



DOI: <https://doi.org/10.38035/gijlss.v3i2>
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Legal Review of the Utilization of the Ciliwung River Boundary Causes of Flooding in Jakarta and Surrounding Areas (Law Number 32 of 2009 concerning Protection and Management of Environment)

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Abstract: Violation law in the name of conservation (ecology) has potential cause abuse utilization land Ciliwung River border and raises problem social . In the research This aiming implement law environment life and system law management border river as controller flooding in the city of Jakarta and its surroundings. The method used qualitative with interview as source primary law and books as product law become secondary data. The discussion through utilization the border of the Ciliwung River which has not yet maximum and based ecology , maintaining wisdom local , and conservation environment . Processing community environment boundaries around the Ciliwung River and exploitation so that cause one of indicator the occurrence flood . Optimization use land with method friendly environment and ecological parameters must prioritize management source Power natural with prioritize function law as protector and booster welfare society . Law Number 32 of 2009 concerning Environmental Protection and Management . Regulating various aspects , starting from definition environment life , principles management environment , up to sanctions criminal for offender if utilization land No in accordance with allocation Because to preserve potential border river That Alone can utilized as big as possible For prosperity society . Integration between enforcer law , massive developments in science and technology , government and non-governmental organizations in control utilization the river boundary with hope Jakarta city and surrounding areas free from flood annual events that occur in a way Keep going continuously.

Keyword: Review Law, River Boundary, Flood

INTRODUCTION

Background

The environment has been introduced since the Conference in Stockholm, Sweden (1972). World leaders gather at least every two decades to agree on the rights and obligations of countries in environmental management through global declarations. The 1970-1980 period introduced the concept of Environmentally Conscious Development in the Stockholm

Declaration (1972); then 1982-1992 developed the concept of Sustainable Development in the Rio Declaration (1992); and 1992-2002 emphasized partnerships in Sustainable Development at the World Conference on Sustainable Development in Johannesburg (September 2002). Furthermore, the discourse on Sustainable Development has changed from a universal concept to a concept that is difficult to implement. One of the causes is the difference in views between developed and developing countries in formulating the concept of good governance to ensure the implementation of Sustainable Development.

Environmental discourse is actually a result of *the ecology- triumvirate. equity - economy* is a discourse that should run parallel, side by side, and in line. However, its implementation into the environmental law system shows that *ecology* (environment) is a more dominant "leader" of *equity* (social justice) and *economy*. From the legislative side, the series of the three creates a discourse that supports and even rejects environmental law, especially as a source of law for the management of natural resources, the collaboration of the *ecology-equity-economy triumvirate* gives rise to several future plans with the following explanation:

First, there is a discourse on sustainable development. In its implementation, the application of sustainable development principles emphasizes mitigation efforts contained in the global environmental concept. Its implementation is in the form of laws and regulations to prevent activities that can cause pollution and/or environmental damage. Along with the development of the era, the objectives of sustainable development can change due to globalization because it is dominated by multinational companies and the global economy is not in line with improvements in environmental conditions;

Second, there is a discourse on the concept of holistic cross-sector. This concept will be contrary to the ego of each sector. National and local interests represented by the economic and social justice components tend to be considered as groups that pay less attention to the environment and have not been able to face the challenges of future development. The existence of legislation that only applies to sectoral egos is prepared by each ministry, for example: the Ministry of Forestry, the Ministry of Mining, the Ministry of Spatial Planning, and so on. This problem arises, usually referred to as institutional failure.

Third, there is a discourse on the conflict of interest between developed countries that have the ability in various fields including environmental management and developing countries. Developed countries will make their environmental planning through the utilization of abundant natural resources throughout their countries including states that are under the jurisdiction of developing countries. These environmental management sectors are included in the classification of renewable energy that has the potential to manage the environment. However, these developed countries did not ratify or sign the Kyoto Protocol as a follow-up to participation as an effort to control greenhouse gas emissions.

