

COAL MINE MANAGEMENT POLICY IN POLLUTION REDUCTION IN EAST BORNEO, INDONESIA

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ABSTRACT

Coal is an industrial raw material which is one of the main high-demand energy source commodities as for countries in the whole world. Thus, its management of usage must be wise and sustainable to restore nature and the environment. This research aims to offer a concept of Pollution reduction in the coal mine management policy as a reference and a guideline for stakeholders, mining business owners and also the society based on the values of Laws and society. This is a juridical-empirical research which observes some phenomena directly in the field using the purposive sampling method. It uses primary data in the form of observation and interviews to chosen informants, who are the Head of the Mineral and Coal Sector at the Energy Natural Resource and Mineral Service (ENRM) of East Borneo Province, Head of the Law Sector at the Environmental Service of East Borneo Province, members of the mine advocacy network non-governmental organization of East Borneo Province. Then, the data are analyzed with case to approaches to obtain formulations on the legal system factors which do not run as they should and principles in managing the coal mines. The results of this research show that the coal mine management policies of the local authorities are formal-procedural including pollution reduction. There are no formulations of executive regulations on the coal mine management policies. This is because the policies which dominate the management are under the authority of the central government. Thus, there needs to be a concept as the solution for this problem to maintain nature through the Law. The original idea is an idea which obliges humans to place nature at the highest priority in life by reduction of pollution.

KEY WORDS : Policy, Coal mining, Prophetic ethics, Management

INTRODUCTION

As the main promising commodity for the state's economy, coal mining has long become a priority in the natural resource exploration activity of the energy and mineral sector (Loso, 2021). Coal is a naturally solid and inflammable hydrocarbon compound. It resembles brown-to-black stone which settled in the earth for thousands of years and it could be used as a fuel to power electricity or other uses, which economically brings high profit in its management (Ministry of National Development Planning, 2019). Errors in the usage of this natural

resource will bring impacts such as environmental destruction or inhibited development in the coal mine area. Generally, Indonesia's supply of coal is spread out in several islands: 92,5 billion Mg in Borneo, 56,1 billion Mg in Sumatra; 74,25 million Mg in Sulawesi (Ministry of Energy and Mineral Natural Resources, 2018).

Considering this large supply of coal, the Indonesian government implemented a coal mine management policy which includes issuing policies in determining the areas of exploration, exploitation, and production. These policies are issued to maintain environmental restoration and pollution

reduction due to mining activities. It cannot be denied that the natural disasters which often happen are due to an excessive usage of natural resources. Nature is used up limitlessly to fulfill the human's hedonistic desires. (Absori *et al.*, 2017).

The nature's great benefits to humans demand the authorities to define natural and environmental management in the ethical perspective. According to Absori *et al.* (2017), regarding that, there are things to note: *First*, controlling the desire to exploit any aspect of nature is part of the spirit. The desire is pragmatic; it aims to obtain as much materials as possible. *Second*, it defines the nature as sacred (as a blessing from God) which aims no more than to achieve a just and an egalitarian human welfare.

To achieve this, the Indonesian government has determined the coal mine management policies in its great regulation (*staatsfundamentalnorm*) stipulated in the constitution which states that, "The state is responsible for environmental function preservation and protection, which includes the human resources, natural resources, and cultural resources to achieve a good and a healthy environment." This includes the environmental restoration due to coal mining activities (Priyanta, 2012).

This regulation applies to all Indonesian areas – in all islands which are divided into Provinces, Regencies, and/or Cities. One of the provinces in Indonesia which dominate the best quality coal production is the East Borneo Province. In this province, the average coal production target reached the realization of 82,2 million Mg (Statistics Indonesia, 2020). The East Borneo Province consists of seven Cities/Regencies and each contains coal mine concessions. The total concession of 51,343 km² takes up almost 46% of the total East Borneo province whose area is 127,347 km².

Even though the coal mining sector gives a great hope to the economic activities in East Borneo province, it is not parallel with the effort to make this province prioritize environmental protection with the environmental law principle which is according to the morality principles of environmental usage – from the aspects of restoration, reduction pollution, social life, and the people's economy. This encourages the fulfillment of rights in the environmental sector, which becomes an urgent need in the development process that emphasizes human dignity for a just and an equally-distributed welfare (Absori, 2006; Jenaabadi and Issazadegan, 2014).

