




ENVIRONMENTALLY RESPONSIBLE MINING: BENEFITS AND LIMITATIONS OF COMPLIANCE

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ABSTRACT

This essay seeks to answer the following question: is Environmental Corporate Compliance an effective tool, in the Brazilian mining industry, for the prevention of environmental damages? After the recent disasters in Mariana and Brumadinho, the evident need is to find preventive and sustainable methods that can ensure efficient compliance. Environmental Compliance is an international trend, being required and preferred by the financial institutions and stakeholders and aligning with the new needs of the mining sector, which strives for high profits and improving its reputation, previously affected by the negative impacts on the environment. Using the hypothetical-deductive method, this paper aims to confirm the initial hypothesis—which is that companies benefit from environmental corporate compliance.

KEYWORDS: Environmental Corporate Compliance; Environmental Damage; Mining.

1. INTRODUCTION

The dam breaks of mining tailings in Mariana in 2015 and Brumadinho in 2019 prompted studies seeking to understand mechanisms capable of preventing or at least mitigating such disasters. As a result of these accidents, negative public opinion about the mining sector escalated (OECD, 2022, p. 10; Lopes; Demajorovic, 2020, p. 3). In this scenario, compliance programs seem to offer a response to many of the mining sector's concerns. However, there is still little discussion about their true capacity for anticipating and preventing environmental damage.

Compliance can be defined as “a set of rules, standards, ethical, and legal procedures that, once defined and implemented, will be the guiding line for an institution's behavior in the market it operates in, as well as the attitude of its employees” (Candeloro., Rizzo., Pinho, 2012, p. 30). This work uses the terms “compliance” and “compliance programs” synonymously.

The main objective is to analyze how the implementation of environmental compliance can help in the effective compliance with regulatory norms and whether it constitutes a viable alternative for achieving the so-called “responsible mining.” It also seeks to understand the benefits and limitations of its application, aiming to contribute to critical debates on the subject.

The research aims, among specific objectives, to understand the applicability of this instrument, its role, and limitations for preventing environmental damage in private organizations through a hypothetical-deductive approach. It uses bibliographic research, analyzing sector reports and scientific articles.

Initially, it will be necessary to address the context of mining in Brazil and why compliance has become a relevant topic for the sector. Then, the definition of compliance and its use in companies will be discussed in the face of the

sustainability challenge. Finally, it will explore how compliance programs can be allies of companies in environmental and business management.

Thus, it is understood that compliance contributes to the advancement of public policies for environmental preservation. However, it is worth noting that, given the complexity of the subject of this article, it is not intended to exhaust it but rather to present new perspectives on the intersection between mining, compliance, and the environment.

2. THE CURRENT MINING SECTOR IN BRAZIL

Mining, globally, drives economic growth and also accounts for a considerable portion of Brazilian social development, contributing to about 2.5% of the Gross Domestic Product (MME, 2021). However, being an activity that exploits non-renewable resources, it exerts significant interference in the territories it operates in, potentially leading to environmental disasters.

Consequently, it results in a set of negative effects, such as environmental changes, area degradation, conflicts in land use, and disruptions for local communities affected by the proximity of mining operations. Since mining is a location-specific activity, as operations must be installed where the mineral deposits are (Bustamante et al., 2013, p. 23), it's important to highlight that, in general, the populations residing nearby consist of traditional groups, quilombolas, agrarian reform settlers, riverbank dwellers, and collectors (Barros, 2017).

As a result, the sector depends on environmental licensing, as any project capable of causing environmental degradation in any form will require prior approval from the competent environmental agency, along with other legally required licenses (Art. 2 of CONAMA 237/97). Thus, mining companies need to prepare prior environmental impact studies, as well as plans for the recovery of degraded areas and impact reports, to ensure the environmental preservation of affected regions and the rights of nearby communities.

