Legal Review of Urban River Conservation Policies from the Perspective of Ecological Balance

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Abstract

River conservation is rooted in the importance of managing watersheds (D.A.S.) in Indonesia, with 42,210 watersheds forming the basis for management policies. To ensure ecosystem sustainability, these policies consider various aspects such as land conditions, water quality, and regional land use. However, the reality on the ground shows that rapid urbanization and a lack of public awareness have led to river pollution and damage to riverbanks. Therefore, more robust conservation efforts are required to achieve environmental justice. This research employs a normative juridical method and focuses on the Cirebon area. The findings reveal that implementing urban river conservation policies in Cirebon includes controlling illegal construction, conducting community outreach on the importance of river protection, and executing environmental rehabilitation programs to raise awareness of the negative impacts of unauthorized development. Despite progress in data collection and action planning, challenges such as community resistance and budget constraints continue to hinder the effectiveness of policy implementation. Collaboration between the Government, communities, and other stakeholders is essential to ensure the success of these conservation efforts.

Keywords: River Conservation, River Conservation Policy, River Basins.

Existing conditions of urban rivers Findings in the field show that many illegal buildings are still standing on urban rivers, especially in Cirebon City. This building violates regulations set by the Government, which is supposed to protect and preserve the river environment as an essential part of the urban ecosystem. This illegal building not only disrupts river flow but also has the potential to cause further damage to the ecosystem and disrupt the natural balance. This phenomenon is a significant concern in urban river conservation policies, where existing regulations should be strictly enforced to prevent adverse environmental impacts. (Mauli, 2023)

The current condition of rivers in urban areas reflects significant challenges in water resource management and environmental conservation. With the large number of illegal buildings that do not comply with regulations, rivers are narrowing, resulting in an increased risk of flooding, especially during the rainy season. Apart from that, this condition decreases river water quality due to waste from activities occurring nearby. Interview results show that local communities often need to understand the importance of maintaining natural balance, and many prefer to build without considering the environmental impact. This shows the need to

increase public awareness regarding the importance of river conservation in maintaining healthy urban ecosystems. (Salsabila et al., 2024)

Existing policies should focus on taking action against illegal buildings and include a more holistic approach, such as river rehabilitation programs and community empowerment in protecting the environment. Through this approach, the community is hoped to be more involved in the conservation process and understand their role in maintaining ecosystem balance. Strict law enforcement, accompanied by education and outreach, will create good synergy between the Government and the community to preserve rivers and ensure that existing policies can be implemented effectively for a sustainable natural balance. (Maridi et al., 2015; Mu'adib et al., 2024)

Damage to river banks can impact the availability of existing water resources. Therefore, it is essential to conserve water to maintain the availability of water resources. River conservation is a series of environmental preservation efforts based on the role and function of each area in the river. This includes aspects of ecosystem protection, maintenance, and sustainable use (Huang et al., 2022). The main goal is to balance natural resources, the river environment, and human activities to preserve environmental functions and community welfare (Mondal & Palit, 2022). There are three theories developed by previous legal experts regarding the purpose of the law, including ethical theory, utilitarian theory, and mixed theory (Warassih, 2005).

A river is defined as a natural and/or artificial water channel or container in the form of a water drainage network and the water in it, starting from the upstream to the estuary, bordered on the right and left by border lines (Brata & Halim, 2023). Rivers have many essential human life functions, including household needs, environmental sanitation, agriculture, industry, tourism, sports, defense, fisheries, electricity generation, and transportation (Nurhamidah et al., 2022). Rivers are humans' primary water source, and many rely on rivers to get clean water (Juniarti, 2020). This shows that rivers have a significant role in human survival.

Based on the National River Watershed (D.A.S.) classification map, Indonesia has 42,210 river watersheds, which are used to determine watershed management policies. This policy is based on several criteria, including land conditions (critical land, land cover, erosion), water quality, water quantity, water continuity, socio-economic aspects, investment in soil and water conservation buildings, and regional space utilization (Ministry of the Environment and Forestry, 2021). Generally, a watershed system can be divided into three main parts: upstream, middle, and downstream. The upstream ecosystem is significant in the entire watershed system because it protects the water system (Putra et al., 2019).

