

MYTHS AND UNCERTAINTIES

THE CHAOS OF (NON) REPARATION OF CRIMES
PERPETRATED BY MINING COMPANIES IN BRAZIL



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EDITORIAL

November 5th, 2015. **19 people** are murdered, **1.9 million people** in at least two Brazilian states, Minas Gerais and Espírito Santo, get hit by the **43.8 million cubic meters** of iron ore tailings poured in by Samarco, with the collapse of Barragem do Fundão (Fundão Dam), in Bento Rodrigues, subdistrict of the Municipality of Mariana, in Minas Gerais. Vale S.A. Billiton¹, the mining companies holding of Samarco, are also to be found guilty of the crime. Throughout these four years, a great number of violations of rights perpetuated and spread along the Bay of the Dace River and little has been done to repair the damages caused by irresponsible mining. In these articles, we approached some of the main charges brought by people who have been living with the consequences of the greatest socio-environmental crime in Brazil. We also presented relevant questions to understand how maintaining a predatory and extractive mining in Brazil allows for new collapses to take place, like the one of mining company Vale in January 2019, which left **256 people** dead and **14 missing**² by realising **12 million cubic meters** of tailings in Brumadinho, in the state of Minas Gerais. We discussed matters related to the collapse of Samarco's dams in Mariana, and Vale's in Brumadinho and the consequences of these continuing crimes. We also discussed the ineffectiveness of the Renova Foundation (Fundação Renova) - entity created by the companies responsible for Fundão Dam - in repairing the damages caused at the Rio Doce basin and, also the mining company Vale in repairing the affected communities of the Paraopeba River Basin. We shed light on the problems involving the mining system, such as: the fragility of studies and flexibility to approve environmental license; the lack of effective supervision of dam conditions; low tax collection on mining in Brazil; and tax evasion rates, questionable integrity technique used by companies to pay the least amount possible in taxes. We seek justice to all affected communities for the socio-environmental crimes committed by Samarco, Vale, and BHP Billiton. We want guarantees that this will not repeat.

¹ BHP Billiton is an Anglo-Australian mining company that does not operate directly in Brazil, but acts as one of the controllers of the Samarco mining company.

² Until November 25, 2019, the date of completion of this material.

DAMAGES CAUSED BY THE CRIMES

Long before a dam collapses, mining, as it is operated in Brazil, imposes on society the consequences of predatory and unsustainable extraction activity. Endangering the well-being of families living around the enterprise, people who work for the mining companies themselves, threatening natural resources essential to life. Cities like Sarao de Cocais, Congonhas, Nova Lima, and Itabirito in Minas Gerais have been endangered with the threat of an announced collapse. At Barão de Cocais, the mining company Vale set

self-saving zones which were never before discussed with the community.

“A lot of people are getting sick. Anything triggers me, loud noises, a car alarm, and I keep thinking it is a siren. I think to myself: ‘My God, what if it collapses now?’ The situation is serious. I will not be able to run. I am turning 80 years old. We wanted asserted answers to be able to live in peace.”

Gercina dos Santos Silva (China),
resident of Barão de Cocais

PHOTO: VOAL STUDIO - JORNAL A SIRENE



Pedras, in Mariana, was hit in the first minutes after the Fundão dam burst

“At the moment, I am on leave, but I work with the monitoring of dams. On the day of the collapse [of Dam 1, of mining company Vale, in Brumadinho], I was at a meeting in Itabirito. I was heading back there when it collapsed. My whole team died, only one person survived. I was not there at the time, however, the psychological trauma I experienced I do not wish on anyone. Vale put me on leave to rest and I came to Barao de Cocais. The siren rang that same night I got here. It is so scary that I thought: If I did not die in Brumadinho, I will now.”

Maria Carolina Gonçalves,
resident of Barão de Cocais

ACCESS TO WATER

Mining contributes to water scarcity in communities located near active dams, which dry up rivers and water tables; and the abandoned ones contaminate our waters. In the State of Minas Gerais alone there are more than **400 abandoned mines**, according to data from the Environmental State Foundation (FEAM - Fundação Estadual de Meio Ambiente). In Brazil mining uses **33 thousand liters of water** per second according to the Annual Report of the National Agency of Waters, ANA (Agência Nacional de Águas), published in 2018.

“Mining is not only about the iron ore, but it is also about the water, the sources of rivers, and it is compromising the

supply of big cities, like Belo Horizonte. One cannot eat, drink or breath ore.”

Marina Oliveira, resident of Brumadinho and social articulator of the Archdiocese of Belo Horizonte that works in communities affected by Vale’s crime, in Brumadinho

After the collapse of Dam 1 in Brumadinho, which was under the responsibility of mining company Vale, the Paraopeba River was destroyed and the water impound from its basin has been suspended. Nowadays, the water supply of over **4 million people** is at risk in the greater area of Belo Horizonte and **30%** of the water resources in the city are compromised, according to data provided by the ANA (National Agency of Waters). The remaining **70%** of the supply of Belo Horizonte comes from the Basin of the Rio das Velhas, threatened by three dam complexes by Vale in Macacos, in the Municipalities Vale in Macacos, in the Municipalities and together, they amount to **129 million cubic meters** in tailings. If any of these dams collapse, Vale will be responsible for the shortage of water supply of over 6 million people. in the greater area of Belo Horizonte alone. Currently, all these dams have presented a problem or risk, according to the ANM (National Mining Agency)

PHOTO: ISIS MEDEIROS



Management and command office at Vale's headquarters in Brumadinho, covered with mud

Therefore, beyond the collective grief of the inhabitants of Brumadinho, Córrego do Feijão, Palhanos and nearby communities for the loss of **270 lives** (and two unborn babies), the matter of access to water becomes one of the greatest violations of rights in the wake of the one year anniversary of the crime in the margins of the Paraopeba. Throughout the bed of this river, countless families of farmers have lost croplands and entire communities mention a shortage of water supply.

Vale denies the Tejuco community, in the rural area of Brumadinho, the status of affected community, therefore, they have their rights denied and do not have access to reparation measures.

“Our legal system should be more assertive. Vale does not have the right to sit on the table with us, the affected communities, the victims and look us in the eyes and talk to us as if everything is ok. They murdered people. They committed a crime. They should be treated as criminals. What happens in Brumadinho is: They break the law, commit a crime and they are the ones in heading the actions for damages and reparation. And they are not intimidated by this. It is very natural, it is as if they could do what they are doing.”

Marina Oliveira, resident of Brumadinho and social articulator of the Archdiocese of Belo Horizonte that works in communities affected by Vale's crime, in Brumadinho

In the States of Minas Gerais and Espírito Santo, the collapse of the Fundão Dam of mining companies Samarco, Vale, and BHP Billiton was responsible for interrupting the water supply of over **600 thousand people** in 16 municipalities which impounded water from the Rio Doce Basin. The collapse also reached **663.2 kilometers** of water bodies according to a study by Ramboll.

“We ask: Can we drink this water, can we eat this fish? Is there a limit to using the sea and the river for our leisure? Is the water treated by SAAE - Autonomous Service of Water and Sewage - safe for drinking?”

Joice Lopes,
resident of Barra do Riacho

Excerpt from the special report "Em nome do mar, do rio e do Espírito Santo" from the newspaper A Sirene

Four years after the collapse of the Fundão Dam, Renova Foundation and the mining companies are responsible for supplying mineral and safe drinking water to part of the population of the States of Minas Gerais and Espírito Santo. Until today, approximately **58 thousand people** have this water distributed in emergencial character via water trucks, according to Ramboll.

