundation.

#### 2.2 Critical accounting estimates and judgments

The preparation of financial statements requires the use of critical accounting estimates. It also requires Foundation management to exercise its judgment in the process of applying the accounting policies, which affect the assets, liabilities and expenses reported.

Estimates and judgments are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

Based on assumptions, the Foundation makes estimates for the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of

assets and liabilities within the next year are addressed below.

a material adjustment to the carrying amounts of assets and liabilities within the next year are addressed below.

### Provision for contingencies

Contingencies are analysed by Foundation Management in conjunction with its legal advisers. The Foundation's analyses include factors like hierarchy of laws, case law available, recent decisions delivered by courts and their relevance in the legal order. These evaluations involve Management judgments.

Provisions are recorded when the value of the loss can be reasonably estimated, as stated in note 10.

### 2.3 Functional currency and reporting currency

The financial statements were prepared in Brazilian Reals, the functional currency and main economic environment the Foundation operates, generates and consumes cash, which is also its presentation currency.

### 2.4 Cash and cash equivalents

They include the balances of cash, bank deposits and investments in marketable securities with immediate liquidity whose

maturities as of the effective date of the investment are equal to or less than three months and pose insignificant risks of change in fair value.

### 2.5 Financial assets

The Foundation classifies its financial assets upon initial recognition in the following categories: measured at fair value through profit or loss, loans and receivables, available-for-sale and held-to-maturity.

As of December 31, 2016 the Foundation did not have any financial instruments classified as fair value through profit or loss, available-for-sale and held-to-maturity.

The financial assets are presented as current asset, except for those with maturities greater than 12 months after the end of the reporting period.

#### (a) Recognition and measurement

Loans and receivables are subsequently carried at amortized cost using the effective interest method.

#### (b) Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legal right to offset the recognized amounts and there is an intention

to settle on a net basis, or realize the asset and settle the liability simultaneously.

#### (c) Provision for financial asset impairment

The Foundation assesses at each reporting date whether there is objective evidence that a financial asset or group of financial assets is impaired. A financial asset or group of financial assets has impairment losses only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset ("loss event"), and that event(s) had an impact on the estimated future cash flows of that financial asset that can be estimated reliably.

An impairment loss is measured as the difference between the carrying amount of assets and the present value of the estimated future cash flows discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognized in the statement of income.

### 2.6 Noncurrent assets intended for donation

Assets are classified as intended for donation when the Foundation is committed to a program with an asset acquisition or construction plan (or set of assets) in which the donation is considered highly likely. These assets are stated at the cost of acquisition,

formation or construction.

### 2.7 Property, plant and equipment

Property, plant and equipment is recorded at the cost of acquisition, donation, formation or construction.

Depreciation and amortization commence from the date the assets are installed and ready for use.

Depreciation is calculated based on the straight-line depreciation and amortization method.

### 2.8 Trade Payables

Trade payables are obligations payable to suppliers for goods and services acquired in the normal course of business, and are classified as current liabilities if the payment is due within a year. If not, they are presented as non-current liabilities.

### 2.9 Provision for contingencies

A provision is made for legal obligations when losses and resulting outflows are rated as probable and the amounts can be measured reliably.

A provision is recognized for a past event when the Foundation has a legal or constructive obligation, and it is probable



that an outflow of funds will be required to settle the obligation. Provisions are calculated by discounting future expected cash flows at a before-tax rate that reflects current market valuations regarding the value of the money over time and specific risks posed by the liability.

### 2.10 Employee benefits

#### Health insurance

The Foundation awards life insurance and health care insurance benefits to its employees and their dependents, which are recorded on the accrual basis and are discontinued in the event the employee leaves the Foundation.

### 2.11 Shareholders' equity

Consists of the initial donation by its maintaining companies, plus or minus the surplus or deficit determined in each year.

### 2.12 Statement of surplus (deficit)

Income and expenses are recognized on the accrual basis, and include revenue and expenses, in addition to the earnings, charges and monetary or exchange variance at official indexes or rates applied to current and noncurrent assets and liabilities.

#### (a) Recognition of contribution revenue

Revenue is recognized when the funds are actively received.

