

Forests, rangelands and climate change in southern Africa

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The forests and rangelands resource in southern Africa is of critical importance to sustainable livelihoods and ecosystems. However, this resource is also extremely vulnerable to the projected changes in climate in the region, as well as to other external stressors with which climate may interact, which, in turn, will have serious implications for people and economies. Consequently, adaptation is a central priority in the Southern African Development Community (SADC)'s regional response framework. This paper provides an overview of the status of issues and actions related to the adaptation of forest and rangeland resources to climate change in southern Africa. A background to the resource is provided which serves to contextualize the extent of the resource, highlight the significance of its economic, social and environmental functions, and outline drivers of deforestation and land degradation. A summary of climate histories and trends in southern Africa indicates a robust pattern of rising temperatures, with some statistically significant changes in rainfall. Climate models project increased average, minimum and maximum temperatures, with increases evident in all seasons. The majority of models for rainfall project decreased rainfall for the June–July–August (winter) season and for the September–October–November (spring) season. In addition, increases in very hot days and in heat waves are projected by all climate change models discussed. The potential impacts of climate change, climate variability and extreme events are discussed in terms of how projected changes would impact on forest and rangeland resources as well as on sustainable development. The need for adaptation to deliver livelihood benefits beyond climate change is highlighted in a discussion on adaptation needs. It is emphasized that successful adaptation projects should simultaneously achieve synergies with socio-economic benefits, climate change adaptation and biodiversity and ecosystem conservation. National adaptation priorities, as identified in national adaptation programme of action (NAPAs) and national communications, include sustainable forest management and the sustainable use of resources; afforestation and reforestation programmes; the promotion of agroforestry, non-timber livelihoods, alternative energy sources and climate-resilient tree varieties; and capacity-building and the strengthening of institutional frameworks. There are few ongoing initiatives in the SADC region dealing with adaptation to climate change, especially in forests and rangelands. NAPAs and country reports prepared for an FAO workshop identified barriers that limit the implementation of national adaptation priorities. This provides insight into key challenges that need to be overcome in addressing climate change. While forests and rangelands play key roles in adaptation to climate change, existing policies and national strategies in many SADC countries do not adequately reflect the climate change needs of these resources and the people who depend on them, especially in terms of adaptation. The need to provide assistance to countries to enhance technical capacity and financial capacity is also highlighted. It is essential to integrate key sectors in the adaptation of forests and rangelands to climate change through the development of holistic programmes that benefit the environment, the communities that depend on the resource, and governments. There are multiple key initiatives in the SADC region on which to build and improve regional and interregional collaboration in climate change adaptation in forests and rangelands. A project spanning the SADC region to help strengthen capacities at all levels and across national borders to enhance resilience to climate change could work in synergy with these.