



Water Source Problems in Kulon Progo Yogyakarta in the Law Perspective

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Abstract

Water is one of the important needs of society for everyday life, especially the need for clean water. To meet these needs, the community can get water from rivers, rainwater, and groundwater sources. Kulon Progo is one of the areas that are part of the Yogyakarta Province, where in Kulon Progo there are many water sources. However, based on research conducted, the water in Kulon Progo cannot be used as drinking water because it has been contaminated. For this reason, it is necessary to conduct a study, especially in terms of existing regulations, both national and regional regulations, whether these regulations can protect water sources so that they can protect the environment, including water sources. Indonesia already has rules regarding environmental protection and management, namely Law Number 32 of 2009, and regulations regarding Water Resources, namely Law Number 17 of 2019. From these regulations, it can be said that they have been able to protect water sources so that they are not polluted, but awareness and the need for community participation are not carried out activities that can cause water pollution.

Keywords: Water, Kulon Progo, Law Perspective

1. Introduction

In daily life, one of the main human needs is water, both clean water for drinking and cooking, as well as water for bathing and washing, so if there is a shortage of water, it will have a significant impact on humans. In Indonesia, River and water resources are important for municipal water supply and agriculture, sometimes water supply and demand often do not align. Freshwater is less available on more densely populated islands like Java as well as Yogyakarta as a part of java island. Risks to urban water security in West Java are high to fulfill the needs of water we usually take it either from rivers, wells, rainwater, and springs. For areas with low water discharge, people will fight to get the water, as we know in some countries such as in Africa, water becomes a problem that results in disputes. According to WRI's Aqueduct tool, many African countries have extremely high water risks. This metric considers multiple factors, including vulnerability to droughts and floods, seasonal variability, and competition for available water (Mason, et al., 2019).

There are a number of root causes for our current water crisis, especially for clean water, such as natural conditions where the soil in the area does not store much water, and low rainfall, to human-made causes, including climate change, cutting trees so that water supplies are reduced, and other human activities such as polluting the environment which preserving environmental functions.

Kulon Progo as part of Province the Special Region of Yogyakarta (DIY) is an area with serious problems of clean water crisis. This happens because it is based on clean water sources to meet the needs of its people, in general, this area is very dependent on the availability of groundwater and the use of groundwater to meet water needs net which for the people here is still permitted by the local government to be used temporarily in the area. In other countries in Indonesia, the use of groundwater has begun to be banned.

There are many water resources in Kulon Progo as well as rivers such as the Mudal River, Bogowonto River, and Krenseng River in Kulon Progo (Santosa & Harsanti, 2020). which enough to fulfill the need for clean water. In 2020 a study was carried out by the Environmental Health Section, Occupational Health and Sports at the Kulon Progo Health Office, requested by the people in Kulon progo because their water is smell. The result of the research is that "As many as 68 percent of the resident's water in Kulon Progo Regency, Special Region of Yogyakarta, is experiencing pollution. The cause of Pollution is the seepage of wastewater into drinking water facilities. Unhealthy environmental behavior includes the treatment of drinking water facilities themselves. This study took samples from dug wells and from PDAM water, as it is known that sources of pollution include wells that are close to septic tanks, or close to livestock or agricultural waste. The Kulon Progo area still has a lot of rice fields, and also a chicken and goat farm where the farm is surrounding the people's residences.

According to UNICEF, nearly 70 percent of the 20,000 household drinking water sources tested in Indonesia as part of a recent study is contaminated by fecal waste, facilitating the spread of diarrhoeal disease.

Regulation is one of the ways to protect and manage the environment, the main goal of this research is to look at existing regulations to see whether they can prevent and deal with water pollution, especially in Yogyakarta. Indonesia has Law Number 32 the year 2009 on "Environmental Protection and Management" and Law Number 17 the year 2019 on Water Resources. This research will analyze the regulations to see if it is enough to protect the water resources and give solutions for the Kulon Progo water resources.

