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Mining and environmental protection in Indonesia: regulatory pitfalls

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III Assessing the quality of the mining licence issuance framework in response to mining licence issuance problems related to the environment: Mining Law 4/2009, and other relevant laws and regulations

3.1 Introduction

As explained in Chapter I, this thesis analyses mining-related laws and regulations, in order to understand how Indonesia responds to environmental problems regarding mining license issuance. This chapter discusses the quality of laws and regulations regarding the issuance of mining licences and concerning environmental protection after the start of *Reformasi* (or, the reform period). As discussed in Chapter II, the various laws and regulations on mining licensing that have been issued in Indonesia since the colonial period have had a major impact on the development of the mining industry, as well as on the environment. However, throughout this history, the mining licence issuance problems related to the environment have hardly been considered and addressed by subsequent laws and regulations. At the beginning of the reform period, such problems became more complex, after the implementation of a decentralisation policy in which the regional government obtained authority to issue mining licences.

This chapter will look into the quality of Mining Law 4/2009, and other laws and regulations related to the issuance of mining licences and the environment. The study will explore the extent to which the Indonesian legal framework has addressed the environmental problems regarding mining licence issuance, which have occurred from the start of the reform period up until the issuance of Mining Law 3/2020. For this purpose, the chapter identifies the quality of law and regulation criteria that are relevant to the ability of law to solve problems, then uses them as a benchmark to look at the legal framework concerned.

This chapter consists of four sections. The next section (Section 2) discusses the quality of criteria for laws and regulations that are relevant to assessing the legal framework. Section 3 is an analysis of the rules for issuing mining licences in relation to the environment. This section is divided into four sub-sections, corresponding to the four problems that were presented in Chapter II: 1) rampant issuance of mining licences by regional governments, which were not in accordance with legal procedures, and which ignored the environment; 2) complex and non-transparent mining licensing procedures; 3) a lack of environmental safeguards when issuing mining licences; and 4) issuance of mining licences in environmentally vulnerable areas. Section 4 concludes the extent to which the legal framework meets the criteria set out in this chapter and potentially solves the environmental problems regarding mining licence issuance.

3.2 The quality of laws and regulations

As explained in Chapter I, the quality of laws and regulations is difficult to define. This section discusses both formal and substantive criteria for law-making, as proposed by several scholars (for example, Mader, 2001; Karpen 2013; and Mousmouti, 2012). The formal criteria are related to the quality of legislative drafting (Mader, 2001: 120), textual quality (Karpen, 2013: 151), or technical quality (Voermans *et.al.*, 2000: 6). Fluckiger uses the term 'formal quality' for drafting-related criteria, which include clarity, simplicity, consistency, concision, and precision (Fluckiger, 2010: 215). Other scholars also provide formal criteria as basic principles that may make legislation better, including clarity, accuracy, and unambiguity (Vanterpool, 2007: 171; Xanthaki, 2011: 80). The formal criteria are in line with the legal theory presented by Fuller, who argues that formal legality means that a law meets certain criteria, being: clear, consistent, known to every citizen, general, and non-retroactive (Fuller, 1976: 41)[1].

The substantive quality of law is related to the content of the law, and it is widely accepted as a key element of legal quality. Most scholars relate the quality of the contents of laws to social reality, such as Mader, who argues that the substantive quality of law is associated with its impact on social reality (Mader, 2001: 121). This relationship is also mentioned by Fluckiger, who considers it part of 'factual criteria' (Fluckiger, 2010: 213-214). Mousmouti also argues that an important element of quality of law is effectiveness, i.e. how the effectiveness of the quality of law is expressed in terms of its real life results (Mousmouti, 2012: 205). Rooij focusses on the 'implementability quality', which assesses whether or not legislation has a positive effect on compliance and enforcement (Rooij, 2006). Seidman and Seidman also issue guidelines to help the substance of a law change human behaviour, based on the understanding that the law must achieve the desired social change (Seidman *et. al.*, 2001)

The formal quality of law and the substantive quality of law cannot be separated, as they are complementary. Furthermore, the substantive quality of law cannot exist without the formal quality of law. For example, although a law might be made based on comprehensive research into changing a certain problematic behaviour, it will not achieve quality of law if certain criteria for the formal quality of law (such as clarity) are not met. The law will be difficult to implement, because its norms are unclear or ambiguous and therefore its intended subjects may not understand them. Likewise, if a law has met the formal quality of law, it will not achieve its goal if the substance of the law is (for example) not in accordance with social reality.

1 Bedner also states that, in the context of formal legality, the law must be clear and certain in its content, accessible and predictable for the subject, and general in its application, so that citizens can predict how the state will respond to their behaviour (Bedner, 2010: 60).

To examine the extent to which norms in the Indonesian regulatory framework can potentially solve problems, this chapter defines and uses several criteria, including the formal quality of law criteria – namely, clarity and coherence – and the substantive quality of law criteria – namely, adequacy, feasibility, and conformity with environmental principles and standards relevant to mining licence issuance. The criteria used in this chapter are interrelated and complementary. So the conclusion, regarding the extent to which the regulatory framework can potentially solve the problems explored in this chapter, is measured based on the fulfillment of *all* the criteria. More information about each of these criteria is given below, including why each criterion is relevant to assessing the quality of the legal framework for regulating the issuance of mining licences in relation to the environment.

Clarity

Clarity means the quality of being easy to understand. A simple understanding of clarity in terms of the quality of law is a set of unambiguous and understandable legal norms. A clear law makes people confident in their understanding of norms and is related to certainty (Re, 2019: 1509). One of the requirements generated by the principle of legal certainty is that a law can be read and understood by its recipients (Voermans, 2009: 66). In general, the legal system must provide clear norms in order to guarantee certainty, so that citizens can understand legal directions (Bertea, 2008: 29). After the law is understood by the public, and implemented by public officials uniformly and repeatedly, legal certainty is formed (Bertea, 2008: 30). People know what behaviour the legislation expects of them, and the consequences for not meeting those expectations. Clarity also protects people from the arbitrariness of authorities or other 'powers'. Certainty gives maximum legal predictability, so it is closely related to legality and the rule of law doctrine (Fuller, 1976; Bedner, 2010). Therefore, clarity is a standard criterion of most studies on legislative quality, and it is used as a standard for law-making (for example, Vanterpool, 2007: 187-188; Flückiger, 2008: 12). Thus, I refer to clarity in this thesis because it is a basic standard that must be met by law. Furthermore, to be able to resolve problems, the law must be implemented in accordance with the intent of the law-maker, whose purpose must be stated clearly in the norms.

How can one measure whether or not a law meets the clarity criterion? it is difficult to measure clarity in general, and even harder to provide quantitative measurements for it (Fuller, 1976: 43). Even the notion of clarity itself is considered by some scholars to be unclear and debatable (Kurzon, 1985: 269; Vanterpool, 2007: 167: Re, 2019: 1507). In general, clarity requires that a piece of legislation must be readable (for example, Kurzon, 1985: 269; Flückiger, 2008: 15). Text that is easy to read generally uses simple and concise sentences, without expressions that are too specialised (Flückiger, 2008:

15). Simplicity also means not using long sentences, because even if long sentences are accurate and grammatically correct, the short-term memory of many readers will not allow the correct understanding of very broad material (Vanterpool, 2007: 188). To ensure that legislation is easy to understand, the use of plain language is widely recommended, both by scholars and in guidelines for making legislation (Vanterpool, 2007: 188; Xanthaki, 2008: 17; Majambere 2011:418; Gashabizi, 2013: 419-420). Plain language is simple language which avoids the use of complicated and technical terms, for the sake of understanding by the intended audience (Vanterpool, 2007: 191). This can be done simply by using everyday language (Vanterpool, 2007: 191; Gashabizi, 2013: 420). However, simple language cannot always be used, as certain cases require a longer, more technical, or more complicated explanation (Flückiger, 2008: 23). In this case, simple language can actually create confusion. Therefore, if simplicity conflicts with clarity, then clarity prevails (Xanthaki, 2008: 18). The idea is to adapt the complexity of the situation being regulated and not use complex legal jargon just for the sake of it, but only when necessary. Another clarity criterion that is also widely discussed is precision. Written legislation must avoid ambiguity and ensure that each rule is accurately stated (Vanterpool, 2007: 195). Ambiguity can create different interpretations of a text. Seidman *et. al.*, state that precise legislation is important, so that meanings cannot be twisted (Seidman *et. al,* 2001: 261). However, sometimes texts cannot be explained by using light and simple language; to achieve precise norms, some texts require ponderous, complicated language (Flückiger, 2008: 23). In other cases, precision may be absent in order to cover political disagreement; for example, when a problem cannot be resolved by law-makers, so that resolution is delegated to lower implementing regulations (Xanthaki, 2008: 16).

In this chapter, clarity means that norms respond to real problems in legislation, and that regulations must be easy to understand and unambiguous. Regulations must be written in simple and precise sentences. However, to regulate certain conditions that require more technical and complex explanation, the language used does not have to be simple. Moreover, sentences providing rules which can be explained in more detail in implementing regulations also do not have to be too precise. In essence, texts should neither generate ambiguity nor lead to multiple interpretations.

