

CRIMINAL LAW AS PRIMUM REMEDIUM IN COMBATING ENVIRONMENTAL DESTRUCTION ACTION

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Abstract: The development of practice and theoretical discourse in the field of environmental law has led to the new arrangements for criminal sanctions as *primum remedium*. The purpose of determining criminal sanctions is intended to provide protection and benefit for the social interests of the community for a good and healthy environment. This research is a normative legal research with using a prescriptive analysis. The results show that the urgency of *primum remedium* on absolute responsibility (strict liability) in criminal acts of pollution and/or damage to the environment is very clear and it appears that many environments have been damaged due to widespread pollution and environmental damage due to hazardous and toxic waste (B3). The perpetrators of environmental crimes feel that there is a deterrent effect from their actions which are detrimental to the environment itself polluted, many people become victims of disturbance health, and the Indonesian state itself as a result of environmental pollution and destruction.

Keywords: Criminal Law, *Primum Remedium*, Environmental Damages

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Introduction

In recent decades, the issue of environmental crime has been a hot topic of debate among academics, environmentalists, multilateral donors and policymakers around the world. Climate change, deforestation, damage to terrestrial and marine biota ecosystems, clean water crises and worsening air quality in mega polis is a clear indication of global scale environmental degradation which is considered to be the initial stage of the extinction process of living things.¹The periodical publication in the United Nation Environmental Program (UNEP) in 2018 reports that financial losses arising from environmental crimes are estimated at 70 - 213 billion dollars annually worldwide.²

One of the trends that have emerged in many developed and developing countries in developing environmental governance is the birth of a series of tripartite sequence of sanctioning options including administrative, civil and criminal acts as well as environmental violations. This view

¹A UN's report notes five potential threats caused by the failure of the nation-state to tackle climate change including territorial changes caused by rising sea levels; increased poverty and food crisis due to reduced availability of water and food; increasing disruption to agricultural production and infrastructure due to extreme weather; security disturbances due to increasing tensions between countries caused by climate-related pressures; and international conflicts to manage resources collectively due to scarcity of resources. To prevent the most extreme impacts, scientists suggest that global greenhouse gas emissions must fall by 25-40 percent by 2020 and 80-90 percent by 2050, while also developing policies that emphasize sustainable development. See further UN General Assembly, Climate change and its possible security implications: report of the Secretary-General, <https://digitallibrary.un.org/record/667264>

²For UNEP's report, see further Hendriksen Nellemann and Raxter Ash (ed.), *The Environmental Crime Crisis, Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources*, BirkelandTrykelli: UNEP, 2018



cannot be separated from the discourse in the world of legal academics which views the field of environmental law as a unique discipline that combines the fields of administrative, civil and criminal law. In addition, the high level of damage and the complexity of the problems that vary in various parts of the world have resulted in a variety of approaches to handling environmental crimes being adopted in environmental law products in a country.

The development of practice and theoretical discourse in the field of environmental law has led to the birth of new arrangements for criminal sanctions as *primum remedium* in enforcing environmental damage. The purpose of determining criminal sanctions is intended to provide protection and benefit for the social interests of the community for a good and healthy environment. For its advocates, if the criminal law is only placed as a punishment that addresses environmental destroyer disobedience to administrative sanctions, this view limits the capacity and scope of the criminal law to protect ecological unity.³

As a legal issue in this research is the challenges faced in the development of environmental law around the world are that environmental cases are even more extraordinary (*super extraordinary crime*), because the state has many losses of up to billions to trillions which can be felt immediately. It is very clear that this is the fundamental problem facing Indonesia. Super extraordinary crime is a manifestation of a condition that requires immediate action, so that what is being experienced by our country today is a state of legal emergency. As a tropical archipelago country inhabited by millions of species of flora and fauna and characterized by a varied landscape, Indonesia faces many considerations in protecting and managing the environment. Many concern over the effectiveness of environmental law enforcement in Indonesia is quite reasonable, considering that until now Indonesia is designated as the third largest polluting country, the second largest contributor of plastic waste in the sea, the second largest emitter of greenhouse gases and facing the second highest deforestation rate in the world.⁴

