

## **CORPORATE SOCIAL RESPONSIBILITY AND CHALLENGES IN THE APPLICATION OF STAKEHOLDER THEORY: THE SOCIO-ENVIRONMENTAL DISASTER OF BRUMADINHO.**

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### **Introdução**

This paper analyzes the peculiarities of applying Stakeholder Theory when the context is socio-environmental disasters caused by companies, notably the relations between the mining company Vale S.A., the public power and the stakeholders involved in the Environmental tragedy of the rupture of the Córrego do Feijão Dam, in Brumadinho, in January 2019. It is a qualitative analysis of primary and secondary data that describe the relations between the firm, public power and stakeholders in the post-tragedy, in search of a solution for the problems caused by the rupture.

### **Problema de Pesquisa e Objetivo**

The research question is “Are the specificities of the context of socio-environmental problems being taken into account in the post-tragedy repair actions, in the case of the rupture of the Córrego do Feijão dam?” The objective of the investigation is to verify how the relations between stakeholders are structured, and how the nature and organization of these relations have influenced the search for solutions to the problems arising from the disaster.

### **Fundamentação Teórica**

In addition to Stakeholder Theory and its relation to sustainability, the theoretical framework involves concepts from Human Ecology, such as management of common goods, wicked problems and the survival of socio-environmental systems. Theoretical propositions that involve new paradigms for corporate social responsibility were also studied, seeking new possible paths.

### **Metodologia**

After reviewing literature on Stakeholder Theory, Sustainability and Corporate Social Responsibility, a survey of articles involving the Córrego do Feijão tragedy, its antecedents and the post-tragedy was carried out. The author adopted a transdisciplinary perspective to apply concepts from different areas of knowledge to analyze the relations between stakeholders, among themselves and with the socio-environmental problem. Then, through non-participant observation, reports from the affected population were collected during events and analyzed in light of the theoretical foundation.

### **Análise dos Resultados**

The analysis shows that the perspective adopted in the search for solutions to the problems arising from the rupture of the Córrego do Feijão dam is as traditional as possible, with the Government and public institutions positioning the company at the center and the stakeholders around it, and attributing to the firm the design of actions, establishment of goals and even the ability to attest their achievement. This has caused dissatisfaction and revictimization of the affected population, who denounce not being heard in the decisions that have been taken.

### **Conclusão**

It is necessary to adopt a different perspective when it comes to seeking solutions for socio-environmental problems involving companies. Public power and companies must understand that theories and methods adopted to deal with business problems cannot be applied without adaptation when the context involves the environment and populations in the surroundings. It is necessary to adopt listening processes and participatory decision making, otherwise aggravate problems created by socio-environmental disasters, producing scenarios of suffering and revictimization of the affected population

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### **Palavras Chave**

Sustainability, Stakeholders, Corporate Social Responsibility

# CORPORATE SOCIAL RESPONSIBILITY AND CHALLENGES IN THE APPLICATION OF STAKEHOLDER THEORY: THE SOCIO-ENVIRONMENTAL DISASTER OF BRUMADINHO.

## INTRODUCTION

According to the Brazilian government, in 2022, Brazil was the world's second-largest producer of iron, reaching the production mark of 431 million tons<sup>i</sup>. The mining activity accounts for about 2,4% of the Brazilian economy; in the first quarter of 2021, Minas Gerais was responsible for 40% of Brazil's mining sector's revenue.

Vale S.A. is among the five largest mining companies in the world, having recorded a net profit of US\$ 16,73 billion in 2022<sup>ii</sup>. However, despite the financial performance and representativity of the sector, serious problems mark the relationship between the company and the community in the regions where it operates. According to the Observatory of Mining Conflicts in Brazil (2021), there were conflicts related to mining activity in 564 Brazilian localities in 2020. The two companies involved in disputes with the largest number of localities are Vale S.A. (110 conflicts) and Samarco/Vale/BHP (109 conflicts).

On January 25, 2019, the tailings dam of the Córrego do Feijão mine, owned by Vale S.A., in Brumadinho, Minas Gerais state, Brazil, collapsed, causing the leakage of about 12 million cubic meters of tailings; 272 people died and 4 are still missing. The toxic mud contamination extends for more than 300 kilometers in the Paraopeba River, one of the main tributaries of the São Francisco River, which flows through 35 municipalities. The National Human Rights Council (2019) characterizes the disaster as an environmental crime; hundreds of lawsuits are pending for damages. In 2021, an Integral Reparation Agreement was celebrated between the Government of Minas Gerais, Vale S.A., the public prosecutor's office, and the public defender's office of the union for R\$ 38 billion (approximately 8 billion dollars). Negotiations excluded the population and even the authorities of Brumadinho.

