

## A digest of information on key aspects of Oshikoto, Ohangwena, Omusati and Oshana's geography

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Much of the information presented here covers all four regions because they share so many features, and most of the boundaries between them are artificial straight lines. Conditions in one region are often therefore identical to those across unmarked borders, the precise locations of which are often not known to local residents.

The same would have been true 100 years ago of the straight line that separates Namibia and Angola. However, conditions in the two countries have since been moulded by very different economic and political circumstances. Better economic opportunities (as a result of more fertile soils, greater rainfall and access to markets) caused many Angolan's to move further north. Other Angolans moved into Namibia as a result of Portuguese rule, including an estimated 40,000 people in 1926, and because of more attractive economic and labour opportunities in Namibia. As a result of all of this, far fewer people live to the north of the border in Angola than in the four Namibian regions.

A total of 778,857 people were counted in the four regions in 2001, and this represented about 43% of the total Namibian population ([density of people in Namibia.jpg](#)). Interestingly, this percentage has dropped and remains on the decline because more and more people leave the 'North' to find work and homes in other parts of Namibia. This immigration began with men leaving to work as labourers or traders over a hundred years ago, but nowadays many women have left as well. As a result, rural areas in the north are home to large numbers of children and older folk, but rather fewer people of an age normally associated with being economically active ([see the age pyramids on page 41 of the North-central profile](#))

Other important features of history and ecology to have had substantial influences on the regions and their people include the many devastating famines that occurred, and the boom-and-bust nature of crop production which allowed for the development of widespread trading. The somewhat fertile cambisols and calcisols ([soils\\_both\\_regions.jpg](#)) on which millet and sorghum can be farmed and the availability of fresh water in shallow wells were the dominant conditions that enabled the oshana system to support relatively large numbers of people in the first place. Finally, the numerical strength of the Oshiwambo-speaking population has allowed people from the four regions to dominate Namibian politics and a considerable, growing segment of the country's economy. As a result of this and the many immigrant workers elsewhere, large sums of money flow back to the regions in the form of investments, remittances and goods.

The high concentration of people has had several consequences. Most obviously, vegetation resources have been severely degraded as a result of clearing for crops, over-grazing and the cutting of trees for building materials and fencing. This is why the densely-populated areas of the regions appear so different on satellite images from areas across the Angolan border, and to the east and west and south. The grounds of Ogongo Agricultural College within the oshana system are also conspicuous because much more indigenous vegetation remains

within their boundaries. The extent of clearing has been impressive, rapidly increasing over the past 40 years ([land\\_cleared 1974-1997.jpg](#)). The expansion of cleared crop land is both due to population growth and increasing wealth which allowed rural households to clear more and more land (see below).

The greatest concentrations of people in rural areas are in the oshana system and around pans in the eastern areas of Ohangwena and Oshikoto ([map\\_population density.jpg](#) and [local distributions of people.jpg](#)). Remaining areas to the south-west of the oshanas are too dry or sandy for crop farming, while the Kalahari sands between the scattered eastern pans are not suited to crop farming on a small scale.

But a high proportion of people now live in urban areas, most obviously in Oshakati/Ongwediva, Ondangwa and Oshikango, and in the many smaller towns such as Oshikuku, Omuthiya, Uutapi, Eenhana, Okongo, Okahao. All these towns and villages are growing very rapidly. Many of them originated as small concentrations of *cuca* shops, and we can expect many similar small groups of *cuca* shops to develop into towns in due course. Tsumeb has a different origin and character, having developed as a mining town and service centre for local freehold farmers.

Much of the eastern regions is covered in broad-leafed North-eastern Kalahari Woodlands that stretch eastwards to the Caprivi ([vegetation types.jpg](#)). These grow on sands deposited there during much drier times long ago. The same is true of the Western Kalahari Woodlands that dominate southern and western Omusati. Between these two blocks of woodlands is vegetation of the Cuvelai Drainage growing on wind-blown sands and more clayey soils formed by water flow. Mopane is the most characteristic species of the Cuvelai.