Fourth, discussion on the advancement of science and technology. Its implementation will support or oppose the ongoing issue of climate change including the issue of global warming and the greenhouse effect. The issue is an explanation and discussion of climate change including the topic of differences of opinion that tend to drag on. Therefore, it has become a common discussion if *the adage in dubio pro natura* will continue to face *in dubio pro reo*. However, the opinions of researchers who will support the issue of climate change will be more dominant.

Licensing for the use of the area, for example, is the construction of illegal houses that occur on the banks of the Ciliwung River from upstream to downstream that passes through the city of Jakarta, including Kampung Pulo and Bukit Duri without permission from the Regional Government, which is a step to exploit natural resources that can cause the river to narrow and cause flooding in the city of Jakarta and its surroundings. The damage is very severe and cannot be repaired, through regulatory measures due to improper land use procedures, has drawn criticism from other communities. For example, there is the

construction of houses on the banks along the Ciliwung River which has resulted in environmental damage, prompting the Ministry of Forestry and Environment to create laws and regulations that regulate provisions regarding the determination of river border areas.

There is an overlap between the use of river borders and existing social activities of the community. This has the potential to cause conflicts related to land ownership because it is related to legal certainty regarding the status of land ownership along river borders. An example is the incompatibility of land use along river borders to the River Basin Area in Jakarta and its surroundings with the provisions of the Provincial Spatial Plan. This incompatibility occurs because of the Green Open Space Plan stipulated by the Ministry of Forestry, while the Provincial Spatial Plan is determined by the Regional Government.

Riverbank management is part of the River Basin Area facing various challenges, including natural resource degradation, pollution from various sources, and land use conflicts around it. Currently, the condition of the River Basin in most parts of Indonesia is showing a decline. The River Basin must bear a heavy burden due to increasing population density and intensive exploitation of natural resources, which causes degradation of the condition of the River Basin. Monitoring of water quality through measuring the Water Quality Index in 13 rivers and 40 lakes in DKI Jakarta shows that 83% of rivers and 79% of lakes are in the poor category. This research, which refers to a study by the Ministry of Public Works, needs to be considered because rivers have an important role as natural resources that support human life. In addition to the decline in water quality, there is also a tendency for increasing disasters around the River Basin Area, such as landslides, erosion, and sedimentation. Passive open spaces can be used as public areas. The Ciliwung River, which is a large river that crosses the city of Jakarta, is 117 km long and is often the cause of flooding in Jakarta. Rapid development along the Ciliwung River has reduced the ecological function of the area. When heavy rain occurs, the water discharge of the Ciliwung River increases and accumulates in the downstream area, causing flooding in Jakarta. Settlements in Kampung Pulo and Bukit Duri, which are located on the banks of the Ciliwung River, often experience flooding. In accordance with the Regulation of the Minister of Public Works No. 63 of 1993 and the Regulation of the Government of the Republic of Indonesia No. 38 of 2011 (Article 9), river banks are protected areas that should not have massive buildings. The dominance of buildings on river banks reduces water retention capacity, so that the volume of water from upstream to downstream increases and can worsen the impact of flooding.

Watershed management faces various problems, including sustainability issues related to the social conditions of communities around the watershed and the institutional management of the watershed itself. Research objectives This is implement law environment life and system law management River boundaries as controller floods in the city of Jakarta and its surroundings .

The problem

The main issues that will be discussed in more depth in this article specifically are:

- a) How management Borders of the Ciliwung River around Kampung Pulo and Bukit Duri?
- b) How is the exploration of the conditions of the community around the Ciliwung River?

METHOD

This article uses a qualitative method with interviews as primary legal sources and books as legal products as secondary data. The research is divided into two main components, namely a case study on river banks which are part of the River Basin Area as an example of the relationship between river border problems and the conditions of the community living around it such as Kampung Pulo and Bukit Duri, East Jakarta. The second component is an analysis of river border problems related to community management and behavior based on various

literature sources, especially those related to river border management as part of the River Basin Area which is still in the unity of the river area. Empirical data in this study were obtained from community groups on the banks of the Ciliwung River, in Situ Gintung which caused flooding in the city which is the downstream part of the Ciliwung River Basin Area. The aim is to gain a clear understanding of the problems in the river area, especially from the perspective of human conditions and their relationship to river border management on a wider scale. The research location was chosen from upstream to downstream to show the problems that occur downstream and their relationship to their management.

