# The Conceptualization of Environmental Administration Law in Environmental Pollution Control



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ABSTRACT

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**Keywords** Environmental; Administration Law; Pollution; Environment is an essential element of life. The domain offers a variety of advantages and functions for humans to carry out activities and reside there. This is normative legal research using secondary sources. According to the study's findings, environmental law enforcement can be conducted both punitively and preventatively, depending on its effectiveness and nature. The lack of coordination between sectors (government officials), the absence of a monitoring plan, and the lack of environmental supervisors are obstacles to ecological monitoring.



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# 1. Introduction

The environment is one of the most important components of life. The environment provides many benefits and functions for humans to carry out activities and live in it. The environment must be preserved, cared for, and empowered so that it remains sustainable and well maintained. The environment is used to place human activities on it, one of which is industry.<sup>1</sup>

The general explanation of Law Number 32 of 2009 concerning Environmental Protection and Management (UU PPLH) states that environmental criminal law enforcement continues to pay attention, which requires the application of criminal law enforcement as a last resort after the implementation of administrative law enforcement is deemed unsuccessful.<sup>2</sup> However, the *ultimum remedium* principle only applies to certain formal criminal acts, namely the punishment of violations

<sup>&</sup>lt;sup>1</sup>Katherine Sievert and others, 'What's Really at "Steak"? Understanding the Global Politics of Red and Processed Meat Reduction: A Framing Analysis of Stakeholder Interviews', *Environmental Science and Policy*, 137.August (2022), 12–21 https://doi.org/10.1016/j.envsci.2022.08.007

<sup>&</sup>lt;sup>2</sup>Yoon Young Chun and others, 'What Will Lead Asian Consumers into Circular Consumption? An Empirical Study of Purchasing Refurbished Smartphones in Japan and Indonesia', *Sustainable Production and Consumption*, 33 (2022), 158–67 https://doi.org/10.1016/j.spc.2022.06.015

of waste water quality standards, emissions, and disturbances, as regulated in Article 100 of the PPLH Law.<sup>3</sup>

Thus, for other criminal acts (other than Article 100), the *ultimum remedium* principle does not apply. This means that law enforcement against criminal acts other than Article 100 applies *the premium remedium* principle (prioritizing law enforcement through criminal law means). Unlike the previous law, namely Law No. 23 of 1997, concerning Environmental Management.<sup>4</sup>

The general explanation of Law No. 23 of 1997 states that as a support for administrative law, the enactment of criminal law provisions still takes into account the principle of subsidiarity, namely, that criminal law should be utilized if sanctions in other legal fields, such as administrative sanctions and civil sanctions, and alternative settlements of environmental disputes are ineffective. The level of the perpetrator's fault is relatively severe, the consequences of his actions are relatively significant, and his actions cause public unrest. Thus, based on this law, law enforcement against criminal acts in the environmental field adheres to the *ultimum remedium* principle.<sup>5</sup>

According to Drupsteen, from an environmental law point of view, it is quite clear that the possibilities for regulating environmental issues with the aid of criminal law are very limited. The regulation of environmental issues should mainly be achieved through the implementation of environmental policies by the parties ruler. The environmental policy is, in part, formulated in legal norms or statutory regulations.<sup>6</sup> Others are formulated outside of legal norms, for example, through environmental education and the creation of environmental awareness. If environmental policies are not formulated in the form of legal norms, then law enforcement cannot be carried out through the use of criminal law. On the other hand, for legal norms relating to the environment, law enforcement efforts through criminal law are more complementary than regulatory instruments.<sup>7</sup>

In relation to the preceding, the expansion of development carries the risk of pollution and environmental destruction, which leads to the destruction of the

<sup>&</sup>lt;sup>3</sup>Carlos Eduardo Lourenco and others, 'We Need to Talk about Infrequent High Volume Household Food Waste: A Theory of Planned Behaviour Perspective', *Sustainable Production and Consumption*, 33 (2022), 38–48 https://doi.org/10.1016/j.spc.2022.06.014

<sup>&</sup>lt;sup>4</sup>Amir Hatamkhani, Ali Moridi, and Masoud Asadzadeh, 'Water Allocation Using Ecological and Agricultural Value of Water', *Sustainable Production and Consumption*, 33 (2022), 49–62 https://doi.org/10.1016/j.spc.2022.06.017

<sup>&</sup>lt;sup>5</sup>Stephen A. Sutton and others, "Village" as Verb: Sustaining a Transformation in Disaster Risk Reduction from the Bottom Up', *Environmental Science and Policy*, 137.November 2021 (2022), 40–52 https://doi.org/10.1016/j.envsci.2022.08.009

<sup>&</sup>lt;sup>6</sup>Li Li and others, 'Urban Residents' Acceptance of Recycled Water: An Improved Innovation-Decision Model Considering the Needs Satisfied and Social Characteristics', *Sustainable Production and Consumption*, 33 (2022), 1005–17 https://doi.org/10.1016/j.spc.2022.08.026

