

# LIFE BEFORE PROFIT!

## MAB'S ANALYSIS OF VALE'S CRIME IN BRUMADINHO/MINAS GERAIS



**MAB**  
Movimento dos Atingidos por Barragens

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February 2019



WE ARE ALL AFFECTED

*Minas [Gerais] has no sea.  
Yet they made two seas of  
mud in the mines.  
Where is my house that was  
here?  
Where are my bull and horse?  
Where is my papaya tree?  
My wheelbarrow?  
Where is my lime tree?  
Where are my books?  
Where are my rice and beans?  
Where is my mattress?  
Where are my father, mother  
and siblings?  
The mud took them away...  
The mud took my life away,  
My dreams,*

*My safe haven,  
My ground.  
No, it was not mud!  
It was man who made the mud that  
knocked Mariana and Brumadinho  
down to the ground.  
Dyed the waters of my  
Doce River brown,  
Colored my Paraopeba  
[River] brown,  
Will dye my Old Chico  
[San Francisco River].  
Will silence the voice of birds,  
Kill fishes...  
What will happen to me?  
Who will give me back everything  
that was taken  
away from me?*

*(Unknown author)*





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IN BRUMADINHO/MINAS GERAIS

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Graphic project  
MDA Comunicação

February 2019

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## PRESENTATION

**W**e face a new crime where, once again, thousands of people were affected and hundreds of people lost their lives. In Brumadinho, Minas Gerais, the collapse of Vale's tailings dam devastated nature, and one month after, it is still not possible to fully measure its impact. Three years after the collapse of the Fundão tailings dam in Mariana, also in located Minas Gerais, Vale who is yet unpunished does not hesitate in causing new crimes. Vale is, therefore, recidivist and responsible for another social, environmental and economic tragedy.

This document aims at denouncing Vale's crime through the lens of workers. We, people affected by dams who suffer the continuous violation of our rights, denounce the destruction and appropriation of natural goods, the exploitation of workers and the disrespect for communities by companies for the purpose of generating extraordinary profits.

The struggle for the recognition of the rights of people affected by dams is historical. Given this situation and the retrogression of rights in the country, the crime that occurred with the collapse of the tailings dam in the Córrego do Feijão mine proves that the existing development model, which is based on profit and in the private accumulation, does not serve the people.

The main strategy adopted by Vale is to reassure the market and investors. With regards to affected people, it continues to violate rights, denying the extent of the impact and damages caused, as well as denying our participation in decision-making processes.

We demand that the affected people in Brumadinho, and people who live along and/or depend on the Paraopeba River, as well as those living close to the São Francisco River must obtain the correct information regarding the level of water contamination, be redressed for the damages they suffered and participate in spaces where decisions about the future of their lives are made. This is the least we expect and we will fight for this!

We warn that the impunity and the complicity of all public bodies mean the authorization for new crimes to take place. In this sense, we demand justice and ask for Brazilian people's support and solidarity.

We wish a good reading and that this document may serve to strengthen the organization and struggle of all of the affected people in Brazil.

*MAB's National Coordination  
São Paulo, February 2019.*





## INTRODUCTION

### CRIME SCENE: UNDERSTANDING THE CÓRREGO DO FEIJÃO MINE

Around 12:30pm on January 25, 2019, in Brumadinho, Minas Gerais, approximately 60km from Belo Horizonte, some of the dams of the Córrego do Feijão mine belonging to the Vale mining company collapsed. The biggest one of them, Dam I, was 87 meters tall and had around 12 million cubic meters of tailings. In this region, in addition to the Córrego do Feijão mine, Vale owns the concession to another four ore reserves: Jangada, Mar Azul, Capão Xavier and Capim Branco. In total, these

mines have high-grade iron ore reserves estimated at 308.5 million tons.

Activities in the Córrego do Feijão mine began in 1956 by the Iron and Coal Mining Company. In 1973, ownership of the mine was transferred to Ferteco Mining and later, in 2003, to Vale. The facility had the complete infrastructure for ore mining and processing, in addition to administrative and support structures, an ore storage yard and a railway system, acting as an outlet for external and internal markets (SUPPRI/SEMAD, 2018, P. 03).



Figure 1 – Structures of the Jangada and Córrego do Feijão mines. Source: Rima, 2014



Studies indicate that tailings dams are not safe and that there are more risks when dams are built upstream, as the case of Dam I. These kind of dams continues to be used because it is less costly. After the collapse of the Fundão tailings dam in 2015, Vale announced that it would deactivate the 19 upstream dams in the state of Minas Gerais. However, in spite of being inactive,

ten of these dams (one of which was Dam I that collapsed), continued to be used for tailings. According to Vale, the other nine dams were decommissioned.

