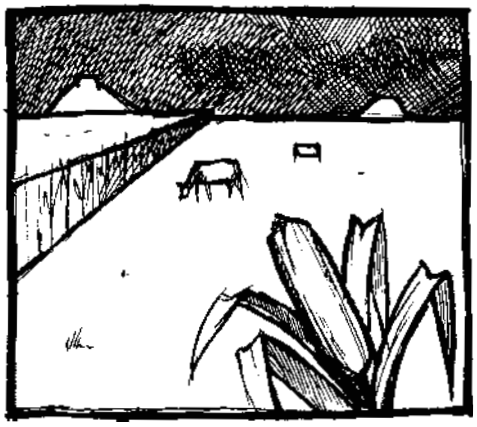


PROVINCIAL FACT SHEET

LAND DEGRADATION
Free State

Reviewing land degradation

As part of a national review of land degradation, information about soil and veld degradation was gathered at three workshops held in the Free State during 1997. Based on the insights of agricultural extension officers and conservationists, three consensus maps were produced (see over). These represent the status of soil and veld degradation and an overall measure of land degradation in the province. In terms of this analysis the Free State is the least degraded province in South Africa.

Provincial profile

Most of the Free State is fairly sparsely populated. The 1995 census recorded nearly 2,8 million people living in an area of 129 480 km^2. Population densities are lowest in the dry west (0–5 people/km^2) and highest in the Welkom and Qwaqwa areas (more than100/km^2). Between 1988 and 1998, settlement increased very rapidly in the Free State. Mechanisation resulted in decreased employment of farms, and many former farm dwellers moved to housing projects set up by the Reconstruction and Development Programme.

The Free State comprises the former Orange Free State plus a small part of the fragmented former homeland of Bophuthatswana and the tiny self-governing state of Qwaqwa. A very small proportion of the province falls under communal land tenure.

Although agriculture accounts for about 90% of land use, mining is the prime income-earner and employer of migrant labour. Overall, 63% of the population lives in poverty.

The natural vegetation of the eastern part of the Free State is grassland, with savanna in the north-west and Namakaroo in the south-west. The western half of the province has an arid climate and the eastern half is classified semi-arid, although some areas receive 750–1000 mm rain per annum.

Agricultural land use

57% of land in the Free State is used for stock farming, including beef and dairy cattle and sheep. Crops account for a further 33% of land use, mainly on the grasslands of the highveld, and include maize, sorghum, wheat, groundnuts and sunflowers. The environment is unsuitable for commercial forestry and only 1% of land is set aside for conservation.

The area of land used for crops decreased slightly between 1988 and 1998. Some reasons for this decline were the grass conversion scheme, which transformed croplands into pasture, the droughts during the mid-1980s and early 1990s, and increased costs of agricultural production. The area of land used for grazing remained unchanged but the intensity of grazing increased slightly.

Land degradation issues

The Free State has the lowest provincial soil degradation index in South Africa (see over). In most magisterial districts soil degradation is insignificant or light, and in general rates of soil degradation are decreasing. Magisterial districts with the highest soil degradation index values are Thaba 'Nchu, Marquard, Witzieshoek and Senekal. Sheet erosion is the most common form of soil degradation, followed by gully erosion and wind erosion.

The provincial veld degradation index (see over) is also relatively low, and only districts in the dry west were identified as moderately or severely degraded. These include Boshof, Koffiefontein, Jacobsdal and Rouxville. The most common problems are change in plant species composition in the grasslands, associated with loss of plant cover. Bush encroachment is not an issue. Alien plant invasions are poorly mapped, but include prosopis, prickly pear, queen of the night and bitter apple in the dry west, and black wattle and scots thistle (bankrotbos) in the east.

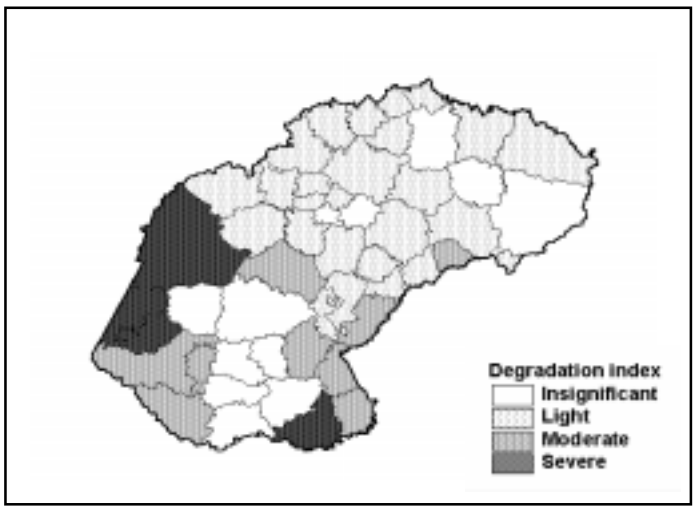
If all the magisterial districts in South Africa are considered together, none of the top twenty districts requiring priority attention occur in the Free State.

