

Pastoralism in Eritrea: Herder Responses to Climatic Stress

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Pastoralists are under enormous pressure and often, at risk of being dislocated from their lands. Their natural environment is challenged by changes in land tenure system, dramatic increases in human and livestock populations, and recurrent droughts that lead to water shortage and disruption of the vegetation cycle. Herders develop range management techniques to ameliorate the impact of their harsh and variable physical environment. To save forage for critical periods, the Zaghawa in Chad move their sheep and camels north to Sahara pastures in parallel paths, leaving portions of pasture for their return journey to the south (Tubiana and Tubiana 1977). The Masai widen their grazing radius and delay entering dry season areas, a strategy which can increase the total carrying capacity by 50 percent (Jacobs 1980). Different types of livestock are dispersed to the most suitable pasture to reduce grazing competition among livestock (Jacobs 1980; Fratkin 1987). Herders may also use fire to regenerate growth and reduce parasite infestation. With a diminishing resource base, however, these mechanisms are increasingly ineffective. This study explores pastoralists' response to climatic stress on rangelands in Eritrea.

FIELD AREAS AND METHODOLOGY

The country of Eritrea is bounded by Sudan, Djibouti, and Ethiopia. Pastureland accounts for 60 percent of the country's total land area (Ministry of Agriculture 1997). The great majority of people in the lowland regions of the country depend on livestock, which play a central role in the material and cultural lives of the pastoral communities. Two lowland areas were selected for this study – Kerkebet in the northwest and Sheab in the eastern coastlands (Figure 1). The Hidareb and Tigre, two ethnic groups that comprise the majority of the 23,000 inhabitants in Kerkebet, largely follow a nomadic way of life (Ministry of Agriculture 2000). In the Sheab lowland, agro-pastoralism is the dominant production system. Sorghum and maize are grown primarily to meet subsistence needs. Yield per hectare is low and highly susceptible to variations in rainfall. Cattle are kept as draught animals in the farming system. Camels are used mainly to carry people and goods during seasonal movement between the highlands and the lowlands. Small ruminants such as sheep and goats provide protein as well as assurance for generating cash income. The