Hereby follows primary factors the Movimento dos Atingidos por Barragens – MAB, translated as Movement of People Affected by Dams, consider important to denounce Vale’s reincident crime.



Toxic mud in the Paraopeba river in Minas Gerais | Photo: Nilmar Lage



## 1. A CRIME AGAINST WORKERS AND NATURE

**S**tudies indicate that this has been the second biggest collapse of tailings dam in the world, with the number of deaths being smaller only to another serious episode that took place in Bulgaria in 1966, which had 488 victims.

In Brumadinho, 12 million cubic meters of mud flowed from the dam. Its trajectory destroyed the cafeteria of Vale's administrative unit, restaurants and the Ferteco Vila, killing hundreds of people.

Many workers were at the affected area since it was time for the shift changeover. Given that the region is touristic and the collapse of the dam occurred in beginning of the weekend, many tourists and residents were in their homes at the moment that the mud devastated the valley.

Comments about the existence of cracks in the dam were common amongst workers and documents prove that Vale knew about the risk of its collapse. As

Photo: Isis Medeiros





disclosed by various media outlets, the engineers of the German company Tüv Süd Bureau Projects and Consultancy who signed the reports affirming the stability of the dam gave the police testimonies that they were under pressure to sign them. They also said they had requested already in June 2018 that Vale intensify its monitoring, the reading of instruments and the increase in the number of probes to verify the humidity of the soil (piezometers).

Since 2015, the dam that collapsed did not receive any tailings. On December 5th, 2018, after Vale's request for an operation license, the Chamber of Mining Activities of the Environmental Council of Minas Gerais granted a license for the company to recover the iron ore disposed amongst the tailings found in Dam I, in addition to a number of internal logistics structures.

With this alternative, the capacity of the Jangada and Córrego do Feijão mines increased from 10,6 million tons/year to 17 million tons/year and the service life of this enterprise would be extended until 2032 (SUPPRI/SEMAD, 2018). In summary, Vale's proposal was to mine once again the tailings held in Dam I and deposit remnants in the Córrego do Feijão mine's pit, in

a context where the price of iron ore being sold by Vale rose above 90 dollars per ton.

The Córrego do Feijão mine employed 613 direct and 28 subcontracted workers, working in three shifts, with one shift of six hours and two shifts of nine hours, operating 24 hours per day seven days a week (SUPPRI/SEMAD, 2018).

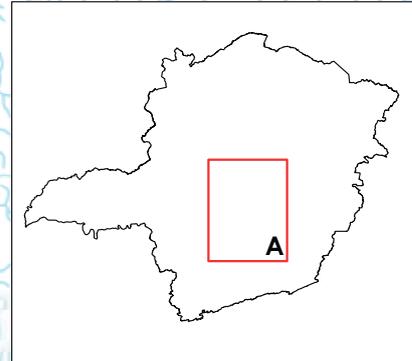
Amongst the dead and missing are more than 300 people. Additionally, thousands of people are affected, and the Paraopeba River, tributary of the São Francisco River, is seriously contaminated by toxic mud.

The Paraopeba River supplies water to eight affected municipalities, with six of these being located in the metropolitan region of Belo Horizonte (Brumadinho, Betim, São João das Bicas, Juatuba, Esmeraldas, Maria Campos, Igarapé and Pará de Minas). The most serious case is that of the municipality of Pará de Minas, where water collection in the Paraopeba River has been interrupted since February 29 and water is being collected from other sources instead. However, there is uncertainty regarding the water supply capacity in periods characterized by less rain. In total, around 600 thousand people suffer from having their water supply jeopardized in these cities.



## O CAMINHO DA LAMA

O rompimento da barragem I, do Complexo Paraopeba, da Vale, despejou 12 milhões de metros cúbicos de rejeito nas águas do córrego do Feijão e posteriormente no rio Paraopeba. A dispersão da lama poderá atingir o rio São Francisco, caso o rejeito não fique refido na barragem da usina de Retiro Baixo, localizada entre os municípios de Felixlândia, Pompéu e Curvelo.