Plant biomass varies rather evenly from the highest in the east to the sparsest cover in the west ([vegetation\\_biomass.jpg](#)). Exceptions to this trend are the degraded areas in and around the Cuvelai and on the very salty soils in southern Oshana, the Etosha Pan and to its west. Another exception is the expanses of bush encroachment on freehold farms around and to the north of Tsumeb ([bush\\_encroachment.jpg](#)). Substantial areas of grazing have been lost as a result of the dense growth of bush such as black thorn, sickle bush and purple-pod terminalia. The ultimate cause of encroachment is over-grazing and fire control which has led to the proximate effect. This is the absence of fire which would kill or stunt young bushes. The economic value of badly encroached farms is, of course, much lower than those with better grazing. Efforts to harvest bush for charcoal production have had little impact on the problem, mainly because the volume of bush removed is small and the plants regenerate if additional measures are not taken to kill the roots.

The west to east trend in plant cover is largely due to the gradient of rainfall. Average annual falls in Omusati are about 400 millimetres while those in eastern Ohangwena and Oshikoto are usually over 500 millimetres ([average\\_rainfall.jpg](#)). The hills around Tsumeb enjoy even higher falls because moist air is forced to rise, cool and condense over the hills. Despite these geographic trends, the most predominant feature of rainfall is its variability: in total amount falling per year ([rainfall\\_annual\\_total 1944-99.jpg](#)), in when it falls within the summer rain season, and its regularity. All of these kinds of variation have immense impacts on farm production. Very poor rains lead to crop failure and even to the famines that killed tens of thousands of people, while exceptional rains result in mahangu harvests which produce

surpluses to be traded and/or stored in *oshingandhi* or *omashisha* baskets. The size and impressive construction of these baskets is a direct consequence of the boom-and-bust nature of cereal production in the four regions.

Focusing first on communal land, much of the area has traditionally been used for farming cereals, goats and cattle. This was generally on a small scale, most families having less than 3 hectares of cereals and a handful of animals. Most household income, of course as in-kind resources, came from their farming activities. Much of this has changed over the past few decades as more and households gained access to cash incomes from wages, trading, businesses, remittances and pensions. While one would expect that rural households would have progressively reduced their agricultural holdings as cash incomes became more and more important, precisely the opposite has happened. Although their **dependence** on farming has diminished, the wealthiest households with the greatest number of incomes, amounts of income and largest families now control the biggest **agricultural holdings** in the form of large fields and livestock numbers (see for example, [graph-livestock by em-category.jpg](#)).

All of this has been made possible by the open access, free-for-all nature of communal land. The great majority of pastures, arable land, and browse are controlled, owned by families that do not derive any significant part of their income from those resources. The remaining minority of farm resources is in the hands of really poor people who depend heavily on produce from crops that usually cover less than one hectare and small flocks of less than 10 goats; these families normally do not have cattle or donkeys.

This is Namibia's best example of the tragedy of the commons, where common property resources have been used by the wealthy at the expense of the poor who depend on the resources. Moreover, this has led to severe environmental degradation since everyone uses the resources maximally.

The best example of large land and livestock holdings are in the very large farms, often called 'illegally-fenced' farms in eastern Oshikoto and southern Omusati. But the same preferential and dominating access to farming resources happens within the densely populated areas of the Cuvelai where rich and poor households live side-by-side ([map\\_cattle-people per household.jpg](#)). The map shows the actual locations of households and their sizes and cattle holdings. The largest homes, which are also the richest have most cattle that consume most of the pasture available in the open oshanas and other unfenced areas. This leaves little grazing for the few animals of the poorest, smallest households. Moreover, wealthy households normally have fenced-off several hectares of grazing, called *uuyanda*, around their homes. Their animals use the *uuyanda* pastures only late in winter when all the free, open access grazing has been depleted.

