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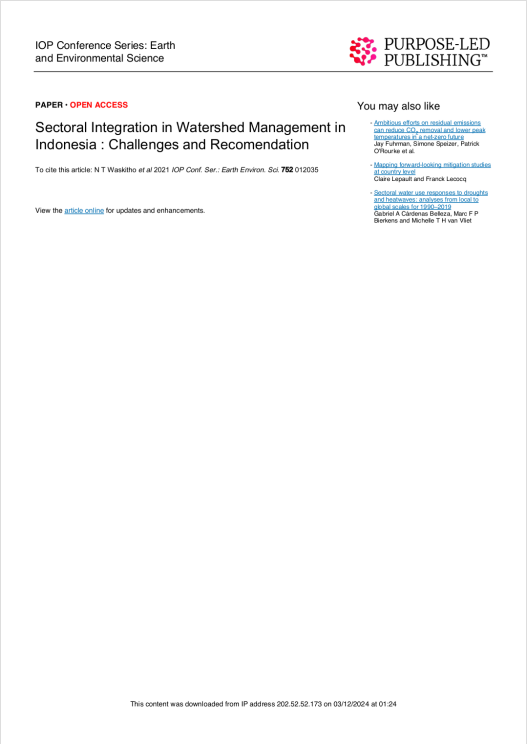

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Sectoral Integration in Watershed Management in Indonesia : Challenges and Recomendation

Sectoral Integration in Watershed Management in Indonesia : Challenges and Recomendation

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Abstract. The integration of watershed management in Indonesia is still far from what was expected. Sectoral integration is influenced by several factors such as communication, coordination, cooperation, policies and regulations. The lack of communication, the limited coordination and cooperation between sectors is a limitation in realizing integration between sectors. Policies reinforced by regional autonomy legislation hamper sectoral integration of watershed management. This article will explain why inter-sectors have not been successfully integrated in watershed management. The sector concept will clarify this situation. Sectoral integration in watershed management in Indonesia is a challenge for the government in this case the Ministry of Public Works and Public Housing, the Ministry of Environment and Forestry and the Ministry of State-owned enterprises. The existence of an institution that manages a Watershed will avoid overlapping programs so that it will greatly save the budget and improve the performance of the watershed.

1. Introduction

The watershed is a complex human-natural system because it involves various biogeophysical and socio-economic components of culture that interact with one another [1]. The complexity of the watershed system requires an integrated management approach that is multi-sectoral, cross-regional, multi-institutional with their respective interests and takes into account the principles of interdependence [1] [2]. Integrated watershed management still faces many obstacles such as lack of organizational integration, lack of communication between institutions, lack of cooperation for the development and implementation of watershed management and lack of public participation [3].

Sectoral integration in watershed management in Indonesia is still far from what was expected. Sectoral integration is influenced by several factors such as communication, coordination, cooperation, policies and regulations. The lack of communication, the limited coordination and cooperation between sectors is a limitation in realizing integration between sectors. Policies reinforced by regional autonomy legislation hamper sectoral integration of watershed management. This article will explain why inter-sectors have not been successfully integrated in watershed management. Sectoral integration is a challenge in watershed management to sustainable development.

2. Watershed Management in Indonesia

The Indonesian government has carried out various program activities to overcome damage to watersheds but have not shown the results as expected. Critical watersheds shows an increase, in 1970 there were 22 watersheds, in 1980 there were 36 watersheds, in 1999 there were 60 and in 2012 there were 108 watersheds [4]. The criticality of watershed is characterized by poor water quality, settlements on river banks, garbage disposal in rivers, high sedimentation, destruction of riverbanks, such as in Ciliwung Watershed, West Java, Brantas Watershed, East Java, Ogan Watershed, Sumatra and Batanghari Watershed, Kalimantan were presented in the Figure 1-5.

Figure 1. Settlements on river banks in Ciliwung Watershed, West Java, Indonesia.

Figure 2. High sedimentation in Ciliwung Watershed, West Java, Indonesia.

