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ASSESSING ENVIRONMENTAL PROTECTION IN INDONESIAN MINING LAWS

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Abstract

This research investigates the quality of Indonesian mining laws in regulating environmental protection, prompted by the ongoing environmental degradation as a consequence of mining activities. Although various laws have been introduced since the Dutch colonial era, environmental issues remain largely unresolved. This raises the key question: *has the quality of current mining laws improved in ensuring environmental protection? Some* studies have addressed environmental and natural resource governance in Indonesia, analysing several legal provisions that reveal weaknesses in environmental protection. However, they have not explicitly focused on evaluating the quality of the relevant laws and regulations. Unlike previous research, this study examines legal quality in depth by establishing measurable criteria for analysis. It employs a normative legal method, drawing on legis prudence literature to apply both formal and substantive quality criteria. It also incorporates internationally accepted principles for mining and environmental management. The findings reveal that Indonesia's mining laws do not meet the legal quality criteria for environmental protection. However, Law No. 4 of 2009 has a higher level of legal quality compared to Law No. 3 of 2020. These results indicate a regression in the legal quality of environmental protection within Indonesia's mining regulatory framework. This study contributes to legal scholarship by presenting a structured method for analysing the quality of laws and offers valuable insights into the quality of mining law in resource-rich countries, especially Indonesia.

Keywords: Environment; Mining; Quality of Law

Introduction

Indonesia has been a major producer of gold, silver and tin for centuries, but its mining policies have historically prioritised economic gains over environmental protection. Significant developments began with the discovery of tin on Belitung Island in 1852[1]. In response, the Dutch East Indies introduced the *Indische Mijnwet* 1899 (IMW) to regulate mining[2], focusing on land ownership, licensing, and human safety, while largely neglecting environmental concerns.

1 Pierre van der Eng, "Mining and Indonesia's Economy: Institutions and Value Adding, 1870–2010," *Center for Economic Institutions Working Paper Series* 2014-5 (Institute of Economic Research, Hitotsubashi University, 2014), 5.

2 A Agus Setiawan, "The Discovery of Oil and the Urgency of the Dutch Indies Mining Act 1899," *Buletin Al-Turas* 21, no. 2 (2015): 302.

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Although the IMW restricted mining near public and sensitive areas, its measures primarily aimed to prevent harm to communities and workers, with little attention to environmental damage, such as deforestation and land degradation resulting from tin mining in Bangka[3].

During the Japanese occupation and early independence, environmental concerns remained neglected[4]. This issue continued under Sukarno's government, as regulations like Government Regulation in Lieu of Law No. 37 of 1960 concerning Mining focused on exploitation. The only difference between the colonial period and the Japanese period lies in the more nationalistic approach, which involved nationalising Dutch companies and restricting foreign investment.

Following economic stagnation under Sukarno, Suharto's New Order prioritised economic growth by fostering mining exploitation. To facilitate mining activities through legal instruments, Law No. 11 of 1967 concerning Basic Mining Provisions was enacted to attract more investors. This law introduced two licence schemes: the Mining Authorisation (*Kuasa Pertambangan* or KP) for domestic entities and the Contract of Work (*Kontrak Karya* or CoW) for foreign investors. The first CoW was signed with Freeport McMoRan, granting rights to the Ertsberg gold deposit in Irian Jaya. This agreement marked a turning point, initiating large-scale mining operations that would lead to significant environmental degradation in Indonesia.

During the New Order period, mining management prioritised economic growth with suboptimal environmental protection. Initial environmental laws and regulations, including the mine reclamation policy[5] following the 1972 Stockholm Conference, were too lenient. For instance, the obligations concerning mine reclamation and post-mining, as outlined in the Director General of General Mining Decree 336.K/271/DDJP/1996, were not included as mandatory prerequisites for obtaining a mining license. As a result, mining companies could still secure licenses without submitting reclamation and post-mining plans or guarantees, bypassing these critical environmental requirements. Subsequently, despite the enactment of environmental laws, including the 1982 Law concerning Basic Provisions for Environmental Management requiring Environmental Impact Analyses (AMDAL) for major projects, enforcement remained

3 Corey Ross, "The Tin Frontier: Mining, Empire, and Environment in Southeast Asia, 1870s–1930s," *Environmental History* 19 (2014): 460.

4 Isma Rosyida, "*Political Ecology of Tin Mining: A Study on Marginalization of Coastal Resource Dependent Communities in Indonesia,"* (PhD diss., Hokkaido University, 2019), https://eprints.lib.hokudai.ac.jp/dspace/bitstream/2115/76470/1/Isma_Rosyida.pdf; WALHI, "*Menilik Kembali Sejarah dan Regulasi Industri Pertambangan di Indonesia - Bagian 2,*" https://www.walhi.or.id/sejarah-dan-regulasi-pertambangan-di-indonesia-bagian-2.

5 The Minister of Mining Regulation No. 4 of 1977 concerning Prevention and Handling of Disturbances and Environmental Pollution Due to General Mining; Director General of General Mining Decision No. 07/DU/1978 concerning Prevention and Control of Disturbances and Pollution Due to Open Mining; Director General of General Mining Decision No. 09/DU/1978 on Prevention and Management of Disturbances and Pollution Due to Processing and Refining of Mineral Materials; Minister of Mining and Energy Regulation No. 1211.K/008/M.PE/1995 on Prevention and Management; Director General of General Mining Letter of Decision No. 336.K/271/DDJP/1996 detailing reclamation guarantees.

weak[6]. The Ministry of Environment lacked authority, and responsibilities were fragmented across institutions. Even with amendments in Law No. 23 of 1997 and additional regulations[7], many activities overlooked AMDAL requirements[8].

Therefore, during the New Order period, mining caused extensive environmental damage, including land disturbance, loss of forest cover, river contamination, and social conflicts over resources[9]. For example, Freeport's Grasberg mine dumped tailings into the Aikwa River and Arafura Sea, altering the forest ecosystem, reversing river flow, and depositing copper along the river[10]. This threatened species and stressed Lorenz National Park, a World Heritage site[11]. Similarly, Newmont Minahasa Raya, established in 1986, polluted Buyat Bay with its dumped tailings.

At the end of the Suharto period and the start of the reform period, mining management issues escalated due to decentralisation. The Regional Government Law No. 22 of 1999 and Government Regulation No. 75 of 2001 authorised district governments to issue mining licences. This led to a surge in licence granting without adequate knowledge or regulation, causing significant environmental problems[12]. Further, the central government failed to oversee

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6 Chris Ballard, "*Human Rights and the Mining Sector in Indonesia: A Baseline Study*," in *Mining, Minerals and Sustainable Development Project No. 182* (The International Institute for Environment and Development, 2001), 14.

7 The first delegated regulation regarding AMDAL was Government Regulation No. 29 of 1986, later amended by Government Regulation No. 51 of 1993. After the issuance of Law No. 23 of 1997 the Government Regulation on AMDAL was replaced by Government Regulation No. 27 of 1999.

