Coastal ecosystems management

Biodiversity For Carrying Capacity Assessment

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Determination of marine vessel carrying capacity (MVCC) of an area is rather a new and challenging concept not only in Turkey, but also throughout the world. Determination of MVCC is a site specific process, and management objectives also play an important role during this process. Thus, MVCC calculation depends on various datasets comprising physical, ecological, social, economical or political components of the area in consideration. Ecological components, such as important habitats of endangered species and facies formations are considered as reduction factors for calculating MVCC of an area. This paper introduces ecological components identified for Kaş-Kekova Special Environmental Protection Area (SEPA), one of the four areas where carrying capacity assessments have been performed in Turkey. Seven flora species were observed in the study area, which contribute to facies formations. Among these, Posidonia oceanica, Zostera marina and Cystoseira sp. were taken as reduction factors because of the direct interaction with mooring and anchoring activities in the area. The habitat of critically endangered Mediterranean monk seal was taken into consideration as another reduction factor because of the probability of cave formation and adjacent area being sheltering zone for this species. The area coverage of ecological components which were considered as reduction factor was calculated as 2.246 km2 within the study area (in total 7.387 km2).