The level of criticality of the watershed is closely related to the socio-economic level of the farming community [4]. The low level of awareness and economic capacity of the farming community will prioritize primary and secondary needs (clothing, food, and shelter) do not concern the environment so that forest encroachment often occurs in the upstream watershed area, illegal logging and dry land agricultural practices in hills which will increase the criticality of the watershed [5].

Another factor that causes watershed management to be unsuccessful is the lack of integration in planning, implementing and monitoring watershed management, including in terms of financing [3]. This is because many agencies are involved in watershed management, such as the Ministry of Environment and Forestry, Ministry of Public Works and Public Housing, Ministry of Agriculture, Ministry of Home Affairs, private companies and the public.

Figure 3. Garbage disposal in rivers in Brantas Watershed, Malang, East Java, Indonesia

Figure 4. Destruction of riverbanks in Ogan Watershed, Palembang, Sumatra, Indonesia

Figure 5. High sedimentation in Batanghari Watershed, Kalimantan, Indonesia

3. Watershed Management Challenges: Sectoral Integration

3.1. Policy

Government policies influence success of public sector management. [6][7]. The results of the study stated the existing policies do not support integration among sectors in watershed management. Sectoral policies between forestry and fisheries are related to the status and management of mangrove forests. Mangrove forests are in fact located in coastal areas which are within the authority of the Ministry of Maritime Affairs and Fisheries (Law No. 31/2003 on Fisheries) but legally the management of

Mangrove forests is the authority of the Ministry of Forestry (Law No. 41/1999 on Forestry). Integration between sectors makes Mangrove conservation less optimal. Integration also occurs between the forestry and mining sectors. UU no. 41/1999 on Forestry does not guarantee legal certainty for mining permits in protected forest areas. The mining sector is trying to make mining business possible in protected forests with the issuance of Government Regulation In Lieu of Law [Perpu] No. 1 of 2004. This situation shows that the Mining sector for economic interests takes precedence over the Forestry sector for the benefit of environmental sustainability.

The results of the study stated the policy also shows the overlapping of the three Ministries in watershed management. The Ministry of Public Works and Public Housing (PUPR) has an agency that manages water resources, namely the Great Basin of the River Area (BBWS) under the Directorate General of Water Resources, the Ministry of Environment and Forestry has a Management Center for Watersheds and Protected Forests (BPDASHL) in Under the Directorate General of Watershed and Protected Forest Management (PDASHL) and the Ministry of State-owned enterprises (BUMN) have public company Jasa Tirta. The three institutions have the same task, namely the management of the watershed. For example the Brantas River Basin is managed by the Brantas-Sampean BPDASHL Ministry of Environment and Forestry, BBWS Brantas Ministry of Public Works and Housing and Jasa Tirta I, Ministry of State-owned enterprises.

The results of the study stated the three institutions have tasks which are partly the same or overlap in the three ministries. The first function of the Director General of Natural Resources of the Ministry of Public Works and Housing is the formulation of policies in the field of conservation of water resources, utilization of water resources and control of water damage on surface water sources, and utilization of ground water in accordance with statutory provisions. While the first function of the Director General of PDASHL of the Ministry of Environment and Forestry is the formulation of policies in the field of watershed management, fostering protection forest management units, seedling forest plants, planting and maintaining forest plants, restoring damage to inland water ecosystems, forest and land rehabilitation, and soil and water conservation. . The two institution have the same function in formulating policies on water conservation and controlling water damage. Public company Jasa Tirta has a vision of managing integrated water resources and has a business in flood control and watershed conservation. Therefore, the three institutions have tasks which are partly the same or overlap in the three ministries. This overlap causes the similarity of work programs of the three watershed management institutions. Streamlining human resources can also be done so that it will save the budget. When the task area is synchronized or implemented by just one institution, it will save a sizable budget on a national scale.

The results of the study stated that each sector is under the authority of the regional government. The Regional Autonomy Policy which is based on Law Number 32 of 2005 concerning Regional Government causes a discrepancy between policies issued by the Central Government and policies issued by Provincial and Regency / City Governments. Overlapping policies and regulations occur in the area of government authority. Policies in the forestry sector that are realized in Law Number 41 of 1999 concerning Forestry, on the other hand with the existence of Law Number 22 of 1999 which is further elaborated in Government Regulation Number 25 of 2000 concerning the Authority of the Central and Provincial Governments as Autonomous Regions has resulted in the management forests are divided into the authority of the Central, Provincial and Regency / City Governments. This situation makes it difficult to integrate between sectors in watershed management because each sector is under the authority of the regional government.