Sehnem et al. (2020, 392) state that, despite the discourse of progress and wealth conveyed by mining companies in the cities where they operate, mining does not always lead to an improvement in social and economic conditions for everyone, reinforcing the so-called Paradox of Abundance or the Natural Resource Curse (Auty 1993): regions rich in non-renewable resources tend to have lower economic growth and worse development indicators compared to places that do not have such resources. This is not to mention the enormous damage caused to the environment and populations around them by large-scale disasters, such as the one at hand. Finding solutions to problems of this nature should involve communities, companies, and governments, avoiding those affected being marginalized in decision-making.

. This work analyzes the specificities of applying Stakeholder Theory to the context of socio-environmental problems involving companies and their surroundings. The objective is to verify how the relationships between stakeholders are structured in the post-tragedy period, in the case of the rupture of the Córrego do Feijão dam, seeking to understand whether the specificities of the socio-environmental problems context are being taken into account by those responsible, and analyzing how the nature and organization of these relationships have influenced the search for solutions to the problems arising from the disaster. After a brief

theoretical review, secondary data from articles written after the tragedy and testimonies from the affected population were analyzed, to identify the stakeholders involved and the configuration of the relationships between them, in search of solutions to the problems arising from the disaster.

## **THEORETICAL FOUNDATION**

### **Stakeholder theory and sustainability**

The first definitions of sustainability date back to 1983, as a result of the work of the Brundtland Commission: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs, ensuring a balance between economic growth, environmental care, and social well-being.” (World Commission on Environment and Development, 1987).

Corporate Social Responsibility (CSR) plays a crucial role in sustainability from environmental, social, and governance perspectives. Ostrom (2000) connects sustainability in SSE to the identification and analysis of relationships between its multiple levels and actors - known as stakeholders and defined by Freeman (1984) as “any group or individual that can affect or is affected by the achievement of an organization’s objectives”. When dealing with ENRM (environmental and natural resource management) issues, we move away from this firm-centric approach, considering that “stakeholders can mean communities, interest groups, advocacy groups, discourse coalitions, organizations, social constituencies (sections of society with a shared characteristic but without formal membership, e.g. women), and/or individual people” – individuals and groups affected by or that can affect an ENRM issue (Covin, Witt, and Lacey 2020).

UNIDO defines Corporate Social Responsibility as “how a company achieves a balance between economic, environmental, and social imperatives (Triple-Bottom-Line Approach) while meeting the expectations of shareholders and stakeholders.” (United Nations Industrial Development Organization 2021). Lock & Seele (2015) position it as a response to specific demands, mostly from external stakeholders. For the European Commission, it is “a concept by which companies integrate social and environmental concerns into their business operations and their interactions with their stakeholders.” (European Commission 2001).

Banerjee (2008a, 23) critically analyzes the Stakeholder Theory and shows relationships controlled by imperatives of capital accumulation, pointing out that the mapping and analysis of these relationships tend to be contaminated by the interests of companies, states, and other institutions. Ostrom (2000, 2) reinforces this perspective and asserts that, in scenarios of imbalance in socio-ecological systems, the best solution is self-organization to create collective benefits; however, the process is not simple and may require time and effort. The author asserts that it may even be necessary to establish sanctions to curb the actions of free riders - agents who intend to benefit in a particular way from what is common, without bearing the costs that this represents to the system.

To address the relationships between stakeholders in the context of a socio-environmental problem involving a large corporation, a new theoretical-methodological approach to Stakeholder Analysis is necessary, operating the transposition of the business scenario to broader issues involving the sustainability of socio-ecological systems.

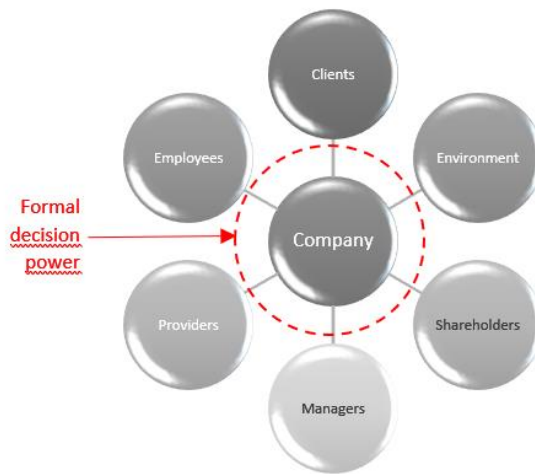
## **Relationships between firms and stakeholders in socio-ecological systems**

Article 225 of the Brazilian Federal Constitution (Brasil 1988) establishes that "everyone has the right to an ecologically balanced environment, a good for common use by the people and essential to a healthy quality of life, imposing on the public authorities and the community the duty to defend and preserve it for present and future generations.". When analyzing the tragedy of the Córrego do Feijão dam, we deal with common goods in a social-ecological system<sup>vi</sup> affected by the actions of private entities. When we talk about commons, we refer to the environment, ecologically unbalanced by the company's actions, which directly affects the rivers, cities, and the environment around it. It is both a right and a good that the entire population has the right to enjoy.

