



Ministry of Environment, Forestry and Fisheries



NAMIBIA INTEGRATED LANDSCAPE APPROACH FOR
ENHANCING LIVELIHOODS AND ENVIRONMENTAL
GOVERNANCE TO ERADICATE POVERTY

NILALEG



PROFILE OF THE

RUACANA

FOCAL LANDSCAPE



1. Background information of the Ruacana Landscape

1.1 Description of the Focal Landscape

The Ruacana Focal Landscape contains two very different kinds of topography and livelihoods, which are roughly divided following the border between Omusati and Kunene Regions. The western part, making up the majority of the Landscape area, is typical of the Kunene Region, characterized by mountainous and undulating terrain, and livelihoods are based mainly on livestock farming, with a small proportion of crop-growing, and tourism features along the Kunene River. The eastern part in Omusati Region, making up the smaller remainder of the Landscape area, is in the Cuvelai basin, characterized by flat topography, sandy soils, and livelihoods based on cropping and livestock, with very little tourism. The Ruacana Focal Landscape is located in the Epupa Constituency in Kunene Region (65%) and the Ruacana Constituency in Omusati Region (35%).

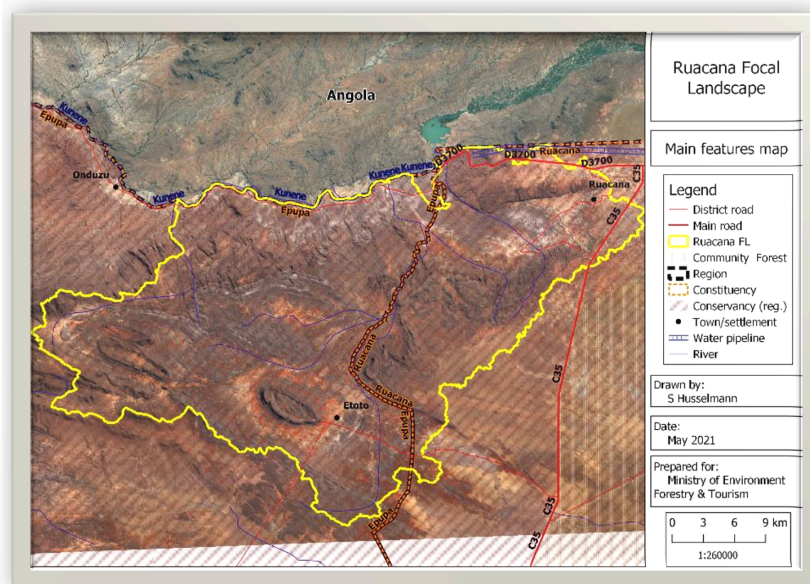


Fig.1: Showing the geographical area of the Ruacana Focal Landscape

1.2 Ethnic Groups

The Ruacana Focal Landscape which falls within the two Regions namely the Omusati and Kunene comprises the following ethnic groups; Ovandongona, San, Ovatusa, Ovahimba, and Aawambo people. The Namibia Development Trust (NDT) is the Consortium in charge of overseeing the implementation of all landscape activities for this Focal Landscape.



Fig. 1: showing stakeholder engagement between NDT and the Etoto Farmers Association committee members

1.3 Population and demographics

The population in the Ruacana Focal Landscape has been calculated from the 2011 census data, using the NSA's disaggregated figure for the exact area of the focal landscape (2,799 people) (NSA 2021 pers. comm.) and applying to this the annual growth rate of 2.3% for Kunene and 0.06% for Omusati region (NSA 2012). This calculates to 3,297 people. In 2011 the sex ratio was biased towards females (55.9%).

The average household size of the Kunene region in 2015 was 4.5 people/ household, while in Omusati Region it was marginally higher at 4.7 people/ household (NSA, 2016). Using the figure of 4.6 people/ household, Ruacana has 764 households in the Landscape.

The population density of the Focal Landscape calculates to 2.6 persons/km². This is much higher than the average for Kunene Region (0.8) and much lower than the Omusati Region average (9.1) (NSA, 2012). In Kunene Region, because of the mountainous terrain and low carrying capacity, settlements are sparsely distributed, while in Omusati Region the density of households is much higher. The density figure for the Landscape reflects the differences between the two regions. Kunene Region as a whole has a relatively young population, with 41.7% of the people being less than 15 years old. In Omusati the percentage of people less than 15 years old is also high at 40.2% (NSA, 2012) (Table 2.2.1).

