

The status of mangrove plantation in San Fernando, Cebu: a case study

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Abstract

The study was conducted in a 14-year old bakauan-bangkau (*Rhizophora stylosa*) plantation in San Isidro, San Fernando, Cebu. The study aimed to assess the ecological and sociological effects of mangrove reforestation established in the area. Interviews were conducted to the plantations owners and fishers through Focus Group Discussion (FGD) and Strip method was used in assessing the mangrove plantation by establishing three sampling plots in two different stand ages. The results showed that the plantation with spacing of 0.5m x 0.5m has a density of 33,833 trees per hectare and 9,433 trees in 1 m x 1 m spacing. The stand has an average height and diameter of 5.70 m and 5.39 cm; and 3.65 m and 4.00 cm for stand with a spacing of 1 m x 1 m and 0.5 m x 0.5 m spacing, respectively. In terms of regeneration, plantation with 0.5 m x 0.5 m spacing have adequate regeneration with an average of 11,666 regenerants/ ha compared to 1 m x 1 m with average of 11,333 regenerants/ ha. Epibenthic fauna identified in the mangrove floor and periphery showed a total of 21 individuals belonging to four species of gastropods and a pair of clam. Samples obtained from exposed area outside the plantations recorded 51 individuals belonging to nine species. Associated flora identified adjacent to the plantations included algal species of *Ulva reticulata*, *Galaxaura oblongata*, *Amphiroa* sp., *Gracilaria* sp., and *Sargassum* sp. The avi- fauna observed in the site included birds like kingfishers, egrets, black shama and other shore bird species. Mammals like fruit bats and some crustaceans (shrimps and crab) and mollusk species reportedly found in the area. Benefits claimed by the owners of the bakauan plantations are the increase population of birds, catch of fishes, crabs and mollusk. They also reported sales of propagules from their plantation of about ₱2,000 – ₱7,000. Visitors and guests that are frequenting the area are mostly students from different schools in the nearest municipalities and some colleges and universities in Cebu City. The findings of the study has led to a conclusion that the growth (diameter and height) including regenerants of the 14-year-old bakauan-bangkau plantations have not been affected by the two different spacing used by the planters. Species diversity and population has increased and aesthetic and educational benefits were among the non-monitory benefits mentioned by other planters. A sense of fulfillment was felt having transformed the area from bare to greenery.

Keywords

mangrove plantation, spacing, propagules, fauna