

Stakeholders Synergy for Ciliwung River Management from a Whole of Government Perspective

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Abstract - This study aims to analyze inter-actor relations in the management of the Ciliwung River and to identify the strengths, weaknesses, opportunities, and threats in building sustainable collaborative governance. The research employed a qualitative approach with descriptive and evaluative analysis, synthesizing data from various documents and previous studies. The findings indicate that the government remains the most dominant actor due to its regulatory authority and resource capacity, yet it is vulnerable to institutional fragmentation and public pressure. The private sector possesses significant financial and technological potential, but its involvement remains largely philanthropic. Non-governmental organizations (NGOs) emerge as the most effective actors in bridging collaboration among stakeholders through participatory and developmental communication approaches. Academia serves as a source of scientific legitimacy but shows limited capacity in policy translation, while the media strengthens public awareness and social accountability. The IFAS-EFAS analysis positions Ciliwung's governance within the growth-stability quadrant, reflecting a balance between internal strengths and external opportunities. The study highlights the importance of adopting a Whole of Government and Whole of Society approach to enhance inter-agency coordination, collaborative incentives, and public engagement for sustainable river governance.

Keywords: Ciliwung River; Collaborative Governance; Development Communication; Multi-Actor; IFAS-EFAS.

Introduction

The current development paradigm places the community as the main actor in the process of planning, implementing, and evaluating development. Development communication plays an important role in building community capacity to plan and manage sustainable development. Sustainable development is a strategic concept for all countries to create a safe, decent, and responsible life for future generations. The global commitment to sustainable development has been

realized through the Millennium Development Goals (MDGs) and continued with the Sustainable Development Goals (SDGs), which emphasize the importance of balance between economic, social, and environmental aspects.

As an archipelagic country, Indonesia has a strong commitment to implementing sustainable development, including in the management of natural resources, particularly river ecosystems (Hidayaturahmi et al., 2024). River environments play a vital role in human life, both as a source of water, a habitat for biota, and a socio-economic space for the surrounding community. However, increased development and urbanization activities have put great pressure on the quality of river environments in Indonesia.

Based on data from the Directorate General of Pollution and Environmental Damage Control (Ditjen PPKL) of the Ministry of Environment and Forestry (KLHK) for the period 2015–2018, around 25.1 percent of the total 64 thousand villages or sub-districts crossed by rivers have poor water quality, with the highest level of pollution found on the island of Java, especially in West Java Province. The increasing number of populations brings negative impact on environment when fulfilling their daily needs (Yunianto, 2021).

The Ciliwung River as one of the main rivers on the island of Java has important ecological and social functions. Various studies show that the water quality of the Ciliwung River is at a critical level. the Ciliwung river is highly polluted, especially in the areas going downstream of the river (Rajagukguk & Pranoto, 2023). Between 2016 and 2020, the percentage of residential land increased significantly. Residential areas in Katulampa watershed increased by 0.9% in 2017, Kampung Kelapa watershed expanded by 2.8% in 2017, Panus Depok Bridge watershed increased by 2.5% in 2017, and MT Haryono increased by 0.1% from 2017, all of which will remain constant till 2020. (Pratama & Constantine, 2023).

The government's technocratic approach, such as the construction of a reservoir in the Ciawi area, has not been able to fully solve the problems of flooding and river pollution in a sustainable manner. Technical measures without ecosystem restoration and community involvement only provide short-term solutions. Effective river management requires collaboration between various parties—the government, the community, the business world, academics, and non-governmental organizations—who have different but complementary roles and responsibilities (Hidayaturahmi et al., 2023). It is in this context that various social movements focused on river conservation have emerged, one of which is the Clean Ciliwung Movement (GCB).

Founded in 1989, GCB is a collaborative initiative between the government, academics, and the community that aims to build public awareness of the importance of maintaining the cleanliness and sustainability of the Ciliwung River. The GCB acts as a facilitator, coordinator, and community mobilizer through a development-communication approach. The strategy used covers four main pillars: advocacy (policy advocacy and public campaigns), network development (development of networks between communities and stakeholders), community organizing (strengthening community organizations), and capacity building (increasing community capacity and competence) (Lubis et al., 2007; Hidayaturahmi et al., 2023; Hidayaturahmi et al., 2024).