Apart from that, there is a lack of effort from the

Indonesian Central Government to achieve coal mining management which is based on environmentally friendly mining management policies. There is not yet any holistic stipulations which regulate the Environmental Impact Assessment that aims to minimize environmentally destructive mine management including no concept of pollution reduction. The existing regulations are not enough to become an instrument of change towards the environmental destruction due to the coal natural resource exploitative activities. More than ever, the coal resource management intervention depends on the new logic which obliges the people, the local authorities, and the society to be responsible for their own welfare and for the natural resource sustainability (Mustalahti *et al.*, 2020). We know that the presence of governmental policies with ethic basis is crucial as part of the substantial regulation to restore the environment from excessive mining activities.

Regarding that, the East Borneo provincial government has the right to issue a regional policy on the coal mine management based on the principles and ethics of environmental usage. It is based on the central regulation which is the Law No. 3 of 2020 on the amendment of the Law No. 4 of 2009 on minerals and coal. This is especially necessary to give coal mining management benefits in the development of the industrial era, where both the nations and the world require a great source of energy. To achieve this, there needs to be legal policies for coal mine business owners which have both direct and indirect impacts towards East Borneo province's economic growth.

Based on the explanation above, it can be concluded that this research's objectives are as follows: (1) to explain the coal mine management policies in East Borneo province, and (2) to formulate a coal mine management policy to reduction pollution and its impacts to restore the ecology of the earth.

MATERIALS AND METHODS

This is a juridic-empirical paper which is carried out using the non-doctrinal approach. This paper is carried out through direct observation of the phenomena in the field using the purposive sampling method. It uses a descriptive type of analysis as it aims to clearly describe the various things related to the analyzed object, which is the coal mine management policies in reduction

pollution in East Borneo province. It uses the primary data in the form of observation and interview towards the chosen informants, who are the Head of the Mineral and Coal Sector at the Energy Natural Resource and Mineral Service (ENRM) of East Borneo Province, Head of the Law Sector at the Environmental Service of East Borneo Province, members of the mine advocacy network non-governmental organization of East Borneo Province.

RESULTS AND DISCUSSION

Coal Mine Management Policies on Pollution Reduction in East Borneo

The coal mine industry continues to develop in Indonesia. Due to the Indonesian government's policy in maintaining the state energy at a stable level and as the main exported commodity, the mine areas become wider and wider. This includes the area of East Borneo Province, where the mine develops rapidly, marked by the great mine area, great production, and great influences towards the social, economic, and cultural aspects of the local people and their activities. For the interests of regional development, the presence of the coal mine activities brings positive impacts, especially in the economic sector. For instance, the mines absorb local labor, it opens business opportunities around the mine, and it becomes the main source of regional income. The issuance of 1,430 coal mine permits became one of the evidences for the rapid development of this industry (Energy Natural Resource and Mineral Service of East Borneo, 2019). It includes all city/regency areas in this province.

Thus, the authorities must be able to formulate management policies carried out in stages. The first stage is the problem formulation, where the authorities identify the problems. It is the most fundamental step in formulating a policy. After the problem is identified, the next stage is the policy agenda. The problem is defined well and the policy makers agree to input the problem to the policy agenda. Then, the next stage is problem solving. The last part in policy formulation is determining the policy which will be chosen to be legally binding. The alternative policy taken is basically a compromise between various stakeholders involved in formulating the policy (Osman *et al.*, 2018).

The coal mine management policy in East Borneo province has an important position in increasing the

economic growth, which is currently supported by East Borneo's 15,12 billion Mg of coal supply – the largest supply in Indonesia in 2019. Thus, in handling coal mine management problems, the East Borneo provincial government has carried out some efforts to minimize the number of violations in the coal mining management, by issuing regulations on: 1) establishing reclamation and post-mining activities, 2) permit revocation, 3) closure of business operations, 4) sealing coal mining pits which have not undergone reclamation, namely Clean and Clear (C & C). Based on the Clean Clear (C & C) policy, the Diagram 1 shows the number of mining businesses from each policy criteria in accordance with the compliance ratio towards the regulations of the regional government:

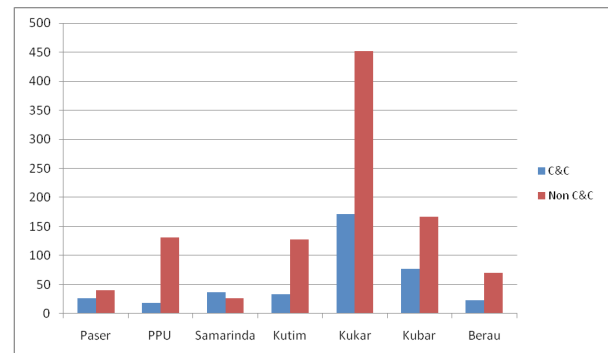


Fig. 1. The number of coal mine C & C in East Borneo Province in 2019

Source: Reconciliation results from the Provincial Legislative House and Energy Natural Resource and Mineral Service (ENRM)