8 Takdir Rahmadi, "Toward Integrated Environmental Law: Indonesian Experiences So Far and Expectations of a Future Environmental Management Act," in *Environmental Law in Development: Lessons from the Indonesian Experience*, ed. Michael Faure and Nicole Niessen (Edward Elgar Publishing, 2006), 131; Simon Butt and Tim Lindsey, *Indonesian Law*, 1st ed. (Oxford University Press, 2018), 166; Giorgio Budi Indrarto et al., *The Context of REDD+ in Indonesia: Drivers, Agents and Institutions* (Center for International Forestry Research (CIFOR), 2012), 94.

9 World Bank, *Indonesia: Environment and Natural Resource Management in a Time of Transition* (World Bank, 2001).

10 Carolyn Marr, *Digging Deep: The Hidden Costs of Mining in Indonesia* (Down to Earth, International Campaign for Ecological Justice in Indonesia, and Minewatch, 1993); Dianto Bachriadi, *Merana di Tengah Kelimpahan: Pelanggaran-pelanggaran HAM pada Industri Pertambangan di Indonesia* (ELSAM, 1998).

11 Budy P. Resosudarmo, Ida Aju Pradnja Resosudarmo, Wijayono Sarosa, and Nina L. Subiman, "Socioeconomic Conflicts in Indonesia's Mining Industry," in *Exploiting Natural Resources: Growth, Instability, and Conflict in the Middle East and Asia*, ed. Richard Cronin and Amit Pandya (The Henry L. Stimson Center, 2009).

12 Budy P. Resosudarmo, Ida Aju Pradnja Resosudarmo, Wijayono Sarosa, and Nina L. Subiman, "Socioeconomic Conflicts in Indonesia's Mining Industry," in *Exploiting Natural Resources: Growth, Instability, and Conflict in the Middle East and Asia*, ed. Richard Cronin and Amit Pandya (The Henry L. Stimson Center, 2009), 8; Giorgio Budi Indrarto et al., *The Context of REDD+ in Indonesia: Drivers, Agents and Institutions* (Center for International Forestry Research (CIFOR), 2012), 31; Feby Ivalerina Kartikasari, Maret Priyanta, and Kusumawardhani Wulan Tresya Dewi, *Perizinan Terpadu untuk Perbaikan Tata Kelola Hutan di Indonesia: Studi Kasus Kalimantan Tengah* (Indonesian Center for Environmental Law, 2012), 3; Bernadetta Devi and Doddy Prayogo, "Mining Development in Indonesia: An Overview of Regulatory Framework and Policies," in *IM4DC, International Mining for Development Centre Action Research Report* (IM4DC, 2013), 42–43; Ida Aju Pradnja Resosudarmo, Ngakan Putu Oka, Sofi Mardiah, and Nugroho Adi Utomo, "Governing Fragile Ecologies: A Perspective on Forest and Land-Based Development in the Regions," in *Regional Dynamics in a Decentralized Indonesia*, ed. Hal Hill (ISEAS Publishing, 2014), 276; Maryati Abdullah, ed., *Report, Coordination and Supervision Mineral and Coal Mining Sector: Findings-Follow up-Achievement*, 1st ed. (Publish What You Pay Indonesia, 2017), 14.

these regions effectively[13]. Furthermore, Mining Law No. 4 of 2009 sought to address these issues but was considered inadequate[14], leading to the enactment of Mining Law No. 3 of 2020, which replaced 85% of the previous law's provisions.

The explanation above highlights that, since the inception of the mining industry in Indonesia, there has been a growing number of laws and regulations that insufficiently address mining-related environmental issues. The existence of laws and regulations is vital in effectively addressing these issues, as establishing effective environmental protection and management is impossible without well-structured legal frameworks, even when political and governmental conditions are favourable[15]. Several studies have identified problems in the quality of environmental and natural resource laws and regulations in Indonesia, citing issues such as incoherence, lack of clarity, and tendencies toward exploitation[16]. However, the evaluation of the quality of laws and regulations, particularly in the mining sector, receives minor attention in the research, as legal analysis is often treated as only one component within broader studies on environmental and natural resource management. Moreover, the criteria for assessing the quality of such laws and regulations have not yet been thoroughly articulated. Therefore, an in-depth examination of environmental protection within the framework of Indonesian mining law is essential. Departing from the consideration of the issues above, this research aims to investigate the following problems: What is the quality of mining laws in regulating environmental protection? *Has the quality of current mining laws improved in ensuring environmental protection?*

To analyse the mining laws from the perspective of environmental protection, this study begins with the identification and discussion of appropriate criteria for evaluating laws and regulations that address environmental issues related to mining. To establish these criteria, the study draws on legis prudence literature, which explores legal norms from both theoretical

13 Ida Aju Pradnja Resosudarmo, Ngakan Putu Oka, Sofi Mardiah, and Nugroho Adi Utomo, "Governing Fragile Ecologies: A Perspective on Forest and Land-based Development in the Regions," in *Regional Dynamics in a Decentralized Indonesia*, ed. Hal Hill (ISEAS Publishing, 2014), 277.

14 *Draft Law on Mineral and Coal Mining* (academic paper, Directorate General of Geology and Mineral Resources, Department of Energy and Mineral Resources, 2004).

15 Nicole Niessen, "The Environmental Management Act of 1997: Comprehensive and Integrated?" in *Towards Integrated Environmental Law in Indonesia?*, ed. Andriaan Bedner and Nicole Niessen (Research School CNWS, School of Asian, African, and Amerindian Studies, 2003), 1.

16 For example: S. K. Waddell, "*The Role of the Legal Rule in Indonesian Law: Environmental Law and Reformasi of Water Quality Management"* (PhD diss., University of Sydney, 2004); Christopher Barr et al., *Decentralization of Forest Administration in Indonesia: Implications for Forest Sustainability, Economic Development and Community Livelihoods* (Center for International Forestry Research (CIFOR), 2006); Simon Butt, "Regional Autonomy and Legal Disorder: The Proliferation of Local Laws in Indonesia," *Singapore Journal of Legal Studies* 1 (2010): 1–21; Paul K. Gellert and Andiko, "The Quest for Legal Certainty and the Reorganization of Power: Struggles over Forest Law, Permits, and Rights in Indonesia," *The Journal of Asian Studies* 74, no. 3 (2015): 639–666; Komisi Pemberantasan Korupsi (KPK), *Kajian Harmonisasi Undang-Undang di Bidang Sumber Daya Alam dan Lingkungan Hidup* (Jakarta: KPK, 2018); Josi Khatarina, "*Decentralisation, Law, and the Failure of Palm Oil Licensing,"* (PhD diss. Melbourne Law School, The University of Melbourne, 2019).

and practical standpoints to define the characteristics of well-structured legislation[17]. While legis prudence literature comprehensively encompasses both theoretical and practical insights, the legal quality criteria drawn from it primarily focus on the quality of legal norms rather than their implementation. This analytical model is adopted from the prospective or *ex-ante* approach, which is typically conducted prior to the enactment of legislation to assess its potential impacts[18]**.** It assists lawmakers in identifying the most appropriate provisions to effectively address the issues the legislation aims to resolve[19]**.** Accordingly, this research assesses only the normative quality of the laws, *not* their enforcement, by examining aspects such as clarity, harmoniousness, and adequacy. Given the environmental focus, the study also incorporates these legal criteria with internationally recognised principles and standards for mining and environmental management. Based on this combined framework, the quality of the mining laws, along with other relevant legal instruments, is assessed.