2. Material and Methods

2.1. Materials

This research was conducted based on rules regarding environmental protection and management. These rules are contained in Law Number 32 of 2009, and regulations regarding Water Resources, namely Law Number 17 of 2019.

2.2. Methods

This study uses qualitative analysis based on Indonesian laws and regulations.

3. Result and Discussion

3.1. Water Resources and Its Regulation in Indonesia

Indonesia has natural areas in which there are both biological and non-biological aspects. Biological means elements of organisms or living things that live in an environment, while non-biotic aspects mean substances that do not have life. The combination of biological and non-biological elements is often referred to as an ecological system (Basiago, 1995; Pavé, 2006). As stated earlier, in a living ecosystem there are several elements that unite with each other in the form of land, water, air, and the living things in it. These various interactions then create a balance between activities in the environment so that humans can enjoy the beauty of the environment on Earth. In this paper, researchers will focus on the arrangement of water resources which is also one of the most important parts of the ecological system. Water is a natural resource that is very important for humans to survive.

Studying the water shortages that have occurred, especially recently, must be examined first to determine whether the condition of water resources in an area or the environment is being threatened. We can see the quality of the water by observing some questions such as:

- a) The origin of water, is the origin of the water springs. For example, if springs are closed for development or industrial purposes, then water resources in the area can be said to be lacking.
- b) Spring discharge.
- c) Water quality, in the sense that the quality of the water produced is polluted or cannot be used according to its designation.
- d) Topographical conditions around it
- e) The vegetation or the environment surrounding the spring.
- f) The possibility of water contamination from community activities (Absori, et al., 2020)

Infrastructure development in Indonesia will also impact land which is part of the ecosystem, and continuous development will reduce water resource areas, so groundwater will follow.

Management of water resources in Indonesia has been regulated in Article 33 paragraph (3) of the 1945 Constitution of the Republic of Indonesia (1945 Constitution), which mentioned that earth, water, and the natural resources contained therein are controlled by the state and used for the greatest prosperity of the people. This article reflects that the use of water must be reserved for the greatest possible prosperity of the people, which means that the community is obliged to benefit from the management of water resources for drinking, bathing, and other interests such as industry and power plants. Further related to environmental protection, Indonesia has Law Number 32 of 2009 concerning Environmental Protection and Management and completed with Law Number 6 of 2023 on Job Creation. Concerning water protection there is the Law Number 17 of 2019 concerning Water Resources which is also covered by Law Number 6 of 2023 on Job Creation.

Article 1 point 1 of the Environmental Law Protection implicitly explains that in implementing policies for environmental management, there must be careful consideration because all aspects of it are interrelated with each other. For example, if the water catchment area is reduced, it will automatically have implications for humans another example is when a river or spring is polluted by waste, then the clean water that can be produced for human interests will also decrease and will have an impact on a clean water crisis because the volume of clean water does not increase according to population growth.

This is also emphasized in Article 1 number 18 of the Environmental Law which reads "conservation of natural resources is the management of natural resources to ensure their wise use and continuity of availability while maintaining and increasing the quality of value and diversity." In interpreting the contents of this article which are

related to water resources, it can be said that the conservation of water resources is an effort to maintain the availability of water in a sustainable manner to meet the needs of humans and other living things both now and in the future. For this reason, the conservation of water, soil, forests, and other living environments is closely related to one another and needs to be maintained consistently. The first Water Resources Law was made in 1974, namely Law Number 11 of 1974 concerning Irrigation, then in 2004, the Government revoked the enforcement of this law and enacted Law Number 7 of 2004 concerning Water Resources. This 2004 Law caused several problems so that some trials were carried out at the Constitutional Court, namely in Case Number 058-059-060-063/PUU-II/2004, Case Number 008/PUU-III/2005 dated 19 July 2005, and Case Number 85/PUU-XI/2013 dated 18 February 2015. In the end, the Constitutional Court through Decision Number 85/PUU-IX/2013 revoked the enforcement of Law Number 7 of 2004 concerning Water Resources and reinstated Law Number 11 of 1974 concerning Irrigation which in reality was no longer in accordance with the current conditions of Water Resources. In 2019 the Government issued a new regulation, namely the Water Resources Law Number 17 of 2019. In this new law what is meant by water resources are water, water sources, and the water resources contained therein, while the meaning of water is all water on the surface of the earth including surface water, groundwater, rainwater, and seawater that is on land. This law also stated that the management of water resources must be carried out based on several principles, among which are:

1. The principle of public benefit, namely that water resources must provide maximum benefit for the public interest.
2. The principle of justice where the management of water resources must be carried out equally by all Indonesian people, and every citizen has the right to get equal opportunities to manage water resources.
3. The Principle of Balance is that the management of water resources must pay attention to the balance between environmental, economic, and social functions.
4. The principle of local wisdom in managing natural resources must pay attention to the noble values prevailing in society.
5. The principle of environmental awareness, namely that the management of water resources must pay attention to the balance of the environment and the existing ecosystem. This is also in line with the objectives of the Law on the Environment that in the utilization of the environment, all aspects of the environment that are related to each other must be considered.
6. The principle of sustainability, namely that the management of water resources is not only intended or intended for the present generation but also for the benefit of future generations.
7. The principle of transparency and accountability where the management of water resources must be carried out in an open and accountable manner

Therefore, every management of water resources must pay attention to the principles stated above.

Regarding the principle of responsibility, Article 1 Point 20 of the Law on Water Resources further states that Managers of water resources are institutions that have duties and responsibilities assigned by the Central Government or Regional Governments in managing water resources.

This is apart from the role of government agencies as managers of water resources such as Water Companies where the Government remains responsible for managing these water resources.

In general, in accordance with the constitution, it must be implemented that the management of water must be used for the greatest prosperity of the people. According to Article 9 of the Law on Water Resources, the state is obliged to guarantee the people's right to water in order to meet basic daily needs for a healthy life. Furthermore, Article 15 states that the authority to manage water resources will be regulated by the central government together with regional governments while taking into account the traditional rights of local indigenous peoples (such as Ulayat rights) and other similar rights. In addition, the central government has other duties, namely maintaining the effectiveness, efficiency, quality, and orderliness of the implementation of water resources management in trans-provincial and national strategic river basins, as well as developing technology in the field of water resources. In addition to the central government, regional governments also have the duty to protect water resources in their regions, for this reason, the regional government must formulate a provincial Water Resources Management policy based on the national Water Resources policy by taking into account the interests of the surrounding provinces. In this regard, the regional government also organizes the permitting process for the use of water resources in cross-regency/city river basins, guaranteeing the supply of standard water that meets the quality to meet the basic needs of the community at least daily. This includes developing and managing inter-regency/municipal drinking water supply systems, as well as supervising the management of water resources. If there are obstacles in the management of water resources, the local government must help to solve the existing problems. The regional government referred to in this regulation is not only the provincial-level government but also includes the district/city regional government. Therefore district regional government can establish a water resources management policy whose contents are based on national policies made by the central government.

The Water Resources Law also regulates the prohibition of several activities that can damage or pollute water resources. Sanctions for violating this rule can be in the form of administrative sanctions, namely stopping activities to revoke permits, and also criminal sanctions. Those who intentionally commit the prohibited acts may be subject to imprisonment for a minimum of 3 years and a maximum of Rp. 15,000,000,000 (fifteen billion Rupiah).

As a complement to this Water Resources Law, implementing regulations have also been issued, including Presidential Regulation Number 37 of 2023 concerning the National Policy on Water Resources and Regulation of the

Minister of Public Works and Public Housing Number 3 of 2023 concerning Arrangement of Permits and Approvals in the Water Resources Sector (PUPR Regulation 3/2023). In Presidential Regulation number 37/2023, it is stated that the central government will establish a National Water Resources Policy. This policy is intended so that the management of water resources must be based on existing principles so that managers of water resources can comply with the criteria set by the government.