This approach emphasizes the importance of participatory and dialogical communication in fostering a sense of ownership and shared responsibility for the river environment (Cox, 2010; Pezzullo & Cox, 2018). Although the government has issued various regulations related to the management of the Ciliwung River — including Government Regulation No. 38 of 2011 concerning Rivers and Government Regulation No. 26 of 2008 concerning the National Spatial Plan — their implementation still faces serious challenges.

There is a gap between government policy and community participation, especially in integrating collective action between upstream and downstream areas. Therefore, social movements such as GCB have become important actors in bridging communication between levels of government and the community, building ecological awareness, and strengthening synergies among stakeholders (Hidayaturahmi et al., 2023; Hidayaturahmi et al., 2024).

Based on this description, this study aims to identify the synergy among stakeholders in the management of the Ciliwung River and analyze this synergy model from a Whole of Government (WoG) perspective. The WoG approach is considered relevant to understanding how cross-agency and cross-actor coordination and integration can strengthen the effectiveness of collaborative and sustainable river environmental management (Hood, 2005; Richards & Smith, 2006; Pollitt, 2003).

Theoretical Framework

One study states that the coordination, integration, synchronization, and synergy of stakeholders in the management of the Ciliwung River are at a moderate level, with a value of 71.4, with the following details: the level of integrity has a moderate criterion with an index of 72.50; the synchronization level has moderate criteria with an index of 70.34, the coordination level has moderate criteria with an index of 72.69; and the synergy level has moderate criteria with an index of 70.05 (Sriyana, 2018). Another study mentions the importance of social learning in collaborative natural resource management. Participation in the deliberative planning process involves state institutions and local communities in developing shared goals and collaborative relationships, as two conditions for joint management.

There are eight characteristics in the social learning process: open communication, diverse participation, uncontrolled thinking, constructive conflict, democratic structures, diverse sources of knowledge, broad involvement, and facilities. Social learning is necessary but not sufficient for collaborative management. Other requirements for co-management are capacity, appropriate processes, appropriate structures, and supportive policies (Schusler, Decker, & Pfeffer, 2003).

Communication among stakeholders is generally held to increase agreement on the facts and objectives of management. The results of statistical network analysis of six natural resource management systems show that the effects of communication depend on the context. If communication influences stakeholder knowledge and values, it will foster agreement among stakeholder groups. Whether individuals, groups, or organisations, each stakeholder community has its own set of demands, expectations, and cultures. To effectively engage them, traditional and one-size-fits-all program communication approaches must be altered. Effective communication strategies take into account the complexity of the individuals who participate in and benefit from the programs (Koilakonda, 2023). (Koilakonda, 2023).

Based on the above studies, it appears that river management, particularly of the Ciliwung River, has never been studied from a Whole-of-Government perspective, as another form of collaborative governance. However, the application of Whole-of-Government approaches in river management could provide solutions to the complexities of addressing river-related issues, such as flooding, where the root cause of the problem lies in the lack of synergy among stakeholders involved in river management. The concept of synergy is generally taken from the group syntality theory proposed by Cattell (in (Shaw & Costanzo, 1970).

This theory emphasizes the existence of bond dynamics that explain group behavior formed based on the interactions of its members. In his inaugural lecture as professor (Ancok, 2003) said that effective cooperation is social capital for organizations, especially when such cooperation is specifically aimed at the interests of the organization. The definition of the quality of synergy as the quality of solid cooperation is in line with the quality of cooperation in a collaborative process as stated by (Gray, 1996) and as conveyed by (Bennis & Biederman, 1997) as what is called 'creative collaboration', which is a collaboration that can produce something that exceeds the expectations of any party.

Today's organizations cannot separate themselves from competition and changes in the business environment. These changes require them to continuously revitalize themselves to overcome new challenges in the future. Therefore, cooperation among members of the organization is required to produce innovation, so that the organization has a competitive advantage.

The quality of synergy can be described as the result of cooperation within a group, which is essentially supported by cooperative behavior among its members. The cooperation referred to is close cooperation, in which all members of the group participate and collaborate in a synergy-oriented organization to meet the demands of the organization (Quigley, 1993). Synergy is essential not only within an organization but also between organizations that share the same goals and vision. The Stanford Research Institute (SRI) defines stakeholders as a group of people who would continue to exist even without the support of an organization.