Legal products that regulate river management aim to ensure that rivers can be managed well and sustainably. This includes rules that protect river ecosystems from damage, such as preventing water pollution, controlling activities that can cause flooding, and regulating land use around rivers to prevent erosion and environmental damage. This legal product also regulates how the community and Government play a role in maintaining the cleanliness and sustainability of rivers. Thus, water resources remain available and function well for various needs, including agriculture, fisheries, and the community's daily needs.

River management policy aims to create public awareness of the importance of sustainable river management. Environmental management is an integral part of sustainable development that impacts future generations. Environmental protection and management must be carried out sustainably to ensure environmental sustainability, which will impact justice for society (Genovan et al., 2022).

However, awareness of keeping rivers clean still needs to be ingrained in every individual. This can be seen from the pollution in the rivers, such as rubbish being thrown into the rivers. In

addition, rapid urbanization and unplanned development have damaged rivers. Therefore, the need for environmental justice has become very urgent.

Based on data from the Ministry of Environment and Forestry (K.L.H.K.) in the 2023 Indonesian Statistics book released by the Central Statistics Agency (B.P.S.), more than half of the river water quality in 34 provinces (excluding the newest province resulting from the expansion of Papua) was recorded as experiencing pollution. Of 111 rivers (nine rivers flow through two provinces), 81 rivers (around 72.97%) are considered lightly polluted. Meanwhile, another 8.11% is between lightly polluted and moderately polluted. 9 other rivers (8.11%) meet Class II river water quality standards, while seven other rivers (6.31%) are in the range of meeting quality standards to being lightly polluted. Apart from that, five rivers (4.5%) are classified as moderately polluted (Shafina, 2023).

River conservation is the Government's effort to realize environmental justice. Environmental justice includes the compatibility of rights between human needs and the surrounding environment, regulated by a set of statutory regulations. The legality of environmental law in the form of statutory rules is the main instrument in enforcing environmental law (Harjono, 2021). Environmental justice demands the protection and restoration of river conditions to fulfill people's rights, especially the right to clean water and a healthy environment. In this country, resolving environmental cases has become very difficult. Although many efforts have been made by the Government, community, and environmental NGOs to bring these cases to court, the results achieved have yet to satisfy environmental activists (Sutrisno et al., 2020).

Previous research conducted (Prianggoro et al., 2021) stated that the implementation of policies and programs for managing the Brantas River, which passes through the City of Surabaya by the East Java Provincial Environmental Service for the case study in East Java Provincial Regulation Number 18 of 2016 was generally still less than optimal in terms of integration. Synergy and monitoring of the prevention and control of pollution even though there has been outreach to the community and coordination between relevant agencies in TKSPDA (Water Resources Management Coordination Team). Based on these data, researchers are interested in conducting a "Legal Review Of Urban River Conservation Policies From The Perspective Of Ecological Balance." This research aims to determine how river conservation policies are implemented in urban areas. Based on this description, this research has a research question: based on the conditions above, the main problem concerns how to implement river conservation policies in the Cirebon urban area.

Literature Review

River Conservation

River conservation is an effort to preserve the river environment, also known as river restoration. River conservation is an effort to utilize rivers, protect and restore their natural functions, and maintain rivers for the present and future. The concept of river conservation includes specific values and characteristics that function as education for the community in three main aspects: utilization, protection, and maintenance of river areas. Various local wisdom related to the river environment that develops in society has significant educational value and must be maintained and passed on to future generations (Setyowati et al., 2018). The regional apparatus in charge of environmental Government affairs carries out guidance and supervision to improve the performance of Water Resources Conservation management. Guidance on planning activities, implementation of construction and non-construction, supervision, and maintenance of Water Resources Conservation involves the role of the community, coordinating with relevant regional apparatus.

