Law Enforcement Towards Environmental Damage and Pollution Caused by Open-Pit Coal

by
Indriyane Vera Natalia

(*Undergraduate Student Faculty of Law Padjajaran University*)
(email: indriyanevn@gmail.com)

Maret Priyanta

(*Lecturer Faculty of Law Padjajaran University*)
(email: maret.priyanta@unpad.ac.id)

***Received**: 21/01/2019* | ***Accepted**: 12/02/2019* | ***Published**: 27/02/2019*

ABSTRACT

The mining industry is the primary source of the state's revenue. The legal instrument governing the mining industry in Indonesia is Law No. 4 of 2009 on Mineral and Coal. Unfortunately, the existence of the mining industry in various regions in Indonesia, especially open-pit coal mining industries, raises multiple problems, one of which related to the aspect of environmental law. The issues which arise in forms of pollution and ecological damage. These problems still occur in several open-pit coal mining areas such as in Bengkulu and South Kalimantan. Environmental law is expected to be a tool to protect the environment from various negative impacts of business activities and from citizens who lack awareness towards the environment, in order to guarantee the sustainability of environmental functions. One of the steps that need to be done is enforcing environmental law effectively. Enforcement can be done in forms of preventive and repressive, which means through administrative, criminal and civil procedures. Thus, the existence of the mining industry is expected to continue to support sustainable development in Indonesia. This research is normative legal research through the method of legislative approach, conceptual approach and analytical approach. The object of the normative legal analysis is in the form of qualitative legal materials, namely primary legal material (legislation) and secondary legal material (library materials). The specification of this study is inferential research, which doesn't merely describe facts but draws general conclusions that can be the basis of deduction to determine steps to deal with legal problems and define the position of the issues in the national legal system as well. Regarding the research data, both secondary and primary data, a qualitative juridical analysis was carried out using the method of legal interpretation, especially grammatical interpretation, historical interpretation, and systematic interpretation and analogy and constructivism, the results of which were written descriptively.

Keywords: Law Enforcement; Environmental Law; Mining Law; Open-Pit Mining; Coal

1. Introduction

Environmental awareness arises from the understanding that humans, indeed, have a fundamental relationship with its own environment. Understanding the concept of humans as an integral part that cannot be separated from its environment is the key to achieve environmental preservation. One of the instruments to implant awareness is through the understanding of environmental law. Environmental law is a branch of law which is correlated with regulations towards behaviors or activities conducted by subjects of law (people and legal entities) in order to utilize and protect natural and environmental resources as well as to protect people from the negative impacts which are caused by the utilization of natural resources. Thus, environmental law is not intimately associated with only regulations concerning the protection of the environment, but also related to regulations concerning the utilization of natural resources such as water, soil, sea, forest and coal.[1] The substance of environmental law itself comprises of various rules regarding the attempts to prevent and combat ecological problems.[2] According to Takdir Rahmadi, national environmental law is viewed from environmental issues which can be divided into four parts, *inter alia*, *first*, environmental planning law; *Second*, environmental pollution control law; *Third*, environmental dispute resolution law; and *fourth*, the law on conservation of natural resources.[3] The purpose of the existence of environmental law itself is to create sustainable development in the context of constructing Indonesian people as a whole and developing Indonesian communities that are faithful and devoted so that the realization of the preservation of environmental functions can be achieved.[4]

[1] David Farrier, Rosemary Lyster, Linda Pearson, Zada Lipman. (2004). *The Environtmental Law Handbook.* New South Wales : Redfern Legal Centre Publishing, p. 4.

[2] Takdir Rahmadi. (2011). *Hukum Lingkungan di Indonesia.* Jakarta : PT Raja Grafindo Persada. p. 27.

[3] *Ibid.* p. 28.

[4] Maret Priyanta & Nadia Astriani (2015). *Buku Ajar Hukum Lingkungan.* Bandung : Kalam Media, p. 67.

Indonesia as a state of law, as reiterated by the 1945 Constitution of the Republic of Indonesia in 1945 (the 1945 Constitution),[5] creates a legal position in the sense that laws and regulations are essential factors in the framework of ensuring the achievement of national development. Under this fact, regulations concerning environmental protection becomes one of the components incorporated within the target of fulfilling the national development, which is accommodated in three foundations, namely constitutional basis, operational basis and legal basis. The constitutional basis is regulated under Article 33 Paragraph 3 and 4. It stipulates:[6]

> *"(3) The land, the waters and the natural resources within shall be under the powers of the State and shall be used to the greatest benefit of the people;*
>
> *(4) The organization of the national economy shall be conducted on the basis of economic democracy upholding the principles of togetherness, efficiency with justice, continuity, environmental perspective, self-sufficiency, and keeping a balance in the progress and unity of the national economy."*

Moreover, the operational basis for environmental management refers to the GBHN (national development planning direction in "Orde Baru (New Order)" regime) or which has been changed into Propenas (national development planning direction) until 2004 and the implementation rules in the form of RPJM (National Development after 2004 based on Presidential Regulation No. 2 of 2015), currently in the form of the 2015-2019 RPJMN.[7] Lastly, the legal basis consists of both written and unwritten law. The written law related to the protection is Law No. 32 of 2009 concerning Protection and Management of the Environment, while the unwritten law consists of customary law, religious law and so forth.

[5] Article 1(3). (1945). Constitution of the Republic of Indonesia.
[6] Articles 33 par (2) and par (3). (1945). Constitution of the Republic of Indonesia.
[7] Maret Priyanta & Nadia Astriani. *Supra n. 4.* p. 63.

Law is a fundamental component of the realization of national development, as written in the opening of the 1945 Constitution. Precisely it is constituted in the fourth paragraph explaining the purpose of the state, one of which is to implement world peace based on independence, eternal peace, as well as social justice so that the state could guarantee that every citizen is able to obtain a good and healthy environment.[8] According to Article 1 Paragraph 3 Law No. 32 of 2009 on Environmental Protection and Management, the sustainable development is defined as a conscious and planned attempt that integrates environmental, social and economic aspects into development strategies to ensure the wholeness of the environment, as well as the safety, ability, welfare and quality of life of present and future generations.[9] Accordingly, every development effort carried out must pay attention to the planned and continuous function of the environment, under the concept of sustainable development within the Indonesian constitution, as elaborated under Article 33 Paragraph 4 of the 1945 Constitution.

