

International Conference on Tropical and Coastal Region Eco-Development 2014 (ICTCRED 2014)

Collaborative Efforts On Mangrove Restoration In Sedari Village, Karawang District, West Java Province

Amal Fatullah Randy^a, Malikusworo Hutomo^b, Helmi Purnama^c

^{ab}Graduate Study Program on Environmental Science, University of Indonesia, Jakarta, Indonesia

^cEnvironmental Division, HSSE Department, PT Pertamina Hulu Energi Offshore North West Java, 12520, Jakarta, Indonesia

Abstract

PT. Pertamina Hulu Energy Offshore North West Java (PHE ONWJ) conducted a mangrove restoration program in Sedari village as part of Corporate Social Responsibility (CSR) program. The program is named Orang Tua Asuh Pohon (OTAP). OTAP aims to restore the degradation of mangrove in the village as well as to develop capacity of local community in mangrove conservation. The activities started in 2012, comprising of planting mangrove at Sedari riverbank, and the coastal area as buffer zone (green belt) to prevent abrasion. The first plantation activity was unsuccessful. The failure planting happened was due to lack of knowledge about how to plant the mangrove in appropriate way and also lack coordination with local governments, both district and province. Learning from the failure planting, the initial coastal planted mangrove covering an area of 0,05 ha was conducted in 2013 to provide experiences as learning process for local community to plan mangrove in appropriate way. The program continues with the next implementation program at the area of 2,7 ha of abandoned fish ponds owned by local community. The implementation result showed that the most planted mangrove survived (55.28%). This paper reviews the changing of managerial aspects of mangrove ecosystem in Sedari village. The collaboration between the private sector, local government and community empowerment are particularly important factor in the success of mangrove restoration. The sustainability beyond the program period is expected to be implemented by the role of local government including development of alternative livelihood for local community.

© 2015 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of scientific committee of the ICTCRED 2014

Keywords: Collaboration; CSR; mangroves restoration; community empowerment; Sedari village

Introduction

Study of the mangrove ecosystems management has been carried out considering the condition of the ecosystem is increasingly becoming a concern. Nowadays, it has been an increase in the loss of mangrove resources around the

world caused by land use conversion for settlement and industrial needs. The same cases also happened in Indonesia. Although estimates of mangrove forest area in Indonesia is so diverse that it is difficult to know exactly how much reduction in the total area of mangrove. But the fact remains, according to the Ministry of Forestry data in 1997 based on various sources, area of mangrove forests in Indonesia approximately 4.25 million hectares. Two decade of mangrove monitoring program conducted using satellite imagery Landsat-1 MMS (Multi-Spectral Scanner), Oktober 10, 1972, Landsat-5 TM (Thematic Mapper) Desember 14, 1993 and Landsat-8 OLI (Operational Land Imager) Agustus 8, 2013 indicated the degradation of mangrove area in Karawang District (Fig 1). In 1972, mangroves area was 2699.3 hectares. Mangrove spread out a long coastline in 9 sub-district. The mangroves area degraded into 1186,1 hectare in 1993 and spreading around Cimalaya Sub-district, and Sedari village. Meanwhile, in August 2013, the remaining area of mangrove forest are 233,7 hectares [2].

One of the Indonesian coastal areas that its mangrove forest was damaged is a coastal region of Karawang District, West Java Province. According to data from the Department of Marine and Fisheries (year?), the original (what do you mean with original here) mangrove forest area in Karawang District is 5,400 hectares. However, currently, 54% of it is estimated in poor condition and has been converted to farm lands and fishponds [3]. Conversion of mangroves into fishpond is considered as one of shortest way that carried people to earn a great income [4]. Relatively moderate damage reaches 3.953 hectares. Meanwhile, good condition of mangrove forest is approximately only 629 hectares. One of the mangrove forest in Karawang is located at the coastal village of Sedari, Cibuaya Sub district. Impact of mangrove forest degradation has been keenly felt by the local communities. This degradation increases a coastal abrasion rate. According to interview results with local communities, Sedari's shoreline (eroded) toward the mainland with rate of 10 meters a year. Therefore, this condition is very alarming and requires special measures to reduce the rate of abrasion due to damage of mangrove forests.

Considering the symptoms of mangrove forest damage due to inappropriate utilizations by variety of interests, there should be a restoration and management efforts of mangrove forests. The main purpose of mangrove restoration is to manage the structure, function, and ecological processes in these ecosystems, as well as prevent it from extinction, fragmentation or degradation further [5]. It is very important because the mangrove forest ecosystems have been degraded and unable to return to its original state. The condition of ecosystems that have been unable to carry out the functions as it should, require management and protection [6], [7]. In this condition, the ecosystem homeostasis permanently stalled, thus inhibiting the normal process of secondary succession to heal the damaged area.

Currently, mangrove restoration is getting considerable attention, but the implementation in the field seems to be still far from expectation [8]. In addition the lack of knowledge on how to plant mangrove in appropriate way and proper site selection, resulting failures of some restoration activities which is suspected as a "project" which led to poor management of implementation and no sustainability beyond project period. Restoration approach is still based on the concept of once grown without an integrated management system involving elements of empowerment and community participation. The function of marine and coastal ecosystem management is not only to preserve the physical dimension and the sustainability of the system, but also has a social dimension because the existing social system that coastal communities have interacted dynamically with coastal and marine resources - is one of the elements that need to be considered in the management of ecosystems of coastal and marine resources [9]. Mangrove forest management based on the principle of sustainability is expected to restore the mangrove forest habitats in the village Sedari.

A pattern of collaboration between the private sector, local governments and communities in the restoration and management of mangrove ecosystems is needed at this time. This paper aims to explain the concept of collaboration in the mangrove forest restoration activities in the Sedari Village that has been being conducted by PT Pertamina Hulu Energi Offshore North West Java (ONWJ), as the private sector, working together with local government and communities. This collaborative program is named "Orang Tua Asuh Pohon (OTAP). As a part of the community development program, the program is expected to provide benefits to the PHE ONWJ, local governments, and communities to be able to manage the mangrove forests in Sedari Village and grow active participation of the community in sustainable mangrove restoration. The data and information used of existing data and information as well as result of field observation. The data and information were assessed.

Site description

Sedari village is one of the villages in the Cibuaya Sub district, Karawang District. The total area of Sedari Village is 3.787 hectares [10]. The border of Sedari Village in the northern part is the Java Sea, the southern part is

Download English Version:

<https://daneshyari.com/en/article/4402304>

Download Persian Version:

<https://daneshyari.com/article/4402304>

[Daneshyari.com](https://daneshyari.com)