

# *Risk Distribution In Coal Mining: Fighting For Environmental Justice In East Kalimantan, Indonesia*

Muhamad Muhdar<sup>1</sup>, Mohamad Nasir<sup>2</sup> and Juli Nurdiana<sup>3</sup>

<sup>1,2,3</sup>Mulawarman University, Samarinda- Indonesia, Balikpapan University, Balikpapan-Indonesia, Mulawarman University, Samarinda-Indonesia

E-mail: muhamadmuhdar@fh.unmul.ac.id/ mohamad.nasir@uniba-bpn.ac.id/ julinurdiana@ft.unmul.ac.id

**Abstract-** *This study is aimed to explore the environmental risk posed by the unsustainable mining activities in Mulawarman village, East Kalimantan, and articulate the disproportionate impact from the perspective of environmental justice on how mining regulations affect the lives of a vulnerable community. A qualitative comparative analysis based on the legislation and administrative rules on coal mining, and a case study of Mulawarman village were adopted. The information was framed based (participatory) observation, and in-depth interview, and purposively conducted to six selected respondents. The result shows how the laws and regulations disadvantage the community and expose them to unequal treatment. The adverse effects of mining activities change the socio-environmental dynamics in this village. Being the breadbasket in 1997, Mulawarman villagers experience the loss of food self-sufficiency, and turn to the government and mining company for social welfare, and clean water. Also, inconsistent and incomplete regulations pertaining to mining, favor serving the business interests before the environment and the local community. This results in severe encroachment upon community rights and leads to long-term conflicts between mining companies and local communities, and has weakened the capacity of local authorities to help the affected community to recover their rights.*

**Keywords-** *Coal Mining; Environmental Justice; Mulawarman Village; Indonesia; Risk Distribution*

## I. INTRODUCTION

The discussion on excessive coal mining and economic growth has been a focus of environmental and development

discourses in Indonesia [1]. One of the important issue here is environmental justice relating to environmental degradation and the limits placed on public access to natural resources. Many social conflicts and other externalities arise closely related to the stakeholders and their conscious

effort to maintain their interests [2]. The term ‘environmental justice’ (EJ) refers to any responses that may be needed to deal with the unequal distribution of environmental and social impacts amongst communities [3], [4]. It consists of how to define the problems and strategies, including how to tackle environmental issues (e.g., contamination, emissions, and environmental risks) from a legal and political perspective [5]. Here, the distribution of environmental quality was at the core of EJ [6]. Walker and Bullard [7] defined EJ as “the unequal distribution of social and environmental costs between different social groups according to distinctions of race/ethnicity, social class, gender, age and location”. A different definition proposed by Lloyd-Smith and Bell [8]. They consider EJ as “the distribution and impacts of environmental problems, as well as the policy responses to address them”. Rechtschaffen et al. [9] also considered EJ related to distributive justice, though, in the view of environmental law, distributive justice does not mean directing attention to redistributing pollution or risk. Many of EJ advocates consider that distributive justice covers the idea of equal protection where it can be achieved by lowering the risks but not by shifting or equalizing the existing risks. Therefore, any state decisions that try to ignore the fallacies of companies to preserve and protect the environment may be considered as supporting environmental injustice.

One of the examples of an environmental injustice issue is coal mining activities in East Kalimantan. Between 1999 and 2014, the number of coal mining permits in East Kalimantan Province reached 1,333. The mining areas covered of 5.2 million ha scattered across the districts of Kutai Kartanegara, Paser, Berau, Kutai Barat,

Mahulu, Kutai Timur, Penajam Paser Utara, and Samarinda. Historically, East Kalimantan has the largest coal reserves in Indonesia. Coal has always been considered as an important commodity since at least 1861, and during the Dutch colonial era in 1927, the production reached 808,078 tons [10]. Nowadays, the recent annual coal production in East Kalimantan is about 200 million tons per year, which is almost half the national coal production's target of 461 million tons in 2017. Though coal mining has become and remains the main economic support for East Kalimantan; it has significant consequences for the environment and local communities. The negative impacts impose unfair burdens on the environment and disadvantaged local communities in ways that are clearly an environmental injustice issue [11]. In this case, the aims to have a sustainable business model (e.g., in mining) seems to be failed because of lack of coordination among stakeholders, who involved in production to consumption process [12]. On the other hand, the public and local stakeholders involvement are essential for bringing about sustainable resource management [13].

