PROVINCIAL FACT SHEET

LAND DEGRADATION
Mpumalanga

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 Mpumalanga 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 Mpumalanga is perceived to be one of the less degraded provinces in South Africa, with only a few high priority districts.

Most of Mpumalanga is fairly sparsely populated (5–25 people/km^2). The 1995 census recorded just over 3 million people living in an area of 78 370 km^2. Population densities are highest (more than 100/km^2) in the mining areas around Witbank and in some of the communal areas. About 46,8% of the population lives in poverty.

The commercial farming areas of Mpumalanga comprise mainly what used to be the eastern Transvaal, while in general the former self-governing states of KaNgwane and KwaNdebele make up the communal areas.

The natural vegetation of the highveld is grassland, while that of the lowveld is savanna. Most of the province has a semi-arid climate, but the eastern escarpment areas are humid or dry sub-humid.

Agricultural land use

46% of land in Mpumalanga is used for grazing , including dairy cattle, sheep and game. Crops account for a further 30% of land use. Maize, sorghum, sunflowers and deciduous fruit are grown on the highveld, and citrus, subtropical fruit and a small amount of tea and coffee in the lowveld. 8% of the province is used for commercial forestry, mainly in the wetter eastern parts. The large Kruger National Park contributes to Mpumalanga being the province with the highest proportion of land used for conservation (7% compared with 1–3% in other provinces).

During the period 1988–98 there was a slight increase in the area of land used for crops and forestry, and a decrease in the area of grazing land.

Land degradation issues

Soils in Mpumalanga are relatively susceptible to erosion. Sheet erosion is a problem in croplands, especially in the communal areas. Grazing lands and forestry areas are affected by gully erosion. The districts of Nsikazi, Moutse 3, Mdutjana 1 and Kamhlushwa are particularly badly degraded.

Mining and coal-fired power stations on the highveld cause chemical pollution and acidification of soils in some districts. Heavy metals and other toxic substances pollute several rivers and wetlands. It costs on average R25 million a year to neutralise the effects of acid rain on soils in Mpumalanga.

Mpumalanga has the second lowest provincial veld degradation index (see over) although some districts are fairly badly degraded. Change in plant species composition affects most districts in the grassland biome, but loss of plant cover is only a problem in the communal areas. Few districts are affected by deforestation or bush encroachment.

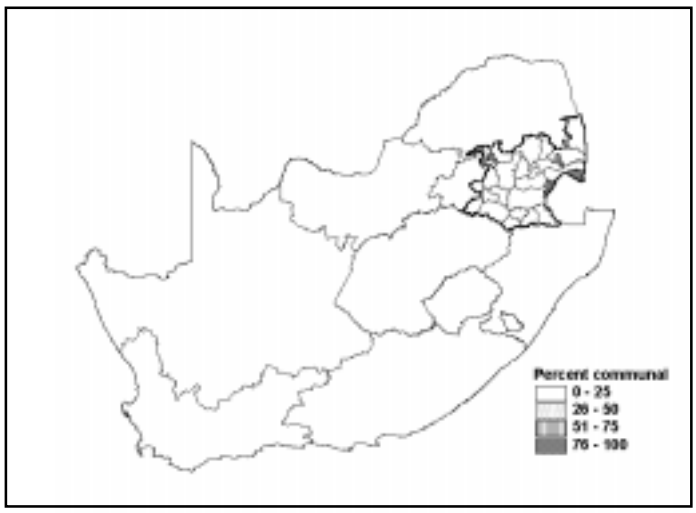
Alien plants are a serious problem in Mpumalanga, having invaded about 16% of the province. River systems are particularly badly affected, especially by black wattle. Alien plants are estimated to use about 14% of the runoff in Mpumalanga each year. In addition, commercial forestry may reduce runoff by up to 18% during dry periods.

If all magisterial districts in South Africa are considered together, none of the top twenty districts requiring priority attention are found in Mpumalanga. However, if communal areas are considered separately, the district of Nsikazi is identified as a priority. In addition, Moutse 3 has a high combined index of degradation (see over).

