



Community Empowerment and Participation in *Brantas* Watershed Management

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Abstract. The size of the Brantas River Basin in the management of the Watershed. The research method used in this article is descriptive qualitative research. In the context of research with a qualitative approach, interviews with informants were conducted. Determination of informants is based on knowledge, experience, and position related to watershed management and community empowerment. The results of this study are in the context of Brantas River empowerment, the empowerment activities carried out by the Brantas River Basin Center include three aspects, namely the Water User Farmers Association, Upstream Community Empowerment and the National Movement for Air Rescue Partnership.

Keywords: Empowerment · Participation · Community · Watershed · Brantas River

1 Introduction

According to the Law of the Republic of Indonesia no. 7 of 2004, a watershed is a land area which is a unit of a river and its tributaries, which functions to accommodate, store, and drain water from rainfall to a lake or sea naturally. The definition shows that there is a mutual interrelationship between areas located in the upstream, middle and downstream parts of the river.

Watershed is an ecosystem unit area where humans, including humans, have a dual function, namely as part of the watershed ecosystem component and function in the use of natural resources. Watershed damage can be caused by human activities and/or by natural disasters. Therefore, in watershed management, it is necessary to involve the active participation of humans, so that maximum and sustainable benefits are achieved [1].

According to research conducted by [2] it is explained that as a water system unit, watersheds are influenced by upstream conditions, especially the biophysical conditions of catchment areas and water catchment areas which in many places are prone to threats from human disturbance. This reflects that watershed sustainability is determined by behavioral patterns, socio-economic conditions and management levels which

are closely related to institutional arrangements. Therefore, in order to improve development performance in watersheds, it is necessary to carry out integrated watershed management.

Natural resource management in a watershed needs to be carried out in a sustainable manner by balancing economic, ecological and social aspects. However, in reality this balance has never occurred because the use of watershed natural resources is more oriented to the economic aspect so that the result is that the quality of the watershed decreases in various regions in Indonesia [3]. In order to overcome this damage, the first step that can be taken is to form a community movement to jointly maintain and preserve the watershed ecosystem [4].

Participation is an activity of community participation in the process of identifying problems and potentials in the community, selecting and making decisions about alternative solutions to deal with problems, implementing efforts to overcome problems, and community involvement in the process of evaluating changes that occur [5]. Participation is defined as a series of processes that begin with community activities to identify their desires, weigh the choices they believe to be true and carry out their choices.

Empowerment is a process to become empowered or a process to obtain power and or a process of providing power from those who have power to those who are less or who are not yet empowered. Community empowerment is an absolute prerequisite for poverty reduction efforts, so that people come out of helplessness when dealing with social and political structures [6]. In a study conducted by [7] explained that the community empowerment program process is carried out through three stages, namely the planning, implementation and evaluation stages.

The Brantas River is the second largest river on the island of Java. This river is located in East Java Province at 110°30' east longitude to 112°55' east longitude and 7°01' south latitude to 8°15' south latitude. The length of the Brantas river is ±320 km and has a river area of ±14,103 km² which covers ±25% of the area of East Java Province or ±9% of the island of Java. The Brantas River Basin (WS) consists of 4 (four) watersheds, namely the Brantas watershed, the Central watershed and the Ringin Bandulan watershed and the Kondang Merak watershed [8].

Thus, environmental management in the Brantas watershed area becomes very crucial in an effort to encourage the improvement of community welfare and the design of sustainable development in East Java. Based on this, the purpose of this research is to find out the community empowerment activities carried out by the Brantas River Basin Center in watershed management.

2 Methods

The type of research in this article is descriptive qualitative research. According to [9] descriptive method is a method used to describe or analyze a research result but is not used to make broader conclusions. In the context of research with a qualitative approach, interviews with informants were conducted. Determination of informants is based on knowledge, experience, and position related to watershed management and community empowerment. The data collection procedure in this study used the FGD (Focus Group Discussion) research method which is a discussion activity carried out systematically and directed at a particular issue or problem [10].

The research location was conducted in 5 (five) regencies, namely Malang Regency, Tulungagung Regency, Kediri Regency, Mojokerto Regency, and Sidoarjo Regency. The five regencies were chosen taking into account that they are included in the Brantas River Basin, including the Upstream, Central and Downstream watersheds.