According to the Monthly Report of March 2022 on Mining Dams by the National Mining Agency (ANM, 2022), there were 907 registered mining dams in Brazil, of which 485 fall under the National Policy for Dam Safety. Among these, 87 were classified as high risk due to changes in risk classification resulting from ANM Resolution No. 95/22, with 54 in a declared emergency situation. However, only 351 inspections were carried out in 278 dams in 2021.

Despite the great profit potential for both companies and society, there is considerable risk involved in mining activities, be it financial, legal, environmental, or social. There are several reasons for companies to adopt environmental compliance, with the most relevant ones being the maintenance of profitability and the reputation of the companies (Gunningham et al., 2004, p. 308).

The Brazilian Federal Constitution (1988) guarantees the right to an ecologically balanced environment, with its preservation being a duty of both the collective and the State¹. Initially, the State was the guarantor of environmental preservation through legislative production and monitoring of law compliance.

However, deficient regulation and the absence/insufficiency of significant economic consequences for offending companies resulted in negative impacts on the environment and society. The crisis of the Brazilian regulatory model strengthened corporate self-regulation in the realm of environmental protection and, logically, the implementation of compliance programs (Saraiva, 2018).

¹ In Article 225 of the Brazilian Federal Constitution, it is stated: "Everyone has the right to an ecologically balanced environment, which is a common heritage of the people and essential for a healthy quality of life, and it is the duty of both the Public Authorities and the community to defend and preserve it for present and future generations."

This does not mean, however, the substitution of the State, but rather the collaboration of private entities to strengthen its action, especially regarding supervision. Thus, the Brazilian mining sector is currently going through a historic moment of restructuring, seeking greater proximity to local communities, municipalities, and regulatory bodies, prioritizing transparency in its operations, a direct consequence of the recent environmental accidents in Mariana (2015), Belo Monte, and Brumadinho (2019).

The causes of these disasters are varied, depending on the specific analysis, but in general, lack of transparency, inefficiency (or even absence) of compliance systems, and failures in regulatory oversight are determining factors for their occurrence. In pursuit of sustainable parameters, many companies operate considering the pillars of economic efficiency, environmental preservation, and social responsibility. However, while essential, these three pillars only function together with the transformation of the internal culture of the companies.

Therefore, the private sector now has a greater role in control and monitoring, with a prominent role in achieving national sustainable development objectives. Furthermore, in analyzing environmental regulation, it is essential to highlight the relationship between corporations and the State. As mining companies are responsible for a considerable portion of the country's GDP, it is not surprising that politics is heavily influenced by these companies (Fuchs, 2013).

As a result, changes in corporate internal policies, mining activities, and guiding principles have the potential to lead to the creation of new public policies in the sector, which requires modernization. In the last decade, the discussion about the need for a new mining code has been present, and in 2021, the Report of the Working Group of the Chamber of Deputies was presented, aiming to propose changes to the Mining Code (Law 227/67).

Therefore, addressing new perspectives on compliance mechanisms in the mining sector is relevant beyond academic and corporate discussions, as it influences policymakers and also has an educational and awareness-raising role. Nonetheless, establishing sustainable principles, considering the economic and social importance of mining, means ensuring sustainable development and respecting the rights of local populations.

3. ENVIRONMENTAL COMPLIANCE IN MINING

The term "compliance" derives from the English verb "to comply," which can be translated as "in conformity." The Administrative Council for Economic Defense (CADE) defines it as "a set of internal measures that allows preventing or minimizing the risks of violating laws arising from the activities practiced by an economic agent and any of its partners or collaborators" (CADE, 2016, p. 9).

An organization must ensure through its governance agents (partners, directors, administrators, auditors, etc.) that its policies, controls, and internal procedures are in compliance with the required norms, standards, principles, and values. Thus, all activities should be developed in a way that does not expose companies to operational, financial, regulatory, strategic, social, and environmental risks (IBCG, 2015, p. 91 and 92).