Ecological disasters involving large companies, the environment, and the surrounding community, as well as the conflicts arising from them, have elements that allow them to be classified as wicked problems. These are characterized by: not admitting rational understanding and planning, presenting many stakeholders with different perceptions of values, instability, and continuous evolution, as well as an irregular knowledge base for defining both the nature of the problems and the scope of the solutions (Rittel and Melvin 1973).

Christensen et al. (2019, 237) state that wicked problems do not present an optimal solution, but good collaboration and coordination among different actors, organizations, and levels of action can help governments deal with them, which again leads us to Ostrom and the importance of relationships between stakeholders. Bannink and Trommel (2019, 198) also reinforce Ostrom's (2009) thinking when they point out that dealing with this type of problem requires systemic thinking and decision-making design must involve the various affected publics. In this case, the literature shows that the stakeholder approach cannot be centered on the organization, as is customary in the business context; decision-making power must be diffuse and fluid. The voices of stakeholders should be the basis for defining the problem itself and raw material in developing solutions, which, in addition to material losses, need to consider feelings, emotions, and the history of populations and regions..

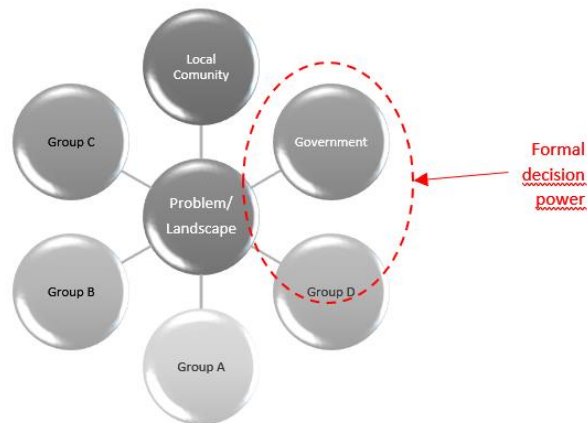
While in traditional analysis, centered on the company and illustrated in Figure 1, the tendency would be to classify stakeholders in terms of their formal relationship with the organization - employees, suppliers, customers -. the socio-ecological perspective contemplates several possibilities for engagement, individual or through social structures, formal, informal, implicit, or explicit. We emphasize that the approach cannot be centered on an organization but on the problem that threatens the sustainability of the system.



*Figure 1. Relations between Company and Stakeholders in the traditional business context. Source: Colvin, Witt, and Lacey (2020). Prepared by the author.*

Colvin, Witt, and Lacey (2020, 6) point out the following differences between the traditional approach and the socio-ecological perspective:

- **Central hub/subject:** In the traditional theory, the company occupies this position and, from it, defines who the stakeholders are. In the socio-ecological scenario, the landscape/question must be the center, and stakeholders must be defined from it.
- **Object:** In the traditional perspective, the company and its issues are the object and self-defined. In the socio-ecological perspective, the problem/object is defined by the vision and speech of stakeholders.
- **Decision-making power and determination of legitimacy:** In traditional theory, they are controlled by the company, which determines stakeholder legitimacy. In the socio-ecological context, decision-making power and legitimacy attribution are decentralized, with a privileged stakeholder able to exercise power based on the central issue and legitimized by other stakeholders.
- **Classification of stakeholders:** In traditional theory, it is centered on the company and based on relationships between the firm and stakeholders. In the socio-ecological scenario, it is more emotional and based on values.



*Figure 2. Relationships between Stakeholders in the socio-ecological context. Source: Colvin, Witt, and Lacey (2020). Prepared by the author.*

Figure 2 shows the approach in socio-ecological systems, with the problem involving the system positioned in the center. Decision-making power can be assigned to various stakeholders, depending on the nature of the proposed issue. Decisions are made by the stakeholder who momentarily holds decision-making power and are guided by their perspective, natural and occasionally privileged about other stakeholders. Some decision-makers play a dual role - as adjudicators and privileged stakeholders (this is what happens with government instances). The decision-making processes should be based on dialogue and facilitated by intermediaries capable of dealing with diverse interests and mediating power differences. The shared understanding of the different perspectives and values facilitates the mapping of the causes of misunderstandings. This creates trust among stakeholders, indispensable for the development and maintenance of agreements aimed at the sustainability of socio-ecological systems. (Colvin et al. 2020, 1)

The management of socio-ecological relationships in the context of mining activity is complex, with various levels of power, decision-making formats, engagement, and commitment. There are expectations from various actors that need to be considered and aligned, which requires planning and good interaction. This refers to what Colvin et al. (2020, 6) postulate when they recommend that decision-making processes be based on trust and dialogue so that it is possible to develop and maintain agreements that promote the sustainability of territories.

