

SYNERGY OF COOPERATION BETWEEN LOCAL GOVERNMENT IN MANAGEMENT OF WASTE HANDLING OF CIKAPUNDUNG RIVER

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A B S T R A C T

Cikapundung river as common property which can support social and economy activities of the community. Cikapundung river has many functions, unfortunately, Cikapundung River is only used as a means of waste disposal, both domestic and industrial waste. In fact, Cikapundung function can be more optimized and sustainable, so it can provide economic benefits for commercial activities, such as tourism facilities, water attractions, raw water provider, agricultural irrigation facilities and as an energy source. In Indonesia, the river management was not performed optimally. The case of Cikapundung River recently in 2016, because of the piles of garbage that cause the water of Cikapundung River has overflowed into the street and residential with foul odors. These conditions made the local government accused each other related to who should be responsible for this issue. Though later the local government finally, assisted by police and military all together clean up the Cikapundung River. The occurrence of cases of piles of garbage in Cikapundung River shows that local government is not really serious in the management of the river. The trash along in the river mostly not directly lifted, left to flow and carried away so that accumulate at a point in Cikapundung River. The results of research showed that the problem of handling waste on the river is caused by poor management of the government in handling the river, the lack of clarity in the river's main stream management division, small and mid, the central government does not supervise the performance of the local government as a subordinate institution, the absence of law enforcement for the companies that dump waste into the rivers, and the lack of public awareness of protecting the environment.

KEYWORDS : local government, management of the river, public awareness, environment

INTRODUCTION

Cikapundung River is one of the longest river at West Java, its length extending from the upstream to the downstream about 28 kilometers. Cikapundung River across 11 districts in three areas, namely West Bandung Regency, Bandung Regency, and Bandung City¹. Cikapundung River upstream areas located in the area Cigulung and Cikapundung, Maribaya, West Bandung Regency. While the central part including Cikapundung Gandok and Cikapundung Pasir Luyu located in the city of Bandung. Cikapundung River disemboage in the Citarum River in Bale Endah, Bandung regency and became one of the 13 main tributaries that supply water for the Citarum River.

Cikapundung watersheds is one part of the Citarum, the largest and longest river in West Java Province. Cikapundung watershed lies in Bandung Basin, and has a catchment area of 14.211 ha. Cikapundung watershed, since long ago is a river that has many functions such as the main drainage in downtown Bandung. Until now, this Cikapundung watershed are still very potential for providers of raw water for the needs of the population, but unfortunately the water flow in the Cikapundung River has degraded each month up to 20-30% of normal debit (Bachrein, 2012: 228).

Progress of development, modernization, economic growth and population growth has indirectly impact on environmental conservation and water quality in the Cikapundung River. Today, Cikapundung River has a number of problems, the most crucial among it is the problem of waste. Cikapundung had been the source of life which provided raw water for local communities and serves as the downtown's main drainage. Now, the water quality of Cikapundung is no longer a source of water for the community because the water has turned murky and smelly, and on the surface of the river seen many piles of garbage that is not nice to see.

According to the Environmental Preservation Unit (BPLHD) of West Java Province, the pollution of Cikapundung River, 80% of which are caused by domestic waste and the rest are industries that dispose of the hazardous and toxic substances into the river. Subsequently reported also that of several rivers located in Citarum, Cikapundung is the river that has the highest pollution levels. Cikapundung River water pollution are caused by the density of residential population that occupying the riverbanks. Beside that, increasing economic and industrial activity contributes water pollution in the Cikapundung river.

¹ <http://citarum.org/info-citarum/berita-artikel/1174-gambaran-umum-sungai-cikapundung.htm>

Cikapundung River pollution actually begins from the weakness of government regulations on the management of the river. According to Government Regulation No. 38 Year 2011 and Government Regulation No. 37 of 2012, river management is become responsibility of the government based on each administrative area. This regulation still considered weak because Cikapundung river management in fact done partially by the respective district/city. There is no synergistic cooperation in the management of river, including the weak supervision of the Provincial Government related to the management of the river that cuts across districts/cities in provinces. The river management is done by the respective local governments without the cooperation and synergy with river management program that undertaken by other regional governments, so that handling of Cikapundung River becomes ineffective. But when there is a problem of environmental pollution in the river, the local government (Bandung Regency, West Bandung Regency, and Bandung City) often occurs mutual accusations of each other. Ineffectiveness of the management of the river makes the government withdrew the authority of local government district/city related to watershed management. However, even though the rules have changed, the problem of pollution in the Cikapundung river still happens and the river management remain ineffective. In connection with the issue, this study aims to determine the factors that lead to ineffective management of river basins and analyze the management of transboundary rivers that need to be implemented by the government in connection with the management of Cikapundung River.

