

Mangrove Cultivation Community Based in Karangsong, Indramayu, West Java

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Abstract. Community based is an effort to mobilize the society to show local potential in solving problems that are being faced. Community based as a way to improve community development in sustainable development. Mangrove cultivation as a solution for coastal abrasion is a way to coastal rehabilitation. But sometimes mangrove cultivation does not succeed as set as a goal. Mangrove cultivation can be done by community based approach. Empowering and involving community in mangrove cultivation is not only to provide awareness of the importance of mangrove for coastal areas, but also to indirectly can provide economic value. Karangsong was an affected area by abrasion since 1993 to 2007. To overcome the abrasion mangrove cultivation has been done with community based approach. In 2015 Karangsong became mangroves ecotourism area in Indramayu. This paper reviews how mangrove cultivation community based have been doing in Karangsong, Indramayu, and role of actor in community empowerment to encourage mangrove cultivation. To achieve the success community involvement in mangrove cultivation requires an economic approach that offer advantage to community on a long term and can generate awareness of the importance of mangroves in coastal areas.

1. Introduction

Human factors greatly affect coastal areas and mangroves. The interaction of both makes the coastal areas degraded or sustainable depending on how humans treat nature. Conversion of agricultural forests for agriculture, legal and illegal logging, timber hunting, and mining activities are the main factors driving deforestation and forest degradation [1]. In a broader perspective, deforestation is exacerbated by poverty, the lack of composition of protected land tenure, a lack of recognition of rights and the need for dependence on forests for local communities, the absence of cross-cutting policies, evaluation under forest products and ecosystem services, lack of participation and good government, Lack of economic support to facilitate sustainable forest management, illegal trade, and national policies that change markets and encourage forest conversion to other land uses [2].

Coastal communities that rely heavily on natural resources make the coastal areas burdened with activities that actually even make the coastal region degraded. Development, opening of ponds, and felling of mangrove trees for firewood needs also increases the damage to the coastal environment. Coastal Pantheon from West Java to East Java did not escape the damage. Just look at what happened



to Tirtamaya Indramayu beach, Sayung Demak beach, Bedono Semarang made the north coast as the worst abrasion beach according to KKP data which is about 10,988 hectares.

Generally, mangroves are threatened with increased consumption pressures, unsustainable fish and shrimp production, contaminated wastewater in rivers from urban industries and oil spills. Mangroves are commonly found along the coast of tropical countries where coastal populations rely heavily on forests for their livelihoods [3]. Mangrove planting is very effective in reducing large waves with a period of 5-8 seconds and protecting the coast. A 6-year-old mangrove tree 1.5 km wide will reduce high waves in open seas up to 0.05 meters on the coast. Due to the high density of vegetation distribution in the overall depth of the water, the effect of decreasing fixed waves despite the increasing depth weather [4].

The community has a critical role in reversing deforestation. They need to be deeper involved in creating sustainable forest management policies, plans and programs to support their commitment to forest conservation as a means of ensuring decent access to forest benefits [2]. The impact of the destruction of mangrove ecosystems is felt directly by people who depend on coastal resources [5]. Therefore, community involvement is needed in the conservation and management of coastal environment.

2. Literature Review

Community development is an effort to show local potential solve their problem by themselves. Community development has a variety of strategies available to meet the needs of those persons and groups who are less advantaged, usually in poverty. Community developers help all communities, but their passion lies disproportionately with people who do not have adequate personal resources to meet their needs or with communities with large populations of people who need assistance [6]. Community development is being practiced by countless organizations, some of the organizations are small, stand-alone, neighborhood groups. There are three overlapping principles in community development, self-help, felt needs, and participation are the appropriate methods for the practice of community development [7].

Community development practice must regard people as agents (subjects) from the beginning [7]. And it is this that sets community development apart from other development practices. In this sense, community development proposes an alternative politics, a truly democratic politics, non-imposition, non-manipulative, and respectful of the will of the people. Community based in conservation was used to the significant characteristics of community participation including community-based natural resource management, community-based social ecological systems approaches, community based conservation-protected areas, incentive-based conservation and ecosystem management and so forth [8]. By definition, community conservation should be, by and for communities, with active partners in protected area management. The fundamental principle for promoting CBC models is for sustainable management where local communities can manage and extract benefits from natural resources at the local level emphasized the role of local communities in decision making and being actively involved as partners in protected area management, to improve livelihoods of local communities and to foster pro-conservation attitude [8]. Community based implies to involving communities actively. Community managed mangroves were found to be economically beneficial but their ecological contributions were questionable as biodiversity issues were not always taken into consideration and in many instances, turned more towards commercial resource harvest than ecological conservation [9]. These commercially exploitative characters may prove to be ecologically harmful while replanting mono-specific stands in the sites previously occupied by naturally diversified mangroves [3].

