



II. STATUS OF MANGROVE BIODIVERSITY MANAGEMENT IN THE PHILIPPINES

Department of Environment and Natural Resources
Biodiversity Management Bureau
Coastal and Marine Division

Mangrove forest ecosystems include mangroves and beach-associated plant species that are tolerant to brackish water and inundation of seawater during the high tide. Mangroves serve as important habitats for birds, insects and other animals, nursery for juvenile fish and invertebrates, and source of nutrients and food within the mangrove food web. The human population, especially those that live near the coasts, benefits from the ecosystem goods and services provided by the mangrove forest. Mangroves serve as spawning and nursery grounds for fish, natural pollution filters, shoreline protection from wave action, sediment traps preventing erosion to the seagrass beds and smothering coral reefs, source of food, fuel, medicines and building materials as well as for recreation and ecotourism. Equally important is the contribution of mangrove ecosystem to the regulatory function by carbon sequestration.

The total mangrove area recorded in the country is 450,000 ha. However, in the 1970s, conversion of mangrove forests to fishponds and illegal cutting became rampant, leaving less than one-third of the actual mangrove area.

In the Philippines, the Department of Environment and Natural Resources (DENR), the Department of Agriculture – Bureau of Fisheries and Aquatic Resources (DA-BFAR), and as well as the local government units (LGUs) are given the mandate of protecting the mangroves through enforcement of relevant laws, rules and regulations. As part of its task, the Biodiversity Management Bureau (BMB), under the DENR, leads the management of coastal biodiversity and wetlands ecosystem, which includes the mangrove ecosystem. The BMB-Coastal and Marine Division with other concerned Bureaus is currently reviewing existing policies and laws concerning various mangrove initiatives of the Department.

Under the National Greening Program of the current administration, 1.5 billion seedlings were targeted to be planted in 1.5 billion ha of public lands nationwide,

including 38,411 ha of mangroves in six years (2011-2016). In 2012, an estimated 223,000 ha were planted.

Another project implemented by the BMB is the Integrated Coastal Resources Management Project (ICRMP) with two components (i.e., Policy and Institutional Strengthening and Development, and ICRM and Biodiversity Conservation) aimed at developing relevant guidelines focused on the need to improve the state of the country's mangrove forest. The project drafted guidelines and policy recommendations such as (1) reversion of abandoned, underutilized and undeveloped fishpond lease agreements (AUU FLAs), (2) cancellation of Illegally Titled Fishponds and Illegally Constructed Fishponds, (3) Special Agreement for Mangrove Area Development, (4) Foreshore Areas and (5) Cutting of Mangrove Forests and Collection of Forest Charges. For the Biodiversity Conservation component, the ICRMP has already rehabilitated and reforested a total of 3,878 ha of mangroves. In 2013, BMB drafted a manual for Ecological Rehabilitation of Mangroves, a set of technical guidelines relevant for the promotion of sustainable mangrove rehabilitation. Early in 2014, BMB also issued a Technical Bulletin to support Mangrove and Beach Forests Development in Disaster-Risk Areas in the Philippines. The Bulletin aimed at providing keys for successful mangrove development and rehabilitation that follow sound science-based protocols in site selection, species-suitability, planting strategy and density. Guidelines on mapping, survey and science-based site assessment, community mobilization and capability development, nursery establishment, operation and seedling production, plantation establishment, maintenance and protection and monitoring and evaluation were detailed in this Bulletin.

In the implementation of multilateral partnerships such as that of the Coral Triangle Initiative (CTI), BMB targeted mangrove rehabilitation as one of its priority activities. Under the Coral Triangle Support Partnership (CTSP), the Verde Island Passage-wide mangrove mapping was completed for incorporation in the development of





municipal and provincial Climate Change Adaptation Plan. It has supported the establishment of a learning site promoting mangrove conservation in Calatagan, Batangas and it has developed the *Ang Pulo* Business Plan hoping to utilize the mangrove site as an ecotourism area.

With support from the German government, the baselining and mapping of the status of mangroves and fishponds in six selected regions of the Philippines were also completed under the Adaptation to Climate Change in Coastal Areas (ACCCoast) Project.

Moreover, BMB conducts social marketing initiatives and included the Month of the Ocean celebration, which focus

on mangrove protection for 2014 and the Coral Triangle Day annually to promote awareness on the importance of protecting the mangrove ecosystems.

At present there are gaps in information and data management as well as conflicting policies and mandates from various sectors and interests of stakeholders. Nevertheless, BMB is determined in recovering and restoring the status and ecological roles and functions of mangroves around the country following science-based approaches and achieve the optimum level of productivity for each hectare of mangroves.

