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Penal proportionality in environmental legislation of Indonesia

Mahrus Ali and M. Arif Setiawan

Abstract: The paper is aimed to analyze the penal proportionality in Indonesia's environmental legislation. Primary data were collected from statutes in Indonesia's environmental legislation. The result showed that penal proportionality relies on the idea that the severity of criminal sanction needs to be proportionate to both the crime seriousness and culpability of the actor. The more serious the offense, the heavier the punishment. The environmental legislation failed to meet penal proportionality due to its inability to reckon the crime seriousness in determining the scale/weight of criminal sanction. To set penal proportionality, offenses in environmental legislation need to be organized based on their seriousness which requires a corollary of rank-ordering, where less serious offenses do not need to be sentenced with greater severity than the more serious ones. The models of criminalization-based environmental damage meet this principle, hence spacing of criminal sanction among the offenses rank need to be formulated to ensure the application of penal proportionality.

Subjects: Criminology - Law; Environmental Law - Law; Regulation

Keywords: penal proportionality; crime seriousness; rank-ordering; criminal sanctions; environmental legislation

1. Introduction

The central focus of this paper is on the penal proportionality in legislating environmental offenses. The lack of preliminary studies on the issues, especially in legislative policies, is the fundamental

ABOUT THE AUTHOR

Mahrus Ali is a faculty member in the criminal law department at Universitas Islam Indonesia. He obtained his first degree in Bachelor of Law (SH) from Universitas Islam Indonesia and had his Master of Law (MH) from the same institution. He had a complete doctoral degree in law from Diponegoro University, Semarang. He has produced more than 15 research publications and 10 books in the last seven years. His research interests include: environmental crimes, criminal law and human rights, economic crimes, victim of crime, and penal policy.

PUBLIC INTEREST STATEMENT

Determining the severity of criminal sanction that fit the seriousness of offenses and culpability of the actor is a crucial step taken by legislators to prevent disparity of sentencing by judges. The study focused on the penal proportionality of legislation of environmental offenses of Indonesia. The study concluded that the penal severity in environmental legislation ignored the prerequisites of proportionate punishment. The scale of the crime is immeasurable because it is regulated by the seriousness of the sanctions that are not proportional in weight. Hence, legislature needs to organize environmental offenses based on their seriousness entailing a corollary of rank-ordering following spacing of penalties where less serious offenses need not be punished with greater severity by adopting four models of criminalization of environmental harm.
basis of this research. Meanwhile, 184 out of the 482 Acts passed from 1998 to 2019 contain penal provisions. The penal severity stipulation of environmental legislation varies irrespective of criteria, pattern, or standard (Akhbari, 2015). The maximum restraint threat of imprisonment varies, namely 4 years in Law on Soil and Water Conservation as in Article 59 section (2) and section (6) as well as Article 63 section (1), 5 years in Law on Spatial Planning as in Article 70 section (2) and Article 73 section (1), 6 years in both Law on Disaster Management as in Article 75 section (1) and Law on Marine as in Article 49, and 10 years in Law on Fisheries as in Article 84 section (3) and Article 86 section (1), as well as 15 years in Law on Waste Management as in Article 40 section (2). In addition, there are also certain variations in the determination of fines. A maximum fine of 1 million imposed for violation of Article 70 section (2) of Spatial Planning Act, 2 billion as in Article 75 section (1) of Disaster Management Act, 5 billion in both Waste Management Act as in Article 40 section (2) and Soil and Water Conservation Act as in Article 63 section (1), and 20 billion in both Fisheries Act as in Article 93 section (2) and Marine Act as in Article 49.

Previous studies focused more on the imposition of criminal sanction by the judges rather than the regulations promulgated by the legislators (Arief, 2010), irrespective of its strategic analysis due to the failure to comply with the penal proportionality in enacted policies. According to Schneider (2012), this process reduces the sense of justice in society because criminal sanctions do not equate to the proportionality (Schneider, Sentencing Proportionality in the States, Schneider, 2012). Consequently, the punishment imposed by the judge tends to be affected, thereby leading to injustice. Sentencing disparity in court rooms may as a result of no proportionality formula by legislators. (Ryan & King, 2019) Judges imposed sever penalty for petty offenses, or even imposing light criminal sanction for serious environmental crimes. Mistakes or weaknesses in determining criminal threats are crucial because they usually affect law enforcement and crime prevention policies. Therefore, proportionality serves as a guide and limits the legislature’s power in formulating these policies (Ristroph, 2005).

