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“Resilience of agricultural systems against crises”

Indigenous Knowledge and Adaptation Strategies of Pastoralists to Climate Variability in Northern Kenya

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Abstract

The Fourth Assessment Report of the Intergovernmental Panel on Climate Change indicates that the anticipated warming in sub-Saharan Africa is expected to be greater than the global average. Consequently, in-depth pastoralists' indigenous knowledge (IK) of complex agro-ecological dynamics is critical in detecting availability and appropriate management of rangeland resources. The current study aimed at describing the IK and adaptation strategies that have been practised by the Rendille pastoralists in Marsabit County of northern Kenya over time. Data were obtained through formal personal and key informant interviews and focused group discussion. MS Access software was used for database management while the General Linear Model Procedure of SAS was used for quantitative analyses. A chi-square analysis was performed where deemed essential to establish the association between different attributes studied. The information gathered from qualitative approach were categorised through identification of various thematic areas on IK and adaptation strategies, and organised into coherent categories for inferences. Pastoralists in the study area used various IK indicators from flora, fauna, climate variables, astrology and general environment in drought monitoring. Although the indicators were not compared with seasonal forecasts issued by the formal institutions, it is evident that this rich knowledge is yet to be fully harnessed and optimally combined with modern science. The pastoralists have developed a basket of reactionary adaptation strategies to maintain their animal genetic resources in the rangelands. It is concluded that creation of livelihood conditions that enable the pastoralists to respond to climate changes by addressing the linkages between poverty and vulnerability is critical for successful adaptation strategies in the rangelands.

Keywords: Adaptation, climate, indigenous knowledge, Kenya, pastoralists