Discussion

A. The Quality Criteria for Mining Laws

Literature on legis prudence shows that scholars view legislative quality from multiple perspectives. Generally, law-making includes formal and substantive criteria. The formal criteria involve legislative drafting quality[20], textual quality[21], and technical quality[22]. Some scholars refer to these as 'formal quality,' encompassing clarity, simplicity, consistency, concision, and precision[23]. Meanwhile, substantive quality is associated with the law's content and considered key to legal quality. Scholars often link the content quality to social reality; for instance, Mader associates substantive quality with its social impact[24], and Fluckiger refers to it as 'factual

17 Luc J. Wintgens, "Legislation as an Object of Study of Legal Theory: Legisprudence," in *Legisprudence: A New Theoretical Approach to Legislation*, ed. Luc J. Wintgens, Proceedings of the Fourth Benelux–Scandinavian Symposium on Legal Theory (Hart Publishing, 2002), 10–11.

18 Luzius Mader, "Evaluating the Effects: A Contribution to the Quality of Legislation," *Statute Law Review* 22, no. 2 (2001): 124

19 *Ibid.*

20 Luzius Mader, "Evaluating the Effects: A Contribution to the Quality of Legislation," *Statute Law Review* 22 (2001): 120.

21 Ulrich Karpen, "Giving Effect to European Fundamental Rights Through Evaluation of Legislation," *Statute Law Review* 23 (2002): 151

22 W. Voermans, Philip Eijlander, Rob Van Gestel, Ivo De Leeuw, Adrienne De Moor-van Vught, and Sacha Prechal, *Quality, Implementation and Enforcement: A Study into the Quality of EC Rules and the Impact on the Implementation and Enforcement within the Netherlands* (Leiden University, 2000).

23 Vareen Vanterpool, "A Critical Look at Achieving Quality in Legislation," *European Journal of Law Reform* 9, no. 2 (2007): 171; Alexandre Fluckiger, "Concluding Remarks, Can Better Regulation be Achieved by Guiding Parliaments and Governments? How the Definition of the Quality of Legislation Affects Law Improvement Methods," *Legisprudence* 4 (2010): 215; Helen Xanthaki, "Quality of Legislation: An Achievable Universal Concept or a Utopian Pursuit?" in *Quality of Legislation: Principles and Instruments*, ed. Luzius Mader and Marta Tavares de Almeida (Nomos, 2011), 80.

24 L Luzius Mader, "Evaluating the Effects: A Contribution to the Quality of Legislation," *Statute Law Review* 22, no. 2 (2001): 121.

criteria'[25]. They align with Mousmouti's emphasis on the importance of a law's effectiveness in producing real-life results,[26] and also with Rooij focusing on 'implementability quality,' that is, evaluating a law's impact on compliance and enforcement[27]. Given the crucial importance of regulatory quality in relation to societal conditions, Seidman and Seidman offer guidelines to ensure laws achieve the desired social changes[28].

Before a law is implemented, its potential to address the intended issues can be gauged through an adequacy assessment of its norms. Therefore, several scholars recommend formulating legal norms that are aligned with societal issues and conditions. For example, Rooij argues that norms must be sufficiently stringent and broadly applicable to induce the intended social change[29]. Mousmouti further proposes a law-making methodology focused on effectiveness, emphasising strategic design and legal mechanisms that guide lawmakers in analysing issues, anticipating challenges, and refining legislative design at early stages[30].

As previously explained, the legal quality criteria derived from this framework primarily emphasise the quality of legal norms, rather than their implementation. This article employs formal quality criteria—clarity and harmoniousness, as well as substantive quality criteria—adequacy, and alignment with environmental principles and standards in mining issued by international institutions or forums. The formal and substantive qualities of law are inseparable and mutually reinforcing. Substantive quality cannot exist without formal quality. For instance, although a law is grounded in thorough research and designed to address a specific issue, it cannot be considered of high quality if it lacks formal attributes such as clarity. Ambiguous laws are difficult to implement because their norms are unclear to the intended audience. Conversely, a law that fulfils formal quality standards may remain ineffective if its substance fails to align with social realities. The criteria used in this research are outlined below.

a. Clarity

Law and regulation must be clear and comprehensible[31]. This means that legal norms should

25 Alexandre Fluckiger, "Concluding Remarks, Can Better Regulation be Achieved by Guiding Parliaments and Governments? How the Definition of the Quality of Legislation Affects Law Improvement Methods," *Legisprudence* 4 (2010): 213–14.

26 Maria Mousmouti, "Operationalising Quality of Legislation through the Effectiveness Test," *Legisprudence* 6, no. 2 (2012): 205.

27 B. van Rooij, *Regulating Land and Pollution in China: Lawmaking, Compliance, and Enforcement: Theory and Cases* (Leiden University Press, 2006).

28 A. Seidmann, R. Seidmann, and N. Abeyesekere, *Legislative Drafting for Democratic Social Change: A Manual for Drafters* (Kluwer Law International, 2001).

29 B. van Rooij, *Regulating Land and Pollution in China: Lawmaking, Compliance, and Enforcement: Theory and Cases* (Leiden University Press, 2006), 35.

30 Mousmouti, Maria. "Making Legislative Effectiveness an Operational Concept: Unfolding the Effectiveness Test as a Conceptual Tool for Lawmaking." *European Journal of Risk Regulation* 9 (2018): 445–464, 462.

31 Dennis Kurzon, "Clarity and Word Order in Legislation," *Oxford Journal of Legal Studies* 5, no. 2 (1985), 269; Alexandre Fluckiger, "The Ambiguous Principle of The Clarity of Law," in *Obscurity and Clarity in the Law, Prospects and Challenges*, ed. Anne Wagner and Sophie Cacciaguidi-Fahy, 1st ed. (Ashgate Publishing,

be explicitly stated, unambiguous, and not prone to multiple interpretations. Another frequently discussed clarity criterion is precision, meaning that each regulation must be stated accurately[32] to prevent the distortion of meaning in a text[33]. Article 5 of Law No. 12 of 2011 concerning the Formation of Law and Regulation defines the principle of clarity as that every piece of law and regulation must adhere to technical drafting standards, systematic structure, choice of words or terms, and clear legal language to avoid varied interpretations in its implementation.

b. Harmony

Harmonisation creates coherence between different parts[34]. Otto explains that separate parts adjust to each other, creating an 'aggregate effect'[35]. He also argues that coherence in the context of environmental management takes into account the harmony between institutions, norms, and procedures[36]. In other words, a law can be considered harmonious or coherent if its norms do not conflict or overlap with other legal norms within the same legal system. In this context, harmonious norms should align within a law or a regulation, with other laws or regulations, and within the legal system. A law or a regulation is then considered harmonious not only if its provisions do not contradict each other but also if they support and share common goals.

c. Adequacy

Norms within a regulation must be comprehensive to achieve the desired social change[37]. An inadequate norm refers to a provision that, despite its full implementation, fails to achieve the objectives envisioned by the lawmakers. This adequacy involves two aspects: comprehensive translation of formal regulatory goals into substantive legal norms[38]; and strict, broadly applicable norms[39]. Strictness means legal subjects have no choice but to comply with the established norms. Broad applicability means the regulatory norms should cover every aspect of the issue being addressed[40]. Some underlying issues will likely remain unaddressed unless a

2008), 15.