PHOTO: DANIELA FELIX - JORNAL A SIRENE



Truck takes drinking water to affected areas in the state of Espírito Santo

LOSS IN THE WAY OF LIFE

Notwithstanding the shortage of water, many people lost their customs and sources of income. Inhabitants of rural areas of Mariana and Barra Longa, for example, were forced to move downtown. They lost touch with their neighbors, friends and family members. They lost their source of income they got from the ground and the river.

“We considered the river to be our mother. Because, when our kids were crying of hunger and they said: Mom, I’m hungry. We told them: Wait, my son. We would get our fish basket, machete, hand-maid spear, hook and we would leave for the mangrove. We would come back with the fish basket filled with crabs.”

Mimbira, resident of the indigenous community of Caieiras Velha

Among the assets lost in the affected communities, there are the ones we are not able to “touch”. The tailings mud that went down the Vale do Rio Doce, as well as the one down the Paraopeba, stole memories, places, stories, identities, leisure and trade, and compromised immaterial assets with great sentimental value.

“We do not see ourselves without the sea, without the river. Because they are our identity. The sea is our life. The river is our life.”

Rosetânia Ferreira, resident of Conceição da Barra

Affected communities like Acaiaca, Barra Longa, and Rio Doce were taken by contracting companies and heavy trucks and are going through countless construction work. In Mariana, affected people have been living in temporary routines for four years while waiting for their ways of life to be restored. In other communities, difficulties in making a living added to the surge of physical and mental health witheringly compromise people’s lives.

“They reaped, forcefully, our rights and we have to financially struggle for food, medicine, and water. It is humiliating. Because calling Renova every day to ask for something that is our right is humiliating to us.”

Dalila Santos, resident of Campo Grande



In Rio Dace and Barra Longa many families lost the support they took from the river.

HEAVY METALS CONTAMINATION IS CONFIRMED AT RIO DOCE

Four years have gone by waiting for fair reparation and several medical reports were issued positive for heavy metal contamination in the Rio Doce basin. Nevertheless, Renova Foundation has yet to provide the community with information and answers. In 2018, physician and researcher Dr. Evangelina Vormittag, supported by the Health and Sustainability Institute (Instituto de Saude e Sustentabilidade), published the results of the total amount of metal blood test in the city of Barra Longa, in Minas Gerais. Out of **15 affected individuals** subjected to blood tests, all of them tested positive for **heavy metal contamination**. The little Sofya Silva, who is 4 years old now, is one of them. Some of the metals found are **aluminum, cadmium, lead, copper and arsenic**. The sediment analysis carried out by the SOS Mata Atlantica Foundation, back in 2015, also identified a number of these heavy metals, such as magnesium, copper, aluminum, and manganese in levels much higher than

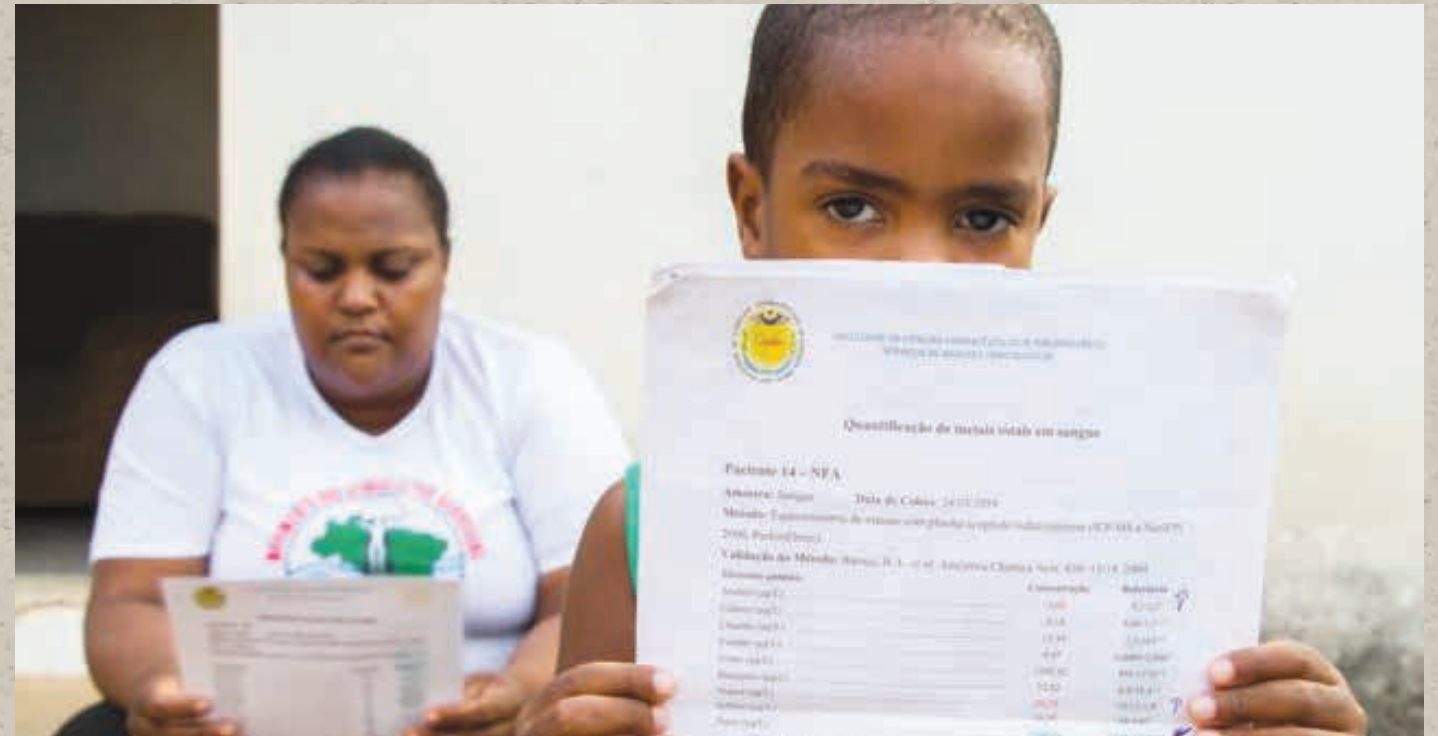
allowed by law throughout the Rio Doce and the streams affected by the tailings ore mud.

“I blamed Sofya sickness on the mud, but I was called crazy by company employees. At the time, my daughter was nine months old and she presented allergy symptoms to the toxic mud”.

Simone Silva, Sofya's mother and resident of Barra Longa.

Published on issue 27 of the newspaper A Sirene

Recently, the Agency A Publica, an investigative journalism channel, published that the Renova Foundation and Minas Gerais State Government had studies for over six months that confirmed contamination of soil, air, and water at the affected communities of Mariana and Barra Longa. The company Ambios Engenharia e Processos along with the Camara Tecnica de Saude, a technical group of the state of Minas Gerais created after the collapse of Fundao Dam, produced the Human Health



In Barra Longa, Andrea Domingos and her son Nicolas received positive results regarding contamination from heavy metals

Risk Assessment in 2018, which was completed and delivered to the Renova Foundation on 22 March 2019. The researchers identified **cadmium, zinc, copper and nickel** in the dust collected at the houses of affected individuals. In superficial soil samples, they found **cadmium**, a **carcinogenic metal**, in concentrations **17 times higher** than baseline value.