Mulawarman village presents an example of how an environmental injustice practice in coal mining occurs. The existing regulations fail to prevent coal mining interest and activities to take over the agricultural lands and residential settlements. Further, the Law, which on a priori grounds should maintain a balance between investment interests and environmental protection, is evidently unfair. It has become more dominant as a tool to facilitate mining business interests, rather than an instrument to protect community rights to the environment and their access to natural resources. Additionally, local governments as permit issuers neglect any form of social cost to the decreased of quality of life [14], nor do they undertake any risk analysis in operating the licensing system [15]. Equally, these decision-makers do not live up to their responsibility under any legal norm principles or are seen to act in the interests of "the protection of the citizen against excessive or unfair government power, including protecting people against excessive or unfair private power" [16]. To address the issue of EJ, and expose how mining regulations lead to the unequal treatment in a vulnerable community, this paper aims a twofold purpose. First, to identify the

environmental risks posed by coal mining activities in Mulawarman Village and how the community responds to the environmental injustice. Second, to examine how the prevailing law contributes to environmental injustices in the coal-mining activities.

## II. PROBLEMS

In order to reach the objectives, we proposed two research questions. First, what are environmental risks posed by coal mining activities in Mulawarman Village and how the community responds to the environmental injustice. Second, how the prevailing law contributes to environmental injustices in the coal-mining activities.

## III. RESEARCH METHOD

This study adopted a two-step approach and was conducted from 17 September 2017 until 25 June 2019 in Mulawarman village, Kutai Kartanegara. The first approach is a qualitative comparative analysis of the coal mining legislation as identified by the Indonesian laws. The comparative analysis here allows to identify the context in a different setting which corresponds to the contextual environment [17]. The second is a case study to understand the problems related to the legislation and practices of coal mining in Mulawarman village. A case study appears to be reliable to address and investigate the contemporary phenomenon, and well suited for an exploratory research [18]. The interdisciplinary process used in this study is common to any socio-legal studies [19], [20].

## IV. DISCUSSION

### 4.1. Environmental Risk Distribution in Mulawarman Village

The Mulawarman village has a size of  $\pm 18,008$  ha. Only  $\pm 2,380$  ha (13%) is made up of non-forested areas, while the remaining  $\pm 15,628$  ha (87%) is forestry areas. Mulawarman village became one of the tens of villages designated as transmigration areas in 1981. During its early establishment, 263 families, originally from East Java, Central Java, and West Java provinces, inhabited the village, occupied about 526 ha in

total. Each family took advantage of two hectares of land allocated by the state for farming rice and more. Farming was and is the main livelihood of the people in Mulawarman village, and this is considered as successful. Rice contributed five tons of output per hectare on average until, in 1997, the Mulawarman village was officially declared as a breadbasket by the district government of Kutai Kertanegara [21]. However, since then, rice production has gradually deteriorated as rice fields were converted into coal mining areas through a series of permits issued by the local government. Both national government and local government of Kutai Kertanegara have issued a number of mining concessions, including in Mulawarman village. Mulyono, the head of Mulawarman village affirmed that in the present total habitable area of Mulawarman village only 85 ha of 2,000 ha (for settlement) is now left because the villagers have sold most lands to mining companies. As a result, now only 6 ha of farming land remain compared to the original 560 ha in the past. Mulyono added the reason behind the massive sales was attributed to soil degradation and loss of its productivity. "It is now hard to plant paddies because of lack of irrigation,"[22].