Some of the relevant functions of environmental compliance, according to the Advisory Document of the Brazilian Association of International Banks and the Brazilian Federation of Banks (2004), are: a) ensuring adherence to and compliance with laws; b) ensuring the implementation and updating of regulations and norms; c) ensuring the existence of internal procedures and controls; d) fostering a culture of internal controls and periodic testing through risk management; and e) ensuring a good relationship with regulatory and oversight bodies, striving to meet all requirements.

In Brazil, compliance became more popular with the Anti-Corruption Law (Law 12.846/2013), which, however, opted for the term 'integrity programs,' stating in Article 7, VIII, that the "existence of internal mechanisms and procedures for integrity, auditing, and encouragement to report irregularities, and the effective application of ethics and conduct

codes within the legal entity” mitigates sanctions for acts against Public Administration. Although compliance became popular after the law’s enactment, there are differences between integrity and compliance programs. This is because the former goes beyond compliance, also focusing on the company’s values, which should guide its actions.

Recent police operations in Brazil related to economic crimes are also a significant factor in the dissemination of the “new organizational culture” in companies, oriented towards business integrity and legal compliance (Saad-Diniz & Urban, 2021). Thus, corporate social responsibility presents a new parameter, where business activities can go beyond wealth generation.

Aware of this trend, in 2021, the Brazilian Mining Institute announced the adoption of international sustainability standards, emphasizing the appreciation of a safe and responsible business model. This paradigm shift is evident, being present in the most important mining studies, such as the Tracking Trends (Deloitte, 2021), which highlights the relevance of Compliance, ESG (environmental, social, and governance) indexes, and Corporate Governance for the sector.

It is notable that stakeholders’ perception—investors, consumers, local communities, employees, financial institutions, etc.—also constitutes an essential asset for companies (Heleno, 2008). The high competitiveness of the international market, together with the transparency required by the information world, favor “green” companies, ensuring, to some extent, their longevity (Araújo, Gonçalves-Dias, Pagotto, 2019; Hainmueller, Hiscox, 2015; IBCG, 2015, p. 20).

One way to influence the social evaluation of companies is through the implementation of compliance, along with ESG indicators, especially in the mining sector, where distancing from the negative image associated with environmental impacts can be a significant competitive advantage. Although economic concerns have traditionally been a priority, it is now understood that harmful practices, even if not illegal at present, may become prohibited or reprehensible in the future, leading to public discontent and governmental action against companies (Gunningham et al., 2004, p. 308).

In this regard, Keith Davis (1973) argues that companies that do not finance social responsibility actions risk losing market space in the long run, being replaced by other “green” companies. Carroll and Shabana (2010) demonstrate that, in addition, these actions strengthen good relationships with customers, investors, activists, and even governments, increasing the perceived value of the company.

The 2021 Report from Ernst & Young (EY) Brazil in conjunction with the Brazilian Mining Institute (IBRAM) demonstrates companies’ awareness of the reputational crisis in the mining sector and what needs to be changed to reverse it. The study was based on interviews with sector executives and indicates the need for renewing business practices for trust reconstruction.

Thus, the implementation of compliance is a commonly used strategy to maintain a positive image associated with reliable and responsible operations (Araújo, Gonçalves-Dias, Pagotto, 2019). However, this new standard is not only demanded by consumers and investors but also by the financial market.

However, these incentives can lead the company to adopt merely formal programs, aiming more to appear “green” than actually being “green” (Meyer & Rown, 1977).

Moreover, it should be noted that there is the possibility of holding legal entities liable for environmental damage, which should be considered by mining companies when implementing compliance programs, due to the potential harm of their operations. Added to the risk assertion is the fact that environmental damage liability is objective, as

established by the Brazilian Supreme Court in Subject 681², meaning that the proof of the agent causing the damage's fault is not required. Consequently, companies are obligated to compensate for damages, even if unintentional, ensuring the victims' indemnification (Belchior, Braga., Themudo, 2017, p. 114).

