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# Regulatory Gaps and Government Oversight of Bauxite Mining Exploitation in Indonesia

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**Abstract:** Bauxite mining exploitation in Indonesia demonstrates a serious gap between government regulation and oversight. Although a legal framework is in place through Law Number 3 of 2020 concerning Mineral and Coal Mining and its derivative regulations, its implementation remains weak due to disharmony between agencies and overlapping authority between the central and regional governments. This study aims to analyze the regulatory and oversight gaps in bauxite mining management and their implications for legal certainty and environmental sustainability. The research method used is a normative juridical approach, examining laws and regulations, legal literature, and empirical data related to mining oversight practices in several bauxite-producing regions. The results indicate that weak inter-agency coordination, a shortage of mining inspectors, and minimal transparency of production and export data are the main causes of weak oversight. Furthermore, the lack of integration between technical and environmental policies creates a gray area that business actors exploit to avoid legal obligations. This gap has resulted in increased environmental damage, legal uncertainty, and a decline in public trust in the government. Regulatory reform measures are needed through inter-agency harmonization, strengthening digital-based oversight capacity, and involving the public in evaluating mining activities to create a transparent, equitable, and sustainable mining governance system.

**Keyword:** Regulatory Gap, Mining Oversight, Bauxite, Legal Certainty.

## INTRODUCTION

Bauxite mining in Indonesia has grown rapidly in line with the increasing global demand for alumina raw materials (Liun & Nurlaila, 2021). Regions such as West Kalimantan, the Riau Islands, and Bintan have become major centers of bauxite mining activity due to their abundant and high-quality mineral reserves (Sahputra et al., 2023). Mining activities in these regions involve not only national companies but also foreign investors, exploiting the natural resource potential on a large scale (Irham et al., 2024). The bauxite mining industry contributes significantly to state and regional revenues but is often not accompanied by effective environmental governance and oversight (Baskoro, 2025). This

situation has made bauxite mining management a serious debate in the legal and public policy spheres of Indonesia.

Bauxite mining activities have had various negative impacts on the ecosystem and the lives of surrounding communities. Massive exploitation has led to deforestation, soil erosion, water pollution, and the destruction of natural habitats, particularly in areas previously home to dense tropical forests (Prasetyo et al., 2025). Socially, many indigenous and local communities have lost agricultural land and livelihoods due to the conversion of areas to mining. Economic inequality has also deepened, as large corporations benefit more from mining operations than local communities (Ramadhani et al., 2023). This situation demonstrates that bauxite mining activities have not fully adhered to the principles of sustainability, a key pillar of national natural resource management.

The role of government regulation and oversight is key to maintaining a balance between economic interests and environmental sustainability. Regulation is needed to establish legally binding standards for businesses to prevent overexploitation of natural resources (Ines et al., 2025). Government oversight serves to ensure that mining activities comply with applicable regulations, including licensing, reclamation, and protection of affected communities (Ranjani & Setiawan, 2024). Strong legal mechanisms are also needed to impose strict sanctions on violators to create a deterrent effect. Strengthening regulations and oversight systems is urgent given the high risk of environmental pollution and misuse of mining permits in various bauxite-producing regions.

The gap between applicable legal norms and their implementation in the field often gives rise to serious problems in mining governance. Many legal provisions are ideal on paper, but their implementation is weak due to a lack of inter-agency coordination, limited human resources, and weak commitment to oversight. This situation leads to various violations such as illegal mining, administrative disorder, and unmanaged environmental damage. The gap between regulations and the reality of implementation is a major challenge that requires further examination to strengthen the legal system for bauxite mining, making it more equitable and sustainable.

Bauxite is the primary mineral that produces aluminum, which is essential for global industries ranging from transportation and construction to high-tech (Santoso, 2024). The characteristics of bauxite, which contains aluminum hydroxide, make it a strategic commodity for many countries, including Indonesia, which possesses substantial reserves. In Indonesia, bauxite deposits are generally found in tropical regions with geological structures that support rock weathering (Haryadi, 2016). The existence of these reserves offers significant economic potential but also presents complex management challenges due to the nature of mining exploitation, which tends to damage the soil surface and vegetation.