Coherence

Coherence is often defined as the equivalent of hanging together, making sense as a whole, cohesion, consonance, speaking with one voice, or being tightly knit (Peczenik, 1989: 159 in Bertea, 2005: 372). To achieve coherence, there must be reasonable interconnection between mutually reinforcing elements, in order to form supportive rationality (Bertea, 2005: 372). Each of these elements supports or justifies each other, so that they integrate and produce harmony (Kress, 1993: 640-641). The degree of coherence therefore

depends on weighing all the elements and balancing them against each other (Alexy & Peczenik, 1990: 132).

The term 'coherence' is common in discussions about legal reasoning and legal justification, where coherence is needed to justify legal propositions or judicial decisions (Raz, 1992). A coherent decision means that each argument put forward supports the others, and is in accordance with the basic principles of a legal system (Bertea, 2005: 372). A decision can be justified if it is supported by arguments that are rationally coherent, i.e. the decision does not contain any illogical arguments, in terms of its structure (Hage, 2004: 87). The decision can also be justified if it is coherent in terms of existing cases and laws (Levenbook, 1984, 355; Siems, 2008: 149).

Coherence is not only used to justify arguments or decisions. It is essential that any legal system (Grantham & Jensen, 2016: 363) has a unity of principles, or a set of legal norms that share the same values or principles (MacCormick, 1984). For Weinrib, every legal doctrine, institution, or action (and its justification) forms an integrated unit, every sub-part (or aspect) of which reflects the whole (Kress, 1993: 640). In a broader understanding of coherence, law is not only a coherent collection of norms; it must also be coherent with social reality, because it law a social phenomenon (Hage, 2004: 90). Unity in the legal system, or being free from contradiction, makes the system clear (Grantham & Jensen, 2016: 363). What is coherent can be understood, it makes sense and is well expressed (Raz, 1992: 276 in McGarry, 2013: 18). Legal subjects will better understand the law, if the rules in their legal system do not contradict each other, making it more likely that they will understand how the rules apply to them. Therefore, coherence supports both legal certainty and the rule of law (Grantham & Jensen, 2016: 363; McGarry, 2013: 18).

In the context of environmental law in Indonesia, Otto discusses the incoherence in decisions, laws and regulations related to the environment and natural resources. Terms like 'coordination', 'harmonisation' and 'integration' have become part of Indonesian legal discourse to address incoherence, but it is not always clear what they mean (Otto, 2003: 13). Otto defines coordination as a particular adjustment between separate parts, but the parts still maintain their own identity and purpose (Otto, 2003: 15-16). The word harmonisation applies when the separate parts are adjusted to one another, giving rise to "agreeable effects" (Otto, 2003: 15-16), whereas integration means the joining of two or more parts into one unit (Otto, 2003: 15-16). By Otto's definition, coherence most closely relates to the term harmonisation, where harmonising different parts will lead to coherence. Otto goes on to explain coherence from the perspective of environmental management, as harmony between institutions, norms, and procedures (Otto, 2003: 16).

I use coherence as one of my criterion, because (as Otto says) in Indonesia there are various laws and regulations related to the issuance of mining licences by different agencies, and there is therefore ample opportunity for contradiction. To be able to solve real problems, the laws and regulations must support each other in creating clear rules. Contradictory rules can be confusing, making them difficult to enforce and easy to divert, because the legal subject is given a choice of several different rules. Conversely, a coherent law has more legitimacy, resulting in a greater obligation on legal subjects to obey the law (McGarry, 2013: 26)

In this chapter I am discussing coherence at two levels, within a law or a regulation, and within the legal system as a whole. Provisions in a piece of law or regulation are said to be coherent, not only because they are not contradictory, but also because they support each other and have the same purpose. Likewise, different laws and regulations must not only be uncontradictory but also harmonious. The relationship between mining law and other laws and regulations, in terms of environmental protection (as Otto explains above), is like separate parts that must be directed towards conformity. For example, rule A stipulates that everyone must have a licence to carry out X activity. Rule B in the same law, or rule C in another law, is said to be coherent, if it is not only not in conflict regarding the licence obligations governed by rule A, but also in support of rule A (e.g. by not allowing activity X to be carried out without a licence).

Adequacy

Adequacy basically means being enough or satisfactory for a particular purpose. The criterion of adequacy is inspired by the quality of law in terms of its implementability, as defined by van Rooij. He states that the rules in a law must be adequate so that, when they are fully complied with, the desired social change can be achieved as much as possible (Rooij, 2006: 34). In this way, the norms of a law have the capability to control behaviour as expected by the law-makers.

As discussed by several scholars, discussion on a law achieving its purpose may also be linked to the law's effectiveness (such as Karpen 2002; Mousmouti, 2012). Effectiveness is the extent to which the law succeeds in producing the desired regulatory effect (Mousmouti, 2012: 201). Moreover, Mader defines effectiveness as the conformity between observable attitudes and behaviour in the target population (individuals, companies, and public officials responsible for implementing or enforcing laws) with attitudes and behaviours as determined by law-makers (Mader, 2001: 126). Effectiveness is achieved when the implementation of legislation has changed behaviour in accordance with the objectives of the law. Therefore, effectiveness is influenced by both the quality of a law and how the law is implemented (Mader, 2001: 126; Xanthaki, 2008: 14; Mousmouti, 2012: 201-202). Thus,

the effectiveness of laws and regulations can be better known if they have already been implemented and evaluated.

However, before a law is implemented, the extent of its potential to resolve the issues being addressed can be estimated via an adequacy assessment of the norms in the law. The adequacy of the norms provided by the law is one element contributing to the law's effectiveness. Adequate norms in law must *first* assume that, because law is aimed at solving real problems, the rules in laws must relate to the real problems being addressed. Making norms in accordance with social realities is a quality statutory requirement for achieving effectiveness (Mousmouti, 2012: 201-202). Therefore, the law must be based on careful research on the problems to be handled, which will provide the norms needed to solve the problems. *Second*, the norms must be capable of solving the problems. For this reason, Rooij provides criteria for norms to achieve the desired social change; that is, the norms need to be quite strict and the scope of application quite wide (Rooij, 2006: 35). Quite strict means that the individual or company has no alternative but to comply with the established norms. For example, the norms impose appropriate sanctions, or other consequences, if legal subjects commit an act that is prohibited. These sanctions or consequences are strict enough to force legal subjects to prefer following the norms to ignoring them. Sanctions that are too light will allow legal subjects alternatives to obeying the norms. Norms must also have a broad scope, meaning that legislative norms must cover every aspect of the problem to be handled. For example, to solve the problem of illegal licence issuance, the norms in the law must be sufficient not only to regulate sanctions for illegal licence holders, but also to govern the entire licensing process. If the law only regulates sanctions, the root of the problem regarding the granting of illegal licences will not be resolved, because there is a possibility that the problem will exist throughout the licensing process. Therefore, the licensing system as a whole should be regulated.

The adequacy of law therefore deserves to be one of the criteria determining the extent to which laws and regulations in Indonesia have the potential to resolve mining licence issuance problems related to the environment, because adequate norms can support the effectiveness of implementation. Assessment of the adequacy of laws and regulations in this chapter firstly includes the relationship between real problems and the norms of laws and regulations. The chapter assesses the extent to which norms in the regulatory framework respond to, or are related to, the problems that have been described in Chapter II. Secondly, assessment of adequacy includes the stringency and scope of the norms concerning issues that must be handled, meaning that the norms related to solving these problems will be assessed on: whether the scope of the regulation is broad enough to cover the problems; and, whether the norms are strong enough to change the problematic behaviour.

Feasibility

Feasibility means the possibility that something is reasonable, or that it can be made, done, or achieved. Based on this definition, norms are feasible if they can reasonably be implemented by every subject of the law that they address, such as individuals, companies, state institutions, and law enforcers. The feasibility criteria used in this chapter are also influenced by the implementable law criteria discussed by van Rooij. According to him, the norms in a law are feasible when they can be carried out financially, physically, and technically by legal subjects (Rooij, 2006; 36). Therefore, feasible laws and regulations are made based on a sufficient understanding of the ability of legal subjects to obey the rules, economically, culturally, and in other relevant contexts. Feasible rules are also made by considering the state's ability to enforce the law, which includes applicable costs, the capacity of law enforcement officers, and the capacity of other facilities that may support law enforcement.

In fact, many laws are not feasible, and some even demand things that are impossible for legal subjects to implement (Fuller, 1976: 70-78). In developing countries, the phenomenon of a law that is not feasible existing often occurs, because the political elites of developing countries issue ambitious laws that tend to require radical social change, in order to pursue development (Otto *et. al.,* 2008: 55). Such laws are difficult to enforce, because people are prepared to accept neither rules that are very different from their usual practice, nor the possibility that the state does not have sufficient time to prepare its law enforcement instruments. For example, legislation may require that all licensing processes be carried out online, with the intention of preventing corruption, despite that fact that certain technology is required to carry out this policy. Such legislation cannot be implemented immediately, if the government does not provide sufficient budget and the skilled staff required to operate the new technology.