The proportion of people younger than 15 years is higher in rural areas in Kunene, at 45%, and also higher in Omusati at 41.0%. Also, there is a relatively high proportion (7.3%) of elderly people aged 60 and above in rural areas of Kunene, while in Omusati it is 11.1% (NSA, 2014). These values are roughly similar to the national average in rural areas, which is 41.4%, attributed to the trend for working-age people (older than 15) to migrate away from rural areas and into urban situations where there are potentially better work opportunities (NSA, 2012).

1.4 Livelihoods and employment

Officially, the employment rate for Kunene Region is 64%, and in Omusati Region it is 58% (NSA 2012, Table 5.84). These figures are fairly close to the national average of 63.1. Of the people in Kunene aged 15 years and older, 53.2% of them are engaged in the category 'agriculture, forestry and fishing (Table 5.100), while in Omusati Region this figure is 50.3% (Table 5.103). These figures show the high proportion of people who work directly with the local natural resources. In the Ruacana FL, the main source of household income is old-age pensions for 32.5% of the population, farming for 29.9%, wages and salaries for 27.0%, and non-farming business activities for 6.5%.

Livelihoods in Kunene Region are primarily based on livestock keeping, with relatively small areas of crops and gardens, while in Omusati crops play a much bigger role. These activities are supplemented with the use of natural resources for food, medicines, and occasionally for sales.

1.5 Education

The 2011 education statistics for Kunene and Omusati Region are as follows. The percentage of infants attending Early Childhood Development programs was 7.3% in Kunene and marginally higher at 9.1% in Omusati. These figures are both lower than the national rural average of 9.8% (NSA 2012 Table 5.2). The literacy rate for Kunene Region was 65%, while in Omusati it was 88% (NSA 2012 Table 5.14). School enrolment in Kunene was 39% in 2011, while in Omusati it was 73%, compared to the national average of 63.2% (NSA 2012 Figure 5.3.2.3.2).

1.6 Health

The 2011 national census data provide little health information. The only useful indicator is the percentage of disabled people; for Kunene Region, this is 3.8%, and Omusati is 6.3%. Kunene is thus lower and Omusati is higher than the national average of 4.7% (NSA 2012 Table 5.53).



1.7 Household assets and resource use

The proportions of households that possess certain assets and use certain resources are informative of the livelihoods of the residents (NSA 2012 Tables 6.50 to 7.152). The five statistics below give an indication of average material wealth and use of local natural resources in the two regions (NSA 2012).

Criterion	Kunene Region	Omusati Region	Namibia average
Households that possess a car (Table 6.33)	15.2%	19.7%	22.3%
Households that possess an animal-drawn cart	13.2%	14.9%	6.3%
Households that live in a traditional dwelling (Table 7.10 and 7.13)	41.1%	84.5%	37.7%
Households that use wood for cooking (Table 7.90 and 7.93)	77.3%	88.0%	53.6%
Households that use wood for heating	50.8%	78.4%	46.3

Table.3: Household assets and resource use

2. Main geographic features and land uses in the Ruacana Focal Landscape

2.1 Topography and soils

The western part of the Focal Landscape is generally hilly and undulating, with rugged mountains and valleys leading towards the perennial Kunene River which marks the northern limit of the Landscape. This mountainous area forms part of the western escarpment of Namibia, and the steep drop in relief is most conspicuous at Ruacana itself, where the Kunene River joins Namibia. Soils in the Kunene valley alongside the river are alluvial and offer opportunities for cropping, while in the mountainous areas with steeper slopes they are generally thin and coarse-textured, and the potential for crop-growing is very limited (Bhalla & Rothauge, 2019). Similar to the Omaiopanga situation, the land is susceptible to erosion as a result of the gravelly texture of the soils and steep gradients; these factors are exacerbated where pastures are intensively used.



The eastern part of the Focal Landscape is generally flat and marks the western side of the Cuvelai Basin. Soils are classified as ferralic arenosols, being very sandy, reddish and are extensively cultivated.