Ambios's researchers also highlighted that exposure to heavy metals existent in the dust could cause respiratory and skin disorders which would manifest in people as symptoms similar to the ones that have been reported by affected individuals: **itchy and red skin, rash, cough, nasal congestion**, and others. On the other hand, the SOS Mata Atlantica Foundation on studies

from 2015 and 2017 adverted that high concentrations of heavy metals could account for nausea, vomiting, dizziness, muscle stiffness, tremors, and even neurological disorders.

The number of people suffering from health-related problems has significantly risen after the collapse of the Fundão Dam. In Barra Longa, a city with **6 thousand inhabitants, 174 cases of dengue** were recorded by November 2016, representing an epidemic surge when compared to the three cases recorded between 2013 and 2015. In the city, they also recorded cases of respiratory and skin allergies, hair loss, besides psychological disorders.

HEALTH DAMAGES IN BRUMADINHO

Also considering the collapse of They Dam 1 at Córrego do Feijão Mine in Brumadinho, the affected communities have already reported an increase in health-related issues. According to a story published by the newspaper Brasil de Fato, approximately **1.3 million people** at the Paraopeba River basin could be suffering from contamination by heavy metals. As in the municipality of Barra Longa, right after the crime, the inhabitants also started to display symptoms of contamination. In regarding the Paraopeba River, the expedition carried out by the SOS Mata Atlântica Foundation in the first month after the collapse of Dam 1 of Córrego do Feijão Mine, proved that the water was in no condition to be used by humans or aquatic life. Heavy metals such as manganese, copper, and chrome, were found in the water in levels above the maximum accepted by law.

After the crime, riverside residents from Paraopeba bay presented allergies and skin wound

“The metals found in the water, in this quantity, are harmful to the environment, human health, the fauna, the fish, and all living organisms. They are known pollutants and could cause uncountable damage to the organisms, from interfering with the metabolism and causing diseases to mutation effects leading to death.”

Marta Marcondes, professor and coordinator of the Environmental Analysis Laboratory of the Hydric Pollutants Index Project - IPH at the Municipal University of Sao Caetano do Sul (USCS)

Excerpt extracted from an interview for the SOS Mata Atlântica portal



PHOTO: PEDRO STROPASOLAS

The research by Fiocruz (Oswaldo Cruz Foundation), which also assessed the immediate impacts of disaster caused by the mining company Vale, in Brumadinho, alerts for the possibility of the **outbreak of infectious diseases such as dengue, yellow fever, and schistosomiasis**, as well as worsening chronic disorders, such as **high blood pressure, diabetes, and respiratory disorders**.

The lack of information and policies aiming at the health of the affected individuals by the companies is a way to prevent people with positive medical reports for contamination to get medical aid or recognition status as affected individuals by the

technological disaster.

Furthermore, new aggravating conditions rise in the matter of Rio Dace. From Ambios's results about the systemic contamination, on November 6, 2019, Renova Foundation motioned to the Federal Justice that the registration process of the affected individuals closed

on December 15 of the same year.

If the motion is granted, people who do not know they are at risk due to contamination for heavy metals will not be able to join the action for damages to health.

According to the agricultural engineer, Leonardo Melgarejo, there are consequences concerning genetic mutation that we are yet to be aware of and may take years to manifest.

“When there is contact with chemical substances not present in nature, our biological clock may suffer the changes only in the future. The contact with metals could, indeed, result in deformity. There is no question that what is at stake when it comes to risk is a lot higher than the knowledge we have.”

Leonardo Melgarejo, agricultural engineer and vice-president of the Brazilian Agroecology Association for the South Region - Associação Brasileira de Agroecologia para a Região Sul

“We might not be able to see it now, because many people were chronically contaminated and they will only manifest the disease years from now, including impacting in cancer. This contact can lead to mutagens alterations..”

Naiara Bittencourt, lawyer and legal consultant at Terra de Direitos

THE MENTAL HEALTH OF AFFECTED INDIVIDUALS

Another factor that is overlooked both by the Renova Foundation, in the reparation process through the Rio Doce basin, and by Vale, along the Paraopeba basin, concerns the affected individuals mental health. The report on mental health by the UFMG (Federal University of Minas Gerais) contracted by Cáritas Foundation Minas Gerais demonstrates a high number of young adults and adults suffering from depression in Mariana. The research points to the need of creating measures for psychological care. The document introduces information about mental disorders such as depression, anxiety, post-traumatic stress, suicide, and substance abuse. Of the **271 people** interviewed, 225 are adults, and 46 are children and teenagers from 10 to 17 years of age.

“Since 2016 I’ve been taking a different medication, going to psychiatrists, psychologists. I used to wear a size 8, now I’m a size 16. I feel sick at night, feeling pain in my arms and feet. My feet are always swollen. Some days are like these, I go to work feeling sick. Today, my oldest son, Arthur, who is 14 years old, takes depression medication, just like me.”

Sandra Maria,
resident of Barra Longa

Published on issue 35 of the newspaper A Sirene

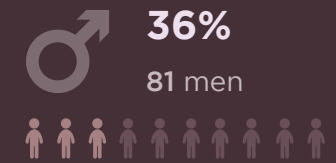
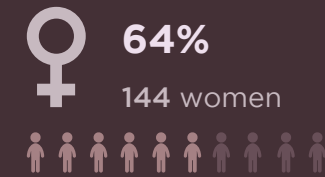
The study: *The impact of affected individuals’ mental health after the collapse of Vale’s dam*, discloses that, in Brumadinho, the case is not much different. The numbers gathered, according to the systematization of reactions from 72 hours to 3 months by intake professionals post-disaster show that the main psychological symptoms reported in this period are: emotional crisis, anxious reaction, anxiety, depression, and PTSD. In this sense, Fiocruz’s research draws attention to the loss of access to health services in Brumadinho and its surrounding areas, which may worsen or provoke new late health disorders, such as mental illnesses (depression and anxiety).

“I was diagnosed with depression. I feel I am in a place that it is not my own.”

Elizângela Gonçalves Maia, resident
of Córrego do Feijão

Published in newspaper Estado de Minas, September 2019

225 ADULTS



Depression diagnostics

35%

51 women

17,3%

14 men

Post-traumatic stress

14%

20 women

9%

7 men

Risk of suicide

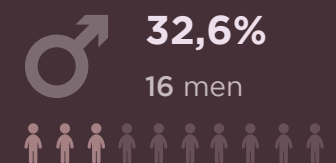
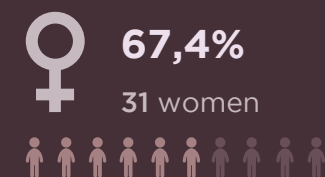
20,8%

30 women

9%

7 men

46 CHILDREN AND TEENAGERS



Depression diagnostics

39,1%

18 people

Risk of suicide

26,1%

12 people showed suicidal thoughts

13%

6 showed suicidal intentions

Data extracted from the Prisma report conducted by UFMG and Cáritas Minas Gerais

THE DATA ON THE (NON) REPARATION AT RIO DOCE

6.8 billion reais were spent in reparation actions for damages caused by the collapse of the Fundão Dam until August 2019. This is the information published by the Renova Foundation - Samarco, Vale, and BHP Billiton -, however, it does not reflect the perception of the affected communities within the territories. The end date for the resettlement of the community of Bento Rodrigues, for example, has already been postponed five times and the companies are hesitant to settle in court and provide a final deadline to deliver the construction work finalized. All resettlements are delayed and there is no house ready to move in for the affected individuals from Bento Rodrigues, Paracatu de Baixo or Gesteira. Today, Renova settles the amount paid for damages - caused by its parent companies -, decides the status for affected individuals, and breaks affective ties within territories.