<sup>&</sup>lt;sup>7</sup>Denis Arinabo, 'Unveiling the Role of Contextual Factors in the Evolution of Urban Floods in Sub-Saharan Africa: Lessons from Kampala City', *Environmental Science and Policy*, 137.June 2021 (2022), 239–48 https://doi.org/10.1016/j.envsci.2022.09.001

basic structure and function of the ecosystem that sustains life. This is a social burden because in the end the community and the government must shoulder the recovery costs.<sup>8</sup> To increase the carrying capacity of the environment, maintaining a good and healthy ecosystem is a responsibility that requires the participation of every member of the community. In order to achieve sustainability and become a guarantee for the welfare of present and future generations, judicious development (especially in the environmental field) must be founded on environmental awareness.<sup>9</sup>

The abundance of natural resources owned by the Indonesian people is a crucial asset in the implementation of national development.<sup>10</sup> As a party or institution, the government has the authority to manage and utilize it. I Nyoman Nurjaya stated that if the implementation of national development is only concerned with increasing state income and foreign exchange (state revenue), then the principles of justice, democratization, and the sustainability of the function of natural resources are disregarded. This is one form of environmental problems emerging.<sup>11</sup>

#### 2. Research Method

The research used in writing this journal uses normative legal research methods that use library research, namely, research in the field of law that uses the law as a basis for norms and is carried out by researching library materials or secondary data,<sup>12</sup> to search for materials based on existing laws, both in the form of laws and

<sup>&</sup>lt;sup>8</sup>Sean Low, Chad M. Baum, and Benjamin K. Sovacool, 'Undone Science in Climate Interventions: Contrasting and Contesting Anticipatory Assessments by Expert Networks', *Environmental Science and Policy*, 137.August (2022), 249–70 https://doi.org/10.1016/j.envsci.2022.08.026

<sup>&</sup>lt;sup>9</sup>Ahmad Siboy and others, 'The Effectiveness of Administrative Efforts in Reducing State Administration Disputes', *Journal of Human Rights, Culture and Legal System*, 2.1 (2022), 14–30 https://doi.org/10.53955/jhcls.v2i1.23

<sup>&</sup>lt;sup>10</sup>Nurfaika Ishak, Romalina Ranaivo, and Mikea Manitra, 'Constitutional Religious Tolerance in Realizing the Protection of Human Rights in Indonesia', *Journal of Human Rights, Culture and Legal System*, 2.1 (2022), 31–44 https://doi.org/https://doi.org/10.53955/jhcls.v2i1.24

<sup>&</sup>lt;sup>11</sup>Silaas Oghenemaro Emovwodo, 'Indonesia as Legal Welfare State : The Policy of Indonesian National Economic Law', *Journal of Human Rights, Culture and Legal System Vol.*, 2.1 (2022), 1–13 https://doi.org/10.53955/jhcls.v2i1.21

<sup>&</sup>lt;sup>12</sup>Tri Hartini, 'Legal Policy of Protection COVID-19 Patients in Hospitals', Journal of Human Rights, Culture and Legal System, 2.1 (2022), 45–57 https://doi.org/10.53955/jhcls.v2i1.25

books from experts.<sup>13</sup> This normative legal research is used to study the role of Environmental Administrative Law in tackling environmental problems.<sup>14</sup>

## 3. Results and Discussion

The environmental regulations divide environmental issues into two categories: environmental pollution and environmental destruction. Stewart and Krier categorize environmental issues as environmental pollution (pollution), land misuse (land misuse), and depletion of natural resources.<sup>15</sup> The primary distinction between environmental pollution and depletion of natural resources is that pollution can result from the introduction or presence of a substance, energy, or component into a particular ecosystem or environment. Thus, the substance, energy, or component is foreign or something that initially did not exist in an environmental area but is now present in a particular quantity or quality due to human activities. On the other hand, depletion of natural resources means that natural resources are located or exist in the context of their origin or area of origin, and then they are continuously and uncontrollably extracted by humans in a certain manner and quantity, resulting in environmental degradation.<sup>16</sup>

The negative impact of a decrease in the quality of the environment either due to pollution or the depletion of natural resources is the emergence of threats or negative impacts on health, decreased aesthetic value, economic losses (economic costs), and disruption of natural systems (natural systems). The impact on human health mainly comes 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.<sup>17</sup> Environmental pollution also causes damage to the aesthetics of the environment or the environment in which humans live, such as: disturbance of smell, noise, smoke or fog. In addition, economic losses will be suffered by victims of environmental pollution or destruction. In the end, environmental problems will change the natural system. Deforestation, degraded land, depletion of the ozone layer, global warming, oil spills in the sea, fish die in