In Indonesia, poor environmental management arrangements are also influenced by the scattered environmental policies and regulations that are not designed effectively to solve environmental problems. This weakness can be seen from several environmental laws and regulations that tend to be pragmatic, reactive, sectoral, partial, and short-term, which are not equipped with the use of environmental management functions, norm sequencing based on sustainable development principles, very partial institutional arrangements, article vague licensing, unclear supervisory norms, incomplete regulations regarding the formal rights of the community for class action, and the formulation of administrative sanctions and criminal sanctions that are not implemented. Thus, there is a lot of disharmony between environmental laws and regulations in the sector, namely in the form of conflicts, contradictions, overlaps, gaps, and inconsistencies.⁵

In Indonesia, it is not surprising that the handling of environmental problems is relatively slow because administrative sanctions aim to increase compliance where the coercive power of the government uses its means to promote legal compliance or by taking action to prevent violations of the law without having to punish the perpetrator through punishment which creates a deterrent effect through punishment.⁶ The potential of environmental criminal law as a *primum remedium* instrument to protect the ecological order is increasingly relevant with the increasing political awareness of citizens about the dangers of environmental damage. In certain situations, criminal law can be used as a first weapon when other legal instruments such as civil or administration are deemed incapable of overcoming systematic environmental crimes and causing extensive material losses.


Departing from the urgency of the above problems, this research is arranged to describe the theoretical problems related to the concept of criminal law as *primum remedium* and to understand it

³Peeters, M. (2006). Elaborating on integration of environmental legislation: the case of Indonesia. *Environmental Law and Development. Lessons from the Indonesian Experience*, Edward Elgar, Cheltenham, Northampton, 92-127.

⁴Maxime van der Laarse, *Environmentalism in Indonesia Today Environmental Organizations*, Green Communities and Individual Sustainable Lifestyles, Thesis Asian Studies, Leiden University, p. 2

⁵Fadli, M., & Lutfi, M. (2016). *Hukum dan Kebijakan Lingkungan*. Universitas Brawijaya Press, p. 167.

⁶Barbir, F., Veziroğlu, T. N., & Plass Jr, H. J. (1990). Environmental damage due to fossil fuels use. *International journal of hydrogen energy*, 15(10), 739-749.



in the framework of absolute criminal responsibility. It is very important because it relates to and determines directly the efforts to enforce the law, especially since most of our environmental laws are still colored by conservative thinking which is difficult to break through with innovative thinking insights. An understanding of the issue of the effectiveness of this law will be able to reveal the supporting factors as well as hindering efforts to prevent and combat environmental pollution in a juridical manner, so that mistakes can be avoided in its application.

This research seeks to find new legal arguments regarding the use of criminal law instruments as a form of law enforcement in tackling pollution and environmental damage, and to provide alternative insights for improving environmental regulations in general and criminal law instruments in particular in future legislation. The many problems in law enforcement in the environmental sector are a challenge for state officials in the field of environmental law and it is also the joint responsibility of legal experts to participate in developing national environmental law in Indonesia in the future.

1. Method of Research

This research is a normative legal research that examines the concept of law as a valid norm, namely in the form of positive legal norms or rules.⁷ The approaches used in this research are a philosophical, a statutory, a conceptual, and a case approaches. The analysis used is a prescriptive analysis.

2. The meaning of *Primum Remedium* as an Environmental Crime Enforcement Instrument

Criminal law includes material criminal law, formal and executory criminal laws. Material criminal law is a legal rule that contains provisions regarding an act that is believed to be prohibited, things or conditions that make a person subject to certain legal actions in the form of crimes or actions because he has committed such prohibited acts, and contains provisions regarding legal sanctions in the form of threats criminal sanctions, both criminal and action sanctions.

The main objectives of criminal witnesses are the prevention of undesired conduct and retribution of perceived wrongdoing.⁸ Meanwhile, the purpose of action sanctions is to educate the perpetrator. The main focus is not on the perpetrator's actions, past or future, but on efforts to help the perpetrator.⁹ Thus, criminal sanctions emphasize the element of retaliation. It is suffering that is deliberately inflicted upon the offender. Meanwhile, the sanctions for action come from the basic idea of protecting the community and fostering or treating the offender.¹⁰

Both criminal and action sanctions have the characteristic of suffering, in the sense that the two sanctions are distressing in nature. People who are found guilty and sentenced to imprisonment are in essence forced to experience suffering in the form of temporarily staying in a community institution. Likewise, when someone is found guilty and is subject to sanctions in the form of therapy in the hospital. It's just that in criminal sanctions, in addition to suffering, there is also criticism. Whereas in the sanction of action, this element of reproach does not exist, because it is only telling stories.