This study aims to analyze penal proportionality in environmental legislation that is limited to the severity of criminal threats in commensuration with crime seriousness and actor’s culpability. The more serious an offense, the heavier the criminal threat. The limitation is due to the prominent environmental legislative characteristics, which necessitate a link between administrative, private and criminal laws (Michael & Faure, 1996; Todd, 2021; Reiswig, 2021). The existence of criminal law functions as streamlining administrative sanctions, therefore it needs to be placed as the last resort (Herlin-Karnell, What Principles Drive (or Should Drive) European Criminal Law?, Herlin-Karnell, 2010). The threats associated with this law are mostly related to administrative violations that cause environmental damage or pollution, although it is relatively severe. Article 40 paragraph (2) of the Waste Management Law threatens a maximum of 15 years imprisonment for anyone that violates this policy by engaging in waste management activities without paying attention to the norms, standards, procedures, or criteria that leads to death or severe injury.

The penal proportionality principle is described in the first section. A criminal sanction is presumed proportional, assuming it is commensurate with the seriousness of the crime and actor’s culpability. The second section analyzes penal proportionality in environmental legislation. It was argued that the legislators lack stipulated guidelines in determining criminal sanction threats, thereby violating this principle. The final section is based on the strategies that reflect the penal proportionality. It was reported that environmental offenses are categorized based on their level of seriousness. Those with similar characters need to be placed in one group. To facilitate this classification, environmental loss-based criminalization models including abstract and concrete endangerment, concrete harm, and serious environmental pollution have to be introduced because it reflects rank-ordering seriousness. Afterwards, the weight of the punishment is analyzed along with the determination of the criminal time interval for mild, moderate, severe, and serious environmental offenses.
2. Materials and methods

This doctrinal legal research mainly relies on environmental statutes as its primary data source. At least six laws are aimed at protecting the environment, namely Spatial Planning Act (SPA), Waste Management Act (WMA), Disaster Management Act (DMA), Marine Act (MA), Soil, and Water Conservation Act (SWCA), and Fisheries Act (FA). These were implemented on the basis that most of the offenses are primarily to protect the environment. The main focus to analyze a list of laws depends on the forms and character of the crime as well as its penal severity. The offenses were further grouped based on their seriousness according to the various environmental harm-based criminalization models that reflect the crimes' ranks. This classification is an essential step to determine whether the penal severity meets its proportionality.

3. Results and discussion

3.1. Principle of penal proportionality

In the legislative policy, proportionality asserts that penal severity entails the crime's seriousness or categorization. The severity of the criminal threat is presumed to be proportional, assuming it considers the offense's seriousness, the loss or damage incurred, and the offender's fault (Herlin-Karnell, What Principles Drive (or Should Drive) European Criminal Law?; Herlin-Karnell, 2010). The proportionality principle is also the most fundamental aspect of the modern legal system (Goh, 2013).

In this research, ordinal proportionality mandates that the grading of criminal threat severity needs to reflect the seriousness of the offense and the offender's culpability (Husak, THE PRICE OF CRIMINAL LAW SKEPTICISM: TEN FUNCTIONS OF THE CRIMINAL LAW, 2020b). Crimes are ranked based on the fact that their relative severity is related to the ratio of the offenses' seriousness (Hirsch A. v., Commensurability and Crime Prevention: Evaluating Formal Sentencing Structures and Their Rationale, Von Hirsch, 1983). Barbara A. Hudson defined it as " ... ranking offenses according to their seriousness and then establishing a scale of commensurate severity penalties" (Hudson, 1996).

A person that commits a serious offense has to receive a penalty with comparable severity (Hirsch A. v., Proportionality in the Philosophy of Punishment, Von Hirsch, 1992).

