**Building Resilience: Empowering Agro-Pastoralists AgainstClimate Variability in Laikipia, Kenya.**

Climate change poses significant challenges for agricultural systems in Africa, particularly affecting agro-pastoral communitiesdependent on crops and livestock for their livelihoods. This study investigates the impact of adaptation strategies on climateresilience among agro-pastoral communities in Laikipia County, Kenya. It applies the Food and Agriculture Organization's RIMA-II framework to analyze data collected from 308 households selected through multistage sampling. Factor analysis is used to clusteradaptation strategies, Principal Component Analysis to calculate resilience pillars, and Structural Equation Modeling (SEM) withinstrumental variable regression (IVR) to estimate the Climate Resilience Index. Our findings reveal that household resilience issignificantly influenced by: Access to basic services ($\beta = 1.643$, $p < 0.05$), assets ($\beta = -3.422$, $p < 0.01$), and adaptive capacity ($\beta = -4.034$, $p < 0.01$). Farm risk reduction, diversification, and access to agro-weather information demonstrated strong positiveassociations with resilience, while households with higher education levels and larger adult equivalent size showed greatercapacity to implement effective adaptation. The negative influence findings imply the use of only the agricultural mitigationmechanism. Policies aimed at emphasizing the use of informal and non-economic approaches as pillars could significantly booststhe resilience of agro-pastoral communities in similar arid and semi-arid regions.