ENVIRONMENTAL ISSUES IN MINING MANAGEMENT

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Abstract: Many countries are faced with environmental problem soil, water, air, erosion, critical land, environmental pollution, floods and droughts. The increasingly worrying environmental support problems are actually caused by unwilling environmental damage that has made the conditions of human habitat more and more worrying. In practice, the realization of mining management makes the conditions of human habitat increasingly worrying. The activity of this sector has been caused by a lack of environmental problems. Some of the negative impacts caused by mining activities are, among others, the rate of deforestation (decrease in the amount of covered forests) and damage to land that increasingly disrupts the existing ecosystem order, damage to the infrastructure in the mining area, loss of resilience and supporting capacity of the living environment leading to a variety of natural disasters, tenurial conflicts, the potential for criminalization of indigenous communities around mining sites, as well asother negative effects.
Keywords: Environmental Damage, Rules, Licenses

A. Introduction

A country with an abundance of natural resources is facing a dilemma on the environmental aspects of living. The abundance of natural resources in the majority of developing countries is often exploited by multinational companies and/or developed countries to avoid super-strict standardization in the field of living environment as well as the search for energy reserves due to the limitation of natural resource ownership in theircountries. [1]

Such conditions and potentially undermining the support and suitability ofthe existing living environment, considering that forests and the components of the ecosystem in them are dependent on the community (both surrounding and indigenous communities) to live (life support) [2], worsened by weak law enforcement as well as the lack of strong regulationin the related sectors, so the facts in the field show that the impact of miningactivity in developing countries shows a higher level of environmental damage when compared with the developed countries [3]. In the national context, referring to the Indonesian Environmental Statistics report of 2015 [4], it is shown that the area of covered forests is decreasing drasticallywith the presence of mining activities. The report supports the official broadcast (release) issued by the Ministry of Environment and Forestry thatthe area of forests granted for mining exploration and exploitation through borrowing permits until January 2015 recorded more than three million hectares.

Based on the available sources of information, the area of forests granted for mining exploration and exploitation activities through the forest area lending permit mechanism has increased by one hundred percent over the course of five years, from 2010 which only spans one million hectares increased to three million more hectares [5]. In addition to this, other negative impacts caused by mining activities have also been repeatedly reviewed by print media and onine as well as supported by research studies from the Swadaya Society Institute (LSM) that put attention in the field of living environment such as the Group for Law Reform Based on Society and Ecology (HuMA), Wahana Environment Indonesia (WaLHI), Mining Advocacy Network (JATAM), Forest Watch Indonesia, Indonesia Center for Sustainable Development. Overall, the results of studies by several of theseNGOs highlight that as one of

the components of the receipt of public interest funding by the state, the mining sector annually only contributes at least 4.4% of the 20% Total receipts of the energy sector and mineral resources to the receipt of the state. [6]

B. Method of research

This research uses a normative doctrinal approach or normative jurisprudential law research that examines the internal aspects of a positive law or regulation. Data collection techniques are carried out through libraryresearch in the form of secondary data publication of articles in journals asthe basic research material. Data analysis is carried out qualitatively and the results are delivered descriptively, so that the results of the analysis can produce conclusions to answer research questions in this study.

C. Result and Discusion

The Background, The Indonesian living environment, which includes water, ocean, air, natural wealth contained in the earth, as well as livelihoods, is all the creation of Almighty God. The wealth of nature given by the Almighty God to the people of Indonesia is an infinite mercy. As human beings with reason and mind, we are obliged to develop and preserve their capabilities so that they can be the source and support for the people of Indonesia and their fellow citizens, for the sake of survival and improvement of the quality of human life.

