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RESEARCH PAPER

Political Capture in the Exclusion of FABA and Slag from Hazardous Waste List Regulation in Indonesia

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ABSTRACT

PURPOSE: This research analyses the political capture that exists in the Indonesian law-making process. It aims to show possible links between the involvement of businesses in the coal and mining sectors and politicians' personal interests that may outweigh the goal of protecting human health and environment.

DESIGN/METHODOLOGY/APPROACH: The analysis departs from a conceptual and normative approach on the law-making process in Indonesia, then juxtaposes it with facts and provisions around the enactment of hazardous waste regulation.

FINDINGS: This paper concludes that business and political influence is undeniably infringing the protection of human rights and the environment through the exclusion of fly ash bottom ash (FABA) and slag from the hazardous waste list. Despite the potential harm that FABA and slag may cause to human health and the environment, the government remains confident that they are non-hazardous materials. The debate on the benefit and drawbacks of FABA utilisation put aside the fact regarding limited access to remedy and weak environmental law enforcement.

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RESEARCH LIMITATIONS/IMPLICATIONS: This paper aims to invite more discussion to criticise the policy and law-making processes in Indonesia in which the personal interest of politicians should not outweigh the protection of human health and the environment.

KEYWORDS: *Policy Process; Law-Making Process; Politics of Law; Political Capture; Political Influence; Human Rights*

INTRODUCTION

Law as a product of policy process is obviously a result of political bargaining between competing interests (Tuori, 2002; Stefanou, 2008; Ordonez *et al*., 2021), including in the enactment of the Omnibus Bill as the Law of the Republic of Indonesia Number 11 Year 2020 concerning Job Creation (hereinafter Omnibus Law). The bill was initiated by the President of Indonesia following the governments' commitment to stimulate investment that, in turn, creates job opportunities for the workforce. The government believes that loads and overlapping regulations are the main factors inhibiting investment. By introducing the Omnibus Bill, the government tried to amalgamate numbers of legislation, simultaneously repealing and replacing norms. The Omnibus Law consists of 11 clusters with more than 1,000 provisions legislating the workforce, investment, land law, ease of doing business, industry, and national economic strategic plan. Although it repealed provisions in 79 acts, the omnibus as a legislative technique was controversial; it was completely new for the Indonesian legislative system that previously acknowledged 'one theme one act'.

The introduction of the Omnibus Bill was criticised by many civil groups, mostly those advocating environmental issues (WALHI, 2020a), farmers and labour groups. The main opposition to the omnibus bill includes:

1) the bill will be a freeway for rampant corruption in the field of natural resource management;
2) environmental destruction will be uncontrollable and difficult to prevent;
3) the climate crisis due to coal investment and coal down streaming;
4) the abolition of articles containing the principle of absolute responsibility will make it difficult for law enforcement to ensnare corporations related to forest and land fires; and
5) the coal industry that carries out utilisation and development activities will receive a lifetime extension of the mining license (Greenpeace Indonesia, 2020).

It was considered that the deliberation of the bill amid the pandemic (with a rushed schedule from April to October 2020) and the fact that it was agreed late at night discouraged public participation. Civil society was pessimistic that Members of Parliament tightly scrutinised the ample content of the Omnibus Bill. As a result, the Omnibus Law delegates power to secondary legislation, meaning the government deals with the details.

The draft bill was supported by nine out of eleven political parties in the Parliament. Since the dominant parties in the Parliament are on the same platform as the President, this makes it a mostly

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governmental political agenda requiring parliamentary approval easily agreed upon by the majority. Furthermore, hundreds of delegations to enact government regulation as a response to the Omnibus Law indicate the increasing power of the President to drive the implementation of the law.

The consent seems to be coming true, as the President introduced Government Regulation Number 22 of 2021 concerning Implementation of Environmental Protection and Management (hereinafter GR 22/2021) in response to the Omnibus Law. The GR 22/2021 excludes fly ash bottom ash (FABA) and slag produced by coal mining from the toxic waste category. Previously, FABA and slag were categorised as hazardous waste according to GR 101/2014. Therefore, corporates were required to treat the toxic waste or there were legal consequences for their disobedience. According to the arguments against the Omnibus Law linked to coal mining and other environmental issues, the issuance of GR 22/2021 that relates to a new category of toxic waste in coal mining cannot be coincidence. By removing FABA from the hazardous waste category, there are indications that corporations might be trying to avoid obligations. This paper seeks to analyse the possible political capture in the enactment of GR 22/2021 by looking at: 1) the policy process; 2) the legal consequences of the exclusion of FABA and slag from the toxic waste list; and 3) adequacy of the regulations considering potential hazards of FABA and slag to human health and environment.