Freemen argues that his definition is broader and more balanced than that of SRI. There are three main conditions for a group to be identified as a stakeholder, namely: (1) having the power to influence; (2) legitimacy of the relationship with the company; and (3) urgency of the demands of stakeholders. Whole of Government is the answer to the problems of integration and coordination in response to countries' demands for administrative reform, which ultimately gave rise to this term.

Whole of Government is a new label for the old doctrine related to coordination issues in public administration (Hood, 2005).

The initial concept of Whole of Government was joint-up government, which was first introduced by Tony Blair's administration in 1997 (Richards and Smith, 2006), as the antonym of terms such as "departmentalism," "tunnel vision," and "vertical silos" (Pollitt: 2003). This study will elaborate on the mechanisms that can be implemented by stakeholders involved in river environmental management to create synergistic management that involves all elements of government to achieve the sustainability of a high-quality river ecosystem.

Material and Methodology

This study uses a qualitative approach with a descriptive research method. Qualitative research is research that aims to understand what is experienced by the research subjects, such as behavior, perceptions, motivations, actions, and others holistically, and descriptively in the form of words and language, in a specific natural context and by utilizing various scientific methods (Moleong, 2005).

This study aims to examine the synergy in the implementation of river management in the Ciliwung River, located upstream in the Bogor Regency, West Java Province. Data collection in this study was conducted through interviews with selected informants, while the analysis technique used in this study was SWOT analysis.

Result and Discussion

The condition of the Ciliwung River is one of systemic damage, where destruction occurs from the upstream, middle, and downstream areas. To see the environmental problems of the river, one cannot ignore its natural environment, namely its hydrology, river characteristics, and water discharge. In addition, environmental problems are also related to human interactions and the social environment that interacts directly with rivers, humans and their behavior towards rivers, or how humans behave when interacting with rivers, or how humans who live near rivers behave.

In addressing the complexities of the Ciliwung River, the government has implemented numerous solutions. The Ministry of Environment (KLH) through the *Prokasih* (Clean River Program) program, which is also regulated by Governor Decree No. 581/1995, regulates, and monitors the quality of wastewater produced by companies that are potential polluters with an organic load of 800kg/day. The government regulates river environmental management through Government Regulation No. 82 of 2001 concerning Water Quality Management and Water Pollution Control.

In addition, water pollution is evaluated using PI as an indicator of water quality, which is regulated by Minister of Environment Decree No. 115 of 2003 concerning Guidelines for Determining Water Quality Status. The parameters used are Total Suspended Solids (TSS), Dissolved Oxygen (DO), Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Phosphate, E. Coli, and Total Coliform. The results of the calculation of these parameters are used to determine the Water Quality Index.

In addition to legislation, the Ciliwung River problem is also being addressed through cooperation with relevant agencies, including the central government, local governments, academics, professionals, international organizations, and community groups. The role of NGOs and other bottom-up non-governmental organizations needs to be supported by all parties. This is where the role of environmental education institutions is needed to voice concerns to the authorities through educational forums. For example, the Clean Ciliwung Movement is a community-based movement that cares about the quality of the Ciliwung River.

Stakeholders in the management of the Ciliwung River consist of various elements, ranging from the government, the business world, academics, and the community. The different backgrounds of these stakeholders also create differences in their respective roles and contributions in the management of the Ciliwung River.

The Role of the Government in Managing the Ciliwung River

The difference in authority between the central and regional governments also leads to differences in the authority structure and policies issued. Based on information from selected sources in Cisarua Subdistrict, Bogor Regency, West Java Province, it was found that in general, the subdistrict government coordinates with the regency government. Many activities carried out by the

subdistrict are the implementation of programs and activities initiated by the regency government. There are also quite a few programs and activities from ministries. In addition, there are also many activities initiated by the subdistrict government itself, such as the eco-mosque program, which focuses on emphasizing universal values to the community regarding the importance of maintaining environmental cleanliness. This is in accordance with religious teachings that maintaining cleanliness is part of faith.

The sub-district government, as part of the regional government, has the closest position in terms of interaction with other stakeholders. In this case, it is mainly with the community and the village government as part of the smallest regional government. In relation to the management of the Ciliwung River, the sub-district government works together with the village government in carrying out program activities. For example, activities to clean up the area around the watershed are carried out by involving the village government to mobilize the community around the area to participate in community service activities.