RESULT AND DISCUSSION

Discussion on the lack of public awareness of actions taken on river banks will have an impact on flooding in other areas. A study shows that the level of public education is one of the indicators that influences the extent to which people care about the environment on a wider scale than their residential environment. In the context of river banks, it is very important to note the role of the community who have realized that actions on one river bank can have an impact on other areas, for example what happened to the Ciliwung River which flows in the Kampung Pulo and Bukit Duri areas of East Jakarta.

Water Quality Table Along the Ciliwung River

No.	Year	Water Quality Status	BOD (mg/L)	COD (mg/L)	TSS (mg/L)	pH
1.	2015	Polluted currently	12.5	25.3	45.6	6.5
2.	2016	Polluted heavy	15.2	28.7	50.4	6.2
3.	2017	Polluted heavy	16.8	30.2	55.1	6
4.	2018	Polluted heavy	18.3	32.5	60.3	5.8
5.	2019	Polluted heavy	17.6	31.1	58.8	5.9
6.	2020	Polluted currently	13	27.4	48	6.4

Source : Data and Information Center of the Ministry of Environment of the Republic of Indonesia, 2021

The table above illustrates the water quality of the Ciliwung River from 2015 to 2020. This table presents the water quality status based on the parameters of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and Total Suspended Solid (TSS) , and pH, the table's numerical data shows changes in pollutant levels over time. There is a variation in pollutant levels, with higher BOD, COD, and TSS values in previous years, indicating severe pollution affecting water quality and the ecosystem around the river. For example, in 2016 to 2019, water quality was identified as "severely polluted" with Biochemical Oxygen Demand (BOD) values reaching 18.3 and Chemical Oxygen Demand (COD) reaching 32.5 and Total Suspended Solid (TSS) reaching 6.3. The data occurred in 2018 , indicating serious pollution . The decline in water quality and biodiversity also impacts the terrestrial ecosystem around the river. Changes in the pattern of interactions between species and disruption of ecosystem balance change the dynamics of the environment as a whole. In addition, this pollution worsens the physical and aesthetic conditions of the river, which reduces its ecological function and threatens the sustainability of the ecosystem in the area.

1. Management Ciliwung River border around Kampung Pulo and Bukit Duri

When flood waters spread they can threaten lives, inundate homes and economic areas, destroy property, damage vital infrastructure, and impede access to public services, disrupting economic and government activities.

1) Main Impacts of Floods

As floodwaters spread they can be life threatening and the impacts of flooding are long term and can result in expensive, disruptive and distressing losses for affected communities. The immediate threat of flooding is people trapped in floodwaters on foot or in vehicles in affected areas. People are at risk of significant or fatal injuries from floodwaters, particularly fast-moving waters and it is important that people are aware not to enter flooded areas on foot or attempt to drive on flooded roads. Likewise, buildings providing public services such as schools, hospitals, government offices, aged care facilities and childcare centres may be affected by inundation or become isolated, as the surrounding area is flooded. These services will cease and be disrupted during and after flooding, which can have a significant impact on the people who use them.

Secondary impacts of flooding can include pollution of floodwater with chemicals and waste. This can pose a threat to human and animal health and can increase the risk of contracting skin diseases, respiratory disorders and waterborne diarrhoea. In the agricultural sector, flooding can damage crops, delay harvests, spoil produce, remove or contaminate valuable topsoil and cause livestock deaths. These impacts can cause significant emotional distress and financial losses for farmers. For the general population, food shortages and production costs will outweigh the gains achieved.