One consequence of the limits on farm resources is that households in the most densely populated areas are of the regions generally have the smallest fields, herds and flocks ([graph\\_cultivated area and populayion density](#) and [graph livestock-population density.jpg](#)). Another corollary is the immense variation in farm holdings in terms of field sizes ([graph fieldsize\\_variation.jpg](#)) and livestock ([graph cattle-goats ownership.jpg](#)).

As for the freehold farms, there is a small number of farms that concentrate their production on irrigated produce around Tsumeb, growing vegetables, fruit, lucerne etc. Most of the

remaining farms are used for cattle farming, tourism and trophy hunting ([conservation areas.jpg](#)). There are several resettlement farms, but the residents of these have required substantial support from government and donors to eke out a living ([map landuses.jpg](#)).

The Mangetti farms were originally allocated to individual Oshiwambo-speakers during an effort by the previous government to promote commercial farming in the homeland areas. The presence of these farms doubtless provided other people with the idea or initiative to fence off their own farms, mainly to the north and east in Oshikoto. I do not know how many farms have been established, but there could easily be about 200 different farms. Many of the owners are people who also have one or more of the original Mangetti Farms.

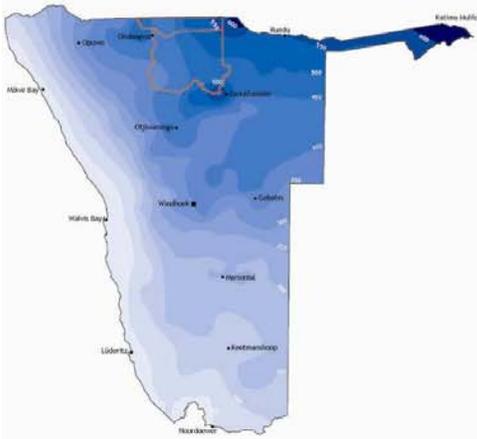
From an ethical and legal point of view, all these farms look like a bad idea. But they do have merit by offering the chance of turning communal land into freehold or leasehold land that has a capital value, and which may be better managed than if its resources are left for open open-access, free-for-all exploitation. Certainly, plant growth and animal populations are in much better condition on these farms than in areas denuded by high concentrations of small-scale farmers.

But there is another problem caused by these large, free farms. This is because almost the only area into which small-scale farming can expand is east of the main Oshivelo-Ondangwa road. Soils are reasonably suited to crops, pastures are available and water can be obtained from shallow wells. As a result, this is the only area within the four regions where populations have increased and expanded spatially over the past 20 years. The expansion is an eastward direction towards where the many large farms are now located, and the time will come that there will be almost no more reasonable land available between the western, degraded areas and the areas of new, fenced farms.

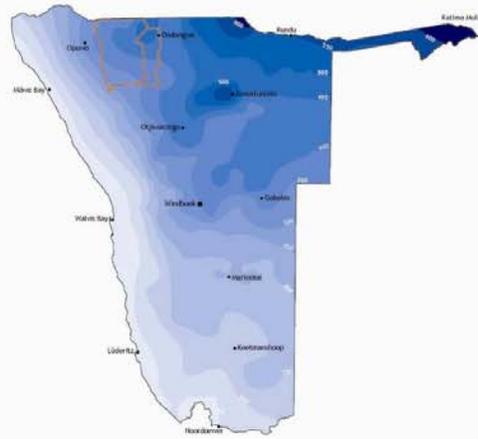
[Map\\_pressure units.jpg](#) provides a perspective on overall pressure on natural resources, especially vegetation. The index of pressure was derived by combining densities of people, livestock and wildlife. As alluded to above, the only areas with little pressure and reasonable soils and grazing are in eastern Oshikoto. Elsewhere, in southern Oshana and Omusati the soils are generally saline, as is the groundwater, and these areas receive less rain than places to the north and east.