Based on the explanation above, it appears that sometimes there is a trade-off between adequacy and feasibility. Adequacy focusses on the aspirations of legislators, whilst feasibility focusses on the possibility and willingness of norm recipients and law enforcement officials to either comply with the law or enforce it (Rooij, 2006: 36). Therefore, an adequate norm may not always be feasible.

This chapter assesses the extent to which norms in the form of solutions to problems related to mining licence issuance and the environment are feasible for implementation. The laws and regulations analysed in this chapter were issued during the reform period, after the initiation of the problematic decentralisation policies described in Chapter II. I will assess the extent to which these norms can be implemented, by assessing the capacity of legal subjects, from both economic and technical points of view. Moreover, the

assessment focusses on the timeframe required for legal subjects to adjust to and apply these norms. Another important element that is assessed is the extent to which the law conforms to the culture or practices that have previously been used, so that the rules do not meet with too much resistance from legal subjects.

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

As the quality of laws and regulations mentioned in this chapter is assessed from an environmental perspective, I will analyse the extent to which norms related to the issuance of mining licences promote environmental interests, by applying the internationally recognised principles of environmental law, in addition to the general criteria discussed above. I will focus on the principles of environmental law that are relevant to mining and the environment; namely, the preventive principle, the polluter pays principle, and the public participation principle. Since a principle is a guide for action it has no detailed definition; therefore, there is debate about its meaning, and its application may vary by jurisdiction or situation (Martin *et. al.*, 2016: 7). In this sub-section, I will explain each of these principles in the context of the regulatory framework for mining and the environment.

The explanation of these principles is linked to the guidelines for regulating mining, which are issued by international environmental agencies or forums that focus on mining and sustainable development, such as: the Berlin II Guidelines for Mining and Sustainable Development[2]; Extracting Good Practices, A Guide for Governments and Partners to Integrate the Environment and Human Rights into Governance of the Mining Sector[3];

2 These guidelines were issued by the United Nations in 2002. They are intended to provide general guidance for sound and sustainable management of mining. These guidelines highlight what can be done in terms of regulation, administrative control and mine management, in order to achieve an acceptable level of environmental performance (UN, 2002).

3 This joint guide, from 2018, written by *Naturvårdsverket* (the Swedish Environmental Protection Agency) and the United Nations Development Programme (UNDP), is aimed at supporting the government and other stakeholders in better managing the environmental and social aspects of mining. One of the guidelines provides an overview of the tools and approaches that the mining sector can use to manage the environment in a more integrated and holistic manner (*Naturvårdsverket* & UNDP, 2018).

Managing Mining for Sustainable Development, A Sourcebook[4]; Mining Policy Framework, Mining and Sustainable Development, 2013[5].

1) The preventive principle

This principle derives from *The Trail Smelter Arbitration [1941]* (Wilkinson, 2002: 104; Kiss & Shelton, 2007: 90). The case arose from crop damage to property in the United States that had been caused by emissions from Canadian smelters. The court concluded that, under the principles of international law, as well as United States law, no state had the right to use or permit the use of its territory in such a way that would cause injury by smoke in or to the territory of another country or property, or persons in it (Wilkinson, 2002: 104). Case law precedent and the adaptation of general international law rules have both resulted in the basic norms of international environmental law prohibiting transboundary pollution (Kiss & Shelton, 2007: 90). Furthermore, the preventive principle became more widely known after the 1971 Stockholm Declaration on the Human Environment featured it as Principle 21. The principle stipulates that States have, in accordance with the United Nations Charter and the principles of international law, a sovereign right to exploit their own resources in accordance with their own environmental policies, as well as responsibility for ensuring that activities within their own jurisdiction or control do not cause environmental damage to other States or territories outside the boundaries of national jurisprudence. Principle 21 was reaffirmed in the 1992 Rio Declaration on the Environment and Development.

The preventive principle is can therefore be interpreted as states, companies, or individuals, under certain circumstances, being obliged to take steps to avoid causing certain types of environmental damage, including to the environment outside of their territory or ownership (Wilkinson, 2002: 105). The principle not only prevents activities that are known to cause extraterritorial environmental damage, it also seeks to avoid harm, regardless of whether or not there are transboundary impacts due to the inter-depen-

4 This sourcebook is a joint effort by the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UN Environment). It extracts the most relevant knowledge for policy-makers, such as policy tools and practices, and regulations to manage the mining sector in order to achieve sustainable development. The focus of this book is on the practical issues that need to be addressed by policy-makers, administrators and regulators, as well as by community leaders and members, including environmental regulation (UNDP & UN Environment, 2018).

5 These guidelines were issued by the Intergovernmental Forum on Mining, Minerals, Metal, and Sustainable Development (IGF). The forum is a voluntary initiative of more than 75 countries committed to exploiting mining for sustainable development, in order to ensure limited negative impacts and the sharing of financial benefit. The framework contains identification of best practice for implementing good governance in the mining sector, which will in turn contribute to sustainable development (IGF, 2013).

dence of all parts of the environment and the fact that it is often impossible to repair environmental damage (Kiss & Shelton, 2007: 91). Various legal instruments can be used to prevent environmental damage, such as licensing procedures, operating standards, emission limits, product standards, and use of the best available techniques (or, BAT) (Kiss & Shelton, 2007: 91).

Most of the regulatory guidelines for mining propose environmental impact assessment (EIA) as a tool to prevent the environmental impacts of mining activities (such as *Naturvårdsverket* & UNDP, 2018; UNDP & UN Environment, 2018; IGF, 2013). EIA helps to protect the environment by looking at the possible impacts of a project and providing information that enables developers to minimise those effects during the construction, operation, and decommissioning phases (UN, 2002: 36). A mining company will identify the potential impacts on the environment, explain how it plans to manage those effects, and provide information to the community, government and other decision-makers, so that it can be decided whether or not the project should proceed and, if so, what conditions should be attached to it (UN, 2002: 36). However, in accordance with the purpose of the preventive principle, this does not mean that only EIA instruments can be used to prevent damage being caused by mining activities; a variety of different instruments can be used, as long as they are intended to prevent environmental damage.

2) The polluter pays principle

The polluter pays principle was first introduced by the Organization for Economic Cooperation and Development (OECD 1975) (Wilkinson, 2002: 120; Kiss & Shelton, 2007: 95; Bell & McGillivray, 2006: 265). The OECD definition[6] was that the polluter should bear the "costs of pollution prevention and control measures", the latter being "measures decided by public authorities to ensure that the environment is in an acceptable state". In other words, the polluter must bear the cost of the steps that he is legally bound to take to protect the environment, such as measures to reduce pollutant emissions at their source and measures to avoid pollution by treating effluent from polluting installations, as well as any other sources of pollution (OECD, 1992: 5). Later, this principle was recognised as part of the 1992 Rio Declaration on Environment and Development, in Principle 16. The principle stated that national authorities should endeavour to promote the internalisation of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

6 OCDE/GD(92)81, The Polluter-Pays Principle, OECD Analyses and Recommendations Environment Directorate Organisation for Economic Co-Operation and Development Paris 1992, https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=OCDE/GD(92)81&docLanguage=En

The basis of the polluter pays principle is that those responsible for pollution meet the costs of its consequences (Bell & McGillivray, 2006: 61). This means that producers of goods must be responsible for the cost of preventing and treating any pollution caused by the manufacturing process (Bell & McGillivray, 2006: 266). This includes costs incurred to avoid pollution, in line with the idea that protecting life by prevention is better than protecting it by cure (Bell & McGillivray, 2006: 266). It should be emphasised that this principle does not justify the view that whoever pays is allowed to pollute (Wilkinson, 2002: 131-132), but it does ensure that environmental costs are included in the overall cost of the production process. For example, European Union legislation provides that, for the necessary environmental quality objectives to be achieved, polluters must pay costs for pollution control measures, such as the construction and operation of anti-pollution installations, and investment in anti-pollution equipment and new processes (Kiss & Shelton, 2007: 97). Another mechanism is the use of mandatory insurance, to anticipate any polluters who might be unable to pay, for example (Wilkinson, 2002: 131).

In relation to mining, the polluter pays principle is most relevant to the company's obligation to carry out mining and post-mining reclamation; that is, activities to restore and improve the quality of the environment and ecosystem following part of (or all) mining business activities, and to restore the environmental and social functions around the mining area. Therefore, most guidelines related to mining and the environment suggest that mining and post-mining reclamation are included in mining arrangements (*Naturvårdsverket* & UNDP, 2018; UNDP & UN Environment, 2018; IGF, 2013). Mining and post-mining reclamation are important stages in mining, but there is always the possibility that a company will not carry it out due to financial problems, given the high costs of environmental and social improvements. In such instances, a mechanism is needed to guarantee that the company will fully rehabilitate the mining area[7]. Most guidelines suggest financial guarantees to rehabilitate the mining areas granted during the licensing process (*Naturvårdsverket* & UNDP, 2018; UNDP & UN Environment, 2018; IGF, 2013) Financial guarantees ensure that the costs of reclamation and restoration of ex-mining land are ultimately the responsibility of the mine owner or operator[8]. In determining the level of financial

7 United Nations Department of Economic and Social Affairs (UNDESA) and United Nations Environmental Programme Industry and Development (UNEP), "Environmental Guidelines for Mining Operations." http://commdev.org/files/814_file_UNEP_UNDESA_EnvGuidelines.pdf, p. 12.