<sup>&</sup>lt;sup>13</sup>Femmy Silaswaty Faried, Hadi Mahmud, and Suparwi Suparwi, 'Mainstreaming Restorative Justice in Termination of Prosecution in Indonesia', *Journal of Human Rights, Culture and Legal System*, 2.1 (2022), 66–77 https://doi.org/10.53955/jhcls.v2i1.31

<sup>&</sup>lt;sup>14</sup>Muhammad Ridwansyah and Asron Orsantinutsakul, 'The Strengthening of Guardian Institutions in Nanggroe Aceh During the Autonomy Era', *Journal of Human Rights, Culture and Legal System Vol.*, 2.1 (2022), 55–65 https://doi.org/https://doi.org/10.53955/jhcls.v2i1.27

<sup>&</sup>lt;sup>15</sup>Hilde Brouwers and others, 'Accommodating Coexisting Impact Rationales in Knowledge Co-Production: The Case of the Natuurpact Reflexive Evaluation', *Environmental Science and Policy*, 137.July 2021 (2022), 32–39 https://doi.org/10.1016/j.envsci.2022.07.033

<sup>&</sup>lt;sup>16</sup>Ahmed Alengebawy and others, 'A Comparative Life Cycle Assessment of Biofertilizer Production towards Sustainable Utilization of Anaerobic Digestate', *Sustainable Production and Consumption*, 33 (2022), 875–89 https://doi.org/10.1016/j.spc.2022.08.016

<sup>&</sup>lt;sup>17</sup>Cézar di Paula da Silva Pinheiro and others, 'Agribusiness and Environmental Conservation in Tropical Forests in the Eastern Amazon', *Sustainable Production and Consumption*, 33 (2022), 863– 74 https://doi.org/10.1016/j.spc.2022.08.015

creeks due to chemicals, and the extinction of certain species are environmental problems that can change natural systems.<sup>18</sup>

The environmental destruction caused by decades of uncontrolled logging of Indonesia's forests, resulting in massive tropical forest shrinkage, has a significant impact on the state of Indonesia's ecosystems. The impact of logging on the surrounding community and even the global community is extremely negative. Destruction of forests causes not only economic damage but also irreplaceable human lives to be lost. Another effect is the loss of Indonesia's and the world's lungs. Climate change will occur as a result of global warming, with some regions experiencing increased rainfall that causes floods and landslides, while other regions experience prolonged drought.<sup>19</sup>

Environmental pollution can cross national boundaries in the form of river water pollution, air emissions, forest fires, oil pollution in the sea, and so on. What is more concerning is that environmental crimes in the form of illegal disposal of dangerous waste in various countries have led to organized transnational crimes, and this was seriously discussed at the World Ministerial Conference on Organized Transnational Crimes in Naples on November 21–23, 1994. Conceptually, this 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.<sup>20</sup>

Consequently, environmental problems that are linked to human rights issues are not only country-specific but also regional and even global (global) issues. This is evident from the Commission on Crime Prevention and Criminal Justice's 1992– 1996 work program, which emphasized the connection between environmental issues and the criminal justice system. On this basis, the 9th United Nations Congress on Crime Prevention and Development of Perpetrators, held in Cairo from April 29 to May 8, 1995, made environmental issues one of its primary topics of discussion.<sup>21</sup>

Pollution and environmental destruction occur when the cycle of materials and materials in the environment shifts and changes, disrupting the equilibrium of its function and/or structure. The natural process, an imbalance in the structure and function of the material cycle will occur; it can also be caused by human actions.

<sup>&</sup>lt;sup>18</sup>Stephen Nyabire Akanyange and others, 'A Holistic Assessment of Microplastic Ubiquitousness: Pathway for Source Identification in the Environment', *Sustainable Production and Consumption*, 33 (2022), 113–45 https://doi.org/10.1016/j.spc.2022.06.020

<sup>&</sup>lt;sup>19</sup>Andreia Santos, Ana Carvalho, and Ana Barbosa-Póvoa, 'A Methodology for Integrating the Characterization Factors Uncertainty into Life Cycle Assessments', *Sustainable Production and Consumption*, 33 (2022), 1018–30 https://doi.org/10.1016/j.spc.2022.08.018

<sup>&</sup>lt;sup>20</sup>Rafael Marcuzzo and others, 'A Multi-Country Simulation-Based Study for End-of-Life Solar PV Panel Destination Estimations', *Sustainable Production and Consumption*, 33 (2022), 531–42 https://doi.org/10.1016/j.spc.2022.07.021

<sup>&</sup>lt;sup>21</sup>V. C. Shruti and others, 'Strengthening Citizen Science Partnerships with Frontline Sanitation Personnel to Study and Tackle Plastic Pollution', *Environmental Science and Policy*, 137.April 2020 (2022), 70–74 https://doi.org/10.1016/j.envsci.2022.08.011

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Today, humans engage in numerous activities to satisfy their biological and technological needs, resulting in significant pollution and environmental destruction. In an effort to alter the human environment in order to improve the quality of life, pollution can occur.<sup>22</sup>