“Samarco ruined my life and, today, I am a Defendant in a lawsuit filed by the mining company because I did not accept the terms of the miserable damages settlement proposed by the flooding of my plot of land by Dike S4.”

Mauro Marcos da Silva,
resident of Bento Rodrigues

According to information provided to the Federal Prosecution Office by the Renova Foundation, until May 2019, Renova had a total of **54 thousand registration requests**, of which 31.7 thousand were forwarded by the Foundation to the CIF (Interfederation Committee), however, according to information submitted by Renova, in April 2019, only 26.5 thousand requests had been approved. Meanwhile, **22.3 thousand** requests are still awaiting answers and some are no longer a part of the process because **1.779** requests were considered **“ineligible”** by Renova.

“There is no trust between those affected and the Renova Foundation. We all know that it is a puppet to get pelted in place of companies. Instead of solving problems, it increases bureaucracy”.

Mauro Marcos da Silva,
resident of Bento Rodrigues
Published on issue 23 of newspaper A Sirene

The **Renova Foundation** is an organization established by a court settlement among the companies responsible for the crime that destroyed the Rio Doce - **Samarco, Vale, and BHP Billiton** -,

the State Government, and the States of Minas Gerais and Espírito Santo. The establishment of the Foundation - as an artifice to shield the mining companies - was done without consulting or the participation of the affected communities. It was established to repair the damages caused by the collapse of the Fundão Dam, however, its common practices have been constantly proving the opposite.

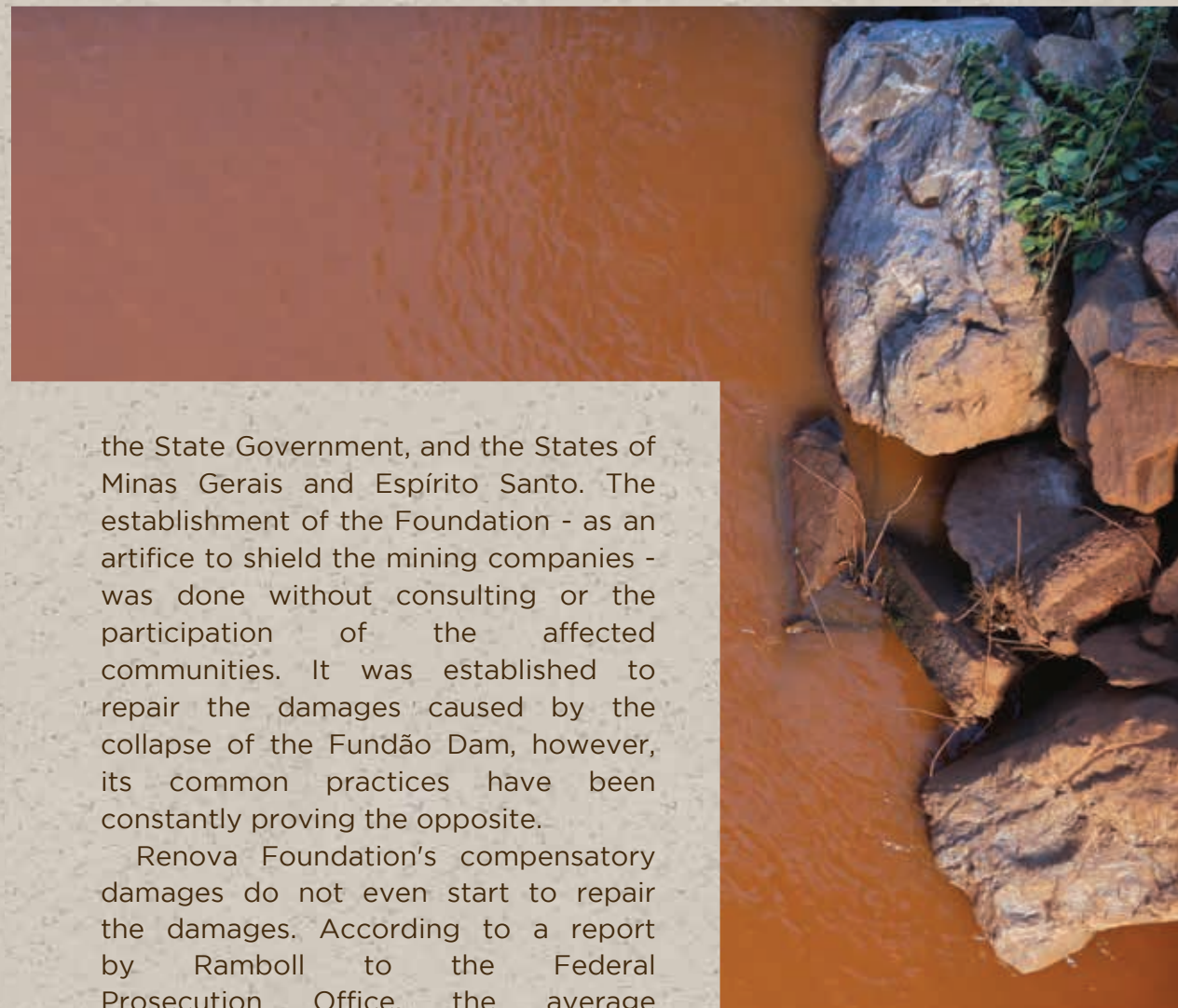
Renova Foundation's compensatory damages do not even start to repair the damages. According to a report by Ramboll to the Federal Prosecution Office, the average income of affected families at the Rio Doce basin dropped from **2,014.60** reais to **826** reais, a **59% drop**. Low income families' average variation was from **1,504.52** to **433.84 reais**, which represents a **72% decrease** in income.

“Our spending in Bento was at one level, here it is another story, much higher. There, I had my income, tractors and a productive farm. I used to joke that I was rich and didn't know it. Today, I can barely fill up the car with my credit card.”

Paulo César,
resident of Bento Rodrigues
Published on issue 25 of the newspaper A Sirene

GLOSSARY

CIF (Interfederation Committee) was created to “evaluate, follow up, monitor, and inspect” Renova Foundation's actions within the states and it is composed by representatives of the municipalities, the states of Minas Gerais and Espírito Santo, the Federal Government, and the mining companies, which also have voting rights. The affected communities are allowed to participate, but without decision-making power.



FOUR YEARS OF UNCERTAINTIES

According to information presented by Renova, in January 2019, **512 families** will take part in the Resettlement Program. Of which 468 in Mariana, 43 in Barra Longa and 1 in Santa Cruz do Escalvado.

As the resettlement is not finalized, the Renova Foundation made **414 temporary housings** available. Ramboll was hired by the Federal Prosecution Office and inspected 232 of the housings concluding that **56%** of them were **inadequate** because they were in **at-risk areas** or presented problems related to the **impossibility of occupancy**.

“The disrespect and lack of responsibility towards us is huge. Our people are like one big family, but we are all very tired. There are people giving up on going back to the community [resettlement]. You are exterminating a village, a language, a culture. Solve our problems fast, act!”