Large parts of Oshikoto, Oshana and Omusati consist of the famous and valuable Etosha National Park. Some freehold farms to the east of the park have capitalized on their proximity to the Park by establishing tourism accommodation and other attractions for people passing by on their way to the Etosha. Several initiatives have been developed to attract tourists north, including craft centres, visits to historical sites (Nakambale, Ongulumbashe, baobab trees) and traditional villages. Some of these initiatives go together with the recent establishment of conservancies and community forests ([conservation areas in the north.jpg](#)).

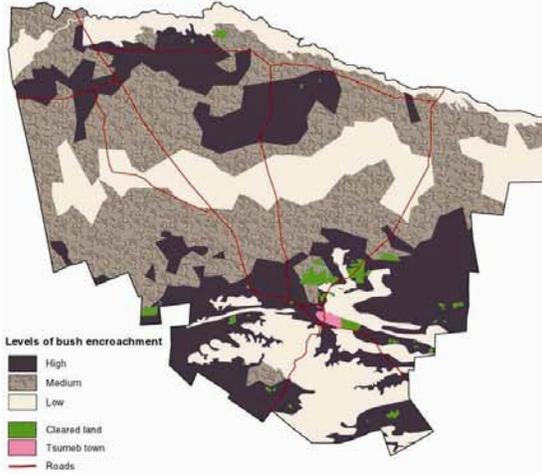
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Average rainfall east.jpg



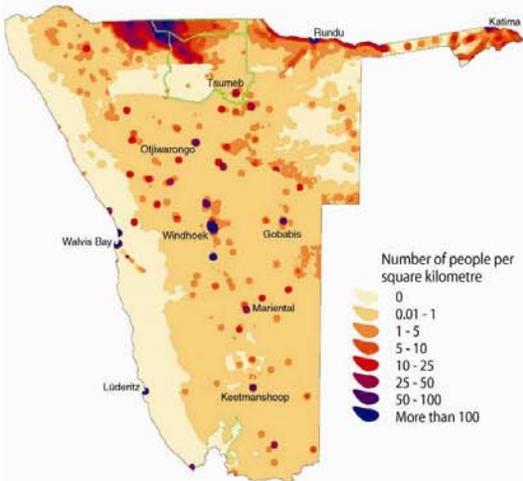
Average rainfall west.jpg



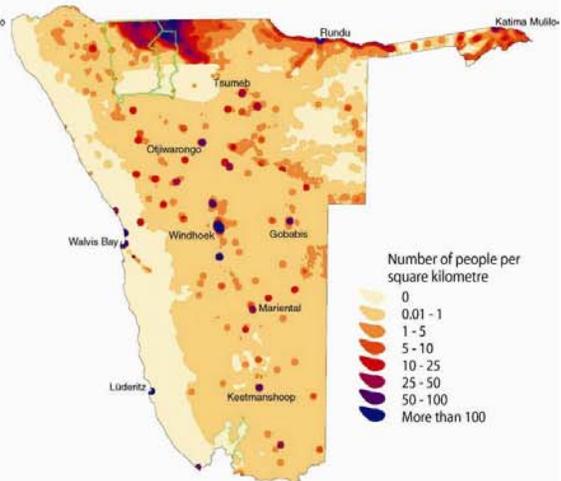
Bush encroachment.jpg



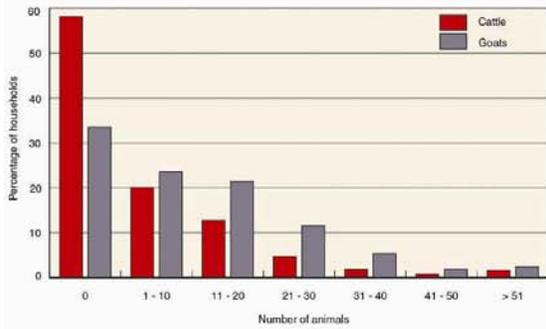
conservations areas in the north.jpg



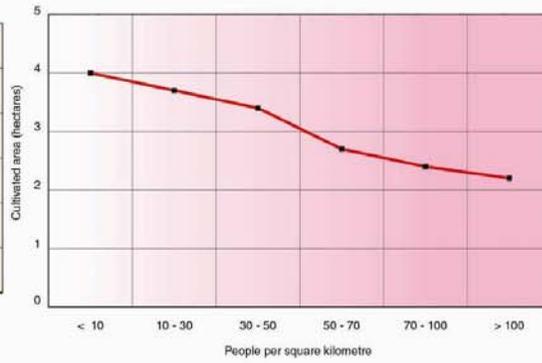
density of people in Namibia\_low\_east.JPG



