Bioprospecting and the Management of Philippine Marine Genetic Resources: Issues and Challenges[1]

Maria Rowena R. Romana-Eguia, PhD.
Research Specialist, SEAFDEC Aquaculture Department
Binangonan, Rizal, Philippines

Abstract

Scientific studies have proven that the Philippines is the epicenter of marine biodiversity. A geographical information system analysis on an extensive marine species database in the Indo-Malay-Philippines Archipelago (which is part of what is known as the Coral Triangle), confirmed that the highest concentration of marine species per unit area is found in the Philippines. Stock assessment and taxonomic surveys show that Philippine marine genetic resources are comprised of roughly 6000 species of clams, snails, mollusks, 488 species of corals, 981 species of benthic algae, 2824 marine fish species, 1200 species of decapod crustaceans, over 100 echinoderm species, seaweeds and threatened species such as sea cucumbers, turtles, sharks and other marine mammals. The incomplete inventory awaits the discovery and identification of other undocumented marine species that may also include extremophiles or deep-sea organisms. This rich aquatic biodiversity that is characterized by a high level of endemism, has made it incumbent upon the Philippine government to support activities and formulate laws for the management and protection of valuable marine genetic resources from anthropogenic as well as environmental threats. Hence the drafting and implementation of Executive Order 247 in 1995 has set a record of sorts for the Philippines having been the first developing country to pass a law regulating the access of genetic resources for use in research and commercial activities. For an archipelago with a coastal zone covering 11,000sq.km of land, coastal waters of 267,000 sq. km and approximately 2.2 million square km of marine territorial waters, bioprospecting and providing access to marine genetic resources are major concerns for various local stakeholders. This paper discusses some of the research activities, policies, issues and concerns relevant to the access, utilization and management of marine genetic resources in the Philippines.

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