

WATER AVAILABILITY IN THE FRAMEWORK OF ENVIRONMENTAL JUSTICE: RECONSTRUCTION OF MUNICIPAL WATERWORKS (PDAM) REGULATIONS

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ABSTRACT

This study aims to determine the arrangements for the Municipal Waterworks (PDAM) to ensure water availability for the community. In addition, this study aims to determine how the reconstruction of regulations in drinking water management in the framework of environmental justice. This research used normative legal research method. The result of this research is that the PDAM regulation in fulfilling water availability for the community has not been maximized due to the decrease in the environmental carrying capacity of water sources. For this reason, it is necessary to reconstruct PDAM arrangements that apply the concept of environmental justice. Regulatory reconstruction is focused on environmental carrying capacity that takes into account population density, technological innovation, and community participation in environmental preservation around water sources.

Keywords: Water, Municipal Waterworks (PDAM), Environment, Environmental Justice

INTRODUCTION

Water has a very important role in improving the health of the environment or society. In human life, water has a role in reducing the number of disease sufferers, especially those related to water, and plays a role in increasing the standard or standard / quality of life of the community. However, until now, the provision of clean water for people in Indonesia is still faced with a number of quite complex problems, which until now have not been fully resolved. One problem that is still being faced to date is the low level of clean water services for urban and rural communities (Akhmaddhian et al., 2017).

According to Government Regulation Number 54 of 2017 concerning Regional Owned Enterprises (BUMD), this drinking water management is carried out by the Municipal Waterworks (PDAM). Where the regulations that replace the previous rules are designed to strengthen BUMD, including BUMD, as providers of drinking water. The establishment of this BUMD aims not only to generate local revenue but also to provide services to the community. In fact, PDAM is not a profit-oriented company but is oriented towards providing clean water services for the community (Handayani et al., 2015).

Some of the main problems that are still faced in the provision of clean water in Indonesia include the problem of the low level of clean water service, the problem of raw water quality and the very fluctuating quantity during the rainy and dry seasons, as well as problems with the technology used for the treatment process is not suitable. with the condition of raw water whose quality tends to decline in society (Akhmaddhian et al., 2017).

The problem that arises is that the quality of ground water and river water used by the community does not meet the requirements for healthy drinking water, even in some places it is not even suitable for drinking. Water that is suitable for drinking has certain standard requirements, namely physical, chemical and bacteriological requirements, and these requirements constitute one unit. So if there is even one parameter that does not meet the requirements, the water is not suitable for drinking. For rural residential areas in coastal areas or small islands that do not have a source of fresh water, the community is usually forced to meet their drinking water needs by collecting rainwater, collecting it from other places that are relatively far and expensive or buying bottled drinking water at a price. which is expensive. For people who are less fortunate, there is no other way than to use water for daily needs from an existing source so that it has an impact on public health (Handayani et al., 2015).

In line with the development of the population and the pace of development in Indonesia, it has resulted in a decrease in the quality of the environment, especially the quality of surface water or ground water. This is especially true in urban areas with large populations and / or downstream areas. The availability of clean water is closely related to the demographic conditions in an area. Hunter (2001) argues that population dynamics have a very important influence on ecosystems, including those related to water availability (Hunter, 2001). The difficulty faced by residents is getting clean water to fulfill their daily life, including households that received PDAM. Meanwhile, the PDAM gets its water from an under which now functions as a water reservoir. Underfill water is surface water flow or saturated soil moisture that comes out to the surface, from a very large catchment area outside the residential area. This residential area can survive the dry season from drought because there is still supply from outside the area, namely open areas to catch rainwater (Narulita, 2018).

Apart from the worsening problem of drinking water raw water quality, a serious problem faced by drinking water companies in Indonesia is related to the problem of raw water availability. Changes in land use in the upstream to downstream areas have a very large impact on water flow fluctuations during the rainy season and dry season. This has resulted in a sharp decrease in river water discharge for drinking raw water in the dry season. The decrease in river water discharge during the dry season also resulted in the concentration of pollutants in the river water becoming more concentrated. The concentration of these

pollutants also affects the quality of the drinking water produced and increases the cost of the drinking water treatment process (Karjoko et al., 2017).