The water resources consist of water, water sources, and the water resources they contain. Water refers to all water found on, above, or below the earth's surface, including surface water, groundwater, precipitation, and seawater on land. Surface water comprises all the water found on the surface of the earth. Water sources are natural and/or artificial water locations or containers found above, on, or below the surface of the earth.<sup>23</sup>

It is believed that water is a divine gift. It is inconceivable that humans could survive in the absence of water, as it is essential to their activities and creativity. However, not all water is useful for human consumption. Humans can only consume water that is free of impurities and of high quality. Water is beneficial to human existence. This rationale creates a mindset that positions water as a vital resource. From any vantage point, water cannot be separated from life; in this context, water cannot be denied as a source of life and a means of sustenance for the continued existence of human life. The rights pertaining to the use of water include each individual's protected need to obtain water.<sup>24</sup>

In accordance with human rights regulations, access to water is a fundamental right. As the world's population and population density continue to rise, the demand for water will continue to rise from year to year; therefore, the need for clean water in various countries is crucial for the continuation of human life. Using water as a source of life necessitates compliance with numerous national and international legal regulations. Article 28 H (1) of the 1945 Law states that "everyone has the right to enjoy physical and spiritual well-being, a healthy living environment, and access to health services."<sup>25</sup>

In the 1948 Declaration of Human Rights, it was stated that everyone has the right to a certain standard of living with guaranteed health and well-being for themselves and their families, including clothing, food, shelter, and care, as well as the necessary social services. Because the demand for and dependence on water in Indonesia are so great, it is crucial to regulate the use of water sources. In

<sup>&</sup>lt;sup>22</sup>Matthieu Mondou and others, 'Policy Forums and Learning in Fields Underpinned by Regulatory Science', *Environmental Science & Policy*, 137.June (2022), 349–58 https://doi.org/10.1016/j.envsci.2022.09.007

<sup>&</sup>lt;sup>23</sup>Dewi Nurul Savitri, 'Legal Policy on the Protection of the Right to Health during the Covid-19 Pandemic in France', *Bestuur*, 10.1 (2022), 1–11 https://doi.org/10.20961/bestuur.v10i1.54449

<sup>&</sup>lt;sup>24</sup>Utkarsh K. Mishra and Abhishek Negi, 'Transgender and the Right to Employment in India: Analysing the Trajectories of Discrimination', *Bestuur*, 9.1 (2021), 34 https://doi.org/10.20961/bestuur.v9i1.51997

<sup>&</sup>lt;sup>25</sup>Dong Li and others, 'Achieving PN through the Selective Recovery of AOB Activity in Inactivated Nitrifying Bacteria: Combined Aerobic Starvation and FA', *Journal of Environmental Management*, 321.June (2022), 116004 https://doi.org/10.1016/j.jenvman.2022.116004

accordance with Article 33, paragraph 3 of the 1945 Constitution of the Republic of Indonesia, which stipulates that the state is the holder of control over water, the state is obligated to ensure the availability of water through a variety of means. The right to water becomes a sure guarantee of an equal standard of living, given that this right is a precondition for determining one's ability to survive.<sup>26</sup>

The state's role in managing and implementing policies to provide protection and promote the principle of state control over significant production branches in order to meet the needs of a large population. The control of this state's rights should prioritize the interests and human rights of the people, particularly in the distribution of environmental resources. The Unitary State of the Republic of Indonesia guarantees the rights of Article 33, paragraph 2 of the 1945 Constitution, which states that the earth and natural resources belong to the state and are utilized for the benefit of the people. Regarding PP No. 122 of 2015 pertaining to the drinking water supply system by PDAM and the availability of regular, clean water.<sup>27</sup>

In Indonesia, clean water comes from a variety of sources, including dug wells, PDAM, and pump wells, in order to meet the country's needs. The 1945 Constitution addresses the human rights to clean and healthy water, particularly a healthy and pleasant living environment, as well as the availability of health services. This suggests that everyone should have access to a decent place to live. The applicable Environmental Law, namely the Environmental Protection and Management Act No. 32 of 2009, Chapter I Article point (1) defines the environment as the totality of all objects, conditions, and living things, including humans and their behavior, which affect the survival and well-being of humans and other living things.<sup>28</sup>

This explains that the living environment is comprised of various interacting ecosystems, including humans, plants, and animals, as well as those inherent in all things, such as groundwater, air, seasons, and natural resources. Consequently, there is a connection between a healthy environment and the implementation of the right to clean and healthy water, which is an integral component of the environment. Regarding a good and healthy environment, it is positively correlated with the right to water, which is a human right.<sup>29</sup>

<sup>&</sup>lt;sup>26</sup>Mas Pungky Hendra Wijaya and Mohammad Zulfikar Ali, 'Legislation Impediments in Reorganising Government Bodies in Indonesia', *Bestuur*, 9.1 (2021), 1 https://doi.org/10.20961/bestuur.v9i1.51633