Political Capture in the Omnibus Law-making Process and Implementing its Regulations

Indonesia has been an important source of global coal demand since 2005 (Lucarellli, 2015), and maintained this position up to 2013 (Cornot-Gandolphe, 2017), and 2017 (Friederich and van Leeuwen, 2017). In 2018, Indonesia was the world's 5th largest coal producer; it is also the 2nd top coal exporting country. The total amount of coal production in 2018 was 548.6 million tonnes; of this, 114.55 million tonnes were utilised for domestic consumption (British-Petroleum, 2019). Coal has been the major source of energy (Baskoro *et al*., 2021); currently the coal-fired power plant capacity in Indonesia may reach 31 Gigawatts (GW) (Shearer *et al*., 2020). With this huge use of coal in the energy sector, it is estimated that these coal-fired power plants will produce 8.31 million tonnes of fly ash in 2019 with a 5% per year increase (Petrus *et al*., 2020).

The coal and mining industry is related to Indonesian politicians and government officials (WALHI, 2020b). There are at least eight MPs, seven top ranking officials and two Indonesian business elites related to the coal industry in Indonesia that are involved in the initiation of the Omnibus Law-making process (Indonesia Corruption Watch, 2020; WALHI, 2020b). This fact indicates that the issuance of FABA regulations might be influenced by the personal interest of politicians and policy-makers. This situation is also known as the 'political capture' (Transparency-International, 2014), where a group of policy-makers and regulators uses its power for the benefit of a minor constituency and shifts away the policy from the public interest towards special interest (Carpenter and Moss, 2013; Omotoye, 2019).

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Primary norms on hazardous waste management in Indonesia is legislated under Article 59 of the Law Number 32 Year 2009 concerning Environmental Protection and Management (hereinafter PPLH Law). According to the PPLH Law, hazardous and toxic waste is the residue of a business and/or activity containing substance, energy, and/or other components that, due to their nature, concentration, and/or amount, either directly or indirectly, can pollute and/or damage the environment, and/or endanger the environment, health, and the survival of humans and other living things. It is mandatory on those who produce toxic waste to manage it; this includes reducing, storing, collecting, transporting, utilising, processing, and/or stockpiling.

In cases where the subject is incapable of carrying out toxic waste management, there is the possibility of passing it to another party. This could be a business entity that manages the hazardous waste, as long as the business complies with the detailed arrangement as regulated through secondary legislation of PPLH Law, that is the Government Regulation Number 101 of 2014 on Management of Hazardous and Toxic Waste (hereinafter GR 101/2014). GR 101/2014 determines several types of hazardous waste, including Fly Ash (Waste Code/KL: B409) and Bottom Ash (Waste Code/KL: B410) abbreviated as FABA. FABA is described as waste generated from the coal combustion process in coal-fired power plants facilities, boilers and/or industrial furnaces. In Appendix I of Table 4 as an integral part of GR 101/2014, FABA is listed as hazardous waste from specific sources and type of hazardous waste category two.

The enactment of GR 101/2014 has imposed a burden for companies to manage. Companies have to prepare many documents and go through complex and time-consuming licensing application procedures to utilise FABA. There were also limited accredited laboratories for toxicological testing as required in GR 101/2014. As a consequence, management costs to manage FABA were higher and became financial burdens for corporations. Hazardous waste management basically recognises the cradle to grave principle; this means from the time it is generated until it is destroyed, the waste should be handled with caution. This matter then counted as impetus to push government to make significant changes to regulations concerning the toxic waste management sector.