32 Vareen Vanterpool, "A Critical Look at Achieving Quality in Legislation," *European Journal of Law Reform* 9, no. 2 (2007): 195.

33 A. Seidmann, R. Seidmann, and N. Abeyesekere, *Legislative Drafting for Democratic Social Change: A Manual for Drafters* (Kluwer Law International, 2001), 261.

34 See, Ken Kress, "Coherence and Formalism," *Harvard Journal of Law and Public Policy* 16, no. 3 (1993): 640–41; Stefano Bertea, "The Arguments from Coherence: Analysis and Evaluation," *Oxford Journal of Legal Studies* 25, no. 3 (2005): 372; Robert Alexy and Aleksander Peczenik, "The Concept of Coherence and Its Significance for Discursive Rationality," *Ratio Juris* 3, no. S1 (1990): 132.

35 Jan Michiel Otto, "Incoherence in Environmental Law and the Solutions of Co-ordination, Harmonisation and Integration," in *Towards Integrated Environmental Law in Indonesia?*, ed. Andriaan Bedner and Nicole Niessen (Research School CNWS, School of Asian, African, and Amerindian Studies, 2003), 15–16.

36 *Ibid*.

37 B. van Rooij, *Regulating Land and Pollution in China: Lawmaking, Compliance, and Enforcement: Theory and Cases* (Leiden University Press, 2006), 34.

38 *Ibid.*

39 *Ibid.*

40 *Ibid.*

norm has sufficient and comprehensive provisions.

d. Conformity with principles of environmental law and international standards regulating mining and the environment

This article assesses the quality of laws from an environmental perspective by analysing how mining licensing norms promote environmental interests by applying internationally recognised principles of environmental law. This study will focus on principles relevant to mining and the environment, linked to guidelines from international environmental agencies or forums on mining and sustainable development[41].

The preventive principle obliges states, companies, or individuals to take steps to avoid causing environmental damage, even beyond their territory or ownership[42]. This principle aims to prevent activities known to cause environmental harm and to avoid damage, regardless of transboundary impacts, due to the interdependence of all environmental parts and the difficulty of repairing damage[43]. Regulatory guidelines for mining often propose environmental impact assessments (EIA) to mitigate mining impacts[44]. EIA helps protect the environment by evaluating project impacts and providing information to minimise such impacts during construction, operation, and decommissioning[45]. A mining company would have to identify potential impacts, plan management strategies, and inform the community, government, and decision-makers to determine if the project should proceed and what conditions are allowed[46]. However, the preventive principle enables various instruments beyond EIA to prevent environmental damage from mining activities; for instance, companies may be required to secure licenses that impose specific environmental requirements and performance benchmarks, as well as undergo continuous monitoring of their environmental performance throughout mining operations.

The "polluter pays" principle. This principle, enshrined in Principle 16 of the 1992 Rio Declaration on Environment and Development, asserts that polluters should be responsible

41 Such as, United Nations, *Berlin Guidelines II, Guidelines for Mining and Sustainable Development* (United Nations 2002); Naturvårdsverket and United Nations Development Programme, *Extracting Good Practices, A Guide for Governments and Partners to Integrate Environment and Human Rights into the Governance of the Mining Sector* (United Nations Development Programme 2018); United Nations Development Programme and UN Environment, *Managing Mining for Sustainable Development, a Sourcebook* (UN Environment and UNDP 2018); and Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, *Mining Policy Framework, Mining and Sustainable Development* (IGF 2013).

42 David Wilkinson, *Environment and Law*, 1st ed. (Routledge, 2002), 105.

43 Alex Kiss and Dinah L. Shelton, *Guide to International Environmental Law*, 1st ed. (Brill Nijhoff, 2007), 91.

44 Naturvårdsverket and United Nations Development Programme, *Extracting Good Practices, A Guide for Governments and Partners to Integrate Environment and Human Rights into the Governance of the Mining Sector* (United Nations Development Programme 2018); United Nations Development Programme and UN Environment, *Managing Mining for Sustainable Development, a Sourcebook* (UN Environment and UNDP 2018); Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, *Mining Policy Framework, Mining and Sustainable Development* (IGF 2013).

45 United Nations, *Berlin Guidelines II, Guidelines for Mining and Sustainable Development* (United Nations 2002), 36.

46 *Ibid.*

for the costs of environmental damage. In the context of mining, this principle emphasises a company's responsibility to conduct mining and post-mining reclamation activities, including efforts to restore and enhance environmental and ecosystem quality following mining operations[47]. Mining-Environment guidelines often recommend integrating these activities into mining operations to ensure environmental and social functions are restored around mining areas. Financial guarantees, required during the licensing process, ensure that companies are financially responsible for reclaiming mined areas[48]. Licenses should set standards for reclamation and environmental performance, determine financial assurance levels based on mine plans, and enforce compliance with closure and reclamation standards to safeguard against environmental impacts[49].

The public participation principle. Principle 10 of the 1992 Rio Declaration recognises three pillars of environmental justice: access to information, public participation, and justice. The Aarhus Convention elaborates on these matters, emphasising proactive and reactive information dissemination. International guidelines on mining and the environment mandate public participation throughout all mining stages. Involving affected communities in rule-making, licensing, and sector monitoring enhances governance and enforcement in the mining sector[50]. Effective legal and institutional frameworks ensure transparency, providing opportunities for informed public participation and mechanisms to hold decision-makers and mining companies accountable[51]. Furthermore, the licensing process should require mining entities to consult with communities and stakeholders, documenting engagement efforts throughout assessment and planning[52].

B. The Quality of Mining Law No. 4 of 2009 (before the amendment) from an Environmental Perspective

This section examines Mining Law No. 4 of 2009 concerning environmental protection. This law began to be drafted in 2005, a period marked by a strong reformist spirit and a desire to transform the management of mining, which had long been centrally controlled, exploitative,

47 Naturvårdsverket and United Nations Development Programme, *Extracting Good Practices, A Guide for Governments and Partners to Integrate Environment and Human Rights into the Governance of the Mining Sector* (United Nations Development Programme 2018); United Nations Development Programme and UN Environment, *Managing Mining for Sustainable Development, a Sourcebook* (UN Environment and UNDP 2018).