## O RASTRO DA DESTRUIÇÃO 2

O desastre da Vale e a dispersão da lama no leito do Rio Paraopeba

## AS BARRAGENS NO QUADRILÁTERO FERRÍFERO

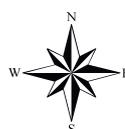
Segundo dados do Plano de Segurança de Barragens, da Agência Nacional de Águas, existem 114 barragens de rejeito em todo o Quadrilátero Ferrífero (QF), mais 104 estruturas não cadastradas no Plano, entre barragens, diques, gabiões. Essas estruturas decorrem da exploração mineral na região, especialmente ferro, ouro, argila e gemas. Deste total, o dano potencial associado (dano ocasionado caso ocorra uma ruptura) é alto para 70 delas e baixo para apenas 12. Em caso de ruptura as bacias do rio Doce, rio das Velhas, Paraopeba e rio Pará serão as mais atingidas. Além das barragens, existem ainda 56 minas paralisadas e abandonadas no QF.

## POPULAÇÃO E AMBIENTE ATINGIDOS

O escoamento da lama destruiu todo o vale do córrego do Feijão, atingindo casas, pequenas propriedades rurais, sítios, pousadas e a sede administrativa da Vale. Cerca de 300 hectares de terra foram soterrados. A lama atingiu o rio Paraopeba e deverá seguir por 245 km até a barragem da usina de Retiro Baixo. A população atingida pelo desastre chega a mais de 944 mil pessoas, nos 18 municípios cortados pelo Paraopeba. Além da população, todo o ambiente aquático do rio também foi impactado.

### LEGENDA

-  Complexo Paraopeba - Barragem I - Vale
-  Minas Paralisadas e Abandonadas
-  Usinas Hidrelétricas
-  Assentamentos
-  Terra Indígena
-  Barragens de Rejeito
-  Municípios afetados (no entorno do Rio Paraopeba)
-  Rios



Escala  
0 5 10 20 30 km

Fonte e Base Digital: ANA (Hidroweb); IBGE; Plataforma I3GEO (MMA); Instituto Pristino, Plano Nacional de Segurança de Barragens. Datum: SIRGAS 2000 Data: Jan/2019

Pesquisa e Elaboração:  
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PoEMAS - Grupo Política, Economia, Mineração, Ambiente e Sociedade



**A**

Sources: Esri, Garmin, USGS, NPS



## 1.1. VALE'S CRIME AFFECTS THE PARAOPEBA AND SÃO FRANCISCO RIVER

**T**he Paraopeba River meets the São Francisco River in the reservoir of the Três Marias hydroelectric dam in Minas Gerais, which contributes to 4% its flow. When such an important tributary is destroyed in this manner, we can affirm that the **São Francisco River is also contaminated!**

The fishermen and women and the inhabitants of the Paraopeba and São Francisco River Basin fear losing their main source of income. The Water Institute of Minas Gerais (IGAM) indicates non-standard levels of metal contamination, including nickel, lead, mercury, cadmium and zinc. There is no information regarding the possible im-

pacts that this contamination may have on fishing, fish production, tourism and electric energy production in the Retiro Baixo and Três Marias hydroelectric dams.

This contamination can travel the distance of approximately 2,100 km, affecting around 100 municipalities along the São Francisco River, until it reaches the Atlantic Ocean. It is important to note that the São Francisco River Basin is one of the most important in the country, with an area of approximately 639,219 km<sup>2</sup>. It supplies water in seven states, and particularly for their industry and farming (irrigation). These will suffer severe consequences, as the impact is inevitable.



Photo: João Zinclar



## 2. VALE: IS PRIMAL RESPONSIBLE FOR THE CRIME

### 2.1. A BRIEF HISTORY OF THE COMPANY

The Vale do Rio Doce Company (CVRD) was created in 1942 and turned into big state company, patrimony of the Brazilian people. The company was privatized in 1997 in one of the biggest scandals entailing the submission of the State to private capital. The privatization policy of the Fernando Henrique Cardoso government contributed to turn the privatization a fraud against public patrimony. Mines, reserves, technologies, dams, railways and structure and logistics sectors were intentionally devalued, so that the sale price of the state company (US\$ 3.3 billion at the time) was estimated below its real value. Moreover, the National Bank for Economic and Social Development (BNDES) funded the buyers. In other words, the State sold the company for a low price and lent money for private companies to appropriate Vale.

Many popular actions questioned the sale of Vale do Rio Doce. However, these actions were neither judged nor their merit analyzed by the judiciary, with the sale presented as an accomplished fact. In 1998, the year following the sale, Vale's profit was approximately US\$ 851.33 million, and the profits continued in the next years. Between 2008 and 2017, Vale accumulated a profit of around US\$ 57 billion, in spite of having committed a crime in Mariana in 2015 with the collapse of the Fundão tailings dam.

