

Management of Mangrove Forest of Sarawak

By
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Abstract

Although Sarawak mangrove forest comprises of only 173,792 ha or a little under 1.4% of the total land area, it is economically the third almost important forest type in the State. About 15,983 ha have been gazetted as TPA and 28,000 ha remains as Forest Reserves and Protected Forests. Major habitats are located in Kuching Division (52,318 ha), Sarikei Division in the Rejang Delta (87,544 ha) and Limbang Division (8,359 ha)

Local uses for mangrove timber are charcoal, construction piles, poles and firewood. The operation is small scale and involves selective felling. In 1982, the forest in the Rejang Delta was licensed for production of cordwood that was chipped and exported to Japan as a source of rayon pulp. This resulted in almost clear felling of the forest. The forest has since recovered but the ecology, the original species composition and productivity has been altered as a result.

In recent years increasing areas of mangrove have been cleared and converted to aquaculture, housing and industrial development, threatening the ecological functions of this important coastal ecosystem. It took the recent tsunami disaster to realize and appreciate its value.

The objectives of management are many-fold : environmental protection, conservation, timber production, socio-economic development, etc. Careful and far-sighted planning and strategies will help to successfully manage the State's remaining mangrove resource. Immediate action plans will involve updating of ecological and baseline data and information, starting with resource inventory, mapping of forest types and zoning for various uses.

Mangrove sustains itself by colonizing new mud flats and growing seaward. There is evidence that species colonization and succession has been affected by factors such as coastal erosion and rates of deposition around the estuaries and coasts. An understanding of these ecological processes will help towards effective management.

Under favourable conditions of frequent tidal inundation, abundant space and light, mangrove trees regenerate readily and with great success. Selective felling in Bakau (*Rhizophora*) and Berus (*Bruguiera*) forests are necessary to encourage natural regeneration. Where natural regeneration is less successful, silvicultural inputs will be needed.

Management of mangrove forests requires a holistic approach in order to achieve the desired objectives. Because of its many multiple roles, management planning must not be confined to Forest Reserves, Protected Forests and National Parks. Its ecological functions extend beyond the realm of protected areas.