The distribution of bauxite reserves in Indonesia is concentrated in several key provinces, such as West Kalimantan, the Riau Islands, Bangka Belitung, and Central Kalimantan. Bauxite production from these regions is a significant source of foreign exchange, especially when exports were permitted before the downstreaming policy was implemented (Khoerunisa et al., 2025). However, careless management can create an imbalance between economic benefits and environmental costs. In many mining areas, increased regional income does not always translate directly into the well-being of local communities, who often bear the negative impacts of exploitation.

The ecological impact of bauxite mining is highly significant because the mining process is performed using an open-pit system that removes topsoil and natural vegetation. This activity causes severe environmental degradation, such as the loss of forest cover, decreased water quality, and river sedimentation (Putranta & Mulyawan, 2025). Furthermore, mining activities also impact biodiversity, as many species lose their natural habitats (Parwito & Fransisko, 2024). From a social perspective, communities near mines often face health

problems due to air and water pollution, as well as social conflicts stemming from land disputes and unclear compensation. The imbalance between economic interests and environmental sustainability highlights the need for stricter regulations and a more transparent oversight system (Sari & Hidayati, 2024).

Regulation is a set of legal rules designed to govern the behavior of individuals and legal entities in a specific sector (Silalahi, 2020). In the mining sector, regulations serve as legal guidelines for the government and businesses to ensure that natural resource exploitation remains within the bounds of sustainability. Regulations define the limits of authority, responsibility, and procedures that must be followed to ensure that mining activities do not cause losses to the state and the community. These regulations cover aspects of licensing, reclamation obligations, environmental impact mitigation, and post-mining management.

The government's oversight function plays a vital role in ensuring the effective implementation of established regulations. Oversight encompasses monitoring, inspection, evaluation, and law enforcement activities for mining business actors (Jannah et al., 2025). The government, through relevant ministries, must have a robust control system, from the exploration planning stage to production and post-mining activities. Without adequate oversight, business actors have the potential to violate permits, neglect reclamation obligations, and even cause massive environmental damage. Effective oversight also plays a role in maintaining accountability and transparency so that profits from mining activities truly benefit the state and the community.

The relationship between regulation, oversight, and legal compliance is interconnected and mutually reinforcing. Regulations provide the normative basis, oversight ensures implementation, and legal compliance reflects the success of the previous two elements. When any one aspect is not functioning optimally, mining governance faces the risk of irregularities. Business compliance is highly dependent on clear legal norms, firm regulatory authorities, and consistent law enforcement. The combination of these three forms the primary foundation for creating a bauxite mining system with integrity and sustainability.

The principle of sustainable development serves as a philosophical foundation that guides all mining activities to maintain a balance between economic, social, and ecological interests. Every natural resource exploitation activity must be designed to meet the needs of the present generation without compromising the rights of future generations (Darnia, Putri, Salsabilla, Setiawan, & Dirgantara, 2023). In the context of bauxite mining, this principle requires mining companies to conduct exploration with careful planning, take into account environmental carrying capacity, and implement reclamation after mining is complete. Implementing this principle demonstrates a commitment to intergenerational equity and the sustainability of national natural resources.

The precautionary principle dictates that if an activity has the potential to cause serious or irreversible environmental damage, preventative measures must be taken even if scientific evidence is not yet fully available (Suhariyanto et al., 2025). Applying this principle to bauxite mining means that companies and the government must prioritize risk analysis before issuing operating permits. A preventive approach is far more effective than addressing damage after it has occurred, as the costs of environmental restoration often far outweigh the costs of prevention. This principle reinforces the moral and legal obligation for the state to protect ecosystems from damage caused by mining activities.