2) Understanding River Boundaries

Definition of River Boundary is an area along the left and right sides of a river, including its tributaries, which functions as a protection zone to maintain the sustainability of the river and prevent damage to the surrounding environment. According to Government Regulation No. 38 of 2011 concerning Rivers. River boundaries are boundary lines along the left and right sides of a river, including artificial rivers, which are designated as protection areas to maintain the sustainability of river functions. The main functions of river boundaries include preventing erosion and landslides, maintaining water quality from pollution, reducing the risk of flooding, providing space for river ecosystem recovery, and limiting the use of space so as not to damage the flow and function of the river. The provisions for the distance of river boundaries vary according to regional regulations, namely as follows: for large/unbanked rivers, a minimum of 100 meters from the river bank; for embanked rivers, a minimum of 10-30 meters from the foot of the embankment; and for small tributaries, it can be smaller, depending on the technical policies of the local area. This boundary is generally not allowed to be built with permanent buildings, except for certain public facilities with special permits. Insight into river boundary issues is the same as that of River Basins which are related to management and human behavior, especially in the context of the relationship between upstream and downstream areas.

A watershed is a land area that serves as a path for rainwater to flow to a main river and its tributaries, which eventually flow to the sea, lake, or other water reservoir. This area includes all areas where surface water flows to the main river, including hillsides, mountains, and lowlands. The characteristics of a watershed

include: having one main river and tributaries, rainwater or other water sources flowing to downstream points, boundaries known as watershed boundaries which are usually ridges or mountains, and reflecting the relationship between natural conditions (such as topography and climate) and human activities (such as agriculture and settlements). The function of a watershed is to provide water for human life and other living things, regulate water management (storage, flow, and discharge of water), and function as a planning unit in environmental and water resource management. Overall, the results of this study are expected to contribute to the practice of urban environmental planning and management between Bekasi Regency, Bekasi City and the Capital City of Jakarta which are prone to flooding due to discharges from the Ciliwung River, which is related to river boundaries and the River Basin Area, as well as the relationship between the physical environment of the River Basin Area and the social conditions of the surrounding community.

The relationship between River Boundaries and Watersheds is very important, because both are key elements in sustainable water resources and environmental management. The following is an explanation of their relationship, including: 1) River Boundaries as part of a Watershed include all areas that drain water into one main river, including the upstream, middle, and downstream. River ledges are located along the banks of rivers within the Watershed area and function as buffer zones that play a role in maintaining the quality and function of water flow; 2) River ledges maintain the hydrological function of the Watershed which functions to prevent erosion, reduce sedimentation, and filter surface water before entering the river. Damage or careless construction of ledges can disrupt the function of the Watershed, which can result in flooding, land damage, and water pollution; 3) Boundary Management as part of Watershed Management includes conservation in the upstream area or land use, as well as management of ledge zones to control degradation of river ecosystems. Therefore, ledge management policies and actions must be in line with the overall Watershed management plan; 4) The Strategic Role of Boundaries in controlling the impact of activities in the River Basin Area includes human activities in the River Basin Area, such as agriculture, settlements, and industry, which can have a negative impact on rivers. River boundaries function as protection zones that minimize the impact of these activities on water quality and river flow stability. As a guideline, river boundaries are an important component of the River Basin Area that functions to protect and strengthen the ecological and hydrological integrity of the river. Without good boundary management, the River Basin Area will not be able to function optimally.

3) Current condition of the Ciliwung River This

Physical condition the banks of the Ciliwung River at the moment This show existence significant damage after a number of year last . Happened shallowing river consequence sedimentation and wild growth , which ultimately cause area the become slum . The river is not Again seen beautiful , clean , and not can used For activity such as bathing, washing , boating , or as place recreation . Jakarta is the capital city of the country that experienced growth rapid from year to year , started with development infrastructure like road highway , road overpass , and Light Rail Transit (LRT) . The environment that used to be empty now changed become area dense , with rapid change every year . In addition to development , normalization or Naturalization is also carried out , especially on the Ciliwung River which crosses Jakarta city . After dozens year , edge Ciliwung river is experiencing change significant physical consequence rapid growth along with improvement amount

population and development buildings tiered like office , center shopping , apartments and housing elite , interesting Lots seeker Work to Jakarta. The community needs field work and place affordable and strategic living For fulfil need them . As a result , the boundaries river become location increasingly residential dense , with discarded garbage haphazard to river , causing narrowing and shallowing (sedimentation) which is very worrying . In addition , the condition of the river water changed become black thick , and appears various disease skin as well as lack of clean water supply .

