

The Effect of Criminal Law Enforcement Related to Environmental Pollution on Groundwater Quality Changes

D. J. A. Hehanussa¹, Yanti Amelia Lewerissa², Astuti Nur Fadillah³
{elyanti_amelia@yahoo.com}

Universitas Pattimura, Indonesia^{1,2,3}

Abstract. Environmental pollution can affect the quality of groundwater. This study analyzes the effect of criminal law enforcement related to environmental pollution on changes in groundwater quality. The study was normative juridical, complemented by socio-legal studies. We used a statutory and conceptual approach. We used secondary data from the literature study and analyzed them qualitatively. Findings show that the enforcement of environmental criminal law is enforcing the criminal provisions of environmental law (*strafrechtelijk milierecht*). The substances, institutional powers, and procedures used are generally subject to the provisions of environmental law unless they have not been specifically regulated.

Keywords: Law enforcement; criminal; pollution; water

1 Introduction

God provides water and must be managed for the prosperity of all beings. Article 33, paragraph (3) of the 1945 Constitution of the Republic of Indonesia states that the state regulates and distributes water resources equitably for the benefit of all citizens. As such, the state assures and controls everyone's right to get water for their daily needs.

Water, as one of the most important elements on earth, is also affected if there is a change in the environment. Water is an important natural element for living things with flowing and pervasive properties. Groundwater is a very important natural resource for humans—without water, there can be no life. Until now, groundwater is still a very important source of water for human life and the environment.

In the hydrological cycle, groundwater also has a role as a link that functions as a reservoir, which then releases it slowly into rivers or lakes, so that flow continuity is maintained. Groundwater also has an important role, because it is easy to obtain and relatively good quality. Therefore, we have to keep the quality and quantity of groundwater [1].

Human activities such as land development for resettlement and industrial areas, mining exploitation, waste disposal and other activities will have an impact on the soil and groundwater in the area[2]. In general, polluted water can be seen easily, for example from turbidity, because generally people think that pure or clean water is clear and not cloudy, or from its transparent and translucent color, or from its smell that stings the nose, or causes itching on the nose, the skin and some can feel with the tongue, such as sour and bitter tastes [3].

Government Regulation Number 82 of 2001 on Water Quality Management and Water Pollution Control mentions that in accordance with the relevant laws and regulations, specific parameters and techniques are used to measure the quality of the water.. Serious violations against the environment are generally carried out by large industries, which are clearly owned by strong economic groups. Furthermore, in the Government Regulation Number 43 of 2008 concerning Groundwater, Article 1 paragraph (7) mentions that groundwater management as a series of ways to design, apply, supervise, and assess groundwater conservation and use as well as prevent the destructive force of groundwater.

We based our study on Government Regulation Number 43 of 2008 on Groundwater, stating that basically groundwater does not have the potential to damage as in surface water, but the destructive force of groundwater will appear if the environment surrounding groundwater is disturbed. The damage to the groundwater environment may be due extraction that exceeds the environmental carrying capacity, pollution, and natural activities. Considering that groundwater is below the ground surface, the damage that occurs to groundwater is not directly visible, making recovery difficult.

2 Literature Review

2.1 Criminal Law Enforcement

Environmental regulations are legal orders and prohibitions against legal subjects and violation will result sanctions, including imprisonment and fines. The aim is to safeguard the environment, including all within it, such as flora and fauna, land, air, and water, and people. Any activities that cause pollution and environmental damage can directly or indirectly endanger human life. Criminal law is made to protect people's life and dignity. Criminal sanctions in environmental are imposed on two main activities: polluting the environment and destroying the environment [4].

The criminal law enforcement process regulated in UUPPLH includes the following stages:

1. Investigation stage
2. Investigation stage
3. Execution or prosecution stage
4. Judicial stage
5. Execution stage

In carrying out the criminal law enforcement mechanism, the basic provisions are the provisions of the criminal procedure law (KUHAP) besides that it is obtained from special provisions in the relevant laws, including UUPPLH [5].

2.2 Environmental Pollution

According to Grolier, environmental pollution happens when any materials or energy enter our water, soil, or air causing short-term and/or long-term damage or loss to our ecological balance or lower quality of life [6]. Environmental pollution refers to situation when the environment is loaded with various materials resulted from human activities, most of which are harmful to the environment [7].

In Law No. 32 of 2009 concerning Environmental Protection and Management (hereinafter referred to as UUPPLH) Environmental pollution is defined in Article 1 Point 14 as the introduction or inclusion of elements into the environment by human activities that are of a

lower quality standard than the environment as a whole. Chapter V of UUPPLH regulates Control in Article 13 and Article 14.