If the essential difference between criminal and action sanctions is related to the environmental-based pattern of increasing the criminal sanction, the result will be different from the pattern of weighting the criminal threat with an orientation towards human protection.¹¹ From the quality aspect, the pattern of punishing penalties should move from a criminal sanction to an action sanction or from one form of action sanction to another. For example, if a person is proven to have

⁷Peter Mahmud uses the term legal issues to refer to legal issues. Legal issue according to Peter Mahmud is a problem that must be solved in legal research. Legal issues arise because there are 2 (two) proportions that have a relationship, both functional, causality and one that confirms the other. Legal issues arise because of the existence of two legal propositions that are interrelated with one another. Legal issues can be developed from three realms of legal layers, namely legal dogmatics, legal theory, and legal philosophy. See Peter Mahmud Marzuki, *Penelitian Hukum*, Prenada Media, 1st edition, Jakarta, 2005, pp. 56-86.

⁸Herbert L. Packer, op. cit, p. 26.

⁹*ibid*

¹⁰Sudarto, *Hukum Pidana I*, Badan PenyelidikanKuliah FH Undip, Semarang, 1973, p. 7.

¹¹Norouzi, N., &Ataei, E. (2021). Covid-19 Crisis and Environmental Law: Opportunities and Challenges. *Hasanuddin Law Review*, 7(1), 46-60. doi:<http://dx.doi.org/10.20956/halrev.v7i1.2772>



committed an environmental crime that has caused environmental damage, the penalty is a fine, but if the damage is severe, then the penalty is the deprivation of all profits obtained from the criminal act, where all of the profits are used to improve the environment in which the crime is damaged broken. If the damage is very severe, then the penalty is the confiscation of all profits obtained from the criminal act and the obligation to repair all the damage caused by the perpetrator's act. In order for these sanctions to be effective, it is necessary to do so, so the forms of sanctions imposed on the perpetrators are directly related to efforts to improve the environment.¹²

From the aspect of quantity, the pattern of environmental conservation-based criminal sanctions is only possible if the form of punishment is a fine. However, the pattern used is the weighting of the criminal threat with a multiplier system without formulating the nominal amount of the fine in the formulation of each article where there is a weighted penalty. With this pattern, the amount of fines that must be paid by the perpetrator must be greater or heavier than the criminal act committed as in the theory of prevention of punishment. In addition, there must be an arrangement that stipulates that the amount of fines paid by actors to the state is used directly in environmental conservation efforts.

The reality of life today becomes a reference for thinking to see whether the enforcement of criminal law in criminal acts of pollution and/or environmental destruction has now become *primum remedium* or *ultimum remedium*? This current phenomenon encourages the author to examine from a theoretical perspective in providing the meaning of *primum remedium* as a form of enforcement of environmental crimes which have now become super extra ordinary crimes.

In essence, everyone has the right to protection from environmental law because almost all legal relationships must receive protection from the law. So far, the regulation of protection against environmental crimes has not provided abstract protection. Direct protection has not been able to provide maximum protection. Because the reality in Indonesia shows that the law that applies with certainty has not been able to guarantee certainty and a sense of justice. Therefore, according to the author, criminal law is the right sanction as the principle of *primum remedium* in guaranteeing legal protection against criminal acts of environmental pollution and/or destruction.