Social movements and organizations developed a long debate regarding the privatization of the company and in 2007 organized a Popular Plebiscite to discuss the necessity for re-nationalization of the company, among other themes. The great majority of the people that participated in the plebiscite (3,729,538 people) agreed that Vale's re-nationalization is necessary to guarantee our country's sovereignty.

### 2.2. PRIVATE COMPANY CONTROLLED BY FINANCIAL CAPITAL

In the nearly 22 years of its existence as a private company, Vale became one of the biggest mining companies in the world, with open capital and shares

sold in the main stock exchanges. Vale's main objective is to increase profits and distribute dividends to its shareholders.



Through speculation, shareholders appropriate the profit produced by the daily labor of workers. The spaces separating the moment of ore production and the appropriation of riches by shareholders are presented distinctly, why shareholders act as if workers and affected people are secondary and that it's not its concern. This becomes clear with the crimes in Mariana and Brumadinho, where foreign investors sue Vale, claiming that their profits were harmed. This demonstrates that financial capital does not want to get entangled with production-related problems, only with its result.



Source: Vale, 2018 (www.vale.com)

## 2.3. HOW DOES VALE OBTAIN EXTRAORDINARY PROFITS?

Vale is the **biggest producer of iron and nickel ore in the world**. It also produces manganese, ferroalloys, thermal and metallurgical coal, copper and sub-products of platinum, gold, silver and cobalt metal. The main concentration of Vale's iron ore production is in Brazil. The iron ore found in Pará, and more specifically in the Carajás area, has the highest quality (around 62%), which allows Vale to obtain higher prices

per ton (called "premium"), and which contributes to the increase in its **extraordinary profit**. Most of the ore extracted in Brazil is destined for export. The following figure shows the countries in which Vale explores minerals:



Figure 2 – Countries in which Vale explores minerals | Source: CVM, 2018



In Brazil, Vale extracts iron ore in three states: Minas Gerais, Pará and Mato Grosso do Sul. About 53% of the production comes from Minas Gerais, where the company has six “production systems” (extraction and processing set), including the Paraopeba system (CVM, 2018). All of these production systems are linked to a complex logistical infrastructure, which allows ore to arrive quickly to ports where they can be shipped for export.

Vale’s high profitability is not only result of the quantity of ore that produces, but also the way in which it produces ore. In order to obtain greater profits and distribute dividends to shareholders, the company undertakes many actions, including:

- **Devaluation of the labor force**, with maximum exploitation and outsourcing;
- Optimum utilization of machines and equipment. In many places, they operate a three shift regime covering 24 hours seven days a week, as was the case in Brumadinho;
- High production levels with intense **harassment of workers**;
- Attempt of cooptation, control and **persecution of workers’ unions**;
- **Exploitation of natural goods at its maximum**, neglecting environmental legislation, at the same time that the companies exercise a strong lobby to reduce environmental control legislation;
- Security negligence, accumulating to date **two of Brazil’s biggest socio-environmental crimes** in Mariana and Brumadinho;



Photo: Isis Medeiros

- **Absence of preparation for and control of security issues** that concern the people affected by the crimes;
- **Disrespect for affected communities**, including traditional and indigenous peoples.
- **Seizure of State structures**, by acting in several fronts:
  - a) Strong lobby within the National Agency for Mining to extend its capacity for granting mineral reserves;
  - b) Putting pressure in structures responsible for the environment to reduce and/or extinguish monitoring and control requirements;
  - c) In addition to having fiscal benefits, and play tax evasion;
  - d) **Putting pressure to State sectors** to deny fine and lawsuit payments, guaranteeing the impunity for crimes.



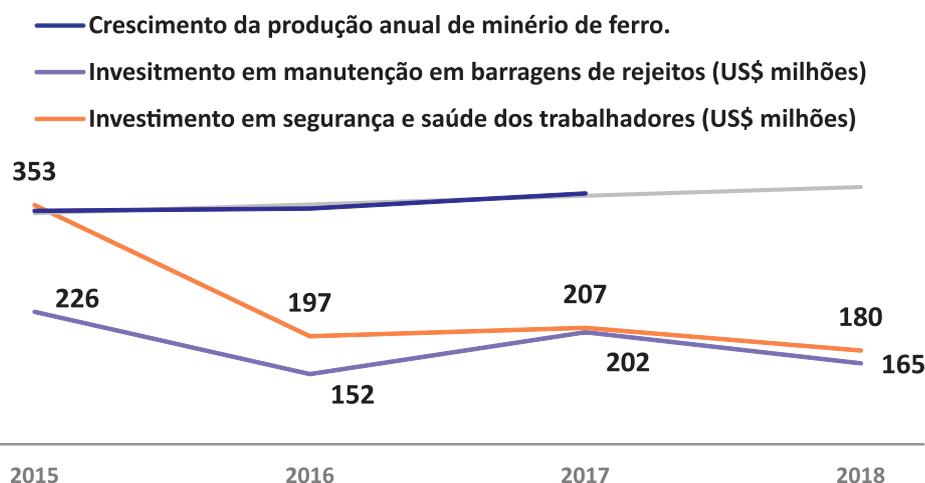
**U**p to April 2018, Vale owed public coffers more than 29 billion Reais in taxes of various types: circulation of goods and services tax (ICMS), income tax, social integration program taxes (PIS) and contribution for social security financing (COFINS) and royalties. The company was being questioned by public bodies in lawsuits for incorrect calculations that led to underpayment.