The research methods in this study is a qualitative research that try to explain how the river management should be implemented by the government. Data collection techniques in this study were obtained from observations and interviews as the primary data, and the use of government data and reports in the mass media as a secondary data. The collected data is processed and analyzed through the stages of coding, by doing categorization, selection, reduction, and interpretation. In qualitative research, data coding as an important part of the process of research analysis and determine the quality of the abstraction of the research results (Saldana, 2009). Data coding in this study conducted in three stages, namely open coding is coding on each data and information openly, axial code is the encoding process in a focused and breaks it down by categories, and the last stage is to do selective code by selecting the code that will be used and discard the data and information that are considered irrelevant. Data and information that have been selected and then interpreted to be drawn a conclusion of the study.

RESULT AND DISCUSSION

Cikapundung river is one of the most vital natural resource to provide water for the community to meet various needs of life. Therefore, it is the common

duty of both governments and communities to constantly maintain and protect the water quality. The water quality of Cikapundung River is influenced by various activities that undertaken by human around, so has the impact on river pollution. Every human activity generates waste and flows into the river will affect the quality of water in it.

According to Suciati in her dissertation entitled Water Resources Management Authority in the River Region in Perspective of Regional Autonomy (2010), the Indonesia Government regulation has prescribe authority division of water resources in the basin between the central government and local governments based on River Regional Unit (SWS). With the division of authority, then the policy setting, the pattern of management, planning, execution, set permissions, forming coordination, facilitate the residential of disputes between institutions, to ensure the effectiveness and efficiency of water management in each region becomes clear. But the idea of Suciati is not entirely true, because in fact that the maintenance of existing water resources in the river Cikapundung up to now has not functioned optimally.

Damage and pollution in some rivers, also in Cikapundung River caused by the weakness of government regulation. The following table describes the authority of the central government, provincial government and district/city governments in the management of river.

Table 1. The Regulations concerning the authority of Central Government, Provincial and District / Municipal in River Management

Act No. 7 Year 2004	<ul style="list-style-type: none"> - The authority of the government is to set the pattern, planning and implementation of water resources management on the cross-province river area, cross-country river areas, and nationally strategic river area; - The authority of the provincial government is to set the pattern, planning and implementation of water resources management on cross-district/city river area in one province; - The authority of the district/city government is to set the pattern, planning and implementation of water resources management in the region of 1 (one) district / city;
Government Regulation No. 38 Year 2011 on the River	<ul style="list-style-type: none"> - River management authority implemented by the government, provincial government and district/city - Management of the river include: (a). river conservation; (b). river development; and (c). control of water river damage. - The Management of the river conducted by: <ol style="list-style-type: none"> a. The minister, to the river on the cross-province river area, cross-country river areas, and nationally strategic river area; b. Governor, to the river on inter-district/city river area in one province; and c. Regent/mayor, to the river in the region of 1 (one) district / city.

<p>Government Regulation No. 37 Year 2012 on The River Watershed Management</p>	<ul style="list-style-type: none"> - Watershed management is a human effort to regulate interrelationship between natural resources with humans in the watershed and all their activities, in order to create sustainability and harmony of the ecosystem and increase the sustainability of natural resources benefit for human. - Implementation of watershed management become authority and responsibility of: <ul style="list-style-type: none"> a. Minister and the relevant minister according to authority on cross-country and cross-province's watershed; b. governor accordance with its authority to watersheds in the province and/or inter-district/city; and c. regent/mayor in accordance with its authority to watershed within one district/city. - In the case of the provincial government and/or the district/city dereliction of the authority in watershed management, implementation is carried out by the Government with funding sourced from Budgets areas related. - Minister, governor or regent / mayor carry out monitoring and evaluation of the implementation of watershed management activities in accordance with their authority. - Ministers, governors and regents / mayors implement guidance and supervision of watershed management activities in accordance with their authority. - Sources of funds for the implementation of watershed management can be derived from state budget, budget, grants and / or other funding sources which is not binding in accordance with the legislation.
<p>Act No. 23 Year 2014 On Local Government</p>	<p>OCURRED CHANGES ON THE RIVER MANAGEMENT AUTHORITY</p> <ul style="list-style-type: none"> - The authority of watershed management includes: <ul style="list-style-type: none"> a. The central government have authorities in the implementation of watershed management b. The Provincial Government has authority to carry out management to watersheds in the province and / or inter-district / city and within one district / city - The authority of district / city associated with the river only related to: <ul style="list-style-type: none"> a. water resources management and protection structure in the river area within 1 (one) district / city; b. Management and development of drainage system which is connected directly to the river in the district / city c. Issuance of a business license and operation of river transport route license.

