DEVELOPMENT OF STRATEGY FOR ECOLOGICAL REHABILITATION AND SOCIO-ECONOMIC MANAGEMENT FOR A PILOT COMMUNITY-BASED PARTICIPATORY APPROACH

Technical Report No. 3

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ABSTRACT

This technical report is made available to satisfy the specific objective 1, output 1.2. activity 1.2.2 on development of strategy for ecological rehabilitation and socio-economic management for a pilot community-based participatory approach. A strategy for the ecological rehabilitation developed based on activities of : 1). Selection and classification of degraded and secondary forests, and 2). Development of strategy for ecological rehabilitation and socio-economic management for a pilot community-based participatory approach. Six sites within the Kapuas watershed from upstream down to the downstream areas were selected to develop forest rehabilitation plots with a total area of 330 ha of both degraded and secondary forests. The strategy to be applied include the involvement of the villagers or local communities in each site and use endemic species either with strip planting or block planting, also plantation of selected traditional commercial trees as buffer areas.

INTRODUCTION

Sustainable Forest Management will always be obtained from the implemented best management practices due to its forest value. Meanwhile, from the community point of view the forest value has changed, not only as timber product but also as non-timber product and other socio-cultural usages. In the rehabilitation of degraded forests in several ITTO member countries indicated that project using local species with empowering the local communities will more accelerate forest plantation and support the sustainable Forest Management.

In this pre-project finding the degraded forests were represented as rangeland or wild-land forms indicated as old logged-over, shifting cultivation and burnt-over areas, which among them were recorded as state production forest lands. The local people or the villagers mostly refused and did not acknowledge that their forest lands were included as state forest. They claimed that the area mentioned as community forest or "adat forest" instead. For the time the team indicated that whatever they wanted to consider the forest

land status, we would accept them since they welcome the purposed rehabilitation project. In next activities (continued Activity 1.2.1 to 2.2.1) plotted area for forest rehabilitation project in each selected location (village) will be measured and mapped.

To rebuild the degraded forest it is needed some preliminary study such as the existing national policy, technical study (land use., silviculture, soil etc), financial, and social-economic-cultural study. For those to recover a degraded forest there must need the hard work and synergy among the complex disciplines and fields of job. Proposed alternatives of rehabilitation patterns must be done depended on conditions of soil of the forest area and vegetation, the social-economic and culture background of local community. After rehabilitation prerequisite fulfilled rehabilitation patterns must be determined. The patterns which can be applied included community partnership, block planting, strip planting, intensive silviculture, and agroforestry pattern.

Some of the patterns selected have to depend on the forestland, its physical, biological and social-economic condition. To say, that any pattern of selected forest rehabilitation system will only be more succeed if local community be involved through empowerment. Furthermore the watershed management must be considered in terms of institutional, technical, financial, and scientific approaches. An integrated watershed management will more accelerate the recovery of degraded forest.

Rehabilitation system using indigenous species and other commercial domestic tree species will promote the benefit for local communities social-economically and ecologically. There will not only be the existing forest resource products but also from the domestic trees such as rubber and gaharu for shorter economic values.

OBJECTIVE

The objective of this activity was to collect and analyze the overall strategy based on the ITTO Guidelines for a pilot community-based participatory strategy for the ecological rehabilitation and socio-economic management of degraded forests in West Kalimantan. The strategy applied is to reach the rehabilitation goals primarily on using indigenous species for ecological reason and commercial domestic species for economic reason, and also involving the local communities for socially sustainable rehabilitation project. In overall objective the product to be produced is not only primary timber product but also non-timber forest products including water and other sustainable environmental services.

METHODOLOGY

During survey it was assessed various factors to considered in proposing the forest rehabilitation project selected villages. Most of community members were curious concerning the project and even they so suspected if the project will take over their land, therefore to make sure the team made several criteria in the implementation of this project, including:

(1) The location should be a degraded or secondary forest within production forest area

(2) The project site is relatively located near population settlement, so they can get from it for short and long term benefits..