As an economic engine (prime mover) for a country, business activity in the mining sector as part of non-renewable natural resources (non- renewablenatural resources) has a significant role when examined in terms of capital development aspects (state deveopment) or reviewed from the aspect of state acceptance. (state budjeting revenue). [7]

In the area to be mined, first it is necessary to open land (can be forests, fields, or other areas), cut trees (if any), and cutting and transferring land. To process economic materials (mineral/coal seeds), a transfer of coating rocks is carried out, which, if necessary, begins with the explosion of the coating stones. [8]

After the covering rocks are moved and deposited in the storage area, further excavation of minerals or coal is carried out. Mineral and/or coal processing is necessary to purify such resources before they are marketed. Coal processing is relatively simpler, which generally consists only of washing and/or fitting to a certain size. [9] As for minerals, the process is more complex by involving processing units, machines, chemicals supporting processing, large energy, and so on. Based on the process, the environmental impacts arising from mining activities in general are, among others: a) decreased habitat quality due to land opening and changes in the natural landscape, disturbance of flora and fauna, b) erosion and sedimentation, decreased water quality, such as the occurrence of high water turbidity, acidic water, and the dissolution of heavy metals, dust, vibration and noise, contamination of waste B3, and some other effects.

The impact of these mining activities has a strong impact on the environment and safety of communities, as well as mining conflicts, environmental issues, and others. Such things are important to be treated wisely, both by the miners and the government. A good planning, implementation, and supervision of mining activities is needed to avoid/minimize major environmental impacts, such as irregular landscapes, even mine holes, high erosion and sedimentation, low soil fertility not suitable for cultivation, production of acidic mining water that can last up to hundreds of years so that it can kill biotes in public waters. Moreover, once the mining efforts are over, the towns that were originally crowded with high economic growth will gradually become dead cities. Such conditions are known as ghost cities or “ghost towns” as many other countries do. Even more sadly, locals who used to farm or gather forests from the surrounding forests would lose that ability after a long time working in the mines. [10]

Direction of Environment, the vast economic potential stored in the commodity of the mining sector is a gift for every country. However, if it is not managed responsibly, professionally, and transparently, it is very likely that a curse of environmental disasters and the variety of social issues that accompany it will occur. The concept of thinking within the scope of the environment, emphasizes the understanding of the reality of the universe and the truth of life to determine human behavior towards the Universe and life in it. The role of science here, made as an alternative understanding of the thought of science and religion, but they are all in dialogue with each other, like a cycle,in which each other needs and collaborates to solve this problem of life. [11]The ecological wisdom of local wisdom, the asceticism of science and philosophical ethics (ecocentrism) can be used as an alternative to preventing environmental damage, caused by the systems of capitalism, secularism, atheism and also religions that have lost the orientation of saving the environment and science that loves to exploit nature massively. [12] About how a country can be avoided from the curse of natural resources especially in the mining sector by means of political reconstruction. Policy reconstruction includes an evaluation of policies and/or a set of regulations that have been implemented. In general, there are four main areas of activity in the management of mining environment, namely: a) monitoring and monitoring of water quality, b) Monitoring and monitoring of air quality, c) land management, advertising, and biodiversity, d) Waste management, hazardous and toxic substances (B3), and wasteB3.

Implementation of such critical activities should be arranged within amanagement and monitoring system, including aspects of compliance withpermits/regulations/standards required for such activities.There are 3 (three) important aspects in environmental management that are synergistic throughout mining operations, namely: practice, management system, and licensing. [13]. In the initial period of activity, the company will require a high effort to obtain all the necessary core licenses, for example environmental permits, operating permits. Temporary storage of waste B3 (TPS waste B3), etc. At the same time, management systems began to be structured on the basis ofthe “common habits” carried out by the mining industry. It is reasonable that in this early period there are frequent changes in the procedures, whichare adapted to the practices of environmental management and monitoringcarried out. [14]

In the intermediate period, where operations have been running with adequate environmental permits, the company needs to set performance targets for environmental management practices. PROPER can be used as one of the targets for this, wherePROPER will assess compliance on licensing, administrative, and operational technical aspects. Over time, thecompany should continue to focus on improving its environmental management system and best mining practices, where both activities can help each other to ensure the overall operational effort runs well. Companies can set achievement targets such as “Green” or “Golden”