The Research Board of Kutai Kertanegara report mentions that the whole Mulawarman village of 18.008 ha has been allotted to "IUP" (*Izin Usaha Pertambangan*/mining business permit) coal mining; namely PT. Kayan Putra Utama Coal, PT. Azara Baraindo Energitama, PT. Kemilau Rindang Abadi, PT. Fisi Fernando Sejahtera, PT. Insani Bara Perkasa ("PKP2B"- *Perjanjian Karya Pengusahaan Pertambangan Batubara*/Contract Coal of Work), PT. Mahakam Sumber Jaya (PKP2B), and PT. Santan Batubara (PKP2B) [23]. Hence, none of the lands in Mulawarman village is immune to mining activities. The open mining system means that the grounds to be mined have to be cleared transforming their designation from farming to a mining site. Currently, the mining activities get closer and closer to community settlement. In the meantime, most rice fields have been cleared by mining companies.

In every case, mining operations may bring different types of critical risks, e.g., access to water for irrigation, noise pollution, the depletion of agricultural productivity due to land-use change and contamination of water used for irrigation.

Though all the company activities depend on the ecosystem services; they do not give enough concerns to understand the conflicts and the risks [24].

In the case of Mulawarman villagers, the loss of food production has become the main problem that makes them fail to maintain food self-sufficiency. As a result, the villagers have lost their independence and turned to the government en masse in order to qualify for social welfare, not to mention their dependence upon the existing companies for clean water. Here, each family head can secure up to 1.200 liters per "RT" (*Rukun Tetangga*/neighbourhood)/day or equivalent to 20 liters of clean water per day. In the past five years, the villagers have inflicted respiratory diseases, as well as diarrhea, caused by coal mine dust released by coal mining companies operating right behind their backyard twenty-four-seven[1]. The villagers also find that mining activities and facilities quite a disturbance during the night. This happens most especially when there is blasting through explosions during coal exploration. Fears of landslide further complicated this activity[2]. In addition, muds from mining activities have often damaged the fish farms that the villagers have<sup>3</sup>. Sooner or later, the villagers living in the vicinity of the mining sites have had to give up their homes and sell them to mining companies. It is to nobody's surprise that no sooner had such lands fallen into their hands, then the companies knocked down the houses and turned them into mining sites. Villagers also have to face the risk of infrastructure scarcity provided by the government, given the uncertainty of their settlement. Meanwhile, other infrastructures, such as roads, have been damaged and gone from worse to worse as coal mining truck traffic that should have been redirected to another route, in fact, use these same public roads.

#### 4.2. Mulawarman Community Response to mining operations

Arguably, a key issue in ensuring an appropriate provision of public goods is determining how much people value them. Because

<sup>1</sup> Kayat (Mulawarman village, East Kalimantan, Indonesia). Personal communication, 25 June 2019.

<sup>2</sup> Jumadi (Mulawarman village, East Kalimantan, Indonesia). Personal communication, 13 December 2018

<sup>3</sup> Wagiran (Mulawarman village, East Kalimantan, Indonesia). Personal communication, 31 May 2019

a large number of people enjoy the benefits of public goods, and this enjoyment is non-rival, individuals do not have sufficient incentive to reveal their willingness to pay for them. Individuals have an incentive to be “free-riders” and let others pay to provide the public good since everyone benefits from them, whether they help pay for them or not. The free-rider problem is one reason why governments often use taxes or user fees to pay for the provision of public goods. In the context of ecosystem services, governments can use tax revenues to pay landowners to manage their land in ways that could protect the provision of those services [25].

Obviously, tension exists in the relationship between authorities, permit users and the people that can result in conflict. Basically, such conflict arises when people experience injustice in their relationship with both mining companies and the authorities. Villagers tend to think that coal mining activities bring malice and environmental injustice to them, rather than bringing the prosperity they used to dream of. In other words, coal-mining activities do people more harm than good. Mulawarman villagers are still struggling after fighting for five years, while their pleas for justice seem to fall on deaf ears. Evidently, mining activities still persist despite various efforts via the legislature and political pressure to try and resolve the conflicts.

It is worth mentioning that the local government of Kutai Kertanegara, the members of Kutai Kertanegara House of Representatives, the members of East Kalimantan Province House of Representatives, the delegates from the relevant ministry office in Jakarta, as well as the governor himself, have made visitations to the endangered village to see and witness how bad the mining had been for the environment. These distinguished people even made promises to take care of the problem, but to no avail<sup>4</sup>. The latest negotiation effort took place between the villagers and the concerned party (a company named PT. KPUC) on February 26, 2019, and March 11, 2019, but these efforts were again fruitless<sup>5</sup>. The company leaned on the fact that most of the villagers have been

received compensation of Rp. 300,000 (equivalent to € 19.35 each month since 2012), while the villagers did not realize what the consequences of such payment are<sup>6</sup>.

