

# Era-Lama

## UGATIPA21

Country: **Uganda**

Administrative region: **Northern (Region)**

Central co-ordinates: **3.57981 N, 31.75288 E**

Area: **100km<sup>2</sup>**

### Qualifying IPA criteria

A(i)

### IPA assessment rationale

Era-Lama qualifies as an IPA under criterion A(i), hosting all known individuals of the Endangered cycad, *Encephalartos macrostrobilus*.

### Site description

The Era-Lama IPA is composed of Era Central Forest Reserve and the adjacent villages north and northeast of the reserve. The adjacent land is communally owned by the local communities. The IPA is located in Moyo and Palorinya sub-counties of in the West Madi county, Moyo district (West Nile region) of Uganda. It covers an area of 100 km<sup>2</sup> with an altitudinal range of 630 - 1045 m. The IPA is situated on the plateau above the Albert Nile.

### Botanical significance

Era-Lama lies within the southeastern part of the Sudanian Regional Centre of Endemism (White 1983). The Forest Department surveys yielded 145 species of trees and shrubs in the reserve alone (Davenport & Howard 1996). More extensive studies are required, with inclusion of all growth habits. The site's flora is likely richer than currently known, particularly as herbaceous species that haven't been adequately surveyed.

The Era-Lama IPA is one of the most important representatives of the Sudanian ecosystems in Uganda (White 1993). It is small-sized but harbours plant species of high national and global importance. This IPA is the only known site for *Encephalartos macrostrobilus*, a globally Endangered cycad species in Uganda (Ojelel et al. 2022).

The land adjacent to the reserve harbours over 90% of the population of this cycad (Ojelel et al. 2022), leaving a much smaller percentage under formal protection.

This IPA also has at least two other globally important plant species namely *Azelia africana*, and *Vitellaria paradoxa*. *Vitellaria paradoxa* is a globally vulnerable tree species (Makerere University Institute of Environment and Natural Resources 1998), growing in the woodland habitats of the reserve and surrounding areas. Throughout its range,

this species has suffered overexploitation, being used for commercial charcoal production (Boffa et al., 1996; Fondoun & Onana 2001; Kalema and Beentje 2012), and its population in the Era-Lama IPA is facing the same fate. Farmers and the refugees from South Sudan seem to spare individuals of *Vitellaria paradoxa* on their land, mainly for its valuable shea butter.

*Azelia africana*, is also a globally vulnerable species (Hills 2020), occurs in this IPA. In Uganda, this species grows in the northern parts of the country, mostly in unprotected sites. Murchison Falls National Park is the best protected area for this species, and Era-Lama IPA is one of the few others. This species is threatened with charcoal production in Uganda and is in need of more stringent protection measures to avert its decimation.

*Coffea liberica* var. *dewevrei*, a coffee wild relative of high potential for supporting and diversifying the coffee sector for climate resilience (Davis et al 2023), was reported by Davenport and Howard (1996), but its continued presence needs verification.

### Habitat and geology

The Era-Lama IPA habitat is predominantly woodland growing on granitic rock outcrops. It is variably dominated by *Acacia hockii*, *Combretum adenogonium*, *C. molle*, *Amblygonocarpus andongensis*, *Grewia mollis*, with *Rhus natalensis*, *Lannea schimperii*, *Sterculia setigera*. Other vegetation types are wooded grassland, bushland, bushed grassland and open grassland.

The topography is characterized by low plains and rolling hills along the Nile River. At higher altitudes further northeast, Lobajo, Ayipe, Atiya and Otzi West CFRs overlook this IPA. The area receives about 1250 mm of rainfall per annum with a distinct dry period from December to February while November and March have moderate rainfall. The highest temperature recorded was 45°C in the months of January to February and lowest 29°C in the months of August to October. The soils mostly comprise of sandy lithosols (Jones and Wynants 1997). The globally threatened and Ugandan endemic *E. macrostrobilus* is found in areas covered by sandy lithosols, granitic rock outcrops and with the primary vegetation cover consisting of degraded savanna woodlands and isolated thorn bushes at a canopy height of 5 to 20 m (Jones and Wynants 1997). The habitat also has other globally important plant species namely *Azelia africana* (VU), *Vitellaria paradoxa* (VU) and *Dalbergia melanoxylon* (NT).