Interestingly, based on information from the Head of Cisarua Subdistrict, the community involvement does not only involve the lower-middle class community. It also involves the middle and upper classes. One example is religious leaders and artists from the capital city who are asked to participate as promoters in attracting the public to maintain the cleanliness of the river and the surrounding environment from trash. The involvement of these religious leaders in programs organized by the government shows good synergy between the government and the community. In this case, the role of the government as the holder of power and authority in managing the region is very strategic. The government must be active and take the initiative to establish close relationships with the community and listen to the needs and expectations of the community.

Regarding synergy between the central and regional governments, improvements are needed in implementing planned programs and activities. Based on information from community movement sources, several activities initiated by the central government have not been well disseminated to the local community. Most activities are carried out in a top-down manner, meaning that the community is directly invited to participate in the activities. An example of this is the use of banners to signal the start of a program, even though the community does not yet understand what the program is and what role they are expected to play.

Community Movement in the Management of the Ciliwung River

Gerakan Ciliwung Bersih (GCB) or Clean Ciliwung Movement is a non-governmental organization that cares about the preservation of the Ciliwung River. GCB was established by the Governor of DKI Jakarta in 1989 with the aim of raising public awareness to care more about the cleanliness of the Ciliwung River and to work together to maintain the cleanliness of the Ciliwung River. The Ciliwung River stretches from West Java Province to DKI Jakarta Province, so there are many Clean Ciliwung communities that can oversee the cleanliness of the Ciliwung River. The Clean Ciliwung Movement has contributed significantly to the transformation of the Ciliwung River into a cleaner river that is friendly to river biota and downstream biota, such as shrimp, lobsters, and even turtles. GCB is an organization that mobilizes public awareness alongside other stakeholders. GCB's vision is to make the Ciliwung River clean and usable again for various activities, such as drinking water sources, tourism, and transportation.

GCB's mission is: (1) To increase public awareness and action to tackle Ciliwung issues; (2) To facilitate cooperation between various parties and build partnerships towards a clean Ciliwung; (3) Supporting policies to improve water quality with community participation and creativity to reduce pollution; (4) Encouraging increased river conservation and cleanliness efforts in the upper reaches of the Ciliwung River. Based on interviews with GCB informants, it was mentioned that the Ciliwung River is a source of drinking water. "At that time, we at the Clean Ciliwung Movement felt that the clean river program could not only be top-down from the government, but we needed to establish an institution that would serve as a forum". Furthermore, it was said that GCB is a platform that can bridge all parties, including the central government, local government, non-governmental organizations, academics, and community groups. The Clean Ciliwung Movement collaborates with relevant parties such as the government, private sector, and community groups.

The synergies carried out by GCB in river management include: (1) The establishment of institutions initiated by the government, such as the Clean Ciliwung Movement, which consists of

various multi-stakeholders; (2) Collaboration with multi-stakeholder partners, including the mass media; (3) Empowering the community to care for rivers; (4) Providing rewards and punishments for all communities involved in river management; (5) Ecosystem-based Watershed Management: Ecosystem restoration, water reserve recovery, watershed landscape beautification.

In addition to support government programs, communities in the upstream area also carry out many self-funded activities, in the sense that they initiate activities that support the preservation of the Ciliwung River environment. If there is a need for funds for these activities, they usually work together to find a solution by contributing directly through material donations from the community. The drive to carry out these independent activities is actively supported by Ciliwung-focused communities such as *Penggiat Pelestari Lingkungan (Pepeling)* or Environmental Community. The communities realize that the most important thing to maintain the sustainability of the river environment is to educate the community to understand the importance of managing their own waste by not throwing it into the river and by managing it through methods such as composting and the 3Rs (Reduce, Reuse, Recycle).

The Role of the Business World in Managing the Ciliwung River

One of the roles of the business world is to support the government in preserving rivers by managing areas around rivers that can become tourist attractions through regional management. The upper reaches of the Ciliwung River in the *Puncak* area of Bogor Regency are a particular attraction. Given the geographical conditions of the area, which is located at a high altitude and has a very cool climate, it is certainly attractive for the business world to invest its capital there. The involvement of the business sector in the management of the Ciliwung River is undeniably very helpful and influential in improving the quality of river basin management. Furthermore, this collaboration between the business sector and the local government is not limited to the two parties; it can also extend to the local community, who benefit from the opportunity to earn income from the development of the tourist area.