The establishment of management policies may be seen from each city/regency area which shows the compliance and the qualification as a coal mine which prioritize good mining principles. Some companies do not fulfill these principles from both the administrative and the business operational aspects at the following areas: (1) In Paser Regency, there are 27 companies who took care of the clean and clear (C and C) administration, while 40 companies did not. (2) In Penajam Paser Utara (PPU) Regency, there are only 18 companies with the C and C status, while 131 companies do not have this status. (3) In Samarinda City, there are 37 companies who have obtained the C and C status, while 26 companies have not. (4) In Kutai Timur Regency, only 33 companies have obtained the C and C status, while 128 companies have not. (5) In Kutai Kertanegara Regency, there are 171 companies with the C & C status, while 452 have not

obtained this status. (6) In Kutai Barat Regency, there are 77 companies with the C & C status, while 167 companies do not have it. (7) In Berau Regency, there are 23 companies with the C & C status, while 70 companies do not have it. Apart from that, there is a city in the East Borneo Province which has not issued a Mining Business Permit at all, as the autonomous policy of that city prohibits coal natural resource exploitation, but the regional original income depends on the fossil fuel mining sector.

Even though there is an increasing trend in the coal mine business growth, it is not followed by regional-level management legislation. The change of management authorities from the regional government to the central one creates a gray area in the coal mine management, regarding the regulations on the structural roles and authorities in managing the mines. There should be the legality of the regional government in managing the natural resource exploitation businesses to increase the welfare of the people in that region. The regional policies only use the national-level coal and mineral regulations as legal instruments.

There is not yet a regional regulation on the coal mine management as the management of the Indonesian natural resources is under the hands of the central government. The East Borneo provincial government currently only has one regional regulation on reclamation and post-mining activities and zero regulation to pollution reduction in coal mining, but it cannot be implemented in the effort to restore environmental destruction due to the expanding coal mine activities. The current existing legislations have not yet been accommodated by the

executing regulations on mineral and coal laws which have recently been issued in 2020.

Coal Mine Management Policy of Pollution Reduction

The coal mine management in East Borneo is part of the governmental agenda to develop the national economy. The governmental agenda is understood as, "A list of subjects which obtain serious attention from the authorities during a certain period of time" (Absori *et al.*, 2006). From the analysis of the coal mine management policies of the authorities, the problem regarding the expanding exploitation era of the natural resources in the coal sector in East Borneo is found. There is no management regulation which is based on Pollution reduction nor that which embraces the principles of legal certainty and its implementation.

The legal values in the coal mine management must be encourage the creation of coal mines which prioritize environmental restoration and pollution reduction. It also defines the nature as a sacred thing which is a blessing, and that it must be with the aim to achieve a just and an egalitarian human welfare (Absori *et al.*, 2017). The problems above may be inserted in the governmental agenda, if it at least fulfills three criteria of legal structure, participation of the society, and the usage of suitable technologies. Table 1 shows the policy regulations through permit instruments in the aspects of study of adequacy, number of exploited lands, and also the production and construction operations in managing the mines in the East Borneo province but its nothing to do for pollution reduction and environmental restoration.

Table 1. Amount of Coal Mining Business Permits in East Borneo Province

No	City/Regency	Total Exploration		Total Production		Total	
		Amount	Area (km ²)	Operations		Amount	Area (km ²)
				Amount	Area (km ²)		
1	Paser	27	748.4793	40	350.6795	67	1,099.1589
2	North Penajam Paser	92	1,363.0613	57	788.5478	149	2,151.6092
3	Samarinda	4	8.2090	59	267.7720	63	275.9810
4	East Kutai	126	10,717.3425	35	2,837.1002	161	13,554.4427
5	Kutai Kertanegara	324	6,039.7838	299	2,733.4449	623	8,763.2287
6	West Kutai	169	9,247.1700	75	3,329.9500	244	12,577.1200
7	Berau	71	2,193.2460	22	666.5423	93	2,859.7883
	Total Coal Mining Business Permits	813	30,317.2920	587	10,964.0368	1.400	41,281.3288
	Coal Mining Concession Work Agreement Grand Total	7	2,514.9000	33		30	10,061.3963
						1.430	51,342.7251

Source: East Borneo Energy Natural Resource and Mineral Service (ENRM) 2019

Thus, we can analyze the impacts of the management policies towards environmental destruction in the perspective of the principles which prioritize environment in using the natural resources. These are the spread of Coal Mine Business Permits of 2020 in East Borneo.