Ordinal proportionality is based on three factors, namely parity, rank-ordering, and spacing of penalties (Skolnik, 2019). Parity occurs when a person has committed several similar crimes; therefore, they deserve a sentence with comparable severity. Rank-ordering is based on a criminal scale, thereby causing the relative severity of the threats to reflect the offenses' seriousness, while the spacing of penalties precisely depends on the way and manner the compared criminal threats severity is adjusted (Gopalan, 2016). In this study, rank-ordering refers to four environmental harm-based criminalization models, which include abstract and concrete endangerment, concrete harm, and serious environmental pollution. Abstract endangerment indirectly criminalizes environmental damage or pollution. This model prioritizes the command and control approach (S. F. Faure, 2009). Concrete endangerment criminalizes environmental pollution characterized by harmful threats, which need not be proven unlawfully (Faure M., Towards a New Model of Criminalization of Environmental Pollution: The Case of Indonesia, Faure, 2006). The concrete harm model mandates that criminalization is carried out based on actual environmental damages to humans, the environment, and even future generations (Ali, 2020). The serious environmental pollution model criminalizes actions related to emissions that tend to cause prolonged pollution, heavier health consequences, and crucial injury to the population (S. F. Faure, 2009). In criminal law, both the third and fourth models require proof of causation because they are formulated based on material offenses.

The offenses of the abstract endangerment model are the least serious crimes with the lightest punishment severity. Meanwhile, that of the concrete endangerment is more serious than the initial model, therefore the criminal sanction threat is weightier. The offenses of the concrete harm model are more serious than the previous ones and need to be followed by heavier criminal punishment. However, offenses in the serious environmental pollution model have the weightiest level of crime seriousness. This is because criminal law is identified as an
independent administrative crime. In this sense, to pass a criminal sanction weightier than the previous models is quite proportional. In addition, it is dependent on the administrative violation (administrative dependent crimes) of the first three models (Negara, 2017).

### 3.2. Penal proportionality in current environmental legislation

The analysis results led to the discovery of two environmental legislation where one of the criminal policies is related to the legal protection of the environment from abstract endangerment, namely the Spatial Planning and Fisheries Laws. The weight of criminal offenses that have a similar level of seriousness is shown in Table 1.

The earlier mentioned crimes are aimed at administrative obligations (Nisser, 1995) and do not involve direct contact between polluted materials and the environment (Faure S. F., A Graduated Punishment Approach to Environmental Crimes: Beyond Vindication of Administrative Authority in the United States and Europe, 2009). In addition, these criminal offenses are characterized by three qualities. The first is a criminal act related to the operation of activities without a permit, e.g., violating monitoring or inspection requirements and other administrative regulations that are not associated with losses or a threat to the environment. Second, both are criminal acts related to the violation or obstruction of work rules and the monitoring or inspection of facilities. The third is a crime related to violating laws, regulations, or permits that do not involve emissions, waste releases, or direct (other) threats to the environment (Faure S. F., A Graduated Punishment Approach to Environmental Crimes: Beyond Vindication of Administrative Authority in the United States and Europe, S. F. Faure, 2009).

### Table 1. The severity of the criminal sanctions for abstract endangerment offenses

| Acts               | Offense                                                                 | Imprisonment          | Fine                                                                 |
|--------------------|-------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------|
| Spatial Planning Act | Any person that violates the provisions stipulated in the spatial utilization permit (Article 71) | A maximum of 3 (three) years | A maximum fine of IDR 500,000,000.00 (five hundred million rupiahs) |
|                    | Each of the government officials is responsible for issuing a permit in accordance with the spatial plan (Article 73 para. 1) | A maximum of 5 (five) years | A maximum fine of IDR 500,000,000.00 (five hundred million rupiahs) |
| Fisheries Act      | Any person constructing, importing, or modifying fishery vessel without prior approval (Article 95) | A maximum of 1 (one) year | A maximum fine of IDR. 600,000,000.00 (six hundred million rupiahs) |
|                    | The captain operating the vessel is licensed to fly a foreign flag with 1 (one) particular type of fishing gear to operate at a certain part of the ZEEI. However, it also carries other types (Article 97 para. 2) |                        | A maximum fine of IDR 1,000,000,000.00 (one billion rupiahs)         |
|                    | The captain sails the fishery vessel without obtaining the sailing permit issued by the relevant harbormaster (Article 98) | A maximum of 1 (one) year | A maximum fine of IDR 200,000,000,00.00 (two hundred million rupiahs) |
Any person that contradicts the law of importing household waste to the Republic of Indonesia (Article 39 para. 1)