The scheme of sustainable development brings up the message that preservation of environmental functions is needed to maintain the availability of natural resources. If the utilization of natural resources only puts forward economic aspects, later naturally the availability of natural resources will be depleted, and hence the environment will no longer be able to support and cooperate with human activities.[10] The importance of preserving environmental functions must always be applied to regional development in Indonesia.

Indonesia is gifted with abundant natural resources, including mining minerals. Indonesia, indeed, has a high dependence on the use of mining minerals as its

[8] Article 28H par (1). (1945). Constitution of the Republic of Indonesia.

[9] Article 1 par (3), Law No. 32. (2009) concerning Protection and Management of the Environment.

[10] Ellyana Dwiharyani, Imammulhadi, & Maret Priyanta. (2018). "Implikasi Hukum Pelanggaran Koefisien Dasar Bangunan pada Ruang Terbuka Hijau Privat". *Jurnal Ilmu Hukum Kenotariatan Fakultas Hukum Unpad, Vol. 1 No. 2*: 253.

development capital.[11] These excavated materials include gold, silver, copper, oil and natural gas, coal, and so forth. Generally, mining industries contributed significantly to the national economy (3% of the GDP in 2006). In cases of managing natural resources within the mining sector, a legal instrument is very much needed. As for mining law, it is defined as the whole legal code that regulates the authority of the state in managing minerals (mining) legal relations between the state and people and/or legal entities in the management and utilization of minerals.[12]

Indonesia's mining history begins with PT. Freeport's first management concession with unlimited exploitation and allowed to be extended at any time, making Indonesia both economically and ecologically disadvantaged.[13] The President's policy in the new order era drove this with the pretext of development making us lulled. The New York Agreement agreed upon after President Soekarno's downfall and later replaced by President Soeharto, opened a wide possibility for the freedom of exploitation of Indonesia's natural resources.

At that time, Indonesia already has several legal instruments related to mining, inter alia, Law No. 11 of 1967 on Basic Provisions for Mining, Law No. 1 of 1967 on Foreign Investment and Law No. 5 of 1967 on Forestry. Presently, the provisions regarding mining management are accommodated under Law No. 4 of 2009 on Mineral and Coal Mining which supersedes Law No. 11 of 1967 on Basic Provisions for Mining. The law provides the management of minerals and coal, given that minerals and coal are natural assets that cannot be renewed. This management must be carried out as optimal as possible, efficient, transparent, sustainable and environmentally sound, equitable as well in order to obtain the maximum benefits for

[11] Adrian Sutedi. (2011). *Hukum Pertambangan.* Jakarta : Sinar Grafika. p. 103.
[12] H. Salim HS. (2007). *Hukum Pertambangan di Indonesia.* Jakarta : Raja Grafindo. p. 8.
[13] Franky Butar Butar. (2010). "Penegakan Hukum Lingkungan di bidang Pertambangan". *Jurnal Yuridika, Vol. 25 No. 2*: 152.

the people's prosperity on an ongoing basis.[14] The enactment of Law No. 32 of 2009 on Protection and Management of the Environment as a complement to the previous laws and regulations, namely Law No. 23 of 1997 on Environmental Management is not to prohibit mining activities in Indonesia.[15] As elaborated previously, the idea of environmental law in realizing sustainable development must be planned and continuous, so that Indonesian people could still manage and use the assets taken from nature to support their lives with still promoting the concept of sustainable development that preserves environmental functions as a prerequisite.

Broadly, mining methods are grouped into three, namely surface mining, underground mining and underwater mining. First, surface mining is a method where mining activities are carried out above or relatively close to the surface of the earth and where the workplace is directly related to outside air. Second, underground mining is a mining method where all mining activities are carried out under the surface of the earth, and the workplace is not directly related to outside air. Third, underwater mining is a mining method where excavation activities are carried out below the surface of the water or when the deposits of valuable minerals are located below the surface of the water. In the coal mining industry, these three methods are often used. In some places in Indonesia, companies are more inclined to use surface mining method. Surface mining method is very much applicable in several areas in Indonesia, such as Bengkulu and South Kalimantan.

The mining industry, especially open coal mining, which for the past several decades has become one of Indonesia's foreign exchange sources, has to turn into an interesting issue and has dimensions that have a profound effect on the lives of Indonesian people. This issue is interesting since there are plenty of polemics generated from industries within this field. One of the primary concerns of the

[14] Adrian Sutedi. *Supra n. 11.* p. 104.

[15] Akhmad Sukris Sarmadi. (2012). "Penerapan Hukum Berbasis Hukum Progresif Pada Pertambangan Batubara di Kalimantan Selatan". *Jurnal MMH, Jilid 41, No. 1*: 9.

discussion on the mining industry is on the economic impact in which countries and large companies (both national and foreign) benefits significantly from the processes and outcomes of this industry.[16] From this industry, the state possesses both tax and non-tax revenues whereas mining companies get results from the sale of exploited minerals. However, there happens to be a sharing of profits and returns in the form of Corporate Social Responsibility for the people who violate the law. Increased escalation of friction between mining companies and local communities are also added to this problem. Besides the issue of economic impacts, there are various other issues which can also be discussed from open coal mining industries. A few of these issues are socio-cultural issues with the erosion of cultural values, and local wisdom that is being replaced by the presence of unlimited moving equipment accompanied causing noise and pollution. Moreover, the security issues and human rights together with the occurrence of so many acts of violence committed by the security forces against communities which are considered to cause chaos or disturbance, resulting to an unsafe life of the people within the mining area are the other of those problematic issues in the open coal mining industries.[17]

However, in this paper, the issue that will be highlighted by the author is the ecological issues caused by the open coal mining industry. In some cases, it has been found that in several regions in Indonesia, the environment in mining industry areas has been polluted and damaged. In fact, not all companies which have carried out surface mining contracts with the Indonesian government has abode all legal instruments and the concept of sustainable development. Some of the cases which the author will refer to are the cases of pollution and destruction due to open coal mining industries that occurred in watersheds in Bengkulu and South Kalimantan.