48 *Ibid.*

49 Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, *Mining Policy Framework, Mining and Sustainable Development* (IGF 2013).

50 Naturvårdsverket and United Nations Development Programme, *Extracting Good Practices, A Guide for Governments and Partners to Integrate Environment and Human Rights into the Governance of the Mining Sector* (United Nations Development Programme 2018), 12.

51 *Ibid.*, 23.

52 Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, *Mining Policy Framework, Mining and Sustainable Development* (IGF 2013), 7.

and disproportionately favourable to foreign investors[53]. Furthermore, Law No. 4 of 2009 was amended by Law No. 3 of 2020, rendering several provisions no longer in effect. The analysis of the quality of Mining Law No. 4 of 2009 below refers to the criteria as explained above.

a. Mining area

One of the environmental issues associated with mining pertains to the locations where mining activities are conducted. Initially, mining activities could take place anywhere as they were prioritised by the state[54]. However, in the 1990s, several regulations were introduced to restrict mining activities to specific designated areas[55]. Various sectors, such as forestry and plantations, had vested interests in land, leading to conflicts over land use. Besides land control conflicts, mining is also recognised for causing ecological disturbances. Several areas, especially protected and conservation areas, are particularly vulnerable to mining activities. Therefore, the designation of mining areas can impact the protection of environmentally sensitive regions.

Mining Law No. 4 of 2009 governed the determination of mining areas (*Wilayah Pertambangan* or WP). One component of WP was the mining business licence area (*Wilayah Izin Usaha Pertambangan* or WIUP)—an area eligible for the issuance of a mining business licence (*Izin Usaha Pertambangan* or IUP). A company must obtain WIUP through an auction process before applying for an IUP. Consequently, mining licences should only be issued within WIUP areas.

Mining Law No. 4 of 2009 authorised the central government to determine WP prior to issuing mining licenses. The determination of WP, as stipulated by Mining Law No. 4 of 2009, was based on national spatial planning in a transparent manner, considering the opinions of agencies, ecological aspects, environmental insight, and regional interests (Articles 9 and 10). The government defined WIUP, which, as described above, as an area eligible for an IUP. Furthermore, the Mining Law stipulated that the determination of WIUP should be based on the following criteria: geographic location, conservation principles, environmental carrying capacity, optimisation of mineral/coal resources, and population density (Article 18). Therefore, according to the Mining Law, the environment was one of the main considerations for determining WP and WIUP.

However, neither the Mining Law nor Government Regulation No. 22 of 2010, the

53 Feby Ivalerina Kartikasari, *Mining and Environmental Protection in Indonesia: Regulatory Pitfalls* (Meijersreeks, 24 April 2024), 104

54 James Otto, Koh Naito, and George (Rock) Pring, "Environmental Regulation of Exploration and Mining Operations in Asian Countries," *Natural Resources Forum* 23 (1999), 327; Rachman Wiriosudarmo, "Baseline Study and Gap Analysis on Mining in Indonesia," in *Mining, Minerals and Sustainable Development Project No. 183*, The International Institute for Environment and Development (IIED, 2001), 8–9.

55 Such as Biodiversity Law No. 5 of 1990, Spatial Planning Law No. 24 of 1992, and Forestry Law No. 41 of 1999.

delegated regulation for mining areas, provided a detailed explanation of these criteria. As a result, there was no clarification on what was meant by transparent determination of WP, honouring conservation principles, and taking into account the opinions of other agencies as stipulated in Article 18. This lack of clarity in these criteria could lead to varied interpretations; the conservation principle could hold different meanings for different parties, particularly those with different interests.

Furthermore, vague clarification on environmental criteria blurred the environmental standards for determining mining areas, making it uncertain whether the designated WP and WIUP were located in environmentally vulnerable areas. Consequently, the regulations governing the determination of mining areas were inadequate to prevent mining activities in environmentally vulnerable regions.

The determination of mining areas also intersected with other land use sectors, such as plantations and forestry, both of which have their own land planning systems. These systems may not align with mining areas, as each sector focuses solely on and adheres strictly to its own sectoral planning, necessitating the creation of coherent laws and regulations. Potential conflicts were especially prevalent in the forestry sector. Forest area planning was regulated by Forestry Law No. 41 of 1999 and its delegated regulations, notably Government Regulation 44 of 2004 concerning Forest Planning.

One purpose of forest planning was to define the functions of forest areas, primarily conservation forest, protection forest, and production forest. Based on these designations, the use of forest areas for development activities outside of forestry, including mining, was permitted only in production forest areas and protected forest areas, with open mining prohibited in the latter. Thus, in determining mining areas, coordination with the forestry sector was essential to ensure that mining areas did not encroach upon areas intended for conservation. However, the Mining Law mandated the designation of mining areas with the absence of coordination with other sector policies. The process for designated mining areas, as regulated by Mining Law No. 4 of 2009 and Government Regulation No. 22 of 2010 concerning Mining Areas, included almost no provisions for coordination with other sectors. Although Mining Law No. 4 of 2009 stipulated that the determination of WP should involve consultation with parliament, regional interests, ecological and environmental considerations, and other sectors (Articles 9 and 10), no further details were provided in either the law or its delegated regulation. Additionally, Government Regulation No. 22 of 2010 did not include stipulations for coordination with other agencies in determining mining areas. Since each agency operates in a sectoral manner, without coordination between authorised parties of mining areas and those of forestry areas, environmental harm could ensue; for example, a mining area could be designated within a

region already classified as a conservation forest by the forestry sector.

Moreover, laws and regulations regarding spatial planning, such as Law No. 26 of 2007 concerning Spatial Planning and its delegated regulations, did not help resolve land conflicts between sectors. These laws and regulations only governed spatial usage by various sectors in general, delegating technical criteria to sectoral ministers. There were no provisions in the spatial planning laws and regulations regarding coordination with other sectors or ministries. The only delegated regulation that stipulated coordination between agencies was Government Regulation No. 15 of 2010 concerning the Implementation of Spatial Planning, which only concerned coordination between regional governments and between different levels of government (i.e., central, provincial, and district/city governments).

The land management provisions in this Mining Law may not appear to be contradictory, but they are not aligned. Several sectors had the authority to determine and plan their respective areas based on different laws and regulations. The absence of rules defining the relationship between the area designation processes for different sectors led to inharmonious land use planning in Indonesia. Therefore, the regulatory framework for determining mining areas can be described as inharmonious, as the rules failed to achieve a unified division of Indonesia's territory. The disharmony of these rules, coupled with the absence of regulations regarding coordination, makes the rules related to land use unclear, which could lead to ambiguity regarding areas that are environmentally vulnerable to mining activities or areas that prohibit mining activity. Therefore, the regulation related to mining land is inadequate for protecting environmentally vulnerable areas from mining activities.

