

Status of Mangrove Wetlands and Implications for Sustainable Livelihood of Coastal Communities on the Lagos Coast (West Africa)

Authors : I. Agboola Julius, Christopher A. Kumolu-Johnson, O. Kolade Rafiu, A. Saba Abdulwakil

Abstract : This work elucidates on mangrove diversity, trends of change, factors responsible for loss over the years and implications for sustainable livelihoods of locals in four villages (Ajido (L1), Tarkwa bay (L2), University of Lagos (L3), and Ikosi (L4)) along the coast of Lagos, Nigeria. Primary data were collected through field survey, questionnaires, interviews, and review of existing literature. Field observation and data analysis reveals mangrove diversity as low and varied on a spatial scale, where Margalef's Diversity Index (D) was 0.368, 0.269, 0.326, and 0.333, respectively for L1, L2, L3, and L4. Shannon Weiner's Index (H) was estimated to be 1.003, 1.460, 1.160, 1.046, and Specie Richness (E) 0.913, 0.907, 0.858, and 0.015, respectively, for the four villages. Also, The Simpson's index of diversity was analyzed to be 0.632, 0.731, 0.647, 0.667, and Simpson's reciprocal index 2.717, 3.717, 3.060, and 3.003, respectively, for the four villages. Chi-square test was used to analyze the impact of mangrove loss on the sustainable livelihood of coastal communities. Calculated Chi-square (X²) value (5) was higher than tabulated value (4.30), suggesting that loss of mangrove wetlands impacted on local communities' livelihood at the four villages. Analyses of causes and trends of mangrove wetland loss over the years suggest that urbanization, fuel wood and agricultural activities are major causes. Current degradation observed in mangrove wetlands on the Lagos coast suggest a reduction in mangroves biodiversity and associated fauna with potential cascading effects on higher trophic levels such as fisheries. Low yield in fish catch, reduction in income and increasing cases of natural disaster has culminated in threats to sustainable livelihoods of local communities along the coast of Lagos.

Keywords : Mangroves, lagos coast, fisheries, management

Conference Title : ICFAS 2014 : International Conference on Fisheries and Aquatic Sciences

Conference Location : Penang, Malaysia

Conference Dates : December 16-17, 2014