Citing Habermas, Fernandes (2020, 92) mentions that citizen participation is a key factor in generating trust and commitment, which are indispensable, in turn, for maintaining sustainability in the socio-ecological context. The author adds that the sense of ownership helps reduce conflicts since “those involved feel responsible for making the plan work”. Social exclusion, on the other hand, weakens decision-making processes and exacerbates conflicts.

Fontoura et al. comment that even recent CSR approaches still fail to consider the voice of the legitimate stakeholders in natural resource extraction actions. They tend to position private corporate power at the center of the analysis and neglect other actors or use them to legitimize decisions made without their participation. Citing Banerjee, the authors comment that conflict arises in response to these power asymmetries between corporations and local communities, who end up not having authority in RSC deliberations: “Those who are socially and politically ignored in defining corporate mining strategies are incorporated as cogs in a machine whose interior cannot be seen” (Fontoura et al., 2019, 24).

Analyzing the assumptions that underlie the corporate social responsibility discourse, Banerjee (2008b, 13) highlights three points that companies should focus on thinking beyond profit, paying attention to socio-environmental issues, adopting ethics, integrity, and transparency in all their operations, and engaging with the community, promoting social well-being, and providing support. He reiterates that these processes should take place through dialogue and engagement with stakeholders. However, social responsibility and sustainability discourses have been used by companies to restrict and silence the dissatisfaction of external stakeholders, legitimizing and consolidating their power. In this context, the Stakeholder Theory becomes a neocolonialist instrument focused on regulating the behavior of these actors. Even though they appear to be based on societal interests, these discourses end up serving corporate interests at the expense of segments of society (Banerjee, 2008b).

Often, trivial actions are highlighted and maximized in reports, setting up a form of greenwashing, which cannot be confused with the idea of sustainable development (Banerjee, 2008a); or even remediation actions are positioned as promoting sustainability; the focus is shifted from *global sustainability* to *corporate sustainability*. This type of proposal revolves around business-as-usual, only colored green, without any radical change in the corporate worldview - it is business that defines the parameters of sustainability. The question here would be: should socio-environmental issues caused by companies submit to business strategy?

Banerjee denounces the practice of large companies in the illusion of “empowering” the community: it consists of consulting stakeholders (involved/affected communities), making decisions privately, and then informing the community about the decisions made, which demonstrates a clear power imbalance in relationships. The consultations usually do not involve doing or not doing but at best address the conditions under which the practice should be carried out. Stakeholders who do not align with the company’s policy end up being co-opted or marginalized (Banerjee, 2008a).

It is not difficult to observe that Corporate Social Responsibility (CSR) has been used as a mechanism for legitimizing predatory business practices, even erasing the role of the State itself and contributing to making the contradictions between these activities and social well-being invisible. Its discourse “reaffirms the reduction of State intervention and the disqualification of civil society as an agent of control of business practices and strategies vis-à-vis issues of social interest”. Manipulated in this way, the concept of Corporate Social Responsibility ends up being used to undermine participation, leaving groups of stakeholders on the sidelines of decisions, and perpetuating asymmetrical power relations. The participation and critical and transdisciplinary perspective of Human Ecology in discussions on corporate social responsibility, analyzing the socio-environmental impacts provoked by large enterprises, are fundamental to the search for innovative solutions that avoid ‘atrophy in a discussion of nature without humans, without questioning its social and cultural meaning’ (Beck, 2010).

### **Mutuality, morality, and sustainability**

Rangan (2018, 5) defines results as a product of power and interest. In other words, if one wants to define the results, it is necessary to pay attention to the structure of power. He adds that corporate responsibility strategies have been designed by companies considering results such as the possibility of attracting bright professionals, the premium prices paid by engaged consumers, or milder attitudes from regulators in case of violations. It is a relationship of mutuality (exchange of benefits), the basic principle of social contracts that involve business

activity. The question would be: is this type of mutuality relationship sufficient to guarantee socio-environmental sustainability as a result?

Justice, well-being, and concern for humanity are not classically the strong point of business research. However, as Rangan (2015) points out, the dilemmas that companies have faced are not only technological and/or economic in nature but also moral and philosophical. They are not just about decisions but choices. The fundamental concern of business practices is primarily performance, but lately, academics and professionals have become increasingly interested in the connection between economics and social progress because it is necessary to rethink ends and not just means, discussing values of various natures, often incomparable or “hierarchizable”.