Furthermore, Mining Law No. 4 of 2009 did not prohibit mining activities in environmentally vulnerable areas but restricted such activities in places where statutory regulations prohibited them unless a license was obtained from a government agency according to the laws and regulations (Article 134). Consequently, the rules regarding the protection of certain areas depended on other laws and regulations. The provisions in Article 134 are intended to ensure compatibility with other laws and regulations. Unfortunately, the laws and regulations related to natural resources are inadequate for environmental protection, as explained below.

One of the laws that constrained mining operations was Law No. 5 of 1990 concerning the Conservation of Living Natural Resources and their ecosystems. This law proscribed activities that could alter conditions in specified areas such as nature reserves and national parks (Articles 19, 31, and 33). However, the provisions of this law were broad, lacking strict prohibitions against activities capable of disturbing these protected zones.

Another law, Forestry Law No. 41 of 1999, also restricted mining in designated areas. Specifically, it prohibited mining in conservation areas and open-pit mining in protected

regions (Article 38). Moreover, Government Regulation No. 24 of 2010, which governed the Use of Forest Areas under this law, mandated a lease-use forest area license (*Izin Pinjam Pakai Kawasan Hutan* or IPPKH) for mining in non-conservation forest areas. While this license ostensibly screened mining activities in restricted forest zones, the law and its delegated regulation did not outline penalties for non-compliance. Subsequently, Law No. 18 of 2013 concerning the Prevention and Eradication of Forest Destruction introduced sanctions for mining in forest areas without proper licensing (Article 89). This is a positive development, meaning that prior to 2013, insufficient sanctions were in place for forestry offenders, which contributed to ongoing forest degradation. Therefore, the introduction of the 2013 law must be acknowledged as a significant improvement.

Spatial planning laws also imposed restrictions on mining activities in specific zones. However, Spatial Planning Law No. 26 of 2007 and its delegated regulations merely delineated general boundaries for permissible mining operations. This law established spatial planning based on two functions: productive (cultivation) and protective (conservation) functions (Article 5 (2)). Mining activities were restricted to areas designated for productive use. Furthermore, Government Regulation No. 26 of 2008 concerning National Spatial Planning provided overarching criteria for mining areas, deferring technical specifications to the minister responsible for the mining sector. Thus, the Spatial Planning Law does not provide sufficiently clear or strict regulations regarding areas where mining activities are prohibited, effectively leaving the determination to the mining sector. As previously discussed, each sector has its own distinct and often conflicting interests concerning land use.

Coastal areas and small islands, known for their environmental vulnerability, have suffered notable ecological harm due to mining activities[56]. These areas were governed by Law No. 27 of 2007 concerning the Management of Coastal Areas and Small Islands, subsequently amended by Law No. 1 of 2014. While Law No. 27 of 2007 did not outright prohibit mining on small islands, it forbade mineral extraction in areas where it could cause technical, ecological, social, cultural, or environmental damage, including pollution or harm to local communities (Article 35 k.). This provision implied that mining could proceed on small islands as long as it did not cause harm or pollution, with criminal penalties stipulated for violations (Article 73). Law No. 1 of 2014 further required a location license to allow activities that took place in coastal and small island areas (Article 16), incorporating zoning plans to ensure the sustainability of these ecosystems and precluding licenses in core conservation zones (Article 17).

These laws and regulations were primarily aimed at safeguarding specific environments.

56 Rokhimin Dahuri, "Pengelolaan Ruang Wilayah Pesisir Dan Lautan Seiring Dengan Pelaksanaan Otonomi Daerah," in *Semiloka dan Pelatihan Penataan Ruang Wilayah Propinsi, Kabupaten dan Kota Dalam Rangka Otonomi Daerah* (Bappeda Propinsi and LPPM Unisba, May 2–3, 2001), 147 and 166.

However, Law No. 5 of 1990, Law No. 26 of 2007, and Government Regulation No. 26 of 2008 inadequately prevented mining in environmentally vulnerable areas due to their lack of explicit prohibitions on mining activities. Similarly, the provisions in Law No. 27 of 2007 concerning coastal areas and small islands were insufficient, as they did not explicitly prohibit mining in certain parts of small islands. These regulations allowed for mining operations provided they did not cause technical, ecological, social, or cultural harm or environmental pollution, without further elaboration. Thus, all of these laws are inadequate because they lack strict provisions for environmental protection in specific areas; the rules regarding law enforcement, supervision, and sanctions are considered weak.

b. Environmental safeguards

Environmental Impact Assessments (AMDAL), mine reclamation, and post-mining activities play pivotal roles in mitigating the environmental consequences of mining operations. Unlike its predecessor, Mining Law No. 4 of 2009 introduced regulations integrating AMDAL into the mining license issuance process. Furthermore, this law imposed obligations concerning mine reclamation and closure for IUP holders. Mining Law No. 4 of 2009 explicitly mandated AMDAL as a prerequisite for obtaining a mining license (Article 39). This requirement was further elaborated in Government Regulation No. 23 of 2010, which stipulated that companies seeking a Production Operation IUP must commit to complying with environmental laws and regulations, including the submission of environmental documents such as AMDAL (Article 26). These regulations are governed under Environmental Law No. 32 of 2009 and its delegated regulations.

Environmental Law No. 32 of 2009 and Government Regulation No. 27 of 2012 concerning Environmental Licensing effectively govern AMDAL by establishing comprehensive and stringent guidelines. These regulations made AMDAL assessments a primary requirement for obtaining environmental licences. According to the Environmental Law, a business license could not be issued without an environmental license (Article 40), and an IUP could not be obtained without first fulfilling an AMDAL. Moreover, Government Regulation No. 23 of 2010 aligned procedures for obtaining an IUP with the requirements outlined in the Environmental Law and its associated regulations, explicitly mandating the submission of environmental documents as part of the application process (Article 26). Thus, these regulations reinforced the AMDAL requirements specified in the Environmental Law and its delegated regulations, ensuring coherence in regulatory oversight.

Environmental Impact Assessments (AMDAL) serve as a proactive measure aligned with the preventive principle. Such a measure is a fundamental approach in international mining and environmental guidelines. Indonesia regulates AMDAL as an EIA for mining activities under

Mining Law No. 4 of 2009 and its delegated regulations, reflecting comprehensive oversight consistent with international standards and environmental best practices.

Mining Law No. 4 of 2009 also introduces rules regarding mine reclamation and post-mining activities, which were not regulated in the previous mining law. Article 39 and Articles 99-100 of this law specifically regulated these aspects within the framework of mining licensing. Government Regulation No. 23 of 2010 further delineated technical requirements for exploration IUP holders seeking a Production Operation IUP, mandating the submission of planning documents for mine reclamation and post-mining (Article 25). Moreover, Government Regulation No. 78 of 2010 specifically governs Reclamation and Post-Mining, requiring mining companies to submit detailed plans for these activities, contribute to a guarantee fund, and undertake reclamation and post-mining efforts, with the guarantee fund serving as a refundable deposit system contingent upon government approval of satisfactory reclamation.