The principles of strict liability and the polluter pay principle emphasize that any party causing environmental pollution or damage is liable without needing to prove fault. The application of these principles provides a strong basis for environmental law enforcement because it ensures that business actors cannot evade their obligations (Ardiansyah et al., 2024). The polluter pays principle requires that environmental restoration costs be borne

entirely by the parties causing the damage, not by the community or the state (Purwendah & Erowati, 2021). In the bauxite mining industry, implementing this principle is crucial to encourage companies to adopt environmentally friendly technologies and carry out reclamation diligently.

Good governance theory explains that sound natural resource management must be based on transparency, accountability, public participation, and the rule of law. Applying this theory to bauxite mining management means the government must ensure that every licensing, monitoring, and law enforcement process is conducted openly and responsibly. The principle of good governance also requires community involvement in decision-making related to the environment around mining areas (Rahimallah et al., 2021). Transparency and public participation will strengthen the legitimacy of government policies while reducing the potential for corruption and abuse of authority.

Law enforcement theory provides the foundation that laws are not merely written norms but must also be enforced through effective monitoring and sanction mechanisms. Strong law enforcement will create a deterrent effect for violators and provide legal certainty for all parties involved (Kadarmanta et al., 2025). In the bauxite mining sector, this theory emphasizes the importance of synergy between government agencies, law enforcement officers, and the community in overseeing mining operations. Weak law enforcement is often the root cause of various environmental violations and economic injustice in mining areas.

The theory of decentralization of authority explains that the division of responsibilities between the central and regional governments must be proportional to achieve effective natural resource management. Regional governments are closely connected to the social and geographical conditions of mining areas and should therefore play a greater role in monitoring and implementing policies. Excessive centralization of authority can actually hinder a rapid response to violations in the field (Fendri, 2023). The application of this theory can strengthen the role of regions as the vanguard in maintaining a balance between economic interests and environmental sustainability.

## METHOD

The research method used in this study is a normative juridical method with a statutory and conceptual approach. The statutory approach is done by examining in-depth various legal provisions governing the management and supervision of bauxite mining, such as Law Number 3 of 2020 concerning Mineral and Coal Mining, Government Regulation Number 96 of 2021 concerning the Implementation of Mineral and Coal Mining Business Activities, and Law Number 32 of 2009 concerning Environmental Protection and Management. The analysis of these regulations tries to identify any disharmony, overlap, or legal gaps that lead to weak supervision in the mining sector. The conceptual approach is used to understand the meaning and purpose of mining legal regulations themselves, including how the concepts of environmental responsibility, the precautionary principle, and the principles of sustainable development are applied in bauxite mining activities. Through this approach, the research presents the relationship between legal norms and their implementation practices and offers conceptual ideas on regulatory harmonization and strengthening the supervisory system. This method also helps in identifying structural and substantive weaknesses that hinder the effectiveness of the law, so that the results of the analysis can provide comprehensive recommendations for improving bauxite mining governance that is fairer, more transparent, and more sustainable.

## RESULTS AND DISCUSSION

### Regulatory Gaps in Bauxite Mining Management

The regulatory structure governing bauxite mining activities in Indonesia is comprehensively established through Law Number 4 of 2009 concerning Mineral and Coal Mining, which was subsequently amended by Law Number 3 of 2020. This regulation serves as the primary legal basis for all stages of mining activities, from exploration, exploitation, processing, and post-mining. Each stage requires different permits and must meet strict technical and environmental requirements. The government has also issued various implementing regulations to clarify the licensing mechanism and mining governance to align with sustainability principles. Despite this comprehensive legal basis, field practice demonstrates weaknesses in the coordination and implementation of these regulations.

The licensing stage is one of the most crucial aspects of bauxite mine management as it serves as the starting point for companies to operate. This licensing procedure includes the issuance of a Mining Business Permit (IUP), a Special Mining Business Permit (IUPK), and other permits related to environmental management. Regulations require every company to have an Environmental Impact Analysis (AMDAL) document as a primary requirement for obtaining an exploitation permit. The provision aims to ensure that all mining activities consider their ecological impacts before undertaking them. However, implementation of this regulation often faces challenges such as weak data verification, weak oversight, and the authorities' indecisiveness in enforcing sanctions.