Furthermore, environmental liability is joint and several, as established by the Brazilian Supreme Court in REsp 650728, which equates "those who do, those who do not do when they should, those who fail to do, those who do not care that others do, those who finance for others to do, and those who benefit when others do" (STJ, 2009). Although financial institutions can be held liable for the ventures and activities they finance, few actions have been brought by the Public Prosecutor's Office, leading to controversy.

In this regard, there is Resolution 4.327 of 2014 of the Central Bank of Brazil (BACEN), which establishes guidelines for Socio-environmental Responsibility Policies to be followed by the financial system and other institutions authorized by BACEN. Article 1 of the Resolution highlights the implementation of environmental compliance programs, proportional to the socio-environmental risk exposure of their activities.

Consequently, legal entities must have a compliance program capable of establishing, monitoring, and adequately assessing established actions. Concerning BACEN's motivation, the concern with possible joint liability is clear, making it a way to minimize financial institutions' risks and a requirement for obtaining credit.

Additionally, there is also financial risk related to environmental fines and compensations, with numerous examples of companies that have been fined millions and condemned in civil lawsuits. Finally, it is also worth highlighting the role of compliance in corporate environmental education, disseminating an ecological culture that has the potential to positively influence all employees.

4. APPLICATIONS AND LIMITATIONS

Environmental compliance, as advocated by the Brazilian Institute of Corporate Governance (IBCG), becomes a prerequisite for organizations aiming for the sustainability of their businesses. However, merely implementing formal compliance systems is not sufficient, as their effectiveness is limited or even nonexistent (Brito., Dias., Zaro, 2020; Lopes., Demajorovic, 2020). To be effective, a transformation of the company's organizational culture and practices is imperative, encouraging environmentally conscious behavior.

According to Sibille and Serpa (2019), the "pillars" of compliance are: (i) appointment of professionals to positions in the compliance area; (ii) risk assessment; (iii) code of conduct and compliance policies; (iv) internal controls; (v) employee training and communication; (vi) whistleblower channels; (vii) internal investigations; (viii) due diligence; (ix) audit and monitoring. However, for compliance to be effective, the commitment of the company's management and the establishment of a responsible department for the program, as well as defining measures in case of rule violations, are also necessary (Silva, 2020, p.65–66).

Regarding risk analysis (ii), it should be conducted through interviews with employees from different areas of the company, document evaluation, and data analysis. Internal controls (iv) ensure compliance with applicable laws and regulations and the integrity of accounting books and records, establishing rules for approval and supervision of business activities (Sibille; Serpa, 2019).

² In this thesis established by the Brazilian Supreme Court, it is stated that "Environmental damage liability is objective, informed by the theory of integral risk, with causation being the binding factor that allows risk to be integrated into the unity of the act. Therefore, it is not appropriate for the company responsible for environmental damage to invoke civil liability exclusions to avoid its obligation to indemnify."

Nevertheless, internal controls (iv) encompass a series of actions, methods, or routines inherent in business management, which, according to Attie (2009, p. 150), comprise all the planned means in a company to direct, restrict, govern, and verify its various activities with the purpose of fulfilling its objectives. Its scope encompasses both accounting and administrative aspects.

The importance of the whistleblower channel (vi) should be highlighted, as it provides a means to report any violations of the Code of Conduct (iii), relevant legislation, and/or internal company policies. To ensure the effectiveness of such reports, internal investigations (vii) are conducted to investigate inappropriate behavior, illegalities, or offenses against corporate policies, also defining sanctions and corrective actions (Sibelle; Serpa, 2019).

Lastly, due diligence (viii) is based on risk, and it is commonly used by companies when dealing with dealers, partners, or representatives, to understand the third party's corporate and economic structure. The objective is to verify whether such negotiation could expose the company to legal risks or unethical practices (Sibelle; Serpa, 2019).