However, despite these provisions, neither Mining Law No. 4 of 2009 nor Government Regulation No. 23 of 2010 made mine reclamation and post-mining plans, nor their associated guarantee funds, integral to the decision-making process for granting an IUP. These regulations mandated only the submission of plans as part of the application for a production operation IUP, without requiring their prior approval by the competent authority. This requirement was reinforced by Government Regulation No. 78 of 2010, which stipulated that exploration IUP holders must prepare and submit mine reclamation and post-mining plans concurrently with their application for a production operation IUP (Article 6). Approval of these plans was mandated within specific timelines following the issuance of the production operation of IUP (Articles 13 and 16), implying that approval could occur after the issuance of the IUP and did not influence the initial decision to grant it. Similarly, the provision of mine reclamation and post-mining guarantee funds was not a prerequisite for obtaining an IUP, but rather an obligation to be fulfilled afterwards, aligning with the stipulations of Mining Law No. 4 of 2009.

Due to the absence of explicit requirements in the Mining Law and its delegated regulations, the government lacked the authority to compel companies to fulfil their reclamation obligations prior to obtaining an IUP. This regulatory gap hindered effective enforcement, contributing to instances where mining companies evaded responsibility even in cases of blatant non-compliance[57]. Critics argue that corruption within governmental institutions exacerbates this issue, further undermining enforcement efforts[58].

Furthermore, broader inadequacies in regulations governing mine and post-mining reclamation are evident. These include unclear guidelines on the timing and accounting

57 Tri Hayati, Conrado M. Cornelius, and Andri G. Wibisana, "Why Reclamation Bonding Mechanisms Fail in Indonesia," *Journal of Energy & Natural Resources Law* (2020): 23.

58 *Ibid.*

procedures for guarantee fund deposits, as well as the absence of specific criteria for evaluating the quality of reclamation efforts undertaken by mining companies[59]. These deficiencies highlight systemic challenges in law enforcement within the mining sector.

Therefore, regulations pertaining to mine reclamation and post-mining did not align with the "polluter pays" principle or international guidelines. Globally, there has been a prevailing trend in mining and environmental frameworks advocating for the inclusion of mine reclamation and post-mining obligations within mining license requirements. The International Guidelines for Mining, such as those outlined by the International Guidance for Governments (IGF) Framework, emphasise that licensing applications should only be considered complete once a mine closure plan and sufficient financial assurances for closure costs have been approved and secured[60]. Similarly, the United Nations Development Programme (UNDP) and UN Environment recommend the establishment of closure plans and financial assurances before granting new mining licenses, ensuring that adequate funds or guarantees are set aside from the outset of mining operations[61].

The inclusion of comprehensive mining and post-mining reclamation plans, along with guarantees, is crucial because they ensure that companies have both the strategies and resources in place to restore the environment after concluding mining activities, thereby preventing undue burdens on government resources. Therefore, integrating these requirements into the licensing process is essential, as it ensures that the polluter bears the environmental costs. In contrast, as previously discussed, Mining Law No. 4 of 2009 and its delegated regulations do not explicitly mandate the inclusion of reclamation and post-mining plans and guarantees as prerequisites in the assessment criteria for obtaining an IUP. Consequently, there is no assurance that companies would submit these plans and guarantees for approval prior to the issuance of mining licenses.

c. Transparency and public participation

Transparency constitutes a fundamental aspect of the principle of public participation. It holds significant importance within international guidelines concerning mining and environmental practices, particularly in the context of mining licensing processes. However, Mining Law No. 4 of 2009 and its delegated regulations did not effectively address transparency and public participation requirements. Despite asserting that mining activities should be governed by principles of participation, transparency, and accountability, the law and Government Regulation No. 23 of 2010 did not comprehensively regulate these aspects. Specifically, the law merely

59 *Ibid.*

60 Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, *Mining Policy Framework, Mining and Sustainable Development* (IGF 2013).

61 United Nations Development Programme and UN Environment, *Managing Mining for Sustainable Development, a Sourcebook* (UN Environment and UNDP 2018), 71.

mandated that mining business licenses be made publicly accessible by both central and regional governments (Article 64). However, it did not include specific provisions ensuring transparency or public involvement in the licensing process itself. Consequently, regarding the issuance of mining licenses, Indonesia's regulatory framework diverged from the transparency and public participation standards advocated by international guidelines on mining and environmental governance.

In relation to environmental protection, the non-transparent issuance of mining licenses that does not involve public participation has the potential to be misused, including the neglect of legal procedures related to environmental protection. The rampant mining licensing, particularly in regions during the early implementation of the decentralisation policy, highlights the numerous licensing procedures not carried out within the hidden process of issuing mining licenses[62].

C. The Quality of Mining Law 3 of 2020 from an Environmental Perspective

Five years after its enactment, the Indonesian House of Representatives (*Dewan Perwakilan Rakyat* or DPR) and the government proposed the amendment of Mining Law No. 4 of 2009 in the 2014-2015 National Legislation Programme (*Program Legislasi Nasional*, or *Prolegnas*). They deemed the mining law insufficient in addressing the developments, issues, and legal requirements related to the implementation of mineral and coal mining, particularly concerning licensing, smelting, and refining, among other matters[63].

The drafting of Mining Law No. 3 of 2020 took place alongside the formulation of the Job Creation Bill, which aimed to streamline regulations and attract investment across multiple sectors, including mining. This simultaneous process significantly influenced the substance of the mining law[64]. Several key provisions from the Job Creation Bill were hastily integrated into the Mining Law without sufficient analysis or public deliberation[65]. In particular, to align with the Job Creation Bill, licensing authority was transferred to the central government, and the licensing mechanism was revised to incorporate a business licensing model[66]. These changes reflect an overarching effort to harmonise mining regulation with the framework of the Job Creation Bill.

Law No. 3 of 2020 was enacted shortly before the ratification of Law No. 11 of 2020 concerning Job Creation. The Constitutional Court later ruled that the Job Creation Law was

62 Feby Ivalerina Kartikasari, *Mining and Environmental Protection in Indonesia: Regulatory Pitfalls* (Meijersreeks, 24 April 2024), 49.

63 House of Representatives, Republic of Indonesia, *Academic Paper for the Draft Law on Amendments to Law No. 4 of 2009 concerning Mineral and Coal* (2018).

64 Feby Ivalerina Kartikasari, *Mining and Environmental Protection in Indonesia: Regulatory Pitfalls* (Meijersreeks, 24 April 2024).

65 *Ibid.*

66 *Ibid.*

conditionally unconstitutional due to procedural flaws. In response, the government issued Government Regulation in Lieu of Law (*Peraturan Pemerintah Pengganti Undang-undang* or Perppu) No. 2 of 2022 as a formal correction, citing an urgent need. The substance of the Perppu largely followed Law No. 11 of 2020, with only minor technical adjustments. The legislature then ratified this Perppu as Law No. 6 of 2023 to strengthen its legal standing. As a result, the changes made were procedural and technical rather than substantive, meaning the core content of the Job Creation Law, including its provisions on mining, remains unchanged.