Sharing Ostrom’s principles, Rangan (2018, 22) highlights the importance of relying not on imposed and difficult-to-achieve rules but on feedback mechanisms to regulate corporate and individual actions; and on better use of the mutuality perspective to better align interests, with a view to the sustainability of relationships between companies and their environment.

Rangan reinforces that philosophers and social scientists need to work together in developing economic perspectives that combine morality and mutuality, since the capitalist paradigm, anchored purely in mutuality, does not help economic agents respond to the demand for justice and well-being; even the state machine remains focused on outputs rather than outcomes. As practice guides theory in the social sciences, there is a need to incorporate this morality into practice (Rangan 2018, 15).

Citing Frank and Petit, Rangan seems to transpose Ostrom’s ideas to cases where companies participate in socio-system problems when he mentions the “Economy of Esteem,” in which an “intangible hand” of civil society would complement the “invisible hand” of the market and the “iron hand” of the law. The process, supported by constructivism, should listen to the voice of affected and potentially affected parties in decision-making, establishing commitments to social priorities, with performance evaluated transparently (Rangan 2018, 25).

## **METHODOLOGY**

This work adopts the qualitative approach since it proposes to examine aspects of the social process, such as experiences and aspects of the participants’ imagination, the articulation of social processes, and their meanings (Denzin and Lincoln 2006, 17). Magalhães et al (2018, 29), citing Bauer, Gaskell, and Allum, point out the interest of qualitative research in the spontaneous expression of people, in what they consider important and in how they reflect on their actions and those of the actors with whom they interact. By focusing on the relationship between stakeholders after the tragedy in Brumadinho and analyzing the nature and organization of these relations, this article demonstrates its practical, descriptive, and explanatory nature, seeking to assist in the development of applied solutions for society.

After reviewing the literature on Stakeholder Theory, Sustainability, and Social Responsibility, a selection of published articles involving the tragedy of Córrego do Feijão, its antecedents, and post-tragedy was conducted. The analyzed material is not restricted to publications in the field of Administration, adopting the transdisciplinary perspective of Human Ecology to apply concepts from various areas of knowledge to analyze the relationships between stakeholders, among themselves, and with the socio-environmental problem in focus. Besides bibliographic research, data were collected through non-participant observation – assistance to



events, virtual and face-to-face, between August 2021 and March 2023, during which it was possible to access testimonies from the community about the reparation process after the tragedy - especially the event that marked the anniversary of four years since the tragedy, in January 2023. The analysis seeks to relate the theory involving stakeholders, sustainability, and CSR to the reality of the stakeholders affected by the tragedy, and the main findings are materialized in the final considerations.

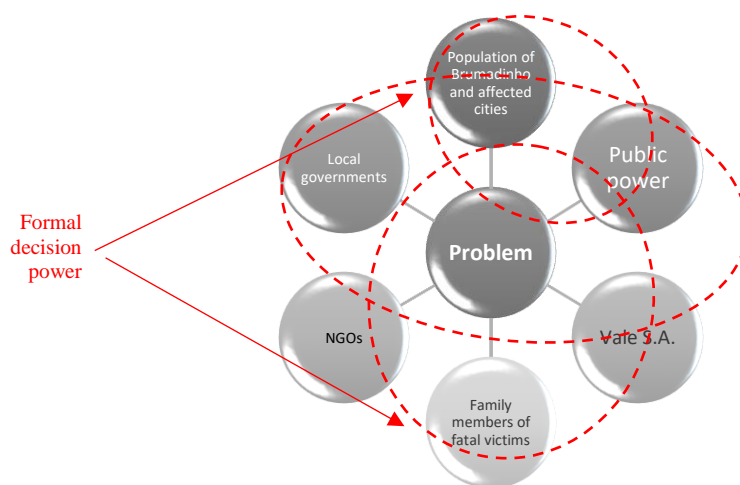
## ANALYSIS AND DISCUSSION

As predicted by Colvin et al. (2020), the events following the Environmental tragedy of the Córrego do Feijão mine have highlighted a complex dynamic of power relations between mining companies, public authorities, and communities. Four years later, different discourses challenge the understanding of the post-tragedy reality. While advertising campaigns and sustainability and reparation reports disseminated by Vale S.A. try to position it as committed to the recovery of the system and compensation for the damages caused by the dam explosion, the population claims that they have not been heard and continues to clamor for justice, denouncing practices different from those propagated by the company.

Sehnm et al. (2020, 417) confirm this view, stating that Vale's performance has been quite disappointing in terms of effective support for victims. Many complaints have not been addressed; even social programs and projects, widely highlighted in the company's speeches, sustainability reports, and media, are being developed only to serve specific communities. Also, the mining company's discourse is considered misaligned with organizational processes.