By providing opportunities for local communities to participate in managing tourist areas through the opening of toilet facilities and cleaning up lake areas, it shows that there is good synergy between the business world, government, and community in managing the river environment. This synergy will indicate that the business world, government, and community share the same interests, namely to maintain the quality of the river environment, improve the community's welfare and income, and provide profitable investment opportunities for the business world. This spirit of synergy is in line with the concept of sustainable development, where the focus is not only on creating economic growth, but also on social and environmental development.

Analysis of Inter-Actor Relations between the Government, Private Sector, NGOs, Academics, and the Media

Synergy between actors is an important factor in the successful sustainable management of the Ciliwung River. Based on the results of the study, the pattern of relations between actors, including the government, private sector, civil society organizations, academics, and the media, shows complex dynamics that are not yet fully integrated. This complexity arises due to differences in institutional mandates, institutional interests, and uneven communication capacities.

In general, the governance of the Ciliwung River is still dominated by the government as the policy controller, with NGOs as the most active social connectors, academics as sources of knowledge, the private sector as limited supporters, and the media as enforcers of transparency. Each actor has different contributions and challenges in building collaborative governance.

Government: Dominant Actor but Prone to Fragmentation

The government occupies the most dominant position in the management of the Ciliwung River because it has formal authority, resources, and policy capacity. Regulations such as Government Regulation No. 38 of 2011 concerning Rivers and Government Regulation No. 26 of 2008 concerning the National Spatial Plan provide a legal basis that gives the government strong legitimacy.

However, this dominance does not always go hand in hand with effectiveness. Coordination between agencies—between the central government, provinces, and districts/cities—is still weak and often overlapping. Programs for riverbank management, waste control, and conservation often run

independently without a clear collaborative framework. The government tends to centralize control but fails to create cross-sectoral integration. The government's strengths lie in its regulatory capacity and resources, while its weaknesses lie in its lack of horizontal coordination and flexibility in cross-regional communication. The government is also the actor that most often faces public and political pressure because it is the party most responsible for the results of environmental management.

Private Sector: Great Potential but Still Playing a Philanthropic Role

The private sector has significant resource and technology potential to support the management of the Ciliwung River, but its involvement is still limited to corporate social responsibility (CSR) activities. Collaborations between companies such as Indofood, Nestlé, and Palyja with the Clean Ciliwung Movement (GCB) are more oriented towards campaigns and symbolic activities. The private sector has yet to enter the realm of strategic policy or long-term investment in environmentally friendly infrastructure.

The lack of incentives from the government and the absence of a solid public-private partnership mechanism have resulted in the private sector playing more of a supporting role rather than a leading one. On the other hand, companies face high external pressure from public opinion and the obligation to comply with environmental regulations. This pressure can be an opportunity if it is directed through green investment policies, but as long as there is no clear policy framework, the role of the private sector will remain marginal and defensive.

Non-Governmental Organizations (NGOs): Social Connectors and Drivers of Collaboration

NGOs occupy the strongest position in building bridges of communication between the community and the government. The Clean Ciliwung Movement (GCB), *Pepeling*, and various local communities have proven their ability to encourage citizen participation and build collective awareness of environmental issues. Through four main strategies—advocacy, community organizing, capacity building, and network development—NGOs have become the most consistent social drivers in maintaining the continuity of environmental action.

They work from the bottom up, using a participatory approach that encourages communities to not only be recipients of programs, but also key actors in conservation. The main weakness of NGOs lies in their limited financial and institutional resources. However, compared to other actors, NGOs have the highest collaborative capacity, as they can communicate across groups, bridge conflicts of interest, and build social trust, which is the foundation for long-term collaboration.

Academia: A Source of Knowledge that is Not Well Connected to Policy

Academia play an important role in producing scientific data, environmental management models, and evidence-based policy recommendations. Universities such as IPB University and other universities around Jabodetabek have contributed greatly to research and community assistance. However, academic involvement often stops at the research stage, while the process of translating knowledge into public policy remains limited.

The lack of knowledge brokerage mechanisms means that research results are not integrated into government decision-making processes. In the context of collaboration, academics have strengths in knowledge production but weaknesses in dissemination and policy advocacy. Collaboration with NGOs and the government is key to ensuring that research results are implemented and do not remain merely academic discourse.