River Conservation Policy

River conservation involves collaboration between various parties in river management, including the central Government, regional governments, the private sector, and the community. The central Government is responsible for formulating macro policies related to river management planning, while regional governments have an essential role in implementing these policies locally. On the other hand, the private sector also contributes to river environmental management through Corporate Social Responsibility (CSR) activities, which involve financial support and other resources. The Indonesian Government has issued several policies regarding river conservation, which are regulated by various regulations and laws. Government Regulation Number 38 of 2011 regulates city river conservation policies concerning Rivers. Apart from that, Law Number 17 of 2019, which explains Water Resources (Water Resources Law), regulates the conservation of rivers in the city. Article 18, paragraph (1) letter states that river conservation is carried out through river protection activities and preventing river water pollution. Article 18, paragraph (1) letter b adds that conservation is also carried out through river development. Furthermore, Article 18 paragraph (1) letter c states that river conservation involves controlling the destructive power of river water. In addition, the Minister of Public Works and Public Housing Regulation (Permen PUPR) No. 2015 concerning the Determination of Irrigation Network Boundary Lines also regulates river conservation policies in the city.

Methods

The normative juridical approach analyzes legal products based on applicable rules, such as regulations, decisions, and policies that regulate a particular field. This approach focuses on understanding and interpreting existing legal norms, as well as how these norms are applied in practice (Benuf & Azhar, 2020). According to Soerjono Suekanto, this approach is used to analyze river management, especially for rivers related to urban river conservation policies. This approach allows researchers to understand and interpret existing legal norms and evaluate whether existing legal products, such as regulations and policies related to river conservation, have been implemented effectively. By using this approach, this research aims to assess the suitability of existing regulations with applicable legal principles and evaluate their effectiveness in regulating sustainable river management, especially in dealing with challenges such as the presence of illegal buildings that disrupt the flow and balance of rivers. The data used consists of secondary data obtained through literature study, observation, and analysis of relevant regulations. The data analysis was carried out in three stages: data reduction, data presentation, and concluding. In the data reduction stage, information is simplified and organized to make it easier to understand by filtering and grouping irrelevant data. Next, at the data presentation stage, the reduced information is presented visually or descriptively to be visualized clearly, helping a deeper understanding of river conditions and existing regulations. Finally, the conclusion-drawing stage involves analyzing the data that has been presented to produce significant findings. This analysis will evaluate how existing rules and policies support river conservation and natural balance in river management.

Results and Discussion

Environmental justice is vital in water studies because of the fair distribution, access, and management of water resources. This is important because water is an essential basic need for human life and the ecosystem. Environmental justice ensures that all individuals and communities have equal access to clean water for various purposes, from drinking to sanitation to agriculture. In addition, ecological justice also involves protecting traditional rights to water, considering the sustainability of water ecosystems, and

accommodating the impacts of climate change on the water cycle and water quality. Inequality in water access and management can lead to social and economic conflict. Thus, environmental justice also seeks inclusive participation in water-related decision-making.

Watersheds (DAS) are parts of the earth that contain water and natural wealth, so they must be protected, regulated, controlled, and managed by the state to create prosperity for the people (Ariyanti et al., 2020). However, the increase in Population and rapid economic development has influenced the intensity of land management in upstream river basins (DAS), both within and outside forest areas. As a result, water resource problems often arise. Rapid Population growth causes the need for land for settlements and infrastructure to increase, often done by changing the function of forests into residential areas or agricultural land (Novara et al., 2021). This deforestation process reduces the capacity of forests to absorb and store water, thereby reducing river bed flows and exacerbating drought during the dry season. In addition, deforestation accelerates the rate of soil erosion, where eroded soil is carried by rainwater into rivers, causing sedimentation that shallows river flows and increases the risk of flooding (Marton et al., 2020).

Infrastructure development and urbanization in upstream watersheds also increase impervious surfaces such as roads and buildings, which reduces water infiltration into the soil and increases surface runoff. This runoff not only accelerates the occurrence of flash floods but also reduces groundwater recharge, which is very important during the dry season. Intensive agricultural practices, which require large amounts of water for irrigation and use pesticides and chemical fertilizers, can pollute water sources and reduce the quality of water available to society (Huang et al., 2020). In addition, the increase in water demand for various domestic, industrial, and agricultural purposes causes over-exploitation of water resources, decreasing groundwater levels and reducing river discharge. Domestic and industrial waste that is not managed correctly also contributes to water pollution, worsening the condition of water resources in upstream watershed areas. All these factors interact and exacerbate water resource problems, demanding a more integrated and sustainable management approach (Korilov et al., 2022).

