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Title	Biological Characteristics and Perceived Socio-Economic and Ecological Benefits of Mangrove Rehabilitation in Selected Areas in Manila Bay.
Year	2006
Program	Master in Environment and Natural Resources Management

ABSTRACT

The research was conducted to assess the mangrove rehabilitation in the eastern part of Manila Bay. Specifically, the study aimed to attain the following objectives: (1) identify the mangrove rehabilitation initiatives in selected areas in Manila Bay; (2) assess the state of the mangroves in terms of size, height and density of trees and the diversity of associated species; (3) determine the general perceptions of stakeholders with regard to socio-economic impacts and ecological benefits of mangrove rehabilitation; and (4) identify factors contributing to the success or failure of mangrove rehabilitation.

The mangrove rehabilitation efforts reviewed in this study are those undertaken along Manila Bay from 1989 to 2001 located in the Municipality of Navotas, Parañaque City, and Las Piñas City. The study used primary and secondary data. Information on the biological and physical aspects of the study sites were mostly derived from the literature, agency reports, including electronic articles posted in websites. Sampling of the mangrove trees was undertaken to measure the circumference and diameter of trunk, estimate the height, and compute for the tree density and other parameters. For the details of the projects and perceived socio-economic and ecological benefits, interviews were conducted with representatives of implementing agencies and members of communities in the vicinity of the mangrove sites.

The results show that mangroves along Manila Bay are in different stages of growth. The mangrove areas in Navotas and Las Piñas can be considered within or nearing the status of mature mangrove forests. However, the site in Navotas shows some evidence of degradation due to natural and human factors such as frequent flooding, sand deposits, pests, and cutting of mangroves. Meanwhile, the site in Barangay Tambo, Parañaque City is still in its early development stage and the mangrove trees are relatively younger compared to those in the two other sites. All the three mangrove areas harbor different species of fish, crabs, shrimps, and shellfish as well as populations of local and migratory birds.

Residents near the mangrove areas perceive that the mangroves contribute to their socio-economic welfare as sources of food and livelihood. Perceived ecological benefits include: shoreline protection, buffer against strong winds and waves, habitats and nursery grounds for fish and other species, and water pollution and flood control.

The success of mangrove rehabilitation depends on the interplay of at least four factors: (1) the biophysical conditions such as wind, waves, floods, sand deposits, and pests; (2) accessibility of the mangrove site; (3) commitment and cooperation of the local communities and

various sectors; and (4) political will as manifested by policies, regulations and their enforcement.

Two important issues identified are increasing pollution from domestic and industrial sources, and the threat of further conversion of the mangrove areas in Parañaque and Las Piñas into industrial and commercial sites.

The study recommends the following: immediate rehabilitation of the denuded coastline specifically in Navotas; comprehensive socio-economic program to include capability building, livelihood, health and educational services for the communities near the mangrove sites; enactment of legislative measures to declare the sites as protected area; strengthening of multi-sectoral cooperation and participation in the mangrove rehabilitation areas; effective waste management program to control pollution of Manila bay; and strengthening of monitoring and law enforcement concerning mangrove.