3 Result and Discussions

Empowerment and Community Participation in Watershed Management

Empowerment activities in the context of watershed management are still not clearly regulated. However, the description of river empowerment in accordance with PP 38 of 2011 is carried out through outreach activities, public consultations and community participation. In the context of the empowerment of the Brantas River, the empowerment activities carried out by the Brantas River Basin Center include three aspects, namely:

3.1 The Association of Farmers Using Water

Irrigation is an effort to provide, regulate and dispose of irrigation water to support agriculture whose types include surface water irrigation, swamp irrigation, water irrigation. Underground, pump irrigation and pond irrigation [11]. Meanwhile, irrigation includes irrigation water infrastructure, irrigation management, irrigation management institutions and human resources.

Water-Using Farmers Association (HIPPA) is an irrigation management institution that serves as a forum for water-using farmers in a service area/tertiary plot or village formed democratically by water-using farmers, including local irrigation management institutions; While the Joint HIPPA is an institutional number of HIPPA that agrees to work together to utilize irrigation water and irrigation networks in the secondary block service area, a combination of several secondary blocks or one irrigation area, while in the primary block service area, a combination of several primary blocks or one irrigation area is formed. HIPPA parent.

As a coordination and communication institution between representatives of the provincial government, representatives of the Association of Water-Using Farmers at the Irrigation Region level, representatives of irrigation network users at the province, and representatives of the irrigation commissions of the regency-city, a Provincial Irrigation Commission is formed, while as coordination and communication between representatives of the Regency/City government, The Association of Farmers Using Water at the Irrigation Regional Level and Representatives of Users of Irrigation Networks at the Regency/City are formed by the Regency/City Irrigation Commission. As the implementing regulations of PP No. 20 of 2006 concerning Irrigation, the scope of regulation of the Irrigation Commission includes:

- a. Position, working area, duties and functions of the Irrigation Commission.
- b. Organizational structure, membership, and working procedures of the Irrigation Commission.
- c. Working relationship between irrigation commission, and financing.

The Provincial Irrigation Commission is domiciled in the provincial capital, while the Regency Irrigation Commission is located in the Regency/City. The Provincial Irrigation Commission is established by Decree of the Governor and is under the direct responsibility of the Governor, while the Regency/City Irrigation Commission is formed based on the Decree of the Regent/Mayor and is under the direct responsibility of the Regent/Mayor.

3.2 Hulu Community Empowerment

The concept of community empowerment is so far believed to be the most effective way to invite the community together to continue sustainable development. With this empowerment concept, the community is given understanding, awareness and training on the importance of their empowerment values both economically, socially and environmentally. Therefore, the concept of community empowerment by the Brantas River Basin Center is used as one of the pillars among the five existing pillars as the foundation for the work direction and movement of the Brantas River Basin Center itself. This is in accordance with the definition of empowerment presented by [12] namely empowerment is expected to stimulate the process of behavior change carried out through teaching and learning activities.

To realize the pillars of the field of empowerment and increase the participation of the stakeholders in the natural resources sector, the Brantas River Basin Center has made various community empowerment programs in the upstream areas, precisely in Batu City and Malang Regency. The program is expected to be able to increase the participation of the community in the upstream area to participate in conserving the water resources of the Brantas River. In addition, the programs created are expected to be able to improve the economic welfare of the community around the Upper Brantas River. The reason is that the Brantas River Basin Center sees that one of the factors causing forest destruction in the Upper Brantas River area is due to economic factors. Several community empowerment programs carried out by the Brantas River Basin Center in the upstream area include:

3.3 Community Empowerment in the Konto Hulu Sub-watershed of Malang

Community empowerment in the Konto Hulu Sub-watershed of Malang is carried out in Tawangsari Village, Pujon District, Malang Regency. The location of the village is in the vicinity of the forest, namely the forest belonging to Perhutani and the main forest. The distance from the sub-district city is about 6 km and from the district capital is about 34 km. It has an area of 1,500 hectares and is located in a mountainous area with an altitude of 1,154 m above sea level. The details are 154 hectares of rice fields, 108 hectares of dry land and 125 hectares of village forest land. While the rest belongs to Perhutani. The average temperature is 20 °C with relatively high rainfall.