Spatial Planning Act

Any person that uses space with disregards to the spatial utilization permit issued by an authorized official (Article 70)

Marine Act

The permanent utilization of unlicensed location or space in the Sea (Article 49)

Fisheries Act

Any person involved in fish handling and processing without meeting or applying the requirements for appropriate manufacturing practices, quality control system and fisheries product safety (Article 89)

Any person operating a vessel flying a foreign flag used for catching fish in the fisheries management area of the Republic of Indonesia without possessing SIPI (Article 93 para. 2)

| Acts                          | Offense                                                                 | Imprisonment                                    | Fine                                                                 |
|-------------------------------|------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------|
| Waste Management Act          | Waste operator or manager that contravenes the law and deliberately carries out waste management activities without considering the norms, standards, procedures, and criteria that tends to cause community health disorder, security disturbances, environmental pollution, or destruction (Article 40 para. 1) | A minimum and maximum of 4 (four) and 10 (ten) years respectively | A minimum and maximum of IDR. 100.000.000,- (one hundred million rupiahs) and IDR. 5.000.000.000,- (five billion rupiahs) respectively |
| Any person that contradicts the law of importing household waste to the Republic of Indonesia (Article 39 para. 1) | A minimum and maximum of 3 (three) and 9 (nine) years, respectively | A minimum and maximum of IDR. 100.000.000,00 (one hundred million rupiahs) and IDR. 3.000.000.000,00 (three billion rupiahs) respectively | A maximum of IDR. 500.000.000,00 (five hundred million rupiahs) |
| Spatial Planning Act          | Any person that uses space with disregards to the spatial utilization permit issued by an authorized official (Article 70) | A maximum of 3 (three) years                     | A maximum of IDR. 20.000.000.000,00 (twenty billion rupiahs)        |
| Marine Act                    | The permanent utilization of unlicensed location or space in the Sea (Article 49) | A maximum of 6 (six) years                       | A maximum of IDR. 800.000.000,00 (eight hundred million rupiahs)    |
| Fisheries Act                 | Any person involved in fish handling and processing without meeting or applying the requirements for appropriate manufacturing practices, quality control system and fisheries product safety (Article 89) | A maximum of 1 (one) year                        | A maximum of IDR 20,000,000,000,00 (twenty billion rupiahs)        |
| Any person operating a vessel flying a foreign flag used for catching fish in the fisheries management area of the Republic of Indonesia without possessing SIPI (Article 93 para. 2) | A maximum of 6 (six) years                                 |                                           |

Table 1 shows a variation in the duration of imprisonment for offenses with similar seriousness, i.e., a maximum of 1, 3, and 5 years. The sentence for a particular offense was not imprisonment, namely, the crime against Article 97 paragraph (2) of the Fisheries Law. The various threats for criminal acts are also in the form of fines, i.e., a maximum of 200, 500 and 600 million, and it even reached a billion. It indicates the disproportionate severity of criminal sanctions for environmental offenses that have a similar level of seriousness (Exum, 2021).
Table 3. The severity of the criminal sanctions for concrete harm offenses

| Act                                | Offense                                                                 | Imprisonment                                           | Fine                                                                 |
|------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------|
| Waste Management Act               | Waste operators or managers that contradicts the law and deliberately carries out certain activities without taking into consideration the norms, standards, procedures, and criteria, thereby leading to death or severe injuries (Article 40 para. 2) | A minimum and maximum of 5 (five) and 15 (fifteen) years, respectively | A minimum and a maximum fine of IDR. 100,000,000- (one hundred million rupiahs) and IDR. 5,000,000,000,- (five billion rupiahs) respectively |
| Disaster Management Act            | Anybody that negligently undertakes high-risk development without disaster analysis as referred to in Article 40 paragraph (3) thereby consequently causing harm (Article 75 para. 1) | A minimum and maximum of 3 (three) and 6 (six) years, respectively | A minimum IDR. 300,000,000,00 (three hundred million rupiahs) and maximum of IDR 2,000,000,000,00 (two billion rupiahs), respectively. |
| Spatial Planning Act               | Any person that fails to abide by the prevailing spatial plan as referred to in Article 61 letter a thereby causing a change in its function (Article 69 para. 1) | A maximum imprisonment of 3 (three) years | A maximum fine of IDR 500,000,000,00 (five hundred million rupiahs). |
|                                    | Any person that uses space with disregard to the spatial utilization permit issued by an authorized official causes a change in its function (Article 70 para. 2). | A maximum imprisonment of 5 (five) years | A maximum fine of IDR 1,000,000,000,00 (one billion rupiahs). |
| Soil and Water Conservation Act    | Any person that intentionally does not apply Soil and Water Conservation practices thereby causing severe land degradation that exceeds its criticality threshold (Article 63 para. 1) | A maximum of 4 (four) years | A maximum of IDR. 5,000,000,000,00 (five billion rupiahs) |