Luzia Queiroz, resident of Paracatu de Baixo

Published on issue 23 of the newspaper A Sirene

While they keep on the endless wait for the houses and fair reparation - and not the ones arbitrarily fixed by the Renova Foundation - the affected communities of Bento Rodrigues and Paracatu de Baixo were surprised in September 2019 by a settlement offer between the Federal Prosecution Office, the State Prosecution Office, the municipality of Mariana, and the companies Samarco, Vale, and BHP Billiton. According to the draft of the document published by the Agência Pública, the proposal would be to condemn and list in the Register of Historic Places the debris ruined by the mud in these municipalities and turn the area into a territory museum. The affected communities complained about the proposal, which "arrived ready to be signed" and a "short deadline to have a discussion among them".

“Once again, they're stepping over our opinions, our feelings, and us, as owners. People don't understand the feelings we have toward that place”

Mônica Santos, resident of Bento Rodrigues

Excerpt from the story published by Agência Pública

PHOTOS: WANDEIR CAMPOS - JORNAL A SIRENE



With heavy truck traffic in the affected cities, such as Barra Longa and Rio Doce, many houses began to crack



In Bento Rodrigues, a person who was affected by the dam burst struck on the ground a sign with the words "respeitem nossa MEMÓRIA": an appeal to the misbehavior and injustices committed by Renova Foundation/Vale/Samarco/BHP

HOW RENOVA PRESENTS ITSELF

Established to "repair" the damages and save the images of the companies BHP Billiton, Vale, and Samarco, the Renova Foundation has always been criticized instead of the mining companies. The report by Ramboll used the tool Torabit to analyze reactions on Renova's posts from March 2017 to June 2019, and it determined an average of **86.9% negative intereactions.**

In an attempt to change this scenario of reproval - which only aggravated after the collapse of Dam 1, by Vale in Brumadinho -, Renova has been investing in paid partnerships with important communications channels in Minas Gerais such as the newspapers O Tempo and Estado de Minas. In both media, Renova bought the

production of a series of special stories which replicate the speech introduced on its website, hiding the information about the non-reparation. It is another way to manipulate the narrative of the disaster.

"The Foundation is a cancer in the lives of the affected communities. It kills more than the heavy metals. It is a serious factor of mental illness because of the injustices perpetrated along the territory. The Renova Foundation, today, is the coverup of Vale, Samarco and BHP. The Foundation stalls, it is the money-laundering machine that hides the money that belongs to the affected communities. Its role is to save resources directed to the reparation of the affected communities, the environment, and the territory, but it blocks that money, saves it."

Simone Silva,
resident of Barra Longa

As one of the publicity strategies of the Renova Foundation, the maintenance of a historical house in the center of the city of Mariana, the most expensive area in the city, stands out. The historical house works as a touristic landmark: a **Casa do Jardim** (the Garden House). There, one can find exposed interactive scale models about the collapse and the reparation process

according to Renova's viewpoint, therefore, according to the companies Samarco, Vale, and BHP Billiton. Besides this, another publicity initiative is the **VimVer** (ComeSee), an initiative of "tragedy tourism", as Mauro Silva, an affected individual from Bento Rodrigues, named it in the story "O que eles querem ver?", by the newspaper A Sirene. Connected to the area of Participation, Dialogue, and Social Control of Renova, VimVer offers visits guided by Renova Foundation's experts through the affected areas of Bento Rodrigues, Paracatu de Baixo, and Gesteira without the previous consent or even consulting the affected individuals. Such practices demonstrate that Renova mistakes transparency for advertising and uses mandatory reparation actions to promote itself and uses resources destined to compensatory damages to make its narrative prevail over the affected communities', covering up the obligations they do not fulfil.

GLOSSARY

Torabit is a company specialized in social media monitoring hired by Ramboll to record Renova Foundation's activities online.



In Bento Rodrigues, Isabela observes the river she no longer can fish

When analyzing Renova's Transparency Portal and how they describe the reparation programs, we have identified three programs that comprehend investments on communication, public relations, and the image of the organization. They are:

- **Program 06: Communication, Participation, Dialogue and Social Control** - Responsible for the production of Renova Foundation's communication channels, press relations and participation in events and conferences. Accumulated costs until October 2019: **157.4 million reais**;
- **Program 35: Information for the Population** - Responsible for managing VimVer and Casa do Jardim. Accumulated costs until October 2019: **3.6 million reais**;
- **Program 36: National and International Communication** - Responsible for the promotion and advertising of communication contents produced by Renova Foundation. Accumulated costs until October 2019: **4.3 million reais**.

Altogether, the three projects represented an expenditure of over **165.3 million reais** until October 2019. Although the description of **Programa 06** highlights that is not only dedicated to establishing

"a relationship with the press and making releases available to communication channels", it is not possible to break down the amount destined to **advertisement**.

With investments in communication, the Renova Foundation gained space in three "collective construction" newspapers, as it apparently defends, which are distributed in the municipalities of Mariana, Barra Longa, and Foz do Rio Doce; Renova Radio broadcasts on **24 stations** throughout the Rio Doce basin; the online magazine named Dois Pontos; and the online special featuring series of stories named Caminho da Reparação (*Road to Recovery*). Therefore, while Renova has **29 media** - counting only the ones presented on Renova's website - the affected communities have only one channel, the newspaper A Sirene.

NO LEGITIMACY

Among the most important criticism by affected individuals along the Rio Doce basin, is the one that the reparation programs by the Renova Foundation are unilateral and aim to deny rights, separate communities and tire them down, winning by default. The report issued by the Federal Prosecution Office proves this theory by analyzing 15 programs by Renova and concluding that none of them was reviewed positively and 10 had negative reports, proving that there is **no participation of the affected communities**. Five of the programs were described as having partial participation. Regarding Program 06, Communication, Participation, Dialogue, and Social Control, the report shows that the presence of affected communities is limited to “meetings with the community, having low or no interference in the implementation”.

“The speech the Foundation tries to display in all media is all a lie. They say the reparation process is moving together with the affected communities and everyone is involved in the decision-making process, but only those who have been here for four years, fighting, know it is not true. It is very difficult for the Renova Foundation to accept the agenda proposed by the

affected communities because it arrives with everything ready and just expects us to accept it. It was with great struggle and fight that we have achieved all that we have now. But it was not a collaborative process and it was not as diplomatic as the Foundation promotes. It is all a struggle, a fight. Renova does not do anything for being nice or because it wants to solve the problem. It is the exact opposite. It wants to do it the cheapest way possible for the companies and the craziest way possible for us, the affected communities.”

Mirella Lino,
resident of Ponte do Gama

For this and other reasons, affected communities do not recognize Renova Foundation as an institution that has the standing to guarantee the reparation. How is it possible that a foundation whose mission is to “always act in an efficient, reputable, transparent, and ethical manner” but is incapable of ensuring basic rights and is disrespectful to the voice of the affected communities in its decisions, gain someone else’s trust?



After a hearing, Mariana's affected communities claim for participation in a fair reparation process.



THE MYTH OF MINING

“The mining model adopted in Brazil is an evil. And it is not a necessary one.”

Bruno Milanez, production engineer, professor and coordinator of the research center Poemas (Politics, Economy, Mining, Environment and Society) at UFJF

Excerpt from an interview given to the portal of Demography and Population Studies Laboratory, UFJF

The mining industry contribution to the Brazilian **GDP** (Gross Domestic Product) in 2018 was only **1.4%** according to the Annual Report by the Brazilian Mining Institute (Ibram). According to the document, Brazil exported over **409 million tons** of mineral assets in 2018 and the Brazilian Mineral Production (PMB) was **34 billion dollars**. This, however, does not correspond to an effective return

to the economy, especially to the development of the country if taken into account that almost **90%** of the ore produced is **exported** under minimal taxation and at the expense of broad destruction. Loopholes and legal flexibilizations allow companies to avoid several taxes and responsibilities, which translates into more social inequality, environmental destruction, and countless damages to the communities affected by dams - even the ones that did not collapse.