Media: Strengthening Public Awareness and Positive Pressure on Other Actors

The media plays an important role in framing environmental issues and mobilizing public opinion. Through news reports and campaigns, the media shapes public perceptions about the importance of protecting rivers and the environment (Besley & Shanahan, 2004; Cox, 2010; Pezzullo & Cox, 2018). In the context of Ciliwung, the media serves as a conduit for messages between NGOs, the government, and the community, as well as providing moral pressure on actors who lack transparency.

The media also encourages public accountability by monitoring and highlighting inconsistent environmental policies. The weakness of the media is its inconsistent involvement, as attention to environmental issues often increases only when major events occur (floods, water crises, land

conflicts). Nevertheless, the role of the media remains important as an actor that strengthens transparency and public communication, especially when collaborating with NGOs in environmental awareness campaigns.

For young generation, the level of their awareness determines from how they gather information through social media. They leverage social media, especially Instagram, to stay informed and gain deeper insights from educational sources. Visual educational content and educator support inspire environmentally friendly attitudes and actions, like reducing plastic and energy use (Lukman & Widagdo, 2025).

Relationship Patterns and Power Dynamics

The relationship between actors in the management of the Ciliwung River forms an asymmetrical but interdependent structure. The government holds structural control, but its effectiveness depends on social support from NGOs and moral pressure from the media. Academics serve as a source of scientific legitimacy, while the private sector has great financial potential but still operates pragmatically.

From this overall dynamic, it can be concluded that the government remains the dominant actor in the management of the Ciliwung River because it has regulatory power and significant resources, but it is still vulnerable to policy fragmentation and high public pressure. The private sector has great potential to support sustainable environmental management, but its role is still the weakest in terms of collaboration because its involvement has not been institutionalized strategically. In contrast, NGOs have emerged as the most effective actors in connecting various sectors, thanks to their social legitimacy and communication flexibility.

Academics have strength in terms of knowledge and scientific data production but are still weak in advocacy and translating research results into public policy. Meanwhile, the media has become the most influential actor in shaping social awareness and accountability through its role as a watchdog, information disseminator, and driver of public participation in environmental issues related to the Ciliwung River.

The following is an analysis of internal and external factors (IFAS-EFAS) from various maps of the strengths and weaknesses of the government, private sector, NGOs, and media above.

Table 1. Internal Factors Analysis (IFAS)

Internal Factors	Weight	Rating	Score	Information
The existence of collaborative initiatives such as GCB which involve multiple actors	0.15	4	0.60	Main strength (NGO as social connector)
Government commitment to environmental policies (SDGs, PP No. 38/2011)	0.10	3	0.30	Strong regulation but weak coordination
Active community participation and community support	0.10	3	0.30	High social capital at the local level
Academic support in environmental research and literacy	0.08	3	0.24	High knowledge, low advocacy
The role of media in environmental campaigns and education	0.07	3	0.21	Positive pressure and public transparency
Subtotal Strengths	0.50		1.65	
Cross-agency coordination is still weak and sectoral	0.15	2	0.30	The main weakness of the government

NGO dependence on short-term funding sources	0.10	2	0.20	Structural weaknesses of NGOs
The role of the private sector has not been institutionalized	0.08	2	0.16	Involvement is still CSR in nature
Weak mechanism <i>knowledge sharing</i> inter-actor	0.07	2	0.14	Academics–government disconnect
Lack of integration of media campaigns and public policy	0.10	2	0.20	Fluctuating media attention
Subtotal Weaknesses	0.50		1.00	
Total IFAS	1.00		2.65	Internal position: moderate-strong

Table 2. External Factors Analysis (EFAS)

External Factors	Weight	Rating	Score	Information
The global SDGs agenda and increasing public awareness	0.15	4	0.60	Great opportunity for synergy
Support from international donors and partners	0.10	3	0.30	Financial and institutional opportunities
Technological innovation and waste management	0.10	3	0.30	Private and academic opportunities
Potential for research collaboration and cross-actor forums	0.10	3	0.30	Strategic opportunities for academics–NGOs
Increasing public pressure on environmental issues	0.05	3	0.15	Media opportunities to expand influence
Subtotal Opportunities	0.50		1.65	
Rapid urbanization and land conversion	0.15	2	0.30	Major threats to environmental carrying capacity
Climate change and upstream degradation	0.10	2	0.20	Permanent ecological threat
Conflict of authority between administrative regions	0.10	2	0.20	Government coordination obstacles
Fluctuations in political commitment to environmental issues	0.10	2	0.20	Pressure on policy
Dependence on short-term donor projects	0.05	2	0.10	Threats to NGO sustainability