GR 101/2014 was revoked with the enactment of Government Regulation Number 22 of 2021 on the Implementation of Environmental Protection (GR 22/2021), which is mandated by Article 22 of the Omnibus Law. Referring to Article 274 of GR 22/2021, it is stated that everyone who generates waste, be it toxic waste or non-toxic waste, is obliged to manage the waste generated from the business and/or activities. In the provisions of Article 452 paragraph (1), GR 22/2021 states that the management of registered non-toxic waste as referred to in Article 450 paragraph (1) point a, is carried out in accordance with the technical requirements for non-toxic waste management. Article 452 paragraph (2) continues that the management of non-toxic waste is carried out by the person who produces the non-toxic waste; the details are contained in the environmental agreement. The details of the management of non-toxic waste in the environmental approval include the identification, the form, and the source of the waste generated on a monthly basis. By knowing these details, the government regulations want the implementation of the precautionary principle and accuracy in

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the process of managing non-toxic waste through environmental approval. It is said that FABA, as it is excluded from the toxic waste category, requires business actors to carry out the process of preparing a comprehensive plan as the basis for issuing environmental approval as well as business permits. With that, government is confident that the process of managing FABA as non-toxic waste could still be carried out without polluting or damaging the environment.

Likewise, the determining factors that distinguish the two different classifications of FABA waste—namely FABA as a Toxic Hazardous Waste and as Non-Toxic Hazardous Waste pursuant to GR 21/2022—lies in the producing place (sources) of the FABA waste, and the different codes assigned to each type of FABA. Since coal burning in Coal Generated Power Plant (PLTU) activities is carried out at high temperatures, the content of unburnt carbon in FABA is minimum and more stable when stored. FABA that is produced by coal-fired power plants originates from the pulverised coal or chain grate stocker combustion system that burns completely and can be used for mixed construction materials. On the other hand, FABA that is produced by a system *stoker boiler*, or other industrial furnaces with combustion that does not burn completely and use outdated technology, is considered more dangerous. Therefore, this FABA is included in the list of toxic hazardous waste (CNN Indonesia, 2021).

However, the Indonesian Center for Environmental Law (ICEL) expressed criticism towards the removal of FABA from the hazardous waste category. *First*, the government does not consider the costs arising from the risk of coal ash pollution as non-toxic waste. *Second*, environmental injustice may arise due to potential risks to the environment and public health. *Third*, the loss of the power plant operator's obligation to implement an emergency response system for coal waste management; toxic hazardous waste management must comply with this obligation, but non-toxic hazardous waste management does not have this obligation. If in the business activity there is no emergency response system, then, in the event of emergency environmental pollution during the course of the activity/business, there will be lack of a system to cope with and to recover the pollution. *Fourth*, there is a potential to loosen law enforcement against coal ash management business actors. In the context of civil law enforcement, there is a risk that the manager of the coal ash may not be subjected to strict liability since FABA originated from coal-fired power plants does not fall within the hazardous waste category.

All in all, the exclusion of FABA in this case not only has implications for the way it is managed, but also has implications for legal responsibility to businesses and/or activities. Referring to the provisions of Article 88 of the Omnibus Law, businesses, and/or activities that produce non-toxic waste, cannot be held to strict liability. With such provisions, it will be profitable for business operators since FABA is no longer categorised as hazardous. These new provisions then trigger accusations regarding the businesses' involvement in the policy process around the initiation of the Omnibus Bill and government regulations, dominated by high ranking officials and politicians that have close relations to the coal-generated power plant and coal mining companies (Indonesia Corruption Watch, 2020; WALHI, 2020b).

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Potential Hazard to Health and Environment

Coal mining activities generate waste as a result of the coal production process. In this case, the two most common coal wastes are FABA and boiler slag. These wastes are generated from combustion in a coal-generated power plant that uses coal (Damayanti, 2018). Research shows that coal waste contains various chemicals that threaten health, especially respiration. FABA, which is often in the form of coal dust, is a mixture of various minerals, trace metals, and organic materials with varying degrees of coal particles; this can lead to chronic diseases such as pneumoconiosis, progressive massive fibrosis, chronic bronchitis, and emphysema (Maryuningsih, 2015). The prevalence rate of coal pneumoconiosis is 1.15% in coal mining areas (Wahyuni *et al*., 2013). Other studies have also shown an increase in the number of asthmatic children around mining areas; this is thought to be due to active components that play a direct role in the pathogenesis of diseases caused by coal dust (Maryuningsih, 2015).

