Available from https://tipas.kew.org/site/lupangua-peninsula-2/
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Lupangua Peninsula

Península de Lupangua (Test version)

MOZTIPA026

Country: **Mozambique**
Administrative region: **Cabo Delgado (Province)**
Central co-ordinates: **-12.57770 N, 40.51470 E**
Area: **57km²**

Qualifying IPA criteria

A(i), C(iii)

IPA assessment rationale

The Lupangua Peninsula qualifies as an Important Plant Area under criterion A(i), as it contains important populations of one Endangered species, Hildegardia migeodii, and two Vulnerable species, Micklethwaitia carvalhoi and Premna schliebenii. It is believed to be the most important site globally for the Micklethwaitia, and so also qualifies under criterion C(iii) in containing over 10% of the national resource of Rovuma Micklethwaitia-dominated Coastal Dry Forest. It is considered highly likely that this under-explored locality will contain other globally threatened and/or range-restricted species.

Site description

The Lupangua Peninsula IPA is located on the coast of Quissanga District in Cabo Delgado Province, northeastern Mozambique. It lies ca. 12 km to the south of the coastal fishing village of Quissanga, close to the village of Mahate. This site, with an area of 57 km2, is within the Quirimbas National Park and is adjacent to the islands of Mefunvo and Quisiva in the Quirimbas Archipelago. The peninsula comprises coastal lowlands and a series of low hills, rising up to 132 m elevation on Lupangua Hill, but with the western ridge of the peninsula reaching 80 m elevation. It contains an important example of coastal dry forest of the proposed Rovuma Centre of Plant Endemism (CoE) (Burrows & Timberlake 2011; Darbyshire et al. 2019).

Botanical significance

Lupangua is of botanical importance primarily for its ca. 25 km2 of near-pristine coastal dry forest, dominated by the globally threatened tree species Micklethwaitia carvalhoi (VU), which is endemic to Mozambique (Clarke 2010). The population of this species at Lupangua is estimated at over 10,000 individuals (Burrows et al. 2014) and is believed to be the largest and most secure population of this species globally (Clarke 2010). It was on this basis that this site was highlighted as one of the four highest priority sites for conservation in a recent review of coastal dry forests of Cabo Delgado (Timberlake et al. 2010). It is one of the few sizable remnant dry forest areas within the proposed Rovuma CoE. This site had apparently not been explored by biologists prior to a reconnaissance survey by a small team in November 2009. In addition to discovering the important Micklethwaitia population, this brief survey focusing on the western ridge also found the first known site in Mozambique for the globally Endangered Hildegardia migeodii (since also found at Pemba Bay) and a population of Premna schliebenii (VU). Other interesting discoveries included a potential new species of Erythrina, which requires further investigation, and the second known Mozambican population of Kabuyea hastifolia, a monotypic genus endemic to East Africa (Clarke 2010). The botanical inventory of this site is highly incomplete and further species of high conservation concern are likely to be uncovered following more exhaustive surveys. A provisional species list, comprising only 28 taxa, is provided by Clarke (2010).

Habitat and geology

Clarke (2010) provides a preliminary assessment of the main vegetation types of this site. The peninsula is surrounded to the north, west and east by extensive mangrove swamps and adjacent salt flats; these are not included within the IPA. Above the salt flats, the low-lying coastal areas support a coastal woodland dominated by Terminalia sambesiaca (which is common in all habitats throughout the site), Acacia nigrescens and A. robusta subsp. usambarensis; some of the woodland and wooded grassland on the peninsula appears to be secondary in nature. Further inland and upslope, there are areas of scrub forest with a broken canopy at ca. 8 m and a more complete lower canopy of ca. 3 – 4 m, with a mixed species assemblage including Dobera loranthifolia, Manilkara mochisia and Monodora junodii. On the ridges and hill tops there are large stands of Micklethwaitia-dominated coastal dry forest, typically with a canopy at ca. 8 m; Monodora junodii is co-dominant with Micklethwaitia in the understorey layer. Occasional emergent trees including Adansonia digitata are noted on parts of the peninsula. This forest type also extends down to sea level in steep gullies that are protected from fire. The soils on the surveyed parts of the peninsula are heavy clays with numerous interspersed calcareous rocks, which are also abundantly scattered on the soil surface. The Micklethwaitia forest favours well-drained soils (Clarke 2010).
Average annual rainfall at nearby Quissanga is 1,320 mm per year, with the main rainy season being December to April, with a prolonged dry season between May and November (climate-data.org).