As with the Sukalila River in Cirebon, it has faced various debates regarding its status, whether as a river or as a primary drainage. The results of interviews with the Cirebon City PUPR Service revealed that the river has now changed its function to drainage, which is no longer a river that flows naturally. This change in function has legal implications, where regulations prohibit the construction of illegal buildings on drainage and other related legal issues. This rule is essential to maintain natural balance, ensuring the drainage system functions appropriately to manage water flow and prevent negative impacts such as flooding or environmental damage. Protecting the function of drainage in the context of natural balance helps maintain the sustainability of the ecosystem. It mitigates environmental risks that can arise due to its change from river to drainage. The Regional Regulations (Perda) of the West Java Provincial Government regarding river borders only partially apply due to several practical considerations, such as the need for open space around the channel for effective maintenance and maneuvering. Many parts of this channel have been covered by utilities and buildings, reducing the channel width. Nasrun and Irsyad Sidik SH argue that it is more appropriate to call it a water channel or canal, similar to the Cipadu Canal and Banjir Kanal, rather than being categorized as a river, considering its function and physical condition (Darmawan, 2011).

Conversion of rivers into drainage, as happened with the Sukalila River, is closely related to natural balance because it changes the natural dynamics of water flow and the surrounding ecosystem. This conversion process

can disrupt the ecological functions of rivers, such as providing habitat for flora and fauna and regulating water cycles and soil quality. Natural balance includes managing the ecosystem to remain stable and function optimally. When rivers are converted to drainage, water flows that previously flowed naturally are now controlled and directed through artificial drainage systems, which can change water distribution patterns, cause a decrease in habitat quality, and affect species' existence. This conversion also impacts the drainage system's ability to effectively handle water flow, which, if not appropriately managed, could result in flooding or other environmental damage. Therefore, strict regulation and protection of drainage and applying conservation principles that focus on natural balance are essential to mitigate negative impacts and maintain environmental sustainability.

Urban rivers often experience more significant impacts from human activities than rivers in rural areas. In cities, rivers are often exposed to heavy pollution due to industrial waste, domestic waste, and dense land use. These activities can cause a decrease in water quality, buildup of pollutants, and significant ecosystem changes. Urban communities that live in high density and high levels of consumption tend to have less well-managed waste disposal patterns, directly impacting rivers. In contrast, rivers in rural areas generally face less pollution and have relatively more natural ecosystems. Rural communities often have a more direct and sustainable relationship with the environment, with simpler waste disposal patterns and more integrated with local agricultural practices (Indriyani et al., 2024).

Cirebon City has several river conservation rules and regulations to preserve the environment and prevent ecosystem damage. One of the principal regulations is Cirebon City Regional Regulation (Perda) Number 5 of 2012 concerning Regional Spatial Planning (RTRW), which covers managing and protecting water resources, including rivers. Apart from that, the governor and related ministerial regulations regulate water pollution control and river watershed management. These regulations emphasize the importance of maintaining the balance of river ecosystems, prohibiting illegal development along riverbanks, and encouraging community involvement in environmental conservation efforts. Through this regulation, the Government seeks to ensure sustainable river management, minimize negative environmental impacts, and improve the quality of life of communities around the River.

Activities related to water and water resources, coordinated by legal entities, community organizations, or individuals, must obtain approval from the Government based on the principles of togetherness and kinship. This action involves the obligation to protect and conserve water and its resources so that it can continue to carry out its functions following the provisions of Article 1 of Law Number 17 of 2019, which states that protecting and conserving water and its resources is essential to ensure that water resources can still carry out their functions properly. Sustainable, both for the needs of human life and other living creatures, following the provisions regulated in law (Yuan et al., 2022).