<sup>&</sup>lt;sup>27</sup>Anom Wahyu Asmorojati and others, 'The Impact of COVID-19 on Challenges and Protection Practices of Migrant Workers' Rights', *Bestuur*, 10.1 (2022), 43 https://doi.org/10.20961/bestuur.v10i1.60179

<sup>&</sup>lt;sup>28</sup>Mukand S. Babel and others, 'A Disaggregated Assessment of National Water Security: An Application to the River Basins in Thailand', *Journal of Environmental Management*, 321.December 2021 (2022), 115974 https://doi.org/10.1016/j.jenvman.2022.115974

<sup>&</sup>lt;sup>29</sup>Jincheng Li and others, 'A High-Resolution Nutrient Emission Inventory for Hotspot Identification in the Yangtze River Basin', *Journal of Environmental Management*, 321.August (2022), 115847 https://doi.org/10.1016/j.jenvman.2022.115847

In Law no. 36 of 2009 concerning health, in the points of consideration, it is explained: (1) that health is a human right and one of the elements of welfare that must be realized in accordance with the ideals of the Indonesian nation in Pancasila and the 1945 Constitution of the Republic of Indonesia; (2) that every activity in an effort to monitor and impair the quality of the environment shall be prohibited Roger H. Soltau defines the state in his book Budiardjo as an agency or authority that regulates or controls common problems on behalf of the people. Harold J. Laski asserted that the state is an integrated society because it possesses greater coercive and legal authority than the individuals or groups that make up that society.<sup>30</sup>

The state is a tool (agency) or authority (authority) with a coercive nature, which regulates or controls common problems for the benefit of the people, according to the opinion presented above. Furthermore, according to Roger H. Soltau, the purpose of the state is to allow its citizens as much freedom as possible to develop and express their creativity. Nevertheless, regardless of its ideology, every nation must perform the following minimum functions: a) maintaining order as a stabilizing force; b) promoting the well-being and prosperity of its citizens; c) ensuring national security; and d) upholding justice.<sup>31</sup>

The recognition of access to water as a human right signifies two things: first, an acknowledgment of the importance of water to human life, and second, the necessity of protecting everyone's right to access water. For the sake of this protection, it is necessary to assert that the right to water becomes a priority within the human rights legal field. As with other human rights, the state must respect, protect, and fulfill it; the formulation and planning of national water strategies and national action plans (including laws and policies) should be based on the concept of rights-based development, which places people at the center of development rather than as mere recipients. A rights-based approach integrates international human rights system norms, standards, and principles into development planning, policies, and processes.<sup>32</sup>

The implication of recognizing the right to water is that the state is obligated to implement such a mechanism to ensure public access to water. This mechanism must be governed so that it does not afford the state the opportunity to delegate its responsibilities to third parties. The recognition of this right to water provides the state with the opportunity to impose restrictions on water resources. This does not imply that everyone must receive water for free with no restrictions on the amount of use, which would allow those with more resources to obtain more

<sup>&</sup>lt;sup>30</sup>Brouwers and others.

<sup>&</sup>lt;sup>31</sup>K. M. Hatch and others, 'Evaluating Phytochemical and Microbial Contributions to Atrazine Degradation', *Journal of Environmental Management*, 321.August (2022), 115840 https://doi.org/10.1016/j.jenvman.2022.115840

<sup>&</sup>lt;sup>32</sup> Hatch and others.

water. Certain restrictions on certain individuals or groups of individuals are required to ensure that everyone's right to water is met.<sup>33</sup>

The increase in development activities carries the risk of pollution and environmental destruction, so that the basic structure and function of the ecosystem that supports life will be damaged. One of the legal regulations related to environmental conservation efforts is UUPPLH. Everyone is obliged to maintain the preservation of environmental functions and prevent and overcome environmental pollution and destruction. Efforts to maintain sustainability and prevent environmental pollution are obligations that are imposed on everyone, both as individuals and as social beings in community life. According to the explanation of UUPPLH, the obligation to preserve environmental functions and prevent pollution implies that everyone participates in efforts to maintain the environment.<sup>34</sup>

In the theoretical-juridical perspective, efforts to preserve and prevent environmental pollution are borne by industrial companies in the country. Therefore, facing the dynamics of the activities of industrial companies today, theoretically and idealistically, the legal principles of environmental conservation should still be used as the basis for commitments for industrial companies in actualizing their economic activities.<sup>35</sup>

Taking into account the idea of protecting the environment's functions, this is a legal tool that businesses in the country cannot ignore. In other words, the legal principle of preserving environmental functions contains several fundamental aspects that can prevent pollution of national industrial waste. For this reason, it is realized that the activities of industrial companies can cause environmental pollution. Consequently, the waste it produces is seen as a dangerous threat to the survival of the community and the environment itself. So, putting the principle of preserving environmental functions into action is mostly about making sure that the environment doesn't get polluted or damaged because businesses aren't as committed to preserving environmental functions when they do business.<sup>36</sup>