The shift in authority from regional to central governments is one of the most significant changes following the revision of the Mineral and Coal Mining Law. Previously, regional governments had extensive authority to issue mining permits and directly supervise mining activities within their jurisdictions. Following the revision, this authority was largely transferred to the central government, purportedly to prevent abuse of authority and improve licensing efficiency. While administratively, this move aimed to create a more centralized and uniform system, it actually created a gap between policymakers and the reality on the ground. As a result, the oversight process was slower, and responses to mining violations were less effective than when authority remained at the regional level.

The downstream mining policy is a national agenda aimed at increasing the added value of domestic minerals, including bauxite. The government is seeking to limit the export of raw materials and encourage the development of processing and refining facilities within Indonesia. The goal is for Indonesia to become not only a supplier of raw materials to foreign industries but also to benefit economically from the processing industry. Implementing this policy requires strong regulatory support and the readiness of domestic industrial infrastructure. However, the reality is that many mining areas lack adequate processing facilities, resulting in the downstreaming policy being less than optimal and even creating uncertainty for business actors.

The legal vacuum is one of the most visible manifestations of the regulatory gap in bauxite mining management in Indonesia. To date, there are no detailed regulations specifically governing the reclamation and restoration of post-bauxite mining land. While every company is required to undertake reclamation, technical standards and success indicators have not been clearly defined. As a result, many former mining areas are left abandoned without adequate environmental restoration efforts. This regulatory ambiguity makes corporate responsibility for environmental damage unclear and difficult to enforce legally.

Overlapping regulations also contribute to this complex gap. The relationship between environmental permits and mining permits often creates confusion because they have different legal bases. Law Number 4 of 2009 concerning Mineral and Coal Mining, as amended by Law Number 3 of 2020, emphasizes that every mining activity must have a

Mining Business Permit (IUP) as regulated in Article 35 paragraph (1), which states that "mining business is carried out based on a mining business permit granted by the Central Government." Meanwhile, Law Number 32 of 2009 concerning Environmental Protection and Management regulates that every business and/or activity that has a significant impact on the environment must have an environmental permit, as stated in Article 36 paragraph (1) which states that "every business and/or activity that is required to have an environmental impact analysis or UKL-UPL must have an environmental permit."

The lack of synchronization between these two regulations makes the licensing process lengthy, inefficient, and vulnerable to abuse. This situation also results in weak coordination between agencies such as the Ministry of Energy and Mineral Resources, the Ministry of Environment and Forestry, and local governments, which should be working together to monitor and enforce environmental violations.

The gap is not caused by a lack of regulations, but rather by regulations that are not aligned and integrated. This disharmony creates a lack of coordination among government agencies with different authorities, resulting in ineffective monitoring and enforcement. This situation creates legal uncertainty for businesses that, on the one hand, fulfill their licensing obligations but, on the other, still face administrative and technical obstacles. The lack of synchronization between regulations makes it difficult for businesses to ensure comprehensive compliance, while government officials often experience overlapping authority in their oversight. Ultimately, this lack of integration in the legal system has a direct impact on increasing environmental damage due to weak control and accountability in bauxite mining activities.

Vertical and horizontal disharmony are issues that worsen the effectiveness of bauxite mining regulations in Indonesia. Vertically, differences in interpretation between central regulations and regional implementation often give rise to conflicts of authority. Following the enactment of Article 4 paragraph (2) of Law Number 3 of 2020 concerning Amendments to Law Number 4 of 2009 concerning Mineral and Coal Mining, the mining management authority was transferred entirely to the central government. The provision has caused dissatisfaction at the regional level, as local governments lose their strategic role in mining supervision, even though they are closest to the communities and the environment directly affected.