[16] Franky Butar Butar. *Supra n. 13.*, p. 153.
[17] *Ibid.* p. 154

The polemic in the form of environmental destruction and pollution from these cases indicated that the need for environmental law enforcement, especially for open coal mining industries, is undoubtedly critical. Enforcement of environmental law is the key to realizing the sustainability of environmental functions in the framework of sustainable development. It cannot be denied that although open coal mining industries have negative ecological impacts, namely destruction and pollution, this industry remains a huge source of the state revenue. In addition, the existence of this industry adds jobs opportunities within the area around the mine. The prevention of destruction and pollution from this industry is not by closing or eliminating mining, but by re-enforcing existing environmental laws and regulation towards these problems. The discussion about enforcement of environmental law was also felt to be necessary since until now, companies and suspects were often not processed to court.[18]

In regards to these various polemics, the author feels the need of an assessment towards environmental law enforcement due to environmental destruction and pollution caused by open coal mining industries as an effort to preserve environmental functions in Indonesia. Enforcement of the law is a way for the concept of sustainable development of environmental functions to come into realization.

Based on the background of the abovementioned problems, several identifications of problems can be formulated in relation to the issues of environmental law enforcement in regard to the coal mining industry, including:

a. What are the problems arising from environmental damage and pollution caused by open-pit coal mining industries in Indonesia?

[18] Akhmad Suktris Sarmadi. *Supra n. 15.*

b. What is the most appropriate way to enforce environmental law towards environmental damage and pollution caused by open-pit coal mining in order to preserve environmental law?

In answering the research question above, the paper uses normative legal research - through the method of legislative approach, conceptual approach and analytical approach - as its research method. The object of the normative legal research is in the form of qualitative legal material, namely primary legal material, legislation and secondary legal materials and library materials, such as books, journals and reports that have relevance with the discussion within this writing. The specification of this study is inferential research, which does not merely describe facts but draws general conclusions which can be the basis of deduction to determine steps in dealing with legal problems and define the position of problems in the national legal system as well. With regards to the research data, both secondary and primary data, a qualitative juridical analysis is carried out using the method of legal interpretation, specifically grammatical interpretation, historical interpretation and systematic interpretation and analogy and constructivism, the results of which will be written descriptively.

2. Problems Arising from Environmental Damage and Pollution Caused by Open-pit Coal Mining

Indonesia is a country which is rich in minerals, such as gold, silver, copper, oil and natural gas, coal and others. The state controls the excavated materials that include the authority to regulate, administer and supervise the management or exploitation of minerals. It consists of the obligation to utilize them as much as possible for public interest and prosperity. State control is held and conducted by the government.[19] In exploiting minerals (mining), the government can exercise itself and/or appoint

[19] H. Salim H.S. *Supra n. 12.* p. 1.

contractors if needed to carry out the work or jobs which are not or cannot be carried out by the government agencies themselves.[20] If the mining business is being carried out by contractors, the position of the government is to give the permit to the relevant contractor. Permissions granted by the government are in the form of mining power, work contracts, coal mining concession agreements and production sharing contracts. The authority to mine can be distinguished into five different types, inter alia, mining authority of general investigations, exploration mining authorities, exploitation mining authorities, mining concessions for processing and refining and shipping and sales mining rights.

Prior to the enactment of regional autonomy, officials authorized to grant mining permissions, work contract permissions and mining exploitation work agreements were the central government, represented by the Minister of Energy and Mineral Resources. With the enactment of regional autonomy, authority in granting licenses are not solely the authority of the Minister of Energy and Mineral Resources, but also become the authority of the provincial and district or city governments. The officials authorized to issue mining rights, sign work contracts[21] and the coal mining concession agreements are the Minister of Energy and Mineral Resources, governors and regens or mayors, in accordance with their respective authorities.[22] Mining companies which can be given the permission to operate mining material consists of : government agencies appointed by ministers, state companies, regional companies, companies with joint capital between the state and regions, cooperatives, private entities or individuals, companies with joint capital between countries and/or areas with cooperatives or private bodies or individuals and community mining.[23]

[20] Article 10 par (1), Law No. 11 of 1967 concerning the Provisions on Basic Mining Conditions.

[21] After the enactment of Law No. 4 of 2009 concerning Mineral and Coal Mining, the work contract regime changed into a licensing regime through a mining business permission.

[22] H. Salim H.S. *Supra n. 12.* p. 3.

[23] *Ibid.* p. 5.

One of the areas of the mining industry is coal mining. Coal is a tremendous source of energy. In 2016, Indonesia was able to produce coal to reach 162 million tons and 120 million tons of which were exported. Meanwhile, around 29 million tons are exported to Japan, Indonesia still has the most abundant coal which are reserved on the island of Kalimantan and Sumatra, while small numbers are located in West Java, Central Java, Papua and Sulawesi. Indonesia, indeed, lumps large coal which reserves and occupies the fourth position in the world as a coal exporting country. In the nearest future, coal will become a potential alternative source of energy to replace the depleted oil and gas potential. [24] In coal mining industries, it is broadly divided into several methods, namely surface mining, underground mining and underwater mining. The method used as the reference for this paper is surface mining. Surface mining is a method where all mining activities are carried out above or relatively close to the surface of the earth and the workplace is directly associated with outside air. The choice of mining method is initially decided based on the location of the sediment which has relation to the shallow surface or in and afterwards referring to the enormous profits to be obtained and to have the best mine acquisition. It is conducted by taking into account the unique characteristics of the area to be mined, including nature, geology, environment and so forth.