The livelihoods of most of the residents of Tawangsari Village are farmers. Some are land owners, while others are only farm laborers. Mostly, the people's way of farming there does not pay attention to conservation rules. Many forest lands are cleared for horticultural agriculture. As a result, in 2004 floods and landslides occurred in Dawuan River. The next four, to be precise, in 2010 there was another flood in Konto River.

In addition to farming, the people of Tawang Sari Village also raise dairy cows as a side business. Almost every family has 2 to 3 cows. The cattle farming has triggered water pollution in Konto River and Dawuan River due to people throwing cow dung into the river. Because they have no other choice. Socio-economic factors make the people of Tawang Sari Village, Pujon District, Malang Regency the main cause of their weak awareness to participate in conserving spring water. With a description of such conditions, the Brantas River Basin finally made efforts to handle it in the form of:

reforestation, namely planting 500 Durian Tree seedlings and planting 500 Bamboo Tree seedlings on the right and left side of the Dawuan River. The aim is to prevent erosion.

- a. Repair of drainage channels is carried out on channels whose condition is damaged and the water flow is not good along 60 m
- b. Production of 2 units of biogas so that cow dung waste that is dumped into the river has become bio gas that does not endanger the quality of the water.
- c. Improvement of raw water facilities in the form of 1 (one) receptacle and divider as well as installation of 260 m long PVC pipe.

All these activities are carried out in a stimulant manner. It is hoped that in the end it can be done again on a larger scale. So that the condition of water resource conservation in Tawang Sari Village can be well maintained. The empowerment of the Brantas sub-watershed community was carried out in Sumber Brantas Village and Tulungrejo Village, Bumiaji District, Batu City. Because in these two villages the source of the majority of the Brantas River is located.

3.4 National Movement for Water Rescue Partnership

Law No. 7 of 2004 concerning Water Resources mandates that the conservation of water resources must involve the community as much as possible. To implement the regulation, a joint movement was formed called the National Movement for the Water Rescue Partnership (GNKPA). The movement was officially formed on April 28, 2005 when President SBY signed the text of his declaration. Furthermore, the declaration was followed up by the Ministry of Public Works by issuing the Regulation of the Minister of Public Works no. 377/PRT/M/2005 dated August 24, 2005 concerning "Guidelines for the Preparation of a Work Plan for the Implementation of the National Water Savings Partnership Movement (GNKPA) and an overview of the GNKPA". In order to maximize the movement, the Minister of Public Works entered into an agreement with the Minister of Forestry and the Minister of Agriculture on May 9, 2007. The contents of the agreement were about "Rehabilitation of Critical Watersheds (DAS) for Conservation of Land and Water Resources" in which it was agreed that critical areas in the watershed Brantas are the sub-watersheds of Konto Hulu, Brantas Hulu, Lekso Hulu and Ngasinan.

Activities in the national water saving partnership movement that are carried out include six components, including:

- a. Spatial planning, physical development, land and population harmony so as to support the infiltration of rainwater into the ground adequately.

- b. Forest and land rehabilitation and conservation of water resources complete with the responsible agency, implementation schedule and location for implementation.
- c. Damage control.
- d. Water quality management and water pollution control
- e. About saving use and managing water demand
- f. About using water resources in a fair, efficient and sustainable manner.

The implementation of GNKPA in Malang Regency has been implemented since 2005 in Tawang Sari Village, Pujon District, Malang Regency (Konto Hulu DAS). In this village the district GNKPA Team and also the sub-district GNKPA Pokja team were formed in 2008. The head of the district GNKPA team is chaired by the Head of the Malang Regency Bappeda with members of related offices, companies in Malang Regency, the community and Non-Governmental Organizations (NGOs).

4 Conclusion

Based on these conclusions, the researcher can suggest that there is a need for regular counseling, accompanied by activities that involve the community in improving the quality of the Brantas watershed on a regular basis. Then it is necessary to carry out monitoring activities that involve the community directly and all parties involved in watershed management.

Acknowledgment. Thank you to all parties involved in the research, Head of the East Java Provincial Government and Surabaya State University.

Authors' Contributions. The author comprises three members where all are contributed to writing the article. Article writing is separated into numerous stages of research and writing that are completed in 3 (two) months. The author investigates related themes based on observations made in the field over many months. The writer offers the ideas in this scientific article based on observable data.

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