Article 13

1. To maintain environmental functions, environmental pollution and/or damage must be controlled.
2. Prevention, mitigation, and restoration are all parts of controlling environmental pollution and/or damage.

Article 14

3. The federal, state, local, and other appropriate parties or authorities in charge shall control environmental pollution and/or damage.

Environmental impact analysis, UKL-UPL, licensing, environmental economic instruments, environmental-based laws and regulations, environmental-based budgeting, environmental risk analysis, environmental audits, and other instruments that follow the needs and/or development of science are some of the instruments used to prevent pollution and/or environmental damage.

2.3 Water Quality Legal Instruments

Government Regulation Number 82 of 2001 concerning Water Quality Management and Water Pollution Control defines water is defined as all liquids above and below the surface of the earth, excluding seawater and paleowater. The Government Regulation explains that the state of water quality as determined by tests and measurements performed in accordance with established protocols and legal mandates. Government Regulation of the Republic of Indonesia Number 43 of 2008 concerning Groundwater Article 1 paragraph (7) describes groundwater management is the coordinated effort to reduce groundwater extraction, increase groundwater use, and mitigate groundwater's destructive potential. State policies in the context of water management and water pollution control are regulated through Government Regulation 82 of 2001 concerning Water Management and Water Pollution Control, the rationale for the birth of Government Regulation 82 of 2001 are:

1. Water is a natural resource that many people need. Because of this, it needs to be protected so that it can continue to help people and other living things.
2. Water as a component of the environment will affect and be influenced by other components
3. As a very important part of natural resources, water should be used as much as possible to help people get ahead.

With regard to legal protection and guaranteeing the right of public access to clean water, the reference is the laws and regulations in Indonesia. The laws and regulations in question are:

1. Law No. 11 of 1974 on Irrigation
2. Law No. 36 of 2009 on Health
3. Law No. 32 of 2009 on Environmental Protection and Management
4. Government Regulation No. 82 of 2001 on Water Quality Management and Water Pollution Control,
5. Government regulation No. 43 of 2008 on Groundwater
6. Regulation of the State Minister for the Environment No. 01 of 2010 on Water Pollution Control Management.

3 Method

We employed normative juridical research which examines law as a system of norms [8]. This writing is supported by library research, namely examining secondary data consisting of primary legal materials, namely binding legal materials such as legislation, and secondary legal materials that provide explanations of primary legal materials such as research results and the works of lawyers [9]. Furthermore, this legal material is analyzed qualitatively [10].

4 Findings and Discussion

Groundwater is the main alternative for the community to get clean water easily because it is relatively easy to manufacture [11]. Environmental disputes are basically disputes that arise as a result of the existence or suspicion of environmental impacts. Article 1 number 25 UUPPLH mentions that environmental disputes are disagreements between two or more people over actions that could affect or do affect the environment. So, the people who are at fault and the people who are hurt by the environmental impact are the subject and the object of the dispute, respectively. The activity that has the potential or already has an effect on the environment is the object of the dispute [12].

Environmental law enforcement can be seen as the use of administrative law, criminal law, and civil law tools and penalties to force legal subjects to follow environmental laws and rules. Environmental and health losses due to environmental pollution and destruction can be irreversible. Therefore, environmental management should be based on prevention rather than recovery. As part of environmental management, environmental law plays a very important role in preventing environmental problems from happening. This is because administrative environmental law, one field of environmental law, has both a preventive function and a corrective function for activities that do not follow the rules.

When it comes to water pollution, administrative law enforcement is preventive (supervision) and repressive (administrative sanctions) to enforce environmental laws and regulations. Enforcement of administrative environmental law can be applied to activities that violate licensing requirements and statutory regulations. The administrative sanction procedure is carried out directly by the government, without going through the judiciary (preventive-repressive non-justicial), while the procedure for applying criminal sanctions must go through a judicial procedure (justicial). Administrative sanctions will only impose sanctions on administrative acts, it is not impossible if the imposition of sanctions or processing of the imposition of administrative sanctions and criminal sanctions are carried out simultaneously or in parallel [13].

In essence, the existence of criminal law in UUPPLH aims to maintain the existence of the environment in its sustainability function. Enforcement of criminal environmental law is nothing but enforcement of the criminal provisions of environmental law (*strafrechtelijk milierecht*). The substances, institutional powers, and procedures used are generally subject to the provisions of environmental law, unless they have not been specifically regulated. In the context of UUPPLH, the formulation of criminal acts is regulated in Articles 98 to 115.

Article 98

1. Anyone who does something on purpose that causes the air quality standard, water quality standard, sea water quality standard, or environmental damage standard to be broken is

guilty of a crime, shall be punished with imprisonment for a minimum of 3 (three) years and a maximum of 10 (ten) years and a fine of at least IDR 3,000,000,000.00 (three billion rupiah) and a maximum of IDR 10,000,000,000.00 (ten billion rupiah).