The advantages of Open-pit method compared to the other two ways is that its mining costs per ton or bank cubic meter (BCM) are much cheaper. It is because there is no need for supporting ventilation and lighting. Moreover, the working conditions are better because it deals directly with outside air and sunlight and the use of mechanical devices with large sized can be more flexible which will result in a faster production. The other advantages are the mining recovery that predicted to be greater because the sediment limit can be seen clearly and it is relatively safer since hazards such as landslides can be avoided. Last but not least, the Open-Pit method

[24] Harum Harmin Abdillah. (2018). Thesis : *"Dampak Penambangan Batubara Terhadap Lingkungan".* Yogyakarta : Universitas Muhammadiyah Yogyakarta. p. 1.

creates cheaper supervision and observation of seed quality (grade control). However, the open-pit method carries several disadvantages as well. Workers will be directly affected by weather conditions where heavy rain or hot temperatures, and then causing the decline of work efficiency. The other disadvantages are that the depth of excavation is limited since the more digging activities as well as, the more overburden that needs to be removed. Moreover, there will be difficulty in finding a large amount of landfill disposal, mechanical devices will be widespread, and relatively more massive environmental pollution will occur.[25]

In this millennium era, the existence of the mining industry as a whole in Indonesia is being questioned by various groups. At first, the existence of this industry brought many positive impacts on national development. The positive effects of the presence of mining companies are that it increases the country's foreign exchange from revenues both in the form of taxes as well as non-taxes and increases local revenue which amounts to significant progress in national and regional development. Moreover, so is the development of the community around the mining areas. Mining industry companies have sufficiently carried out their legal obligations to develop the community around the mine in terms of socio-economic, health and culture of the people.[26] At the same time, the massive exploitation of coal which is viewed as the increasing presence of this industry is being questioned, since it has caused a quite significant adverse impact on the exploitation of minerals. The negative impact can be grouped into several issues. The first issue is about economic issues in which the sharing of profits and returns in the form of Corporate Social Responsibility for the community is not in line with the prescribed law.

Further, there was also an escalation of friction between mining companies and local communities. The second issue is on socio-cultural topics where there are the

[25] Odih Supratman. (2018). *Penambangan Modul 1 Penambangan Terbuka.* Bandung : Kementerian Riset Teknologi dan Pendidikan. p. 32.

[26] *Ibid.* p. 6.

erosion of cultural values and local wisdom which has been replaced by the presence of unlimited moving equipment with noise and pollution. The third issue is security and human rights, where there are often so many acts of violence carried out by security forces against communities within the mining areas which are considered to cause chaos and disturbance and consequently resulted to an uncertain life of the people in the mining area. The fourth issue revolves around health issues which are marked by the outbreak of the disease for people living within the mining area.

However, in this paper, the issue that will be the main focus of the author is the ecological issue caused by open-pit coal mining industries. The mining industry has several characteristics, which are non-renewable, has a relatively higher risk and its operations have both physical and social environmental impact that is relatively higher than that of other commodities in general. Basically, due to its non-renewable nature, mining entrepreneurs are always looking for new proven reserves. The proven reserves decrease together with production and increase with new discoveries. There are several types of risks in the mining sector, namely geological risk (exploration) related to uncertainty in the discovery of reserves (production), technological risks associated with the uncertainty of costs, market risks associated with the magnitude that affects business profits, which are production, price, cost and tax. It is to be acknowledged that a business that has a higher risk will automatically demand a higher rate of return.[27] Each of these very high risks consequently brings negative impacts in the form of pollution and environmental damage.

As per Article 1 Law No. 32 of 2009, environmental pollution is elaborated as the entry or inclusion of living things, substances, energy, and/or other components into the environment by human activities to exceed the prescribed environmental quality standards.[28] Furthermore, according to Article 20, a measurement by

[27] Adrian Sutedi. *Supra n. 11.* p. 43.

[28] Article 1 Par (14), Law No. 32 of 2009 concerning Protection and Management of the Environment.

environmental quality standards must be conducted to determine the occurrence of environmental pollution. The quality standards relating to rivers are water quality standards. Pollution can also be described to be a condition which occurs due to changes in the environmental conditions (land, air and water) that are not beneficial (damaging and detrimental to the lives of humans, animals and plants) caused by the presence of foreign objects (such as garbage, industrial waste oil, dangerous metals, and so forth) as a result of human actions, resulting to an environment that could not function as how it is supposed to be.[29] Pollution that can occur due to the mining industry is divided into three, inter alia, water, air and land. First, water pollution may occur if the water quality standard is exceeded by pollutant within the water. The pollution occurs when the coal surface containing pyrite (iron sulfide) interacts with water and produces high sulfuric acid which amounts to the killing of fish in rivers, plants and aquatic biota that are sensitive to drastic changes in pH. Coal which cements uranium in low concentrations, thorium and naturally forms radioactive isotopes, if disposed of, will cause radioactive contamination. Albeit these compounds are contained in low levels, they are thrown into the environment in large quantities. Mercury emissions into the environment are concentrated because they continually move through the food chain and are converted to methylmercury, which is a dangerous compound and harms human, especially when consuming fish from the water which has been contaminated with the abovementioned mercury. In addition, coal washing waste is also dangerous for human skin health for the possibility of skin cancer. It is because the waste contains sulfur (b), mercury (Hg), slarida acid (Hcn), manganese (Mn) and sulfuric acid (H2sO4).

