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Community Participation in Management of Mangrove Villages with Renewable Energy in Teluk Naga District of Tangerang

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Abstract. Mangrove forests have an important role and function in ecological / environmental, social and economic. Currently, mangrove forests have suffered a lot of damage, one of which is in the coastal mangrove ecosystem Tangerang. Tanjung Pasir beach ecosystem condition has suffered damage caused sea water to become cloudy and abrasion occurred in the last three years. Loss of land area reaches 500 meters. Damage to mangrove forests in Tangerang district reached 371 ha area, mostly located in the district of Teluk Naga is 118 hectares (BPDAS Citarum-Cisadane). To overcome these problems, management through community-based rehabilitation, productive business, the utilization of renewable energy needs to be done. Landscape Development Institute together - with Pertamina has been implementing CSR programs in the area of Tanjung Pasir – Muara and Lemo Teluk Naga environment. Through empowerment, among others, mangrove nurseries, ecotourism development and utilization of renewable energy. The purpose of writing this paper is to discuss participation in the activities of mangrove villages through renewable energy by using descriptive analysis method. This paper is expected to provide input to coastal development policies.

Introduction

Mangrove forest is a unique ecosystem because it combines the two types of terrestrial ecosystems and the oceans [1]. Mangrove forests play an important role in the social, economic and ecological [2]. Role for life can be seen from many kinds of animals, plants and humans depend on mangrove forests. Mangrove ecosystem is one of the coastal ecosystems play an important role in the productivity of fisheries [3]. Although it has been recognized to have important roles and functions, the current condition of mangrove forests have suffered a lot of damage, including coastal mangrove ecosystem in Tangerang. Tanjung Pasir, Muara and Lemo beach ecosystem conditions have been damaged, murky sea water so it is not convenient for recreational activities, the surrounding arid region filled fish ponds. Tangerang District Environment Agency states that there is damage in the North Beach area of Tangerang and further uncontrolled from the District Teluknaga, Pakuhaji, Sukadiri, Mauk, Grantham, Kronjo, until Sepatan [4].

Environmental conservation efforts in the village of Tanjung Pasir, Muara and Lemo have been started by the community through the planting of mangrove and supported by the government of Tangerang and the Ministry of Environment. For Pertamina, Cape Sand can be used as show windows among other community empowerment through mangrove nurseries, tourism development, and utilization of renewable energy. Therefore, this activity is named Mangrove Village with Renewable Energy. The purpose of this activity is to build a mangrove nursery village with renewable energy (mangrove nursery center), a region that supplies assistance needs donations of mangrove plants as environmental programs Pertamina, as a demonstration and education area of mangrove plants, increasing the ability of communities (Local Community Capacity) in make environmental improvements coastal areas (rehabilitation of mangrove ecosystems).

Analysis and Interpretation

Location of activities

Muara village located in coastal areas, the North Bay District Dragon Tangerang District, Banten Province. The area of 505 acres consisting of Hamlet 7, 8 and 22 RT RW, boundaries: the North Java Sea, north-east of Java and Lemo village, southern Lemo village, west of the village of Tanjung Pasir. Inhabited by 709 heads of families consisting of 3447 souls. The condition of the village administration with honors Villages. Muara village covers an area of 550 ha

Mangrove Center with Renewable Energy

Mangrove embryo of the Renewable Energy Center was built in 2012 as a center of education, training, self-employment related to mangrove cultivation techniques and application Silvofishery with ponds and their use to improve the welfare of the community, as an example of the utilization of renewable energy center. There are four focus Mangrove Center with activities in Renewable Energy, among others: Breeding / nursery, Education and training, Utilization of renewable energy, Source of seed (seed donation Pertamina to public)