4) Expected conditions of the Ciliwung River

In the research This expect if the Ciliwung River Irrigation Service focuses on prevention more impact big besides only just prevent violation only . This is due to Because existence violation has occurs in society . *Biochemical Oxygen Demand, Chemical Oxygen Demand, and Total Suspended Solid* , and pH. Review law that is carried out resident against illegal buildings on the border Ciliwung River and the surrounding areas of Kampung Pulo and Bukit Duri sub-districts Jatinegara, East Jakarta via enforcement differentiated law into two categories , namely effort prevention and action . Prevention efforts aiming For avoid the occurrence impact certain as well as damage possible environment happen .

Enforcement efforts prevention is step the beginning of the DKI Jakarta Irrigation Service in enforcement law preventive related use land on the border Ciliwung River , which includes : a) Socialization carried out by the DKI Jakarta Irrigation Service in the form of counseling to the community that uses land on the border Ciliwung River , covers socialization laws and regulations about border river as well as applicable prohibitions ; b) Installation board prohibition on the border river intended to planning users build illegal buildings and those who have occupy the area previously . This is a step preventive measures of the DKI Jakarta Irrigation Service in enforcement regulations and laws . It is expected board prohibition This can increase awareness public about prohibition use land on the border Ciliwung River ; c) Incentives and disincentives is part from effort prevention , it is hoped can increase awareness public in a way wide For return border river to function originally . Enforcement incentives and disincentives set up in Constitution Number 26 of 2007 concerning Spatial Planning . Incentives is form awards , while disincentive is form punishment For push inhabitant comply spatial planning established by the government DKI Jakarta province or government area (East Jakarta City) in utilization room in accordance with regional spatial planning . Incentives given If utilization room in accordance with plan structure Spatial Planning .

The community has awareness For return function main border river with do dismantling and requesting recommendation technical related to boundary line boundaries river , so that the boundaries the can functioning in accordance with its purpose . If public has show awareness said , the DKI Jakarta Irrigation Service will give incentive in the form of : awards in the form of relief tax ; provision facility infrastructure ; and convenience in procedure giving recommendation technical regarding the boundary line river .

Enforcement efforts enforced if cooperation in giving incentive between the DKI Jakarta Irrigation Service and can implemented , then required giving disincentive For arrange utilization space , in particular use land on the border Ciliwung River . Enforcement law by the DKI Jakarta Irrigation Service against user land , especially those related with disincentive , must based on the Law Number 26 of 2007 concerning Spatial Planning also, so that misuse land border can prevented , limited and reduced consequence action that is not responsible answer . The agency

provides disincentives in the form of restrictions on the provision of infrastructure and the imposition of high taxes. The provision of incentives and disincentives by the DKI Jakarta Irrigation Service are implemented based on regulation applicable laws and regulations .

If the DKI Jakarta Irrigation Service has carry out steps prevention to user land on the borders of the Ciliwung River, the Irrigation Service also enforces action repressive , namely : issuing a warning letter until three times; work The same with Civil Service Police Unit Praja (Satpol PP) for to put things in order illegal buildings along border river ; and emphasize effort prevention through incentives and disincentives . However , if No There is agreement reached in accordance with applicable regulations , Civil Service Police Unit Praja will forced do eviction and demolition , although user land own proof of Land and Building Tax that is not can made into as proof ownership legitimate land . According to with Article 6 of the Law Main Point Agrarian Number 5 of 1960, every land own function social , and if land River boundaries are used For illegal buildings that cause floods in Jakarta, things This will bother interest general . Behavior man contribute to decline quality environment . With increasing global awareness about importance protection environment from threat damage and pollution , policy environment has changed become regulation legislation in a way official (Asshiddiqie , Jimly , 2010). However , after implemented , many from regulation This No succeed prevent pollution and damage environment . Dissatisfaction This the more spread across various countries, triggering demands For integrate policy environment to in constitution as base more laws strong .