The Organization for Economic Cooperation and Development (OECD, 2022) recommends several practices to be implemented, including: (i) frequent public consultations with stakeholders to identify necessary improvements and updates; (ii) activity assessment and risk management; (iii) compliance programs to prevent potential legal or administrative breaches; (iv) implementation of transparent communication strategies for civil society and regulatory bodies.

In the mining sector, the dissemination of information through sustainability reports has been highly valued, aiming to communicate with stakeholders and consequently improve the company's image (Souza; Souto, 2022). However, this trend is also observed in other sectors benefiting from association with environmentally responsible practices (Landén., Malmberg, 2016).

Companies must go beyond formal obligations (Santiago; Demajorovic, 2016), valuing dialogue, transparency, and trust. Regarding disclosure policies, it is understood that companies that publish socio-environmental corporate reports reap benefits by highlighting their commitment to sustainable practices, legitimizing them to their stakeholders (Brito; Dias; Zaro, 2020). It is recommended that the compliance department, internal audit, and their professionals enjoy independence, autonomy, and legitimacy to avoid interference, conflicts of interest, or omissions regarding potential risks (IBCG, 2017, p. 25–27).

However, it is noted that sustainability reports do not adequately reflect companies' practices. There are deficiencies and omissions in the content disclosed, and the reports are often used only to strengthen the institutional discourse, not serving as tools for actual compliance verification (Brito, Dias, Zaro, 2020; Ribeiro, 2012; Oliveira, 2005).

Tools for compliance to function well include clear and informative communication, such as regular reporting, monitoring regulatory/legal risks, aligning internal policies with norms, and providing adequate training for compliance with internal rules. Corporate policies should be continually reviewed and disseminated (Manzi, 2008).

Therefore, companies aiming for compliance must allocate investments to structure internal mechanisms, provide employee training, implement whistleblower channels, collaborate with regulatory authorities, and focus on preventing damages and misconduct, rather than solely mitigating them. Unfortunately, the level of compliance maturity in Brazil is weak, as assessed by KPMG (2019) in the Compliance Maturity Survey in Brazil.

According to the survey, only 55% of participating companies had a monitored regulatory inventory, with 18% stating they did not have dedicated structures, 16% lacking autonomy and independence, and 32% not having adequate resources. Interestingly, 81% of the participants reported implementing compliance more than a year before 2019 (KPMG, 2019, p. 9).

Nevertheless, despite the high cost of compliance, non-compliance can result in significant expenses, including damage to the company's reputation, loss of brand value, revocation of operation licenses, regulatory sanctions (KPMG, 2019), and even criminal charges, among others (Coimbra, Manzi, 2010). Therefore, risk management is essential.

To function effectively, risk analysis and management should be conducted by systematizing data on an activity to identify unwanted effects and potential environmentally damaging gaps (KPMG, 2019). The objective is to establish which risks are involved and their causal relationships with the activity (Peixoto, Codonho, 2021).

Furthermore, it is advised to map and evaluate the consequences through quantification and monetization, making them tangible for managers. Taking proactive action upon identifying the possibility of environmental damage is of utmost importance, especially considering that restoration to the status quo may be impossible, as in the case of dam breaches.

Regarding economic development, it is impossible to dissociate it from sustainability. In this sense, the United Nations, in the document "Our Common Future" (1987), defined sustainable development as not compromising the ability of future generations to meet their needs while satisfying present needs.

The sustainable posture of companies depends on the implementation of an internal culture and compliance with norms, with a focus on the environment, in all stages of the production process. For this, everyone in the company, especially directors, must demonstrate commitment to internal policies and codes of conduct (Rao., Tilt, 2016, p. 327).

As compliance involves creating policies related to criminal, regulatory, ethical, and social conformity, it effectively results in self-monitoring (Oliva., Silva, 2018, p. 2710). It is important to note that there is no single compliance model, allowing companies to adopt programs suitable for their needs and regulatory requirements of their industry (Oliva., Silva, 2018).