According to the Brazilian Constitution of 1988, resources and richness extracted from the subsoil by mining companies belong to the Federal Government, therefore, it needs to be compensated in the form of environmental reparation and tax collection. One way to collect these sums is through the **CFEM** (Financial Compensation by

Mineral Resource Exploration). The main problem of this taxation are the low tax rates levied only over the net turnover, whereas, in other countries, taxation is levied over the gross turnover of the company. Law no. 13,450, passed in 2017, foresees that the ANM (National Mining Agency) can **reduce** taxes from **3.5%** to just **2%**, justifying that **“it does not harm the economic feasibility of mines which are low in rentability and underperforming”**, but it does not provide parameters for this situation.

“The National Mining Agency can decrease the tax, but it has few people to supervise and understand the amount of ore extracted by a company.”

Euler Cruz, engineer and researcher at the Forum Permanente Sao Francisco

GLOSSARY

PMB (Brazilian Mineral Production) is the sum of all mineral goods produced in the country and it is calculated in billions of dollars. It does not include oil and gas.

CFEM is the amount due over the net turnover of mining extraction for the states, municipalities and direct Federal Administration where there is mineral extraction. CFEM is collected by the National Mining Agency, responsible for transferring it to the federal government, States and municipalities around mineral exploration areas.

Another way of tax flexibilization for the mining industry is the **Kandir Law**. Passed in 1996, it allows commodities, such as iron ore, to be exported without without being levied on the ICMS (Tax on the Circulation of Goods and Services). Due to this law, Brazilian states stopped levying, approximately, **812.5 billion reais** with the reduction of the tax burden on exports of semi-elaborated products and commodities from September 1996 to June 2018, according to the news story published on the newspaper Estado de Minas. In the state of Minas Gerais alone, it is estimated that approximately **100 billion reais** were not collected.

In 2015, for example, Brazil produced **422 million tons** of iron ore, of which only **14%** stayed in the internal market and the remaining **86%** were exported to China (58%), Europe (14%), and Japan (14%). Therefore, almost 90% of the whole production **was not taxed on ICMS** (the numbers are from the Department of Research and Economic Studies, DEPEC/Bradesco). These rates can change from State to State. In Pará, for example, all mining activities are exempt from the ICMS tax to interstate transactions.

Confronted by this low tax revenue on mining activities,

documents from supervising agencies show signs that most mining companies operating in Brazil have been practicing **tax avoidance**. The practice - ethically and legally questionable - consists on selling the product at lower prices than the market to its own subsidiary companies, located in tax havens, such as Switzerland or the Cayman Islands, so they can, in their turn, export the ore at market price, surpassing the sale amount made in Brazil. Once taxes are levied on the sales price in the Brazilian territory, this practice allows companies to reduce the tax burden, therefore, maximizing their profits. According to the Institute of Socio-economic Studies (Inesc), CFEM revenue over the sales of mining company Vale in 2013 could have been about **30%** higher than the actual amount declared.

As the Commissioner of the Accounting Court of the State of Para highlighted at an audit of external prices, Vale has two subsidiaries, one in Switzerland and one on the Cayman Islands. According to the study, Vale exports iron ore to these companies, which re-sell to other countries, like China. The price charged by the foreign subsidiaries reached **32%** more than the price charged - and taxed - in Brazil. Besides the "creative accounting" mentioned, it is also important to highlight the tax evasion. According to the document issued by the General Accounting Office (TCU), several mining companies under notify the amount collected and the amount of ore extracted and produced in order

to reduce the tax levied. This means that the companies themselves are responsible for reporting the quantity produced and there is no supervision or inspection of this data. In October 2015, a list of overdue tax liability of the Federal Government was published with the first 500 companies in default in the country. **Vale** was leading it with a **debt** of almost **42 billion reais**.

“Among the debtors, there is a tax planning that borders the legality more and more institutionalized’, according to Anelize Lenzi Ruas de Almeida, director of Overdue Tax Liability at the Office of the General Counsel for the Federal Treasury (PGFN), the agency responsible for collecting overdue taxes. ‘There are companies that state that not paying taxes is cheaper than getting a bank loan’, states Achilles Linhares de Campos Frias, president of the Counsel for the Federal Treasury Union (Sinprofaz).”

Excerpt of a story published on the economic magazine Carta Capital, in October 2015



Observation

Vale's subsidiaries located in tax havens: Vale International and Vale Overseas.



MINING IN DECLINE

After the collapse of the Fundão Dam in 2015, mining companies adopted the speech that they would have a significant loss in revenues due to the suspension of Samarco's operation. This argument, however, does not stand on its own, because the decrease of the extractive industry - which does not include only iron ore - in the participation of the GDP of the State of Minas Gerais has been happening since before the crimes of Samarco, Vale and BHP Billiton. According to data from the João Pinheiro Foundation, the GDP of the extractive industry in the State of Minas Gerais is approximately **1 to 2%**. Until 2000, Brazil was the world leader in the iron ore export market, representing **29%** of exports against **26%** of Australia. This scenario has changed throughout the years. According to information by the OEC (Observatory of Economic Complexity), since 2006 Australia has led the export market, leaving Brazil behind.

“Mining GDP has been falling since 2013. In 2019, it risks getting closer to 1%. Mining is the most basic activity there is. In the Stone Age, they collected what they could find in nature and made no alterations. Mining is the same thing, but with machines. You extract the product from nature, but there is no alteration, no technology, no knowledge, nothing. It is a very primitive thing, very behind our time.”

Euler Cruz, engineer and researcher at the Permanent Forum San Francisco

Even in decline, mining numbers are considerably heightened, however, there is no concrete return to society. From 2016 to 2019, Vale and BHP Billiton profited near **162 billion reais**, according to a story published by the Observatório da Mineração. In 2019, even with the collapse of Dam 1, in Brumadinho, **Vale** recorded a **profit** of

6.5 billion reais in the first quarter. When leaving the company in 2017, Vale's president, Murilo Ferreira was paid 60 million reais and, in the same year, the average pay per director was **12.4 million reais/year**, more than twice the amount recorded in 2016. Meanwhile, Vale accumulates **390 million reais in unpaid fines** and thousands of people affected by the collapse of its dams fight to receive emergence-aid of one minimum wage in Brazil - **998 reais**.

From this information, it is safe to state that economic growth is not equal with development. Decades ago, we expanded our notion of development to include social, cultural and sustainability standards. The need to invest in education and technology is becoming increasingly urgent in Brazil and the world. It is essential to ensure economic diversity for the country at the risk of never letting go of our colonial bond when confronted with the most industrialized countries.

FAILURES IN THE MINING SYSTEM

The collapse of Dam 1, in Brumadinho, brought to memory that the disaster of the Rio Doce was not a simple accident nor a one of a kind. It is more important than ever to understand the problems faced by the mining system operating globally, which, therefore, removes from the affected communities the decision-making power and the autonomy of those who live in that space.

“If [the mining company] does not distribute enough dividends, the investor will buy stocks from another company. So, what does the mining company do? It cheapens the operation cost. As Vale’s operations take place in Brazil, the impacts are felt here.”