Local NGOs have also taken part in escorting and providing legal assistance to the villagers, including bringing the case to the Human Rights Commission; an action that ended nowhere. The community efforts to fight for their rights also backfired when a law enforcement agency (the police) perceived their actions as being in violation of law stated in Chapter 156, Law No 4 of 2009, regarding Minerals and Coal Mining. In this respect, the local government at the district level was powerless, as the authority responsible for coal mining had been accorded to the provincial government; this according to Chapter 14 verse (2) of Law No 23 of 2014 regarding local government<sup>7</sup>. The presence of various parties from the government does not necessarily appease everyone, as the solution-finding measures since the very beginning have been based on an unbalanced negotiation approach. Negotiation practices that neglect the public interest are obviously dangerous in environmental law because it denies the justice principle and fair social treatment. The risks that befell Mulawarman villagers, and their ongoing struggle for justice, presents an example of how the state can neglect community interest and the environment in the context of coal mining operations.

#### *4.3. The lack of state responsibility in public and environmental protection*

The Indonesian constitution firmly stated that the state has to protect the whole nation and homeland and to utilize natural resources for the well-being of the people. The whole homeland implies a guarantee to all citizens for legal protection. This covers the protection of individuals in their access to natural resources, as well as providing for a safe and healthy environment. In fact, Indonesia constitutes one of only a few countries in the world that incorporate environmental protection and entitlement into their

<sup>4</sup> Tarsudi (Samarinda, East Kalimantan, Indonesia). Personal communication, 25 June 2019

<sup>5</sup> Zainal (Samarinda, East Kalimantan, Indonesia). Personal communication, 25 June 2019.

<sup>6</sup> Kayat (Samarinda, East Kalimantan, Indonesia). Personal communication, 25 June 2019.

<sup>7</sup> Edy Darmansyah (Tenggarong, East Kalimantan, Indonesia). Personal communication, 20 March 2019

constitutions. The foremost reason for this incorporation is to protect all people and their entitlements to certain rights regarding their relationships with the biodiversity environment [26]. The constitutional text also confirms that the political law of state-citizen relationships and natural resource users is based on environmental protection and economic advantage. Thus, the state has the responsibility to provide a legal instrument to respect, to protect, and to fulfil these rights. The state must create and implement a law that clearly establishes the limits and the government's responsibilities, the limits, duties and individual's rights, and also the mechanisms to protect guarantee a remedy in case of a violation [27]. In the context of human rights, a commission can declare a violation to a state. For instance, where there is insufficient regulation, or omission (i.e., state failure to fulfil its responsibilities to protect the rights from non-state actor's actions).

However, in the case of Mulawarman villagers, environmental protection and benefits are not likely to be realized. This situation reaffirms a growing public assumption that people living in the vicinity of an extractive mining site, tend to experience abject poverty. Unless political intervention and third party advocacy take place in mediating the overlapping interests among the residents (victims), the business, and the government [27], those people will not gain access to public decisions related with their livelihoods [28]. In essence, though, the law is designed to protect both individual and collective rights [29], in reality, it is prevalent that the law is unable to give its protection, particularly in cases where the individuals or community rights stand in opposition to investors' interests.

In Mulawarman village, the evidence indicates that coal-mining operations have been exploitative in nature and lead to environmental degradation. Unfortunately, the institutions involved in the licensing chains, either at the central or lower levels tend to side with the investors in any cases where legal conflict arises<sup>8</sup>. Such exploitative regulations, which abandon the environment and the people living with and from

the environment, are positively correlated with the negative impacts that occur almost daily. The regulations have deserted the principles of sustainability, fair access of natural resources, the destruction of clean water reservoirs, and have driven farming as the principal means of survival of the people to the edge of extinction<sup>9</sup>. In the perspective of law, though coal-mining companies have the rights to mine, they expose an inequality in the social justice system.

