

Local Government Policy in Handling Groundwater Pollution Due to Domestic Waste Disposal

Dewi Mulyanti¹, Dhanang Widijawan², Andi Maulana³, Ai Romlah⁴

{dewimulyantiunigal@gmail.com¹, dhanang123unigal@gmail.com²,
andimaulana@gmail.com³, airomlah@gmail.com⁴}

Galuh University, Jl. R. E. Martadinata No.150, Mekarjaya, Kec. Ciamis, Kabupaten Ciamis,
Jawa Barat 46274, Indonesia¹²³⁴

Abstract. Human activities that produce domestic waste, such as detergent liquid or other debris, are due to uncontrolled household activities. Some simple houses with building licenses do not also provide domestic waste disposal facilities, and those are only dumped in every yard of the house so that apart from bad smell, the number of flies also pollutes the surface water, which becomes murky, unhygienic, and smells. The government and local government need to make some efforts for the community, particularly in giving building licenses for housing or business buildings, to avoid the increasing groundwater pollution due to domestic waste disposal. The limit of the research problem is how the local government constructs the policy in the form of the regulation that controls groundwater pollution due to uncontrolled domestic waste disposal and how community participation minimizes activities that can pollute the groundwater. This research used descriptive analysis to describe the observed result using the normative juridical approach related to regulations that control the environment through a literature study searching for data and information that the authors compiled. The research result is expected to describe clearly and comprehensively the concept of local government policy to avoid groundwater pollution due to domestic waste disposal and the community participation to maintain the environment, especially the groundwater quality and quantity.

Keywords: Policy, Groundwater Pollution, and Domestic Waste

1 Introduction

A Healthy and sound environment is one of the basic human needs besides clothing and shelter. Clean water is what humans need, as well as all living beings on earth. Water is a human right. God

created it for a human being to be used and preserved. The world's focus on water has been discussed in the United Nations conference under the 64/292 resolution, emphasising that the human right to water, drinking water, and sanitation is vital for human life. The resolution also stipulates that countries and international organisations help provide financial resources, capacity building, and technology transfer to help governments, mainly to provide clean drinking water for developing countries that everyone can easily access.

The amount of clean water is not renewable. Increasing population and economic development, especially in developing countries, will increase the intensity of environmental damage, including the clean water crisis that will hit the world. In 1995, the vice president of the World Bank at the time, Ismail Seragilden, wrote in *The New York Times* on August 10, 1995, stating that "many of the wars of this century were about oil, but wars of the next century will be about water". In 2000, the General Secretariat of the United Nations, Kofi Annan, also stated that "fierce competition for freshwater may become a source of conflict and war in the future". Then, in 2001, Jim Yardley, in his article in *The New York Times* dated April 16, 2001, entitled "For Texas now, water, not oil, is liquid gold". [1] Water wars or conflicts are, of course, triggered by the decreasing amount of water, while the need for water is unavoidable. The water crisis that has the potential to become a problem is now starting to show up.

Balanced water, land, and forest and preserving their environmental functions are everyone's obligation, the obligation of business actors and the government with policies through the regulations they regulate. Water resources consist of surface water and groundwater. Water is a natural resource ultimately needed for all living things on earth for drinking, household, agricultural, and industrial economic activities. The use of water in extensive industrial activities will affect the quality and quantity of water. Household activities also impact the water resources' damage, including the quality of groundwater, so it must be maintained, and its quality must be guaranteed by controlling damage and water pollution and preserving its function.

Control of water pollution is one of the efforts to protect and manage the environment. Article 1 point 2 of Law Number 32 of 2009 concerning Environmental Management states that "environmental protection and management is a systematic and integrated effort carried out to preserve environmental function and prevent pollution and environmental damage through planning, taking the benefit, control, maintenance, supervision, and law enforcement". Environmental management efforts include water resources to preserve and keep the balance and sustainability of water resources in the future.