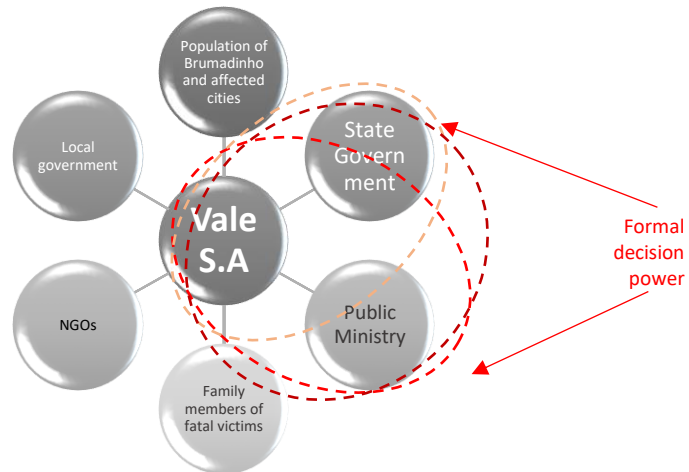
Figure 3 shows stakeholders involved in this issue: the public power (Government of Minas Gerais, the public prosecutor's office, and the public defender's office of the union), Vale S.A., family members of fatal victims, local governments of Brumadinho and affected cities along Paraopeba river, local and national NGOs and the population of Brumadinho and affected cities.

The decision-making axis should include the stakeholders in flexible arrangements and decisions, dialogued with the various groups involved.



*Figure 3. Recommended relationships between Stakeholders in the social-ecological context in the environmental tragedy of Vale S.A. Source: Colvin, Witt, and Lacey (2020). Prepared by the author*

However, as illustrated in Figure 4, the analysis of current relations shows Vale S.A positioned in the center, defining the profiles of stakeholders, sharing (eventually) power with the Government and the Public Prosecutor's Office, which also seem to continue acting as stakeholders of the company, as has been pointed out by the texts analyzed.



*Figure 4. Relationships between Stakeholders in the social-ecological context in the environmental tragedy of Vale S.A. Source: Colvin, Witt, and Lacey (2020). Prepared by the author*

The text of the Integral Reparation Agreement establishes that the mapping of damages - which would previously be done by an academic and independent entity - must now be done by a private company hired by Vale. It is also noteworthy that the parameters for measuring Vale S.A.'s obligations are defined, according to the Agreement, by a company "funded and under the responsibility of Vale", although they must later be validated by the compromisers. In addition, Vale, formally responsible for the tragedy, is also responsible for detailing the projects for the Paraopeba Basin and Brumadinho (Annexes 1.3 and 1.4). According to the text, the company has to present "the analysis of technical and financial feasibility and presentation of detailed scope, schedule, estimated costs, expected results (indicators, goals, and delivery milestones)" (Tribunal de Justiça do Estado de Minas Gerais 2021, 19). That is: the company is responsible for mapping the damages it caused itself, as well as defining indicators, goals, and milestones for actions to repair these damages. It is also worth noting that among Vale's obligations to do are projects for "Living with mining dependence and transition to a new economy". It is questionable why a mining company - rather than the Public Power - was assigned the responsibility of setting objectives and goals and executing projects aimed at overcoming a condition imposed by itself on the population.

Laschefski (2020, 13) states that mining companies infiltrate public authorities, civil society representative institutions, and even the Public Prosecutor's Office to manipulate governance. The victims find themselves forced to negotiate with the mega-entrepreneurs on unequal terms, which aggravates social suffering. So, in addition to not suffering sanctions, the companies end up increasing territorial control in the destroyed areas and still have their profit increased. Laschefski points out the invention of an "itinerant nature", materialized in Vale's discourse, stating that "everything that was destroyed can be rebuilt". It spreads the idea that the

environment and people will become better than before, but the reality is that the actions to recover the environment are reaching territories previously used by the victims, transforming old areas of common use into restricted access areas. This, according to the author, could configure a veiled appropriation of traditional territories.

Zhouri et al. draw attention to the fact that the management of mining disasters has shifted from the investigation of crimes and legal infractions - eventual sanctions recommended by Ostrom (2000,11) - to the administrative treatment of socio-ecological conflicts, to build bridges between litigating parties. The so-called “Transaction and Conduct Adjustment Terms” - agreements signed between the Federal and State Governments and companies, under the justification of speed - end up denying the participation of those affected, as they are not heard in the elaboration of the term. People without access to formal representation, because they do not belong to categories predefined by decision makers (without consultation with the territory), remained unidentified and therefore excluded from access to reparatory measures, having at most been the target of “emergency and welfare actions, without the perspective of autonomous resumption of their lives” (Zhouri et al., 2016, 39). This illustrates also what happened in the elaboration of the Integral Reparation Agreement, which has been the target of many criticisms, by social movements, political representatives, the church, and the affected population itself. We will now address some of them.

