

DIRECTORATE OF FORESTRY

CHALLENGES

ENVIRONMENTAL DEGRADATION

ARE there any forests in Namibia? This is a typical question asked by foreigners and quite often also by Namibians. There are, in fact, quite large forest areas but they tend to be far from the main tourist attractions.

The major parts of Namibia's forests and woodlands are located in the north-eastern part of country. The most wooded regions are Okavango and Caprivi. There are also forests in the eastern parts of Ohangwena, Otjozondjupa and Omaheke Regions. Here rainfall supports relatively denser forests than the more open woodlands typical of much of central Namibia.

Forests consist of many different tree and shrub species. The biggest trees are up to 15 metres in height and more than half a metre thick. The big wild teaks (*Pterocarpus angolensis*), which are found scattered in their natural habitat, are harvested commercially for timber on a selection system in which only one or two trees are felled per hectare. They are mainly used in the furniture and carving industries.

Trees and shrubs also grow in the central and southern regions. The big trees are mostly camelthorns (*Acacia erioloba*). Densely wooded areas are found only along river courses where ground water is shallow.

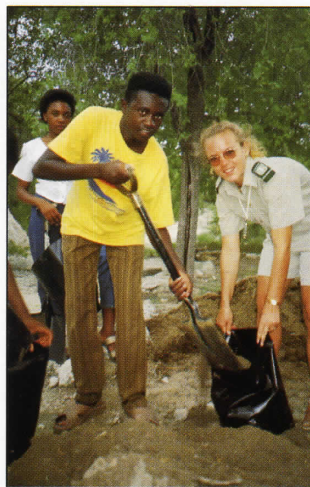
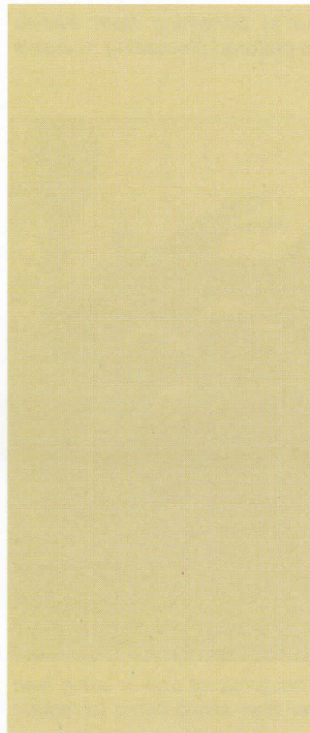
Trees and shrubs provide fuelwood, timber and other construction material, as well as edible fruits, livestock fodder and fibre to most Namibians. In nature trees stabilise soil and protect it against erosion. If forests and woodlands are managed properly they can provide us and future generations with their valuable products.

TREES IN DANGER

Wood has been used for various products and reasons since people first entered Namibia. Before the 19th century the population was small and their use of wood made little or no impact on the woody resources until the beginning of 19th century.

However, this changed rapidly. One of the earliest written accounts on forestry in Namibia was made by botanist Hans Schinz who reported serious destruction of woody vegetation in some of the most populated areas of the former Owambo region in 1885 and 1886. Another report in 1907 stated that due to the intensive cutting of forests, southern Owambo communities were compelled

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Meryn Smith from the Etosha Environmental Education Centre, and students from Rundu prepare the soil to plant an indigenous tree. Although thousands of new trees are planted each year, they grow slowly in Namibia's hot, dry climate.

to use millet stalks as a substitute for woody poles in buildings.

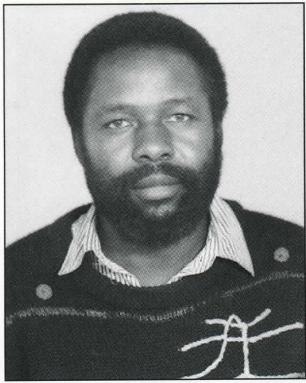
The first European settlers and explorers cut down trees and shrubs wherever they camped or settled. The long ox wagons were rigid and not easily manoeuvrable. Trees which were obstacles, had to be cut down. The excessive cutting of trees surrounding European settlements aroused the attention of colonial authorities in the 1890s. Increased settlements and the use of wood for fuel and fencing caused the destruction of many big camelthorns, especially at Rehoboth and further south. By 1946 the forests in those areas had been seriously eroded as a result of overcutting and grazing.

Tamboti, *Spirostachus africanus*, was another important tree species for European settlers. It was exploited by the mining companies around Tsumeb and Grootfontein for use as mining props. Following mass exploitation, the tamboti trees were replaced by thorny and drought tolerant bush. Nature's way of reacting to the mass removal of a dominant tree species from an ecosystem had resulted in another problem, bush encroachment. Tamboti was the most important tree species used in the construction of missionary buildings in the former Owambo, now comprising the Omusati, Oshana, Ohangwena and Oshikoto Regions. Today it is difficult to find any tamboti trees in those regions. The destruction has been so thorough that young Namibians do not even know the name of this species.