Second, air pollution can occur if pollutants exceed the air quality standard within the air. The role of contaminants contributes to stimulating respiratory diseases such as influenza, bronchitis or respiratory tract infections, pneumonia, chronic

[29] Y. Eko Budi Susilo. (2003). *Menuju Keselarasan Lingkungan (memahami sikap teologis manusia terhadap pencemaran lingkungan).* Malang : Averroes. p. 34.

diseases such as asthma and chronic bronchitis and illnesses that have long-term effects such as lung cancer, blood cancer or gastric cancer. Third, soil pollution can occur if pollutants exceed soil quality standards on the ground. This land pollution occurs due to the coal mining industry which can damage existing vegetation, destroy genetic soil profiles, replace old soil profiles, destroy wildlife and habitat, degrading air quality, change land use and until certain boundaries can permanently change the general topography of mining areas.[30] Pursuant to Article 1 Point 16 Law 32 of 2009, environmental damage is the act of a person who causes a direct or indirect change in the physical, chemical and/or biological nature of the environment to the extent that it exceeds the standard criteria for environmental damage.[31] The damage has been done by companies is in the form of ex-reclaimed mining holes (still gaping) and damage to forest areas. In accordance with Article 69, every person is strictly prohibited from carrying out acts which may result in environmental pollution and/or damage. Some of the cases that the author refers to were cases of pollution and destruction due to the open-pit coal mining industry that occurred in watersheds in Bengkulu and South Kalimantan.

The open-pit coal mining industry in Bengkulu is conducted in several watersheds such as the Ketahun watershed, Air Bengkulu watershed, Susup sub-watershed, Bengkulu Hilir sub-watershed, Rindu Hati sub-watershed and other river basins in the upstream river basin in Bengkulu. The companies that built the industry from work contracts with the government are PT. Inti Bara Perdana, PT. Bukit Sunur, PT. Fetro Rejang, PT. Sirat Unggul Permai, PT. Kusuma Raya Utama, PT. Danau Mas Hitam, PT. Cahaya Sawit Lestari, PT. Palma Mas Sejahtera, PT. CBS and other several companies. In the open-pit coal mining industry in Bengkulu, pollution that occurs is characterized by the occurrence of siltation of rivers and river water that is

[30] Harum Harmin Abdillah, *Op. Cit.*, p. 4

[31] Article 1 par (16), Law No. 32 of 2009 concerning Protection and Management of the Environment.

no longer clear; instead, it becomes black-colored due to the coal deposits within the river bed. Coals that settles and drifts in the river comes from the disposal of coal wastewater and coal piles that are exposed to heavy rain.[32]

At the beginning of June 2011, Bengkulu Provincial Government formed a joint team to take and test samples at 17 different points along the Air Bengkulu River. As a result, on June 14, 2011, the Head of the Bengkulu Provincial Environment Agency, Arifin Daud, stated that the Bengkulu River water had been positively contaminated with heavy metals, manganese and serum. Arifin also noted that the Bengkulu River water class has turned into class III from class I. Further, the team of the Petrol Leader Mitigation Commission (KPBB) in collaboration with the Indonesian Blacksmith Institution and the Ministry of Environment conducted a sample test of the Bengkulu water. As a result, the Air Bengkulu River is declared to be contaminated with mercury and arsenic. Mercury and arsenic levels are at a dangerous level, which is 15 PPM and 12 PPM in the two sample locations, which are Penandingan Village and Surau. River pollution within the upstream part of the -80 storet index value shows a relatively high number. On average, river water pollution index, if heavily polluted, according to the Decree of the Minister of Environment No. 115 of 2003 is -11 to -30.

Meanwhile, destruction has been indicated by 22 (twenty-two) ex-mine holes that are not reclaimed or remain gaping, and the damage of forest areas can be seen by the decline of the forested regions of 4,505.5 hectares from the total forest area which initially covers up to 12,515 hectares. In fact, a watershed requires that at least 30% of the area is forested. However, forested Bengkulu watershed is only about 10% of the total area. Until the present time, several organizations such as WALHI

[32] Pareke, J.T. dan Aprizon Putra, David. (2014). "Model Penyelesaian Konflik Kewenangan dalam Hal Timbulnya Dampak *Dumping* Limbah Batubara: Studi Kasus pada Pemerintah Kota Bengkulu dengan Pemerintah Kabupaten Bengkulu Tengah". *Padjadjaran Jurnal Ilmu Hukum, Volume 1 – No 2*: 301-321.

have demanded the information of where are the concerned companies based, however, the resolution remain unclear.

In contrast, the open-pit coal mining industry in South Kalimantan is conducted in the Hulu Sungai line which passes through the districts of Martapura, Rantau, Barabai and Tanjung. In fact, exploitation of natural resources, specifically coal through surface mining in South Kalimantan, has never really stopped. Referring to the history of the existing exploitation, starting from the colonial period until the present, it turns out that the nature in South Kalimantan continues to drain. The mining sector in South Kalimantan began with the issuance of the Presidential Decree No. 49 of 1981 concerning Generation I Coal Entrepreneur Contract, or also known as the Coal Mining Entrepreneur Agreement (PKP2B). In South Kalimantan, there are three companies, which are PT. Arutmin, PT. Adaro and PT. ChongHua OMD (whose licenses were later revoked). This industry has caused environmental damage, marked by the crisis suffered by forest areas. According to the Report map data from 1095-1997, the forests in South Kalimantan shrank by 44,4% for 12 (twelve) years or an area which amounts to 769,713 hectares or in other words, 3,7% per year.[33] Until now, the forests of South Kalimantan has been endlessly exploited, especially by the open-pit coal mining industry, both legally and illegally. Ironically, cases of detention of the suspects never happened. Some people who were said to be suspects are not known to be processed by law in court.

3. The Most Ideal Law Enforcement Towards Environmental Pollution and Damage Caused by Open-pit Coal Mining

Several legal teachings at least influence the law in Indonesia. First, the theory of natural law. According to the teaching of Thomas Aquinas, natural law came and rooted in an eternal law (lex aeterna). Eternal law is the essence of God Himself in the form of divined mind, which guides all beings to their final goals. Second, after

[33] Report of the Kanwil Kehutanan. (1997–2004).