In Cirebon City, converting the Sukalila River into drainage has raised various legal issues related to violations of river conservation regulations and environmental impacts. The main legal issues arise from regulations governing river management and conservation, which are often violated. The applicable Regional Regulations (Perda) and Mayor's Regulations (Perwalkot) stipulate that rivers must be protected from activities that could damage their ecosystem, including restrictions on illegal development along water bodies. However, with the River's function changing to drainage, many of these provisions may still need to be fully implemented, potentially causing legal issues related to conservation and environmental management violations. Apart from that, this conversion also creates problems

related to illegal buildings above the drainage. Based on regulations, illegal development is prohibited in drainage areas because it can obstruct water flow, increase the risk of flooding, and reduce environmental quality. On the Sukalila River in Cirebon, violations of this provision often occur, where illegal buildings are erected in the drainage area without permission, resulting in negative impacts on the drainage system and the surrounding environment.

The natural balance is greatly influenced by the conversion of rivers into drainage. The Sukalila River, converted into drainage, no longer adequately supports the natural ecosystem and hydrological cycle. Reducing habitat for aquatic species and changing water flow patterns can disrupt the balance of existing ecosystems, causing damage to flora and fauna that depend on healthy river environments. This could reduce the overall quality of the environment and threaten people's rights to a clean and healthy environment. Currently, the condition of the Sukalila River, especially in Cirebon City, is experiencing a decline in quality due to the many illegal buildings along the riverbanks. The existence of this building causes the narrowing of river flows and disrupts the existing ecosystem. In addition, the impact of community activities around the River, such as careless waste disposal, further worsens water quality. This situation creates a high risk of flooding, especially during the rainy season, and affects the health of people who depend on the River's water sources.

Implementing laws and enforcing regulations related to river conservation in Cirebon City is still a challenge. Although there are regional regulations governing river protection and preventing illegal development, their implementation is often less effective. Lack of supervision from the authorities and public awareness regarding the importance of protecting the environment has resulted in many illegal buildings being left standing. Strict law enforcement is needed to curb illegal buildings and ensure that people comply with existing regulations. Thus, that river ecosystems can be protected. If this condition is left unchecked, the resulting negative impacts will become increasingly severe. Illegal development can cause permanent damage to river ecosystems, such as loss of habitat for flora and fauna that depend on these ecosystems. In addition, the increased risk of flooding can threaten public safety and health, as well as cause economic losses due to damage to infrastructure and property. Poor water quality can also cause health problems for people who use water from rivers for daily needs. Therefore, immediate action and firm policies are needed to overcome this problem for the sake of environmental sustainability and the welfare of communities around the river.

River watershed (DAS) management is carried out to regulate the reciprocal relationship between natural resources in the watershed and humans in order to achieve ecosystem sustainability and ensure the continued benefits of these natural resources for humans. This means that every form of natural resource utilization is carried out by considering aspects of watershed sustainability. Government Regulation Number 37 of 2012 concerning Watershed Management already includes community participation and empowerment in watershed management (Clareza et al., 2023).

Changes in watershed carrying capacity conditions result in uncontrolled land use without paying attention to soil and water conservation principles. This can increase erosion and sedimentation, decrease vegetation cover, and accelerate land degradation. A decrease in the carrying capacity of a watershed is characterized by floods, landslides, erosion, sedimentation, and drought, which disrupt the economy and community life. The result of changes in watershed carrying capacity has a real impact on the biophysical condition of the watershed and socio-economic conditions, which causes people to lose their ability to cultivate their land and reduce community welfare (Setyowati et al., 2018).

If regulations regarding river conservation are violated, the sanctions imposed can vary, ranging from written warnings and administrative fines to demolishing illegal buildings that do not comply with the regulations. The enforcement of these sanctions aims to provide a deterrent effect for violators and emphasize that the existence of rules must be respected. After sanctions are imposed, it is essential to have an environmental rehabilitation and restoration program. This can take the form of efforts to improve river conditions, restore ecosystem functions, and educate the public about the importance of maintaining cleanliness and preserving the river environment.

Cirebon City has implemented several policies in river conservation efforts, which include implementing sanctions for violators as well as conservation programs designed to protect and preserve rivers. This policy includes environmental control on river banks by identifying and taking action against illegal buildings, as well as involving the community in river clean-up and reforestation programs. Apart from that, the government also plans to develop infrastructure that supports good water management, such as building efficient drainage channels and arranging green open spaces along rivers.