PROPER and ISO 14001 Environmental Management System certification. The results of the achievement of these targets will facilitate the necessary environmental licensing processes, whether new, renewed, or revised, including the Addendum process or AMDAL Document Revision that frequently occurs in mining activities, as changes occur/discoveries of coal or mineral reserves, or other activities. For mining companies that also involve foreign capital raising where funds come from international banking unions, the application of international environmental standards such as the International Finance Corporation (IFC) standards is often required to be complied with. [11]

Regulated, the setting of the authority of mining licenses that is still with the centralized paradigm at the moment is no longer relevant to the current orfuture conditions of development. On the other hand, there is a stream of globalization that accelerates towards political democratization andregional autonomy, human rights, technological and information

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development and the living environment. Law No. 32/2009 defines environmental protection and management as "a systematic and integrated effort made to preserve the functioning of the environment and prevent the occurrence of pollution and/or damage to the environment that includes planning, utilization, control, maintenance, monitoring and enforcement of law". [15]

Environmental pollution is defined as "inserting or inserting living beings, substances, energy, and/or other components into the living environment by human activity so that it exceeds the standard quality of the established living environment". (Pasal 1 Angka 14). Baku quality of the environment means water quality, wastewater quality, seawater quality, environmental air quality, emission quality, disruption quality and other quality standards in accordance with the development of science and technology. (Pasal 20). Of these two definitions, there is a criminal provision for those who violate it. In addition to discussing the operational matters that must be done by a mining enterprise, the regulation also stipulates the operating permits that the mining business must have. These licenses are essential to be owned by the company which one must have before the activity begins. [16]

Periodicity. Environmental permits are permits granted to any person who carries out business and/or activities that are mandatory AMDAL or UKL-UPL in order to protect and manage the living environment as a prerequisite for obtaining business permits and / or activities. Some of the operational permits required by mining enterprises are: 1) Licensing of wastewater mining activities. 2) Domestic wastewater disposal permit, if mining activities are supported by the presence of dormitory/mess/camp with its support facilities (kitchen, laundry, etc.) that process the wastewater centrally. 3) Temporary storage of waste B3. 4) Tailing accumulation license, for companies that process mines and leave tailing. 5) Permission to take surface or groundwater. 6) Permission for the operation of the insinerator, if the enterprise carries out the processing of B3 waste itself. 7) The waste disposal permit, if you do your own household garbage management. 8) Lease use of forest areas (IPPKH) if the activity is carried out in the forest with the status of forest production and/or forest protection.

In addition to the regulations issued by the Government of the Republic of Indonesia that regulate the environmental management of mining enterprises, companies can also refer to the documents of the best management practice of the world mining environment (Best Management Practice) as a reference in the implementation of good management and monitoring activities of the environment. [17]

D. Conclusion

Governments consider it necessary to thoroughly rethink the policies and/or regulations to be adopted in the future, including the redesign of policies and/or regulations in order to be more adaptive and responsive to environmental issues at the national, regional and global level, as well as the incorporation of ethical elements into the concept of development carried out in a country. To do so, it is necessary to regulate the authority of non-metallic and rock mining permits that are integrated between the Central Government, the Provincial Government and the Government of the district/city with the establishment of supervision, coordination and combination between the sectors based on the general or customary community with the management scheme centered on the community (Community-based sector) and the development of the community aimed at accessing the community in order to meet better social, environmental and economic conditions. (Community development). Assesment of the potential and extent of the environmental impact of an activity, including the management and monitoring activities, must be examined and subsequently referred to in the Environmental Impact Analysis (AMDAL) and/or Environment Management and Monitoring efforts. (UKL-UPL). These documents, along with other technical documents such as the

Reclamation Plan and the Post-Mining Plan, are compiled to ensure that mining activities are carried out taking into account the sustainable responsible management of the environment.

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