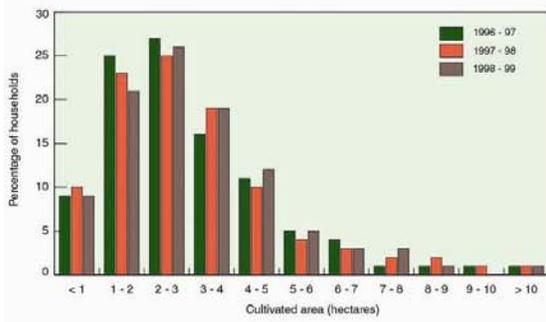
density of people in Namibia\_LOW\_west.JPG



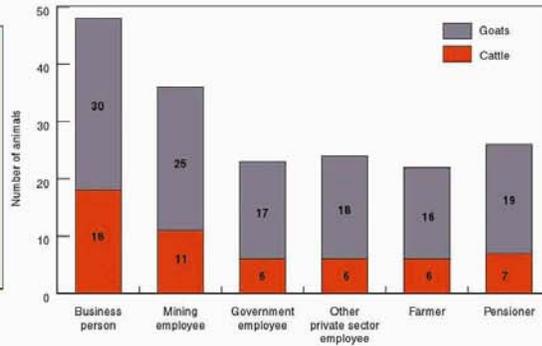
graph\_cattle-goats ownership.jpg



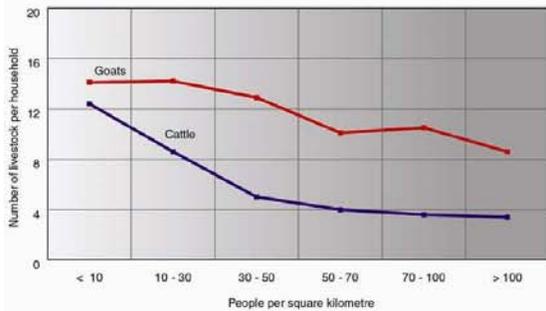
graph\_Cultivated area and Population density.jpg