The economic aspects of coal mining operation are complicated, as the regulations that license these operations have also become the source of a series of restrictions [30]. International markets are notoriously reluctant to accept timber, fishery, and palm oil from Indonesia, but react differently in the case of coal as a commodity, which is welcomed without little question. Such practice indicates that importing countries are likely becoming an indirect proponent in the destructive environmental practices that take place in Indonesia. The state seems powerlessness and shows its incompetence to guarantee sustainability. In the long run, this will bring to two serious implications: firstly, by ignoring the ongoing environmental destruction, the state will have to pay a high cost in the future by ignoring the externalities now and previously. The state has to finance farming lands, clean water resources, soil vegetation, public infrastructure repairs, and other socio-economic costs. Secondly, the state has failed to meet their constitutional responsibility to manage the country by allowing damaging environmental endeavors that threaten its citizens, as the Mulawarman village case shows.

In essence, licensing in natural resource management aims to ensure the safety of all public interests from those who entitled to the permits to manage the resources. However, the practices in the field have failed to meet the expectations. Coal mining activity is evidently unable to ward off both the marginalization of the nearby community and the environmental degradation. It is evidence that the licensing system of coal mining in Indonesia has played a key role in triggering environmental injustice. The coal mining licensing service has received special treatment when compared to other natural resources operations, such as forestry,

<sup>8</sup> Mulyono (Mulawarman village, East Kalimantan, Indonesia). Personal communication, 13 December 2018.

<sup>9</sup> Jumadi (Mulawarman village, East Kalimantan, Indonesia). Personal communication, 13 December 2018.

plantations, or fisheries. The state is bound to issue permits for coal mining, despite the fact that the lands belong to the villagers, as has occurred in Mulawarman village. Arable areas, as well as community settlement, come as secondary concerns to the interests of mineral and coal mining. Also, a variety of laws do not disapprove coal-mining operations, including Law No 41 of 1999 regarding Forestry, Law No 39 of 2014 regarding Plantation, and Law No 29 of 2009 regarding Transmigration. Law No 4 of 2009 regarding Minerals and Coal Mining does not repudiate that all Indonesian territory can be mining areas. This means that where and when coal is found within community settlements, it is absolutely legal for mining companies to apply for permit to manage the area.

In addition, coal mining permit guarantee the right of coal mining companies to survey any potential areas though, they are already licensed for plantation, forestry or settlement. The licensing system has changed the licenser (the state) and the licensed relationship into private style of license issuer and license holder relationship. As a consequence, forest areas that have been strictly regulated have to be given up for coal mining purposes. In fact, the regulation (Minister of Environment and Forestry Regulation No. P.50/Menlhk/Kum.1/6/2016 on Forestry Permit Guidelines) allows mining permit applicants to utilize forest areas through the "IPPKH" (*Izin Pinjam Pakai Kawasan Hutan*/ Borrow-to-Use Forestry Permit) scheme, or a leasing permit for a forestry area. In this case, the previous owners of the lands are also very likely to live with much anxiety thinking of the possibility that their lands can be confiscated for coal mining at any time. This kind of land transfer from agriculture to mining sometimes follows a legal path. However, no less frequently the land is converted to mining site through non-legal mechanisms, without even having to acknowledge the concerned individuals. Such practices sound ridiculous from a legal perspective, given the uncertainty surrounding the legal status of a leasing object. Here, the leasing object normally is the primary forest, which post-mining will turn into mining pits (void) that cannot sustain the original forest functions [31].

Mining companies went further in penetrating community-owned farmlands by taking over their

ownership. The parties that accepted the admission to issue mining permits never really run any background checks, except for paper reports that the permit applicants presented. This ignited tenurial conflict as a result, as people's lands suddenly became a negotiation object and source of conflicts should villagers ever disagree to let go of their lands. If the latter situation occurred, the landowners would always be at a disadvantage as was proven in Mulawarman village. The direct risks include noise pollution, water quality degradation, damaged farming sites, degrading value of lands (due to damaged lands that surround the lands in conflict), and the loss of community access to public infrastructure built by the government. When considering the impact of coal mining management operations on land and forest, it is not hard to imagine how serious the environmental risk distribution potential is that takes place in coal mining licensing system in Indonesia. The coal mining regulatory system fails to consider the environmental risk. Law No. 4/2009 regarding Mineral and Coal Mining does not sufficiently mention of how to protect the environment around the mining areas. It seems that it does not clearly accommodate environmental sustainability (e.g., in responding to the risks during coal exploitation and post-mining). The only legal umbrella to coal mining area is state regulation No 27/2017 on Environmental Permit which gives concerns to environmental biodiversity; a law that has yet to be seriously implemented.