There are reports on a correlation between the existence of open-pit coal mining that produces coal waste and the health conditions of the people near the mining area and the environmental damage in Indonesia from 2010 until recently. *First*, research conducted on PT MBA, a coal mining company with an open-pit mining system in Mereubo district, Aceh Barat Regency, shows there are clear impacts on the environment and local residents due to coal mining activities. There are topography changes in the environment, enormous holes, hydrological disturbances, reduction in air quality and dissolution of natural ecosystems. Also there is an increase in health costs by residents around the mining area estimated at IDR 258,307,192 (US$16,751) a year as more people face respiratory disease (Fachlevi *et al*., 2015).

Second, research undertaken by PT Bukit Asam (Persero), a coal mining company with an open-pit mining system in Muara Enim Regency, shows that there is a correlation between health problems and mining activities. Based on data from the local health office of Muara Enim Regency in 2010, many residents have suffered from diarrhoea and acute respiratory infection syndrome that occurs in the dry season due to high saturation of coal dust that is easily inhaled by the community. The highest number of cases involved coughs and colds followed by fever, especially local residents who live 200 metres from the mining site (Juniah, 2013).

In addition, according to research conducted at PT Berau Coal in Tasuk Village, Berau Regency, a coal mining company with an open-pit mining system, there are environmental impacts and health problems felt by the community surrounding the mining area. Through interviews with residents, respondents said they were concerned about the air pollution and mine waste that flows to the river, makes the river muddy and causes floods; these are the most impactful for the environment. In addition, common diseases such as coughs, respiratory problems, itching, chicken pox, and diarrhoea are common. This is because the residents are surrounded by mining air pollution. Also, access to dirty water for residents due to pollution leads to the unavailability of access to clean water in residential areas near the mines (Mursyidin and Warnida, 2017).

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Furthermore, in interviews conducted with residents in Suralaya Village, Banten, which is in the area of the coal-generated power plant in Suralaya, the existence of the power plant that emits FABA waste also has an impact on the lives of surrounding residents. In February 2021, ash rain occurred in residential areas, which was exacerbated by damage to the power plant's chimney. Over the past 35 years, these eight coal-fired power plants have also affected the health of Suralaya residents; a child suffered from lung disease and a number of people died due to lung disease (Syahni, 2021).

Based on a study conducted on residents in Rawaurip Village, Cirebon, who live in a coal stockpiling area, there is an indirect correlation between the presence of coal stockpiling and health issues experienced by the surrounding community. Residents from Pahing block, Rawaurip village, were severely exposed to dust produced from the coal sieving that affected the residents' salt ponds. The residents of Pahing block, Rawaurip, were also disturbed by the smell in the stockpile area, which harms human respiration. Even so, it is hard to say that the dust from the coal stockpile area does cause health problems as there are no reports or studies that have proven such correlation. However, annual data between 2009-2013 from the Pangenan health centre located in the area around the coal stockpile show an increase in acute respiratory infection syndrome; there is, therefore, an impact on the community from dust from the coal stockpiling area (Maryuningsih, 2015).

In research conducted on open-pit mining and processing workers of PT. Atoz Nusantara Mining, at Pesisir Selatan District, West Sumatera, there were complaints from workers about occupational illness, the causes of which were connected to working conditions. According to the data from Dr Muhammad Zein Painan Local Hospital, there are two types of illness due to exposure to coal dust; anthracnosis, and shortness of breath and dry cough. The noise and vibrations in the mining area result in shaking, sleeping difficulty and muscle tension. In addition, smoke, ammonia, and ultraviolet radiation in the mining area cause redness, irritation, and watery eyes. Lastly, sound and vibration cause ringing in the ears and temporary insensitivity (Maradona, 2013).

Likewise, in a study conducted on health workers at a coal yard of coal-fired power plants in Jepara, it was found that there is a correlation between total and inhaled coal dust levels with the impaired workers' lung function. Based on the Monthly Medical Report Plant Site 2012, acute respiratory infection syndrome, such as coughing that emits black phlegm, is the most common disease suffered by workers. This totalled up to 151 cases, and from February to June 2012 cases kept increasing (Wahyuni *et al*., 2013). As a result, although the average respondent works with good nutritional status and is aged around 20 to 30 years with exercise habits, it was found there are restrictive lung malfunctions. When the total dust concentration measurements at five points at the job site were compared, the results exceeded the threshold value at 11.9-16.4 mg/m^3. The level of dust inhaled by the respondents was above the threshold value with the result of 2.1 mg/m^3. Therefore, there is a significant relationship between total coal dust levels, inhaled coal dust levels, and smoking habits, with impaired respiratory function (Wahyuni *et al*., 2013).

