

Assessing Socio-Ecological Change Dynamics Using Local Knowledge in the Semi-Arid Lowlands of Baringo District, Kenya

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Abstract

A clear understanding of the social and ecological change dynamics in pastoral ecosystems is imperative for formulation of appropriate policies that ensure sustainable resource use and livelihood security of pastoral households. Spatial and temporal ecological knowledge expressed by those with long familiarity with the ecology has been shown to be more superior in quality and resolution than those gathered remotely and modeled digitally. This study adopted a local-perceptions approach in assessing the social and ecological change dynamics in the Njempes Flats of Baringo district over a period of four decades. The results reveal a changing vegetation structure, declining diversity and increasing soil erosion that are attributed to the rise in both human and livestock populations. The results also show a rising trend in diversification of asset portfolios in response to impoverishment as a result of the declining pasture and livestock productivity. These findings suggest that pastoralism in Baringo is a system in transition, attempting to maintain itself while at the same time trying to adapt progressively to a continuously shrinking resource base.