The environmental permits were initially enacted as a legal tool to mitigate the risks related to natural resource management. The regulations also state that to enable sustainable development, the natural resource should be managed in a way that is economically viable, socially acceptable and environmentally sound. Further, in 2012, the Minister of Environment issued an implementing regulation (no. 4 of 2012 on Eco-Friendly Indicators for Open-pit Mining Operations or Activities), which prohibiting mining within 500 meters of residents' settlements. However, in East Kalimantan, this provision has not been legally enforced and has been violated by mining companies. This indicates that the legal system covering licensing has yet to pay attention to or deal with environmental and societal risks. Also,

any multiplier effects which result from mining operations, should not deprive villagers of their rights or deny their very existence at first place. Unfortunately, the impacts that should not have happened has been the reality that has haunted the villagers in the vicinity of the mining site: poverty, toxic waste in the river, polluted drinking water, and road damage, amongst others adverse outcomes.

In term of social acceptability, initially coal mining brought great benefits to the people, especially during the period when permits boomed in 1999. With the passage of time, it has created tension in society due to the destruction that it has caused, particularly because of the risk distribution issue and the miners' reluctance to abide by the law. It is inferred that the environmental analysis or prior informed consent to local inhabitants has been severely violated, whereas, the environmental aspects are supposed to be the main concern in any decisions concerning coal-mining investment [32], considering its high risk to the environment and local people's wellbeing. However, the risk distribution practices of mining show just the contrary. People's concern has been raised as to whether the Environmental Impact Assessment, known as AMDAL, has not been properly issued. Poor environmental condition at mining sites has also prompted people to think that there has been something wrong in the process of AMDAL that the mining companies use. This issue has raised especially after people that were affected by the adverse consequences of mining activity have been denied access to the truth. Thus, excluding the concerned community in the preparation of AMDAL, is a violation of the transparency principle in the public decision-making process and has resulted in a myriad of problems for society. This contemptible licensing practice of coal mining operations has forced the authorities to revoke 809 mining licenses out of a total of 1,333 licenses issued earlier in East Kalimantan Province, but these exclude those of companies that operate in Mulawarman Village. Such licenses were revoked because the companies did not have the appropriate environmental documents and provided no reclamation fund. However, the repeal of the licenses, unfortunately, has left the immediate mining pits unattended, which also means that the perpetrators got away scot-free. One of the focal

problems is the unreclaimed coal mining areas that negatively impact the local environment and community, and becomes the main cause of risk distribution. On the hand, the reclamation funds that companies left in state-owned banks (a prerequisite to acquire the mining permit), have been already refunded on the assumption that the companies had satisfied the reclamation requirement, for example, to deliver success in the reforestation of the coal mining area.

No sooner had the East Kalimantan government terminated 809 questionable permits, the environmental risk potential followed. Both local and central governments lack in legal responsibility scheme, for instance, the consequences for the ex-permit holders in the case that they fail to reclaim the mining pits. Another problem that also often arises is that the reclamation fund falls short of restoring the environmental degradation from the mining activities. As a result, the government fund has now to be used to cover up the crime committed by mining companies, otherwise, they have a responsibility to allow the environmental risk happening. Therefore, the abandoned mining sites will eventually become a burden on the government and squeeze the fund that was initially set aside to finance other public needs. It is clear that the authority shift with regard to the licensing is evidently causing harm rather than benefit for the people living in and around the coal mining area. Legal action has also failed to cope with the situation, which proves that the state has failed in its management of natural resources.

