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"Solidarity in a competing world — fair use of resources"

Ninety Years of Pastoralists Land Use Change - A Case Study from Northern Kenya

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Abstract

We use three different data sets to reconstruct land use patterns of the Rendille pastoral people in Marsabit District, Kenya, for the past ninety years. The first is extracted from an oral history record of seasonal migrations of eight Rendille settlement units (gobs) between 1927 and 1978. The second results from nine aerial surveys of South-Western Marsabit District carried out 1979–1980. The third stems from the analysis of Digital Globe images (Google Earth) of Marsabit District recorded between 2012 and 2014. The oral history record allows the placement of settlement sites within a 10 by 10 km grid, the aerial survey allows a 5 by 5 km grid, and the satellite image analysis uses accurate geo-referencing. All data sets facilitate, albeit with different accuracy, estimation of frequency and distance of seasonal movements of the gobs. The two more recent ones also permit counting of household numbers per gob as well as estimating size and number of animal enclosures, differentiated into those for smallstock, camels and others. Some striking changes in the land use patterns occurred during the period under observation: 1) the overall home range of the Rendille people shrunk by about two thirds since the 1940s; 2) migration distances and migration frequencies as an important aspect of pasture management diminished significantly; 3) distinct clustering of gobs in very small areas has become common; 4) the gobs became smaller in average, i.e. having lower number of households. We interpret these developments against environmental parameters such as rainfall, range condition, vegetation types, land degradation, and others which have been mapped during the 1980s for the Range Management Handbook of Kenya and with recently recorded corresponding results from remote sensing exercises carried out under AFSIS, and we present what the analyses show.

Keywords: Long-term land use change, migration patterns, Kenya, pastoralists

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