Under Law No. 7 of 2004, Government Regulation No. 38 Year 2011 and Government Regulation No. 37 of 2012, Government give the power or authority of river management from planning, implementation, monitoring, evaluation, guidance and supervision to the district/city government, without any mechanisms for supervision and accountability of the river management

authority by the district / city governments to the central government and the provincial government as the representative of the central government. The absence of government supervision mechanisms and accountability of local governments to the higher government being a loophole for local government by infringing and disobey the law, so that the management of Cikapundung River is not optimal. Disobedience of the law is getting worse because of the supervision and coordination that conducted by the provincial government in the management of trans-boundary river district / city is very weak, caused the damage of Cikapundung River becomes increasingly complex and diverse. Without supervision and accountability mechanisms, making the district / city government is not serious in implementation of its authority.

District / city government considers Cikapundung management is not a priority, although Cikapundung River is a vital water resources to provide raw water for the surrounding area. In fact, Cikapundung River became a waste disposal site make the water quality got more polluted. Cikapundung River water pollution are caused by high content of waste from livestock waste on the riverbank, the agricultural wastes are not environmentally friendly, and also pollution caused by indiscriminate disposal of household waste and industrial waste. The high sedimentation in downstream areas and the number of tree logging due to land conversion also cause Cikapundung water quality decreased. Cikapundung only be used as a waste disposal site for some people who are not responsible, both household waste, industrial waste and agricultural waste, as well as the act of some people who throw litter so that eventually flows into the river. The local government let it even do not care in maintaining the cleanliness and handling the river pollution.

Littering behavior seen in mapping the accumulation of garbage along the riverbank Cikapundung region, which are generally located in densely populated residential areas. Densely populated residential along the riverbanks Cikapundung from West Bandung Regency, Bandung and ends in Bandung regency. Figure 1 shows a map of the water flow of Cikapundung River and mapping the accumulation of garbage along the Riverbank. Seen from figure 1, river pollution caused by household waste and pile of garbage are found in the administrative region of Bandung City. According to research conducted by Bachrein (2012: 228), Cikapundung river divides the city of Bandung along 15.50 km, which is 10.57 km of them or 68.20% of the total length is already a densely populated residential area and filled with buildings.

The number of residential in the area along the riverbanks, show violation and disobedience of the local governments to the spatial regulations, in the context of the management of watershed areas (DAS). Most of the land on the riverbanks which should not be occupied, in fact a lot of land has been certified, including illegal slums.

Although the central and local governments have cooperated in the effort to control the damage to the basin, but such action is only partially and