**V**ale owed 596 million Reais to social security (INSS), according to data disclosed by the National Treasury Attorney's Office.

**E**ven after the crime in Mariana (2015) and successive records in production levels, Vale systematically reduced investments in maintenance and security. The graph below shows that if

investments in maintenance and security for the tailings dams were kept, the crime in Brumadinho could have been avoided and/or its impacts mitigated, as well as hundreds of lives could have been spared.

### Aumento da produção x cortes em segurança e manutenção



Source: Le Monde, 2019.

Written by author in 2018, based on information of the first three trimesters



### 3. AFFECTED PEOPLE DO NOT WANT TO BE VALE'S HOSTAGES

**W**e see the “modus operandi” of the companies when acting in the treatment of those affected, preventing participation in the decision making process in order to minimize the costs of the repairs. Through our experience of organization, we realize that companies use tactics, among them which we point out:

- a) Establishment of agreements between the State (public bodies) and the company, without the participation of those affected, in order to determine who are affected, the costs, how they should be repaired and who does the repair;
- b) Creation of “shield institutions” that protect the name of the company responsible for the crime. In this way, foundations and/ or entities with new nomenclatures are created, but managed by the company itself, capable of producing new violations. The most recent example is the creation of the Renova Foundation, which operates throughout the Rio Doce basin;
- c) The frequent rotation of interlocutors to intentionally cause discontinuity of attendance with those affected;
- d) Combating collective solutions and forcing those affected to treat problems individually - and not of the community;
- e) Pressure for those affected to make immediate decisions: they are coerced into negotiations with several lawyers of the company, not allowing lawyers or representatives of their confidence;
- f) The companies don't accept the autonomous organization of those affected;
- g) An aggressive advertising tactic that spends more money on the disclosure of alleged actions than on actual repair;
- i) Encouraging disputes among those affected while the company freely deny their rights.

These are some of the initiatives that the people affected have denounced. Immediately, Vale does not recognize the requests of those affected. But our organization remains committed to putting pressure on the company and the judiciary to secure the rights, such as the Preliminary Adjustment Agreement (TAP) built in Brumadinho, which provides for **initial and monthly emergency financial support for household costs until the situation of work and life stabilize.**



In this perspective, reparation becomes an unequal dispute, with the use of negotiation and coercion techniques against the affected population. In addition, the company as the primary responsible, acts directly at the scene of crime, manipulating information, pressing the people affected and chasing local groups.

It is important to emphasize that when governments and public agencies allow the company to continue conducting the reparation process, they are authorizing that the rights of those affected can be trans-

formed into another profitable business of the companies, besides giving the criminal the power to define the parameters and choose who was the victim.

The impunity and connivance of the judiciary with the companies is the authorization for new crimes to happen. In Mariana, for example, fines and lawsuits against Vale and compensation for those affected were suspended by initiatives of the judiciary itself, which acts more as Vale's lawyer than as a defender of justice.

### 3.1. WHAT MARIANA TEACH US?

The people affected by dams from the communities of Bento Rodrigues and Paracatu de Baixo, in the city of Mariana, and the community of Gesteira in Barra Longa, had their houses destroyed by the mud of the Fundão Dam and were forced to leave their communities. After three years of the crime in that region no house was rebuilt and no family was resettled. The companies had made the negotiations as hard as possible, discouraging the people affected and forcing them to give up of their rights or to accept the lowered offer made by Renova foundation ("shield" company made by Vale).

The people affected organized within MAB around the Rio Doce basin, have put

up on fights to claim the right to information, to acknowledgement, the right to resettlement, to a home, and to fair amends, the right to healthy and to quality water, to access and quality of their lands that got contaminated with the tailings.