Therefore, compliance implements actions advantageous to the company, such as preventing fines, penalties, administrative, civil, and criminal proceedings, and reducing costs and legal expenses, promoting the company's positive image to stakeholders. This occurs because irregularities are anticipated and avoided, rather than remediated.

5. LESSONS FROM MARIANA AND BRUMADINHO

After analyzing the benefits and applications of compliance for companies, it is necessary to explore the consequences of non-compliance with environmental laws in the environmental, social, and economic dimensions. To enable such examination, the disasters of Mariana and Brumadinho will be used as examples, considering their significance in the national mining context and discussions about compliance.

In 2015, the Fundão dam, managed by Samarco Mineração S.A, a company controlled by VALE and BHP Billiton, collapsed, hitting the Municipality of Mariana and resulting in 19 deaths. The consequences for the ecosystem and the region have never been fully repaired due to their magnitude and complexity. The disaster led to the discharge of 62 million cubic meters of mining waste, affecting organisms in the area and the tributaries of the Carmo and Doce Rivers, suffering from siltation and burial.

Only four years later, in 2019, the tragedy repeated itself in Brumadinho, despite prior knowledge of irregularities in operations. On that occasion, the tailings dam of the Córrego do Feijão mine collapsed, causing an environmental disaster with irreparable damage and hundreds of deaths. The wave of waste that hit the city also caused soil and water contamination, the death of organisms in the region, and the destruction of local fauna and flora.

Investigations after Brumadinho pointed out that the company's management knew about the risk of collapse, as evidence indicating this possibility had already been collected. However, despite this information, no significant measures were taken for prevention, mitigation, or even communication of the risk to relevant authorities and the local population. In this regard, the Public Prosecutor's Office argued that the Brumadinho disaster could not be classified as an accident due to the ignored signs of rupture.

It is worth noting that Samarco had a compliance program at the time of the collapses; however, the company was not diligent in transparency and accountability. According to the Federal Public Prosecutor's Office on page 279 of Civil Action No. 60017-58.2015.4.01.3800/MG and 69758.61-2015.4.01.3400/MG, the Mariana (2015) tragedy:

"Revealed that the company's norms and policies regarding environmental respect fell far short of what was required [...] This deficit of norms and adequacy, showing, at the very least, the insufficiency of internal compliance policies, must be addressed by imposing an external audit that assesses the corporate governance of each of the companies, their culture and environmental risk management norms, associated with the practices adopted, determining corrective behavior and values that fit the needs of sustainable development and prevent the repetition of events like the Fundão tragedy in Mariana."

In the case of Mariana, environmental and social risks had already been identified during the site selection phase of the Fundão dam, through an environmental impact assessment. Lopes and Demajorovic (2020) point out that, when analyzing documents from the investigation of the Rio Doce Task Force 263 (MPF/PGE of Minas Gerais and Espírito Santo), the board of directors was already aware of the dam risks.

Regarding the social impacts of mining projects, Maria Gerotto (2020) concluded that the negative impacts far outweighed the perceived positive ones. Thus, although job creation and company investments in technical training are undoubtedly beneficial and valued by local communities, the negative impacts are more relevant. In terms of regulatory economics, the negative externalities of potential operations in the region would be disproportionate to any socio-economic benefits that society could obtain.

This is because local communities live in a vulnerable situation and depend on mining activities, suffering from environmental changes in water quality and quantity, air quality, and the constant risk of dam breaches. In terms of culture, expansions of projects lead to migration in search of work and infrastructure, resulting in the loss of agricultural culture due to discouragement (Gerotto, 2020).

In response to the repercussions of Mariana (2015), VALE signed the Conduct Adjustment Term (TAC, 2016) with the Public Prosecutor's Office. The document requires the development and implementation of compliance policies and manuals, as well as the creation of an internal governance structure. Furthermore, in 2018, a new commitment was made, incorporating more significant popular participation through regional and local chambers, aiming to establish a communication channel between associations, civil society, and the company.