The environmental legislation also regulates criminal acts to protect the environment from concrete endangerment, as contained in the Waste Management, Spatial Planning, Fisheries, and Marine Laws. The severity of the imprisonment threat or fine for each offense is shown in Table 2.

Several similar qualities characterize the aforementioned offenses; therefore, they possess similar or comparable seriousness levels. These offenses do not require proof of environmental pollution or damage, however with the threat of loss and unlawful act (Faure M., Towards a New Model of Criminalization of Environmental Pollution: The Case of Indonesia, Faure, 2006), its existence still depends on administrative regulations (Cho, 2000/2001). An act is categorized as a criminal offense assuming it is against the law and a form of threat or danger (Faure M., The Revolution in Environmental Criminal Law in Europe,Faure, 2017).
The severity of imprisonment and fines for these offenses does not reflect the penal proportionality principle. Meanwhile, two out of the six prohibited policies contain a special minimum imprisonment penalty, i.e., in Articles 40 and 39 of the Waste Management Act. The maximum length of imprisonment also varies, i.e., a maximum of 1, 3, 6, 9, and even 10 years. A similar pattern was also discovered in the payment of fines, where a minimum amount regulates only two offenses or threats. Furthermore, the heavier fines are also different, i.e., a maximum of 500 and 800 million, including 3, 5, and even 20 billion. Unfortunately, although more serious than abstract

| Table 4. The severity of the criminal sanctions for serious environmental pollution offenses |
|---|---|---|
| **Act** | **Offense** | **Imprisonment** | **Fine** |
| Fisheries Act | Any person that intentionally catches and cultivates fish in the fisheries management area of the Republic of Indonesia by means of chemical, and biological substances, explosives, tools, and manner of construction activities which tends to ruin or jeopardize the resources sustainability and the environment (Article 84 para. 1) | A maximum of 6 (six) years | A maximum of IDR. 12.000.000.000,00 (twelve billion rupiahs) |
|  | The owner of the fishery vessel, company, the person in charge, and operators that intentionally catching fish in the fisheries management area of the Republic of Indonesia using chemical, and biological substances, explosives, tools, and manner of construction activities which tends to ruin or jeopardize the resources sustainability and the environment (Article 84 para. 3) | A maximum of 10 (ten) years | A maximum of IDR. 2.000.000.000,00 (two billion rupiahs) |
|  | Any person that intentionally causes damages or pollutes the resources in the fisheries management area of the Republic of Indonesia (Article 86 para. 1) | A maximum of 10 (ten) years | A maximum of IDR. 2.000.000.000,00 (two billion rupiahs) |
| Soil and Water Conservation Act | Individuals that out of negligence, converts prime land use in a protected area, thereby resulting in severe degradation (Article 59 para. 2) | A maximum of 4 (four) years | A maximum of IDR. 2.000.000.000,00 (two billion rupiahs) |
|  | Individuals that out of negligence converts prime land use in the Cultivation Area which results in disaster (Article 59 para. 6) | A maximum of 4 (four) years | A maximum of IDR. 3.000.000.000,00 (three billion rupiahs) |

The severity of imprisonment and fines for these offenses does not reflect the penal proportionality principle. Meanwhile, two out of the six prohibited policies contain a special minimum imprisonment penalty, i.e., in Articles 40 and 39 of the Waste Management Act. The maximum length of imprisonment also varies, i.e., a maximum of 1, 3, 6, 9, and even 10 years. A similar pattern was also discovered in the payment of fines, where a minimum amount regulates only two offenses or threats. Furthermore, the heavier fines are also different, i.e., a maximum of 500 and 800 million, including 3, 5, and even 20 billion. Unfortunately, although more serious than abstract
endangerment, the concrete type has a lighter penal sanction threat; therefore, it fails to fulfill the proportionality principle based on this variable (Green, Legal Moralism, Over-inclusive Offenses, and the Problem of Wrongfulness Conflation, Green, 2020) (III, Cruel and Unusual Non-Capital Punishment, Berry & William, 2021).