Even before the ratification of the Agreement, back in 2020, there were several manifestations among stakeholders in Brumadinho. The three Independent Technical Advisory (ATIs)<sup>vii</sup> that worked in the Paraopeba River basin, with the help of the Methodological and Final Coordination of the Pontifical Catholic University of Minas Gerais, gathered dozens of Organized Commissions of Affected and prepared a Manifesto for participation in the discussion of the Agreement, approved by those present at the 4th Meeting of the Commissions of Affected and Affected by the Paraopeba Basin. In the text (Associação Estadual de Defesa Ambiental e Social 2020), the affected population disagrees with the approval of an agreement built without the properly informed participation of those affected, claiming for a broad and transparent process of participation, including traditional peoples and other communities, with revocation of confidentiality, unrestricted access to information and adequate time for appreciation - that is compliance with what the Agreement itself proposes.

The term “polluter pays” deserves attention as it qualifies Vale S.A. in the Manifesto: the affected population argues that the company’s role in reparation should be restricted only to payment of measures, demanding that its participation and that of companies linked to it be prohibited in the management, implementation, and definition of criteria for reparation measures. In addition, those affected demand that Vale be prohibited from using reparation actions for advertising purposes, self-promotion, or any action to improve institutional image. The document criticizes the haste of those involved in “quickly hitting the hammer,” without even waiting for the completion of calculations of the necessary value for reparation. It also condemns the use of resources by the State Government for “diffuse actions not necessarily in the affected territory.”

According to Bannink and Trommel (2019, 206), the so-called regulatory actors (position occupied by the Government of State and Public Prosecutor’s Office in this situation) should integrate governance approaches, both to ensure that stakeholders contribute their expertise to the joint understanding of the problem and to collaborate in building solutions that go beyond their individual preferences, as well as in the implementation of these solutions. However, what events demonstrate is that the debate has been confined to adjusting interests among participants in meetings held in hermetic decision-making environments. Stakeholders occupy asymmetrical positions, and the unequal distribution of economic, political, and

symbolic capital defines their power of action and enunciation. Guaranteed rights are relaxed by law and vulnerabilities caused by disasters are being aggravated (Zhourri et al., 2016, 36).

23 entities supervise and regulate mining in Brazil. However, the regulatory entities, instead of placing the environmental problem at the center of governance, empower the entrepreneur, positioning him as the protagonist of the process. The result: instead of sharing power and quality of life with their surroundings, mining companies share only losses and risks with the community. As Sehnem et al. (2020, 422) confirm, the lack of rigor in the law and failures in punishment encourage mining companies to violate the legislation. As there has been no efficient assignment of responsibilities, nor limits to expansion or effective punishment, the process of disconnection between companies' actions and sustainable practices has been legitimized. For example, in December 2018, the National Forum of Civil Society in Watershed Management requested the suspension of licensing for the mine in Brumadinho; however, the Environmental Policy Council of Minas Gerais confirmed the recommendation for mine operations, in a document signed by the Brazilian Mining Institute and the Mining Industrial Union, even under criticism and warnings from environmentalists. In just over a month, the dam collapsed, causing hundreds of deaths. This demonstrates the ascendancy of the mining industry in decision-making, contrary to what Colvin et al. (2020) recommend.

AVABRUM - Association of relatives of victims and affected by the rupture of the dam mine Córrego Feijão, organized the Seminar "Cities Affected by Mining", on January 24, 2023 (four years after the tragedy), in Brumadinho<sup>viii</sup>. During the event, Andresa Rocha Rodrigues, vice-president of AVABRUM, who is the mother of one of the 272 fatal victims, claimed that the population has been silenced and that the community is not a protagonist in the reparation process (Legado de Brumadinho 2023). She used a play on the words, "RE-PARA-AÇÃO" (something like RE-STOP-ACTION), to show that the reparation process "stops us on January 25, 2019". For her, the lives of families and other affected people remain stagnant while they fight for dignified reparation.

At the same event, Silas Fialho, representative of the Brumadinho Leadership Committee, also criticized the non-listening of the population in the reparation process: "Speaking for me is easy; it's hard to represent me. Those who represent us don't listen to us; those who speak for me are not sitting next to me". Márcio Rodrigues, president of the Brumadinho Leadership Committee, described the events concerning the Integral Reparation Agreement was signed:

"The Justice institutions, the compromisers, do not even call or have called an affected person or want to know if the decisions made are representative. We are not called to participate. The agreement did not have participation. This is wrong and needs to change. So far there has been no reparation. Works that violate the rights of those affected are taking place, causing inconvenience. Call the leaders, listen to the community" (Legado de Brumadinho 2023)

Citing Foucault, Banerjee (2008a) states that, in liberal political discourse, the problem is not the antisocial effects of the market, but the anticompetitive effects of society. Instead of reformulating processes and practices to respect nature's logic, sustainable development strategies seem to reverse the process, using market logic to determine nature's future. It would be a "new" paradigm based on old capitalist parameters. Zhourri et al. (2016, 39) point out that the work of companies in charge of raising and sizing damages, hired by mega-entrepreneurs, has its objective shifted from fair compensation for damages to cost reduction for the contractor.