In addition to Presidential Regulation 37/2023, the Minister of Public Works and Public Housing has also stipulated Regulation Number 3/2023 regarding permits to align every permit and approval in the water resources sector. These rules include that applications for approval for the use of water resources are not only addressed to legal entities, social agencies, or individuals, but government agencies to projects destined for national strategy need to apply for approval for the use of water resources.

After looking at the regulations regarding the management of water resources from a normative perspective, it can be concluded that Indonesia already has adequate regulations to protect water resources. However, in practice, the management of water resources is still not managed properly so it tends to result in the interests of the community being violated.

This can be seen from the statement from the Ministry of Public Works and Public Housing in 2022 that several regions, such as Sumatra, Java to Bali, were recorded as having a water index with a critical status. Water scarcity is caused by the destructive power of water that occurs due to declining environmental quality. According to some experts, water scarcity also occurs due to changes in rainfall patterns as a result of climate change (Klare, 2020).

3.2. Water Sources in Kulon Progo Yogyakarta

Kulon Progo is a regency in the province of the Special Region of Yogyakarta in the west. Kulon Progo Regency has an area of 58,627 ha. The expanse of the Kulon Progo Regency area includes lowlands, highlands, and hilly areas. Kulon Progo Regency has a varied topography with an altitude between 0 - 1000 meters above sea level. Kulon Progo Regency consists of 12 *kapewon*, which are further divided into 88 sub-districts and sub-districts, and 930 hamlets (before regional autonomy was called *Dusun*). The northwestern part of the district is mountainous (Menoreh Hill), with the peak of Suroloyo peak (1019 m), on the border with Magelang Regency. While in the south is a lowland that slopes down to the beach. The beaches in Kulon Progo Regency are Congot Beach, Glagah Beach (10 km southwest of the city of Wates or 35 km from the center of Yogyakarta City), and Trisik Beach. With the topographical conditions in Kulon Progo Regency which are very diverse, there are lots of small to large irrigation areas built to support agriculture and plantations in Kulon Progo Regency.

Groundwater use in Yogyakarta has a massive impact on the continued decline in water level land by 15-50 cm each year and causes the structure Soils in DIY to be prone to natural disasters due to groundwater flooding continuously exploited makes the structure of the layers in the soil become empty and easily experience subsidence, land shifts, then landslides and as well as the impact of earthquake hazard which increasingly threatens the safety of life and It also damages existing buildings. Even Kulon Progo together with Gunung Kidul Regency are the areas with the most problems related to the availability or access to clean water. This happened in other regions in Indonesia, which has challenges in managing water resources, especially clean water. Indonesia is one of the countries in the world that is also experiencing a water crisis clean. Based on research conducted by the United Nations, these conditions will get worse in 2025 and Indonesia will be included in the "high risk" category experiencing a clean water crisis (Rene, et al., 2020). As we know groundwater is influenced by natural and non-natural factors, such as land use/cover, rainfall, recharge, geology, soil type, evaporation, and abstraction. With the increased demand for water fuelled by an increase in the population, an increase in abstraction rates has been witnessed, causing a decline in groundwater levels.

The use of water in Kulon Progo has developed where the use of water is not only for agricultural purposes and the lives of residents but also for tourism activities. Currently, in Kulon Progo there are various waterfall tours visited by the public and swimming tours both in rivers and in swimming pools. The swimming pool in Kulon Progo, of course, takes water from a water source or ground. In fact, Kulon Progo has quite a lot of water sources, including groundwater, waterfalls, springs, and so on. Groundwater as a source of clean water is a reliable water resource in this area, which is in line with what Foster & Chilton told that groundwater is a source of water the most widely used bargain in this world. The use of groundwater increasing each year side by side with industrial development modernization. One example of modernization in Kulon Progo Regency is the construction of the New Airport Yogyakarta International Airport (NYIA) in 2020. Development which happening rapidly concurrently with an increase in groundwater use. In theory, activities like this could result in a decrease in the quality as well as the quantity of groundwater (Ahadiyah & Widyastuti, 2020). Utilization management of groundwater resources needs to be done for development to take place sustainably with care groundwater resources to remain sustainable long term (Gorelick & Zheng, 2015). Vulnerability measurement conducted in the Groundwater Basin (CAT) Wates, which administratively be part of the District Kulonprogo and includes 8 districts CAT Wates Where CAT Wates is CAT number 110 specified in the Regulations Minister of Energy and Resources Mineral No. 2 of 2017, with the area about 150 km².