3. The Urgency of *Primum Remedium* for Strict Liability in the Crime of Environmental Destruction

The environmental law divides environmental problems into 2 (two) forms, namely environmental pollution and environmental destruction. Meanwhile, Stewart and Krier classify environmental problems into environmental pollution, land misuse, and natural resource depletion. The main difference between environmental pollution and natural resources depletion is that pollution can occur due to the entry or presence of a substance, energy or component into the living environment or certain ecosystem. Thus, the substance, energy, or component is something foreign or that initially does not exist in an environmental area and is then present in a certain quantity or quality because it is entered by human activities. On the other hand, the natural resources depletion means natural resources that are located or live in their original context or area of origin, which humans then take continuously and uncontrollably in a certain way and in a certain amount, causing changes and decreases in the quality of the environment.¹³

The negative impact of a decrease in the quality of the environment either due to pollution or natural resources depletion is the emergence of threats or negative impacts on health, decreased aesthetic value, economic costs, and disruption of the natural system. The impact on human health comes mainly from environmental pollution. The impact of environmental pollution can often only be felt after several years or decades since the entry of a substance into the environment. Environmental pollution also results in the aesthetics of the environment or the environment in which humans live, such as disturbance of smell, noise, smoke or fog. In addition, the victims of environmental pollution or destruction will suffer economic losses. Eventually environmental problems will be able to change natural systems. Deforestation, degraded land, depletion of the ozone layer, global warming of oil

¹²Suhariyono, *Pembaruan Pidana Denda*, Rajagrafindo Persada, Jakarta, 2012, p. 41

¹³Takdir Rahmadi, *Hukum Lingkungan di Indonesia*, Raja Grafindo Persada, Jakarta, 2014, p. 1-3.

spills in the sea, dead fish in tributaries due to chemicals, and the extinction of certain species are environmental problems that can alter natural systems.¹⁴

Likewise, environmental destruction due to uncontrolled logging of Indonesian forests for decades and causing a large-scale shrinkage of tropical forests has greatly impacted the state of the ecosystem in Indonesia. Logging has a very detrimental impact on the surrounding community, even the world community. The losses caused by forest destruction are not only damage in economic value, but also result in priceless loss of life. Another impact is the loss of the lungs of Indonesia and the world. Global warming, will be followed by climate change, such as increased rainfall in some parts of the world, causing floods and landslides, but on the other hand, other parts of the world experience prolonged drought.¹⁵

Environmental pollution can cross national borders in the form of river water pollution, air emissions, forest fires, oil pollution in the sea, and so on.¹⁶ What is more concerning is that environmental crimes in the form of illegal disposal of dangerous waste in various countries have led to transnational organized crime and this is seriously discussed at The World Ministerial Conference on Organized Transnational Crimes in Naples on 21-23 November 1994. This conceptual concept is in line with the understanding that a crime that violates the provisions on environmental protection is a criminal crime. This is related to the fact that environmental crimes often have international or transnational impacts.¹⁷

Therefore, environmental problems, when linked with human rights issues, are not only a country-by-country problem, but also a regional and even international problem (between nations). This is evident from the work program of *The Commission on Crime Prevention and Criminal Justice 1992-1996* which focuses specifically on the relationship between environmental problems and the criminal justice system. On this basis, the 9th UN Congress on Crime Prevention and Development of Perpetrators from 29 April-8 May 1995 in Cairo, made environmental issues one of the main agendas.

Judging from the level of damage caused is it still appropriate that the *ultimumremedium* principle that places criminal law as *ultimumremedium* against perpetrators of environmental destruction be applied? Can the administrative and civil sanctions imposed deter environmental destroyers? Because the principle of *ultimumremedium* places criminal sanctions as a last resort. The principle of *ultimumremedium* in criminal sanctions is a last resort to punish environmental destroyers. The purpose of this *ultimumremedium* principle is to prioritize the repair of the damaged environment due to the activities of the person/business entity. In fact, the perpetrators of the destruction who are corporations are people who have very large capital. The amount of fines they have to pay to meet administrative sanctions is not a big problem for them.

Environmental protection and management based on Article 1 figure 2 Act No. 32 of 2009 is a systematic and integrated effort conducted to preserve the functions of the environment and prevent environmental pollution and/or damage which includes planning, utilization, control, maintenance, supervision and law enforcement. As the elucidation of this law, that preventive efforts in the context of controlling environmental impacts need to be conducted by making maximum use of monitoring and licensing instruments.