Subtotal Threats	0.50		1.00	
Total EFAS	1.00		2.65	External position: moderate-strong

The results of the IFAS-EFAS analysis show that the collaborative governance of the Ciliwung River is in quadrant II (growth-stability), which means that internal strengths and external opportunities are relatively balanced. This condition provides space for strengthening cross-actor synergies through more systematic integrative and collaborative strategies. The government emerges as the strongest actor, mainly due to its regulatory legitimacy and large resource capacity, but it is still vulnerable to bureaucratic and political pressures that hinder cross-sector coordination.

The private sector is the weakest actor in terms of collaboration, as its involvement is still philanthropic and not yet institutionalized; therefore, incentives and regulations are needed to encourage more active participation in environmental management. On the other hand, NGOs appear to be the most effective actors in building social synergy and collaborative networks, as they are able to bridge communication between the community, government, and other parties through a participatory approach. Academics serve as a source of scientific legitimacy, but still need to improve their capacity to translate research results into operational public policy. Meanwhile, the media plays a strategic role as a positive pressure enforcer and guardian of transparency, ensuring accountability among actors is maintained and shaping broader public awareness of environmental issues and the sustainability of the Ciliwung River.

The management of the Ciliwung River is an integral part of overall environmental management. In overcoming the problem of synergy between stakeholders in the management of the Ciliwung River, as explained and described in the previous section, a strategy is needed that can unite all relevant parties in order to realize targeted management and support the achievement of river management objectives, namely creating a clean and high-quality river area.

The Whole of Government (WoG) perspective is one solution recommended in this study. This is because the fundamental problem that must be solved is how to connect all stakeholders involved in river management so that they can share a common goal and clearly divide their respective roles without overlap. Within the WoG framework, the communication process between river management stakeholders mainly relates to policy coordination, policy integration, and policy convergence. In this case, the government plays a significant role in determining the direction of policies that support the achievement of activity objectives, namely to preserve a conducive and ecologically minded river environment.

Based on data obtained in the field, this study argues that the appropriate management model for WoG-based river management is to strengthen coordination between institutions. In this case, GCB serves as a forum that can bridge the heterogeneity of existing stakeholders. However, strengthening coordination among these stakeholders has not yet been successful. This is because activities are still focused on strengthening community involvement through river activist communities. The business world and academia have not been encouraged to become more involved in river management.

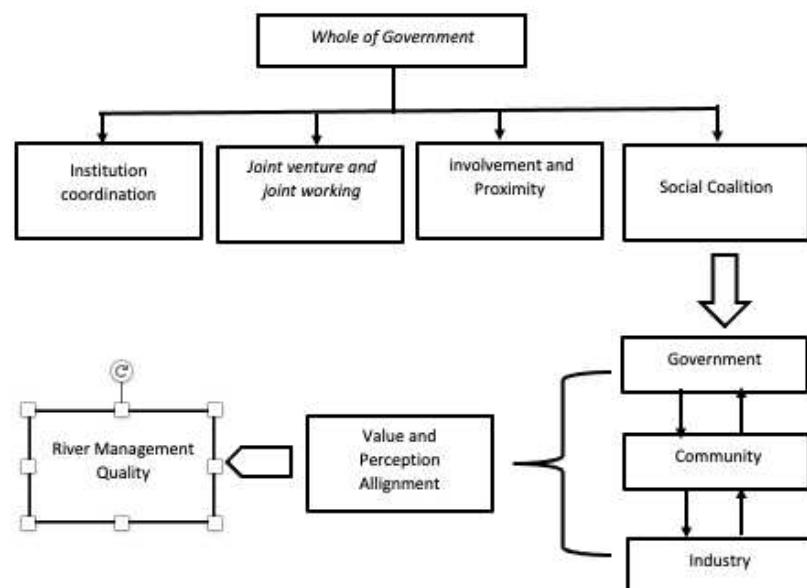
Coordination as one category of institutional relations in WoG can be strengthened through activities such as dialogue, as stated by Perry (LAN 2017), where dialogue becomes a forum for exchanging information between stakeholders. In this case, the government can open public spaces that can be accessed by communities living in the upstream and downstream areas of rivers so that they can be educated and approached regarding river environmental management and exchange information about the problems faced by the community, especially regarding waste management, which has mostly been dumped in rivers. What causes this to happen and what can the government do to encourage the community to change their behavior.