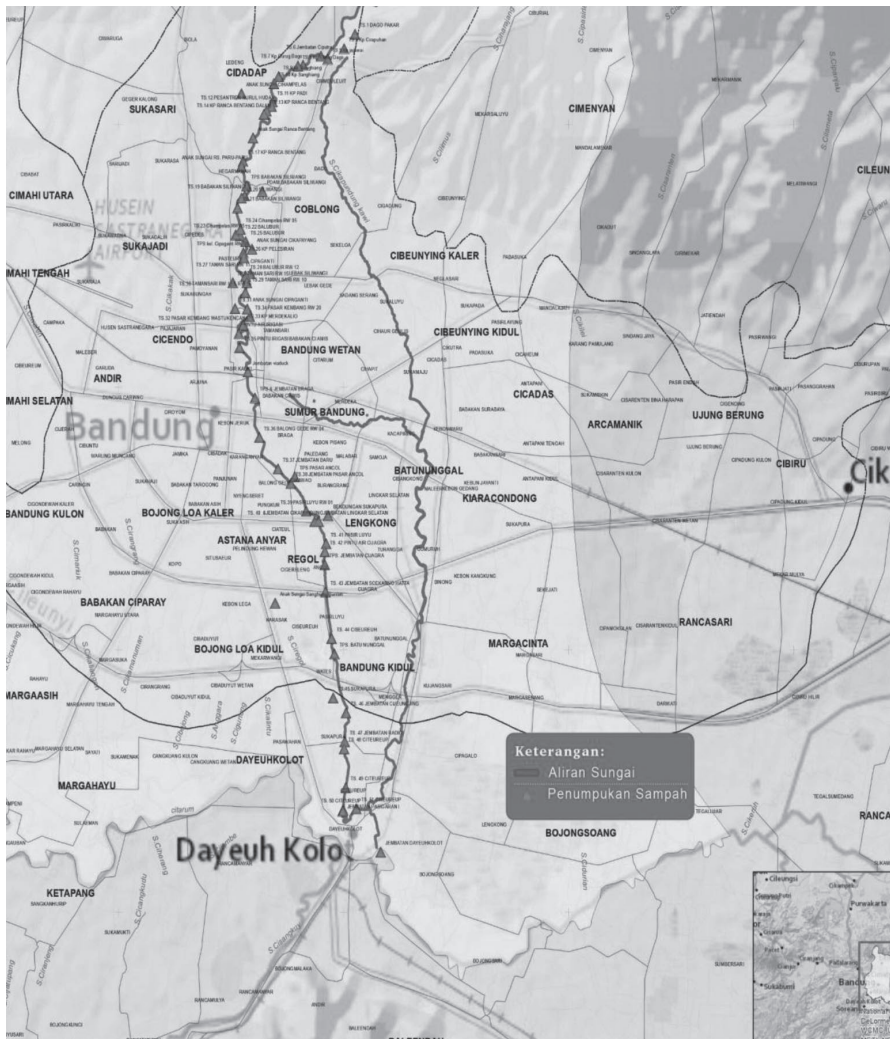


Figure 1. Map of Cikapundung Watershed and Mapping Stacking of Waste
Source : www.citarum.org

has not demonstrated a well-integrated cooperation among local government administrative area that crossed by the Cikapundung River. Thus, the management of the river by the government (central and local) felt not quite optimal. Cikapundung River pollution problems are still handled by the ability of each local government resources. Some river damage control activities that have been done in collaboration with the provincial government and the central government through BBWS Citarum (Central River Region), one of the activities that have been done are normalized Cikapundung River in 2015 in Kampung Cipurut, Bojongsong Village, Bandung Regency. Earlier, in 2014, Cikapundung River normalization activities have been carried by BBWS Citarum in Dayeuh Kolot District, Bandung Regency.



Figure 2. Dredging Sedimentation on Normalization Watershed Cikapundung project in 2015
Sumber : <http://www.pikiran-rakyat.com>

While efforts to control Cikapundung River in the city of Bandung is done through Cikapundung Restoration Program II (Terrace Cikapundung). This restoration program is an effort to organize the border region along the Cikapundung River to accommodate social activities and to explore the potential around. The restoration of Cikapundung river with expected availability of accomodative and representative facilities and infrastructure, both from the aspect of function and aesthetics, to support clean Cikapundung program. Implementation Cikapundung river restoration program aims to protect water quality, flood control, structuring and improving the function of the riverbanks which has a social function as a means for people to interact². Restoration Program is an integrated program and the cooperation of the Government of Bandung City with the Directorate General of Water Resources, Ministry of Public Works and Public Housing (PUPR ministry) through BBWS Citarum.

Despite control efforts have been done but cases of water pollution in the Cikapundung river is still happened. Water pollution in the Cikapundung River often lead to disputes between local governments and accusation as the sender of the trash in the Cikapundung River. The following table presents several cases of Cikapundung river pollution that ever covered by the mass media.

The management of rivers that have not optimal made the central government withdraw the authority of the regency / city government, according to Act No. 23 of 2014, clearly written that the watershed management authority become the authority and responsibility of the central government

² <http://sda.pu.go.id/pages/posts/Restorasi-Sungai-Cikapundung-Upaya-Penataan-Kawasan-Sempadan-Sungai>, diakses tanggal 8 Februari 2017



Figure 3. Results Restoration Program Cikapundung River at Terrace Cikapundung Bandung

Table 2. Cikapundung River Pollution Case

Pollution Case	Time	Affected Area
cow manure waste pollution in the river upstream Cikapundung, Cibodas village, subdistrict of Lembang, West Bandung Regency	2011	disturb the clean Cikapundung program implemented by the Government of Bandung City
Overflowing Trash in Cikapundung river, in Kampung Cijagra, Bojong Soang, Bandung Regency	2016	Bandung is regarded as the sender city that caused the accumulation of garbage in the Cikapundung river, Bandung regency, West Java Province issued a budget, in cooperation with the city of Bandung to help the Government of Bandung Regency to transport the waste out of the Cikapundung River

and provincial. According to the law (see table 1), the central government has the authority in the implementation of watershed management, and the provincial government has the authority to implement a cross-area management of districts / cities and in the Regional county / city within one (1) Region provinces. Meanwhile, the district / city government only has the authority related:

- a. water resources management and protection structure in the river area within 1 (one) district / city;
- b. Management and development of drainage system which is connected directly to the river in the district / city
- c. Issuance of a business license and operation of river transport route license.