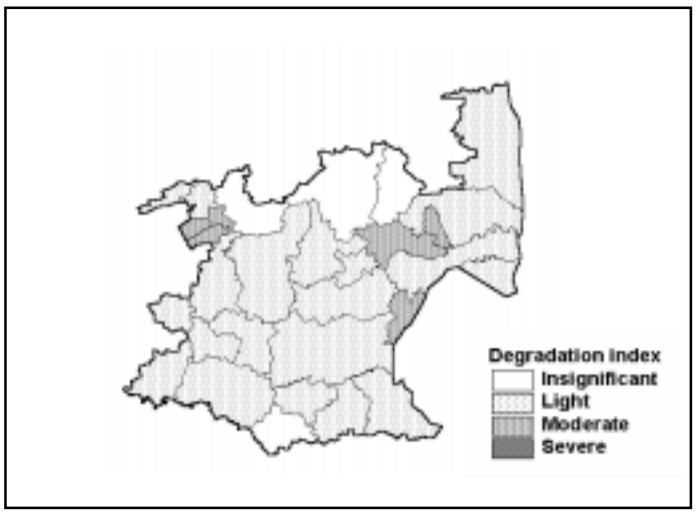
Combating land degradation

Soil degradation is decreasing in most croplands in Mpumalanga thanks to good agricultural extension services, farmer study groups, government-subsidised soil conservation works and strict application of agricultural legislation. However, in some grazing lands and forestry areas where insufficient care is taken when cultivating erodible soils on steep slopes, the rate of degradation has increased. The worst increases in soil degradation have been in settlement areas in the former self-governing territories, where apartheid policies forced too many people to live on too little land, with poor infrastructure and services. When developing sustainable land use policies and programmes to address land degradation in Mpumalanga, factors that have both caused and limited degradation should be taken into account.

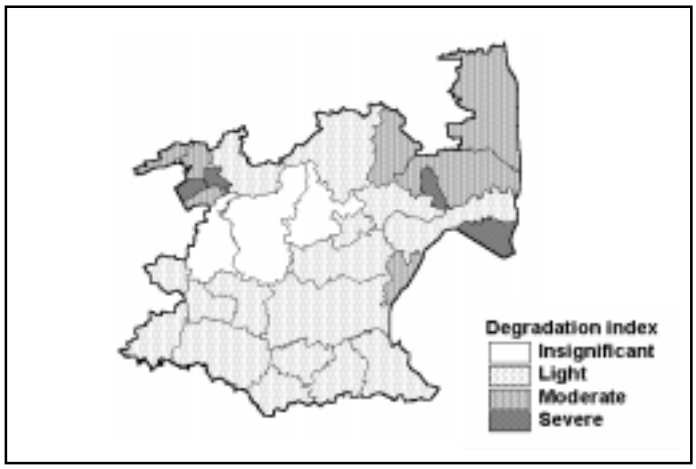
Indices of Land Degradation in Mpumalanga



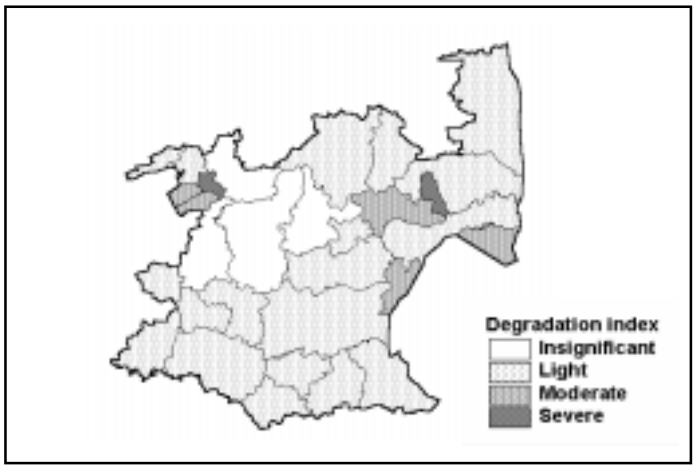
The location of Mpumalanga, showing the percentage of each magisterial district managed under a communal land tenure system.



The total Veld Degradation Index (VDI) for the 30 magisterial districts of Mpumalanga:
The Veld Degradation Index (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 30 magisterial districts of Mpumalanga:
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 30 magisterial districts of Mpumalanga:
The CDI is the sum of the total SDI and VDI for each magisterial district.

Where can I get more information?

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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

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