<sup>&</sup>lt;sup>33</sup>Antonino Spanu and others, 'Influence of Irrigation Methods on Arsenic Speciation in Rice Grain', Journal of Environmental Management, 321.August (2022) https://doi.org/10.1016/j.jenvman.2022.115984

<sup>&</sup>lt;sup>34</sup>Nur Putri Hidayah, Quincy R. Cloet, and David Pradhan, 'The Implementation of Labor Development Principles According to Job Creation Law as a Reason to Protect Wages Rights', *Bestuur*, 9.1 (2021), 94 https://doi.org/10.20961/bestuur.v9i1.49252

<sup>&</sup>lt;sup>35</sup>Ayanda Shabalala and Vhahangwele Masindi, 'Insights into Mechanisms Governing the Passive Removal of Inorganic Contaminants from Acid Mine Drainage Using Permeable Reactive Barrier', *Journal of Environmental Management*, 321.August (2022), 115866 https://doi.org/10.1016/j.jenvman.2022.115866

<sup>&</sup>lt;sup>36</sup>Amrit Kumar Mishra and Syed Hilal Farooq, 'Lack of Ecological Data Hinders Management of Ecologically Important Saltmarsh Ecosystems: A Case Study of Saltmarsh Plant Porterasia Coarctata (Roxb.)', *Journal of Environmental Management*, 321.August (2022), 115957 https://doi.org/10.1016/j.jenvman.2022.115957

The principle of compensation is another environmental law principle that can be utilized as a preventative measure against the pollution of national industrial waste. The provisions of Article 87 paragraphs (1)-(4) UUPPLH demonstrate the legal basis for the principle of compensation for environmental pollution. These normative provisions are the manifestation of the polluter pays principle in environmental law. In addition to being required to pay compensation, a judge may be required to pay environmental polluters and/or destroyers to take certain legal actions, such as an order to install or repair a waste management unit so that waste complies with the specified environmental quality standards; restore environmental functions; or eliminate or destroy the causes of pollution and/or environmental destruction. The imposition of forced payment (dwangsom) for each day of delay in carrying out court-ordered actions is for the purpose of preserving environmental functions.<sup>37</sup>

## 4. Conclusion

The purpose of law enforcement is to enforce the legal norms and rules underlying these norms. Article 65 paragraph (1) of Law Number 32 of 2009 concerning Environmental Protection and Management regulates environmental protection and management in Indonesia. In accordance with its effectiveness and nature, environmental law can be enforced both punitively and preventively. If a person or business entity violates the provisions of the law governing environmental administration, administrative sanctions and fines are imposed for environmental protection, control, and management.

#### References

- Akanyange, Stephen Nyabire, Yan Zhang, Xiaohan Zhao, Gifty Adom-Asamoah, Abdul Rasheed Abubakari Ature, Cosmos Anning, and others, 'A Holistic Assessment of Microplastic Ubiquitousness: Pathway for Source Identification in the Environment', Sustainable Production and Consumption, 33 (2022), 113–45 https://doi.org/10.1016/j.spc.2022.06.020
- Alengebawy, Ahmed, Badr A. Mohamed, Keda Jin, Tingting Liu, Nirmal Ghimire, Mohamed Samer, and others, 'A Comparative Life Cycle Assessment of Biofertilizer Production towards Sustainable Utilization of Anaerobic Digestate', Sustainable Production and Consumption, 33 (2022), 875–89 https://doi.org/10.1016/j.spc.2022.08.016
- Arinabo, Denis, 'Unveiling the Role of Contextual Factors in the Evolution of Urban Floods in Sub-Saharan Africa: Lessons from Kampala City', *Environmental Science and Policy*, 137.June 2021 (2022), 239–48 https://doi.org/10.1016/j.envsci.2022.09.001

Asmorojati, Anom Wahyu, Muhammad Nur, Indah Kusuma Dewi, and Hezlina

<sup>&</sup>lt;sup>37</sup>Wijaya and Ali.

