

## UNDP-GEF grasslands project: conserving mountain biodiversity in southern Lesotho

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**Background** The Kingdom of Lesotho contains some 70% of the Drakensberg-Maloti Mountains, recognised as the Eastern Mountains "Centre of Biodiversity and Endemism" of southern Africa. The Mountains have globally significant plant diversity, with unique habitats and high endemism. These resources have been increasingly degraded by a grazing regime based on communal access, with reduced regulatory capability. Lack of ownership has restricted investment in conservation. Lesotho has the lowest Protected Area coverage of any nation in Africa (<0.4%). Biodiversity is thus at risk.

**Project approach** This United Nations Development Programme (UNDP) Global Environment Programme (GEF) project (1999-2005) provided two distinct but complementary interventions. The first was to work with government and communities to create a network of small protected sites, targeting specific biodiversity values. The second objective addressed conservation more broadly, by seeking to incorporate biodiversity values in rangeland management systems. This required inputs to policy review as well as developing incentive and regulatory systems within central, district and community organisations.

The project focused on the rangelands of Quthing District in south Lesotho, but linked with other biodiversity initiatives in the country. The project worked through national and district institutions including Range and Conservation Divisions in the Ministry of Agriculture, the National University of Lesotho and NGOs. The National Environment Secretariat (NES) provides oversight and coordination.

**The grassland flora** There are several classifications of vegetation and floristic communities for southern Africa as a whole. The vegetation types of Lesotho have been assessed within two broad categories -the lower veld grasslands and the higher mountain grasslands. The main grasslands, with their approximate areas are:

Moist lower grassland	6,689 km <sup>2</sup>	Below 1,700m asl
Afro-Mountain grassland	15,484 km <sup>2</sup>	1,700m to 2,500m asl
Alti-Mountain grassland	7,118 km <sup>2</sup>	2,500m to 3,480m asl

None, or tiny areas only, of these vegetation types are represented in the protected area systems of southern Africa.

The Alti-Mountain biome has two subdivisions: (a) the temperate alpine belt with *Erica* / *Helichrysum* heathland and *Merxmuellera* / *Festuca* temperate grassland (b) the temperate- sub-tropical alpine mixed grassland with *Merxmuellera* / *Themeda* / *Harpochloa*.

The Afro-Mountain biome also has two subdivisions: (a) the sub-tropical / sub-alpine belt with *Themeda* / *Eragrostis* sub-tropical grassland (b) the sub-tropical montane belt with *Catalepis* and *Cymbopogon* sub-tropical grasslands.

In addition to these 'Zonal' vegetation types, three 'Azonal' vegetation categories can be recognised in the higher altitudes, wetlands (largely bogs and mires), riverine gorges, cliffs and talus etc.

**Endemism** There are an estimated 30% endemics out of a total 1,750 taxa on the Eastern Mountains. The most important family for endemics is Asteraceae with 118 endemics out of a total of 167 species. Strict Lesotho endemics number about 50 higher plant species and many more lower plants. A large proportion of the 30 % endemics are found in the heathlands and the bogs of the upper alpine belt. It is these two categories that form the globally significant biodiversity value (the entry point for GEF biodiversity project eligibility). Endemic plant taxa include: *Helichrysum palustre*, *Helichrysum qathlambanam*, *Kniphofia hirsuta* (red hot poker), *Crassula qoatihambensis*, *Dianthus basuticus* (orchid), *Brownleea spp* (4) (orchids), *Dierama jucundum* (harebell), *Saniella verna* (an endemic genus). At least two endemics are recognised to be endangered: *Aloe polyphylla*, the spiral aloe threatened by illegal trade, and *Aponogeton ranunculiformis*, a submerged water plant confined to a few small pools.

**Conclusion** The project is now winding down. Principal outputs have been much greater awareness of biodiversity with government and communities, the integration of biodiversity concepts in livestock policies and a network of community managed biodiversity areas – within larger format grazing land-use plans.