Local and Indigenous Knowledge Systems in Subsistence Agriculture, Climate Risk Management, and Mitigation of Community Vulnerability in Changing Climate, Lake Victoria Basin: A Case Study of Rakai and Isingiro Districts, Uganda

Author(s): Casim Umba Tolo, Enock Amos Majule, Julius Bunny Lejju

Abstract

Developing countries are vulnerable to negative impacts of climate change due to over reliance on climate-sensitive sectors, mainly agriculture. Limited adaptive capacity makes them vulnerable to climate-induced hazards. However, over the years, indigenous knowledge systems (IKS) have proven effective in promoting sustainable development particularly for those in subsistence agriculture. For example, in Lake Victoria basin, local communities have coped and adapted to climate-induced hazards using traditional systems and IKS. This chapter presents findings of a cross-sectional survey on the use of IKS in subsistence agriculture to enhance climate risk management and mitigation of community vulnerability in a changing climate. Data were collected by household questionnaires, key informants' interviews, and focus group discussions. Results showed overall, significantly high community awareness levels prevail in study area, implicating climate change as the main challenge facing agricultural sector. Nevertheless, as climate change adaptation and mitigation measures, local communities use myriad of IKS to improve resilience and productivity. They use IKS in soil conservation, weather/climate forecasting, selection of planting seeds, and preservation of seeds/crops. This study, therefore, recommends incorporating IKS into scientific knowledge systems to promote climate change adaptation and mitigation among vulnerable communities dependent on climate-sensitive resources.

Keywords: Changing climate, Indigenous knowledge systems, Subsistence agriculture, Lake Victoria basin, Uganda