This section examines Mining Law No. 3 of 2020 concerning environmental protection. The analysis of this law also applies the criteria outlined in Section B, which include formal quality criteria, namely clarity and coherence, as well as substantive quality criteria, such as adequacy and alignment with environmental principles and standards established by international institutions or forums in the context of mining.

a. Mining Areas

The same as Mining Law No. 4 of 2009, the absence of rules facilitating inter-sectoral coordination for natural resource management, coupled with spatial planning laws that do not mandate sectoral coordination, hinders the establishment of unified regulations that clearly delineate environmentally vulnerable areas and prohibit mining activities within them.

Mining Law No. 3 of 2020 introduces the concept of 'legal mining area' (*Wilayah Hukum Pertambangan* or WHP), which may lead to conflicts with other land uses. This is primarily because the law defines WHP as encompassing all terrestrial and marine territories, including the Indonesian archipelago, underwater lands, and the continental shelf, but lacks clarity on its precise definition, criteria for determination, and operational implementation. This means that WHP could overlap with areas designated for other sectors.

Furthermore, unlike Mining Law No. 4 of 2009, which referred to mining areas or WP integrated within the national spatial plan, Mining Law No. 3 of 2020 designates WP as part of WHP, thereby decoupling mining area determination from the national spatial plan. This separation has the potential to create discrepancies between spatial planning-based area designations and those specifically designated for mining, leading to disharmony in territorial classification

Protection of environmentally vulnerable areas becomes even more uncertain due to the inadequacy of regulations regarding their protection. As previously discussed, rules concerning the protection of environmentally vulnerable areas are established in laws and regulations beyond the scope of mining, such as those pertaining to forestry, coastal zones, and small islands. Mining Law No. 4 of 2009 introduced provisions prohibiting mining in areas delineated by existing laws and regulations. This restriction remains unchanged under Mining Law No. 3 of

2020, ensuring that mining licenses can only be granted in areas permitted by these established legal frameworks. The issue is that the laws and regulations related to natural resources are not stringent enough in regulating the prohibition of mining in environmentally vulnerable areas.

Moreover, the removal of environmental protection criteria from the determination of mining license areas or WIUP under Mining Law No. 3 of 2020 raises concerns about potential mining activities in environmentally vulnerable areas. Additionally, the law stipulates that once designated, WIUP areas cannot be altered, despite potential changes in environmental conditions or community needs over time.

Therefore, Mining Law No. 3 of 2020 lacks coherence and inadequately prevents mining activities in environmentally vulnerable areas. The absence of rules coordinating mining area determination with other sectoral land planning regulations exacerbates the risk of overlooking environmentally sensitive areas identified by other sectors. Furthermore, the rules governing mining area determination fail to adequately consider environmental factors, as they do not integrate environmental assessments into the process. These deficiencies underscore the inadequacy of Mining Law No. 3 of 2020 in safeguarding environmentally vulnerable areas from potential mining impacts.

b. Environmental safeguards

Although the academic paper of Mining Law No. 3 of 2020 explained that there were problems with the implementation of AMDAL, Mining Law No. 3 of 2020 made no improvement to the rules related to AMDAL[67]. The rules remain the same as in Mining Law No. 4 of 2009. Neither is there any regulatory improvement regarding mine reclamation and post-mining. As was the case with Mining Law No. 4 of 2009, Mining Law No. 3 of 2020 does not take advantage of the licensing mechanism to ensure company compliance with mine reclamation and post-mining obligations. As explained above, based on guidelines from several international organisations related to mining and the environment, a commitment to comply with reclamation and post-mining obligations should be part of the licensing requirements. Therefore, mine reclamation and post-mining guarantees must be paid before a mining licence is granted. However, according to Mining Law No. 3 of 2020, mine reclamation and post-mining are not a part of the decision-making for the mining licence issuance process, so this obligation is largely symbolic. Although the new mining law imposes criminal sanctions on companies that fail to carry out reclamation and/or post-mining activities, which appears to be a step forward, its implementation will be challenging due to the law's imposition of administrative sanctions for the same violation. Judges and lawyers may argue that the application of a criminal sanction must be based on the principle of *ultimum remedium* so that administrative sanctions must be

67 *Ibid.*

applied first before criminal sanctions can be imposed[68]. In other words, although the provision of criminal sanctions deserves appreciation, in practice, judges are often reluctant to apply them, believing that administrative sanctions should be imposed first.

c. Transparency and public participation

Mining Law No. 3 of 2020 failed to address the challenges and intricacies associated with mining license issuance, nor did it establish transparency and public participation guidelines in this process, thus offering no enhancements over its predecessor. Consequently, there is a concern that this law may inadvertently facilitate corruption in the mining licence issuance procedures. This lack of transparency opens the possibility for various licensing procedures to be neglected, including those related to environmental protection by the licence issuers. The more mining licences that are issued illegally, the more mining practices threatening the environment will emerge. Moreover, the law has removed provisions pertaining to criminal penalties for mining licence issuers who contravene the laws and regulations stipulated in Mining Law No. 4 of 2009, exacerbating the regulatory shortcomings in this area.

Conclusion

The historical review presented in the Introduction illustrates how mining laws and regulations in Indonesia, from the Colonial period to the Reform era, have contributed to environmental problems rather than resolution. Over time, the environmental impacts of mining appear to have been largely overlooked by the legal and regulatory framework. Its economic benefits often come at a considerable environmental cost. History also shows that various laws and regulations have been enacted, yet environmental damage continues to worsen. Therefore, this study examines whether recent laws and regulations have improved in quality with regard to environmental protection, so that they have the potential to protect the environment more effectively than the former laws and regulations. The study examines Mining Law No. 4 of 2009 and Mining Law No. 3 of 2020 by applying formal quality criteria, namely clarity and harmony, as well as substantive quality criteria, namely adequacy, and alignment with environmental principles and standards in mining issued by international institutions or forums. The study focuses on three key aspects: 1) delineation of mining areas; 2) environmental safeguards; and 3) transparency and public participation.

The assessment results show that, based on these criteria, both mining laws are insufficiently robust from the perspective of environmental protection and, therefore, inadequate in regulating

68 Dyah Paramitha, Raynaldo Sembiring, and Isna Fatimah, *Beberapa Kritik Hukum Terhadap Perubahan UU No. 4 Tahun 2009 Tentang Mineral dan Batubara*, Seri Analisis ICEL (2022).

mining-environment management. Consequently, they lack the potential to effectively safeguard the environment from the impacts of mining activities. Regulating mining-environment management requires high-quality laws and regulations; however, there are several shortcomings in the quality of laws and regulations, including inadequate clarity and sufficiency in regulating environmental protection; lack of harmony in the regulation of mining areas, making it difficult to define environmentally vulnerable regions; inadequate rules on mine reclamation and post-mining activities; inadequate rules on transparency and participation; and the regulations that do not align with mining-environment guidelines issued by various international organizations or forums. However, it should be highlighted that Mining Law No. 3 of 2020, which was supposed to address the weaknesses of Mining Law No. 4 of 2009, actually worsens the situation, as it removes several articles intended for environmental protection.

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