Hashim, 'The Impact of COVID-19 on Challenges and Protection Practices of Migrant Workers' Rights', *Bestuur*, 10.1 (2022), 43 https://doi.org/10.20961/bestuur.v10i1.60179

- Babel, Mukand S., Kaushal Chapagain, Victor R. Shinde, Somkiat Prajamwong, and Somkiat Apipattanavis, 'A Disaggregated Assessment of National Water Security: An Application to the River Basins in Thailand', *Journal of Environmental Management*, 321.December 2021 (2022), 115974 https://doi.org/10.1016/j.jenvman.2022.115974
- Brouwers, Hilde, Lisa Verwoerd, Anne Loeber, Barbara Regeer, and Pim Klaassen, 'Accommodating Coexisting Impact Rationales in Knowledge Co-Production: The Case of the Natuurpact Reflexive Evaluation', *Environmental Science and Policy*, 137.July 2021 (2022), 32–39 https://doi.org/10.1016/j.envsci.2022.07.033
- Chun, Yoon Young, Mitsutaka Matsumoto, Kenichiro Chinen, Hideki Endo, Shu San Gan, and Kiyotaka Tahara, 'What Will Lead Asian Consumers into Circular Consumption? An Empirical Study of Purchasing Refurbished Smartphones in Japan and Indonesia', Sustainable Production and Consumption, 33 (2022), 158–67 https://doi.org/10.1016/j.spc.2022.06.015
- Emovwodo, Silaas Oghenemaro, 'Indonesia as Legal Welfare State : The Policy of Indonesian National Economic Law', Journal of Human Rights, Culture and Legal System Vol., 2.1 (2022), 1–13 https://doi.org/https://doi.org/10.53955/jhcls.v2i1.21
- Hartini, Tri, 'Legal Policy of Protection COVID-19 Patients in Hospitals', Journal of Human Rights, Culture and Legal System, 2.1 (2022), 45–57 https://doi.org/https://doi.org/10.53955/jhcls.v2i1.25
- Hatamkhani, Amir, Ali Moridi, and Masoud Asadzadeh, 'Water Allocation Using Ecological and Agricultural Value of Water', *Sustainable Production and Consumption*, 33 (2022), 49–62 https://doi.org/10.1016/j.spc.2022.06.017
- Hatch, K. M., R. N. Lerch, R. J. Kremer, C. D. Willett, C. A. Roberts, and K. W. Goyne, 'Evaluating Phytochemical and Microbial Contributions to Atrazine Degradation', *Journal of Environmental Management*, 321.August (2022), 115840 https://doi.org/10.1016/j.jenvman.2022.115840
- Hidayah, Nur Putri, Quincy R. Cloet, and David Pradhan, 'The Implementation of Labor Development Principles According to Job Creation Law as a Reason to Protect Wages Rights', *Bestuur*, 9.1 (2021), 94 https://doi.org/10.20961/bestuur.v9i1.49252
- Ishak, Nurfaika, Romalina Ranaivo, and Mikea Manitra, 'Constitutional Religious Tolerance in Realizing the Protection of Human Rights in Indonesia', *Journal of Human Rights, Culture and Legal System*, 2.1 (2022), 31–44 https://doi.org/https://doi.org/10.53955/jhcls.v2i1.24
- K. Mishra, Utkarsh, and Abhishek Negi, 'Transgender and the Right to Employment in India: Analysing the Trajectories of Discrimination', *Bestuur*, 9.1 (2021), 34 https://doi.org/10.20961/bestuur.v9i1.51997
- Li, Dong, Hao Chen, Xin Gao, and Jie Zhang, 'Achieving PN through the Selective

Recovery of AOB Activity in Inactivated Nitrifying Bacteria: Combined Aerobic Starvation and FA', *Journal of Environmental Management*, 321.June (2022), 116004 https://doi.org/10.1016/j.jenvman.2022.116004