#### (b) Recognition of voluntary work revenue and expenses

The services provided by the maintaining company, Board of Trustees, Advisory Board and Audit Committee were recognized when they were effectively realized and in accordance with Technical Interpretation “Non-profit Entities – ITG 2002 (R1).

The amounts are measured at fair value and recorded as if a disbursement had been made, i.e. an inflow and outflow of financial funds. These amounts were recorded as revenue and expenses in the same amount without changing the deficit/surplus for the year and the net equity.

#### (c) Financial revenue and Financial expenses

Financial revenues encompass interest revenue on funds invested at fair value through profit or loss.

Financial expenses include arrears interest expenses, IOF and bank expenses.

Interest revenue is recognized as it accrues in profit or loss, using the effective interest method. Foreign currency gains and losses

are reported on a net basis.

## 3. CASH AND CASH EQUIVALENTS

The balance of cash and cash equivalents breaks down as follows:

	2016
<b>CASH AND BANKS</b>	
Domestic	1
<b>SHORT-TERM INVESTMENTS</b>	
Domestic	567.464
	567.465

In 2016, the amounts available in the bank were invested in remunerated bank accounts, with daily liquidity at national financial institutions. Amount linked to the client account yielding the Selic base interest rate, ranging from 10% to 100%, as per the maintenance period of the amounts invested. These short-term investments are recorded at market value, in accordance with periodical restatements by the financial institutions.

Of this amount, R\$ 240,000 was reserved in 2016 for delivering compensatory projects and compensatory measures, where this reserve closed the year with the balance of R\$ 228,338, including the IPCA restatement

required by the TTAC. R\$ 51,895 has been deposited in a segregated bank account for exclusive use in the “development of basic sanitation plans, sewage system engineering, construction of sewage collection systems, eradication of garbage dumps and construction of regional sanitary landfills” (as worded in TTAC), where these funds should be passed through in their entirety to the municipalities specified by the inter-federative committee (IFC). This amounts shall be invested as soon as the IFC has examined the projects presented by the interested municipalities.

## 4. RECOVERABLE TAXES

The balance of recoverable taxes breaks down as follows:

		2016
IRRF tax on short-term investments	(a)	580
Recoverable INSS on payroll	(b)	273
		853

Given its tax exemption, the Foundation seeks to recover taxes withheld by other entities or improperly paid.

- (a) Income tax withheld at source - by banks where the Foundation has short-term investments – on yields made in 2016.
- (b) The employer’s portion of INSS for the

months August to November, the period in which the Foundation is assessing its tax classification. In the Entity’s opinion, these amounts were unduly paid and can be recovered in accordance with article 2 (I, 1) of RFB NI 1300/2012.

### 5. ASSETS UNDER CONSTRUCTION INTENDED FOR DONATION

In 2016 the Foundation initiated the investments comprising the Reconstruction Program of Bento Rodrigues, Paracatu and Gesteira, as required by the TTAC. These disbursements are classified in non-current assets, as the project is expected to be completed in 2019, when the properties built in the new villages will be delivered to the respective owners.

The amounts comprising this item are set out below:

		2016
Land	(a)	4.134
Engineering Projects	(b)	888
		5.022

(a) Refers to the acquisition of land for the construction of the village called Novo Bento Rodrigues.

(b) Disbursements related to the conceptual and detailed designs for the construction of the villages from Program 08.

### 6. PROPERTY, PLANT AND EQUIPMENT

The Entity began its activities in August 2016, at a rented property, and refurbishment was then carried out on the head office located in Belo Horizonte. These investments are classified in property, plant and equipment in progress.

	2016
Improvements to Third-Party Assets	38
	38

The Entity also received assets under lease to carry out its operational and administrative activities from its maintaining companies Samarco and Vale. These items essentially consist of properties, utensils and IT and telecommunications equipment. The reported amounts are the residual carrying amounts of these assets at the owner companies.