Own Funds Mangrove Community Muara Ujung

Planting Groups (KT) consists of five groups that each group has 4 people :1 chairman and 3 members. The group names are Investment Group (KT) 1 Forward Together, Investment Group (KT) 2 Harapan Jaya, Investment Group (KT) 3 Beautiful my village, Investment Group (KT) 4 and Sustainable Investment Group (KT) 5 Renewable Energy. Community Participation in Management of Mangrove Village a community development activities such as training activities. In accordance with the objectives of mangrove village, the center of education, eco-tourism, and the pilot villages in the utilization of renewable energy. Educational programs are implemented namely Mangrove Aquaculture Training 2 times of activities, namely: (1) Training Mangrove Nursery (2) Training Mangrove Planting

Public participation in the activity

1 Training mangrove nursery

Mangrove nursery training was held on October 11, 2012 at 10:00 to 12:00 pm, was attended by 18 people consisting of members of the public nursery group, including 4 Active Communities Coordinator Semai-Plant-Maintain that has formed in Mangrove Village activities with this Renewable Energy, Chief Muar village, the trainers, experts silviculture and two field assistants.



Figure 1, Mangrove Nursery Training activities during practice directly

The training aims to promote mangrove nursery, refresh your knowledge on how to create a seedbed and sow seeds properly mangrove estuary to the village community, particularly members of the Active Communities nursery Nursery-Planting-Maintain Muara. The training consists of two sub-activities such as description of the theory of mangrove nurseries and practice nursery seedbed directly at a predetermined location. Figure 1 shows mangrove nursery training activities during practice directly.

2. Mangrove nursery activity

Target planting until the end of 2012 was as much as 90,000 plants mangroves, so it takes 120,000 seedlings were prepared in the nursery. for meet the needs of the seed, made a number of sub-activities such as the determination of the appropriate location of the nursery, purchase of seeds ready for planting, preparation of seedbed, preparation of the seedbed media and procurement of seedlings. The entire nursery activities carried out by the Community Nursery Group Active Nursery Planting-Maintain (ASTAP) Muara village, district. Teluknaga, Kab. Tangerang was accompanied by Chairman ASTAP Estuary, Nursery Coordinator, Field Assistants and team of experts mangrove cultivation. Figure 2 shows active communities nursery group Plant-Maintain (ASTAP) with ASTAP Chairman, Field Assistants and Experts



Figure 2, Active Communities nursery group Plant-Maintain (ASTAP) with ASTAP Chairman, Field Assistants and Experts.

3 Training mangrove planting

Training mangrove planting was held on October 11 2012jam 13:00 to 15:00 pm. The training was attended by 22 community members, including 4-Semai Active Communities Coordinator-Maintain Plant which had been formed in Mangrove Village activities with this Renewable Energy. In addition, training was also attended by the village head of Muara, the expert trainers and companion. Training aims to disseminate knowledge about ways appropriate to plant mangrove seedlings to the villagers of Muara. The training consists of two sub-activities such as explanation of the theory of the mangrove planting and the practice of planting directly in the planting site in the form of ponds and riverbanks. From this training, participants know the techniques appropriate to plant mangrove seedlings through the trainer explanation and they practice the techniques directly to plant mangrove seedlings Planting Locations. The trainees, who is also a member of Plant Group, becoming better understand what must done within prepare for planting mangrove seedlings in mangrove rehabilitation. Figure 3 shows planting activity took place.



Figure 3, Planting activity

Maintenance activities is critical to the success of the planting. Maintenance is performed periodically by a group planting ASTAP Muara which includes monitoring activity of mangrove plant growth and prevention of disorders, especially goats, with the manufacture of bamboo fence at the access road entrance goat.

Conclusion

1 Community participation in village activities Mangrove with Renewable Energy Education Program is the first in the Mangrove Aquaculture Training are:

- Training Mangrove Nursery
- Training Mangrove Planting
- Mangrove planting

2 The results of community participation in village activities was Mangrove with Renewable Energy:

- Planted 75,000 mangrove seedlings have nursery with a capacity of 45,000 mangrove seedlings (year I)
- Planted on year I and year II 205.250 *Rhizophora mucronata*
- Formed Mangrove Communities of Owns Funds, Muara Ujung.

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