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Farmers' and academia's views"

Threats and management options of wild edible plants in semi-arid lands of turkana county, Kenya

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Abstract

Wild edible plants (WEPs) can be effective in the fight against hunger and malnutrition, however, sustainable use of WEPs is threatened by many factors. Due to the sensitivity of the topic and the difficulty to measure threats to WEPs, ethnobotanical studies often report threats as an afterthought despite the importance of sustainable use. Here we outline a participatory process to identify major threats facing WEPs and management options for sustainable use. Our methods combine Focus Group Discussions (FGDs) and preference ranking to derive the major threats and management options for WEPs. We showcase the application of these methods in the arid and semi-arid lands of agro-pastoral Turkana communities in northwestern Kenya where WEPs are particularly important for food and medicine. We held three FGDs each with 14 adults (age >= 18 years) in three community units (Nasiger, Atala Kamusio, and Lopur) with maximum socio-economic and environmental heterogeneity. Our informants included community health workers, community health volunteers, public health officers, nutritionists, chiefs/assistant chiefs, village elders, religious leaders, teachers, and other community members knowledgeable about WEPs. They listed and ranked both threats and potential management options against the threats. Preference ranking of important threats facing WEPs and management options revealed some differences across the three community units. Overall, major threats included climate change, overstocking, over-harvesting, and invasive species. Important management options included mitigation of climate change, preservation of local knowledge, selection, propagation, processing, and marketing of WEPs. Our findings could be widely applied for identifying threats and developing sustainable management options for WEPs. Further studies should evaluate the potential costs, benefits and risks of implementing management options and potential suitable habitats of the WEPs for optimising site-specific conservation.

Keywords: Agro-pastoral communities, challenges, conservation, field survey, focus group discussion, wild food plants

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