Photo: Leandro Taques





Though the fight, the people affected are achieving advances on the negotiations, for example the emergency card, as a way for the family to restore their income that was interrupted, and more recent achievements as the acquisition of land for the settlement of Gesteira. Besides, the people affected accomplish to have a technical support team around the entire basin to contribute on the discussion process and call for rights.

On the evaluation of the Movement of People Affected by Dams (MAB), the cost of reparation is responsibility of Vale, and the process of reparation must be built collectively, with popular participation with an independent technical support, that respond to the true needs of the population. The people must be protagonist within the repair of their lives, because they are the only ones who knows the local reality, the ways their life has been affected, what needs and how it must be repaired.

Photo: Maxwel Vilela





## VALE'S STRATEGY TO DENY THE RIGHTS OF THE PEOPLE AFFECTED OF THE RIO DOCE BASIN

**A**fter the rupture of the Fundão Dam in Mariana, the company Samarco, formed by Vale and BHP Billiton, is building a strategy of power and hegemony throughout the Rio Doce basin. Firstly, the State moved a Public Civil Action against the companies, estimating a value of 20 billions Reais for reparation. As consequence, a “big agreement” is made between the companies and state organizations - the Brazilian federal government, IBAMA (Brazilian Institute of the Environment and Renewable Natural Resources), ANA (National Water Agency), DNPM (National Department of Mineral Production), FUNAI (National Indigenous Foundation), ICMBio (Chico Mendes Institute for Biodiversity Conservation), Government of the States of Minas Gerais and Espírito Santo - the so called Transaction and Conduct Adjustment Agreement (TTAC), that estimated in 15 years the repair of the damages, defined who were the affected, in addition to creating the Renova Foundation to manage the whole process. The people affected were not part of this agreement.

Together with the creation of the Renova Foundation, the agreement stated its guidelines and goals, as well as 41 programs supposedly thoughts for the damages repairs process. The TTAC also created the Inter-federal Committee(CIF) and the Technical Chambers, spaces supposedly prepared for the inspection of Renova actions, but that in practice have difficulties to perform such

duties. The Renova is also totally managed and directed by Samarco (Vale and BHP).

The companies and government defined who the people affected was, and created an institutional arrangements to operate actions in all the Rio Doce basin. Created a “Solution Model” for repairs and compensations. In other words, a “Governance Model” to protect the company of great expenses with reparations, guarantee the direction and whole control of the repair actions and offer the best condition to challenge hegemony all around the territory.

A Civil Public Action (ACP) moved by the Public Prosecution questioned the above mentioned agreement and at the same time estimated a value of 155 billions Reais for reparation.

In 2018 a new agreement was signed between companies and the State, the “Governance TAC”, which provides participation of the people affected in some advisory spaces, but that keep the total hegemony of the companies. In this way, the Federal Justice suspended by undetermined time the lawsuits (including the ACP of 155 billions Reais) against Samarco (Vale and BHP).

Three years later there wasn't built any house, school, church, or land was given back to any affected family, and the Renova Foundation has been fulfilling its role, violating the people's affected rights.



## 4. VALE'S TAILLINGS AND THE HEALTH OF THE PEOPLE AFFECTED

**T**he rupture of dams also has the consequence of violating the human right to health. Mainly because it disrupts socially, economically and culturally the entire region, far beyond the physical space where the reject has arrived. In this sense, all those who have had their health affected are also affected. Health is understood here in terms of the World Health Organization that defines as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.

When analyzing the health problems caused after Vale's crime in Mariana, it is necessary to propose collective solutions from those affected, who are able to repair the damages:

› **Diseases related to depression, anxiety, insomnia, stress:** several studies have identified the significant growth of diseases related to depression within the affected populations. These diseases are a consequence of, among others, delays in negotiation with the company, loss of family members, fear of a

new dam rupture, loss of collective leisure spaces such as the river, soccer fields, sports arenas, religious practice spaces, squares and loss of workspaces.

In the documentary produced by MAB “Renova: Periodical Crime”, from 2019, one person affected reports his feeling after the crime: “Horrible fear of death. This fear of dying don't let got”. Fear turns to anxiety, insomnia, and depression for many people affected throughout the basin, especially from places where the mud has passed with the most violence. There is a significant increase in the number of people who have psychological support (psychology and psychiatry), as well as an increase in the number of people affected who use medication for psychological problems.