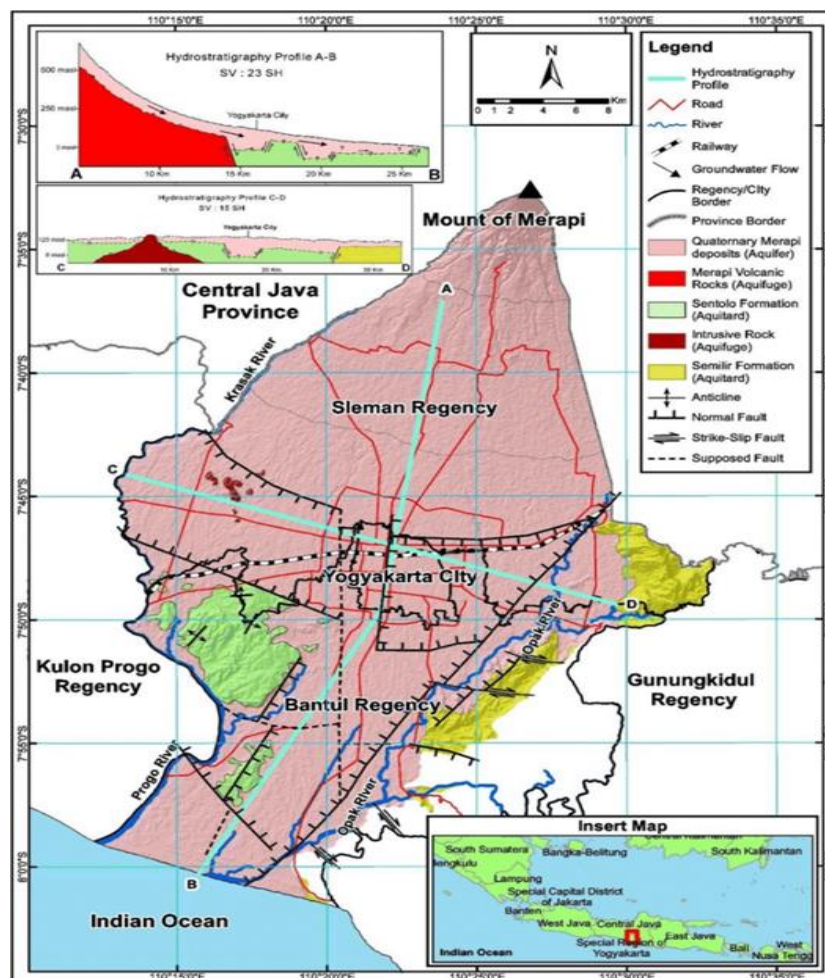


Figure 1: Map of central java province

Groundwater depth is important in vulnerability assessment because it can show long when the pollutant enters from the surface soil down to the aquifer. Deeper groundwater level then the time it takes pollutants to reach the water table will be getting longer, so groundwater vulnerability will be smaller (Rahman, 2008).