The environmental legislation also regulates criminal offenses to protect the environment from concrete harm, as contained in the Waste, and Disaster Management, Spatial Planning Law, and Soil and Water Conservation Acts. The severity of the imprisonment and fines for each offense is shown in Table 3.

Table 3 shows that these offenses have to be in the form of substantial actual losses to humans (death or serious injury), such as resulting in a disaster that changes the function of space, or exceeds the criticality threshold of water (Skinnider, Victims of Environmental Crimes—Mapping the Issues, Skinnider, 2011). The causal relationship (cause and effect) needs to be proven in criminal law even though it has not yet freed itself from administrative dependence (Sofian, 2018). By referring to the seriousness level of these offenses, the severity of imprisonment and fines is also disproportionate. However, only two out of the five forms of prohibited policies contain the threat of imprisonment and a minimum fine, namely, Article 40 paragraph (2) of the Waste Management Act and Article 75 paragraph (1) of the Disaster Management Act. The duration of imprisonment also varies, i.e., a maximum of 3, 4, 5, 6, and even 15 years. This non-uniform pattern was also discovered in the maximum fines, i.e., 500 million, 1, 2, and 5 billion rupiahs.

Criminal policies aimed at protecting the environment from serious pollution are also contained in two of the laws, namely, Fisheries and Soil and Water Conservation Acts. The severity of the imprisonment threat and fine for each offense are shown in Table 4.

The aforementioned offenses have a similar level of seriousness in terms of fulfilling several characteristics. First, these crimes trigger the occurrence of environmental damage or pollution prohibited by the law (Faure M., The Revolution in Environmental Criminal Law in Europe, Faure, 2017). Second is the elimination of permits that serves as protectors despite being permitted by the officials. The third is the elimination of unlawful nature as an element of environmental crime. Criminal law is applied assuming it causes serious harm even though the offense is not against the enacted policies, and as long as it is carried out under permit or administrative regulations (Faure S. F., A Graduated Punishment Approach to Environmental Crimes: Beyond Vindication of Administrative Authority in the United States and Europe, S. F. Faure, 2009).

The severity of criminal sanctions on these offenses is also disproportionate, especially when compared to a lighter level of seriousness in one model. The duration of imprisonment is incomparable because it differs, such as 4, 6, and even 10 years. Variations were also discovered in the amount of fines, namely, a maximum of 12 billion as stated in Article 84 paragraph (1) of the Fisheries Law, and 2 billion as stated in Article 59 paragraph (2) of the Law on Soil and Water Conservation as well as Articles 83 and 86 paragraphs (3) and (1) of the Fisheries Law. The specific minimum penalty is not threatened for offenses categorized in the serious environmental pollution model. This is different from those grouped under the concrete harm and endangerment models. In addition, the maximum imprisonment penalty is lighter than the same threat for concrete harm offenses, which are less serious. This contradicts the proportionality principles, which stipulate that criminal threat severity reflects or refers to the offense's seriousness and the defendant's culpability. Based on this, the most serious offenses need to be punished with more than lighter ones (Segate, 2021) (Stinneford, 2011).

Based on the acquired data, the determination of the highest penalty threat or maximum punishment among the four models also needs to indicate the seriousness of the offense (Roskies, 2021) (Hardwicke, 2021). However, assuming a certain crime is punishable by a serious penalty indicates that it is categorized as serious and vice versa. Conversely, assuming the highest
criminal sanction has a similar formulation; then, it is difficult to determine the seriousness of the crime (Schneider, Sentencing Proportionality in the States, Schneider, 2012). This formula also applies when the sanctions are formulated in a lesser manner without considering the offenses' level of seriousness (Philips, 2020). Therefore, based on the rank-ordering variable, the penal proportionality has not been met because the severity of the criminal sanction does not reflect the seriousness of the offense or the scale of the crime (Kelly, 2021).