In fact, drinking water management in order to meet community needs needs to pay attention to rules related to the environment. Therefore, this study intends to analyze existing PDAM arrangements and reconstruct them in regulations that base themselves on environmental aspects. The goal is that PDAM as the provider of drinking water can carry out management that maintains a fair environment so that the continuity of water sources for the community is maintained.

RESEARCH METHODS

The research method used is prescriptive normative legal research using case studies. The approach used in this is the statute approach and the conceptual approach. This research is a legal research that uses secondary data sources consisting of primary and secondary legal materials. These data were obtained from this literature study (Marzuki, 2017). Primary legal materials, namely the 1945 Constitution of the Republic of Indonesia, Law Number 17 of 2019 concerning Water Resources, and Government Regulation Number 54 of 2017 concerning BUMD. Secondary legal materials in the form of books, journals, and related scientific publications.

RESULT AND DISCUSSION

Water is one of the components of the environment which is very important for development and growth not only for humans, but also for other living things. Therefore, water is a basic necessity of life. Article 33 paragraph 3 of the 1945 Constitution (UUD) states that "the earth, water and natural resources contained therein are controlled by the state and used for the greatest prosperity of the people". In this context, it is emphasized that the contract between public rights (state) and private rights (citizens) in utilizing the environment, including the resources in it. This means that the state is obliged to protect and protect the environment so that the people become prosperous and prosperous (Utomo & Karjoko, 2018).

The central government policy in providing clean water in rural areas is carried out in a program called Pamsimas (National Program for Community-Based Water Supply and Sanitation). This program was launched because so far people in rural areas have not been reached by the clean water supply services provided by PDAM. BUMD will be increasingly vital in the exploitation of water resources (as the spearhead of the government and local governments in providing clean water and drinking water in Indonesia. PDAM as a regional company that is responsible for providing services to meet the needs of clean water in the community, its service coverage is only to the community in urban (Prihatin, 2013).

In Law Number 17 of 2019 concerning Water Resources, water is defined as all water found on, above, or below the ground surface. Meanwhile, drinking water is water that has been processed or without treatment that meets health requirements and can be drunk directly. Article 23 of the Law on Water Resources states that water management is actually carried out in a comprehensive, integrated and environmentally friendly manner with the aim of realizing sustainable water benefits for the greatest prosperity of the people (Handayani, 2015). In the Annex to the Presidential Regulation of the Republic of Indonesia Number 59 of 2017 concerning Implementation of Achieving the Sustainable Development Goals, the SDGs target by 2030 is to achieve universal and equitable access to safe and affordable drinking water for all. For Indonesia, these targets and targets have been set in the 2015-2019 RPJMN, through increasing access to safe drinking water services by 2019 to 100%.

However, in Indonesia, especially big cities, the availability of proper drinking water for the community cannot be avoided from problems. There are various causes of the clean water crisis in big cities in Indonesia. The factors that cause a decrease in water quality are: (1) The rate of population growth and movement to urban areas is quite high; (2) Land use that does not pay attention to soil and water conservation. The construction of many buildings in big cities does not comply with the ratio of used land to open land, thereby disrupting the process of absorption of rainwater into the ground; (3) quite high population growth and domestic, industrial, erosion and agricultural activities; and (4) Excessive groundwater exploitation by office buildings, hospitals, shopping centers, apartments, laundry entrepreneurs, and other buildings (Prihatin, 2013).

The rapid development of urban development areas by taking into account new activity centers, such as industry, trade / services, and the growth of residential areas in suburban areas. This condition results in a high ratio of land use change which must be addressed with caution because it has an impact on decreasing environmental carrying capacity which can disrupt the balance of an ecosystem area (Alihar, 2018). According to (Swyngedouw, 2004), the success of a city is very much dependent on its ability to solve environmental problems, especially in the provision of clean water. Without the role of the Government and the Regional Government in managing access to clean water, it is certain that the fate of big cities will have the potential for social conflicts due to access to clean water.

The government is still unable to solve the problem of clean water availability due to various obstacles, including those related to population growth and density. This is in line with stating that a high population size will increase the population density of an area and in turn will have an impact on high pressure on the environment. In addition, the large population also has an impact on environmental health, such as drinking water, sanitation and air pollution (Akhmaddhian et al., 2017).