1. No matter how good the legal structure arrangement is in running the issued legal stipulations, and no matter how good the quality of the legal substances is made, the law enforcement will be useless without the support of the legal culture of the people involved in the system and the society (Dupuy, 2014). In this order, the sale of mining business permits seems to be a normal thing for both regional and national level authorities but if we see its had zero regulation in pollution reduction and environment recovery.

2. The social participation in the coal mine activity is crucial as with it, it is hoped that the environmental revival and management may succeed. As a form of participation, it is hoped that no part of the society carries out mining activities around the reclamation location during the reclamation process (Grandt, 1978). Pollution reduction, environment recovery and social empowerment is the company's responsibility. (Shrader-Frechette, 1981). The work performance effectiveness of the pollution reduction, reclamation and post-mining supervisory commission formed by the Regional Government is still questioned as there have been 34 victims who drowned in the ex-mining quarries which have not undergone reclamation, who consisted of children and teenagers between 2018 to 2019.

3. It is important to choose the suitable technologies before carrying out the pollution reduction and reclamation. There must also be an observation on the mine's condition to know which technologies are most suitable with the field conditions for the reclamation process. This is so that the pollution reduction and reclamation may run well according to the plans and it is to avoid material and non-material losses (Tarlock, 1996). The technologies are not used maximally, causing environmental destruction because of pollution. The companies ignore the regulation on the 500-meter minimum distance between the mines and the residential areas in cities. The environmental restoration and pollution reduction did not run well. Some companies ignored the obligations on reclamation and post-mining activities. There is also a weak law-enforcement on business owners, which causes environmental destruction such as landslides,

floods, and air pollution, all without any sanction.

The policy model offered by this research is that which is based on the of the human need of environmental protection which encourages humans to behave more wisely towards nature. Its foundations are: (1) the principle of leadership and mandate, which means that the leader and government must be though and had responsibility to preserve the environment especially in coal mine; (2) The leader and government must be made a set of regulation and policy to ensure the goodness of environment through pollution reduction and environment recovery in coal mine field; (3) Government (central and regional) and its leader must be implement sanction and others punishment according to law if any of the coal mining company not fulfil their obligation and responsibility

Ecological problems may be resolved through the application of the law, as it contains ecological values and also preservation of the environment stands on the highest position in the mining process (Assya'bani, 2017). In this position, the nature is viewed as a unity in the human life. The human beings have the authority to use and to utilize the provided natural resources and preserve the environment by reclamation and pollution reduction. Even so, at this point, the humans have the responsibility to maintain, preserve, and use the nature wisely for the sake of the natural balance. In other words, the humans are not allowed to excessively explore the natural resources (Assya'bani, 2017).

Coal mine management policy and Law may become a guideline in sustainably managing mining businesses. This is because basically, to reach a state of welfare, humans must not only act justly to themselves and others. Further, they must be able to place themselves in their relations with other human beings, the nature

Individuals and institution, including those who are part of the stakeholders, business owners, and society who internalize this value will embrace the following characters: (1) they will side the people's interests. They will not burden the society with complicated procedures or high fees, (2) they uphold justice, truth, and welfare, by creating programs, regulation or systems which may protect themselves and their social environments to support and participate; and (3) they will eradicate ignorance and socio-economic backwardness (poverty) (Roqib, 2013). Through this, in the future, we may give birth to a mining business

management policy which is one of the role-model legal products for the stake holders, the business owners in managing the coal mines, and the society with the aim to achieve prophetic-based social welfare at the coal mine area.

CONCLUSION

1. The East Borneo Provincial Government's coal mine management policy is based on the central regulation on minerals and coal in the Constitutional principles and the regulations beneath it. The regional government does not yet have regional regulations as a guideline of the mining management operation, including regulations in determining the mining business permit area and also those on pollution reduction environmental restoration. All management policies are centralized by the center government; thus, the regional governments are the trustees of the central government.
2. The coal mine management policy concept with the basis of ethical principles emphasizes the law and policy which are based on the concept of environmental management and usage. In the end, it will support the ethical ideal of a just and an egalitarian society, so that humans may achieve the idea to place nature at the highest priority in life. In this position, nature is placed at the highest position compared to other materials

Conflict of Interest

The author declares that there is no conflict of interest in this research.

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