8 United Nations Department of Economic and Social Affairs (UNDESA) and United Nations Environmental Programme Industry and Development (UNEP), "Environmental Guidelines for Mining Operations." http://commdev.org/files/814_file_UNEP_UNDESA_EnvGuidelines.pdf, p. 12.

assurance, the licensing process plays an important role for three reasons[9]. First, the licence can be used to identify the standards required for reclamation and environmental performance in the mine. Second, the mine plan is used as the basis for calculating the amount of the financial guarantee, taking into account factors such as the existing level of pollution prevention, closure planning, and reclamation design. Third, licences are often the only way to successfully enforce environmental performance and reclamation standards; therefore, a license application should be considered completed, only if it includes an acceptable plan for eventual mine closure and the provision of adequate financial guarantees to cover the costs of closure and ongoing monitoring (IGF, 2013: 26). Indonesia also regulates a reclamation guarantee fund (*dana jaminan reklamasi*) for mining activities (Article 30-35 Government Regulation 78/2010 on Reclamation and Post-Mining). The guarantee fund is a refundable deposit system. A certain amount of money is deposited in a joint account controlled by both the government and the mining company. This amount can only be drawn if the government considers the company's reclamation satisfactory. Placing such a reclamation bond does not relieve the company of its obligation to carry out mine reclamation, but it provides a guarantee for the government that funds are available if the company fails to carry out the reclamation.

3) The public participation principle

The public participation principle developed internationally after being recognised in the 1992 Rio Declaration. Principle 10 of the declaration states that environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment, which is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 10 recognises 3 pillars of public participation, namely access to information, public participation, and justice. The Aarhus Convention lays the principle out in more detail, stating that access to information includes the active, unsolicited dissemination of information, and the provision of reactive information. The latter is where public authorities provide certain

9 United Nations Department of Economic and Social Affairs (UNDESA) and United Nations Environmen- tal Programme Industry and Development (UNEP), "Environmental Guidelines for Mining Operations." http://commdev.org/files/814_file_UNEP_UNDESA_EnvGuidelines.pdf, p. 13.

information upon request and within a certain time limit (Bell & McGillivray, 2006: 317). In terms of public participation, the convention promotes increased public participation in environmental decision-making, where the public participates in the preparation of plans and programmes related to the environment (Bell & McGillivray, 2006: 317). The convention also promotes access to justice in environmental issues by giving the public the right to challenge decisions through independent review via the courts or other independent bodies (Bell & McGillivray, 2006: 317).

Forms of public participation are varied, and participation may occur through elections, grassroots action, lobbying, public speaking, hearings, and other forms of government where various interests and communities actively shape the considerations and decisions that affect them, including licensing procedures (Kiss & Shelton, 2007: 103). It should be understood that a community does not automatically have the capacity to access and understand all the information relevant to its interests. Application of the principle of public participation therefore needs to be accompanied by community empowerment, so that powerlessness can be moderated and equalised by several disparities, thus supporting fairer participation (Martin *et. al*., 2016: 20). This is especially true in the mining sector, in which data and information are complex and difficult for the public to understand.

Most of the guidelines related to mining and the environment require public participation for every stage of mining. Actively engaging the affected public to participate in rule-making, licensing and monitoring the sector acknowledges the value of community and civil society participation in both improving governance of the mining sector and strengthening enforcement (*Naturvårdsverket* & UNDP, 2018: 12). Public consultation and engagement helps to balance economic development considerations with social and environmental considerations, leading to decisions that are more sustainable, and more viable politically and socially (UNDP & UN Environment, 2018: 15). Therefore, there should be a legal and institutional framework that ensures transparent and available information provides opportunities for an informed public to participate in decision-making, as well as providing mechanisms to hold decision-makers and mining companies accountable to an informed public (*Naturvårdsverket* & UNDP, 2018: 23). In turn, the licensing process should require mining entities, in preparing their applications for mining licences, to consult with communities and other stakeholders at all stages of the assessment and planning process, and to document the nature and results of their engagement programme in the license application (IGF, 2013: 7).

Transparency is recognised as an important element in mining licensing instruments (NGRI Reader, 2015: 4; Cameron & Stanley, 2017: 221). This is an important step in ensuring that the public (particularly people affected by a specific project) has access to the terms and conditions governing access

to the country's mineral resources (*Naturvårdsverket* & UNDP, 2018: 97). At the very least, the following must be available to the public: data and reports on licences, geological surveys, and reserves; the national mining cadastre and a national data bank; national and regional level mining contracts or concessions (*Naturvårdsverket* & UNDP, 2018: 45). Even the mining licence/investment contracts, or at least their key terms, are available to the public, as there is a growing body of international guidance calling for the disclosure of contract terms, with only limited exceptions. Availability includes: access to the terms and conditions being granted for access to the country's mineral resources; giving the public tools to assess and discuss whether or not the government has negotiated a good deal for the country; helping to reduce corruption and making it more likely that rights are allocated on the basis of merit; providing a basis for holding mining companies accountable, as it makes the commitments that a company has made more transparent (*Naturvårdsverket* & UNDP, 2018: 97).

3.3 The quality of Indonesia's laws and regulations in terms of addressing mining licence issuance problems related to the environment

This section uses the criteria for assessing the quality of laws and regulations (described above) to analyse the effectiveness of Mining Law 4/2009, and other relevant laws and regulations, in addressing the environmental problems associated with mining licence issuance at the beginning of the reform period, as identified in Chapter II. At the time, key problems were: 1) the rampant issuance, by regional governments, of mining licences that were not in accordance with legal procedures, and which ignored the environment; 2) the complex and non-transparent mining licensing procedures; 3) the lack of environmental safeguards for issuing mining licenses; and 4) the issuance of mining licences in environmentally vulnerable areas. The sub-sections below are based on the four problems. Each sub-section discusses the extent to which the regulatory framework responded to the problem and met the relevant quality of laws and regulations criteria.

The rampant issuance, by regional governments, of mining licences that were not in accordance with legal procedures, and which ignored the environment

Chapter II explains how, in the early days of decentralisation, the authority to issue mining licences (known at the time as Mining Authorisation or *Kuasa pertambangan* or KP) was delegated to regional governments, which resulted in the widespread issuance of KP. In turn, this boosted opportunities to obtain own-source regional revenue (*Pendapatan Asli Daerah*, or PAD) and illegal profit by issuing mining licences via regional powers. Many of the licence issuance processes did not go through legal procedures and ignored environmental requirements. Therefore, the process eliminated

the opportunity to filter out companies that were committed, and had the ability to protect the environment and prevent mining licences being issued for environmentally vulnerable areas. As a result, there were thousands of problematic KPs, some of which did not have an accompanying Environmental Impact Assessment (EIA or *Analisis Mengenai Dampak Lingkungan*, or AMDAL) and were located in conservation areas, posing a risk to the environment. Therefore, with regard to the issue of problematic licence issuance by regional governments, Mining Law 4/2009 had to deal with two main problems: (1) problematic behaviour on behalf of regional governments when issuing mining licenses; and (2) the existence of thousands of mining licences which had been issued via unlawful processes.

The Mining Law and its implementing regulations responded to the problem of regional governments' behaviour by giving authority to central government to determine mining areas and supervise the regional governments. Moreover, the mining law provided criminal sanctions for governments committing violations by issuing mining licences. Mining Law 4/2009 stipulated that the authority to determine mining areas rested with central government. The Mining Law stated that mining areas would be determined by central government, after coordinating with the regional government and consulting with the House of Representatives (*Dewan Perwakilan Rakyat* or DPR) (Article 6). The regional governments were no longer authorised to decide on mining areas, and a mining licence, which the Mining law referred to as a Mining Business Licence (*Izin Usaha Pertambangan*, or IUP), could only be issued by a regional government after the mining area had been determined by central government. Further, Government Regulation 22/2010 on the Regulation of Mining Areas stipulated in more detail how a mining area should be determined.

The Mining Law also regulated the central government's supervision of mining operations carried out by regional governments (Article 139-141). This included the obligation for regional governments to provide reports on their mining management to central government (Article 142). Government Regulation 55/2010 on Guidance and Supervision of Mineral and Coal Mining Business Management regulated central government's supervision of regional governments, in more detail. Furthermore, the Mining Law established a criminal sanction for government officials who abused their licensing authority: a maximum of two years in prison, and a maximum fine of of 200,000,000 rupiah (Article 165). However, the mining law did not regulate the thousands of problematic KPs which were issued in the early days of decentralisation.

