

Abstract

Integrating Ecological Consideration into Post-tsunami Mangrove Rehabilitation Program in Relation to Public Participation

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Several Andaman Coastal communities in Thailand are still trying to cope with the aftermath of the tsunami that had struck the region on December 26, 2004. While most communities needed to pursue livelihoods and regain a minimum quality of life, attention should be focused on sustainable rehabilitation of coastal resources. Rehabilitation of coastal resources will not only ensure the future safety of these communities by reducing damages from natural disaster, but also contribute to longer-term socio-economic development by enhancing livelihood opportunities and provision of needed resources. Prior to initiating work on specific mangrove rehabilitation activities, a more comprehensive understanding of the complex ecological-social-economic linkages is necessary to determine suitable approaches not only as they are related to the coastal environment, but equally important to enhancing the quality of life and livelihoods of residents in affected communities. The multidisciplinary researches on ecological risk assessment and post-tsunami monitoring as well as socio-economic conditions of communities are essential.

Prior to the tsunami, several mangrove reforestation activities have been carried out in the study areas, Ban Nam Khem in Phang-nga Province and Bang Rong in Phuket Province. The activities aimed to increase the fertility of the forest and to enhance fisheries production as well as building a coastal barrier against wind and wave stress. These mangrove reforestation activities cannot be evaluated as successful in Ban Nam Khem due to the lack of public participation. In contrast, the reforestation programme was a success in Bang Rong due to community-based management. The key factors for the success in implementing the mangrove rehabilitation scheme were due to public awareness and participation. It is clear in this study that active participation in mangrove conservation is positively correlated with the degree of mangrove-dependency. A good example is the active mangrove conservation and management among Bang Rong villagers. Local residents' utilized the forest mainly for fishery resources to meet their subsistence needs which was in line with the ecological consequences in the mangrove ecosystem, as their survival depended on the sustainability of the coastal environment. Even though the tsunami caused great loss of life and property, this disaster could turn a "crisis" into an "opportunity" since mangrove

forests have proven one of their ecological roles as barriers against winds, wave and erosion. In our study, eyewitness reported that the mangrove belt has reduced the impacts from the tsunami by serving as natural shields against disastrous waves. The water rose rapidly like a rising tide in the embayment area. It is important to gather more detailed information on the linkages between mangroves and the damage caused by the tsunami. These data can be integrated into a public awareness programme.

The findings pointed out that sustainable development of mangroves should not solely be the government's responsibility. Local communities should have the responsibility to conserve mangroves as well as the right to utilize the forest and its products. With different goals and objectives for mangrove restoration, the same basic blue print cannot be drawn. There is the need for the design of mangrove rehabilitation scheme which is site-specific to suit the objectives of the coastal communities. In order to conserve and maintain long-term sustainable yields from the valuable resources, full cooperation among the tripartite, namely: the government sectors (both national and local levels), the non-governmental sectors and public participation are ultimately required. The six REs namely REvalue, REstrategy, REprocess, REstructure, REcondition and REsearch were proposed as underlying factors determining sustainable development of mangrove resources.