› **Skin diseases:** the main complaints of those affected are allergies, itching, scaling of the skin and wounds. These various problems are reported-



Child Affected from Marian with Skin reaction due to contact with the mud's heavy metals  
Photo: Mídia Ninja

ed in several towns along the Rio Doce basin that had direct contact, inhalation of mud dust from the air, water consumption, etc. Studies carried out by the Ministry of Health (2016) and the Institute of Health and Sustainability (2017) in the city of Barra Longa / MG found the increase of skin diseases as one of the main health problems in the region.

› **Contamination of the river, the environment and people:**

there is loss of leisure space in the river used by the river community, loss of fishing and fertile areas that guaranteed healthy food, in addition to contamination of water, soil, air and plants that influence the entire food chain, and consequently damage health. Exams conducted in residents of Barra Longa found the presence of heavy metals in

the blood. These metals can have serious consequences for people's health.

› **Diseases in the respiratory system:**

according to reports of those affected, there was an increase in respiratory allergies, rhinitis, shortness of breath and asthma in several municipalities after contact with mud dust.

› **Infestation of mosquitoes and other insects:**

the outbreak of dengue in the municipality of Barra Longa between 2015 and 2016, as well as the outbreak of Yellow Fever in 2017 in the towns of the Rio Doce basin is strongly related to the environmental destruction caused by Samarco (Vale / BHP).

Just as in the crime in Mariana, companies do not want to admit that dam rupture causes health problems because they know that the ways to repair such impacts are more complex and costly. The damage to health goes far beyond where the mud has come, and the number of victims is always larger than which the companies count for.

In parallel, we understand that Vale's crime in Brumadinho, being a similar situation, is causing many damage to the people's health. From the trauma of people who lost family members, or who



experienced the breakup several ways, to the long period of searching for missing people. The disinformation, confusion, and negatives that Vale has made in the negotiations are also a cause of health problems in the life of those affected.

Several places of leisure have ended, such as the river itself that is important to many riverine people, and the loss of these spaces affects health. In the region of Brumadinho, there were many small scale vegetable farming communities that supply local markets and the metropolitan area of Belo Horizonte. Those affected who lost these production spaces will also have reduced their ability to produce healthy food, or even fish that

were used for food, affecting the quality of food consumed by these families.

In the Paraopeba river, the public organs responsible for the Government of the States of Minas Gerais identified the presence of heavy metals at levels up to 21 times higher than acceptable. The metals found (lead, mercury, nickel, cadmium and zinc) have been dumped along with the waste and can have serious consequences for human health. Both lead and mercury affect various systems in the body, such as the cardiovascular, renal, reproductive, respiratory and central nervous system. After identification of the metals in the studies carried out, in a note, the Government of the States of



Photo: Isis Medeiros



Minas Gerais directed people to keep a minimum distance of 100 meters from the river.

In the understanding of those affected, health is everyone's right, and State obligation, and must be managed by the public Unified Health System - SUS as a guarantee of the principle of universality. However, the resources to pay for care and health policies to those affected should be provided by the criminal company, which is responsible for the damages. Constant monitoring should

be carried out to identify whether metals are found to continue or even to be diluted in the environment, such as soil, air, plants, animals and the food chain. All people who have had contact with toxic mud should have the right to pass examinations to evaluate possible contamination.

The companies want to omit, but those who are affected report that the crime violates the right to health. Damage to health needs to be mapped, quantified and fully repaired.



Photo: Isis Medeiros

## 5. POINTS FOR BUILDING A SECURITY POLICY OF THE PEOPLE AFFECTED BY DAMS

Until 2010 there were practically no initiatives and concerns of the State with what could happen in regions downstream of the dams. Only in 2010 was created the Federal Law No. 12,334, which established the National Dams Security Policy (PNSB), which requires the National Water Agency (ANA) to conduct annually a Report on Safety of Dams (RSB).

It is estimated that in Brazil there are about 24,000 dams. These are dams of tailings, power generation and water supply. Of these, only 4,510 are submitted to the PNSB and only 3% were surveyed. Even the subscribers do not have information and even less these dams are properly monitored.

Faced with this reality, the people affected present some evaluations on the subject of dam safety:

**a. There is no adequate security policy** that addresses the situation of dams at risk. The recent cases in Mariana and Brumadinho reveal that the current mechanisms are insufficient;

**b. There is no reliability on the information:** much of the information is provided by the companies owners of the dam;

**c. There is no public system of security and supervision:** after privatizations, this task have been delegated to the power of the companies themselves (self-policing). There is no public security system, capable of acting independently and properly supervising the works. On the contrary, companies claim environmental “self-licensing”;

**d. The owner companies omit basic information** and the state organs are not able to proper verify the information provided.