This ends up breaking trust in relationships between stakeholders, a premise for managing socio-environmental issues, as advocated by Ostrom (2000).

## FINAL CONSIDERATIONS

Environmental disasters are wicked problems and, by definition, do not admit linear or cartesian solutions. Dealing with this type of problem requires systemic thinking and decision-making design must involve the various affected publics, so the stakeholder approach cannot be centered on the organization, as is customary in the business context. Decision-making power must be diffuse and fluid. The voices of stakeholders must be the basis for defining the problem itself and raw material in developing solutions, which, much more than material losses, need to consider feelings, emotions, and the history of populations and regions. Without this, “solutions” are only palliatives that increase suffering and promote processes of revictimization, as demonstrated by this work.

The post-disaster literature of the Córrego do Feijão mine has shown that the ongoing “solutions” may be generating results for business sustainability, but seem to be putting socio-environmental needs in the background. This clearly reflects the non-adaptation of Stakeholder Theory to the context in which the problem is inserted, or the creation of a kind of Frankenstein in disaster governance: stakeholders’ voices sometimes are apparently heard, but decisions made in offices and courts do not contemplate them. The decision-making stakeholder (public power) legitimizes the company’s position at the center of relations and only shares power with it – power that should be diffuse among the set of stakeholders.

Government actors seem to give up their strength (the “iron hand of the law”) in their role of applying sanctions to those responsible for environmental disasters, probably in the eagerness to find final solutions for symptoms of issues that, by definition, have deep roots and cannot be solved in days, months or even a few years. The Integral Reparation Agreement, built without the participation of Brumadinho’s population in the negotiations clearly demonstrates this. Trust, so necessary for the development and maintenance of agreements that must sustain socio-ecological systems, is no longer part of the process, as groups of stakeholders are left on the sidelines of decisions. The “intangible hand” of civil society claims it is being silenced, as the (not always) “invisible hand” of the market continues to operate.

It is urgent to critically examine the dynamics of relationships between companies and the community, governments, and other stakeholders, incorporating changes to organizational theory to respond to new questions, rather than repackaging old answers. The focus should be on the sustainability of the affected socio-ecological system, and decisions should be made collaboratively. This is a challenging process that demands listening and conciliation of often divergent interests and incorporating morality into mutuality relations and does not always guarantee optimal solutions. Even imperfect, these solutions point to the evolution in the relationships between the socio-system and ecosystem, generating outcomes in the pursuit of sustainability and making connecting economics and social progress possible.

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<sup>i</sup> Source: Boletim do Setor Mineral, published by Ministry of Mines and Energy: [boletim-do-setor-mineral-2013-1-sem2022.pdf \(www.gov.br\)](https://www.gov.br/mineral/2013-1-sem2022.pdf)

<sup>ii</sup> Source: <https://www.cnnbrasil.com.br/economia/vale-tem-lucro-liquido-de-us-1673-bilhoes-em-2022-queda-de-324-na-comparacao-com-ano-anterior/>

<sup>vi</sup> Ostrom (2009, 419) defines socio-ecological systems (SES) as arrangements composed of subsystems (resource systems, resource units, governance systems, and users) and internal variables, analogous to living organisms, composed of organs, tissues, and cells, interacting to produce results that in turn affect the system itself and other socio-ecological systems related to it.

<sup>vii</sup> The ATI's functions are "to carry out studies and participatory processes in which those affected have access to information about the reparation process and can discuss their damages". It is also up to ATI "to inform, raise and discuss in participatory spaces the proposals of those affected about the best way to repair the losses suffered", so the Public Prosecutor's Office and the Public Defender's Office receive information for the defense of the rights of those affected in judicial proceedings (Associação Estadual de Defesa Ambiental e Social, 2020)

<sup>viii</sup> Speeches made by the affected population collected by the author during the Seminar of Cities Affected by Mining, held on January 24, 2023, in Brumadinho, by the initiative of AVABRUM - Association of relatives of victims and affected by the rupture of the dam mine Córrego Feijão. The event was attended by the affected population, local, state, and national authorities, and experts in various areas of knowledge. More information at: <https://legadobrumadinho.com.br/blog/seminario-4-anos-da-tragedia-crime-e-os-impactos-em-brumadinho-e-municipios-mineradores/>