Given the Foundation’s obligation to return these assets to the maintaining companies at the end of the contracted period, the values of these assets have been recorded as follows:

FREE-LEASED ASSETS	2016
Data Processing	7
Furniture and Fixtures	196
<b>Sub Total</b>	<b>203</b>
FREE-LEASED ASSETS TO BE RETURNED	
Data Processing	(7)
Furniture and Fixtures	(196)
<b>Sub Total</b>	<b>(203)</b>

### 7. TRADE PAYABLES

The balance of trade payables essentially consists of amounts payable to service providers, which break down as follows as of December 31, 2016:

	2016
Domestic sales	47.569
Overseas sales	177
	47.746

### 8. PAYROLL, PROVISIONS AND SOCIAL CONTRIBUTIONS

The balance of payroll, provisions and contributions is shown below:

		2016
Payroll payable	(a)	373
Provision for vacations	(b)	128
FGTS payable	(c)	52
Employee INSS payable	(d)	15
Other	(e)	40
		608

(a) Salaries are paid by the 5th working day of the following month, with a fortnightly advance of 40% of the gross amount.

(b) The provision for vacations is made in proportion to the period worked in accordance Brazilian law.

(c) Monthly contribution of 8% of the employee’s salary which the employer has to pay under the existing legislation.

(d) Denotes the employee’s contribution to the National Institute of Social Security – INSS.

(e) Primarily consists of amounts payable for group life insurance covering the Entity’s employees.



## 9. TAXES PAYABLE

This entire item consists of taxes withheld from suppliers, generally service providers. The balances of these taxes payable are shown below:

	2016
ISS withheld from suppliers payable	1.625
INSS withheld from suppliers payable	1.083
IRRF withheld from suppliers payable	572
Federal taxes withheld (a)	559
	<b>3.839</b>

(a) Denotes the PIS, COFINS and CSLL federal taxes withheld in accordance with Law 13137/2015 issued June 19, 2015.

## 10. PROVISION FOR CONTINGENCIES

The Entity is party to 3 judicial proceedings, arising from the normal course of operations, mainly involving civil claims. Based on the information and opinions of its internal and external legal advisors, Management has not made provisions for contingencies, as it does not consider all of the cases to be rated as possible defeats.

The value of these cases has been stated at the restated case amount, i.e. the amounts attributed by the respective plaintiffs.

Possible contingencies:

### DESCRIPTION

Case 0034197-49.2016.8.13.0400 - This entails a Public Interest Civil Action led by the Public Prosecutor’s Office against Samarco Mineração, Vale S.A., BHB and Renova Foundation, in which interlocutory relief was granted on 9/12/2016, suspending transactions involving the purchase and sale of animals to/from the affected population, obliging the defendants to abstain from carrying out any further transactions of this nature with the affected population until a new court order was issued.

### POSITION

Following the petition submitted by MPMG on page 485, the hearing previously scheduled was cancelled on 10/27/2016 and the case stayed for the term of 120 days.

2016: 511

### DESCRIPTION

Case 5007288-91.2016.8.13.0105 - Refers to a Public Civil Action led by the Public

Prosecutor’s Office against Renova Foundation, in which the plaintiff (i) is claiming annulment of certain sections and clauses of the Settlement Agreement under the mediated compensation program; (ii) is requesting that the mediated compensation program continues, provided that the minimum amount of R\$ 1,000.00, per adult, and R\$ 1,100.00 per vulnerable person, is paid, without prejudice to the filing of new claims by those affected or the continuation of those already filed, to address damages and negative impacts exceeding said amount, where any amounts previously paid can be deducted, and (iii) impose a punitive fine of at least R\$ 20,000.00, per each transaction made in contravention or repeated contravention of the above orders petitioned for, in addition to R\$ 300,000,000.00, in the event of an interruption to the aforesaid minimum compensation amounts.

### POSITION

The case was stayed on 12/6/2016 as a result of the stay awarded under Interlocutory Appeal 0905717.72.2016.8.13.0000, to be judged on 4/20/2017.

2016: 303.210

### DESCRIPTION

Case 0038496-04.2016.8.08.0014 – Pertains to a Public Civil Action led by the Public

Prosecutor’s Office of Espírito Santo against Renova Foundation seeking: (i) annulment of certain sections and clauses of the settlement agreement under the mediated compensation program (PIM) in Colatina; (ii) continuation of the PIM providing the minimum amount is paid out of R\$ 1,000.00, per adult, and R\$ 1,100.00 per vulnerable person, without prejudice to the filing of new claims by those affected or the continuation of those already filed, to address damages and negative impacts exceeding said amount, where any amounts previously paid can be deducted, and (iii) imposition of a punitive fine of at least R\$ 20,000.00, per each transaction made in contravention or repeated contravention of the above orders petitioned for, in addition to R\$ 300,000,000.00, in the event of an interruption to the aforesaid minimum compensation amounts.