Environmental legal protection is regulated in the 1945 Constitution of the Republic of Indonesia after the fourth amendment in 2002. Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia emphasizes that human rights are protected by law, including the right to live in a healthy and safe environment, and the right to obtain good health. Therefore, the 1945 Constitution of the Republic of Indonesia strongly supports the environment, so it is often referred to as the Green Constitution.

2. Exploration condition communities around the Ciliwung River

Study This give contribution significant in identify factors reason pollution , its impact to ecosystem and health society , and recommend steps For increase awareness community and involve they in management a more environment well . In addition , research this also contributes provide input suggestions to stage holder as maker policy and society For handle pollution in a way effective through approach collaborative involving various sector .

1) Social Conditions

Riverbank Area : Density residents in the area This , especially in Jakarta, is very high . Many residents living in informal settlements due to limitations land and conditions difficult economy . Access to service base such as clean water , adequate sanitation , and services health also becomes challenge for Lots residents . In addition , the surrounding community river often become victims of flooding seasonal , which results in loss Good material and also psychological , especially for underprivileged family capable .

This pollution in a way direct influence quality life the people living around river . Water contaminated by waste domestic and industrial increase risk health

society , including disease diarrhea , infection skin , and gastrointestinal disturbances , especially in older children . prone to to infection due to polluted water .

Decrease water quality impacts on quality life public so that decrease consequence limited access public to safe clean water For consumed and used in activity everyday . In addition , pollution This also reduces mark aesthetics environment and property around the River area so that lower mark sell properties and inhibits growth economy local . Pollution of the Ciliwung River provides impact significant social and economic for the surrounding community ;

2) Economic conditions

Some people in this area rely on the informal sector for their livelihoods, including small traders, day laborers, scrap collectors, and motorcycle taxi drivers. The slums of Kampung Pulo and Bukit Duri are low-income communities and poverty is quite high, with many families living below the poverty line and relying on subsistence economics. The Ciliwung River in this area is also used for all purposes from bathing, washing, and sometimes as a water source, although the water quality is not good.

In economic terms, water pollution in this area results in material losses for communities that depend on river water for their daily needs. The decline in water quality has an impact on common diseases, namely: skin diseases, respiratory infections, diarrhea and dengue fever, thus decreasing the level of public health and hampering the economic sector of productive age communities. The socio-economic aspect is also seen in the increasing tension between communities that have different access to clean water resources. Conflict can arise between group that has access more Good for clean water and those who are forced to using polluted water . In addition , pollution This lower quality life society , reducing mark properties , and encourage migration resident to more area safe , problem this is what happened consequence from problem minimal urbanization Education Level and provision skills .

Relation to Law Number 32 of 2009 concerning Environmental Protection and Management. This study provides problems related to pollution of the Ciliwung River, especially in the areas around Kampung Pulo and Bukit Duri, East Jakarta, which are closely related to the implementation of existing regulations and policies, especially Law Number 32 of 2009 concerning Environmental Protection and Management as follows:

- a) Pollution of the Ciliwung River by *Biochemical Oxygen Demand* (BOD), *Chemical Oxygen Demand* (COD), and *Total Suspended Solid* (TSS) , and pH of Domestic and Industrial Waste: The study found that the main factors causing pollution of the Ciliwung River are the disposal of domestic waste (including household waste, detergents, and other liquid waste) and industrial waste that are not managed properly. One of the significant findings is the high levels of pollutants in the water, such as *Biochemical Oxygen Demand*, *Chemical Oxygen Demand*, and *Total Suspended Solid* , which exceed the threshold set by the relevant regulations;
- b) Lack of Waste Management Infrastructure: Studies have shown that the lack of adequate waste management facilities, at the household, industrial and local government levels, further exacerbates the pollution situation. Much domestic waste is discharged directly into rivers without prior treatment, creating an ever-increasing pollution load;

- c) Low Public Education and Awareness: Public awareness of the importance of maintaining river cleanliness and waste management is also still very low. Many individuals are unaware of the long-term impacts of pollution on their own quality of life.

