

Spatial Approach to (Zonal Differentiation) of Livelihood Change and Resource Use in Agro-silvo-fishery Settlements around Lake Victoria, Western Kenya

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Abstract

This study takes a spatial approach aimed at illuminating the extent of environmental change driven by livelihood diversification and resource use, and identifying factors that influence livelihood security of households in agro-silvo-fishery settlements around Lake Victoria, Western Kenya, in the context of a new resource co-management regime introduced in the 2000s that may impact on resource access and livelihood strategies of the people. In the recent past the resources of Lake Victoria have come under severe pressure due to a variety of economic and ecological factors associated with over-fishing and a significant decline in fish species. Farming increased in importance as households attempt to meet subsistence needs, but land fragmentation, drought and low investment have led to poor crop yields. The compounded effect to the smallholders has led to increased forest resource dependency which in turn has been met by government regulations aimed at conserving the forested area. The end result is a vicious cycle of poverty and environmental degradation. The following is a discussion based on a preliminary field research in Sindo and its environs, the former Suba District, Nyanza Province. A spatial approach is adopted as a methodological exemplifier first to obtain a sample of households from different zones of the natural resource system encompassing Lake Victoria and Gwasssi Hills Forest and secondly to examine spatial enablement and/or constraint of how resource access and use is by households located in the different zones. The study revealed that households engaged in various economic activities classified into five sectors namely: Agriculture, fishery, livestock, forest product extraction, and non-farm activities whereby a household comparatively engaged or specialized in one dominant sector/activity which contributes significantly to the household economy and the other sectors/activities playing a secondary role. The livelihood options for the people are less, with the consequence of their increasing vulnerability to various economic shocks. Contrary to some expectations set by the existing literature, farming households located in the interior zones were increasingly separated from fishing, possibly due to overfishing and the general shift from inshore to offshore fisheries, and to the increasing fishing cost: only those with sufficient capital can go offshore to fish. In contrast to the case of fishing, resources in the forest reserve adjacent to their settlements were widely used for firewood and fodder regardless of the zones from the lake shore. This was with no communal nor co- management except occasional community policing, facing environmental degradation. On the basis of these findings, the study argues for place-based analysis at both household-level and local-levels in enhancing understanding of local-level decisions in adoption of different livelihood strategies and management of natural resources in the face of changing economic and environmental conditions. In order to attain livelihood security in the study area, this paper argues that future development strategies need to enhance the sustainability of the resources of both the lake and land, and possibly build upon traditional management methods and institutions.