3.3. Toward penal proportionality in environmental legislation: A proposed solution

In accordance with environmental legislation, these offenses need to be categorized based on the seriousness level. This principle entails a corollary of rank-ordering, where less serious offenses need not be punished with greater severity (Husak, 2020a). Furthermore, the severity of the punishment has to be a function of the crime's seriousness (Husak, 2009), which is limited to the following context in this study, namely, light, moderate, severe, and serious categories. This is based on 2 factors, namely, to meet the demands of justice as the ultimate goal of the penal proportionality theory and the offense grading system, which stipulates the need for the public prosecutor to provide only simple proof. Generally, the determination of offense seriousness from the perspective of criminal law refers to two ways. The first is attributed to the loss incurred from the disgraceful action (Torti, 2013). The second refers to the violator’s reproach or faults, such as the intention, motive, and circumstances that led to the disgraceful action (Mandiberg, 2009). Crimes committed intentionally are considered more serious compared to those committed due to negligence.

In this study, the seriousness of the offense refers to four criminalization models, namely, abstract and concrete endangerment, concrete harm, and serious environmental pollution. These models reflect the offense grading system based on its seriousness, both in terms of the protected legal interest and threat of loss. The abstract endangerment model criminalizes environmental damage or pollution only for violations of administrative obligations (Nisser, 1995). It indirectly protects ecological values since this model is only limited to crimes that do not involve direct contact with the polluted materials and the environment (Faure S. F., A Graduated Punishment Approach to Environmental Crimes: Beyond Vindication of Administrative Authority in the United States and Europe, S. F. Faure, 2009). However, this model is based on environmental policies that prioritize the command and control approach with respect to licensing. Administrative officials in this system play a crucial role as they determine the number of pollutants released into the environmental media. Emission standards are also set through the use of permits (Michael & Faure, 1996). This model also serves to combine public and private laws to prevent environmental damage or pollution (G. B. Faure, 1998).

The crimes of the abstract endangerment model are included in the light offense group because they are purely administrative violations. Besides, there is no direct contact between polluted materials and the environment, and it indirectly protects ecological values. These violations are subjected to only fines. However, assuming the fine is not paid, the prosecutor confiscates the convict’s assets and auctions them. Meanwhile, supposing the property turns out to be less than the fine, the convict serves a maximum imprisonment of 1 year.

The concrete endangerment model refers to certain types of hazards or threats to environmental values that are prerequisites for criminal liability. This model does not require concrete proof rather it is based on loss of threat and unlawful acts (Hartiwiningsih, 2008). Criminalization is carried out to prevent human and environmental harm (Hoskins, 2018). This model directly protects ecological values, although its existence depends on administrative regulations (Cho, 2000/2001). It is also described with two main characteristics. The first instance is based on the fact that emissions or pollution poses a threat and this needs to be proven. The second is centered on emission or pollution carried out against the law. As long as administrative rules are followed, any act legally carried out is not considered a crime. It is categorized as a criminal act supposing it
is against the law and poses a threat (Faure M., The Revolution in Environmental Criminal Law in Europe, Faure, 2017).

The concrete endangerment model offenses are more serious than those in abstract endangerment. This is because it directly protects ecological values, and there is an obligation to prove certain actions against the law and the potentials to damage or pollute the environment. The threat of criminal sanctions on these offenses is heavier compared to the abstract endangerment model, and it is usually in the form of fines. In abstract endangerment, environmental damage or pollution does not yet exist, and this depends entirely on administrative violations.

The concrete harm and endangerment models are identical. Both require proof that the perpetrators of environmental offenses violated administrative regulations or procedures. These two models are unable to separate criminal law from administrative dependence. The difference is associated with environmental losses in concrete harm, which is in the form of real environmental losses, and it is not enough just to be in the form of a threat of loss (Faure S. F., A Graduated Punishment Approach to Environmental Crimes: Beyond Vindication of Administrative Authority in the United States and Europe, S. F. Faure, 2009). The meaning of environmental loss depends on the approach adopted. Based on the traditional approach, it is limited to losses that pose as a threat to human health and safety. This approach still relies on environmental and traditional criminal laws, in which humans are perceived as the only victims. These types of losses are also assessed from an ecological approach. Specifically, it tends to be in the form of damages as well as the degradation of ecosystems, species extinctions, weather changes and global warming, environmental pollution, and threats to animals (Laitos, 2013). Environmental damage or pollution from an anthropological perspective is harmful to societal cultural values. The term attached to this phenomenon is referred to as cultural pollution, which is caused by environmental bad work and pornography (Nagle, 2009-2010).