Accordingly, this finding also shows that coal-mining governance in Indonesia is legally and institutionally complex. It involved multiple bodies of law and government agencies related to land, forests, spatial planning, and environmental management. These situations do lead to legal uncertainty, not only for the coal mining companies but for the community as well. The existing condition indicates that the coal mining licensing system lacks sufficient mechanisms to predict environmental and societal risks. In other words, the failure to prevent coal mining risk distribution affirms that the legal licensing system of coal mining has yet to accommodate the safety of both people and their environment.

Further, the silence of the state to those who continuously violate the environmental regulations is a clear case of state negligence and should be regarded as an injustice. The implications are that it diminishes state power and undermines its ability to manage and carry out its environmental function sustainably. Such absurd licensing practices and state reluctance to bring the perpetrators to the court can also mean that the state has effectively entrusted environmental protection responsibility to the coal mining businesses. This is a high-risk move because businesses, including coal-mining companies, have always been profit-oriented with little incentive to be socially or environmentally responsible.

## V. CONCLUSION

From a risk distribution perspective, it can be concluded that the existing environmental laws have not and not being successful to provide the protection to all, as the nature of the regulations solely tend to lead to conflicts. The lack of state responsibility in public and environmental protection signifies the problems in the level of state protection, which result coal mining to have more concern to economics (i.e., profit) over public and environmental concerns. What happened in Mulawarman village, are similar to the classic case of “tragedy of the commons” outcome. The prevailing licensing system was not designed to anticipate risk distribution and the negative effects of coal mining activities to the surrounding community and the environment.

## REFERENCES

- [1] L. Fatah, “The Impacts of Coal Mining on the Economy and Environment of South Kalimantan Province, Indonesia,” 2008.
- [2] X. Pan, J. Sha, H. Zhang, and W. Ke, “Relationship between corporate social responsibility and financial performance in the mineral industry: Evidence from Chinese mineral firms,” *Sustain.*, vol. 6, no. 7, pp. 4077–4101, 2014.
- [3] A. Kaswan, “Environmental justice: bridging the gap between environmental laws and ‘justice,’” *Am. Univ. Law Rev.*, vol. 47, no. 221, pp. 221–300, 1997.
- [4] M. Hillman, “Environmental justice: A crucial link between environmentalism and community development?,” *Community Dev. J.*, vol. 37, no. 4, pp. 349–360, 2002.
- [5] G. C. Bryner, “Assessing Claims of Environmental Justice: Conceptual Framework,” in *Justice and Natural Resources: Concepts, Strategies, and Applications*, and D. S. K. Kathryn M. Mutz, Gary C. Bryner, Ed. Washington DC: Island Press, 2002.
- [6] N. Low and B. Gleeson, “Justice, society and nature,” London: Routledge, 1998.
- [7] R. Bullard, “Environmental justice in the 21st century. People of color environmental groups,” 2000.
- [8] M. E. Lloyd-Smith and L. Bell, “Toxic Disputes and the Rise of Environmental Justice in Australia,” *Int. J. Occup. Environ. Health*, vol. 9, no. 1, pp. 14–23, 2003.
- [9] C. E. G. Rechtschaffen, *Environmental Justice: Law, Policy, and Regulation*. Durham, North Carolina: Carolina Academic Press, 2009.
- [10] R. W. van (Reinout W. van) Bemmelen, *The geology of Indonesia / R.W. van Bemmelen*, 2nd ed. The Hague: The Hague: Martinus Nijhoff, 1970.
- [11] K. Slack, “The Role of Mining in The Economies of Developing Countries: Time of a New Approach,” in *Mining, Society and a Sustainable World*, J. P. Richards, Ed. Heidelberg: Springer, pp. 75–90, 2009.
- [12] M. Rodríguez-García, M. Guijarro-García, and A. Carrilero-Castillo, “An overview of ecopreneurship, eco-innovation, and the ecological sector,” *Sustain.*, vol. 11, no. 10, 2019.
- [13] J. I. Schmidt, D. Clark, N. Lokken, J. Lankshear, and V. Hausner, “The role of trust in sustainable management of land, fish, and wildlife populations in the Arctic,” *Sustain.*, vol. 10, no. 9, pp. 1–18, 2018.