3) Environmental Conditions

The Ciliwung River is severely polluted by household waste, small industries, and plastic waste. The surrounding community often throws waste directly into the river due to the lack of waste management facilities. Flooding in areas along the riverbanks is very vulnerable to flooding during the rainy season, which is exacerbated by river sedimentation and narrowing of the flow due to illegal settlements. The government has implemented normalization and naturalization programs to overcome flooding problems and improve environmental conditions, but often raises pros and cons regarding population relocation.

According to Law Number 32 of 2009 concerning Environmental Protection and Management which aims to protect and manage the environment by establishing obligations for the state, society, and business actors in maintaining environmental sustainability. This study found that the implementation of this law is still less effective, especially in terms of waste management and supervision of waste disposal into the Ciliwung River.

- a) Article 15 of Law No. 32 of 2009 regulates the obligation of every person to maintain environmental sustainability, which includes the management of natural resources and pollution. In the context of this study, many parties violate this obligation by dumping waste directly into rivers without prior processing, both by industry and the community ;
- b) Article 36 stipulates that business actors must provide environmental management facilities, including waste management. However, research results show that many industries around the Ciliwung River have not complied with this obligation, with waste being dumped directly into the river without adequate processing.

The results of this study revealed that pollution of the Ciliwung River was caused by the lack of good domestic and industrial waste management, as well as low public awareness of the importance of maintaining river cleanliness. Two regulations, namely Law Number 32 of 2009 concerning Environmental Protection and Management and Government Regulation Number 82 of 2001 concerning water quality management and water pollution control have provided a clear legal framework for environmental management and water quality. However , its implementation Still face various challenges , especially in aspect supervision , enforcement law , and participation society . Research This give significant contribution to understanding about causes and effects pollution of the Ciliwung River around Kampung Pulo and Bukit Duri, as well as emphasize importance participation community and collaboration between various party in overcome problem this . Based on findings that factor main reason pollution river is disposal waste domestic and industrial , as well as increasing rubbish plastic in the area The community living around the Ciliwung River in the Kampung Pulo and Bukit Duri areas were reviewed from sector housing area and also commercial , often throw away rubbish haphazard without consider the impact to water quality and environment . Research This show that pollution the impact directly to health society , such as increasing case infectious disease through water, as well as the decline diversity life in the river . Identify the need increase awareness public through education and

campaign more information wide about impact pollution and ways For reduce pollution river . Involvement public in management environment through activity like Work devotion and cleaning river . In addition , collaboration between government , sector private sector , and society are very necessary For create management more waste effective . With clear regulations, logistical support from the government, and active participation from the private sector and the community.

The river boundary management policies implemented by the government are divided into two categories, namely structural and non-structural policies. This grouping refers to the definition of Grigg (1996) in Kodoatie and Sjarief (2010) which states that water resource management is the application of structural and non-structural methods to regulate water resources, both natural and artificial, for the benefit of humans and environmental purposes. Structural actions for water management include infrastructure built to regulate water flow in terms of quantity and quality. Meanwhile, non-structural actions include programs or activities that do not require physical infrastructure.

4) Cultural and Community Aspects

Various communities, such as the Ciliwung Community and environmental groups, play an active role in educational activities, river cleaning, and preserving river culture. Solidarity between communities is quite strong, although social conflicts can arise over land, relocation, or the impact of government policies. Some communities still use the river as part of their daily lives in traditional ways.

Mat Peci (Ciliwung Care Community) is a community that cares about the environment in the Ciliwung River Basin. This community was formed by a group of residents who share the same vision regarding cleanliness, beauty, naturalness, and environmental sustainability, and are committed to paying attention to the Ciliwung River through various activity programs. Previously, this community was known as Cikoko Hijau Lestari. Founded on January 11, 2009 by Mr. Usman Firdaus, S.Kom, who is the founder, this community was originally the Cikoko Hijau Lestari Farmers Group with an activity center behind Carrefour MT Haryono, Cikoko Village, Pancoran District, South Jakarta. However, along with the arrangement and concreting along the Ciliwung River, Mat Peci moved its activity center to Green Camp located on Jl. Arus, Rt.007/Rw.01, Srengseng Sawah Village, Jagakarsa, South Jakarta.

