

Characterization of Wetland Values for Sustainable Utilization in Kisii Central District, Kenya

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Abstract

Wetlands cover approximately 4% of Kenyan surface area, but their total area has been declining. There were once abundant wetlands in Kisii Central District but now there are only isolated wetlands remaining. Wetlands are viewed as wastelands or dumpsites having little or no value. Wetland ecosystems play a critical role in supporting livelihoods and contributing to the sustainability of the Kenyan economy. The study surveyed wetland vegetation and characterized their ecological, socio-cultural and economic values for sustainable utilization in Kisii Central District, Kenya. A Multi-stage purposive sampling procedure was used in the research. Stage I: Kisii Central District; highly populated district was chosen, Stage II: Kiogoro, a Division with brick making, water abstraction and farming activities on wetlands. Households interviewed were proportionate to the total households within each sub-location. Households in close proximity to the wetlands were purposely selected through simple systematic random sampling. Vegetation sampling was performed along transects and set up preferentially on a North-South orientation. Analyses of qualitative and quantitative data was done using the Statistical Package for the Social Science. Qualitative data was recoded into numeric data sets for Chi-square and Pearson correlation while Microsoft Excel auto-sum mathematical functions were used to organize the outcome of vegetation sampling. Results from the study indicated that *Cyperus latifolius* and *Typha domingensis* had the highest importance value indices and could therefore be considered the dominant wetland vegetation species. All the three sites varied in terms of species composition. Using the Shannon Weiner diversity index, Nyaguta had the highest diversity index of 2.87 as compared to Kegati and Mobamba which had values of 2.44 and 2.39, respectively. Thus socio-cultural values were ranked relatively lower than economic and ecological values. Based on the results of this study, it can be concluded that the Kiogoro wetlands could be considered as a source of livelihoods for the local communities. The study recommends the protection of water collection points at the wetland sites to help save wetlands from destruction. The maintenance of wetlands should be recognised and adopted as a water management approach.