The second strategy in river management from the WoG perspective is integration. The integration carried out here takes the form of joint working and joint ventures. Joint working is carried out in relation to the implementation of incidental and short-term government programs. An example is the Clean River Program, which involves government and community elements around the riverbank area. Meanwhile, joint ventures are a form of cooperation that focuses on long-term

planning, taking the form of cooperation on large projects or programs that are the main concern of one of the stakeholders. In this case, the government can form a joint venture with a consortium of companies to invest capital in providing public and social facilities around the river basin.

This is in order to make the river basin an attractive area that needs to be kept clean and comfortable, so that undesirable behaviors such as littering in the river can be prevented. Another form of joint venture that can be developed is to turn the river area into a rafting tourist area. This will certainly attract more tourists and encourage the community to maintain the quality of the river flow in their area because, at the same time, the community will also have the opportunity to increase their income with the opening of this tourist attraction.

Furthermore, the strategy in the stakeholder relationship model from the WoG perspective is closeness and involvement. This form of relationship is carried out through a merger, meaning integration into a new structure. The existence of GCB as an organization that accommodates various stakeholder backgrounds is an example where the different backgrounds of stakeholders from the government, academia, the business world, and the community are combined into a new structure, namely GCB. The existence of GCB in realizing a clean and high-quality Ciliwung River is carried out within the framework of closeness and active involvement of all relevant stakeholders.



Source: Hidayaturahmi et al, 2020

Based on the figure above, the river management model initiated in this study from the WoG perspective is through the formation of a social coalition. The formation of a social coalition is carried out by aligning the values and perceptions of all stakeholders involved, namely the government, the community, and the business world, in seeing the strategic importance of river environmental quality. A more intense and clear form of coordination in the division of roles will also support this process of aligning values and perceptions. Values and perceptions can be used as objectives in educating the community to fully understand the importance of river cleanliness and the impact of waste disposal in river basins. Thus, the formation of a social coalition is the recommended model for managing the Ciliwung River in this study, involving stakeholders from the government, community, and business sectors. This social coalition creates synergy among stakeholders to align their values and perceptions in managing the river.

Conclusions

Based on the analysis results, it can be concluded that the management of the Ciliwung River does not yet fully reflect integrated collaborative governance. The relationship between actors, namely the government, the private sector, NGOs, academics, and the media, is still partial, with a level of coordination that is not yet optimal. The government remains the dominant actor due to its

regulatory power and resources, but it still faces policy fragmentation and bureaucratic pressures that weaken the effectiveness of program implementation. The private sector has great potential in supporting funding and technological innovation, but its involvement is still philanthropic and not yet institutionalized in the environmental policy system.

In contrast, NGOs have Strengthening coordination between institutions Joint ventures and joint working Proximity and involvement Formation of a social coalition Alignment of values and perceptions Whole of Government government Business world Community River Environmental Quality emerged as the most effective actors in building social networks and bridging interests between actors, while academics provide scientific legitimacy but remain weak in policy advocacy. The media plays an important role in shaping public awareness and strengthening positive pressure on the government and the private sector to be more accountable in environmental management.

The policy implications of these findings suggest that the Whole of Government (WoG) approach is the most relevant framework for strengthening synergies between actors. This approach emphasizes the importance of cross-agency coordination, policy integration, and open communication between the government and other stakeholders. The government needs to strengthen the role of permanent multi-actor forums, such as the Clean Ciliwung Movement (GCB), as a platform for cross-sector and cross-regional coordination.

Incentives for the private sector in green investment, improved knowledge brokerage mechanisms between academics and policymakers, and continued collaboration with the media and NGOs need to be prioritized to ensure sustainable river management. Thus, the success of Ciliwung River governance is not only determined by technical capacity, but also by the ability of all actors to share values, strengthen communication, and build social coalitions in realizing a clean, healthy, and sustainable river ecosystem.

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