- [14] Environmental Law Alliance Worldwide, *Guidebook for Evaluating Mining Project EIAs*, 1st ed. Eugene: Environmental Law Alliance Worldwide, 2010.
- [15] Craig N. Johnston; William Funk; & Victor B. Flatt, *Legal Protection of The Environment*, 4th ed. West Academic Publishing, 2018.
- [16] S. Mermin, *Law And The Legal System: An Introduction*. Boston: Little, Brown and Co, 1982.
- [17] Franks Esser & Rens Vliegenhart, "Comparative Research Methods," in *The International Encyclopedia of Communication research Methods*, R. F. Matthes, J.; Davis, C S.; Potter, Ed. John Wiley & Sons, Inc, pp. 248–270, 2017.
- [18] M. Shakir, "The selection of case studies: Strategies and their applications to IS implementation cases studies. Maha Shakir," *Res. Lett. Inf. Math. Sci.*, vol. 3, pp. 191–198, 2002.
- [19] R. Banakar, "On Socio-Legal Design," pp. 1–22, 2019.
- [20] W. Schrama, "How to carry out interdisciplinary legal research Some experiences with an interdisciplinary research method," *Utr. Law Rev.*, vol. 7, no. 1, p. 147, 2011.
- [21] Antara Kaltim, "Desa Lumbung Padi Terancam Emas Hitam!," Samarinda, 20-Apr-2017.
- [22] Humas Kabupaten Kutai Kartanegara, "Kades Mulawarman Berharap Infrastruktur dan Air Bersih," 2017. [Online]. Available: <https://humas.kukarkab.go.id/berita/pemerintahan/wabup-kukar-minta-kpuc-dan-jmb-segera-perbaiki-jalan-mulawarman>. [Accessed: 03-Mar-2020].
- [23] DRD Kutai Kartanegara, "Kondisi Lingkungan Hidup Di Desa Mulawarman Kecamatan Tenggarong Seberang Kabupaten Kutai Kartanegara," Tenggarong, 2013.
- [24] S. C. L. Watson and A. C. Newton, "Dependency of businesses on flows of ecosystem services: A case study from the county of Dorset, UK," *Sustain.*, vol. 10, no. 5, 2018, doi: 10.3390/su10051368.
- [25] J. M. A. and J. J. Stoorvogel, "Payments for Ecosystem Services, Poverty and Sustainability: The Case of Agricultural Soil Carbon Sequestration," in *Payment for Environmental Services in Agricultural Landscapes*, R. S. L. Lipper and T. S. D. Zilberman, Eds. FAO & Springer, 2009, pp. 133–162.
- [26] T. Hayward, *Constitutional Environmental Rights*. Oxford: Oxford University Press, 2005.
- [27] M. Barón Soto and A. Gómez Velásquez, "An approach to the state responsibility by an omission in The Inter- American Court of Human Rights Jurisprudence," *Rev. CES Derecho*, vol. 6, no. 1, pp. 3–17, 2015, doi: 10.21615/ces.
- [28] J. Prno and D. Scott Slocombe, "Exploring the origins of 'social license to operate' in the mining sector: Perspectives from governance and sustainability theories," in *Resources Policy*, 2012, vol. 37, no. 3, pp. 346–357, .
- [29] D. N. Cassuto, "The law of words: Standing, environment, and other contested terms," *Harvard Environ. Law Rev.*, vol. 28, no. 1, pp. 79–128, 2004.
- [30] J. Southalan, *Mining Law and Policy: Intrnational Perspectives*. New South Wales: The federatioan Press, 2012.
- [31] M. Muhdar, M. Nasir, and R. Rosdiana, "Implikasi Hukum Terhadap Praktik Pinjam Pakai Kawasan Hutan untuk Kegiatan Pertambangan Batubara," *Hasanuddin Law Rev.*, vol. 1, no. 3, p. 430, 2015.
- [32] M. Naito, K.; Myoi, H.; Otto, J.; Smith, D.; Kamitani, "Mineral Project in Asean Countries, Geology, Regulation, fiscal regime, and the Environment," *Reources Policy*, vol. 24, no. 2, pp. 87–93, 1998.