The offenses in the concrete harm model are more severe compared to those in the concrete endangerment. It poses as a threat both in the form of environmental damage or pollution and disturbances to health, loss of property, or even human life, thereby making the punishment to be heavier than the previous models. The sanction types are fines and imprisonment, which are formulated cumulatively. Specific minimum penalties are threatened to avoid criminal disparities because the substance is included in a serious offense. Although, assuming the criminal fine is not paid, the defendant’s property is confiscated by the prosecutor and auctioned. In addition, supposing the confiscated property turns out to be less than the amount of the fine, the convict serves a maximum imprisonment of 2 years.

The serious environmental pollution model has completely freed itself from the administrative dependence of criminal law, which is marked in 2 ways. The first is the elimination of permits as protection. Irrespective of the fact that a person already has a permit issued by an administrative official, supposing their actions endangers the environment, and then it is categorized as a criminal act. The second is the elimination of unlawful nature as an element of environmental crime. Criminal law is applied in serious cases even irrespective of whether or not the act is against the law, in the sense that it is carried out under permit requirements or administrative regulations.

Acts that are criminalized under this model are related to emissions, although the consequences are more severe such as prolonged pollution, serious health hazards, or injury to residents. This model aims to criminalize extremely serious environmental damage or pollution regardless of whether it is caused by administrative violations. Even when an actor has complied with the permit and its requirements as well as other administrative regulations, the offense is still categorized as a criminal act assuming it causes serious environmental consequences.

The offenses in the serious environmental pollution model are included in the most severe category because it has separated itself from the administrative dependence of criminal law. It
indicates that certain acts are categorized as criminal acts as long as it has serious consequences on the environment even though the violators have permits or other administrative requirements or regulations. Moreover, assuming it causes serious and extreme harm, such as prolonged pollution, health hazards, or injury to human (Jing, 2014). The weight of criminal sanctions, which are in the form of fines and imprisonment, formulated cumulatively and have a specific minimum penalty are the heaviest. However, assuming the criminal fine is not paid, the defendant’s property is confiscated by the prosecutor and auctioned. In addition, supposing the confiscated property turns out to be less than the fine, the convict needs to serve maximum imprisonment of 3 years.

The severity of criminal sanctions based on the seriousness of an offense needs to be followed by the spacing of penalties. It involves the determination of the distance between one offense group and another, including serious and less severe ones (Hirsch A. v., Censure and Proportionality, Von Hirsch, 1994). Besides, those in the serious environmental pollution model are the most critical offenses compared to those in that of the concrete harm; therefore, there needs to be a criminal distance between these two. In addition, the criminal distance between the offense in the concrete harm and endangerment models needs to be determined. This also includes that between the offense in the concrete and abstract endangerment models. A spacing of penalties between serious and minor offenses is highly required to realize justice as a goal of the proportionality theory (Green, Legal Moralism, Over-inclusive Offenses, and the Problem of Wrongfulness Conflation, Green, 2020)

4 Conclusion
The legislation of environmental offenses do not fully reflect the penal proportionality in determining the threat of criminal sanctions. The prerequisites of proportionate punishment have not been met in promulgating this sanction. Consequently, the scale of the crime is immeasurable because it is regulated by the seriousness of the sanctions that are not proportional in weight. Therefore, the legislature is beneficial to adopt penal proportionality criteria when offenses proportionate to the crime seriousness and culpability of the actor. However, it is strongly recommended to examine the application of proportionality of punishment for environmental cases in court rooms.

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Author details
Mahrus Ali
E-mail: mahrus.ali@uii.ac.id
ORCID ID: http://orcid.org/0000-0002-5864-1009
M. Arif Setiawan
Department of Criminal Law, Universitas Islam Indonesia, Yogyakarta, Indonesia.

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