MOPANE WOODLANDS GONE FOREVER?

The central Cuvelai catchment and surrounding areas in the Oshana, Omusati and western part of Ohangwena Regions are the most populated parts of Namibia. Here the need for agricultural land, firewood and building material has led to the cutting down of large areas of omusati or mopane trees (*Colophospermum mopane*).

Mopane wood is resistant to termites and therefore highly valued as construction material in traditional homesteads where it is used mainly in the construction of palisade walls. Many trees are needed for the inside and outside palisade to separate the homestead from the surrounding environment. The long, thick poles used in the palisades are a sign of wealth and prosperity.



HARRISON KOJWANG

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Bruno Nebe

Namibia faces a growing demand for fuelwood, which is offered for sale in towns. Although it is illegal to harvest, transport or sell wood products without a permit, halting deforestation will only succeed if alternative and affordable sources of energy can be developed.

The excessive use of this wood for construction is a real threat to the survival of trees and a forerunner to desertification.

Cutting does not kill the mopane tree. It coppices vigorously from the stumps but remains in a bushy form if coppices are cut back in successive years. Vast areas of mopane woodland have been transformed into one- to two-metre high shrubland. The Directorate of Forestry is studying the most

feasible way to manage these shrublands at Ombalantu in the Omusati Region. Together with local communities, the Ministry is trying to establish ways to harvest mopane wood and bark so that the trees can survive for future generations. This is in line with the classical forestry concept of management for "sustained yield".

The Directorate of Forestry has also established research trials at three sites with

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Bruno Nebe

In the absence of affordable alternatives, indigenous trees are used for the construction of fences and houses. The environmental cost of this practice could be high, especially in the densely populated communal areas.

potential tree species for pole production. Indigenous and exotic species, such as the blue gum (eucalyptus) from Australia, are included in the study.

Tree planting is a difficult task in a dry and hot environment. In addition, trees take a long time to grow. There are no easy or quick solutions to the burning environmental problems. However, basic research and experiments have to be done before recommendations can be made. Exotic tree species may provide alternative sources for poles and fuelwood production, but ways should be found to maintain and best manage our indigenous wood and shrublands.

FIRES DESTROY VALUABLE TREES

Forest fires today are the most destructive force affecting Namibia's woody resources. The practise of burning forests areas is still popular in parts of Namibia and if these fires are not controlled, Namibia will rapidly lose its most valuable timber resources.

Almost all forest areas - more than five million hectares - are burnt annually. The fire hazard is highest from August to December, just before the rains. The usual causes of forest fires are "slash and burn" agriculture, burning for pasture improvement and hunting, lightning and arson.

The commercially valuable timber species Zambezi teak, *Baikiaea plurijuga*, is very sensitive to fires. Wild teak, *Pterocarpus angolensis*, is fairly resistant, but unusually frequent fires prevent its natural regeneration.

The Directorate of Forestry has intensified its struggle against fires, including intensifying research into the role of fires in local management practices. Many fire breaks have been cleared and fire control towers constructed.

The Eastern Caprivi Forest Fire Control Pilot Project will start at the end of this year. After the detailed forest inventory a forest management plan will be designed with fire control as a significant component. This will be followed by a similar project in the Okavango Region.

ILLEGAL BUSINESS WITH WOOD PRODUCTS

In Namibia wood products are protected under the Nature Conservation ordinance (4 of 1975), the Forestry Act (72 of 1968) and the Preservation of Trees and Forests ordinance (37 of 1952). A permit is needed to harvest, transport or sell wood products. Unfortunately illegal cutting for quick profit is far too common, with commercial wood cutters usually coming from urban or peri-urban areas.

Contrary to general belief local communities do not deliberately destroy their woody resources. However, the effects of mass cutting are often not realised and therefore continue.



Wynand du Plessis

Many communities have contacted forestry authorities who have been asked to stop illegal wood cutting. Communities realise that forestry laws and regulations are meant to protect peoples long-term interests.

A COMBINED EFFORT

Preventing the total destruction of Namibia's woody resources is too huge a task for one small Directorate. The cooperation of other ministries and government bodies, private sector and non-governmental organisations are essential. The Northern Namibian Forestry Committee based in Ongwediva has brought together all these sectors. The Committee meets frequently to take decisions on cooperation and areas of responsibility.

More cooperation is needed on policies and fire management, especially where there are conflicting interests. Nevertheless, the coordination has already resulted in closer cooperation between the Directorate of Forestry and the Weather Bureau. The latter can locate forest fires from satellite images and convey this information to forestry staff. This enables them to speed up fire fighting.

No programme would be successful without involving the people who depend on forest resources in their daily lives and who are directly affected by environmental degradation. Only by joining forces can we combat deforestation and destruction of woody vegetation.

Fast growing exotic eucalyptus trees are planted on an experimental basis in northern Namibia. These plantations could provide wood for fencing-poles and stockades.