Figure 3. Overflowing Trash in Kampung Cijagra, Bandung regency
Source: www.pikiran-rakyat.com

With the change in the rules regarding the authority of district / city governments in the management of the river are not necessarily being a solution to the problem of managing Cikapundung River. Act No. 23 of 2014 raises new issues, local government (district / city) experiencing difficulties related to the management of water resources associated with the river. In the management of water resources, the district / city should coordinate with the two agencies, BBWS Citarum and related institutions in the province, in fact, bureaucratic job become sluggish in handling the affairs of the management of water resources.

Related to the problems with the management of the river, the government needs to consolidate with relevant agencies and involves multiple stakeholder to consider the management mechanism of Cikapundung River, ranging from upstream to downstream.. The government can not handle Cikapundung River without the involvement of multiple parties. However Cikapundung River as a common property natural resources must be protected and preserved its existence.

Table 3. Problem-Root of the Problem and Solution for Cikapundung River Management

Problem	Root of Problem	Solution
Cikapundung River management is still partial	The lack of clarity of authority in the management of river if handled respectively by the local government (district / city) or the management are handled directly by the central government	<ul style="list-style-type: none"> - Need for clarity of river management authority that does not quickly change - Need for integrated river management, build the institutional structure where the national government through its representatives in the province acts as coordinator, monitoring and evaluating the management of river basins
The increase in the volume of waste continuously	<ul style="list-style-type: none"> - local government's indecisiveness in implementing environmental protection rules and regulations of maintaining cleanliness (K3) - unawareness and ignorance of community and bad habits of throwing the garbage into the rivers 	<ul style="list-style-type: none"> - Enforcement of environmental laws and K3 - Establish partnerships with civic organizations in the community empowerment program in order to shape the behavior and culture of the people to keep the river for the common good - Establish a communal waste management in residential areas along the river Cikapundung
Pollution of rivers by industrial waste, agricultural and trade	<ul style="list-style-type: none"> - Lack of supervision of waste disposal by industrial, agricultural businesses, and farms - The absence of sanctions for businesses that contribute to environmental pollution 	Cooperation between sectors or relevant agencies

Cikapundung river actually has many functions including the preservation of the environment and ecosystem function, economic function which can provide economic benefits to communities and local government, as well as educational function. If the functions of these rivers are well utilized and developed undoubtedly will be a benefit to human life. Ecosystem function is where the river could provide raw water for living things around. Cikapundung river also has the function of preserving the environment such as the city's main drainage facilities and accommodate the overflow of rain water so as to prevent the floods that can harm humans. Cikapundung also has an economic function as a tourist attraction water, means of transport and can be used as a source of electricity generation. In addition, Cikapundung River also has the function of education. Cikapundung has a natural charm that quite beautiful, there are small waterfalls in some places and the river flows so swiftly. Research and education community can learn the geology of the river Cikapundung. Around Curug Dago, for example, we can learn about the lava, molten rock incandescent with temperatures over 1000 degrees to

reach the earth's surface, because of the volcanic eruption. Here the education community can learn about the breccias of volcanic material that resembles rock solid concrete, angular rock fragments, are found on the walls of the river and below the lava flow. Natural processes can be studied in the river, for example, the process of how the stone can be rounded, or a fist-sized or sand-sized stones can move from one place to another at downstream, carried away in the stream and how the marble-sized rock move in river. Cikapundung can be used as a terrestrial laboratory³.

The function of the river can be obtained from the management of the Cikapundung River. But unfortunately, until now the functions of Cikapundung river has not to be utilized properly. Cikapundung River only used as a waste disposal site by the public, industry, and farm businesses, so the water pollution becoming more serious. Very unfortunate if these functions are not utilized properly by the government, both central and regional governments.

