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Community perceptions concerning key ecological resources at risk in Baringo district ,Kenya

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Introduction key ecological resources in arid and semi-arid lands are often characterized by small patches of seasonal grazing and important water points that lend critical support to entire production systems (Scoones , 1991) . When these are lost , production systems are badly compromised . The Baringo District of north-central Kenya has endured decades of resource abuse due to breakdown of traditional system of resource management and conservation and increase in human population that put pressure on grazing and wood resources (Little , 1992) . The overall project goals were to map and characterize key ecological resources at risk throughout the district , this phase of study was used to : (1) identify the vulnerable and lost key resources in the district ; (2) rank key resources in order of their degree of vulnerability ; (3) note major factors influencing vulnerability and loss of resources ; (4) suggest possible means of restoration .

Materials and methods One hundred and thirty six key informants were interviewed from seven divisions in Baringo . Four of the divisions were in the arid pastoral zones while three were semi-arid agro-pastoral zone . The repeatability in ranking was assessed using Friedman's test , while descriptive statistics were used to identify the factors affecting resource vulnerability .

Results Pastoralists were more concerned about the vulnerability of dry-season grazing and water ($p < .05$) , while agro-pastoralists were concerned with water and cropland respectively (Table 1) . Overall water was found to be the most vulnerable key resource .

Table 1 key resources at risk , their description , and ranked vulnerability to loss by pastoral and agro-pastoral communities in Baringo district

Key resource	Description	Overall ranking on vulnerability to risk		
		Pastoral (n=70)	Agro-pastoral (n = 66)	District n= (136)
Grazing land	Dry season grazing , swamps , depressions , valley bottoms , high elevation pastures	1	3	2
Water	Springs , rivers , boreholes , wells	2	1	1
Arable land	Rainfed and irrigated lands	4	2	3
Livestock	Cattle , sheep and goats	3	4	4

The communities identified climatic factors (96%) , insecurity (56%) , expansion of crop cultivation (45%) , lack of grazing guards (26%) , invasion of unpalatable bush (19%) , sedentarization (13%) , invasion of *Prosopis juliflora* (13%) , increased livestock numbers (6%) and breakdown of traditional resource management systems (4%) as the factors influencing the loss of key grazing resources . Factors affecting water resources were identified as drying and silting of pans (98%) , climatic factors (96%) , insufficient sources of water (66%) , animals using human water (55%) , destruction of watersheds (51%) , damage of water structures (47%) , river changing course (22%) , pollution (19%) , and overuse of water supplies (14%) . Land resources were negatively influenced by population increase (51%) , riverine area cultivation (32%) , increase in soil salinity (22%) , scarcity of land for irrigation (19%) and soil erosion (6%) .

The respondents when asked to suggest possible opportunities of restoring vulnerable or lost resources , they responded by placing all the responsibility to the Government . This included that the government should develop new water sources (100%) , provide more security (98%) , restock herds (94%) , control noxious bush (90%) , employ grazing guards (85%) , provide food relief (82%) , and give title deeds to farmers (52%) . In contrast , very few respondents (only 2 to 8%) suggested ways of restoring key resources that involved community leadership or involvement .

Conclusion The Baringo communities are well aware of the state of their key ecological resources . Their perception on the factors causing vulnerability and loss of the key resources was found to be limited as majority emphasized on climatic factors but downplayed important human influences such as population increase , sedentarization , and lack of traditional management systems . The opportunities suggested for restoring the key resources by the community lacked community-led interventions depicting a dependency on outside help . Partnership between the government and local resource users are needed for effective restoration of the lost key resources in Baringo .

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