Bruno Milanez, production engineer, professor and coordinator of the research center Poemas (Politics, Economy, Mining, Environment and Society) at UFJF

Excerpt from an interview given to the portal of Demography and Population Studies Laboratory, UFJF

According to Tadzio Peters Coelho, expert of the extraction and

development industry and a member of the National Committee in Defense of Territories in the face of Mining (CNDTM), the reverse cycle that begins after a **boom** in ore prices has a strong impact in producing these technological disasters. After all, the **reverse cycle** is characterized by falling prices in mineral products due to low demand, leading to several negative factors for society, such as job cuts, reduction of costs related with socio-environmental security and structure maintenance, and an increase in the extraction flow.

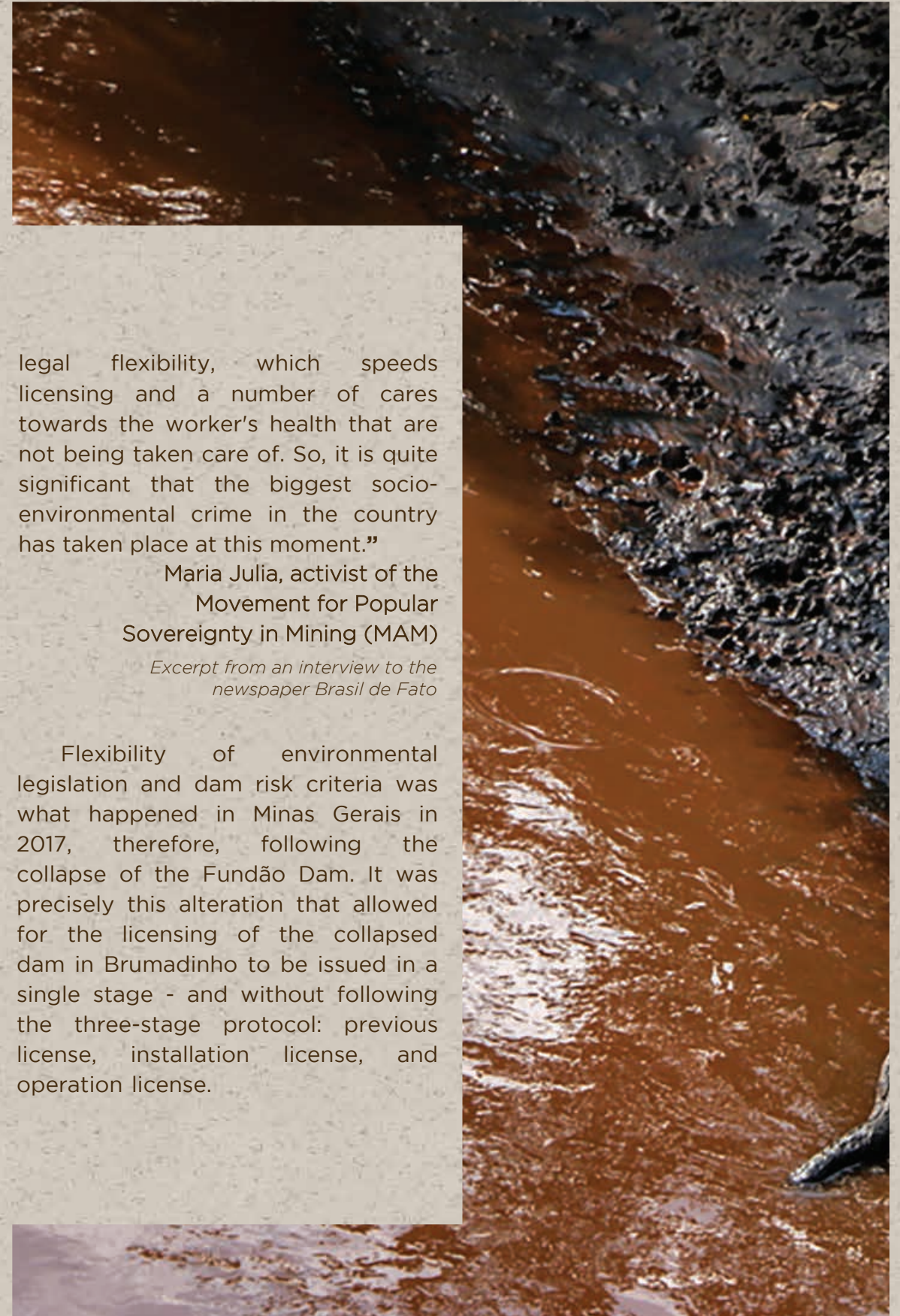
“The crime committed by Samarco, Vale, and BHP sets the end of a growing period of mining in Minas Gerais and Brazil. The mining boom happens when commodities, like iron ore, have an exponential growth in which one ton is worth 150, 160 dollars when, not long ago, it was worth \$50. We were able to identify that, when there is this boom in mineral extraction, in general, there is some

legal flexibility, which speeds licensing and a number of cares towards the worker’s health that are not being taken care of. So, it is quite significant that the biggest socio-environmental crime in the country has taken place at this moment.”

Maria Julia, activist of the Movement for Popular Sovereignty in Mining (MAM)

Excerpt from an interview to the newspaper Brasil de Fato

Flexibility of environmental legislation and dam risk criteria was what happened in Minas Gerais in 2017, therefore, following the collapse of the Fundão Dam. It was precisely this alteration that allowed for the licensing of the collapsed dam in Brumadinho to be issued in a single stage - and without following the three-stage protocol: previous license, installation license, and operation license.





“In practice, the work is licensed before the assessment. The government is worried about economic growth and beforehand is willing to approve the construction. Nowadays, the Environmental Impact Assessment is carried out by companies hired by the contractor. To ensure the contract, there is an interest to reinforce the positive aspects of the construction while ignoring the negative ones. This can already be considered a self-licensing if there is a bill that puts the environmental impact assessment on the same level as granting a license.”

Bruno Milanez, production engineer, professor and coordinator of the research center Poemas (Politics, Economy, Mining, Environment, and Society) at UFJF

Excerpt from an interview for the portal of the Demography and Population Studies Laboratory, UFJF

Between February 2017 and January 2019, only one mining project was denied at the State Committee for Environmental Policies of Minas Gerais (Copam) in 40 meetings, according to a story by Agência Pública. The expansion of Vale's enterprise accelerated the collapse of the Dam in Brumadinho. The expansion was approved by the Committee composed mostly by representatives of the mining interests and with only one opposing vote by the National Forum of the Civil Society in Hydrographic Basin Committees (Fonasc), represented by Maria Tereza Corujo. According to her, in testimony

to the Parliamentary Committee of investigation of the State Legislature of Minas Gerais, Copam would be a true "licensing machine".

“The Committee is in the hands of the mining companies. The government representatives are 50% of the votes and they always vote for the opinion presented by the Environment Department (Semad) and they are people who are not able nor educated to technically analyze a mining project. The other 50%, which would represent civil society, the mining companies have almost every vote. So, the mining company proposes a project and they vote for the licensing themselves. With the

current disposition of Committees, there is no possibility of a mining project not being approved, no matter how bad it is, nor how unsafe nor unsustainable. Economic power should have a voice, but not a vote.”

Julio Grillo, former Chief Officer of Ibama (Brazilian Institute of Environment and Renewable Natural Resources)

Beyond exercising a strong influence over the agencies that grant environmental licenses, it is clear at a regional and federal level, the phenomena of the revolving doors, once the companies hire people who have government roles - or who have just left them.



“The major mining companies have completely captured the State. The state Legislative branch, elected in 2014, was directly financed by mining companies. [...] When Temer took office, all middle management of the Ministry of Mines and Energy came from Vale’s personnel. The Mineral Code was approved in this context.”