Below, I discuss the extent to which the quality of the Mining Law responded to the two problems described above.

1) *The clarity and coherency of rules in regulating the behaviour of regional governments*

Chapter II discusses how one of the problems in issuing mining licences in the regions is caused by the unclear distribution of power between central government and regional governments. Indeed, the clarity of norms regarding the division of authority was very important. Central government and regional government should both understand what authority they have, the accompanying limitations and obligations, and the consequences if they were to abuse their authority. Mining Law 4/2009 clearly stipulated the division of authority for issuing mining licences, as follows: regents/mayors had the authority to issue IUP for mining within districts/cities; the governor had the authority to issue IUP for mining across districts/cities; and the Minister of Government Affairs in the Field of Mineral and Coal Mining was authorised to grant IUP for mining across provincial areas (Article 37). These rules were clear norms; so it could be understood, without multiple interpretations, that each level of government had the authority to issue mining licences in their areas. The rules regarding the authority of central government to determine mining areas and supervise mining operations by regional governments were also clear. Furthermore, Mining Law 4/2009 clearly stipulated the sanctions for officials who abused their authority when issuing mining licences.

Clarity on the division of authority between central government and regional governments in issuing IUP was also supported by the alignment between Mining Law 4/2009 and the regional autonomy policy, as regulated by Law 32/2004 on Regional Government. At the time, as with all policies related to natural resources, the Mining Law was required to be in line with the decentralisation policy, which meant giving the authority to issue mining licences to regional governments. Also, because the rules in Mining Law 4/2009, regarding the authority of central government and regional governments, were coherent with the decentralisation policy, as regulated by Law 32/2004, they were even easier to understand.

2) *The adequacy and feasibility of rules regarding the authority of central government to determine mining areas and supervise the implementation of mining licence issuance by regional governments*

Several rules to control the authority of regional governments seem to be adequate, because they respond to the problematic behaviour of regional governments, when issuing mining licences, by limiting and controlling their authority. Prior to the enactment of Mining Law 4/2009, regional government could determine the areas defined in mining licences and issue the licences without supervision, so that many mining activities were carried out in conservation or protected areas. The enactment of Mining Law 4/2009 formally eliminated the possibility for regional governments to

determine their own mining areas when issuing mining licences. In addition, there were new rules for the supervision of mining management, and a sanction imposed on government officials who abused their authority when issuing mining licences.

However, the rules regarding the determination of mining areas by central government were difficult to implement, due to the central government's lack of readiness to provide data on mining potential throughout Indonesia (see, TII, 2017: 27-29). The rules concerning central government supervising regional governments were also difficult to apply, as central government first needed to improve its capacity to carry out the supervision. This included matters of finance, human resources, and other facilities. Hence, the solutions adopted by the mining law and its implementing regulations to regulate the behaviour of regional governments seemed adequate, but were likely not feasible for implementation. As explained in the previous section, fulfilment of adequacy criteria is sometimes an issue due to difficulty in fulfilling feasibility criteria.

3) The adequacy of rules to regulate the existing problematic KPs

The thousands of problematic KPs that had been issued by regional governments were not addressed by Mining Law 4/2009. In fact, the law did not mention KP at all, so immediately after the passage of Mining Law 4/2009 the status of KP was not clear. The Mining Law only regulated how the IUP process was issued, it did not pay attention to the thousands of existing KPs. Government Regulation 23/2010 on the Implementation of Mineral and Coal Mining Business Activities clarified the status of KPs by stipulating that KPs granted prior to the enactment of the regulation would remain in effect until the KP expired and must be adjusted to the IUP form no later than three months from enactment of the regulation.

The rules regarding KP in the government regulation were not adequate to address the problem of the existence of the thousands of problematic KPs that had been created through the unlawful procedures described in Chapter II. Government Regulation 23/2010 required only that the KP holder must change the administrative form of licence from KP to IUP. There was no detailed mechanism for the transfer and requirements for KPs to become IUPs, in accordance with the requirements for issuing IUPs in Mining Law 4/2009. This meant that the problematic KPs remained valid for as long as the form was converted into an IUP. Therefore, no adequate rules were provided to solve the problem of the thousands of existing KPs unlawfully issued in the early days of decentralisation, even though many of them had resulted in environmental problems.

Complex and non-transparent mining licensing procedures

As explained in Chapter II, the licensing process did not identify companies that were committed and had the capacity to protect the environment. One of the reasons for this was that procedures for issuing mining licences were complex and not transparent. In order to obtain KP, a company needed licences, and other documents obtained through various complex procedures from different government agencies which were governed by several different regulations. It was increasingly complex after the start of the decentralisation policy, because the regional government had the authority to issue regional regulations (*Peraturan Daerah*, or Perda) to manage natural resources, which means they were allowed to regulate various procedures and requirements for obtaining KP. The complexity of the mining licence issuance system could be used by government officials to ignore the legal procedures for issuing licences, including those related to environmental protection – for example, the obligations related to AMDAL. This was also exacerbated by the absence of rules regarding transparency in the licence issuance process, making it difficult for various parties to fully see the process. Therefore, Mining Law 4/2009 and its implementing regulations did not seem to respond to the issue of the complexity and opacity of the licensing process, in the absence of any rules leading to a transparent and simpler form of licence issuance process regulation, as well as to certainty regarding time and costs.

However, Mining Law 4/2009 did issue new policies related to the licensing system, the most significant of which were abolition of the contract scheme and use of an auction system to obtain a metal and coal mining licence. The Mining Law abolished the contract scheme, so that mining rights were only granted through the licensing system. The existing contracts were still in effect until the termination of the contract was over (Article 169 (1)), and they should be adjusted according to the rules in the Mining Law, not later than one year after promulgation of the law (Article 169 (2)). As for the auction system, Mining Law 4/2009 and Government Regulation 23/2010 stipulated that companies must first obtain a mining business licence area (*Wilayah Izin Usaha Pertambangan* or WIUP) which, for metal, mineral and coal mining, was obtained through an auction process organised by the minister, governor, or regent/mayor, depending on the WIUP area defined (Article 10-11, Government Regulation 23/2010). After winning the auction, a company would be granted a WIUP by the Minister, governor or regent/mayor (Article 17, Government Regulation 23/2010) and the process of applying for IUP could begin.

1) The adequacy of rules to solve the problem of mining license issuance complexity and transparency

As explained above, Mining Law 4/2009 and its implementing regulations contained no rules aimed at simplifying the complexity of licensing procedures. Furthermore, transparency in the issuance of mining licences was also not stipulated in the Mining Law and its implementing regulations. Hence, the Mining Law and its implementing regulations were not adequate to resolve the problems of mining license issuance complexity and transparency, because there were no rules specifically designed to respond to that problem.

The auction system in Mining law 4/2009 and Government Regulation 23/2010 were regulated as part of the mining licence issuance process, and did not aim to address the problem of mining licensing complexity and non-transparency, but instead aimed to screen all mining companies with the capability to carry out mining activities in Indonesia. In fact, the auction system even had the potential to exacerbate the complexity. The new system required new rules and procedures, and if they were not appropriate, they would create new complexities. Furthermore, Mining Law 4/2009 and Government Regulation 23/2010 did not adequately regulate transparency in the auction process. Only one article in Government Regulation 23/2010 stated that, prior to an auction for a WIUP, the minister, governors or regents/mayors, in accordance with their respective powers, shall publicly notify business entities, cooperatives, and individuals of area to be auctioned off, at least 3 three months prior to the auction (Article 10). This would simply be an announcement to parties potentially interested in participating in the auction. In addition, there was no rule that guaranteed transparency in the auction process, in order to support the fair treatment of all bidders.

2) The feasibility of implementing the auction system in Indonesia

Competitive bidding processes involve defining and selecting the areas to be tendered, establishing technical and financial qualification criteria for bidders, determining bid evaluation criteria, establishing bid evaluation procedures, and appointing a bid evaluation committee (IMI, 2018). Therefore, the auction system requires procedures and skills for regulating a competitive bidding process (Venugopal, 2014: 4), as well as the readiness of the state to provide data on potential mines to be offered, and state capacity to hold auctions.

However, based on the old mining law, Indonesia had implemented a mechanism whereby the state did not require the availability of accurate geological data, as companies conducted their own research and applied for licences or contracts once they had discovered mining potential in a

particular area. With the auction system in effect, the state needed to immediately provide geological data and prices. This was difficult for Indonesia, especially at the beginning of the enactment of auction provisions, because it was not easy to carry out research to determine mining areas and the price to be offered. There were several weaknesses in the auction process in Indonesia, including: the detailed geological information used to justify basic value was unclear, while the time required by registrants to survey the mining business licence area being auctioned was insufficient to assess the base value; there was a lack of institutional capacity and resources to verify the information stated in the documents submitted; there was no due diligence mechanism to prevent bid-rig or fraudulent bid participation (TII, 2017: 27). Therefore, the auction system was difficult to implement in Indonesia and it needed some careful preparation, especially when it came to the availability of proper data regarding potential mining and various resources to support the implementation of auctions. The Indonesian government was not yet ready for this system.