Additionally, after the Mariana accident, Ordinance No. 70.389/2017 was published, modifying the National Register of Mining Dams, reviewing criteria for dam classification, emergency action plan requirements for mining companies, and establishing mandatory periodic inspections. Furthermore, Law No. 14.066/2020 sets stricter safety and inspection rules, imposing high fines on mining companies for non-compliance.

Observing these two cases, a departure from the expected responsible and ethical corporate behavior of companies of this magnitude, engaged in activities with high potential for harm, is evident. It also highlights an attempt to make the identity and interests of vulnerable communities, dependent on mining, invisible.

In this regard, Juliane Vilela's study (2020) demonstrates how Samarco's institutional discourse sought only to construct an image of a socially responsible company. It is worth noting that even after the Mariana disaster, VALE continued to use the term "accident" to describe it, as stated in its 2016 report (VALE, 2016, p. 10).

However, by associating social responsibility and sustainability, the company managed to obtain benefits without the costs of a genuine commitment to the issue (Fontoura et al., 2019). Therefore, a critical approach to the motivations for implementing environmental compliance is necessary.

A viable alternative is to include affected populations in the decision-making process, participating in regular consultations, and having access to information about operations and whistleblower channels, as they are also stakeholders (Scherer & Palazzo, 2011). In this context, the Movement of People Affected by Dams (MAB) has been pushing for the approval of the National Policy for the Rights of Affected Populations, which grants rights to people affected by the impacts of dam operations.

The referred policy also seeks to establish rules for the social responsibility of entrepreneurs. There are, in this regard, theories of "democratization of stakeholders," in which voting rights in companies would be limited to employees, shareholders, business partners such as suppliers, and members of the local community (Moriarty, 2014; Calton & Kurland, 1996).

Nevertheless, sustainability reports published by companies should undergo internal and external audits, as well as risk analysis, accounting records, and similar evaluations. This way, the principles of transparency and accountability will be respected.

6. FINAL REMARKS

Considering the limitations of compliance, it is evident that despite its advantages, as stated by William Laufer (p. 113, 2017):

"This is a game that [...] gives all players moral and legal cover, placates constituencies with the appearance of legitimacy, and offers beautifully crafted images of leadership and governance with integrity."

Compliance is beneficial for companies, as explored in the previous sections, but it cannot be implemented solely considering the profitability of mining companies. The mining sector has been striving to become sustainable; however, as an exploratory activity with serious consequences, achieving this goal requires critical discussions and approaches.

The environmental damages resulting from mining are difficult to repair, and sometimes it is impossible to return to the previous state. Hence, the importance of state regulation and self-regulation by companies, which must also be responsible for legal compliance and the pursuit of a sustainable business model.

Corporate discourse often overlooks the limitations of these mechanisms, highlighting only the positive aspects of compliance programs, as if they alone guaranteed the prevention of environmental disasters (Brito; Dias; Zaro, 2020). Compliance and corporate social responsibility enable legal compliance when appropriate mechanisms and structures with sufficient funding are implemented together.

However, the limits of compliance must be challenged to build democratic and truly sustainable strategies and instruments. For this purpose, it is necessary to understand the conflicts between mining-affected communities and corporations, rather than denying them, and to involve populations and their interests in deliberative processes.

Not only economic dimensions should be considered; the use of ESG indicators is crucial for the implementation of this new organizational culture. In this regard, the social dimension must be understood by recognizing the interests and vulnerabilities of communities, legitimizing their demands and identities.

In conclusion, the democratization of governance structures and the transparency, publicity, and autonomy of compliance programs are essential for the renewal of the mining sector. For future studies, it is recommended to investigate the effectiveness of corporate self-regulation and the possibility of evaluating and monitoring their initiatives. For continued critical research, there is a lack of studies on the impacts of Decree No. 10.411 of June 30, 2020, which regulated regulatory impact analysis.

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