However, in the case of environmental pollution and damage that has occurred, it is necessary to make repressive efforts in the form of effective, consistent and consistent law enforcement against the pollution and environmental damage that has occurred. According to Rangkuti, in the environmental sector, administrative sanctions have an instrumental function, namely controlling prohibited acts and primarily aimed at protecting interests guarded by the violated provisions.¹⁸ Meanwhile, the provisions of civil law include the settlement of environmental disputes outside the


¹⁴*ibid*

¹⁵Bambang Tri Bawono and Anis Mashdurohatun, 2011. "Penegakan Hukum Pidana di Bidang Illegal Logging bagi Kelestarian Lingkungan Hidup dan Upaya Penanggulangannya", *Jurnal Hukum* Vol 16, No. 2, p. 601

¹⁶Andi Hamzah, *Penegakan Hukum Lingkungan*, Sinar Grafika, Jakarta, 2008, p. 58.

¹⁷Muladi, *Demokratisasi, Hak Asasi Manusia, dan Reformasi Hukum di Indonesia*, The Habibie Center, Jakarta, 2002, p. 94

¹⁸ Sri Sundari Rangkuti, *Hukum Lingkungan dan Kebijakan Lingkungan Nasional*, Airlangga University Pers, Surabaya, 2000, p. 211



court and inside the court. The settlement of environmental disputes in court includes class action suits, environmental organizations lawsuit rights or the government' right to sue. Through this method, it is hoped that in addition to having a deterrent effect, it will also increase the awareness of all stakeholders about the importance of environmental protection and management for the lives of present and future generations.

Enforcement of criminal law in this law still takes into account the principle of *ultimumremedium* which requires the application of criminal law enforcement as a last resort after the application of administrative law enforcement is deemed unsuccessful. The application of the *ultimumremedium* principle only applies to certain formal crimes, namely punishment for violations of wastewater quality standards, emissions, and disturbances. In other words, violations against waste water quality, emissions and disturbances shall apply to the principle of *primum remedium* (prioritizing the implementation of criminal law enforcement).

The act of polluting and destroying the environment is an act that can directly or indirectly endanger human life and life. Basically, criminal law aims to protect human life and honor and property. When environmental pollution and destruction has caused negative impacts on human life, then these actions must be viewed as actions that are against morals and are worthy of criminal sanctions.

Environmental problems in the form of pollution and environmental damage are increasingly complex and tend to be difficult to handle properly, this indication can be seen from the decreasing quality of the environment in several parts of Indonesia, which of course can threaten: the continuity and sustainability of the lives of humans and other living creatures. Environmental problems are becoming increasingly complex because they are not only practical or economic conceptual but also ethical issues, both social and business. What is protected by criminal law is not only nature, flora and fauna (the ecological approach) but also the future of humanity which may suffer from environmental degradation. Thus, the term "the environmental laws carry penal sanctions that protect a multitude of interest."¹⁹

In environmental crime, it is closely related to the concept of actual harm and damage and the threat of harm. Because it must be understood that loss or damage in environmental crime often does not occur immediately or can be easily quantified. Thus there are categories of victims that are concrete in nature and there are victims that are abstract in nature. This is where the discussion often intersects with formal crimes and material crimes; specific crimes and generic crimes. The problem is that someone' actions are not only "causes impact of the quality of the natural environment" but also "is likely to cause impact of the quality of the natural environment".

Environmental problems in the form of pollution and environmental damage are increasingly complex and tend to be difficult to handle properly, this indication can be seen from the decreasing quality of the environment.²⁰ The negative impact of a decrease in the quality of the environment is the emergence of threats or negative impacts on health, a decrease in aesthetic value, economic costs, and disruption of the natural system. Environmental problems, when linked to human rights issues, are not only a country-by-country problem, but also a regional and even international problem.

Preventive measures in the context of controlling environmental impacts need to be done by making maximum use of monitoring and licensing instruments. However, in the case of environmental pollution and damage that has occurred, repressive measures are needed in the form of criminal law enforcement to ensure legal certainty as a basis for the protection and management of natural resources and other development activities. Enforcement of criminal law in environmental issues, namely by still paying attention to the principle of *ultimumremedium* as a last resort after the implementation of administrative and/or civil law enforcement is no longer feasible to be maintained. Environmental problems in the form of pollution and environmental destruction are actions that directly or indirectly endanger human life and life. Basically, criminal law aims to protect human life and honor and property. When environmental pollution and destruction has had a negative impact on

¹⁹ Ibid., p. 99.

