

(206)

Economic Value of Marine Ecosystems: A Review

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Abstract

Marine ecosystems are main tourist attraction in Sri Lanka and globally. Due to the public good nature of the resource, they are subjected to much free riding and hence degradation. Economic values, their estimation and appropriations is considered a much felt need in proper conservation and management of these resources. Objective of this study is therefore to review the available literature on economic valuation of marine recreational areas and to explore the gaps in the local and global contexts. Available literature were searched using the keywords marine recreation valuation and using search engines such as Science direct and Google scholar together with individual journals dedicated to marine valuation. The values were then converted to a common currency (US\$) and 2018 prices using GDP deflator values for comparison. According to the results, a range of valuation methods have been employed in marine ecosystem valuation and contingent valuation method, travel cost method and choice experiment method were among the most common. Many researches have estimated recreational values including both local and global values. The concepts of total economic value and the ecosystem service framework have been commonly used in the studies. Valuation focus was wide ranging including economic value of ecosystem services in the coastal regions, value of wetlands in supporting recreational fishing, benefits of coral ecosystems, indirect and existence value of coastal and marine biodiversity, recreation value of coastal lagoons and values of beach erosion control. Estimated values range from US\$ 9.24 to US\$ 31.63 billion for the selected studies. These studies have been carried out in U.S, Brazil, Hawaii, Maldives, India, China, Portugal Tunisia and Sri Lanka. Value of Ecosystem Services has been carried out in Sri Lanka for Bar Reef Marine Sanctuary and Pigeon Island National Park and recreational values have been estimated for Hikkaduwa Marine Sanctuary. It was found that the use of values in the policy context has been very limited in the developing country context and the signal provided for the policy makers about the importance of these recreational resources has not been properly recognized. Further this study emphasizes the research gaps in the world especially in the Asian region and Sri Lanka and the need to develop interdisciplinary studies that contribute to our understanding of the complex oceanographic, ecological, and economic factors that are involved in the governance, use, and stewardship of marine ecosystems.

Keywords: Marine, Recreation, Valuation, GDP deflator, Ecosystem services