Bruno Milanez, production engineer, professor and coordinator of the research center Poemas (Politics, Economy, Mining, Environment and Society) at UFJF

Excerpt from an interview given to the portal of Demography and Population Studies Laboratory, UFJF

The shortcomings continue when it comes to supervising the structures, whether during or after the construction, since it is not carried out directly by the State. Having environmental agencies increasingly precarious in terms of human and financial resources, it is the mining companies themselves that are responsible for hiring an outsourced company to audit them and write the report confirming or not the dam’s safety. There is, once again, a conflict of interest once the most important report concerning the safety of the population is

written - and ordered - by the company itself. This was proved with the collapse of Dam 1, Córrego do Feijão Mine, in Brumadinho, in which consulting company **Tüv Süd** was processed and had **60 million reais** blocked for ensuring the stability of Dam 1, at Córrego do Feijão. In testimonies, the German company stated that the mining company Vale pressed auditors to certify the dam’s stability.

“There are gross mistakes in the whole mining and dam process. Tailings disposal methods are the responsibility of the mining company, without the interference of the State and society. The company chooses a way to maximize its profits and the method with the cheapest conditions. At no point, mining companies consider safety as a decision-making factor.”

Julio Grillo, former Chief Officer at Ibama

In this context that, on 25 October 2019, the Committee approved Samarco (Vale and BHP Billiton) to resume their operations in the municipality of Mariana with **ten votes in favor**, one abstention, and **one against**, again by Fonasc. The resume of the operations is set for

early 2020, even if the affected communities by the collapse of the Fundão Dam and the environment have not been compensated nor repaired at the moment.

“I don’t agree that once again, a rushed decision should be done here [at Copam], with no real consideration about the Germano Complex and the risks it poses, again to Rio Doce and the people living along it, because there are several structures that would have to be decommissioned before even thinking about reactivating the whole Complex and the operation with so many issues pending.”

Maria Tereza Corujo, environmentalist and former Fonasc representative at Copam

Excerpt from an interview for MG2 by TV Globo Minas, on October 25, 2019

Four years have gone by after the Fundão Dam collapsed and the mining companies Samarco, Vale, and BHP Billiton are already profiting again, growing and returning to extraction activities, but so far no person has been arrested or convicted for the crimes committed.



“The three companies are the main responsible for the reparation. However, from a criminal point of view, there is corporate criminal liability under environmental crimes. Therefore, besides **Vale, Samarco** and **BHP Billiton, VogBR**, which acted as consultants regarding Fundão Dam, should also be held responsible.”

Guilherme Sá Meneghin, State Prosecutor at the 1st Judicial District of Mariana

Currently, the biggest mining company in the world, **BHP Billiton** is being sued by negligently ignoring warnings about the risky conditions of the Fundão Dam. Mining companies Samarco, Vale, and BHP Billiton have received reports, since 2014, about cracks on the structure of the dam but did not do anything to ensure its safety. The lawsuit, filed in England, counts on **235 thousand Brazilian citizens**, besides local governments, and the Catholic Church. According to Reuters, it is the largest group action in England so far.

BHP Billiton’s participation is similar to its partner, Brazilian mining company, Vale. According to a news story by Sydney Morning Herald, out of the **67 dams** the mining company has all over the world, **32 pose an extreme risk** - the worst

classification under the CDA (Canadian Dam Association), which represents an estimate of over **100 potential deaths**, and four of these structures are in Australia.

BHP Billiton operates indirectly in Brazil and tries to escape its responsibility as a parent company notwithstanding being implicated in several environmental crimes with irreparable damages. Before Fundão, the incident with the most severe social and environmental consequences in the history of BHP was the mine OK Tedi, in Papua New Guinea. In 1999, the company admitted to dumping tons of copper tailings into the hydrographic basins of the rivers **OK Tedi** and **Fly** for over a decade. The technological disaster affected **120 rural communities** and artisanal fishermen in the area, affecting up to **50 thousand people**.

“After the scandal came to light, the company withdrew from the business: it was not good for its image to be associated with the deliberate destruction of nature. BHP is taking the same attitude regarding the crime at Fundão Dam: it is hiding behind Vale, that is hiding behind Samarco, that is hiding behind the Renova Foundation, that claims is independent of all.”

Excerpt taken from the text "Crime sem fim: a lama da BHP Billiton/Vale S.A. não para de escorrer", Amigos da Terra Brasil



In southern Australia, the BHP Billiton mining company has also been questioned due to its elevated production, storage of radioactive waste and high water consumption at the Olympic Dam, which has copper, gold and silver reserves and the world's largest uranium deposit, according to BBC News. In 2015, BHP sought to increase the height of the venture by 10 meters, which would increase the tailings storage capacity from, **48.4 million cubic meters to 64.8 million**, an increase of **34%**. Currently, the company has been investing in developing a new exploration site next to the Olympic mine. The ventures use the heap leach technique, or leaching, to extract the ore. The operational cost of the technology is low and presents serious risks to society and the environment, such as compromising the reservoir, contaminating the water in the region of the dam and contaminating the workers, the community, fauna and the flora, according to a study developed by the University of the Witwatersrand.

Other controversies involving BHP Billiton include the copper mines of Escondida, in Chile, where NGOs and affected communities reported **copper tailings leakage**; as well as the implementation plans of IndoMet, megaproject of coal extraction in Indonesia forests. In 2015, a BHP document reported the **death of 180 metallurgists** of the company from 1926 to 1964, in Australia alone. While impunity prevails, in the political setting the argument defending “**less bureaucratization**” of mining licensing processes, supervision, and taxes in Brazil gets stronger and shift responsibilities by stating that the severe unemployment in the country is a consequence of environmental laws that prevent economic growth. Publicity campaigns by associations that represent the interests of the companies present the same argument, like the FIEMG (Industry Federation of the State of Minas Gerais) and the Sindiextra (Mineral Industry Union of the State of Minas Gerais).

“Creating new jobs is the most important thing in society but you pose so many challenges to create a job that you end up giving up. Then, what happens? When you overprotect things, what you do is you destroy what should matter the most, which is creating new job posts. [...] **The environment is important but not more important than society's social development.**”

Flávio Roscoe, president of FIEMG

Excerpt taken from interview for Band News, on September 24, 2019

The argument, besides being deliberately in favor of the extractive and predatory system, makes use of a distorted logic to defend the interests of mining companies, and cannot be supported when disregarding the importance of the environment to human existence in itself and minimizing the severity of the socio-environmental damage in the short and long term.



FOR A FAIR REPARATION, SO IT WILL NEVER HAPPEN AGAIN

The affected communities have been fighting for their right to reparation. For the consequences of the crime in the lives of people to be discussed and remembered. For the risks that the current exploratory model of mining poses on life to be understood. For everyone to understand how the irresponsibility of mining turns the whole society into affected communities.

The reality presented in this material and the complexity of socio-environmental conflicts caused by crimes committed by mining companies should be common knowledge. However, there is no use to have information without action. In the face of the pain of thousands of people, we invite you and/or the institution you represent to reflect upon what can be done for these crimes never to be repeated? What can be done to change this reality of pain and suffering? How to contribute so affected communities are effectively repaired and compensated?



This is a publication of the Incidence Project on the Mining Agenda (PIPAM) by Brazilian Cáritas Regional Minas Gerais which integrates the Churches and Mining Network.

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MYTHS AND UNCERTAINTIES

THE CHAOS OF (NON) REPARATION OF CRIMES
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Reference Documents