Photo: Maxwel Vilela





Vale's crimes in Mariana and Brumadinho shows clearly the lack of preparation of the company in dealing with the consequences of this type of crime. Workers, residents as well as aid agencies themselves

are not prepared to act in these conditions. We understand that from the point of view of security of the affected population, some measurements must be taken to protect life. We point out for some following axis:

- a. Establish local social control, capable of guaranteeing full information and participation of the people affected on the decisions and measurements that should be adopted in each dam;**
- b. Dams, should only be built with the participation of local population:**
  - **Plan to alert and evacuate the population in case of disruption, as well as prior training of the affected population that is at risk;**
  - **Plan for the rescue of the victims, defining actions that must be taken by the population and workers, by the company and by state organs;**
  - **Policy of Integral Reparation of Rights (mitigation, restitution, identification, compensation), material and immaterial, adequate to the affected families and communities.**

Photo: Isis Medeiros

**Sucata Zero,  
segurança 10.**

O comprometimento é de cada um,  
o resultado é de todos.



## 6. THE CONCEPT OF AFFECTED: THE OLD DISPUTE

**T**he rupture of dams and the eminence of new disruptions, evidences in society the debate: who are the ones affected.

The companies try, at all times, to apply a restrictive definition of the concept of “people affected”, because in the current model people affected, is considered an additional cost that lower the companies profits. Thus, families, social groups or individuals who should be considered eligible for reparation are not adequately guaranteed and qualified. In addition, several damages are not raised, also as a way to reduce costs, and not organizing the fully repair.

In Brumadinho, Vale has defended that only those who died, disappeared and/or lost their homes are affected: what the company calls a “Hot Zone” or “Self-rescue Zone”.

For many years MAB has been fighting so that those who suffered damages by the policy of dam building in Brazil are acknowledged. In this way we seek the fair conceptualization and reparation of the people affected. In 2010, the report of the Special Commission “Affected by Dams”, approved by the Council for the Defense of Human Rights - CDDPH, writes the following recommendation on the concept:

*“It is understood that the **concept of people affected, applicable to individuals, families, social groups and populations in general**, should consider the following dimensions:*

*The implementation of a dam implies, a complex process of social change, which involves **compulsory population displacement and changes in cultural, social, economic and territorial organization.***

*It is understood that in the identification of the impacts and the social groups, communities, families and individuals affected, must be considered **the changes re-***

***sulting not only from the reservoir implantation, but also from other works and interventions associated with the project, such as construction site, functional facilities and residential buildings, roads, transmission lines, etc.***

*In identifying the types of impacts, the following should be considered, among others: **a) compulsory displacement ; b) loss of land and other property (for owners and not owners); c) loss or restriction of access to resources necessary for the reproduction of way of life; d) loss or reduction of sources.***



In certain circumstances, **communities and populations**, that have received resettlements of people displaced because of the dam project, should also be considered as affected.

Consideration should be given to the **downstream effects of the dam**, which are normally felt only after filling the reservoir. The restriction or loss of fishing potential, changes in the water regime, effects on navigation and communication, loss or reduction of resources for effluent farming or other forms of exploitation of floodplains (mining, extraction of materials, etc.), as well as all downstream interference shall be considered for the purpose of identifying the impacts.

**Changes imposed within social relations** should be considered as losses, whenever they imply the **breaking of important relationships for social reproduction**, considering the cultural dimensions and identity of the groups, communities and families affected.

**Losses of affective, symbolic and cultural nature, immaterial and intangible**, and therefore not quantifiable and, a fortiori,

monetization, must be considered and object of wide open discussion and negotiation. Owners and non-owners, small sharecroppers, partners, occupants (public or private lands), employees, self-employed, informal workers, small business owners and others may be considered affected.

The absence of legal title of property, legal employment bond or formalization of occupation or activity will not be taken as a criteria to exclude groups, communities, families or individuals from the appropriate recognition as person affected.

The **temporal dimension of impacts** should be considered in order to incorporate the essentially dynamic character of social, economic, political and environmental processes. This will involve considering impacts that are felt at different points in the project cycle from the beginning of planning.

**For Indigenous Peoples and other Traditional Communities will be considered their cultural specificities, historical rights, constitutional and recognized by international conventions”**(CDDPH, 2010. p. 30 and 31).

In this way, we seek to organize those affected by dams so that they are recognized and have their rights guaranteed. And that the population affected by the Vale's crime, along the Paraopeba river and throughout the basin of the São Francisco River, can be recognized and fully repaired.

**ORE, WATER AND ENERGY ARE NOT COMMODITIES!**