For the arrangement of water resources, sustainable management is required so that water quality and utilization can be carried out optimally. Determination of spring-protected areas, determination of vulnerable zones, and safe zones is a small part of the regulatory efforts needed to protect water resources. Water resource area settings can also be classified into several priority zones such as:

- a) Priority Zone I
Conservation and control measures are urgently needed (protection, preservation, preservation, control of groundwater use, control of groundwater quality, monitoring, and supervision).
- b) Priority Zone II
Conservation and control measures are needed (protection, preservation, preservation, control of groundwater use, control of groundwater quality, monitoring).
- c) Priority Zone III
Conservation measures (protection, preservation, preservation, and monitoring) are required.
- d) Priority Zone IV
Protection and preservation measures are required (protection, preservation, and monitoring) (Thin, et al., 2008; Wilopo, et al., 2018).

For the Kulon Progo area, the management of raw water from surface water managed by the PDAM of Kulon Progo Regency is sourced from the Clereng spring which has been operating since 1984 with an installed capacity of 125 liters/second serving the Sendangsari, Wates, and Temon areas. In addition, there is a Water Treatment Plant in the Sermo Reservoir managed by PDAM Tirta Binangun which uses a pump system considering the installation height is at an elevation of +163.29 meters, while the normal water level of the reservoir is +136.6 meters. Some of the water is distributed using gravity for lower areas, while for higher areas it relies on pumps to flow water to higher areas.

Technically, there have been many studies conducted on the arrangement of water resources in Kulon Progo Regency, but in terms of regulation, it is necessary to strengthen the policy by rearranging the regulation of water resources so that the management of water resources in Kulon Progo Regency can be properly controlled. The birth of developments in surrounding areas such as Menorah Hill, Kulon Progo International Airport, and so on are just a few

illustrations of the need to strengthen regulations so that the management of water resources in Kulon Progo Regency can still be carried out properly. The enactment of the Job Creation Law also made changes to the management of water resources as one of the laws amended based on Law No. 6 of 2023. (which since being enacted by Law No. 11 of the Year 2020 has already caused some controversy).

The broad aspect of regulating water resources, whether for raw water needs, clean water, or other needs, requires good regulation to ensure legal certainty while still supporting sustainable development. In general, arrangements for the management of water resources in Indonesia are regulated by two main laws, namely the law on the protection and management of the environment (Law No. 32 year 2009) and the law on water resources (Law No. 17 Year 2019). There are two important provisions in Law No 17 year 2019 related to the management of water resources, as stipulated in Articles 5 and 6 which state that water resources are controlled by the state and used for the maximum great prosperity of the people and the State guarantees the people's right to water to meet basic needs daily minimum for a healthy and clean life with sufficient quantity, good quality, safe, sustainable, and affordable. While Law No. 32 Year 2009 in principle, provides general arrangements related to environmental governance that pay attention to the balance of nature in efforts to protect and use aspects of natural resources in general.

Furthermore, there are other provisions that regulate the use of water, more precisely on village authorities regarding drinking water as stipulated in Law Number 6 of 2014 concerning Villages and also Law Number 23 2014 concerning Regional Government.

Specifically for the Kulon Progo Regency area, there are also several related provisions, including the Regulation of the Regent of Kulon Progo No. 142 of 2021 concerning the regional drinking water supply system master plan and Kulon Progo Regent Regulation No. 52 of 2023 concerning regional policies and strategies for the implementation of the Kulon Progo Regency drinking water supply system for 2023-2027.

Based on Article 3 Regulation of the Regent of Kulon Progo No. 142 of 2021 concerning the regional drinking water supply system master plan, it is said that:

The scope of this Regent Regulation is:

- a) SPAM System and Master Plan;
- b) Management system of the Drinking Water Supply;
- c) Protection and Security; And
- d) Control and Evaluation.

Meanwhile, based on Article 2 Regulation of Regent of Kulon No. 52 of 2023 concerning regional policies and strategies for the implementation of the Kulon Progo Regency drinking water supply system for 2023-2027 it is said that in regional policies and strategies related to the supply of drinking water used as a guideline for regional ASN, it is mandatory to develop policies and strategies to support :

- a) achieve the target of the Sustainable Development Goals in 2030 in Regions for Goals Health and Clean Water and Sanitation Goals (Clean Water and Sanitation);
- b) achieve the target of universal access to Drinking Water;
- c) provide input to the Central Government and Government of the Special Region of Yogyakarta concerned SPAM affairs; And
- d) provide opportunities for the Village and the community to carry out SPAM development.