Conservation issues

The whole of the Lupangua peninsula is contained within the Quirimbas National Park and UNESCO Biosphere Reserve, but there is no active conservation management of the site at present. The human population is currently small and the peninsula is not easily accessible as it is not served by any sizable roads. Some small non-permanent fishing settlements are found on the coast, and a large village is located to the southeast of the main forest block (Clarke 2010). Some notable expansion of agricultural activity is visible on recent satellite imagery (Google Earth 2020) which has, post-2003, encroached into the forest in the northeast and, in particular, the southeast of the site. However, the soils on the hills are thin and rocky and so unlikely to be of agricultural value. A single cut-line running north-south along the peninsula is also clearly visible on satellite imagery and probably dates back to oil exploration in the early 1980s (Clarke 2010).
The Micklethwaitia is used here as a source of poles for construction, as its timber is hard and termite resistant. However, this species coppices well and the 2009 survey found evidence of it regenerating from stumps (Clarke 2010; Burrows et al. 2018). A more significant threat is from fire to which this species appears to have very little resistance. Fires are set deliberately by humans primarily to control wild animals (Clarke 2010).
The Lupangua Peninsula is included within the Quiterajo Key Biodiversity Area.

Site assessor(s)

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IPA criterion A species

SPECIES	QUALIFYING SUB-CRITERION	≥ 1% OF GLOBAL POPULATION	≥ 5% OF NATIONAL POPULATION	1 OF 5 BEST SITES NATIONALLY	ENTIRE GLOBAL POPULATION	SOCIO-ECONOMICALLY IMPORTANT	ABUNDANCE AT SITE
Micklethwaitia carvalhoi (Harms) G.P.Lewis & Schrire	A(i)	✓	✓	✓	–	✓	Abundant
Hildegardia migeodii (Exell) Kosterm.	A(i)	✓	✓	✓	–	–	Occasional
Premna schliebenii Werderm.	A(i)	–	✓	✓	–	–	Unknown

IPA criterion C qualifying habitats

HABITAT	QUALIFYING SUB-CRITERION	≥ 5% OF NATIONAL RESOURCE	≥ 10% OF NATIONAL RESOURCE	1 OF 5 BEST SITES NATIONALLY	AREAL COVERAGE AT SITE
Rovuma Micklethwaitia Coastal Dry Forest	C(iii)	–	✓	✓	25

General site habitats

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Forest - Subtropical/Tropical Dry Forest	–	Major
Savanna - Moist Savanna	–	Major
Grassland - Subtropical/Tropical Dry Lowland Grassland	–	Minor
Artificial - Terrestrial - Subtropical/Tropical Heavily Degraded Former Forest	–	Minor

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Nature conservation	–	Major
Agriculture (arable)	–	Minor
Harvesting of wild resources	–	Minor

Threats

THREAT	SEVERITY	TIMING
Agriculture & aquaculture - Annual & perennial non-timber crops - Small-holder farming	Low	Ongoing - increasing
Natural system modifications - Fire & fire suppression - Increase in fire frequency/intensity	Low	Ongoing - trend unknown
Biological resource use - Gathering terrestrial plants	Low	Ongoing - trend unknown

Protected areas

PROTECTED AREA NAME	PROTECTED AREA TYPE	RELATIONSHIP WITH IPA	AREAL OVERLAP
Quirimbas National Park	National Park	protected/conservation area encompasses IPA	–
Quirimbas Biosphere Reserve	UNESCO Biosphere Reserve	protected/conservation area encompasses IPA	–

Conservation designation

DESIGNATION NAME	PROTECTED AREA	RELATIONSHIP WITH IPA	AREAL OVERLAP
Quiterajo	Key Biodiversity Area	protected/conservation area encompasses IPA	–

Management type

MANAGEMENT TYPE	DESCRIPTION	YEAR STARTED	YEAR FINISHED
Protected Area management plan in place	Ministry of Tourism (2012). Parque Nacional das Quirimbas: Plano de Maneio 2013-22.	2013	2022

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