The importance of legal justice in handling cases of non-compliance with water conservation policies is very significant for several reasons. First, legal justice ensures that any violations of water conservation policies are handled fairly and equally before the law. This means that no party will receive unique benefits or experience discrimination in the law enforcement process related to water conservation (Sutrisno, 2013). Legal justice also ensures that any individual or entity responsible for violating water conservation policies is tried fairly and in accordance with applicable law. In addition, legal justice prevents abuse of power in enforcing water conservation policies. By having a transparent and accountable legal process, policy actors and law enforcers must be held responsible for their actions, which promotes accountability and reduces the risk of corruption or manipulation. Furthermore, legal justice provides protection for communities affected by violations of water conservation policies, ensuring that their rights are recognized and respected in the legal process. Thus, legal justice is an essential basis for enforcing effective and sustainable water conservation policies, as well as ensuring fair environmental protection for all parties involved (Sutrisno, 2018).

In the future, planned conservation programs will focus more on increasing public awareness about the importance of protecting rivers through education and training. The government can also involve local communities in decision-making regarding river management and the surrounding environment. With a participatory approach, it is hoped that the community will be more committed to protecting the environment and play an active role in conservation efforts. Overall, the combination of implementing sanctions, conservation programs, and environmental control will have a positive impact on preserving rivers and improving the quality of life of the people in Cirebon City.

Non-compliance with water conservation policies can have various significant negative impacts on the environment, economy, and community welfare. Here are some of the main impacts:

1. Degradation of Water Resources

a. Decreasing Water Quality

Non-compliance with waste management policies and the use of chemicals in industry and agriculture can cause water pollution. Poorly managed domestic, industrial, and agricultural waste pollutes rivers, lakes, and aquifers, thereby reducing the quality of water available for human consumption, irrigation, and industrial purposes.

b. Overexploitation of Groundwater

c. Uncontrolled groundwater extraction can significantly decrease groundwater levels, which can result in wells drying up and impact the availability of water for household and agricultural needs.

2. Ecosystem Damage

a. Lost Habitat

Degradation and water pollution can damage aquatic habitats, threatening the survival of various species of flora and fauna that depend on these ecosystems.

b. Biodiversity Decline

Changes in water quality and unstable river flows can result in a decrease in biodiversity, both in the water and around water bodies.

3. Social and Health Issues

a. Clean Water Crisis

Non-compliance with water conservation policies can lead to clean water scarcity, which can affect public health, especially in areas already vulnerable to water shortages.

b. Waterborne Diseases

Polluted water can be a means of transmitting diseases such as diarrhea, cholera, and skin diseases, which have a negative impact on public health.

4. Economic Impact

a. High Water Treatment Costs

Water pollution increases the cost of processing water to achieve quality standards suitable for consumption, thereby burdening government and community budgets.

b. Losses in the Agricultural and Industrial Sectors

Unstable water availability can disrupt agricultural and industrial activities that depend on water, reducing productivity and potential economic losses.

5. More Frequent and Severe Natural Disasters

a. Floods and Droughts

Unsustainable water management can increase the frequency and intensity of natural disasters such as floods and droughts. Deforestation and changes in land use without paying attention to water conservation principles exacerbate these impacts.

6. Social conflict

a. Struggle for Water Resources

Non-compliance with water conservation policies can exacerbate competition between water users, including communities, industry, and the agricultural sector, which can trigger social conflict.

Law Number 7 of 2004 concerning Water Resources in Indonesia is the main legal basis that regulates the protection and preservation of water resources. Several essential points related to the protection and preservation of water sources according to this law include:

1. Water Resources Management Arrangements

The law stipulates that water resources management be carried out in an integrated, sustainable, ecosystem-based and participatory manner. This aims to maintain sufficient water availability for the needs of life, production and the environment.

2. Rights and obligations

The law also regulates the community's rights and obligations regarding the use and conservation of water sources. Everyone has the right to obtain water for a decent life but also has the obligation to preserve this water source.