From these two regulations, we might find that any policies regarding Drinking Water in Kulon Progo should be based on Masterplan for a management system that guarantees protection and security for water resources that are in line with the fulfillment of SDG's goal of health and clean water and sanitation, which shall include public participation in development SPAM in Kulon Progo.

The content of the masterplan and policy according to these two regulations shall consist of :

- 1) Article 4 Regent of Kulon Progo No. 142 of 2021 stated that the masterplan shall construct as follow :
 - a) Chapter I Introduction;
 - b) CHAPTER II Overview of Kulon Progo Regency;
 - c) CHAPTER III Condition of Existing SPAM in Kulon Regency Progo;
 - d) CHAPTER IV Planning Standards/Criteria;
 - e) CHAPTER V Projection of Water Needs;
 - f) CHAPTER VI Raw Water Potential;
 - g) CHAPTER VII Master Plan and Pre Design SPAM development;
 - h) CHAPTER VIII Financial Analysis;
 - i) CHAPTER IX Institutional Development of Water Services Drink; And
 - j) CHAPTER X Closing.
- 2) Article 3 Regulation of Regent of Kulon No. 52 of 2023 stated that policies of drinking water must include:
 - a) vision and mission of organizing SPAM;
 - b) strategic issues, problems, and challenges Implementation of SPAM;
 - c) Jakstrada SPAM; And
 - d) SPAM implementation action plan.

Article 6 it is explained that the Arrangement of the SPAM Master Plan is an obligation in fulfilling people's rights to water, prioritizing rights the people for water as a basic daily need, and in the framework of the use of Water

Resources for business needs to meet basic needs through the Drinking Water Supply System and to implemented such masterplan should comply with

- a) Regional Spatial Planning;
- b) Regional Medium Term Development Plan;
- c) Regional Apparatus Strategic Plans;
- d) National Development Policy and Strategy SPAM; and
- e) regional conditions.

Based on this article, it can be seen that there are many related aspects in making policies related to the management of water resources, one of which is regional conditions and another thing is spatial planning. In the Yogyakarta Special Province of Spatial Plan for 2009-2029, the development of the water resources sector is included in the Regional Infrastructure System Development Plan. Paragraph 7 of Article 27 concerning the Water Resources Development Plan, it is stated that the policy for developing water resources infrastructure is to maintain ecosystem balance, develop and manage water resources in an integrated manner based on river areas and integrated with groundwater basins, develop water resources infrastructure networks to serve agricultural land, residential areas, urban environmental infrastructure, industry, and strategic area development .

In the spatial arrangement of Kulon Progo itself, there are several water management plans which include:

- a) Watershed (DAS) the national strategic river area of Serayu Bogowonto that includes: DAS Serayu, Bogowonto, Begawan, Ijo, Luk Ulo, Cokroyasan, Sempor, Padegolan, Tipar, Wawar, Telomoyo, Watumumulung, Pasir, Tuk, Yasa, Sрати, and donan;
- b) Watersheds (DAS) river areas across the province of Progo - Opak – Serang includes: DAS Progo, Opak, Serang, Tangsi, Elo and Oyo;
- c) The River Basin Area (DAS) of the Regency river area is in the Serang Watershed;
- d) Sermo reservoir management system in Hargowilis Village, Kokap District
- e) Irrigation network system includes:
 - a. DI The authority of the central government is in the DI Kalibawang system;
 - b. DI provincial authorities include: DI Sapon dan Pengasih;
 - c. DI district authorities include: DI Bugel, Clereng, Jelok, Jurug, Kamal, Karangsewu, Kayangan, Krengseng, Niten, Papah, Pekikjamal, Plelen, Pleret, Sumitro, Wadas, Reinforcement, Tawang, Soka, Singo Gaweng, Siliran, Sapрати, Secang/ngancar, Sarimulyo, Sarigono, Sadang, Promasan, Pereng, Pengkol, Penggung, Pandan, Nyemani, Ngobarab, Nabin, Monggang, Melar, Mejing, Kluwihan, Kembangmalang, Mojing, Kobong, Mute, Bathang, Kebonharjo, Karang, Kanjangan, Kalisalak, Jetis, Teak, Jembeaji, Grembul, Gemalang, Gegunung, Gedangan, Duren/young, Dungdekem, Hamlet, Degung, Dasnganten, Clumprit, Clangkring, Cikli, Brangkalan, Brangkal, Barongaren, Bogor, Belik 2, Banjaran, Banaran and Balong V.