3.2. Coordination

Coordination affects management success [8, 9]. The results of the study stated that routine coordination in the management of the Brantas-Sampean watershed is carried out once a year. The annual meeting was held at the Forum secretariat by discussing the Forum work program. Incidental coordination can be done in accordance with the forum program. The planning, implementation, monitoring and evaluation aspects are coordinated. Some of the problems faced in coordination between sectors are

time, commitment, and sectoral ego. Some institutions could not attend the coordination meeting because of the existence of matters of higher urgency because they were in line with the main tasks of the institution's functions. Weak commitment caused the delegations present in the coordination to be different, thus hampering the continuation of the discussion. Such commitment also causes the implementation of coordination in watershed management to be less than optimal.

The results of the study stated that the coordination between sectors/institutions in the management of Brantas River Basin is formalistic and has no legal strength. Institutions related to the management of the Brantas watershed are BPDASHL Brantas-Sampean, BBWS Brantas, BBTNBTS, BBKSDA East Java Province, BPN East Java Province, East Java Province Bappeda, East Java Provincial Forestry Service, East Java Provincial Agriculture Service, East Java Provincial Plantation Service, The East Java Province Fisheries and Maritime Service, BLH and the ESDM Office, SOEs such as Public company Perhutani and Jasa Tirta I. Coordination between sectors and institutions was seen when the preparation of the Integrated Brantas Watershed Management Plan (RPDASBT) showed that BPDASHL Brantas-Sampean dominated and respectively the sector / institution feels it is not compulsory to implement the plan. Thus, the coordination between sectors / institutions in the management of Brantas River Basin is formalistic and has no legal strength.

The policy of regional autonomy has resulted in the management of forest resources that were based on forest administration with a watershed as the basis for forest management, shifted based on government administration so that between one regency / city with other regencies / cities in one province the forest management is fragmented and each regency / cities have their own forest management policies so that coordination with the Provincial Government tends to be ignored, especially with the Central Government.

3.3. Communication

Communication influences management success [10, 11]. The results of the study stated that the Brantas-Sampean River Basin Forum is a vehicle for communication between sectors in the management of the Brantas-Sampean Watershed. These sectors include forestry, agriculture, the environment, livestock, fisheries and public works. The meeting was conducted incidentally at the ForDAS secretariat by inviting relevant stakeholders both at the provincial and district / city levels. The most frequently discussed topic is the declining quality of the Brantas-Sampean watershed. Starting from the planning, implementation, monitoring and evaluation carried out discussion in the forum. The quality of communication between sectors needs to be improved because there is more communication between forum officials and members.

Communication between sectors was also seen during the preparation of the Integrated Brantas Watershed Management Plan. Sectors involved in preparing the plan are the Forestry Sector, Agriculture sector, Plantation sector, Environment sector, Mining sector, Fisheries and Maritime sector. The absence of sector initiatives in the preparation of this plan and the lack of communication outside the forum shows that there is no integration between sectors and communication is still a formality.

3.4. Sectoral ego

Cooperation between sectors affects management success [12, 13]. The results of the study stated that the management of the Brantas watershed has not been integrated between sectors. The Forestry Sector, Agriculture Sector, Plantation Sector, Environment Sector, Mining Sector, Fisheries and Maritime Sector Prioritize Each Sector. Each sector / institution has its own planning which results in an integrated management. This is due to the policies and regulations that each sector tries to carry out in accordance with the tasks of the sector.

4. Conclusion

Sectoral integration in watershed management in Indonesia is a challenge for the government in this case the Ministry of Public Works and Public Housing, the Ministry of Environment and Forestry and the Ministry of State-owned enterprises. The existence of an institution that manages a Watershed will

avoid overlapping programs so that it will greatly save the budget and improve the performance of the Watershed.

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