2. If the act as referred to in paragraph (1) results in injury and/or harm to people, the perpetrator shall be punished with a minimum imprisonment of 4 (four) years and a maximum of 12 (twelve) years and a minimum fine of IDR 4,000,000,000.00 (four billion rupiah) and a maximum of IDR 12,000,000,000.00 (twelve billion rupiah).
3. If the act in (1) causes serious injury or death, the person shall be punished with a minimum imprisonment of 5 (five) years and a maximum of 15 (fifteen) years and a minimum fine of IDR 5,000,000,000.00 (five billion rupiah) and a maximum of IDR 15,000,000,000.00 (fifteen billion rupiah).

Article 99

1. Anyone who carelessly causes the ambient air quality standard, the water quality standard, the sea water quality standard, or the environmental damage standard criteria to be exceeded will go to jail for a minimum of 1 (one) year and a maximum of 3 (three) years and a minimum fine of IDR 1,000,000,000.00 (one billion rupiah) and a maximum of IDR 3,000,000,000.00 (three billion rupiah).
2. If the act as referred to in paragraph (1) results in injury and/or harm to human beings, the person shall be punished with imprisonment for a minimum of 2 (two) years and a maximum of 6 (six) years and a fine of at least IDR 2,000,000,000.00 (two billion rupiah) and a maximum of IDR 6,000,000,000.00 (six billion rupiah).
3. If the act in (1) causes serious injury or death, the person shall be punished with imprisonment for a minimum of 3 (three) years and a maximum of 9 (nine) years and a fine of at least IDR 3,000,000,000.00 (three billion rupiah) and a maximum of IDR 9,000,000,000.00 (nine billion rupiah).

Article 100

1. Everyone who breaks the standards for waste water quality, emissions quality, or disturbance quality shall be punished with imprisonment for a maximum of 3 (three) years and a fine of a maximum of IDR 3,000,000,000.00 (three billion rupiah).
2. The criminal act described in paragraph (1) can only be done if the administrative sanctions are not followed or if the violation happens more than once.

The formulation of Article 98 of the UUPPLH above stipulates material offenses, namely offenses that are deemed to have been fully implemented with prohibited consequences. In the formulation of Article 98 of the UUPPLH, there is no question about what element the perpetrator is referring to and in what way the perpetrator takes an action that causes it to be worse than the standard for ambient air quality, water quality, sea water quality, or environmental damage. What is required as a prerequisite for this article are the consequences in the form of exceeding the ambient air quality standard, water quality standard, sea water quality standard, or environmental damage standard criteria which become the ambient air quality standard, water quality standard, sea water quality standard, or damage to the environment. environment which is the cause of the crime. Therefore, in order to be accountable for the crime according to this Article, it must be proven that there has been a change and/or exceeded the ambient quality standard, water quality standard, sea water quality standard, or standard criteria for environmental damage.

Proof of the element of pollution using the following means: [14]

- a. Normative Juridical Provisions. The legal means used are the pollution criteria as stipulated in the legislation. If an activity has caused the entry of pollutant materials, the activity has caused/caused pollution.

- b. Expert Description. The use of legal means in letter a above must be supported by expert statements from various related disciplines. These experts in accordance with their respective disciplines will systematically describe the chronology of:
- 1) Why do physical changes occur in water and what pollutants cause
 - 2) What consequences occur in humans, animals and plants and what carcinogenic elements are contained in water and aquatic biota that can cause disorders/diseases
 - 3) How long do these water disorders last, how far do these disorders spread?
 - 4) How is the nature and effect of abnormalities in water, what disorders/diseases that arise in various living things can be restored or leave permanent disabilities.
 - 5) and so on with regard to negative impacts.
- c. The results of laboratory examinations, with the facilities and methods and certain areas of specialization, samples are sent to and received in the laboratory for examination. Inspection is carried out on waste samples. Treated waste, water samples taken upstream of the waste disposal chimney and water samples taken downstream of the waste disposal chimney. What is studied is the types of pollutant materials contained in each sample, the level/intensity of the pollutant materials in these samples. The results of the inspection are comprehensively compared with the established Water Quality Standards.

The UUPPLH provides Article 94 paragraph (2) giving the authority of PPNS (Civil Servant Investigators) in conducting investigations. UUPPLH requires PPNS to coordinate with Polri investigators in terms of making arrests and detentions, informing Polri in this case PPNS conducting investigations. PPNS also notifies the public prosecutor with a ransom to the Police investigator about the start of an investigation.