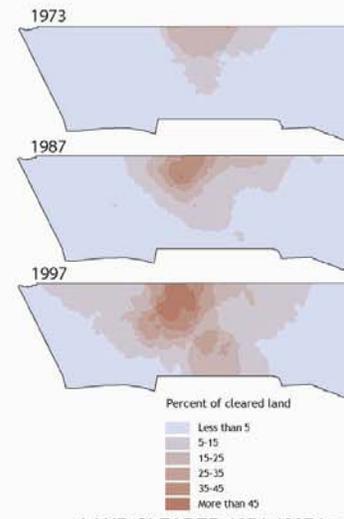
graph\_fieldsize variation96\_98.jpg



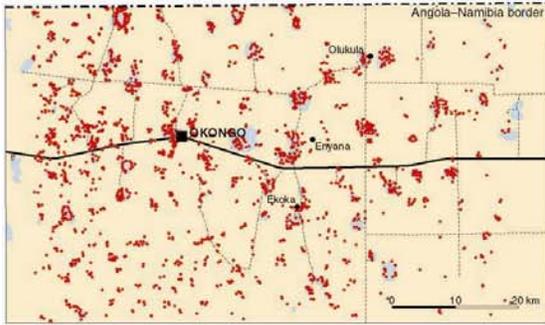
graph\_livestock by emp-category.jpg



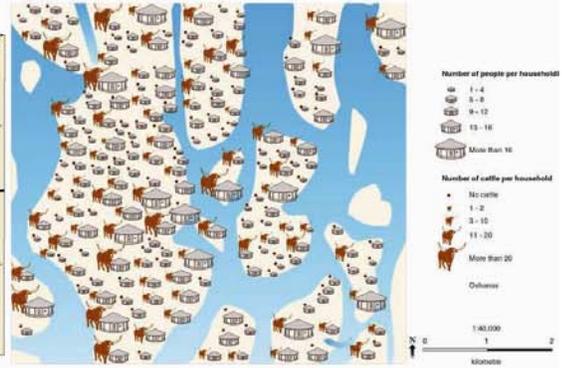
graph\_livestock-population density.jpg



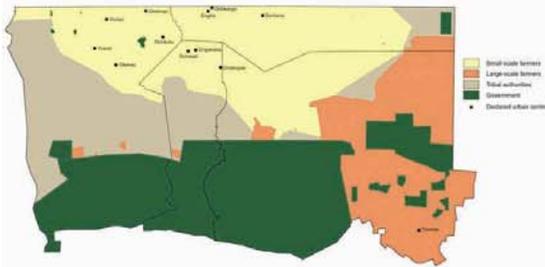
LAND CLEARED 1974-1997.jpg



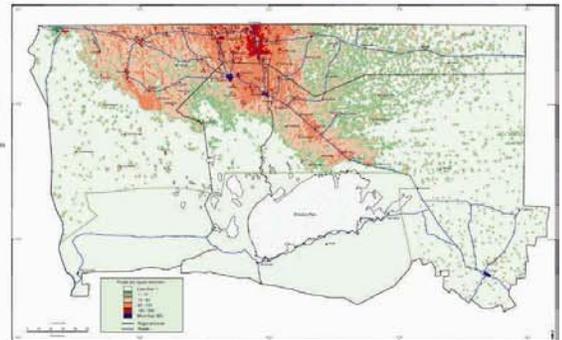
Local distributions of people.jpg



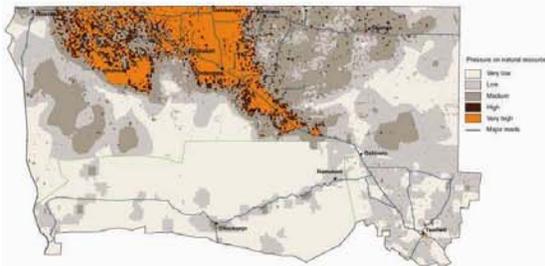
map\_cattle-people per household.jpg



