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Analysis of macrophyte biomass productivity, utilization and its impact on various eco-types of Yala Swamp, Lake Victoria Basin, Kenya

Local communities' land use and recent land-use change were analyzed in a wetland ecosystem (Yala swamp, West Kenya) based on socio-economic and bio-physical data, remote sensing and geographical information system techniques. Harvesting wetland resources (e.g., macrophytes for thatching roofs) represents a sizeable part of the local income, while its impact on the post-harvest macrophyte growth is small. However, human impact is clearly discernible on satellite images; around 20 % of the wetland area was converted to agricultural land from 1973 to 2001. Sustainable use of wetlands requires a balance between indigenous land-use strategies and farming activities.