### POSITION

The interim relief claimed by MPES was denied on 12/1/2016, and the evidentiary stage opened for the parties.

2016: 303.210

**Total: 606.931**

## 11. OTHER PROVISIONS

The entity acquires substantial volumes of outsourced services to carry out its activities. As of December 31, 2016 a number of its suppliers were unable to invoice services already provided, for a number of reasons. Based on its internal control and measurements, management therefore made a provision to comply with the accrual basis of accounting. Details of these services can be seen below:

		2016
Civil construction	(a)	8.082
Leasing of support equipment	(b)	5.086
Legal advisory	(c)	2.875
Environmental and forest compensation services	(d)	807
Engagement with communities	(e)	703
Consultancy and various studies	(f)	600
Other	(g)	1.836
		19.989

(a) Civil works: construction and maintenance services on fences in the properties and on roads, reconstruction of properties and infrastructure in the region of Barra Longa, road surfacing and bioengineering for environmental

recovery. B) Leasing of support equipment: machinery and equipment leasing equipment to clean rural properties and repair and conservation of Barra Longa.

(b) Leasing of support equipment: machinery and equipment leasing agreements to clean rural properties and ensure the remediation and conservation of Barra Longa.

(c) Legal consultancy: consultancy services regarding engagement with the inter-federative committee (IFC) and the compensation Program (PIM).

(d) Environmental and forest recovery services: agricultural crop plantation services, orchards, allotments and formation of pastures in properties between the municipalities of Mariana and Santa Cruz do Escalvado-MG.

(e) Engagement with communities: services for the public in the offices of the PIM negotiation centres.

(f) Consultancy and various studies: consultancy services for the diagnosis and proposal of improvements to processes for following up service contracts related to delivering projects

(g) Other: Other smaller expenses relating to communication services, identification of areas for irrigation, cleaning rural properties, aiding animals and D&O insurance.

## 12. SOCIO-ENVIRONMENTAL AND SOCIOECONOMIC OBLIGATIONS

The socio-environmental and socio-economic

obligations consist of the endowment received from the maintaining companies and allocated to expenses involved in implementing the socio-environmental and socio-economic programs, as defined in the framework agreement (TTAC)

The socio-environmental and socio-economic obligations break down as follows:

	2016
Remedial programs	219.747
Compensation programs	227.919
Compensation programs - initiatives related to the preparation of basic sanitation plans	51.895
	499.561

The above obligations consist of expenses on projects to be delivered within 12 months.

## 13. SHAREHOLDERS' EQUITY

### Equity

The public deed creating the Foundation establishes that the endowment of assets to be provided under article 62 of the Brazilian civil code (Note 1) will be the sum of endowment contributions made up to 2018 and any subsequent contributions deemed by the Board of Trustees to be necessary for the operation of the Foundation's programs

as from 2019.

in accordance with the Framework Agreement (TTAC), Samarco and its shareholders Vale and BHP have provided and will continue to provide resources to the Foundation as follows:

- R\$2,089,682 in 2016, of which R\$1,112,195 was used directly by Samarco within programs under the Settlement Agreement, R\$283,537 was retained under a Public civil Action in the city of Mariana, and R\$693,950 was deposited into the Foundation.  
- R\$1,200,000 in 2017. - R\$1,200,000 in 2018.

From 2019 to 2021, annual contributions to the Foundation will be sufficient to cover the remediation and compensation programs planned for each year under the Settlement Agreement, with indicative annual contribution amounts set at between R\$800,000 and R\$1,600,000. From 2022 onwards, contributions to the Foundation will be based on a program schedule approved by the Foundation each year. The Settlement Agreement does not specify a minimum or maximum amount for this period.

As from the signature of the Settlement Agreement, the Foundation will allocate an annual amount of R\$240,000 to compensation programs over a period of 15 years. These annual amounts are included in the contributions for the first six years (2016 – 2021). In addition, a contribution



of R\$500,000 will be allocated to the sewage collection and treatment and waste disposal programs to be implemented in certain areas. The contributions made by Foundation sponsors will be initially recognized in Equity and transferred to a social, environmental and economic program obligations account under equity, as all endowments received from sponsoring entities under the Settlement Agreement are intended exclusively for expenditure within the social, economic and environmental programs. As the Foundation utilizes the funding contributed by sponsoring entities on program expenditure, these amounts will be recognized as revenue to offset program expenses.

