

Kabaena Island

Tokotua Island (Test version)

SULTIPA001



Country: **Sulawesi**

Administrative region: **Sulawesi Tenggara (Province)**

Central co-ordinates: **-5.25927 N, 121.91742 E**

Area: **880km²**

Qualifying IPA criteria

A(i)

IPA assessment rationale

Kabaena is an important habitat for globally threatened plants, with two Endangered and one Vulnerable. There are also several species endemic to Kabaena Island which are likely to be threatened since all parts of the island are unprotected. This island also holds populations of Sulawesi endemics like *Grevillea elbertii*, *Lasjia erecta*, and *Vaccinium kjellbergii* which are located in the disturbed shrubland. Larger parts of the island, i.e. around 70 percent of the island, have been designated as concessions for nickel mining areas, which surely threaten the presence of endemic or important species. In some areas, Some native species including large trees are being used by the local people as the source of traditional medicines.

Site description

Kabaena is an outer island in Southeast Sulawesi. It is an 880 km square island with undulating terrain with its highest point located on Mount Sabampolulu at 1533 m asl. Some areas of the mountain consist of rocky outcrops which are very hard to climb like Mount Batu Sangia. The lowland areas have mostly been converted into developed areas, with the upper elevation still in the form of forest and shrubland or savanna. The vegetation on the island is threatened by tin mining and many plants in the open area are threatened by pastoral activities like cattle grazing. Mount Sabampolulu is an area for hiking and will attract more visitors shortly due to the increasing popularity of mountain climbing in the country.

Botanical significance

Kabaena harbours the entire global populations of at least six species from several families and is an important area for 3 globally threatened species. The globally threatened species are all endemic to Sulawesi phytogeographical regions: the Endangered *Goniothalamus majestatis* and *Callicarpa cinnamomea* as well as the Vulnerable *Dehaasia celebica*. This area is also an important habitat for some Sulawesi endemic species like *Grevillea elbertii*, *Lasjia erecta*, *Sartotheca celebica*, and *Vaccinium kjellbergii*.

Habitat and geology

Date of first assessment:

2nd Jun 2025

The vegetation of Kabaena Island belongs to the Sulawesi moist forest ecoregions. Barthlott et al. (2005) scored 6 out of 10 for diversity zone, which means there are 1500 to 2000 plant species per 10,000 km square. Vegetation of Kabaena is divided into two types the Sulawesi lowland rainforest, and Sulawesi montane rainforest ecoregions, alongside the scattered distributed savanna in some areas, especially in the lowlands. In the coastal area, mangrove belts developed in some parts of the island. Kabaena is a Mesozoic-Australian derived, or in other words, it was once part of the Gondwana supercontinent. All summits on this island are non-volcanic and have a similar geological origin to the likes of Sula Island, Buton, Tukang Besi, and some parts of the SE arm of Sulawesi (Hall 1996, Satyana et al. 2011). There are five main rock formations in Kabaena Island: (1) ultramafic being the most prominent component of the island, from north to south; (2) two metamorphic rocks, i.e. the Pompangeo formation in the central northern and Langkowala formation in the western coast; (3) central karstic mountain that includes the Mount Batu Sangia; and (4) alluvium plain scattered along the coastal areas (Simandjuntak et al. 1993).

Conservation issues

Kabaena is rich in nickel and has been subjected to rapidly growing mining since 2009. This resulted in habitat degradation in many places, especially the lowland areas and ultramafic mountains in the southern half of the island including the highest point, Mount Sabampolulu.. The destruction of habitats from mining activities is projected to increase for many years to come. The concession area covers an area of around 75 per cent of the total area of the island (Afra 2024). The nickel mining activities seem not to threaten forests of northeastern montane ranges as they are made of metamorphic rocks.

Besides that, cattle grazing and relevant activities also threaten some vegetation in many parts of the island, with the most intense being the Mount Batu Sangia area, reaching the base of the summit rock cliffs. This includes the area that becomes the habitat of the Kabaena, e.g. *Vernonia kabaenensis*, or Sulawesi endemic, e.g. *Vaccinium kjellbergii*. Besides that, vegetation surrounding the Batu Sangia rocky summit has been converted into clove (*Syzygium aromaticum*) plantations that could be misinterpreted as forests with good tree stands.

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>Dehaasia celebica</i> Kosterm.	A(i)	✓	—	✓	—	—	Unknown
<i>Callicarpa cinnamomea</i> (Hallier f.) Govaerts	A(i)	✓	—	—	—	—	Unknown
<i>Goniothalamus majestatis</i> Kessler	A(i)	✓	—	✓	—	—	Unknown
<i>Gardenia kabaenensis</i> Y.W.Low	A(iii)	✓	✓	✓	✓	—	Abundant
<i>Grevillea elbertii</i> Sleumer	A(iii)	✓	✓	✓	—	—	Abundant
<i>Begonia batusangiensis</i> Ardi & D.C.Thomas	A(iii)	✓	✓	✓	✓	—	Scarce
<i>Begonia kabaenensis</i> D.C.Thomas & Ardi	A(iii)	✓	✓	✓	✓	—	Scarce
<i>Mucuna kabaenensis</i> Adema	A(iii)	✓	✓	✓	✓	—	Scarce
<i>Pandanus kabaenaensis</i> A.P.Keim	A(iii)	✓	✓	✓	✓	—	Unknown
<i>Lasjia erecta</i> (J.A.McDonald & R.Ismail) P.H.Weston & A.R.Mast	A(iii)	✓	✓	✓	—	—	Unknown
<i>Vernonia kabaensis</i> J.Kost.	A(iii)	✓	✓	✓	✓	—	Occasional
<i>Vaccinium kjellbergii</i> J.J.Sm.	A(iii)	✓	✓	✓	—	—	Abundant
<i>Sarcotheca celebica</i> Veldkamp	A(iii)	✓	✓	—	—	—	Occasional

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	—	Major
Forest - Subtropical/Tropical Mangrove Forest Vegetation Above High Tide Level	—	Minor
Forest - Subtropical/Tropical Moist Montane Forest	—	Major
Shrubland - Subtropical/Tropical Moist Shrubland	—	Major
Rocky Areas - Rocky Areas [e.g. inland cliffs, mountain peaks]	—	Minor

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Extractive industry	70	Major

Threats

THREAT	SEVERITY	TIMING
Residential & commercial development - Housing & urban areas	Low	Ongoing - stable
Agriculture & aquaculture - Livestock farming & ranching - Small-holder grazing, ranching or farming	Low	Ongoing - stable
Energy production & mining - Mining & quarrying	High	Ongoing - increasing
Human intrusions & disturbance - Recreational activities	Low	Ongoing - stable

Management type

MANAGEMENT TYPE	DESCRIPTION	YEAR STARTED	YEAR FINISHED
No management plan in place		—	—

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