the emergence of the theory of natural law, the positivism theory arises. One of the adherents of this theory is Hans Kelsen. The law according to Hans Kelsen is rules and regulations. The law must free from elements such as non-juridical factors, ethics, sociology, politics and others. As time goes by, because the definition of law cannot provide a sense of justice, Kelsen in the Law of Dualism Theory stated that regulations are the law aspired or das sollen (Ius Constituendum) and the real law that applies or das sein (Ius Constitutum).[34] Third, after the emergence of the positivist theory, the theory of history arises. According to Carl von Savigny, the law was not made, it grew and developed following the development of society. Fourth, the theory of sociological jurisprudence law. As per this theory, a good law is a law which lives in the community (living law).[35] These teachings by the most highly qualified publicists become an underlying principle for Mochtar Kusumaatmadja in drafting the definition of law. According to Kusumaatmadja, the law is a set of rules and principles that govern human life within the society which must also include institutions and processes to turn the law into a realization.[36] The function of law itself is to renew society, which means that law in terms of rules or regulations does, indeed, function as an attempt to help and channel the direction of human activities to reach reformation and development.[37]

Environmental law is one of the branches of law that is considered to be a science with multidisciplinary position compared to the other sciences such as environmental engineering, environmental health, environmental biology, environmental chemistry and other sciences which is felt to be too slow to keep up with the acceleration of those sciences mentioned above. Environmental law only acts

[34] Maret Priyanta & Achmad Billy Zulqiyami, *Supra n. 10.* p. 208.
[35] Immamulhadi, Ratu N. (2015). *Hukum & Keadilan : Ajaran Ahli Hukum Termuka.* Yogyakarta : K – Media. p. 47.
[36] Mochtar Kusumaatmadja. (2006). *Konsep – Konsep Hukum Dalam Pembangunan.* Bandung : PT Alumni. p. 91.
[37] Sudikno Mertokusumo. (1966). *Mengenal Hukum Suatu Pengantar.* Yogyakarta : Liberty. p. 108.

as a "sweetener" or a complementary object which incarnate through the weak enforcement of environmental law in Indonesia. Within the legal field, environmental law becomes a functional law, since it is a part of the genus of law where it does not have any explanatory "legal mother". Environmental law which carries out the interdisciplinary characteristic is a breakthrough from the pre-existing legal science. In environmental law, there is civil, legal and administrative law. Further, environmental law has played a significant role in several other legal fields including spatial, tax, and international law. This awareness began to rise when awareness regarding the environment began to echo internationally at the 1972 Stockholm Conference and started to be implemented into Indonesian Law ten years later. It can be seen in Law No. 4 of 1982 which has become Law No. 23 of 1997 which can be considered as the "Umbrella Act". Until now, the applicable law which can be used as a legal instrument for dealing with environmental issues is Law No. 32 of 2009 concerning Environmental Protection and Management.[38]

The mining industry which takes place in Indonesia is bound by mining law. The term mining law regulates the extraction or mining of ores and minerals inside soils. This definition is only focused on ore extraction or mining activities. Excavation or mining is an attempt to explore various potentials contained inside the bowels of the earth. Another definition was found in the Black Dictionary which elaborated that mining law is a provision explicitly regulating mining rights, which is a part of land containing precious metals in land or rocks following the pre-determined rules. The object of mining law can be divided into two, material objects and formal objects. Material objects are materials that are targeted in their investigations. The material object of mining law is humans and minerals whereas the formal purpose of mining law is regulating relations between the state and minerals and between the state and people or legal entities in utilizing excavated materials. In

[38] Franky Butar – Butar. *Supra n. 13.* p. 168

mining law, there are five principles, among other things, the principle of benefit, exploitation, violence, participation, deliberation and consensus.[39]

Mining law has a very intimate connection with environmental law, since every mining business, whether it is related to general mining or oil and gas mining, is required to maintain the continuity of supporting capacity and environmental capacity. This is commonly called the preservation of environmental functions.[40] Mining law has various dimensions, one of which is in the environmental field since the object of mining activities is related to the environment. In this case, the environment in question comprises of both biotic and abiotic. Mining law places environmental aspects as a fundamental aspect because of the dynamics and changes in nature and the physical changes of the environment.

Consequently, a particular treatment is needed for the environment so that the environment which is used for mining activities will always remain with its beneficial functions.[41] To ensure the preservation of the function of environment, every company which are engaged in various fields of activity, especially in the mining sector, is obliged to perform several responsibilities. The responsibilities, inter alia, companies must have an environmental impact analysis (Article 15 Paragraph 1 Law 32 of 2009), companies must manage the waste produced from their business and companies are required to manage hazardous and toxic materials. Companies are also prohibited from violating the standard quality and criteria for environmental damage and restricted from importing hazardous and toxic waste as well (Article 14 Paragraph 1 and Article 21 Law 32 of 2009).

Mining law and environmental law can be described to complete each other as they have similar visions and goals, namely to maintain the preservation of

[39] H. Salim H.S. *Supra n. 12.* p. 12.
[40] Article 1(5), Law No. 32 of 2009 concerning Protection and Management of the Environment.
[41] Franky Butar – Butar. *Supra n. 13.* p. 153.

environmental functions. However, in fact, the mining industry, especially open–pit coal mining often do not prioritize the preservation of environmental functions. Environmental law along with mining law is expected to be present with a manifestation of environmental management, in a positive way. The management of the environment is interpreted as a concerted effort to preserve the environmental function of life, which includes the policy of structuring, utilization, development, maintenance, recovery, supervision, control of the environment.[42] According to the lecture given by Siti Sundari Rangkuti, the substance of the law on environmental management must contain the principles of environmental policy so that it can be encompassed in regulations which consist of legal norms as follows: mitigation at the source, as low as reasonably achievable, the principle of polluters being fined, the principle of blocking, the principle of regional differences and the reversed burden of proof. Environmental management is a regulatory chain which includes legislation, regulation, permit issuing, implementation and enforcement. In environmental management, the law does not only operate as protection and certainty for society but also as an agent of development or agent of change. In its function as a mean of growth, the law legitimizes the instrument of policy in environmental management, among them are the Standard of Environmental Quality and Analysis of Environmental Impacts.