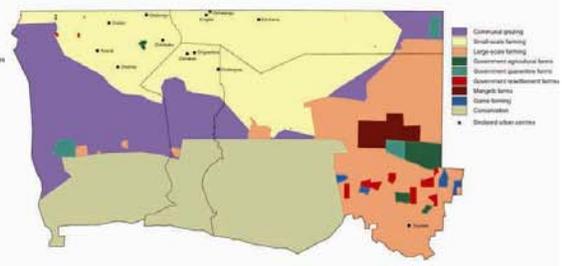
map\_control.jpg



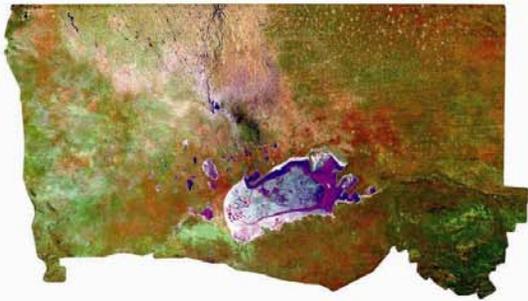
map\_population density.jpg



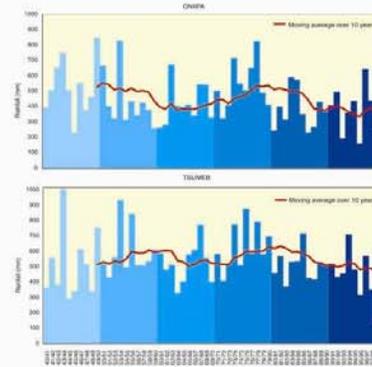
map\_pressure units.jpg



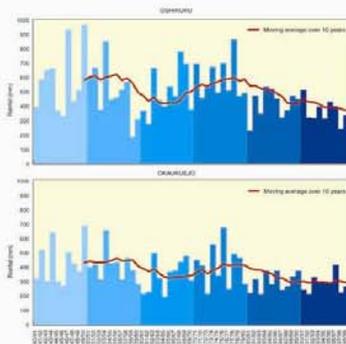
map\_uses.jpg



MOSIAC copy.jpg



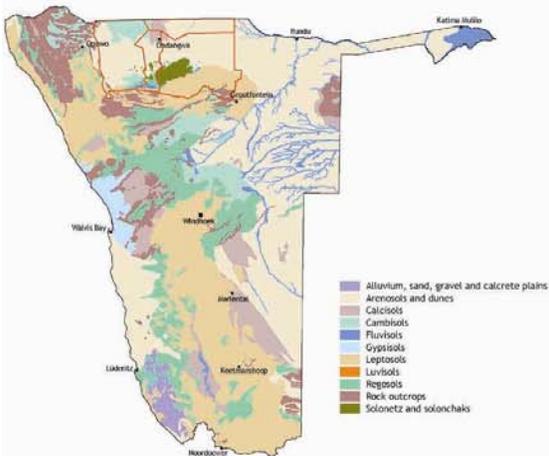
Rainfall\_AnnualTotal1944-99 - east.jpg



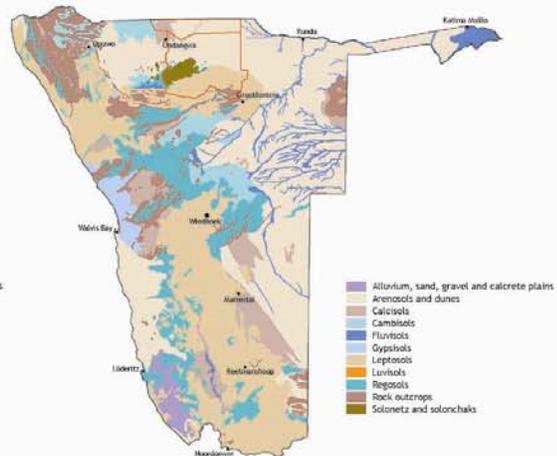
Rainfall\_AnnualTotal1944-99 - west.jpg