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Moreover, data have also been obtained on the impact of waste and coal mining. In Cilacap, Central Java, in the coal-fired power plants, there is a correlation between FABA waste, and the disease suffered by the surrounding community. The number of those suffereing with acute respiratory infection syndrome increased from around 8,000 residents per year in 2018 to 10,000 residents per year in 2019. Additionally, 25 children who lived within a 100 metre radius of the ash pool suffered from bronchitis, some even died. Cilacap power plants produce around 26,000 tonnes of FABA per three months, which certainly has an impact on the community (Syahni, 2021).

Although there are various negative impacts due to coal mining, especially on coal waste towards health and the environment, the government, through Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management, is confident in removing FABA from hazardous and toxic waste materials. According to the Ministry of Environment and Forestry, FABA was removed from the hazardous waste category based on scientific reasoning. They argue that the carbon content is low and tends to be stable due to the fact that the type of FABA released is only produced from the pulverised coal combustion system that uses a closed vessel with refined fuel and considering the high temperature. From the study of the toxic characteristic leaching procedure test by the Ministry from 19 coal-fired power plants, FABA waste is still considered within the parameters that fulfil the quality standards, nor does it exceed toxicity reference value in Human Health Risk Assessment. Therefore, FABA waste was removed from hazardous waste so that it can be utilised (Prasetiawan, 2021).

It is argued that there are many advantages of removing FABA waste from hazardous waste with proper utilisation. Utilisation of these wastes includes raw materials for construction, cement industry, agricultural raw materials, reclamation of ex-mining land, road construction, earthwork materials, grouting mixture, soil stabilisation, landfill base layer to reduce the acidity of ex-mining land, components of cast refractory raw materials, increase the pH of acid mine water and absorb heavy metals, raw materials for cement, and pave block (Prasetiawan, 2021). FABA could also be utilised to produce concrete protection from corrosion, ceramic additives, alumina recycling (Ekaputri and Al Bari, 2020), airport runway asphalt mixture (Widayanti and Ahyudanari, 2019), and as a mixture of solid waste biomass for coal biofuel (Marganingrum *et al*., 2021). Therefore, according to the Indonesian Employers' Association, the utilisation potential of FABA is estimated at IDR 300 trillion per year (US$19,450,530,000) (Prasetiawan, 2021).

Elimination of FABA waste from the hazardous category is also based on a comparative basis with policies from other countries. Countries that currently categorise FABA waste as non-hazardous solid waste include the United States, Canada, the European Union, Russia, Japan, China, India, South Korea, Australia, South Africa, and Vietnam. This policy shows that these countries have been able to manage and increase the utilisation of FABA reaching 44.8-46%.

In contrast, the utilisation rate of fly ash in Indonesia is relatively low at only 10-12% of the waste produced (Forest Digest, 2021). In its 2019 Sustainability Report, the State Electricity Company recorded that of 2.9 million tonnes of total FABA produced in a year, less than 50% was

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reused. FABA waste that was previously classified as hazardous waste is subject to special treatment using membrane technology. Unfortunately, Indonesia has only one treatment plant in Bogor that employs this technology. Moreover, the framework for the utilisation of FABA in Indonesia does not yet exist (Forest Digest, 2021).

CONCLUSIONS

The policy process of the Omnibus Law, followed by the issuance of GR 22/2021, shows the possible influence of politicians who have a close relationship to the coal mining sector. Despite the potential harm that FABA and slag may cause to human health and the environment, the government remains confident that FABA and slag are non-hazardous materials. This argument relies on scientific measures that have not yet settled and effectively implemented in Indonesia. In fact, environmental problems are left unanticipated and even remedy for victims remains unresolved while obligations to the corporation are clearly reduced, whereby coal industry-related politicians benefit from the profit difference before and after the changing criteria of hazardous waste. It is difficult not to conclude that there is policy capture in the exclusion of FABA and slag from the toxic waste list. Further research on the competing interest between the politicians and the public in natural resource industry is needed. This is particularly important to explain how politicians' and policy-makers' personal interests should be declared when involved in a policy-making process that may affect public interest.

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