The raw water network system for clean water includes: a piped clean water system managed by the government, private and community, and non-piped clean water systems privately owned;

- f) Clean water services include: optimizing scattered water sources in several areas districts, optimizing the use of Sermo reservoirs and the use of water basins land;
- g) Flood control system in the form of construction, rehabilitation and maintenance operations flood control building

Kulon Progo also has other potential water resources such as Pemandian Alam Clereng, which has one natural pool which is usually called “sendang”. Spring water comes from springs and what is unique is the base of the “sendang” in the form of very natural rock and moss. There are also two artificial ponds with a depth of 2 meters and a half meters. Apart from being known as one of the oldest baths in Kulon Progo, Clereng Baths are also known to have a historical history, namely being a stopover for Sunan Kalijaga during the era of the spread of Islam. This is then believed to bring magical value to the Clereng Bathing Spring.

The extent of arrangements related to water resources is a challenge in itself for the management of water resources in Kulon Progo. Even more so when referring to the new Job Creation Law which amended several provisions of Law no. 17 year 2019, including Article 8 which reads the people's right to water which is guaranteed to be fulfilled by the state as referred to in Article 6 is a minimum basic need every day with priority for daily needs, irrigation, and drinking water. Furthermore, the amendment said that if the region had a lot of water resources that already fulfill the community's daily needs then water resources can be used for public use or other purpose based on a permit that has already been granted.

In relation to the integrated permit system through Online Single Submission (OSS), the central government will also regulate Norms, Standards, Procedure and criteria for utilization of water resources, which in might raise question relating to role of local government in manage their natural resources as stipulated in Environmental Protection and Management Law No. 32 year 2009 and also the original Water Resources Law No. 17 the year 2019. This type of approach actually had a different approach from the perspective of regional autonomy and environmental management which proposed the role of local government and eroregion approach for environmental management which inculde management of natural resources as well as management of water resources.

In order to achieve the most effective approach to water resources management, Kulon Progo regent need to develop some regulation that complies with Norm, Standard, Procedure, and criteria for the utilization of water

resources that will be regulated by the central government. Furthermore, as with many other legal approaches for natural resources management, Kulon Progo regent must have comprehensive data – which is known as Rencana Perlindungan dan Pengelolaan Lingkungan Hidup (RPPLH) or in English might call as Environmental Protection and Management Plan and Kajian lingkungan hidup strategis (KLHS) or in English strategic environmental studies as regulated in Environmental Protection and Management Law. Having such data with support from public participation from relevant stakeholders the regent of Kulon Progo might develop integrated regulations and/or policies for water utilization within Kulon Progo areas.

4. Conclusion

Water as an important need of human life has to be protected, and one of the efforts to protect the environment including water sources is by regulating water use and regulating human activities so as not to damage the environment. Regulations in Indonesia are sufficient to protect the environment including the protection of water sources in Kulon Progo. However, to implementing these regulations requires good cooperation from the government, the community, and business actors. The participation of the people of Kulon Progo is very much needed to protect water sources in their area, and the government as a community partner is tasked with overseeing and providing solutions when environmental problems occur, including water sources.

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