The community's routine water management activities, including daily household activities (domestic), produce waste such as detergent water and other domestic waste in large and continuous quantities without proper management, damaging groundwater resources. Densely populated communities, people's housing that does not provide domestic waste disposal, or home industries that do not have a business license are some causes of groundwater pollution. That is because public awareness of clean water, which impacts environmental health, is still low, especially in the dry season with the shrinking surface of the healthy water, so pollution cannot be avoided.

The high level of groundwater pollution is also caused by the community's poor sanitation system and the well's location, which is very close to the domestic waste disposal sewer. Hence, the sewer leakage certainly pollutes the healthy water. In addition, people's lifestyles also affect the level of groundwater pollution. Therefore, groundwater pollution is an environmental problem that needs to be handled and controlled immediately. Article 13, dealing with the Environmental Management Act, states that "control of environmental pollution and damage is carried out in the context of preserving environmental functions". The way to control pollution and environmental damage can be through prevention, control, and conservation as the restoration of natural resources.

Article 53, paragraph (2) of the Law on Environmental Management states that "management of environmental pollution and damage is carried out by providing information on pollution and ecological damage warnings to the public; isolation of corrosion and environmental damage; termination of sources of pollution and environmental damage; or other ways related to the development of science and technology. Based on that fact, the community has an essential role in controlling, preventing, and restoring natural resources, especially groundwater. Apart from the community, the government must play a significant part in managing domestic waste.

Human activities in economic development will impact the environment, particularly in the use and waste management or domestic waste for damage to groundwater resources, so the government needs to carry out policies in the form of regulations that regulate and prevent damage to groundwater function. Therefore, the author provides several problem formulations as follows:

1. What is the impact of domestic waste on groundwater resources?
2. What is the local government's policy for handling groundwater pollution from domestic waste?
3. How is law enforcement in resolving groundwater pollution due to domestic waste?

This research on local government policies in handling groundwater pollution due to domestic waste disposal aims to discover the theory, practice, and concept of formulating government and local government policies in preventing and overcoming groundwater pollution due to household waste disposal. Furthermore, it is necessary to know how law enforcement resolves environmental disputes, especially the problem of groundwater pollution due to domestic waste, by involving people who have an essential role in their activities in the household and business as contributors to domestic waste that can avoid groundwater pollution.

2 Method

Several methods were used in the author's research. The approach method used normative legal research named scientific research by examining theory and law and regulation to find the truth of coherence as a guide to community behavior² in handling groundwater pollution due to domestic waste disposal. The writing method used analytical description through the description and explanation to find appropriate government regulations and policies comprehensively and systematically examine primary and secondary data. Based on the research approach and specification, the data collection techniques used in this research are field study and literature study

by reading the objects of the community's environment and all its activities that contribute to domestic waste and impact groundwater pollution. Then, literature or secondary data as the research basis were collected through a search on the regulation and literature related to the problems being studied³. The data is analysed qualitatively by reducing the legal materials presented, and then the conclusion is withdrawn.

3 Result and Discussion

3.1. The Policy of the Regional Government of Karanganyar Regency in Establishing Land Relocation due to the Natural Disaster

Indonesian Dictionary defines the environment as the surrounding conditions that affect the development and behaviour of living things. In Dutch, the term environment is called milieu⁵. The term environment comes from the Old French environment expert, which means to surround or encircle. It also means that the environment is the totality of natural, social, and cultural conditions that affect personal and group life. So, environmental problems can be considered problems that include traffic jams, crime, noise, etc. The environment means "that which surrounds, so the environment is "the whole physical universe⁷". According to environmental ecology, the environment is the external condition, and its influences affect the life and development of organisms⁸.

Then, Article 1 paragraph (1) of Law Number 32 of 2009 concerning Environmental Protection and Management states that "the environment is a unity of space with all objects, forces, conditions and living things including humans and their behaviour, which affect nature itself, survival and welfare of humans and other living creatures". So, it can be concluded that the environment is an ecosystem that supports life, which at the same time is a unity that influences each other between the place of life and the living things in it.