- Li, Jincheng, Yan Chen, Kaikui Cai, Jiaxing Fu, Tang Ting, Yihui Chen, and others, 'A High-Resolution Nutrient Emission Inventory for Hotspot Identification in the Yangtze River Basin', *Journal of Environmental Management*, 321.August (2022), 115847 https://doi.org/10.1016/j.jenvman.2022.115847
- Li, Li, Xiaojun Liu, Yizhe Ding, and Na Liu, 'Urban Residents' Acceptance of Recycled Water: An Improved Innovation-Decision Model Considering the Needs Satisfied and Social Characteristics', Sustainable Production and Consumption, 33 (2022), 1005–17 https://doi.org/10.1016/j.spc.2022.08.026
- Lourenco, Carlos Eduardo, Gustavo Porpino, Cecília Maria Lobo Araujo, Luciana Marques Vieira, and Daniele Eckert Matzembacher, 'We Need to Talk about Infrequent High Volume Household Food Waste: A Theory of Planned Behaviour Perspective', *Sustainable Production and Consumption*, 33 (2022), 38– 48 https://doi.org/10.1016/j.spc.2022.06.014
- Low, Sean, Chad M. Baum, and Benjamin K. Sovacool, 'Undone Science in Climate Interventions: Contrasting and Contesting Anticipatory Assessments by Expert Networks', *Environmental Science and Policy*, 137.August (2022), 249–70 https://doi.org/10.1016/j.envsci.2022.08.026
- Marcuzzo, Rafael, Wanderbeg Correia de Araujo, Mauricio Uriona Maldonado, and Caroline Rodrigues Vaz, 'A Multi-Country Simulation-Based Study for End-of-Life Solar PV Panel Destination Estimations', Sustainable Production and Consumption, 33 (2022), 531–42 https://doi.org/10.1016/j.spc.2022.07.021
- Mishra, Amrit Kumar, and Syed Hilal Farooq, 'Lack of Ecological Data Hinders Management of Ecologically Important Saltmarsh Ecosystems: A Case Study of Saltmarsh Plant Porterasia Coarctata (Roxb.)', Journal of Environmental Management, 321.August (2022), 115957
- Mondou, Matthieu, Steve Maguire, H.M. Tuihedur Rahman, Guillaume C.F. Pain, and Gordon M. Hickey, 'Policy Forums and Learning in Fields Underpinned by Regulatory Science', *Environmental Science & Policy*, 137.June (2022), 349–58 https://doi.org/10.1016/j.envsci.2022.09.007
- Pinheiro, Cézar di Paula da Silva, Luana C. Silva, Valente José Matlaba, and Tereza Cristina Giannini, 'Agribusiness and Environmental Conservation in Tropical Forests in the Eastern Amazon', *Sustainable Production and Consumption*, 33 (2022), 863–74 https://doi.org/10.1016/j.spc.2022.08.015
- Ridwansyah, Muhammad, and Asron Orsantinutsakul, 'The Strengthening of Guardian Institutions in Nanggroe Aceh During the Autonomy Era', Journal of Human Rights, Culture and Legal System Vol., 2.1 (2022), 55–65 https://doi.org/https://doi.org/10.53955/jhcls.v2i1.27
- Santos, Andreia, Ana Carvalho, and Ana Barbosa-Póvoa, 'A Methodology for Integrating the Characterization Factors Uncertainty into Life Cycle

Assessments', Sustainable Production and Consumption, 33 (2022), 1018–30 https://doi.org/10.1016/j.spc.2022.08.018

- Savitri, Dewi Nurul, 'Legal Policy on the Protection of the Right to Health during the Covid-19 Pandemic in France', *Bestuur*, 10.1 (2022), 1–11 https://doi.org/https://doi.org/10.20961/bestuur.v10i1.54449
- Shabalala, Ayanda, and Vhahangwele Masindi, 'Insights into Mechanisms Governing the Passive Removal of Inorganic Contaminants from Acid Mine Drainage Using Permeable Reactive Barrier', Journal of Environmental Management, 321.August (2022), 115866 https://doi.org/10.1016/j.jenvman.2022.115866
- Shruti, V. C., Fermín Pérez-Guevara, Priyadarsi D. Roy, and Gurusamy Kutralam-Muniasamy, 'Strengthening Citizen Science Partnerships with Frontline Sanitation Personnel to Study and Tackle Plastic Pollution', *Environmental Science and Policy*, 137.April 2020 (2022), 70–74 https://doi.org/10.1016/j.envsci.2022.08.011
- Siboy, Ahmad, Al-fatih Virga, Dwi Efendi, and Putri Hidayah, 'The Effectiveness of Administrative Efforts in Reducing State Administration Disputes', *Journal of Human Rights, Culture and Legal System*, 2.1 (2022), 14–30 https://doi.org/https://doi.org/10.53955/jhcls.v2i1.23
- Sievert, Katherine, Mark Lawrence, Christine Parker, and Phillip Baker, 'What's Really at "Steak"? Understanding the Global Politics of Red and Processed Meat Reduction: A Framing Analysis of Stakeholder Interviews', *Environmental Science and Policy*, 137.August (2022), 12–21 https://doi.org/10.1016/j.envsci.2022.08.007
- Silaswaty Faried, Femmy, Hadi Mahmud, and Suparwi Suparwi, 'Mainstreaming Restorative Justice in Termination of Prosecution in Indonesia', *Journal of Human Rights, Culture and Legal System*, 2.1 (2022), 66–77 https://doi.org/10.53955/jhcls.v2i1.31
- Spanu, Antonino, Ilaria Langasco, Francesco Barracu, Mario Antonello Deroma, José Fermín López-Sánchez, Andrea Mara, and others, 'Influence of Irrigation Methods on Arsenic Speciation in Rice Grain', Journal of Environmental Management, 321.August (2022) https://doi.org/10.1016/j.jenvman.2022.115984
- Sutton, Stephen A., Douglas Paton, Petra Buergelt, Saut Sagala, and Ella Meilianda, "Village" as Verb: Sustaining a Transformation in Disaster Risk Reduction from the Bottom Up', *Environmental Science and Policy*, 137.November 2021 (2022), 40–52 https://doi.org/10.1016/j.envsci.2022.08.009
- Wijaya, Mas Pungky Hendra, and Mohammad Zulfikar Ali, 'Legislation Impediments in Reorganising Government Bodies in Indonesia', *Bestuur*, 9.1 (2021), 1 https://doi.org/10.20961/bestuur.v9i1.51633