

Abstract

Matungulu Sub-County is a semi-arid region in Kenya that is prone to frequent droughts, water shortages and food insecurity. Rapid population growth, coupled with climate change, has led to not only an increasing demand for more land, but also to over-exploitation and degradation of local natural resources, leading to a myriad of socio-economic and environmental challenges in the area. The objective of this study was to assess farmers' perceptions of climate change and its effects on tree cover in Matungulu Sub-County. A structured questionnaire, FDGs, key informants and direct observations were used to collect household socio-economic data from 412 randomly selected households in two locations, namely, Sengani and Koma. Temperature and rainfall data from the Kenya Metrological Department was used to study changes in climatic trends over the three-decade period between 1987 and 2017 in the study area for comparison. Descriptive and inferential statistics were used in the data analysis. Farmer-perceived climatic patterns were collaborated by data from the Kenya Meteorological Department. 84% of respondent farmers perceived climate change to have affected species composition, density and distribution of tree cover. The farmers unanimously indicated climate change was real in the region.