Water resources are water's ability or potential capacity to be managed and utilised in human economic and social activity. The community can utilise various water sources: seawater, rainwater, surface water, and groundwater. Surface water is a source of water that humans widely use, and surface water is also a significant concern because groundwater availability is increasingly limited/rare.

According to Law Number 17 of 2019 concerning Water, Resources groundwater is water contained in layers of soil or rocks below the ground surface. Meanwhile, surface water is all water found on the ground surface. Meanwhile, what is meant by comprehensive environmental management proposed by Magna and Charles Weiss is that Environmental management is a process that entails the (i) recognition of environmental problems, (ii) emergence of public awareness and political commitment to address these problems; (iii) formulation of environmental policies; (iv) expression of policies in regulations and litigation; and (v) implementation and enforcement of policies².

Domestic waste that is disposed of carelessly will impact public health and groundwater sources. It will decrease groundwater quality, so a permit is needed to dispose of household waste. Waste

disposal permit based on Article 40 paragraph (1) Government Regulation Number 82 of 2001 concerning Water Quality Management and Water Pollution Control states that "every business or activity that will dispose of wastewater into water or water sources must obtain written permission from the Regent/Mayor "The following provision confirms that the application for a wastewater disposal permit is based on the results of an AEI (Analysis of Environmental Impacts) study for industries that are required to have an AEI or a survey of Environmental Management Effort (EMAE) and Environmental Monitoring Effort (EMOE) for activities that do not require an Amdal.

The waste disposal permit contains the following requirements:

- a. The obligation to manage waste;
- b. Requirements for the quality and quantity of wastewater that may be discharged into the environment;
- c. Waste disposal requirements;
- d. Requirements to provide facilities and procedures for handling emergencies;
- e. Requirements for monitoring the quality and wastewater flow;
- f. Other requirements determined by the results of the Amdal process;
- g. Prohibition of simultaneous disposal all at once or sudden release of waste;
- h. Prohibition of doing dilution;
- i. Obligation to self-monitor and report the results to the authorised official.

Wastewater disposal can be regulated and utilised through a licensing mechanism. The district/city government issues permits for the use of wastewater for land based on the results of AEI, EMOE, and EMAE studies. An application for a permit to utilise wastewater for soil needs to conduct a survey in advance to determine the effect of wastewater application on the ground, fish, animal and plant cultivation, soil, groundwater quality, and public health. The district/city government can issue a wastewater disposal permit for application to the ground if the evaluation result shows that it is environmentally proper.

The regulatory chain in environmental management is an environmental management process consisting of the following:

- a. The development of legislation;
- b. permission;
- c. Implementation consists of compliance control and compliance promotion; and
- d. Enforcement

Institutional government policy in dealing with pollution and success in environmental management has made various efforts as follows:

- a. Establish new institutions or restructure existing institutions;
- b. Improve communication and coordination of inter-ministry agencies;
- c. Develop local-level environmental management institutions;
- d. Provide technical infrastructure and adequate training for staff;
- e. Appoint employees in formal and informal community workgroups, and
- f. Build collaboration with the local authority, business group, and environmental organization to implement environmental law and regulation.

The duty and authority of the district/city government in environmental protection and management, including the handling of groundwater pollution due to domestic waste, are as

follows:

- a. Establish district/city level policies;
- b. Establish and carry out a Strategic Environmental Assessment at the district/city level;
- c. Establish and carry out the policy for the plan of regency/city Environmental Protection and Management;
- d. Establish and carry out the policy of AEI, EMOE, and EMAE;
- e. Organizing an inventory of natural resources and greenhouse gas emissions at the Regency/City level;
- f. Develop and implement cooperation and partnerships;
- g. Develop and apply environment instrument
- h. Facilitate dispute resolution
- i. To provide guidance and supervision of the compliance of the person in charge of the business and activity to the provisions of environmental permits and statutory regulation;
- j. Implement the standard of minimum service standard;
- k. Implement policies regarding procedures for recognizing the existence of indigenous peoples, local wisdom, and rights of indigenous peoples related to environmental protection and management at the district/city level;
- l. Manage the environmental information at the regency/city level;
- m. Develop and implement environmental information system policies at the district/city level;
- n. Provide education, training, coaching, and awards;
- o. Issuing environmental permits at the district/city level, and
- p. Enforcing environmental law at the district/city level.

