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Biodiversity assessment of sea grass ecosystem in ecologically sensitive area for conservation, Kudankulam coast, Southeastern India

Palingamoorthy Gnanamoorthy*, M. Srinivasan and V. Ashok Prabu

Center of Advanced Study in Marine Biology, Faculty of Marine Sciences, Annamalai University, Parangipettai, Tamil Nadu, India.

* pg.moorthy87@gmail.com

Abstract

The sea grass ecosystems of Gulf of Mannar southern part are still mostly unexplored. The present study has been carried out with the objective of assessing the Sea grass resources of Kudankulam coast in two ecologically sensitive areas during October 2011 to March 2012. Assessment was made in two sites and totally 80 quadrates were selected and studied for the following parameters, species composition, biomass, shoot density, shoot epiphytes cover and epiphytes biomass. Totally five species were found, they are; *Thalassiahemprichii*, *Syringodiumisoetifolium*, *Cymodoceaserrulata*, *Halophilaovalis* and *Haloduleuninervis*. The species *Thalassiahemprichii* was found to be a dominant one among the total species survived. The overall density of the Sponges are 17.5 followed by Echinoderms 16.5 and Gorgonians, Ascidians and Molluscs were 15.5, 15.5 and 8.5 respectively numbers per 50 m². Sponges was found in higher density. The overall abundance of fishes in Kudankulam area was fair. Most common fishes were *Lethrinus* sp., *Lutjanus* sp., *Upeneus* sp., *Scarus* sp., *Chaetodon* sp., *Carangoides* sp. and *Odonus* sp. Unexplored sea grass and assessment of associated flora and fauna will create regular monitoring function of this important study area. Since various developmental activities are emerging steadily in this region, and the nuclear power plant is also going to be operational in the near future, this study becomes important and provides baseline information. Hence, it exceedingly vital information on marine environment and biodiversity in order to assess for conservation and management measures.

Key words: Assessment, sea grass, gulf of Mannar, biodiversity management