

Center for Community-Based Resource Management (CBRM)

Natural Resources Institute, University of Manitoba

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Date:	August 10, 2012	Entry Number:	1236
Case Study Name:	Integrating local ecological knowledge and management practices of an isolated semi-arid papyrus swamp (Loboi, Kenya) into a wider conservation framework		
Author:	Terer, T., Muthama Muasya, A., Dahdouh-Guebas, F., Ndiritu, G.G. and Triest, L.		
Document Type:	Paper in scientific journal		
Year:	2012		
Language:	English		
Document Location:	Journal of Environmental Management 93: 71-84		
Full Citation:	Terer, T., Muthama Muasya, A., Dahdouh-Guebas, F., Ndiritu, G.G. and Triest, L. 2012. Integrating local ecological knowledge and management practices of an isolated semi-arid papyrus swamp (Loboi, Kenya) into a wider conservation framework. Journal of Environmental Management 93: 71-84.		
Region:	Africa – south of Sahara		
Country:	Kenya		
Ecosystem Type:	wetland		
Social Characteristics:	Indigenous community		
Scale of Study:	community		
Resource Type:	Species conservation		

Type of Initiative:	Research-driven project
Community Based Work:	Resource management, conservation
Keywords:	Cyperus papyrus, Wetland, Sustainable utilization, Ethnobiology, Great rift valley, Kenya
Summary:	<p>The current study documented local utilization of <i>Cyperus papyrus</i> L. (papyrus), harvesting patterns, threats, and local management practices among the Endorois community living around Loboï swamp (Kenya). Papyrus is a highly productive freshwater macrophyte that is widely utilized throughout tropical Africa. However, increased human population and poverty, has led to over exploitation and conversion of papyrus wetlands to agricultural fields. Nonetheless, users of papyrus hold important local ecological knowledge (LEK) and practices. We show that Endorois practices on papyrus uses are compatible with the management priorities of the swamp and a wider conservation framework using data obtained from three focus group discussions (FGD), interviews of 34 households and 15 key informants. The study revealed that papyrus support local livelihood notably as a source of income (papyrus mats are sold), cattle fodder, roofing materials (shelter), and cooking fuel. The study further revealed important LEK relating to harvesting patterns, recovery after harvesting and traditional management practices. Correlation and principal component analyses showed that experienced old harvesters (EXPERT) avoided harvesting repeatedly at the same location (REVISIT), thereby allowing recovery of papyrus when compared to younger harvesters ($r = 0.63$, $p < 0.01$). However, over 70% of harvesters predicted a decrease in papyrus coverage in the future due to the current diversion of water from the swamp, and frequent droughts, despite the instituted traditional management strategies (e.g. rotational harvesting) to curb overharvesting. The study concluded that the documentation of site-scale papyrus users' profile, LEK, and traditional practices are vital for the conservation and management of Loboï swamp.</p>