²⁰Hajdú, József, and RofiAulia Rahman. "The New European Union Whistleblowing Directive: In Comparison to Indonesia's Practice." *Hasanuddin Law Review* 7, no. 3 (2021): 226-240.

human life and soul, then the act must be viewed as an act that is against morals and is worthy of criminal sanctions.

Therefore, several laws and regulations relating to the management of natural resources or those directly related to the preservation of nature and the environment need to be revised. Revisions need to be conducted not only because acts of pollution and environmental destruction are against morals but also because they follow international developments which require that the function of criminal law in environmental crimes becomes *primum remedium* not *ultimum remedium* anymore. The use of criminal law is in the framework of protecting the environment both in the international, regional and domestic spheres.

Conclusion

The meaning of *Primum Remedium* as an instrument for combating criminal acts is that given the large number of victims of environmental pollution caused by hazardous and toxic waste (B3) pollution, legal protection is needed for present and future generations. Given that the current environmental problem is not only a country-by-country problem, but also a regional and even international problem because environmental problems have now become a super extraordinary crime. The urgency of *primum remedium* on absolute responsibility (*strict liability*) in criminal acts of pollution and/or damage to the environment is very clear and it appears that many environments have been damaged due to widespread pollution and environmental damage due to hazardous and toxic waste (B3), threatening both human and life other living things even though the environment is a human right so that criminal law as *primum remedium* is the right sanction, so the perpetrators of environmental crimes feel that there is a deterrent effect from their actions which are detrimental to the environment itself polluted, many people become victims of disturbance health, and the Indonesian state itself as a result of environmental pollution and destruction.

References

- Andi Hamzah, *Penegakan Hukum Lingkungan*, SinarGrafika, Jakarta, 2008.
- Bambang Tri Bawono and Anis Mashdurohatun, 2011. "Penegakan Hukum Pidana di Bidang Illegal Logging bagi Kelestarian Lingkungan Hidup dan Upaya Penanggulangannya", *Jurnal Hukum* Vol 16, No. 2, p. 601.
- Barbir, F., Veziroğlu, T. N., & Plass Jr, H. J. (1990). *Environmental damage due to fossil fuels use. International journal of hydrogen energy*, 15(10), 739-749.
- Fadli, M., & Lutfi, M. (2016). *Hukum dan Kebijakan Lingkungan*. Universitas Brawijaya Press.
- Hajdú, József, and RofiAulia Rahman. "The New European Union Whistleblowing Directive: In Comparison to Indonesia's Practice." *Hasanuddin Law Review* 7, no. 3 (2021): 226-240
- Hendriksen Nellemann and Raxter Ash (ed.), *The Environmental Crime Crisis, Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources*, BirkelandTrykelli: UNEP, 2018
- Maxime van der Laarse, *Environmentalism in Indonesia Today Environmental Organizations, Green Communities and Individual Sustainable Lifestyles*, Thesis Asian Studies, Leiden University.
- Muladi, *Demokratisasi, Hak Asasi Manusia, dan Reformasi Hukum di Indonesia*, The Habibie Center, Jakarta, 2002.
- Norouzi, N., & Ataei, E. (2021). *Covid-19 Crisis and Environmental Law: Opportunities and Challenges*. *Hasanuddin Law Review*, 7(1), 46-60. doi:<http://dx.doi.org/10.20956/halrev.v7i1.2772>
- Peeters, M. (2006). *Elaborating on integration of environmental legislation: the case of Indonesia. Environmental Law and Development. Lessons from the Indonesian Experience*, Edward Elgar, Cheltenham, Northampton, 92-127.
- Peter Mahmud Marzuki, *Penelitian Hukum*, Prenada Media, 1st edition, Jakarta, 2005.
- Sri SundariRangkuti, *Hukum Lingkungan dan Kebijaksanaan Lingkungan Nasional*, Airlangga University Pers, Surabaya, 2000.
- Suhariyono, *Pembaruan Pidana Denda, Rajagrafindo Persada*, Jakarta, 2012.
- Takdir Rahmadi, *Hukum Lingkungan di Indonesia*, Raja Grafindo Persada, Jakarta, 2014.
- UN General Assembly, *Climate change and its possible security implications: report of the Secretary-General*, <https://digitallibrary.un.org/record/667264>