3) *The coherency of rules for issuing mining licences between laws and regulations related to the environment and natural resources*

As mentioned above, mining activities not only required a mining licence but also other documents, such as AMDAL, an environmental licence, and a lease-use licence (*Izin Pinjam Pakai Kawasan Hutan*, or IPPKH), if the mining was to be carried out in forest areas. If the rules related to these documents were not in line, this added to the complexity of licensing.

Unlike other laws related to natural resources, which only focussed on regulating the sector, Mining Law 4/2009 and its implementing regulation, Government Regulation 23/2010, linked the issuance of mining licences to rules in other laws and regulations. The Mining Law stipulated that AMDAL was one of the requirements for a mining licence (Article 36). Government Regulation 23/2010 stipulated that the requirement to obtain an exploration IUP is a statement to comply with the provisions of laws and regulations in the environmental sector, and to obtain production operation, IUP also require the approval of environmental documents in accordance with the provisions of laws and regulations (Article 26). The documents were AMDAL and an environmental licence, which were regulated by Law 32/2009 on Environmental Protection and Management, and Government Regulation 27/2012 on Environmental Licensing. Law 32/2009 stated that an environmental licence was a requirement for obtaining a business and/or activity licence (Article 40 paragraph (1)). Therefore, the rules supported each other, because both required the fulfillment of environmental documents before issuance of a mining licence. This coherence reduced the complexity of the licensing system.

Mining Law 4/2009 also linked mining activities with other requirements stipulated by laws and regulations in other sectors. Mining Law 4/2009 banned mining activities in prohibited areas, unless a licence was obtained from a government agency in accordance with the provisions of the law (Article 134). This was related to the provisions in Mining Law 41/1999 on Forestry, which stated that the use of forest areas for mining purposes was to be carried out after granting IPPKH (Article 38). Therefore, the obligation to have an IPPKH for mining activities in forest areas regulated by the forestry law was supported by Mining Law 4/2009, which required a licence from the authorised agency for mining in certain areas. This coherence would make the procedures for carrying out mining activities clearer, and might reduce the complexity of licensing.

4) Conformity between mining licence issuance rules regarding transparency and the principles of environmental law and international mining, as well as environmental guidelines

As explained in the previous section, transparency is part of the public participation principle. Transparency is an important element in international guidelines for mining and the environment, and with regard to the process of issuing mining licences. However, as explained above, the Mining Law and its implementing regulations did not adequately regulate transparency and public participation. Although Mining Law 4/2009 stated that mining was managed on the basis of the principles of participation, transparency and accountability, the law and its implementing regulation, Government Regulation 23/2010, did not in fact regulate it adequately. The law only stipulated that the central and regional governments were required to make mining business licences available for the public to see (Article 64). No specific provision was made for openness and public participation in the licence issuing process. Therefore, in terms of the process for issuing mining licences, the Indonesian regulatory framework was not in line with the transparency and public participation standards promoted by international mining and environmental guidelines.

Lack of environmental safeguards when issuing mining licences

As explained in Chapter II, one of the main environmental problems regarding the issuance of mining licences has been the lack of attention given to environmental interests throughout the process. The previous Mining Law and its implementing regulations did not regulate environmental requirements for issuing mining licences. Hence, mining licences were being issued without environmental consideration. Subsequently, environmental law and government regulations issued during the New Order period regulated the requirements for making an environmental impact assessment or AMDAL before mining activities were carried out; however, as described in Chapter II, these were not properly implemented.

Unlike the previous mining law, Mining Law 4/2009 regulated AMDAL within the mining licence issuance process. Moreover, the Mining Law also stipulated obligations related to mining reclamation and mine closure for IUP holders. The extent to which the quality of laws and regulations related to AMDAL, mine reclamation, and post-mining helps to resolve the problems with issuing mining licences is discussed below.

1) The coherency and adequacy of AMDAL rules for mining activities

Mining Law 4/2009 clearly stipulated that AMDAL was one of the documents required to obtain a mining licence (Article 39). This rule was followed up in detail by Government Regulation 23/2010, which stipulated that, in order to obtain a Production Operation IUP, a company must have a letter of commitment to comply with laws and regulations regarding the environment and environmental documents, in accordance with laws and regulations (Article 26). This referred to AMDAL, which was regulated by the Environmental Law and its implementing regulations.

Environmental Law 32/2009 and its implementing regulation, Government Regulation 27/2012 on Environmental Licensing, regulated AMDAL adequately, because the rules were comprehensive and strict. This included the requirements for assessing AMDAL and making it the main basis for issuing an environmental licence. The Environmental Law also stipulated that, without an environmental licence, a business licence could not be issued (Article 40), and IUP could not be issued without AMDAL. Moreover, Government Regulation 23/2010 linked IUP obtaining procedures to AMDAL and the environmental licensing rules stipulated by the Environmental Law and its regulations. Government Regulation 23/2010 stipulated the submission of these environmental documents as one of the conditions for applying for an IUP (Article 26). Therefore, the regulation supported the rules regarding AMDAL in the Environmental Law and its implementing regulations, thereby establishing coherent rules.

2) The adequacy of rules regarding mine reclamation and post-mining as safeguards for the issuance of mining licences

Unlike the previous mining law, Mining Law 4/2009 regulated both mine reclamation and post-mining (Article 39 and Article 99-100). Mine reclamation and post-mining were regulated in more detail, as part of mining licensing, in Government Regulation 23/2010 which stipulated the technical requirements for exploration IUP holders to apply for a Production Operation IUP. One of the requirements was to provide planning documents for mine reclamation and post-mining (Article 25). Regulations regarding mine reclamation and post-mining were specifically regulated in Government Regulation 78/2010 on Reclamation and Post-Mining. Mining companies are required to submit mine reclamation and post-mining plans, provide

a contribution to the guarantee fund as well as eventually carry out reclamation and post-mining. As explained on 3.2 above, the guarantee fund is a form of a refundable deposit system from which a company can only retrieve its deposit once its reclamation has been judged satisfactory by the government.

However, the Mining Law and government regulations did not make mine reclamation and post-mining plans and their guarantee funds part of the consideration for deciding to grant IUP. The Mining Law and Government Regulations 23/2010 did not specify that mine reclamation and post-mining plans would be assessed before granting or rejecting an IUP application. They only stipulated that in order to apply for a production operation IUP, a company must submit mine reclamation and post-mining planning documentation. Therefore, the requirement to apply for an IUP was only the submission of a plan, and not its approval by the competent authority. This rule was strengthened by Government Regulation 78/2010, which stated that exploration IUP holders were required to prepare and submit a mine reclamation and post-mining plan, along with an application for a production operation IUP (Article 6). Approval of the reclamation plan would occur no later than 30 days after the production operation IUP had been granted and the post-mining plan would be approved no later than 60 days after the production operation IUP had been granted (Articles 13 and 16). This means that approval for mine reclamation and post-mining plans could be submitted *after* the IUP had been issued, and did not form part of the assessment for issuing an IUP. Based on Government Regulation 78/2010, the provision of mine reclamation and post-mining guarantee funds was also not part of the requirement for issuing an IUP. Consistent with Mining Law 4/2009, the government regulation stipulated that IUP holders were required to provide reclamation and post-mining guarantee funds, meaning that these obligations would be carried out after the IUP had been granted.

Since the Mining Law and its implementing regulations did not explicitly stipulate that mining reclamation and post-mining plans and guarantee funds would inform the decision to issue an IUP, the government could not force companies to fulfil their obligations before obtaining an IUP. These rules were not adequate to compel companies to carry out their obligations.

However, obviously the problem of implementing mine and post-mining reclamation is not only caused by the process of issuing mining licences. In fact, the regulations regarding mine and post-mining reclamation are overall inadequate. Apart from the unclear rules regarding the timing of the placement of the deposit into the guarantee fund, the mining law and its implementing regulations do not provide clear and specific guidelines on how each of the cost factors for the guarantee fund are to be accounted for (Hayati, et.al., 2020: 23). They also do not provide specific written guide-

lines for evaluating the quality of the reclamation conducted by mining companies as the basis for the retrieval of the deposit (Hayati, et.al., 2020: 23). However, the most problematic issue regarding the failure of mining and post-mining reclamation is law enforcement. as mining companies have gone unpunished even when they blatantly failed to fulfill their obligations (Hayati, et.al., 2020: 23). A number of researchers have suggested that this is caused by corruption in government institutions, which leads to poor enforcement (Hayati, et.al., 2020: 23).

3) The conformity of AMDAL and reclamation and post-mining rules with the preventive principle and international guidelines on mining and the environment

As explained in the previous section, one of the applications of the preventive principle, especially in mining, was the availability of an EIA. All international guidelines on mining and the environment also required the existence of an EIA prior to the implementation of mining activities. Indonesia regulated AMDAL as an EIA for mining activities in both Mining Law 4/2009 and its implementing regulations, and AMDAL was also regulated comprehensively and in detail in the Environmental Law and its implementing regulations. Therefore, in relation to AMDAL for mining activities, the regulatory framework met the standard preventive principle and international guidelines for mining and the environment.