Environmental Carrying Capacity Increasingly Burdened by Population Growth and Urbanization. The Water and Environmental Sanitation Working Group noted that in 2015, the total population of Indonesia was estimated at 245.7 million, all of whom are entitled to access to drinking water. In 2015, the number of urban residents became larger than urban areas with a ratio of 53% 47%. This shift indicates the increasing need for drinking water per capita, because the water consumption of urban communities is greater than that of rural communities. Population growth, especially in urban areas, is higher than the growth of existing drinking water supply facilities. Meanwhile the population on the island of Java will increase rapidly, while the availability

of water is very limited. Deforestation has become out of control, thus further disturbing the availability of raw water (AMPL, 2015).

Meanwhile, raw water sources, especially surface water, experience increasing pollution due to domestic, industrial and agricultural activities. Increasingly day by day, the availability of raw water cannot be guaranteed, both the quantity and quality of water. Raw water in most parts of Indonesia is actually sufficient, but its existence is threatened due to poor management. Pollution or damage to nature is one of the factors that hinders water conservation. Meanwhile, in other parts of Indonesia, such as Kalimantan and parts of Sumatra, raw water is difficult to obtain due to its natural conditions, so people have to rely on rainwater or unhealthy surface water. Due to natural damage, more and more areas are prone to water disasters, drought in the dry season and floods in the rainy season (AMPL, 2015).

Garret Hardin in his writing "The Tragedy of the commons" states that economic reasons often influence and drive human behavior or decisions taken by humans individually or in groups. Especially in relation to the use of common property. Common property is a natural resource that cannot be the right of an individual. However, everyone can use or utilize it for their own benefit. The existence of freedom that is not managed properly to exploit natural resources will bring destruction to society itself. This situation is called by Hardin as the tragedy of the common (Hardin, 2017).

Referring to Bunyan Bryan, environmental justice is related to cultural norms and values, rules, policies, habits and decisions to support the sustainability of a community. Where people can relate to one another in a safe, healthy and productive environment. Through environmental justice there is also decent work and wages, quality education and recreation, adequate housing and health services; democratic decision making and personal empowerment; and an environment free from violence to poverty (Bryan, 1995). Therefore, it can be said that environmental justice encourages an increase in the quality of people's lives to be better, healthier, more comfortable, and safer (Binawan & Sebastian, 2012).

Environmental justice is one area where the focus is now on the distribution of environmental quality; focus on the damage caused and exacerbated by anthropogenic environmental crimes and the well-being of being protected and enhanced by environmental goods (Ali, 2001). Meanwhile, Collin sees environmental justice, especially in relation to the fair distribution of environmental rights and benefits among race, class and people's income. According to Collin, the procedural aspect in the form of public participation in decision making is considered a substantive right which is part of distributive justice (Collin, 2008). Environmental justice includes not only distributional aspects, but also procedural aspects. Arcioni and Mitchell stated that, in addition to distribution aspects, environmental justice is also related to public opportunities to participate in decision making related to environmental management (Millner, 2003).

Talking about the relationship between social justice and ecological justice, Andrew Dobson stated that social justice has a function to support a sustainable and sustainable development. For example, functional relationships occur when social justice overcomes the problem of poverty will have an impact on increasing environmental sustainability. So that if we pay attention, the relationship between social justice and ecological justice contains an understanding of the rights to the welfare of life (Baranyanan et al., 2019). The problems of unequal welfare and poverty can be identified as problems of environmental damage. In his opinion, Bartelmus said that industrialization and exploitation of the environment had a bad impact, not only for the environment itself but also for the welfare of the people, especially the poor (Jr., 1992).

Environmental justice as a social justice is functionally and empirically related to sustainable development. Sustainable development is development that meets the needs of the present generation without reducing the ability of future generations to meet their needs (Purwendah, 2019). Basically, environmental problems will not be easily resolved. Foreman explained that if grassroots organizations, academic institutions, and government agencies working on environmental justice have critical thinking and attention to environmental problems, this issue can be addressed (Mohai et al., 2009).

Improve environmental conservation and management, particularly water resources. Natural resource management as the old way of doing it alone or on a limited basis by government agencies and water experts is no longer able to effectively solve the problem. Experience shows that sustainable resource management cannot be solved alone by the government and therefore needs to involve many parties outside government agencies. Through awareness of the importance of water as a source of life for both present and future needs by various sectors, water is everyone's business (Hartono, 2015).