3. Water Quality Protection

The Water Resources Law sets water quality standards that must be met for various purposes, including consumption, industry, agriculture and the environment. This regulation protects public health and ecosystems that depend on good water quality.

4. Water Usage Regulations

This law regulates water use permits, including the conditions that must be fulfilled by parties who wish to use water from existing sources. This aims to regulate water use efficiently and sustainably.

5. Designation of Protected Areas

The Water Resources Law gives the government the authority to establish conservation and protected areas to preserve water sources. These areas are protected from activities that could damage water quality and availability.

6. Sanctions

The law also regulates sanctions for violations of the provisions regulated therein,

whether in fines, revocation of permits, or other legal action. Through these regulations, the Water Resources Law aims to provide adequate protection and preservation of water sources in Indonesia to maintain the sustainability of ecosystems and human life.

As a strategic step in controlling illegal buildings along riverbanks, it is essential to carry out a relocation process for affected communities. These recommendations include providing new locations that are safe and livable, as well as support to help people adapt to the new environment. In this case, the Public Works and Spatial Planning Service (PUPR) needs to formulate a comprehensive relocation plan involving stakeholders such as local government, non-governmental organizations, and local communities to ensure the success of the relocation process and reduce the social impacts that may arise. The following are efforts that can be made to increase the effectiveness of river conservation policies.

1. Strengthening Regulations and Law Enforcement

a. River conservation policies need to be updated in detail, taking into account each river's specific characteristics in urban areas.

b. Involve various experts to identify key problems and practical solutions.

c. Set clear and measurable targets and realistic implementation times.

2. Green Infrastructure Development

a. The creation of rain gardens, green roofs, and water-absorbing systems can help reduce rainwater runoff, increase groundwater absorption, and reduce the burden on the city's drainage system.

b. The development of green spaces in urban areas also contributes to more sustainable water management, improves water quality, and increases biodiversity and the quality of life of residents.

3. Improved Inter-Agency Coordination

a. Forming a cross-agency working team involving local government, environmental agencies, and other related agencies.

b. Hold regular coordination meetings to ensure each agency understands its role and works synergistically.

c. Strengthen cooperation between government agencies, non-government organizations, and the private sector.

4. Increasing Community Participation

a. Involving local communities in planning and implementing river conservation programs.

b. Providing education and outreach to the community about the importance of protecting rivers and ways to contribute.

c. Forming a community working group that is active in river monitoring and maintenance activities.

5. Increased Research and Technology Development

a. Support research to develop new technology that can be used in river conservation efforts.

b. Using modern technology such as water sensors, drones and monitoring applications to monitor river conditions in real-time.

c. Developing new technology that can increase water use efficiency.

In dealing with this condition, PUPR has taken various initial steps, including collecting data on illegal buildings and raising awareness about the importance of river conservation to the community. They have also conducted field surveys to determine locations that need to be controlled, as well as designing action plans that include law enforcement and rehabilitation of affected areas. PUPR also collaborates with other agencies to monitor the use of space around the river so that it follows applicable regulations.

This enforcement and relocation policy effort has reached several stages, where the government has begun to identify and record buildings that violate regulations. Apart from that, educational programs regarding the importance of keeping rivers clean and sustainable have also been implemented to increase public awareness. However,

implementing this policy still faces challenges, such as resistance from the community and budget limitations. Therefore, it is essential to continue strengthening coordination between the government, community, and various related parties so that these steps can be implemented effectively and provide the expected results for river conservation in Cirebon City.

Conclusion

Implementation of river conservation policies in Sungai, Cirebon, includes a series of strategic steps aimed at curbing illegal buildings and improving the quality of the environment around the river. The Public Works and Spatial Planning Service (P.U.P.R.) has identified and collected data on buildings that violate regulations and carried out outreach to the public regarding the importance of river conservation. Environmental education and rehabilitation programs are also carried out to increase public awareness of the negative impacts of pollution and illegal development. Although there has been progress in data collection and action planning, challenges such as community resistance and budget constraints still need to be addressed for effective policy implementation. Therefore, collaboration between the Government, community, and various related parties is essential to ensure the success of this conservation effort and preserve the river ecosystem and community welfare.

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