However, the rules regarding mine reclamation and post-mining did not meet the polluter pays principle or the international guidelines. In the international guidelines and framework regarding mining and the environment, it had actually been a trend that mine reclamation and post-mining should be part of mining licence requirements. The IGF Framework stated that licensing applications should only be considered complete if the mine closure plan and adequate financial assurance to cover the costs of closure had been approved and accepted (IGF, 2013: 26). The UNDP also encouraged a closure plan and adequate financial assurance to be in place before granting a licence for a new mine, so that adequate funds (or guarantee of funds) could be put aside from the beginning of the mining operation (UNDP & UN Environment, 2018: 71). Mining and post-mining reclamation plans and mining and post-mining reclamation guarantees were very important, because they ensured that a company had the plans and funds in place to restore the environment after its mining activities had been concluded, meaning that they would not impose on the government. It was therefore important to ensure it was applicable *during* the licensing process, rather than afterwards. This also ensured that the cost of environmental impact would be passed on to the polluter. By contrast, as described above, Mining Law 4/2009 and its implementing regulations were not explicitly placed in plans and guarantees for mine reclamation and post-mining as part of the requirements and assessments for obtaining an IUP. Therefore, there was

no assurance that companies would submit plans and guarantees for mine reclamation and post-mining prior to the process of mining licence issuance.

Issuance of mining licences in environmentally vulnerable areas

Based on the explanation in Chapter II, many mining activities were carried out in environmentally vulnerable areas, such as conservation and protection areas. One of the reasons for this was that the issuance of mining licences, especially those granted by regional governments, was not based on adequate consideration of area conditions. Mining Law 4/2009 did not prohibit carrying out mining activities in areas that are environmentally vulnerable, but it did prohibit such activity in places where statutory regulations had already prohibited mining activities, unless a licence was obtained from a government agency according to the laws and regulations (Article 134). Therefore, the rules regarding the protection of certain areas depended on other laws and regulations. Determination of mining areas could also affect the protection of environmentally vulnerable areas. Mining Law 4/2009 regulated the determination of mining areas (*Wilayah Pertambangan* or WP). One part of WP was the mining business licence area or WIUP: an area that could be granted an IUP. A company had to obtain WIUP via an auction process, before applying for an IUP. Therefore, mining licences should only be granted in WIUP areas.

Based on the above explanation, areas that could be granted an IUP were based on WIUP, and other laws and regulations that limited mining activities in certain areas. The following discusses the extent to which the regulatory framework regarding the determination of WP, WIUP, and laws and regulations related to the protection of environmentally vulnerable areas from mining activities, met the quality of laws and regulations criteria.

1) The clarity and adequacy of rules regarding the determination of mining areas to prevent mining activities in environmentally vulnerable areas

Mining Law 4/2009 authorised the central government to determine WP prior to issuing mining licences. The determination of WP stipulated by Mining Law 4/2009 was based on national spatial planning, in a transparent manner, taking into account the opinions of agencies, ecological aspects, environmental insight, and regional interests (Articles 9 and 10). The government determined WIUP which, as described above, was an area that could be granted an IUP. The Mining Law regulated 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, based on the Mining Law, the environment was one of the main considerations for determining WP and WIUP. However, no detailed explanation of the criteria was provided in either the Mining Law, or Government Regu-

lation 22/2010, the implementing regulation for mining areas. Therefore, there was no explanation for what was meant by determination of WP which was transparent, which honoured the conservation principles, and which took into account the opinions of the other agencies stipulated in Article 18. The lack of clarity regarding these criteria could lead to different interpretations of each. For example, the conservation principle could hold different meaning for different parties.

The lack of clarity regarding environmental criteria made the environmental standards that were the basis for determining mining areas rather vague, and it could not be ascertained if the designated WP and WIUP were located in environmentally vulnerable areas or not. Hence, the rules regarding the determination of mining areas were not adequate to prevent mining activities in environmentally vulnerable areas.

2) The coherency and adequacy of rules regarding mining areas to prevent mining in environmentally vulnerable areas

The determination of mining areas was related to other land user sectors, such as plantations and forestry, both of which have their own land planning systems. This was potentially not in line with mining areas, so harmonious laws and regulations needed to be created. Potential conflicts were found in the forestry sector especially. Forest area planning was regulated by Forestry Law 41/1999 and its implementing regulations, notably Government Regulation 44/2004 on Forest Planning.

One purpose of forest planning was to determine the function of forest areas, which consisted mainly of conservation forest, protection forest, and production forest. Based on the designation of forest area functions, the use of forest areas for development purposes outside of forestry activities, including mining activities, could only be carried out in production forest areas and protected forest areas; in the latter, open mining was prohibited. Thus, in determining the mining area, coordination with the forestry sector was essential to ensuring that mining areas would not fall within conservation forest areas. However, the Mining Law did not regulate the designation of mining areas in coordination with other sector policies. In the process of determining mining areas regulated by Mining Law 4/2009 and Government Regulation 22/2010, there were almost no rules pertaining to coordination with other sectors. Even though Mining law 4/2009 stated that the determination of WP would be based on consultation with the DPR, as well as on regional interests, ecology, the environment, and consultation with other sectors (Articles 9 and 10), no further explanation was given in either the article or the implementing regulation. Also, Government Regulation 22/2010 did not contain stipulations regarding coordination with other agencies to determine mining areas. If the determination of mining areas and forestry areas was not coordinated, it had the potential to harm the

environment; for example, the mining sector determined one mining area within an area which was already designated as conservation forest area by the forest sector.

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

The natural resource laws and regulations regarding land use (as described above) did not seem to contradict each other, although they were disconnected. Several sectors had the authority to determine and plan their respective areas based on different laws and regulations. There were no rules to define the relationship between the area determination process for one sector and another, which resulted in inharmonious land use planning in Indonesia. Therefore, the regulatory framework related to the determination of mining areas could be described as incoherent, because the rules did not lead to a division of Indonesia's territory which was unified and could clearly define areas prohibiting mining activity. The disharmony of these rules, coupled with the absence of any rules regarding coordination, made rules related to land use inadequate for protecting environmentally vulnerable areas from mining activity.

3) The coherency and adequacy of natural resource laws and regulations to prevent mining in environmentally vulnerable areas

As explained above, Mining Law 4/2009 did not regulate areas that are environmentally vulnerable to mining activity, but instead left their regulation to other laws and regulations. One of the laws limiting mining areas was Law 5/1990 on the Conservation of Living Natural Resources and their ecosystems. This law prohibited activities that could result in changes to conditions in certain areas, such as nature reserves and national parks (Articles 19, 31, and 33). However, the rules in this law were very general, and there was no strict prohibition of activities that could disturb these protected areas.

Another law that prohibited mining activities in certain areas was the Forestry Law 41/1999. This law prohibited mining in conservation areas and

open-pit mining in protected areas (Article 38). The law and its implementing regulation, Government Regulation 24/2010 on Use of Forest Areas, required a lease-use forest area licence or IPPKH for mining activities in non-conservation forest areas. Such a licence might be able to filter out mining activities in prohibited forest areas. However, the Forestry Law and its implementing regulation did not stipulate any sanctions for violating the rule. Eventually, Law 18/2013 on the Prevention and Eradication of Forest Destruction set sanctions for mining in forest areas without a licence (Article 89).

Spatial laws and regulations also restricted mining activity in certain areas. However, Spatial Planning Law 26/2007 and its implementing regulations only provided general boundaries for mining activities. The law regulated the basis of spatial planning, dividing it into two functions: the cultivation function, and the protection function (Article 5 (2)). Mining activities could only be carried out in areas deemed to have a cultivation function. Furthermore, Government Regulation 26/2008 on National Spatial Planning only outlined general criteria for mining areas, passing technical criteria to the minister with a duty towards and responsibility for the mining sector.

Coastal areas and small islands were also environmentally vulnerable, and they had seen significant environmental damage due to mining (Dahuri, 2001: 147, 166). The areas were regulated by Law 27/2007 on the Management of Coastal Areas and Small Islands, and Law 1/2014 on Amendment to Law Number 27/2007 on the Management of Coastal Areas and Small Islands. Law 27/2007 did not prohibit mining activity on small islands, but it did prohibit mineral mining in areas where it would cause technical, ecological, social, cultural and/or environmental damage, and/or environmental pollution, and/or harm to the surrounding community (Article 35 k.). No explanation was given for this rule, but it meant that mining was still allowed on small islands, as long as it did not cause damage, environmental pollution, or loss for the community. There would be a criminal sanction if the rule were violated (Article 73). Eventually, Law 1/2014 on Amendments to Law Number 27 of 2007 on Management of Coastal Zone and Small Islands stipulated the obligation to have a location licence for the use of coastal and small island areas (Article 16). This meant that a location licence was also required to carry out mining. A location licence would be granted based on a zoning plan for coastal areas and small islands, it would consider the sustainability of coastal and small island ecosystems, and it could not be granted in core zones within conservation areas (Article 17).