### 14. REVENUE

The Entity’s funding and resources derive from contributions made by sponsoring entities as well as from volunteer services provided by the sponsoring entities and their directors. The amounts received in 2016 are shown below:

		2016
Operating revenue -contributions	(a)	194.389
Contribution revenue	(b)	4.928
Voluntary Service Revenue - Assigned	(c)	19.679
Voluntary Service Revenue - Shared	(d)	8.098
Voluntary Service Revenue - Directors	(e)	216
		227.310

entities and utilized in program expenditure throughout 2016.

(b) Amounts received from the main sponsor, Samarco, to defray the Foundation’s administrative expenses.

(c) A number of employees (469 - unaudited) from sponsors Samarco and vale were dedicated full-time to Foundation activities throughout 2016. These employees were allocated by the sponsoring entities due to the fact that the Foundation was then being structured and

the programs initiated by Samarco could not be discontinued. The sponsoring entities have seconded their employees but have not charged for their services. The amounts for 2016 represent these employees’ salaries, payroll charges and benefits, which are paid by each sponsoring entity.

(d) Part of the administrative services necessary for the operation of the Foundation are provided by the main sponsor, Samarco, free of charge, i.e. they are not paid for by the Foundation.. These services essentially consist of purely administrative functions, primarily: financial, information technology, procurement, and human resources.

These amounts were recorded based on the cost of providing the services as reported by the relevant sponsoring entity, which manages all expenses incurred on those services.

(e) Consists of time donated by Directors serving on the Foundation’s Board of Trustees, providing services voluntarily. The value of the services was calculated based on hours incurred (1,194 hours in 2016 - unaudited) by the 7 Directors from August to December, multiplied by their hourly rate (R\$ 181.35 on average - unaudited). The other Boards did not hold meetings in 2016.

### 15. OPERATING EXPENSES ON PROGRAMS

Operating expenses under the Entity’s programs consist of expenses incurred in the period on the socio-environmental and socioeconomic remediation and compensation programs set out in the settlement agreement. The tables below break down expenses by group of measures and program in FY 2016:

		2016
Socio-environmental programs - Remediation	(a)	60.161
Socioeconomic programs - Remediation	(a)	125.210
Socio-environmental programs - Compensation	(b)	2.057
Socioeconomic programs - Compensation	(b)	6.961
		194.389

#### (a) Programs – Remediation

These include remedial measures and actions to mitigate, remedy and/or repair social, environmental and economic damages caused by the dam collapse.

SOCIO-ENVIRONMENTAL PROGRAMS	2016
Recovery of environmental area 1	32.040
Conservation of aquatic biodiversity	462
Water supply systems	2.881
Environmental risk management	49
Investigation of water monitoring	18.669
Program management	6.060
	60.161
SOCIOECONOMIC PROGRAMS	2016
Emergency mitigation measures	10.727
Survey and registration of affected parties	7.109
Reimbursement of Compensation of Affected People	6.447
Protection of indigenous peoples	4.599
Social protection program	300
Communications and engagement	4.453
Aiding animals	1.496
Reconstruction of Bento, Paracatu and Gesteira	1.219
Recovery of affected infrastructure	12.425
Recovery of schools	11
Preservation of historical heritage	5.463
Support for tourism, culture and sport	1.327
Physical and mental health of affected people	4.931
Resumption of agricultural activities	2.480
Recovery of micro and small businesses	59
Emergency financial aid	61.725
Reimbursement of extraordinary expenses	439
	125.210

### (b) Programs - Compensation

These include measures and initiatives to compensate for non-mitigating or irreversible damages caused by the dam collapse by improving environmental and economic conditions in affected areas where remediation is impossible or impracticable, in accordance with the programs.