Various efforts to overcome environmental problems in Indonesia in the context of environmental protection and environmental law enforcement are something that the government must do because the increasing population increasingly threatens the environment. It is essential to carry out these efforts through law enforcement to prevent and overcome environmental pollution and damage caused by the community in disposing of domestic waste or by business actors. Legal protection of the environment must be supported by sound legal instruments, legislation, and institutions and by increasing public legal awareness.

The form of legal protection is an effort to enforce the law. Conceptual law enforcement is an activity to connect the relationship of values in harmony, described in good rules and attitude of action as the interpretation of final values to maintain peace in social life.

Law enforcement is enforcing or functioning legal norms as the behavior guidelines in legal relations in social and state life. Law enforcement efforts carried out by the government in overcoming environmental problems in Indonesia, including groundwater pollution resulting from domestic waste, both preventively and repressively, cannot be separated from the terminology of the legal system to understand the effectiveness of the law function in changing human behavior so that they have legal awareness to protect and preserve environmental function.

Preventive enforcement of environmental law includes a) regulation of environmental protection and management; b) fostering government officials and law enforcement officers; c) fostering business actors (business license holders) in environmental management; d) socialization and counseling of environmental law to the community; e) supervision of environmental management activities. Then, repressive environmental law enforcement includes the application of administrative sanctions, the determination of environmental civil sanctions, and the application of environmental criminal sanctions.

4 Conclusion

The increase in the population and the development of community economic development will impact the environment, especially waste. Domestic waste or household waste is considered trivial because it does not contain too many toxic substances. Still, the increase in human activities in households and small and medium industries has an impact on the pollution of clean water resources. Polluted clean water will impact public health and the quality of groundwater sources. Local government makes various efforts by formulating policies in the form of regulations dealing with preventing and controlling groundwater pollution from domestic waste. Various preventive and repressive law enforcement efforts are carried out to restore the function of the environment.

References

- [1] A'an Efendi, *Hukum Pengelolaan Lingkungan, Indeks*, Jakarta, 2018.
- [2] Alexandre Kiss, *I Introduction to International Environmental Law*, The United Nations Institute for Training and Research Palais des Nations, Geneva, Switzerland, 2005.
- [3] David Wilkinson, *Environment and Law*, Routledge, London, and New York, 2005.
- [4] Dinah Shelton & Alexandre Kiss, *Judicial Handbook on Environmental Law*, United Nations Environment Programme, 2005.
- [5] European Union Network for the Implementation and Enforcement of Environmental Law, *IMPEL Reference Book for Environmental Inspection*, Juni 1999.
- [6] Johnny Ibrahim, *Teori dan Metodologi Penelitian Hukum Normatif*, Malang: Bayumedia, 2013.
- [7] Mada Apriandi Zuhir, *The Evaluation of The Effectiveness of International Environmental Law Concerning The Issue of Global Climate Change*, Simbur Cahaya No. 47 Tahun XVII, Universitas Sriwijaya, 2012.
- [8] Magda Love & Charless Weiss, Jr, *Environmental Management and Institutions in OECD Countries Lessons from Experience*, World Bank Technical Paper No. 391, Pollution Management Series, May 1998.
- [9] Peter Bartelmus. *Environmental and development*, Allen & Unwin Inc, USA, 1986.
- [10] Soerdjono Soekanto, *Penelitian Hukum Normatif: Suatu Tinjauan Singkat*, Jakarta: PT. RajaGrafindo Persada, 2007.
- [11] Soerjono Soekanto, *Faktor-Faktor yang Mempengaruhi Penegakan Hukum*, Rajawali Press, Jakarta, 1983.
- [12] Tim Penyusun Kamus Pusat Bahasa, *Kamus Besar Bahasa Indonesia*, Jakarta: Balai Pustaka,