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Ecological effects of coastal embankment structures on beaches of Kadmat Island, Union Territory of Lakshadweep

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Expanding coastal developments and population pressures are one of the major threats to coastal environment in Lakshadweep Islands. The small islands are greatly affected by sea level rise and climate change which are expected to exert greater pressure on island ecosystem, exacerbating erosion, degrading habitat and accelerating shoreline retreat in islands. The Lakshadweep government has made embankment structures such as tetrapods, hollow blocks and seawalls for the protection of 77 km out of 121.27 km shorelines in island. Despite wide spread use on all types of shoreline information about the ecological effects of beach ecotone region is quite limited. It is evident to note that the ecological impacts of armoring leads to alterations of coastal seascape and related effects on the depression and connectivity in marine population. It also resulted in the fragmentation, degradation and loss of native sedimentary with impact on biodiversity, biotic communities and populations. The armoring structure placed along Kadmat Island showing poor diversity of natural fauna and flora compared to free beaches. Placing of engineered structure parallel to beaches do not contribute anything against erosion check, but accelerated sand movement and restrict accretion in some areas. These structures also contribute to the development of alien species by eroding natural species from the biota and create corridors for hard bottom species. The poor ecosystem diversity and declining abundance of prey resource in armored locations lost the feeding ground of migratory birds. The present study summarized the ecological effects due to the armoring at Kadmat Island Lakshadweep.

Biography

Nasarullah has completed his graduation in Environmental and Water Management from SN College Alathur, Plakkad, Kerala under University of Calicut and Post-graduation studies from Kannur University, Department of Environmental Studies.

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