### Conservation issues

Era IPA includes Era Central Forest Reserve (CFR), managed by NFA and the surrounding community areas in which the cycad grows. All

conservations strategies in this IPA need to involve the local communities for success. The Government of Uganda in 2017, through the Ministry of Water and Environment, issued a ban on any cutting, transportation and sale of *A. africana* and *V. paradoxa* tree logs and their products nationally. This ban was informed by the uncontrolled rampant, illegal harvesting. Accordingly, *A. africana* was assessed as nationally Endangered (MTWA 2018). A recent survey by Ojelel et al. (2022) recorded 181 mature individuals of *Encephalartos macrostrobilus* in 43 colonies with a sex ratio of 2:5, female:male (or 28.6% female). This is the smallest population size of the four known and assessed cycad species in Uganda, apparently having declined from previous estimates (see Scott & Wynants 1997, Donaldson 2003), with only a small fraction conclusively sexed. The sex ratio of the population is skewed with the proportion of males more than double higher than that of females. Unfortunately, the habitat is continuously threatened by burning, widespread stone quarrying because of the many granitic rock outcrops, cattle grazing, and tree cutting for charcoal burning. The cycads are directly threatened by frequent burning and use of their seeds for spiritual purposes by some South Sudanian communities. Occasionally, there is cutting of the cycad leaves off the trees for no known purpose (Ojelel et al. 2022). These threats are escalated because over 90% of the population lies on communally owned land with no form of protection whatsoever. Only a small fraction (

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### 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
<i>Encephalartos macrostrobilus</i> Scott Jones & Wynants	A(i)	✓	✓	✓	✓	—	Frequent
<i>Azelia africana</i> Sm. ex Pers.	A(i)	—	—	—	—	✓	Frequent
<i>Vitellaria paradoxa</i> C.F.Gaertn.	A(i)	—	—	—	—	✓	Scarce
<i>Khaya grandifoliola</i> C.DC.	A(i)	—	—	—	—	✓	Scarce

## 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
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## General site habitats

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Forest - Subtropical/Tropical Moist Lowland Forest	—	Minor
Forest - Subtropical/Tropical Swamp Forest	—	Minor
Savanna - Dry Savanna	—	Major
Savanna - Moist Savanna	—	Minor
Grassland - Subtropical/Tropical Dry Lowland Grassland	—	Minor
Wetlands (inland) - Permanent Rivers, Streams, Creeks [includes waterfalls]	—	Minor
Rocky Areas - Rocky Areas [e.g. inland cliffs, mountain peaks]	—	Major
Artificial - Terrestrial - Pastureland	—	Minor

## Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Nature conservation	—	Major
Agriculture (pastoral)	—	Minor
Tourism / Recreation	—	Minor

## Threats

THREAT	SEVERITY	TIMING
Biological resource use - Logging & wood harvesting	Low	Ongoing - stable
Human intrusions & disturbance - Work & other activities	Low	Ongoing - stable
Natural system modifications - Fire & fire suppression - Increase in fire frequency/intensity	Medium	Ongoing - stable
Agriculture & aquaculture - Livestock farming & ranching - Small-holder grazing, ranching or farming	Medium	Ongoing - increasing
Energy production & mining - Mining & quarrying	Low	Ongoing - increasing

## Protected areas

PROTECTED AREA NAME	PROTECTED AREA TYPE	RELATIONSHIP WITH IPA	AREAL OVERLAP
Era Central Forest Reserve	Forest Reserve (conservation)	protected/conservation area overlaps with IPA	74

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