SOCIO-ENVIRONMENTAL PROGRAMS	2016
Recovery of APP and Erosion Control	1.300
Water supply systems	14
environmental deduction system	115
Preparing for environmental emergencies	433
Nacional and international communications	195
	2.057
SOCIOECONOMIC PROGRAMS	2016
Reimbursement of compensation of affected people	6.961
	6.961

## 16. OPERATING AND ADMINISTRATIVE EXPENSES

The administrative expenses break down as follows. These expenses are classified as necessary to maintain the Foundation's operating activities, and are not directly related to delivery of the programs. They include expenses recognized for voluntary services received by the Entity.

	Note	2016
Legal advisory		3.096
Own staff		1.820
Insurance		351
Outsourced services		320
Travel		178
Other expenses		68
Voluntary service assigned employees	14.b	19.679
Voluntary service shared	14.c	8.098
Voluntary service directors	14.d	216
		33.826

## 17. FINANCIAL INCOME/LOSS

The Company's financial results are broken down as follows:

FINANCIAL REVENUE	2016
Earnings on investments	2.585
	2.585
FINANCE EXPENSES	2016
Banks fees	(1)
IOF - Tax on financial transactions	(5)
	(6)

## 18. RELATED PARTIES

In 2016 the maintaining companies made the following contributions. These contributions do not constitute the Foundation's liabilities towards them.

	2016
Samarco Mineração S.A.	221.390
Vale S.A.	238.744
BHP Billiton Brasil Ltda.	238.744
	698.878



## 19. COMMITMENTS

The Foundation has long-term service agreements as shown in the table below:

CONTRACTED SERVICES	
Up to 1 year	673.002
1 to 2 years	6.298
2 to 3 years	3.002
3 to 5 years	1.904
Total 2016	684.206

## 20. INSURANCE COVERAGE

In order to partially mitigate the risks and given the nature of its operations, the Foundation takes out a number of insurance policies in accordance with the guidelines of its management committee which are similar to policies contracted by other foundations engaged in similar activities.

The coverage of these policies include: life insurance and employee personal accidents, civil liability insurance and others.

# BOARD MEMBERS

## BOARD OF TRUSTEES

#	Entity		Name
1	BHP Brasil Ltda.	Serving member	Ian Burton Wood
2	BHP Brasil Ltda.	Serving member	Flávio de Medeiros Bocayuva Bulcão
3	BHP Brasil Ltda.	Alternate	Sergio Consoli Fernandes
4	BHP Brasil Ltda.	Alternate	Luis Fernando Madella Athayde
5	Vale S.A.	Serving member	Wilson Márcio Depes
6	Vale S.A.	Serving member	Luiz Soresini
7	Vale S.A.	Alternate	Eustaquio Coelho Lott
8	Vale S.A.	Alternate	Ricardo Eugênio Jorge Saad
9	Samarco Mineração S.A.	Serving member	Celso Castilho De Souza
10	Samarco Mineração S.A.	Serving member	Wilson Nélio Brumer
11	Samarco Mineração S.A.	Alternate	Jose Carlos Gomes Soares
12	Samarco Mineração S.A.	Alternate	Rafael Tiago Juk Benke
13	Inter-Federative Committee	Serving member	Fábio José Feldmann
14	Inter-Federative Committee		Not stated to date

## AUDIT COMMITTEE

#	Entity	Name
1	Fundação Renova	Carlos Henrique Ribeiro
2	BHP Brasil Ltda.	Edgar Augusto Alfonso Vargas
3	Vale S.A.	Murilo Müller
4	Samarco Mineração S.A.	Luís Eduardo Fischman
5	Government	Not stated to date
6	MG state	Rafael Amorim
7	ES state	Rodrigo Lubiana Zanotti

## ADVISORY BOARD

#	Entity	Name
1	CBH Rio Doce	Senisi de Almeida Rocha
2	CBH Rio Doce	João Lages Neto
3	CBH Rio Doce	José Geraldo Rivelli Magalhães
4	CBH Rio Doce	Hernani Ciro Santana
5	CBH Rio Doce	Carlos Alberto Sangália
6	Interministerial Commission for Marine Resources	Not stated to date
7	Interministerial Commission for Marine Resources	Not stated to date
8	Specialist (appointed by MPF)	Not stated to date
9	Specialist (appointed by MP MG and ES)	Alceu Torres Marques
10	Specialist (appointed by Oversight Board)	Cláudio Bruzzi Boechat
11	Specialist (appointed by Oversight Board)	Not stated to date
12	Specialist (appointed by IFC)	Igor Rodrigues de Assis
13	Community (MG - appointed by IFC)	Not stated to date
14	Community (MG - appointed by IFC)	Not stated to date
15	Community (MG - appointed by IFC)	Not stated to date
16	Community (ES - appointed by IFC)	Andrea Aparecida Ferreira Anchieta
17	Community (ES - appointed by IFC)	Élcio José Souza de Oliveira