(3) The size of the individual rehabilitation plots are at least 50 hectare as discussed together with the villagers.

(4) Local population willing to cooperate in development and maintenance of the rehabilitation plots will be recruited.

(5) The ecological approach for selecting rehabilitation sites is based on watershed principle.

FINDING

Before the pre-project activity initiated orientation was conducted in two sites in the villages having potential degraded forests including in the districts of Pontianak and Sanggau. Maps of forest cover and its function were colleted from the Provincial Forest Service office and studied it to locate the prospective target sites or location. Satellite-made-map was also explored to examine the degraded forest lands. Finally, all proposed forest rehabilitation projects are located within the major watershed of West Kalimantan province. The six proposed locations from upstream to downstream areas of Kapuas watershed were selected respectively.

As mentioned that the project sites for rehabilitation of degraded forest were extended up to 6 (six) sites or location with total demonstration plantation area of 330 Ha, namely :

1) Mentajoi (District of Sintang), 60 Ha.
2) Merbang (District of Sekadau), 50 Ha.
3) Lintang Pelaman (District of Sanggau), 60 Ha
4) Empirang Ujung (District of Sanggau), 60 Ha
5) Manggang (District of Landak), 50 Ha
6) Bunbun – Amawang (District of Pontianak), 50 Ha

In this survey the villagers principally accepted the proposed forest rehabilitation project in their ecosystem since it will benefit to them. They agreed the use of endemic species for rehabilitation of degraded and secondary forests, however, they also proposed plantation of rubber tree on their degraded community forest or "hutan adat" surrounding the villages. Their confidence rubber tree has supported their livelihood for economic reason, especially today when the price of rubber has tripled in recent years.

ANALYSIS

Referring to the overall strategy concerning the land status to be rehabilitated almost in each selected site the local people rather considered as their-own land, like "adat forest" or community's forest, instead of state forest or production forest function. The forest that is available for rehabilitation in each site is generally found near the village site. The people are critical about the reforestation proposal and want to be sure about these points:

1. Who will be the owner of the land once the project in which they are involved are completed.
2. Who will be allowed to use the trees planted in the area or other product extractable from them.

At each site of the villages identified, the team explained the prospective rehabilitation project to be proposed, its background and future benefits for the local communities. Almost all members of communities principally welcome the project as long as they will directly obtain benefits from it including the forest products used in the later days.

In all locations visited the local communities were perceived the environmental impacts of forest degradation on their livelihood. Within the boundary of their villages there can no longer be found primary forest. Secondary forests and bare lands covered with alang-alang grasses in surroundings of the villages are primarily affected by continued

logging in the past and shifting cultivation. In other tropical countries such as that in the Philippines long term commercial logging started already in the early twentieth century has caused not only reduced biological diversity but also the existing grasslands and a loss of natural resource management options for local communities. In the Philippines reforestation project is not a product of a top-down program, it had evolved from farmer's need and deliberate choices of what to plant, It is called "Rainforestation Farming", which recognizes local community participation in all stages of forest and tree resource management (Margraf and Milan, 2004).

Concerning the degraded forest, questions were raised including 1) does it just leave for natural succession?; 2) can it be converted?, and 3) has it to be rehabilitated?. Local communities agreed that rehabilitation project has to be done as soon as possible as this will benefit to them, since land demanding conversion increased for oil palm plantation. To rebuild the degraded forest it is needed some preliminary study such as the national policy, technical study (land use., silviculture, soil etc), financial, and social-economic-cultural study. For those to cure a degraded forest there must need the hard work and synergizing the complex disciplines and field of jobs, by making several alternatives of rehabilitation patterns, depended on condition of soil physic and chemical od he forest area, vegetation and social - economic and culture of local society. After rehabilitation prerequisite fulfilled hence rehabilitation pattern must be determined.. There are several patterns which can be applied such as community partnership, agroforestry pattern with block planting, strp planting, intensive silviculture pattern.