On the other hand, horizontally, overlapping policies between ministries such as the Ministry of Energy and Mineral Resources, the Ministry of Environment and Forestry, and the Ministry of Investment/BKPM also become a source of disharmony. This difference in mandates is further exacerbated by Article 36 paragraph (1) of Law Number 32 of 2009 concerning Environmental Protection and Management, which requires every mining activity to have an environmental permit, while mining business permits are regulated separately in Article 35 of Law Number 3 of 2020. The lack of effective coordination between agencies often results in overlapping policies, hampering implementation in the field, and opening up opportunities for abuse of authority. This situation demonstrates the failure to realize the principles of harmony and integration as mandated by Article 5 of Law Number 12 of 2011 concerning the Formation of Legislation, which emphasizes the importance of consistency and conformity between legal regulations. This disharmony ultimately creates a gray area that business actors often exploit to avoid legal obligations and weaken government oversight of bauxite mining operations.

The lack of national technical guidelines in bauxite mining waste management is also a real gap. Each bauxite-producing region has distinct geological and hydrological characteristics, requiring waste management standards tailored to local conditions. The absence of national technical guidelines leads to differences in implementation between regions and creates opportunities for pollution. However, bauxite processing waste contains

heavy metal particles that have the potential to pollute soil and water sources. Without a uniform standard, law enforcement against pollution becomes difficult due to the lack of clear benchmarks for assessing violations.

The decline in legal certainty is a direct consequence of the disharmony in applicable regulations. Businesses often face confusion in interpreting regulations, especially when there are discrepancies between central and regional regulations. The situation creates high legal risks because mining activities can be deemed to violate certain regulations even if they comply with others. This uncertainty also hinders investment, as investors require assurance of legal stability for the sustainability of their businesses. The government must ensure regulatory consistency to ensure legal certainty is realized.

Overexploitation without environmental responsibility is another inevitable consequence of regulatory gaps. When regulations regarding reclamation and land restoration are unclear, many companies choose to delay or even ignore their obligations. The ecological impacts are severe, causing land degradation, flooding, and loss of vegetation cover. This situation not only harms the environment but also causes social suffering for communities surrounding mines that depend on natural resources. The situation demonstrates that weak regulations are directly proportional to the increased risk of environmental damage in mining areas.

Obstacles to law enforcement against mining violations are the latest indicator of a flawed regulatory system. Law enforcement often struggles to establish a firm legal basis due to overlapping regulations and the lack of clear technical guidelines. Investigations into environmental violations are hampered by weak coordination between agencies that should be working together. The situation allows businesses to evade legal sanctions or delay environmental restoration obligations. As a result, justice for affected communities is difficult to achieve, and the law loses its function as an effective tool of social control.

**Gaps in Government Oversight of Bauxite Mining**

Government oversight of bauxite mining activities is a crucial element in ensuring business compliance with laws and regulations, and the principles of sustainable natural resource management. The Ministry of Energy and Mineral Resources (ESDM) plays a primary role in regulating and supervising all mining activities, from exploration to post-mining. Through the Directorate General of Minerals and Coal and the Mining Inspectorate, the government is responsible for ensuring that mining activities are conducted in accordance with the Mining Business Permit (IUP) and applicable technical standards. Regional governments, although their authority has been reduced since the revision of Law Number 3 of 2020, retain a moral and administrative responsibility to monitor social and environmental impacts in their jurisdictions. A synergistic relationship between the central and regional governments should be key to ensuring the sustainability of the bauxite mining industry.

The mining sector's oversight system is divided into three main categories: administrative, technical, and environmental oversight. Administrative oversight includes the examination of permit documents, production reports, and the payment of financial obligations such as royalties and taxes. Technical oversight focuses on operational activities in the field, including the implementation of good mining practices. Environmental supervision relates to the fulfillment of environmental impact analysis (AMDAL) documents, reclamation, and post-mining activities. These three aspects of supervision should complement each other to prevent legal loopholes that business actors can exploit to avoid their responsibilities. Integration between the three is a measure of the effectiveness of the national supervision system in the bauxite mining sector.