## IFC MEMBERS

Representation	Agency	Serving member	Alternate
MMA	Ibama	Suely Mara Vaz Guimarães de Araújo	Ana Alice Biedzicki de Marques
	ANA	Vicente Andreu	Gisela Damm Forattini
Federal Government	Chief of Staff's Office	-	Isabele Villwock Bachtold
	Segov	João Mendes da Rocha Neto	Luciano de Oliveira Gonçalves
MG Government	Semad/MG	Germano Luiz Gomes Vieira	Zuleika Stela Chiacchio Torquette
	Secir/MG	Izabel Cristina Chiodi de Freitas	Wesley Cantelmo
ES Government	Sedurb/ES	João Carlos Coser	Marinely Santos Magalhães
	Seama/ES	Aladim Fernando Cerqueira	Andreia Pereira Carvalho
Representation Municipalities of MG	Municipal government	Duarte Eustáquio Gonçalves Júnior - Mayor of Mariana	André Luiz Coelho Merlo - Mayor of Governador Valadares
		Silvério Joaquim Aparecido da Luz - Mayor of Rio Doce	Wellington Moreira de Oliveira - Mayor of Caratinga
		Guerino Luiz Zanon - Mayor of Linhares	José Barros Neto (Neto Barros) - Mayor of Baixo Guandu
CBH-Doce	CBH-Doce	Leonardo Deptulski	Carlos Eduardo Silva



# RENOVA FOUNDATION MANAGEMENT

## Chief Executive Officer

Roberto Silva Waack

## Institutional Development Director

Andrea Aguiar Azevedo

## Projects Director

Marcelo Eduardo Figueiredo

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## ACTIVITY REPORT

Performed by the Communications team, with the support of all departments and programs of Renova Foundation

### Coordination of the Activities Report

Bárbara Braga Paulino

### Consultancy

Nelmara Arbex (Arbex & Company)

### Text

Report Sustentabilidade (Álvaro Almeida and Janice Kiss)

### Art Direction and Graphic Design

Fabio Issao, Caco Neves and Bruno Oliveira

### Illustrations

Bruno Oliveira

### Photography

Ricardo Corrêa, Alexandre Battibugli and Nitro

### Infographics

Victor Farat (Conversations Design)

### Revision

César Ribeiro (Assertiva)  
Alicia Toffani

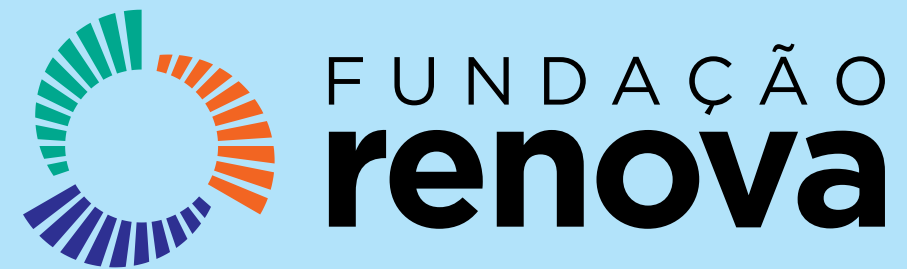
### Printing

Imprimaset

Our objective is to provide a balanced and reasonable presentation of the Foundation's performance. We are committed to improving our reporting systems progressively and strive to offer useful and accurate information. Although every effort has been made to ensure the accuracy of the information presented in this Report, we would like to remind readers that the data comes from our various activities throughout the Rio Doce basin, and the complexity of these activities may influence the level of accuracy of information Presented in the non-financial part of this Report. The financial data presented on pages 60 to 67 were audited by PWC, and the auditors' opinion is presented on page 61.

Those who wish to use the data presented in this Report, or those in search of more detailed information, feel free to contact the Foundation for support.

Renova Foundation's management team is responsible for the information presented in this Report.



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