In point of fact, the main mining legal instrument is Law No. 4 of 2009 on Minerals and Coal which still legalize the dredging of coal mining. This law, if understood in terms of legal science, must not stand alone, since this rule is still embodied in environmental law. It means it has a powerful connection as well with Law 32 of 2009 as an "umbrella provision" for the other laws and regulation. Other legal instruments that are intimately related as well are Law No. 18 of 2013 concerning Forestry, Law No. 26 of 2007 concerning Spatial Planning and Law No. 5

[42] Siti Sundari Rangkuti. (2003). *Hukum Lingkungan dan Kebijaksanaan Lingkungan Nasional.* Surabaya : Airlangga University Press. p. 430.

of 1990 concerning Conservation of Biological Resources and their Ecosystems and so forth. As a matter of fact, until now, every legal instrument of mining and environmental law has not been applied optimally towards the coal mining industries, especially open-pit coal mining industries in order to strictly preserve ecological functions.

Under these facts, it is necessary to enforce environmental law effectively. Enforcement of environmental law is the last link inside the environmental policy planning chain cycle. According to Siti Sundari Rangkuti, the enforcement of environmental law is highly connected with the ability of the apparatus and the compliance of the citizens to the existing regulations, which covers three legal fields: administrative, criminal and civil.[43] Assumptions like this imply that environmental law enforcement only carries out a repressive characteristic, which is after the occurrence of cases of pollution and/or environmental damage. In fact, the enforcement of environmental law is not limited only to how judicial actions are being performed, but also how to implement and enforce environmental legislation. Pursuant to the teaching of Keith Hawkins, enforcement of environmental law can be seen from two systems or strategies, which can compliance with conciliatory style as its characteristic and sanctioning with penal style as its unique.[44] Hawkin's opinion was pursued by Daud Silalahi, who stated that the enforcement of environmental law in Indonesia includes structuring and enforcement (compliance and enforcement) which covers the fields of state administrative law, civil law and criminal law.[45] Thus, enforcement of environmental law can be conducted preventively as in the effort to comply with the existing regulations and in a repressive manner through the provisions of sanctions or court proceedings in any event of any violation of

[43] *Ibid.* p. 214.

[44] Koesnadi Hardjasoemantri. (1995). *Pengantar Penegakan Hukum Lingkungan.* Surabaya : Fakultas Hukum Universitas Airlangga. p. 1.

[45] Daud Silalahi. (1991). "*Penegakan Hukum Lingkungan di Indonesia Melalui Pendekatan Kesadaran Hukum dan Lingkungan".* XXXIV Dies Natalies of Universitas Padjadjaran. Bandung : 24 September. p. 1.

regulations. In order to enforce the law, a synergy between the system of environmental law aspects and mining activities must be created so that a comprehensive integration between these aspects may result in an ideal mix. In that way, a norm which leads to an effective and efficient acceleration of legal development can be established. Regulations regarding the environment within the mining sector are one of the series of legal norms that contain legal mechanisms which must comply by the business initiator and/or activities along with the enforcement of the law. The role of the state apparatus as the successor of existing authority plays an essential role in the law enforcement process. Therefore, the state apparatus is expected to become a mean of mobilization which is armed with applicable legal norms.[46]

The enforcement of environmental law is divided into three, namely the enforcement of administrative environmental law, civil law and criminal law. The elaboration of how they apply within the mining industry are as follows:

3.1. Enforcement of Administrative Environmental Law

Enforcement of the administrative environmental law is the primary step that must be taken in order to achieve a society which wholly complies towards regulations. Enforcement through administrative facilities is conducted to stop actions which violate the law and to return the situation to its original state (before the violation occurred). The means of enforcement through administrative means, pursuant to Mas Ahmad Santosa, at least includes : (1) licenses that are utilized as means of supervision and control; (2) requirements of permission with references from EIA, environmental standards and legislation; (3) structuring supervision mechanisms; (4) the existence of adequate quantity and quality supervisors (inspectors); and (5)

[46] Franky Butar – Butar. *Supra n. 13.* p. 157.

administrative sanctions.[47] Law enforcement within the administrative scope can be preventive in nature through permissions, quality standards and EIA and can be repressive through coercive compliance. The advantages of enforcing administrative environmental laws compared to enforcing other laws (civil and criminal), pursuant to Mas Ahmad Santosa, are: (1) administrative enforcement can be optimized as a preventive tool; (2) preventive enforcement can be financially more efficient compared to the enforcement of criminal and civil law, since the financing only covers costs of routine field supervision and laboratory testing which is apparently cheaper than the effort to collect evidence, field investigations, employing expert witnesses to prove aspects of causality (cause and effect) in criminal and civil cases; (3) administrative enforcement has more ability to invite participation of communities. Community participation starts from the licensing process, monitoring compliance or supervision and involvement in raising objections and asking state administrative officials to provide administrative sanctions. Following J. B. J. M ten Berge, there are three attempts of enforcement, inter alia, supervision, administrative sanctions and claims to the state administrative court.

Administrative sanction as per Article 76 Paragraph 2 of the Law No. 32 of 2009 includes, but is not limited to, (1) written warning; (2) government coercion; (3) freezing of environmental permits; or (4) revocation of environmental permits. While administrative sanctions according to Article 151 Paragraph 2 of Law No. 4 of 2009 stipulates that administrative sanctions are in the form of (1) written warnings; (2) temporary suspension of part or all of the exploration or production operations; and/or (3) revocation of IUP, IPR and IUPK. Thus, it can be concluded that the imposition of administrative sanctions in Law No. 32 of 2009 and Law No. 4 of 2009 is similar. Only in the Law No. 32 of 2009, “coercive aspects” are added, such as temporary suspension of production activities, removal of production facilities,

[47] Mas Ahmad Santosa. (2001). *Good Governance dan Hukum Lingkungan.* Jakarta : ICEL. p. 248.

closure of sewage emissions, demolition, confiscation of goods or equipment which may potentially cause violations, temporary suspension of all activities; or other actions aimed at combating violations and efforts to restore environmental functions.