The implementation of supervision by Mining Inspectors often faces structural obstacles. The number of supervisory personnel in the field is limited compared to the size of

the mining area to be monitored, especially in areas such as West Kalimantan and the Riau Islands. Difficult geographical access adds to their workload, while transportation facilities and monitoring equipment are still minimal. It results in supervision often being administrative on paper, without thorough field inspections. These limitations in human resources and supervision facilities increase the possibility of undetected violations, including exploitation outside permit areas and mining practices without reclamation.

Coordination between the central and regional governments in implementing supervision remains weak. After the licensing authority was transferred to the central level under Law Number 3 of 2020, regional governments often have difficulty accessing permit data and reports on mining activities in their jurisdictions. This situation hampers the ability of regions to monitor the social and environmental impacts they directly face. Policy asymmetry also slows down the reporting process for violations, as communication channels between agencies lack an integrated system. As a result, many mining violations are not promptly addressed, and most remain at the administrative level without any tangible sanctions.

The lack of experts in mining and environmental engineering is a significant factor weakening the effectiveness of oversight. The government has not been able to provide human resources with sufficient technical competence to conduct regular field audits. Inspections often rely solely on company self-reports, which are often inaccurate. Technical oversight, which should prevent violations early, ultimately shifts to reactive measures after environmental damage has occurred. The lack of a continuous training system for mining inspectors also prevents the quality of oversight from improving in line with advances in mining technology.

Transparency of bauxite production, distribution, and export data remains a serious issue in mining governance in Indonesia. Many mining companies fail to report production data accurately, either due to tax evasion or weak government verification systems. Integrated digital reporting mechanisms across agencies are not yet optimal, resulting in inconsistent data between the Ministry of Energy and Mineral Resources, the Ministry of Finance, and law enforcement agencies. This situation makes it difficult to assess companies' compliance with financial and environmental obligations. The lack of transparency also creates public distrust in the government's integrity in managing national resources.

Enforcement of administrative and criminal sanctions for mining violations remains low. Many cases of pollution and permit violations result in mere warnings without firm legal action. Article 151 of Law Number 3 of 2020 actually provides the basis for the government to impose administrative sanctions in the form of temporary suspension or revocation of business permits. However, implementation is often delayed due to political interference, economic interests, or weak coordination between agencies. As a result, violating businesses tend not to be deterred, while environmental damage continues to escalate without a clear remedial process. Weak oversight is also evident in the numerous cases of illegal mining operating without official permits. These illegal mining activities not only harm the state economically but also cause severe environmental damage. The government often struggles to enforce regulations due to limited information and a lack of coordination with local law enforcement. When enforcement is taken, it often does not progress to the investigation stage due to weak administrative evidence. This phenomenon indicates that the mining oversight system remains reactive and lacks a strong preventive approach.

The legal implications of weak oversight are evident in the decline of legal certainty in the mining sector. When violations are not firmly prosecuted, public trust in regulatory authorities also weakens. The public perceives law enforcement in the mining sector as unfair, especially when large companies often escape sanctions while small-scale perpetrators are easily prosecuted. This injustice creates negative perceptions of the government, which is

supposed to protect the public interest. This gap has the potential to widen the gap between the community and state officials, while also undermining the legitimacy of mining management policies.

The environmental impact of weak oversight is very real on the ground. Bauxite mining activities have caused massive deforestation in West Kalimantan and Bintan, leaving behind critical land and disrupting the balance of the ecosystem. River sedimentation has increased due to the lack of post-mining reclamation, resulting in declining water quality and damage to aquatic biota habitats. Heavy metal pollution from mining waste has also begun to be found in river basins used by communities for daily needs. This situation demonstrates that environmental monitoring is not functioning as it should, as monitoring reports submitted by companies are rarely independently verified.