Some of the selected patterns depended on the forestland condition, its physical condition, biological and social-economic. To say that any pattern of selected forest rehabilitation system will only be more succeed if local community be involved with its empowerment. Furthermore the watershed management system must be considered in terms of institutional, technical, financial, and scientific approaches. An integrated watershed management will more accelerate the recovery of degraded forest.

All proposed forest rehabilitation projects are located within the major watershed of West Kalimantan province, consisting of six proposed locations from upstream to downstream areas. Species mentioned by the villagers for the proposed forest rehabilitation projects were not only timber-oriented species such as:; meranti (*Shorea sp*); kapur (*Hopea sp*); bengkirai (Shorea sp), ulin/belian (*Euxideroxylon zwaery*); jelutung (*Dyera costulata*); damar (*Agathis damara*); kelampai (*Elateriospermum tapos*), keranji (*Diallium sp.*) but also the commercial traditional tree species such as tengkawang

(*Shorea stenoptera, S.pinanga* etc), durian (*Durio zibethinus*), gaharu (*Aquilaria malacensis*), whereas kemiri (*Aleuritus molluccana*), and rubber (*Hevea braziliensis*) will be planted as buffer for short term economic and ecological reasons.

Sustainable Forest Management will always be obtained from its best management practices of the forest value. Meanwhile, from the community point of view on forest value has changed, not only as timber product but also other non-timber products. In the rehabilitation of degraded forest projects in several ITTO member countries indicated that the local species with empowering the local communities will more accelerate forest plantation and support the sustainable Forest Management. Rehabilitation system using indigenous species and other commercial domestic tree species will promote the benefit for local communities social-economically and ecologically. There will not only be the existing forest resource products from the domestic trees such as rubber and kemiri for shorter economic values.

CONCLUSION

A pilot community-based participatory strategy has been determined. The local communities agreed that rehabilitation project has to be done as soon as possible as this will benefit to them and to prevent forest land conversion. The strategy applied is to reach the rehabilitation goals primarily on using indigenous species in the degraded production forest for ecological and socio-economic reasons. Commercial domestic species will also be planted to satisfy the bottom-up rehabilitation through community empowerment program.

To rebuild the degraded forest it is needed some preliminary study such as the national policy, technical study (land use., silviculture, soil etc), financial, and social-economic-cultural study. Watershed management approach has also been considered especially in the determination of rehabilitation project sites.

Several patterns will be applied in the rehabilitation project including community partnership, agroforestry pattern, block planting, strip planting, and intensive silviculture pattern. To say that any pattern of selected forest rehabilitation system will only be more succeed if local community be involved with its empowerment.

RECOMMENDATION

The project rehabilitation strategy will consider the participatory approach which recognizes local community participation in all stages of forest and tree resource management, including the local community's need and deliberate choices of what to plant. Therefore besides indigenous species for the rehabilitation project, proposed traditional commercial trees will also be planted as buffer plantation adjacent to the villages.

Consultation with local community indicated that the rehabilitation project should be implemented as soon as possible since they were worry of rush conversion demands of the degraded forest lands for oil palm plantation. The existing recovered forest with all its functions will provide and find again the natural resource management option for local community.

Degraded and secondary forest having canopy coverage will be rehabilitated by enrichment planting on strip and gap in the residual stand. Whereas degraded forest lands dominated with grass and undergrowth will be rehabilitated by block planting on the cleared land. The soil type and environmental condition of selected rehabilitated sites either on the enrichment planting or block planting sites will be carefully understood prior plantation.

Participative maps made for villages in selected rehabilitation sites were considered and complementing the maps all rehabilitation sites which will be measured and mapped. In the implementation the project there must be made agreement between local communities and the Executing/implementing Agency to endorse a formal document guiding proposed project implementation by both parties for the rehabilitation project.

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