The Mat Peci Community is located along the Ciliwung River, with around 21 fostered groups spread across various regions, centered at the post (basecamp) covering Depok, East Jakarta, South Jakarta, Central Jakarta, as well as Kali Krukut and several posts along other River Basins in West Jakarta. Each post or basecamp consists of six volunteers. Currently, the Mat Peci Community has several work program divisions, including nature conservation, waste processing and sorting into blessings, urban agriculture, arts and culture, mat peci rescue and disaster management, and community empowerment. The principle and philosophy held is simple, 'If we don't care about the Ciliwung River, who else will take care of it.

The River Basin management policy implemented by the government so far has focused more on the main tasks and functions of the relevant ministries, in accordance with the Regulation of the Minister of Forestry Number 39 of 2009 concerning Guidelines for the Preparation of Integrated River Basin Management Plans. This regulation identifies several ministries as stakeholders directly related to River Basin management, especially in flood control, namely the Ministry of Forestry and the Ministry of Public Works. The Ministry of

Forestry is responsible for forest management, conservation area management, and River Basin rehabilitation, while the Ministry of Public Works manages water resources and spatial planning.

In relation to this task, the Ministry of Forestry has carried out forest and land rehabilitation activities from 2010 to 2013, which include repairing conservation structures such as infiltration wells, reservoirs, control dams, and civil engineering activities based on river channels (gully plugs). In 2014, the ministry continued with soil and water conservation policies and the use of engineering technology. The Ministry of Public Works also carried out similar activities, which include structural efforts such as the construction of reservoirs, reservoirs, lakes, and infiltration wells, as well as the normalization of water bodies. In addition, there are non-structural efforts that include reforestation, regulating conservation agricultural practices in the hills, preventing waste disposal in rivers, and relocating residents on riverbanks. The activities carried out by the two ministries focus more on structural activities, as seen from the larger allocation of funds compared to non-structural activities.

CONCLUSION

River banks are protected areas that should not have massive buildings. The dominance of buildings on river banks reduces water retention capacity, so that the volume of water from upstream to downstream increases and can worsen the impact of flooding. Management of the Ciliwung River Bank in the Kampung Pulo and Bukit Duri areas in anticipation of flooding in the city of Jakarta spreading which can threaten lives, flood housing so as to damage vital infrastructure, and hinder access to public services that disrupt economic and government activities. The increasingly dense residential areas, with garbage being dumped carelessly, result in narrowing and shallowing (sedimentation) which is very concerning. In addition, the condition of the river water turns black, and various skin diseases appear and there is a lack of clean water supply. Preventive efforts carried out by the DKI Jakarta Irrigation Service through the provision of incentives if the community follows directions to maintain river cleanliness and in the form of: tax relief; provision of infrastructure facilities; and ease in the procedure for providing technical recommendations regarding river boundary lines and providing disincentives if the community does not comply in the form of: restrictions on the provision of infrastructure and the imposition of high taxes. These actions are part of prevention efforts, and are expected to increase public awareness at large to return river boundaries to their original function.

Exploration of the conditions of the community around the Ciliwung River has contributed significantly to identifying the factors causing pollution, its impacts on the ecosystem and public health, and suggesting steps to increase public awareness and involve them in better environmental management. Various aspects that influence the lives of communities along the riverbank include: Social conditions related to population density in this area, very high, many residents live in informal settlements due to limited land and difficult economic conditions, The slum areas of Kampung Pulo and Bukit Duri have a substandard economic level and poverty in this area is quite high; Economic conditions with many families living below the poverty line and relying on subsistence economy; Environmental conditions played by the Government have implemented normalization and naturalization programs to overcome flooding problems and improve environmental conditions, but often give rise to pros and cons related to relocation of residents; and Cultural and Community Aspects through a group of residents who have the same vision regarding cleanliness, beauty, naturalness, and environmental sustainability, and are committed to paying attention to the Ciliwung River through various activity programs.

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