Hence the laws and regulations only regulated the protection of certain areas. Law 5/1990 and Law 26/2007, as well as Government Regulation 26/2008, were not adequate to prevent mining in environmentally vulnerable areas, because they did not specify the areas where mining activities were prohibited. Furthermore, the Law 27/2007 rules relating to mining in

coastal areas and small islands were not adequate, because they did not explicitly prohibit mining in certain areas that were part of small islands. The rules still allowed mining, as long as it did not technically, ecologically, socially, or culturally cause environmental damage and/or environmental pollution, but no further explanation was provided.

However, Law 1/2014 required companies to have a location licence for the use of coastal and small island areas, which were granted based on environmental considerations and could not be granted within core zones of conservation areas. This meant that mining licences were limited in certain areas, based on environmental protection alone. The rules regarding mining in forest areas were also quite strict, because apart from explicitly prohibiting certain areas for mining, there was also an obligation to have IPPKH for mining activities in forest areas, which could filter out mining activities in those areas. In addition, there were criminal sanctions for any violation of the rules. These rules could therefore be described as adequate, because if they were implemented they would reduce the possibility of mining activity occurring in environmentally vulnerable areas.

3.4 Conclusion

This chapter examines the extent to which mining licence issuance problems related to the environment (as identified in Chapter II) were addressed and solved by Mining Law 4/2009, and other relevant laws and regulations related to the issuance of mining and environmental licences. The problems identified in Chapter II were: 1) the rampant illegal issuance of mining licences, by regional governments, which are not in accordance with legal procedures and which ignore the environment; 2) complex and non-transparent mining licensing procedures; 3) the lack of environmental safeguards when issuing mining licences; and 4) issuance of mining licences in environmentally vulnerable areas. This assessment uses relevant quality of law criteria to assess whether various laws and regulations have had the ability to solve the problems. The criteria are: clarity, coherence, adequacy, feasibility, and conformity with environmental principles and standards from international guidelines regarding mining and the environment.

In terms of the problem of rampant illegal issuance of mining licences by regional governments, there were two issues to resolve, namely: (1) the problematic behaviour of regional governments when issuing mining licences; and (2) the existence of thousands of mining licences issued via unlawful processes. Mining Law 4/2009 responded to this issue by creating clear rules, stating that every level of government had the authority to issue mining licences. The division of authority to issue licences, between central government and the regional governments, was also in line with the regional autonomy policy regulated by Law 32/2004 on Regional Gover-

nance, and the coherence between these regulations made the distribution of powers even easier to understand. Clear rules were important, because one of the problems with issuing mining licences in the regions was the unclear distribution of power between central government and the regional governments.

In response to the problem of the behaviour of regional governments in issuing mining licences, even though regional governments had been given authority to issue mining licences, Mining Law 4/2009 limited their powers by giving central government the authority both to determine mining areas and to oversee regional governments. The Mining law also regulated sanctions if the regional governments abused their authority when issuing mining licences. The rules were adequate to control the behaviour of regional governments, because they were no longer authorised to decide mining areas as before, reducing the possibility that there would not be the capacity or bad intention for granting mining licences in conservation or protected areas. Furthermore, central government also supervised the mining management carried out by regional governments, and there were sanctions if government officials abused their authority when issuing mining licences.

However, sometimes adequate rules are not feasible for implementation. The rules stipulating that central government should supervise regional governments seemed to be difficult to implement, due to the lack of central government capacity to carry out the powers assigned to it; therefore, the rules may not have been feasible. It would take time to adjust, and sufficient funds were required, along with a very strong willingness to implement them.

Meanwhile, Mining Law 4/2009 did not respond to the thousands of problematic KPs, for which licences had been issued unlawfully. Government Regulation 23/2010 only required that the KP document be converted into an IUP document, so there was actually no substantive change. Therefore, there was no adequate rule to combat the problem of the existence of the unlawful KPs, even though many of them had already caused environmental problems.

The Mining Law and its implementing regulations did not seem to respond to the problem of complex and non-transparent mining licensing procedures. The Mining law regulated neither a transparent, simpler regulation of the licence issuance process, nor certainty regarding time and costs; therefore, the rules were not adequate to resolve the issue. The Mining Law did issue a new licensing mechanism – an auction procedure to obtain mining licences in some areas – but this was no simpler than the previous mechanism. The auction system may not even be feasible to fully implement in Indonesia, due to the lack of state capacity; for example, in terms of providing mining data and other required resources.

The complexity of issuing licences was exacerbated by the absence of rules regarding transparency and public participation. As during the previous regime, the Mining Law and its implementing regulations did not regulate transparency and public participation in the mining licence issuance process, even though transparency and public participation in mining was standard in almost all international guidelines related to mining and the environment. Hence, Mining Law 4/2009 and its implementing regulations did not apply the public participation principle of environmental law. On the other hand, Mining Law 4/2009 and Government Regulation 23/2010 linked the requirements of mining licence issuance with other laws and regulations governing mining activities, such as environmental and forestry laws and regulations. Since mining activities required several documents that were regulated by different laws and regulations, coherence between those rules had the potential to reduce the complexity of licensing.

Regarding the problem of the lack of environmental safeguards when issuing mining licences, Mining Law 4/2009 and Government Regulation 23/2010, unlike the previous mining law and mining regulations, regulated more clearly regarding AMDAL. They made AMDAL a requirement for applying for IUP, and the AMDAL rules were regulated in more detail by Environmental Law 32/2009 and its implementing regulations. These rules were adequate to force mining companies to procure an AMDAL, because AMDAL was now part of the consideration for issuing an IUP. The use of the AMDAL instrument in the mining licensing process was in accordance with the preventive principle of environmental law, because it was an effort to prevent the environmental impact of mining activities. This rule is also in line with international guidelines as most of the international guidelines regarding mining and the environment require the use of an EIA in the process of issuing mining licences.

Mining Law 4/2009 and government regulations did not make mine reclamation and post-mining plans, and their guarantee funds, part of their considerations in making decisions to grant IUP. International guidelines recommend that mine reclamation and post-mining plans be submitted as part of a mining license application, and that they become part of the assessment of whether or not an application should be accepted. This was a way of implementing the polluter pays principle, which ensures that polluters are financially burdened for damaging the environment. Hence, Mining Law 4/2009 and the government regulations did not use licensing as a tool to force companies to fulfill their environmental obligations.

The problem of mining in environmentally vulnerable areas also seemed difficult to resolve via the legal framework, due to several weaknesses in the rules regarding determination of mining areas and protection of certain areas from mining activity. Mining Law 4/2009 regulated the determination of mining areas by central government. However, the rules regarding the

determination of mining areas were not adequate, because although some criteria for determining mining areas related to the environment, there was no clarity regarding those criteria, and they were not explained by the mining law or its implementing regulations. Therefore, there was no guarantee that environmental interests would be considered in the determination of mining areas. In addition, the rules regarding the process of determining mining areas were not coherent with other laws and regulations governing the determination of areas for other sectors. In addition, there were no rules regarding coordination with other land use sectors when determining mining areas. Therefore, the rules regarding the determination of mining areas were not adequate for dealing with mining in environmentally vulnerable areas.

Although the problem of mining activities in environmentally vulnerable areas was not addressed directly by Mining Law 4/2009, protection was given to such areas via other laws and regulations. The laws and regulations related to forestry and small islands contain regulations concerning the protection of specific areas from mining activities, but the Spatial Planning Law and its implementing regulations, as well as the Law on the Protection and Conservation of Natural Resources and their Ecosystems, do not firmly and clearly regulate the protection of certain areas from mining activity.

In summary, even though there are several provisions in Mining Law 4/2009 which aim to resolve problems regarding the regional issuance of mining licences and protection of the environment, based on the quality of laws and regulations assessment criteria, the regulatory framework has not yet been able to solve the mining licence issuance problems related to the environment. Several problems were adequately addressed by Mining Law 4/2009 and its implementing regulations, such as the behaviour of regional governments in issuing mining licences through restrictions and the supervision of regional government authorities, but the regulations were either difficult to implement or not feasible. The problem of lack of environmental safeguards when issuing mining licences was also addressed by inserting AMDAL into the licence issuance process. However, Mining Law 4/2009 and its implementing regulations did not make mine reclamation and post-mining plans, and their guarantee funds, part of the decision-making process for mining licences, even though international guidelines recommended it. Meanwhile, the Mining Law and its implementing regulations did not seem to respond to other problems, such as the complexity and non-transparency of mining and mining licences in environmentally vulnerable areas. The laws and regulations related to other natural resources were also insufficient for solving these problems. From the perspective of environmental law, the regulatory framework was not really in accordance with environmental law principles, and problems related to the environment were neither considered nor resolved.

The law-making process can explain the mixed nature of Mining Law 4/2009. Therefore, it is necessary to look at the process for making Mining Law 4/2009. The dynamic of this law-making process is discussed in Chapter IV.