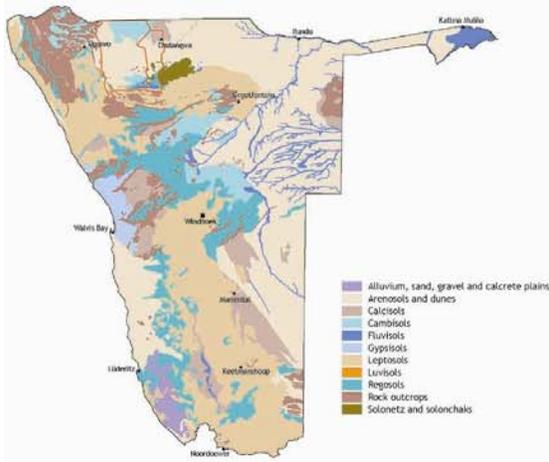
Shuttle image.jpg



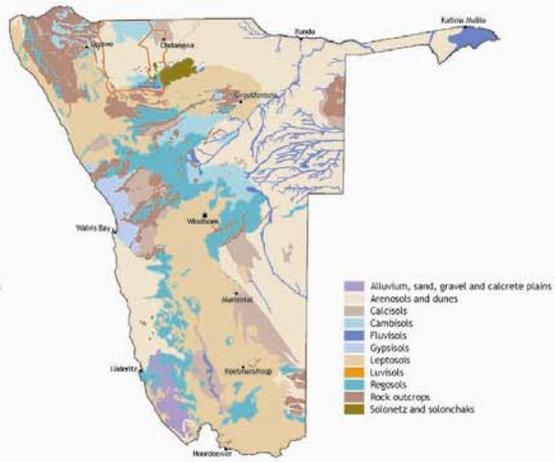
soils\_both\_regions.jpg



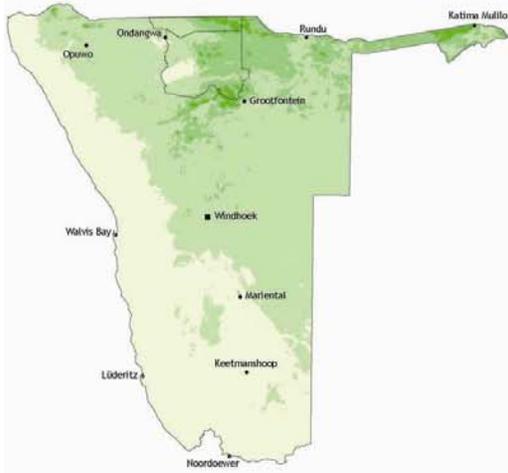
soils\_east.jpg



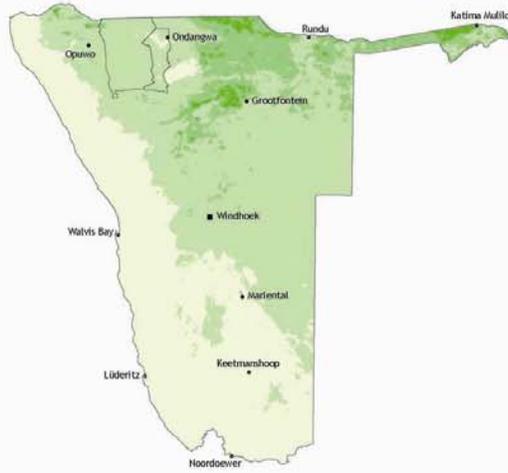
soils\_west.jpg



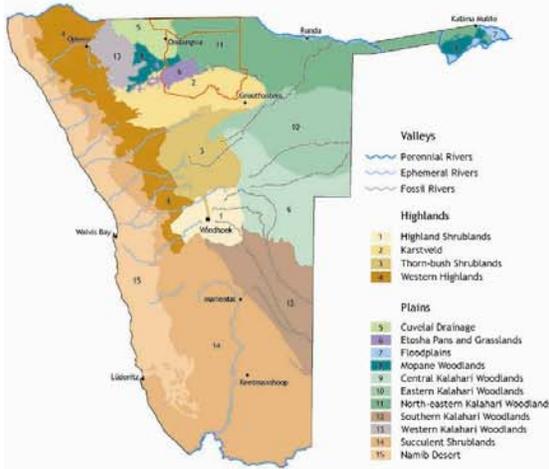
soils\_west.jpg



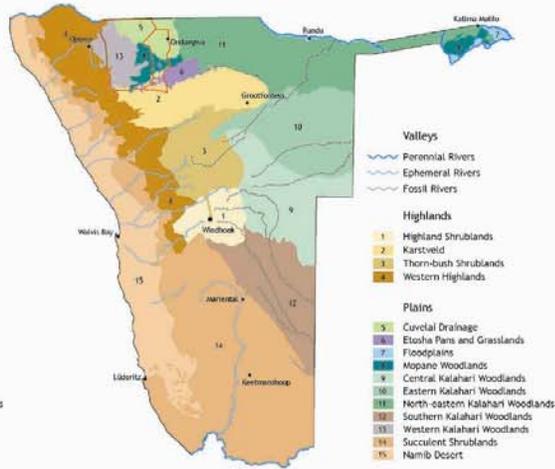
vegetation biomass east.jpg



vegetation biomass west.jpg



Vegetation types east.jpg



vegetation types west.jpg