Combating land degradation

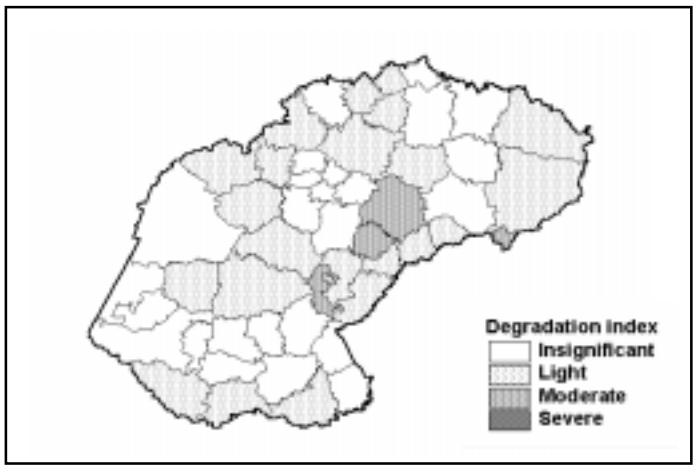
Reasons for the relatively low levels of land degradation in the Free State include the provision of agricultural extension services, farm planning, government-subsidised soil conservation works and stock reduction schemes, the organisation of farmers into study groups, and the strict application of agricultural legislation. These practices should be taken into account when developing sustainable land use policies and programmes to address land degradation in the Free State.

Indices of Land Degradation in the Free State

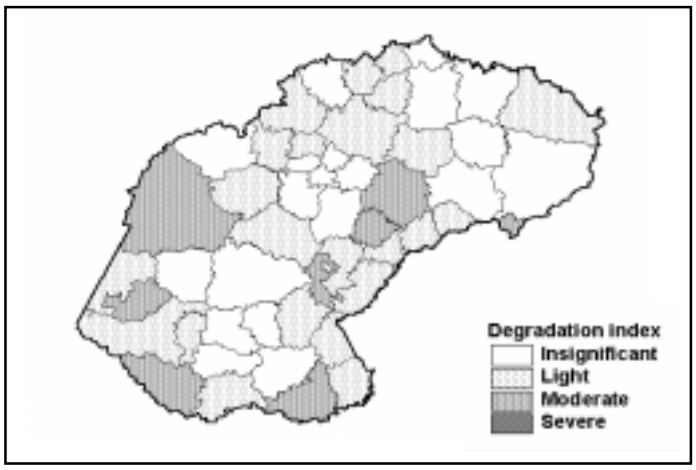
The location of the Free State, showing the percentage of each magisterial district managed under a communal land tenure system.



The total Veld Degradation Index (VDI) for the 51 magisterial districts of the Free State:
The VDI incorporates the severity and rate of veld degradation, as well as the % area of veld in the magisterial district.



The total Soil Degradation Index (SDI) for the 51 magisterial districts of the Free State:
The SDI incorporates the severity and rate of soil degradation for all land use types, adjusted for the % area of each land use type in the magisterial district.



The Combined Degradation Index (CDI) for the 51 magisterial districts of the Free State:
The CDI is the sum of the total SDI and VDI for each magisterial district.

Where can I get more information?

Department of Water Affairs & Forestry, Free State, P O Box 528, Bloemfontein 9300
Tel: (051) 430 3134, Fax: (051) 430 8146

Department of Agriculture, Free State, Private Bag X529, Bloemfontein, 9300
Tel. (051) 448 1224, Fax: (051) 448 8799

For more information about the national review of land degradation and its products, visit the following web-site:
www.nbi.ac.za/landdeg

National Department of Agriculture | National Botanical Institute | Environmental Monitoring Group | Department of Environmental Affairs & Tourism | Programme for Land & Agrarian Studies | Department of Water Affairs & Forestry

Text by Timm Hoffman (NBI) and Ally Ashwell (EnviroEds). Illustrations by Carlos Amato. Desktop publishing by Andy Thesen. Printed by Salty Print.