2.2 Vegetation

The western part of the Landscape is covered mostly in mopane scrub which dominates in the vegetation type known as ‘western highlands’ (Mendelsohn, et al., 2002). The shallow soils prohibit the growth of large trees so the mopanes are fairly short (less than 3m high) and scrubby (Figure 1 4). This area falls in the Agro-Ecological Zones known as ‘Kaokoland mountains and hills’ and ‘Kaokoland high plateau’ (Bhalla & Rothauge, 2019), and is mostly used for livestock production. Small areas close to the Kunene River are used for small-scale crop production.



Figure. 3: Mopane scrub vegetation along the D3700 road west of Ruacana. The Kunene River can be seen in the far distance. The mopane scrub vegetation is typical of the western highlands in the Ruacana Focal Landscape.

The approximate area under the three main vegetation types /classes as calculated by Bhalla (2019) is presented in Table 3 7 below. The trend for the change in land cover type/class averaged over 16 years (2003-2018), as calculated by Bhalla (2019) is presented in Table below.

Forest		Scrub		Rangeland		Other		Total
Area (ha)	%	Area (ha)	%	Area (ha)	%	Area (ha)	%	
748	0.68	76,156	69.38	32,788	29.87	76	0.07	109,768

Table 1: Trend in land cover class/type change



Land cover	Change trend (%)
Forest	0.06
Scrub/shrub	-0.23
Rangeland	-0.61
Degraded	-0.24
Moist soils & water	-0.05

Table 2: Area under different land cover types/classes (Bhalla, 2019)

The eastern (Omusati Region) area makes up part of the ‘Western Kalahari’ landscape (Mendelsohn, et al., 2013), which is an open woodland but quite intensively populated and cultivated so most of the woodland is now converted to agricultural land (Figure 1 5). This area falls in the Agro-Ecological Zone known as ‘Kalahari sands plateau’, and is considered to be the most productive for cropping in the Landscape, but much of it is heavily overgrazed (Bhalla & Rothauge, 2019). Important trees include sparse Zambezi teak (*Baikaea plurijuga*), silver Terminalia (*Terminalia sericea*), Acacia, and mopane trees (*Colophospermum mopane*), and makalani palms (*Hyphaene petersiana*) grow where the soils are more grey and saline. Bhalla & Rothauge (2019) suggest that this part of the Landscape would be ideal for forest management and afforestation efforts.

The invasive poisonous plant is known as Madagascar rubber vine (*Cryptostegia Grandiflora*) is present at numerous places in the Omusati side of the landscape and should be controlled before it becomes a severe agricultural pest.



Figure 4: Vegetation in the western part of the Omusati Region comprises scattered trees and cultivated fields for small-scale crop production such as around this homestead. Pastures are mostly overgrazed, as shown by the low presence of grass after recent rains, and the predominance of the unpalatable shrub bitter bush (*Pechuel-Loeschian*).

2.3 Surface and groundwater

This Landscape benefits from the presence of the Kunene River, which feeds all the small-scale irrigation plots close to the river, with water abstracted via small pumps or by hand. Away from the river, the only presence of surface water is the ephemeral flows from localized rain events, and there are scattered springs. Water sources are therefore mainly sub-surface, and settlements rely on boreholes with diesel and solar pumps.

3. NILALEG Project Key Activities

3.1 Establish a multistakeholder coordination structure or support existing structure to spearhead the implementation and monitoring of Integrated Landscape Management.

3.2 Facilitate Participatory Land-use Planning Training

3.3 Develop, Implement and Monitor management plans and protocols for sustainable land and forest management

3.4 Establish FFA on drought-resistant fodder

3.5 Conduct awareness-raising sessions on sustainable forest management practices

3.6 Develop, implement and monitor a plan for restoration of Savannah for grazing /forest for mixed agroforestry.

3.7 Training of farmers on sustainable crop production

3.8 Train and equip Regional Council /community monitors for ongoing monitoring and enforcement of restoration sites and protocols.

3.9 Planting trees at gullies and eroded soils

3.10 Support EIF Grant Enterprises

3.11 Support agroforestry plots with farming inputs (Demonstration sites)

3.12 drought resistant fodder, drought-resistant shrubs, re-seeding of perennial grasses.

3.13 Rehabilitation of 3 boreholes for livestock support and fodder production

3.14 Provision of quality livestock breed

3.15 Set up a micro drip irrigation system

3.16 Establish a Slate Harvesting Enterprise





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