One of the difficulties in law enforcement in the criminal environment that often causes cases to fail in court is regarding the presentation of evidence (proof) and determining the causal relationship between actions and the consequences of actions with the consequences of actions (cause and effect). Depending on how the environmental offense that was broken and is used as the basis for criminal charges that must be proven in court was written, what must be proven is either the act itself or a quality relationship between the act and the results of the act. If the act is suspected of breaking the laws that make it a "formal offense" then the only thing that needs to be proven is whether or not the illegal act took place. On the other hand, if what is violated and used as the basis for prosecution is a qualifying criminal provision "material offense", then what must be proven in addition to the act is also the result of the act (causality relationship).

The effectiveness of environmental law enforcement, considering that environmental laws and regulations are basically to protect the environment from various negative impacts of business activities and community members who are less or less concerned about the environment. However, there are some regulatory substances that are difficult to implement and enforce, both by state administration officials and by law enforcement officers who are authorized in the judicial process (police, PPNS investigators, prosecutors, judges). The effectiveness of environmental law enforcement is also influenced by the legal culture of the community. Usually people will obey the law because they think the existing law is in accordance with the values that apply in society or is profitable for them. This is in line with what Lawrence M. Friedman found, which consists of legal substance, legal structure, and legal culture. All three must be equally good and support each other in the context of effective environmental law enforcement.

5 Conclusion and Recommendation

5.1 Conclusion

Environmental pollution due to changes in groundwater quality is caused by inorganic waste, organic waste, liquid waste and leachate. Environmental law enforcement can be seen as the use of administrative law, criminal law, and civil law tools and penalties to force legal subjects to follow environmental laws and rules. The existence of criminal law in environmental management efforts aims to maintain the existence of the environment in its sustainability function and the use of criminal law instruments becomes the *Ultimum Remedium* in the last resort when administrative law and civil law are no longer effective. The enforcement of criminal law against environmental pollution for changes in groundwater quality has been going well. With the existence of laws and regulations, law enforcement and community culture.

5.2 Recommendation

The government takes preventive measures to prevent environmental pollution from changes in groundwater quality. For the community not to use groundwater as a source of raw water, it is better if there is an indication of a change in color or smell so that the community would immediately report it to the relevant parties. The government through related agencies conducts outreach to the public on the importance of environmental health, so that people are more concerned about the environment around them

References

- [1] S. Notodarmojo, *Soil and Groundwater Pollution*. Bandung: Institut Teknik Bandung, 2005.
- [2] L. Gerungan, H. Bawole, and Y. Lewerissa, "Criminal Law Policy in Combating Land Use Changes that Cause Environmental Problems," in *LePALISSHE 2021: Proceedings of the First Lekantara Annual Conference on Public Administration, Literature, Social Sciences, Humanities, and Education*, 2022. doi: 10.4108/eai.3-8-2021.2315062.
- [3] A. Herlambang, "Water Pollution and its Management Strategy," *Indonesian Aquaculture Journal*, vol. 2, no. 1, 2006.
- [4] T. Rahmadi, *Environmental Law in Indonesia Second Edition*. Depok: Raja Grafindo Persada, 2005.
- [5] M. Muchtar, A. Khair, and Noraida, *Environmental Health Law (Theoretical Study and Development of Thought)*. Yogyakarta: New Pustaka, 2016.
- [6] T. Haryanto, *Environmental Pollution*. Klaten: Cempaka Putih, 2018.
- [7] T. E. Widodo, *Juridical Principles of Prevention of Environmental Pollution in Indonesia*. Surabaya: Scopindo Media Pustaka, 2021.
- [8] M. F. ND and Y. Achmad, *Dualism Research on Normative Law and Empirical Law*. Yogyakarta: Pustaka Pelajar, 2010.
- [9] S. Soekanto, *Introduction to Legal Research*. Jakarta: UI Press, 1986.
- [10] L. J. Moleong, *Qualitative Research Methods*. Bandung: Rosyda Karya, 1991.
- [11] F. Nur, "Analysis of Groundwater Quality Around TPA Tamangapa with Biological Parameters," *Journal of Environmental Science*, vol. 2, no. 2, 2013.

- [12] M. Akib, *Global and National Perspective Environmental Law*. Jakarta: Rajawali Pers, 2014.
- [13] Muchtar, Khair, and Noraida, *Environmental Health Law (Theoretical Studies and Development of Thought)*.
- [14] A. A. D. Imami, Somawijaya, Imamulhadi, and M. Priyanta, *Position Subsidiary Principles and Implementation in Enforcement of Environmental Law*. Bandung: Center for the Study of Environmental Dispute Resolution (PP-PSL FH UNPAD Bestari Publisher, 2009).