Lawrence M. Friedman argues that the legal system is actually built by three components, namely the legal substance, legal structure, and legal culture (Friedman, 2001). In this case, the substance of drinking water management regulations by PDAMs must be based on the concept of environmental justice. This is of course intended so that the management of drinking water always pays attention to the sustainability of water resources in order to ensure the availability of water for the community. Therefore, the reconstruction of drinking water management regulations carried out by PDAMs must reflect regulations that pay attention to the following:

- a) People's access to proper drinking water, namely how much of the community gets piped drinking water services. Ensure that drinking water used by the community is a water source that is protected / away from sources of pollution. In this case the government also needs to ensure that drinking water providers have provided proper drinking water services. Because most people do not understand their rights to obtain water that is in accordance with the existing drinking water requirements, so people often just accept what they receive from drinking water providers. Meanwhile, the PDAM itself also does not inform the quality of the drinking water they provide to the public. c) In addition to meeting the need for raw water for drinking water, namely identifying sources of raw water in the province / and regency / city concerned. Including determining who is the manager of the raw water source, and who uses the existing water and raw water sources. In addition to the availability of raw water, the estimated raw water needs for the purposes of developing or increasing the coverage of drinking water services also need to be analyzed carefully, so that policies and strategies for fulfilling raw water can be formulated properly.

- b) Institutional, which is related to the PDAM institution. Where the management of PDAM institutions is considered ineffective until now, even until the issuance of Government Regulation Number 54 of 2017 concerning BUMD. The management of this drinking water company is considered unprofessional, resulting in losses in drinking water management. Production costs depend on the source of raw water used by the PDAM. However, in general, the production costs for all types of raw water are actually higher than the tariff.
- c) In addition to meeting the need for raw water for drinking water, namely identifying sources of raw water in the province / and regency / city concerned. Including determining who is the manager of the raw water source, and who uses the existing water and raw water sources. In addition to the availability of raw water, the estimated raw water needs for the purposes of developing or increasing the coverage of drinking water services also need to be analyzed carefully, so that policies and strategies for fulfilling raw water can be formulated properly.
- d) The roles and partnerships of business entities and communities, namely the roles and partnerships of business entities and communities are carried out by seeing whether at present in the area concerned there is already cooperation with business entities or the community in development. The presence or absence of the role and partnership of the business entity and the community for reasons or causes, as well as a description of its performance if there is a role or partnership of the business entity and the community.
- e) Technological innovation, it cannot be denied that the times continue to occur. Technology is increasingly being refined to help human work. However, in this case the technology used is not only easier for humans but also friendly to the environment. The technology analyzed is not only the technology used in the production unit, but also the technology used in the raw water unit and distribution unit, including for handling water leaks / losses in the distribution network. The technology that develops in the area is based on wisdom. For that, it is necessary to also analyze the extent of its use.
- f) Funding, which is related to PDAM in utilizing access to funding sources provided by the government, financial / banking institutions, or private business entities (investors). If there is a budget constraint but the use of other funding sources has not been made, it is also necessary to conduct an analysis of the possibility of accessing funding sources. This is necessary to ensure that technical and administrative activities in the provision of drinking water can run well.

CONCLUSION

Water is one of the environmental components which is very important for development and growth. Therefore, water is a basic necessity of life. However, clean water services are still low, the problem of raw water quality and quantity is very fluctuating and depending on the season. This is certainly not immune from the drinking water management system carried out by PDAM as a Regionally Owned Enterprise which has the task of providing water availability for the community. Until now, vital drinking water management has not been regulated in general, but only limited to regulations in each region. So that enforcement of regulations in drinking water management cannot be done properly. PDAM tends to lose money in its management. Where this is not only related to institutional issues that are regulated in government regulations regarding BUMD only. But it is related to the regulation of drinking water management with an environmental perspective which uses the concept of environmental justice. For this reason, it is necessary to reconstruct PDAM arrangements that apply the concept of environmental justice. Regulatory reconstruction is focused on environmental carrying capacity that takes into account population density, technological innovation, and community participation in environmental preservation around water sources.

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