3. Research Methodology

This research was by descriptive analysis method that show how mangrove cultivation conduct in Karangsang and the actors behind. With primary and secondary data that collected information of community development in mangrove cultivation in Karangsang. The case study was conducted in Karangsang, Indramayu, West Java.

4. Results and Discussion

4.1. Study site

Karangsong is a coastal area located in Indramayu, West Java with an area of 243.067 ha and part of its territory is dominated by ponds. Abrasion experienced by karangsong in 1993 and 2007 left some of the coastal areas lost. At least recorded about 127.30 Ha of coastal area that is in Karangsong terabrasi. Abrasion occurred due to conversion of mangrove forests into ponds. Mangrove cultivation was done by community in Karangsong since 1998. Since there was a cooperation program with international wetland with local government but only lasted five years. In 2007 karangsong had abrasion and made some people took the initiative to form a group of Lestari Beach initiated coastal reforestation program.

4.2. Mangrove Cultivation Community Based

Initially mangrove planting was done as an effort to re-greening coastal Karangsong affected by abrasion and many detrimental to the economic activities of local communities. Involvement of the community is still very difficult, because people always assess the economic side related to their lives. In addition, although the farmers whose ponds were eroded abrasion was not too concerned with the mangrove cultivation. After the end of the group Lestari Beach plant mangrove trees and feels the benefits by the farmers, because the pond is no longer hit by waves, in the end people want to participate in mangrove cultivation. This is in accordance with the principles of community development, self-help. This principle, a complement to the principle of self-help, implies that development projects should respond to people's needs as they see them; they should be demand-based [7]. The principle of felt needs is grounded on the premise that, given the knowledge and other resources available to a people, all their cultural practices including needs are rational.

Obstacles in the effort of community involvement not until there, when farmers have participated in mangrove cultivation activities, people who are generally fishermen still do not want to participate because there is no reciprocity in the form of wages. The poor generally associate an activity with the economy so that the group finally initiates to pay the community involved in mangrove cultivation. The fee that people get to join the mangrove cultivation is 50 thousand rupiah. The community was happy to follow these activities because his life helped from income. The practice of self-help includes collective effort to alter these debilitating structures in order to restore agency. The problem to be solved is defined by outsiders (the state, the development organization, for example). The people whom the problem presumably affects have little role in defining it. They may have a role in implementing the solution (by sweat equity or matching funds, for example). By contrast, problematizing requires the people to determine what the problem is, so that they "own" the problem, which is the first necessary step for them to exert themselves for the solution.

Pak eka as chairman of Pantai Lestari group expressed difficulties in inviting the community in the cultivation of mangrove because there is no advantage that can be directly visible related to environmental conservation. So, the group makes a strategy to pay the citizens involved so that they directly get the economic benefits in meeting their survival. In addition, maintenance is done by making regulations that cooperate with the local village government. This is done because the villagers of Karangsong regency that then prohibit the society legally in an effort to protect the mangrove that they have cultivated. Sanctions in the regulation is quite simple but enough to make people kapok. The sanction for felling of a mangrove tree is to plant 100 mangroves and keep it up. This is a form of community participation in making legal payments for mangrove protection. Participation is the most recognized of the three principles of community development practice. Understood properly, it encompasses the principles of self-help and felt needs. But commonly it is used in a narrow sense as in electoral participation.

Although mangrove cultivation has been done with an economic approach, but it successfully invites the community to participate in mangrove cultivation. Over time, community awareness has also grown, especially for farmers who directly feel that the pond is no longer eroded abrasion and fish harvest does not decrease and fishermen whose catch is increasing.

4.3. Role of Actor

The actor who drives the community is the Lestari Beach group originally conceived by the Head of Karangsong Village, Alm. Pak Lani, with five villagers of Karangsong who care about coastal conditions. Consisting of the head of RT, elementary school teachers, and tambak farmers. Currently Lestari Beach group is chaired by Pa Tarika as a mobilizer and is one who is considered and respected in Karangsong. The group moves by initiating trainings on and approaches with the forestry, plantation, NGO, CSR and local government agencies. This group submitted proposals for submission of mangrove cultivation to CSR and assisted by NGOs. Funds from the submission to be used as a program of reforestation of coastal Karangsong by including the local community as an effort to awareness of the environment. Until now the group is still carrying out its duties in reforestation and coastal protection and community involvement in maintaining and managing mangroves.

5. Conclusion

One way to do mangrove cultivation community based is through an economic approach. It is undeniable that coastal communities rely heavily on natural resources to meet their needs. Thus, the engagement effort should promise prosperity for them especially from the economic side. Once their economies are fulfilled the awareness of the importance of mangroves grows and ultimately, they know the importance of coastal environmental conditions for their lives that should be preserved and protected.

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