Table 4. Optimization Functions, efforts should be made, and the parties involved in the management of Cikapundung River

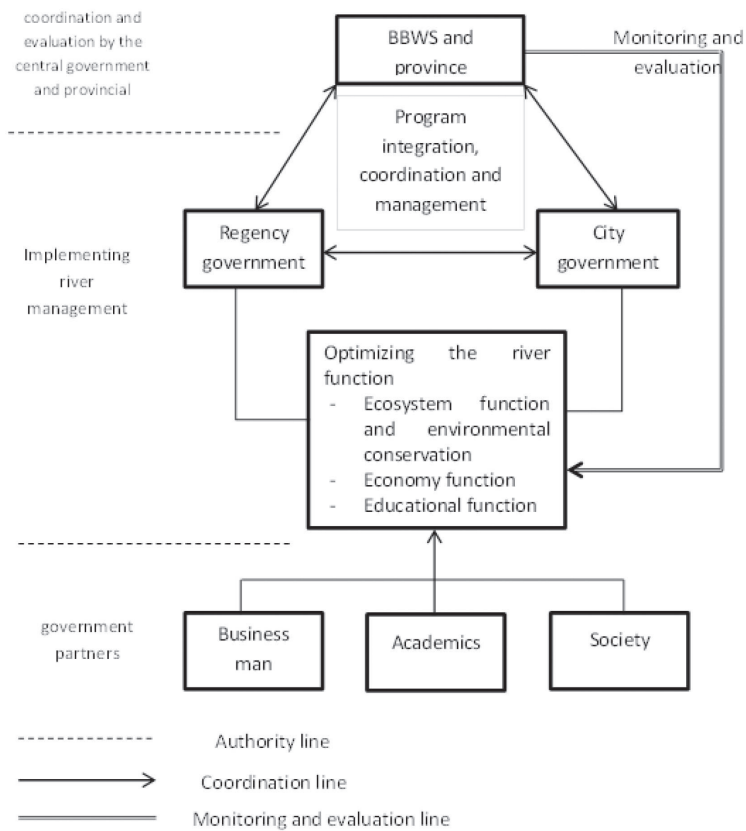
Object	Function Optimization	Efforts	Parties involved
CIKAPUNDUNG RIVER	Ecosystem services and environmental conservation	<ul style="list-style-type: none"> - Grand design of river management plan - Normalization of river water - restoration of the river for tourism - residential arrangement around the area along the river (build the river civilizations river orderly and caring environment) - Riverbanks sterilization from slum housing area (alternative choice) - Community empowerment in socialization and building a culture of people not to throw garbage into the rive - Law enforcement 	<ul style="list-style-type: none"> - Central government - Provincial government - Local government - Society and - Law enforcement
	Economical function	<ul style="list-style-type: none"> - Establish for tourism - Establish a means of river transportation - Developing irrigation facilities - Develop means of energy generation 	Local government and bussinesman
	Educational	river as an object of research	Local government

3 T.Bachtiar, anggota Masyarakat Geografi Indonesia dan Kelompok Riset Cekungan Bandung, <http://citarum.org/info-citarum/berita-artikel/641-lebih-dekat-dengan-sungai-cikapundung.html>, diakses tanggal 14 Februari 2017

But, of course, once again the management of this river needs to be done in an integrated and well coordinated between the central government and local governments, and the importance of multi-stakeholder engagement (excluding government). The involvement of multiple parties are presented in the following table 4

Cikapundung river management need to design a mechanism of tasks implementation and authority limits and patterns of synergistic cooperation between the central, provincial and local governments (regency/city) in an integrated management. Proposed management integration patterns such Cikapundung River can be seen in the picture below

Figure 4. Integrated Management of Cikapundung River



CONCLUSION

Cikapundung River Management can not be charged only to the government or local government, but there needs to be cooperation between the local government under the coordination of the central government and provincial government. In this case, it is necessary to do a comprehensive communication,

coordination and control together in Cikapundung river management. This is so that the Cikapundung river can be managed properly so that aspect of the duties, functions and even the budget of river management becomes clear and can be strengthened.

In the case of river management, need the involvement and cooperation among all the parties to cooperate synergistically. River handling that is integrated with other programs such as reforestation, waste handling and sedimentation. The Government may also involve the river caring community to be a partner in community empowerment program to maintain rivers and intensive socialization related to increased awareness and behavioral change for not littering and not letting it flowing into rivers, that will create a clean and beautiful river.

Revitalization of river functions are integrated in addition to the function of preserving the environment, economic functions, including educational function. Governments and communities build a commitment to improve discipline and care in protecting and maintaining the river. The role of the mass media is also very important in the socialization of river management and increase public awareness of the need to maintain the river water is clean, healthy and quality.

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