3.2. Enforcement of Criminal Environmental Law

Enforcement of environmental law is the enforcement of the criminal provisions within the scope of environmental law (*strafectelijk milieurecht*) which serves the purpose of imposing criminal sanctions on business proponents and/or activities which are sorrow. Subsequently, either a person or any legal entity that defiles and/or damages the environment is expected to have a deterrent effect and will not repeat any wrongful acts. Institutional substances, authorities and procedures used are generally subjected to the provisions of environmental law unless they have not explicitly been regulated. In such case, the provisions that apply in general criminal law will be used. For example, regarding judiciary, personnel and other applicable procedural law. In the enforcement of the law, this is commonly known as the principle of subsidiarity in dealing with environmental crime. In accordance with the Law No. 32 of 2009, it is stipulated within the General Explanation No. 6 that:[48]

> *"Enforcement of environmental criminal law continues to pay full attention towards the principle of ultimum remidium which requires the application of criminal law enforcement as a last resort, if after the implementation of administrative law is deemed to be unsuccessful. The application of the ultimum remedium principle only applies to certain formal crimes, such as crimes against violations of wastewater quality standards, emissions and disturbance."*

The general explanation above is different from previous regulations. The applicability of criminal provisions still highlights the principle of subsidiarity

[48] General Explanation No. 6, Law No. 32 of 2009 concerning Protection and Management of the Environment.

without distinguishing the qualifications of criminal acts. It is to be emphasized that the legal construction in the formulation of Law 32 of 2009 does not encompass the prohibition of applying criminal law as *ultimum remedium* if it to be deemed as necessary. For example, if it is proven that there happen to be an occurrence of environmental pollution and/or damage, criminal law can be used without having to wait for the application of other legal sanctions first. Law 32 of 2009 does not require criminal penalties as an alternative sanction and does not prohibit the application of criminal sanctions in addition to other sanctions as well (cumulative). Under this fact, in the General Explanation Law 32 of 2009, it was added that the application of the *ultimum remedium* principle only applies to certain formal crimes, such as crimes against violations of wastewater quality standards, emissions and disturbance. Apart from these formal crimes, criminal law can be applied only as *ultimum remedium*. In cases of criminal proceedings within the scope of environmental law, the authorized investigators are the Environmental Officers of the Civil Servants (PPNS).

Criminal provisions in the field of environmental law are broadly regulated in between Articles 94-120 Law 32 of 2009 which recognizes sanctions in the form of imprisonment and fines. The details are as follows:

a. Environmental Quality Standards are regulated under Article 100 Paragraph (1);

b. B3 waste is regulated under Article 103;

c. Environmental Permits are regulated under Article 109;

d. Corruption acts are stipulated under Articles 115-118; and

e. Additional crimes or disciplinary actions are specified under Article 119.

Special arrangements regarding criminal sanctions for mining activities related to the environments include, but is not limited to, mining activities without

permission regulated under Article 158 of the No. 4 of 2009, incorrect information or false information stipulated under Article 159 of the Law No. 4 of 2009 and additional crimes stipulated under Article 164 of the Law No. 4 of 2009.

3.2. Enforcement of Criminal Environmental Law

Environmental dispute is considered, generally, as a dispute which arose as a result of a direct impact felt by the environment. Under Article 1 Point 25 Law 32 of 2009, an environmental dispute is defined as a dispute between two or more parties arising from activities that have the potential and/or have an impact towards the environment. Thus, the subject of the dispute revolves around the perpetrator, and the victim of the environmental effects felt, while the object is the activity which may potentially or already made an impact on the environment. The settlement mechanism according to Article 84 Paragraph 1 Law 32 of 2009 can be carried out through court proceedings (litigation) or off-court proceedings (non-litigation) or better known as alternative dispute resolution.

Environmental dispute resolution through courts can be conducted through public courts and administrative courts. A trial, which uses civil law mechanisms, aims to demand compensation and restoration of the environment on the basis of wrongful acts which may appear in various forms, such as environmental pollution and/or damage which causes harm to people and the environment. Pursuant to the *Burgerlijk Wetboek* (BW) and Article 91 Paragraph (1) Law 32 of 2009, the environmental lawsuit can be submitted both individually and in groups (class action). The group lawsuit has been regulated under the Indonesian Supreme Court Regulation (*Peraturan Mahkamah Agung*/ PERMA) No. 1 of 2002 on Group Representative Lawsuits. In Article 1 Point A of the PERMA, it is stipulated that:

> *"Group representative lawsuit is a procedure for filling a claim, in which one or more people representing the group file a claim for themselves*

or/and at the same time represent a large number of people who suffer similar facts or legal basis between group representatives and the member of the group concerned."

4. Conclusion and Suggestion

Some points can be concluded based on the analysis above, as follows:

a. Problems caused by open-pit coal mining in forms of the river, soil and air water pollution are evidenced by the exceeding environmental quality standards, and environmental destruction is evidenced by the number of ex-mine holes that have not been reclaimed and have exceeded the standard criteria of forest destruction.

b. Enforcement of environmental law can be done through three attempts, *inter alia*, administratively, in court and privately. Administratively, enforcement can be carried out by issuing written warnings, temporary termination of a part or all parts of the exploration or production operations and revocation of licenses. In court, enforcement is carried out in the form of imprisonment and fines. Civilly speaking, dispute resolution can be resolved through litigation and non-litigation proceedings through litigation proceedings, claims can be submitted individually or in groups.

According to the conclusion above, the authors suggest some actions that should be taken in solving the problems, as follows:

a. The enforcement of the administrative environmental law and the environmental criminal law within the mining sector for pollution and environmental destruction due to open-pit coal mining should be upheld effectively by institutions which have strong authority and discipline law enforcement officials who are reliable.

b. The active role of communities or community groups, governmental agencies and environmental organizations with regards to filling individual claims and group representation claims is very much needed if open-pit coal mining companies happen to cause a significant amount of losses within their territory.

Mitigating and restoring environmental functions so that forest and river areas which experience pollution and destruction can recover according to their original function is necessary. Building Communal Waste Water Management (IPAL) installations by the Provincial Government is fundamental as well so that people can safely consume water, even from polluted rivers.