Communities living near mining areas are most impacted by the weak monitoring system. Many have lost their livelihoods due to the destruction of agricultural land and clean water sources. Public complaints about mining violations are often not responded to promptly and are often ignored. Lack of access to information and public participation mechanisms deprives communities of the power to demand justice. The situation has resulted in diminished trust in the government as a natural resource manager, which should act transparently and responsibly.

Efforts to improve the monitoring system must be directed at strengthening cross-agency coordination. The Ministry of Energy and Mineral Resources, the Ministry of Environment and Forestry, and law enforcement agencies must develop an integrated work system based on data and technology. This collaboration can be realized through the integration of digital reporting systems, the exchange of production data, and the synchronization of sanctions for violations. Each agency needs to have clear responsibilities within the chain of control to prevent overlapping authority. Strong coordination will strengthen policy effectiveness and close loopholes for legal violations in the mining sector.

Improving the capacity and integrity of mining inspectors is essential for oversight reform. The government needs to provide ongoing training programs that combine technical knowledge, supervisory ethics, and an understanding of environmental law. The inspector recruitment system must also prioritize professionalism and independence to prevent them from being easily influenced by political or economic pressure. Improving inspector welfare is a crucial factor in minimizing the risk of corruption and abuse of authority. With competent and integrated supervision, the implementation of mining regulations can be more effective and credible.

The use of digital technology is an innovative solution for improving the bauxite mining oversight system. The use of geospatial information systems, satellite imagery, and drones can assist the government in monitoring mining activities in real-time. An integrated online reporting system across ministries allows for early detection of violations without having to wait for manual reports from companies. Technology can also be used to track the bauxite supply chain, thus maintaining export transparency. This digital innovation also promotes efficiency, accuracy, and accountability at every stage of mining oversight.

The involvement of local communities and independent institutions in the oversight process is a crucial element in creating transparency and public participation. Community-based monitoring allows for timely identification and action on violations in the field. Non-governmental organizations and universities can also play a role in conducting independent environmental audits, providing an objective view of mining companies' performance. Public participation will strengthen the country's oversight system and build trust between the government, business actors, and the public. This inclusive oversight model reflects the application of good governance principles in national natural resource management.

Effective mining oversight policies require not only strong regulations but also a moral commitment from all stakeholders. The government must prioritize environmental and community interests over short-term economic gains. Mining companies need to view oversight not as a burden, but as part of their social responsibility and business sustainability. The public must also be given greater opportunity to participate in the oversight process. Only with synergy between the government, business actors, and the public can bauxite mine management be fair, sustainable, and in the national interest.

## CONCLUSION

The regulatory and oversight gap in the bauxite mining sector highlights the weakness of Indonesia's natural resource governance system. Disharmony between regulations leads to overlapping authority, differing legal interpretations, and minimal policy integration between the central and regional governments. The lack of clarity in legal norms has resulted in inconsistent implementation of technical standards for mine management, leading many companies to operate without regard for sustainability principles. This situation is exacerbated by weak field oversight due to limited inspectors, a lack of transparency in production and export data, and poor enforcement of sanctions for violations. Consequently, uncontrolled bauxite mining activities trigger environmental damage, such as deforestation, water pollution, and land degradation, which directly impact the well-being of communities surrounding the mines.

Harmonization of regulations and strengthening of the oversight system are urgently needed to create equitable and sustainable mining governance. The government needs to build synergy between agencies such as the Ministry of Energy and Mineral Resources, the Ministry of Environment and Forestry, and regional governments to ensure targeted and consistent bauxite management policies. Strengthening human resource capacity in the field of mine supervision, digitizing real-time data-based monitoring systems, and increasing transparency are strategic steps to address these ongoing oversight gaps. The involvement of local communities, academics, and independent institutions must also be part of the social control system so that the mining process is not only oriented towards economic profit but also ensures environmental sustainability and the protection of the rights of affected communities.

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