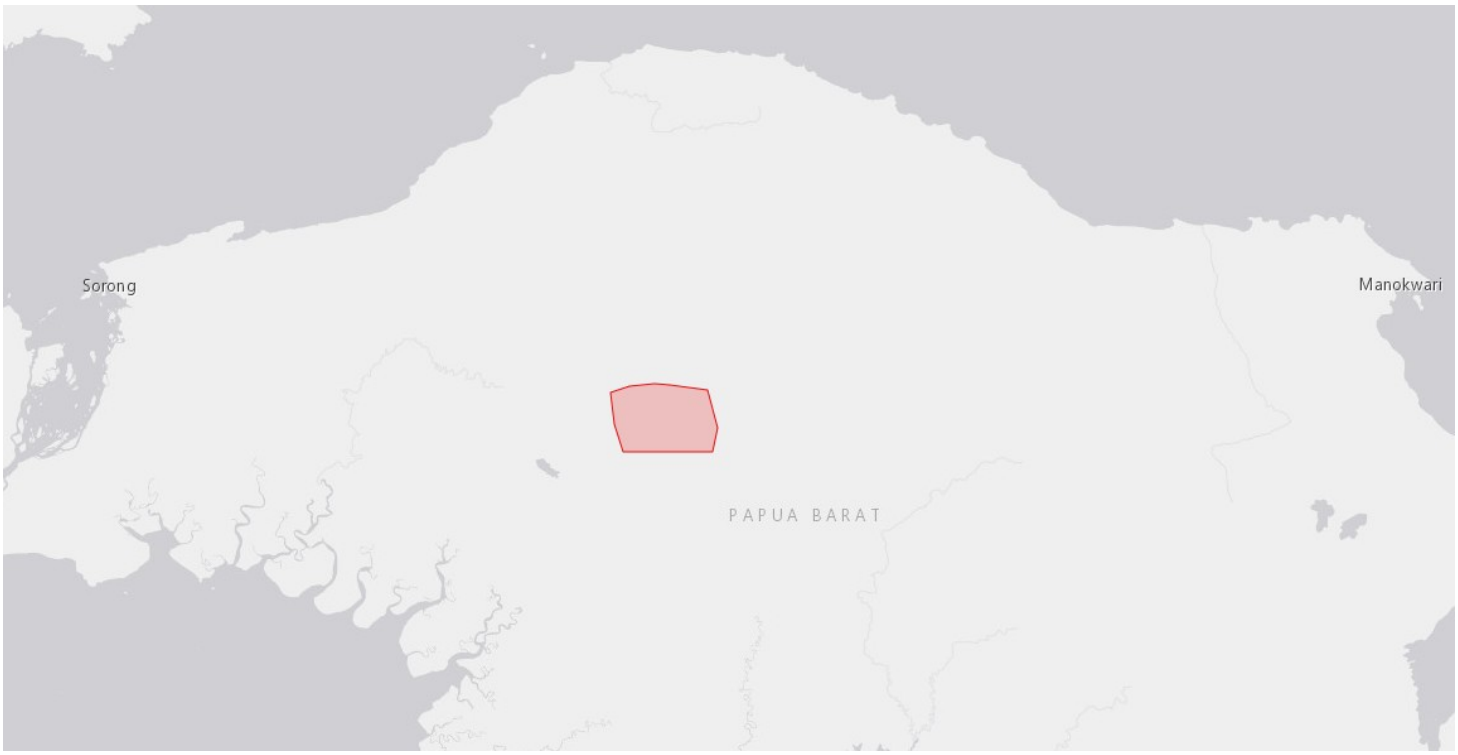
Available from https://tipas.kew.org/site/ayawasi/
[Accessed 16 June 2026]

Ayawasi

NGUTIPA004



Country: **New Guinea**
Administrative region: **Papua (Province)**
Central co-ordinates: **-1.15566 N, 132.46351 E**

Qualifying IPA criteria

A(i)

IPA assessment rationale

There are 15 site endemic plant species at this site, the majority of them orchids in the genus Bulbophyllum. This lowland area has a fairly complex topography, with limestone hills surrounding the town, which allows lowland and hill forest vegetation types to exist in the same small area.

Site description

Ayawasi is a small town the central part of the Bird's Head peninsula of New Guinea, in the Netayn river valley, a tributary of the Ayfat river. The town is surrounded by lowland rainforest and low karst hills up to 600 metres elevation. The average rainfall is 5000 to 5500 mm per year. There were several years of targeted botanical surveys in this area using forest plots by the National Herbarium of the Netherlands in the early 1990s, making it one of the most thoroughly surveyed areas for plants in north-west New Guinea.

Botanical significance

The topography and geology of this site mean that there are several different vegetation types within a relatively small area as well as typical lowland rainforest, namely tall rainforest with an open canopy on sandy soil, secondary forest, and low rainforest with a dense canopy on limestone. The limestone vegetation type has no unique tree species, but is compositionally different to the other forest types at this site, and is dominated by the tree genera Anisoptera, Tristaniopsis and Haplolobus. There are 16 vascular plant species known only from Ayawasi, of which 12 are species of Bulbophyllum (Orchidaceae). These species are mostly confined to the limestone hills. The 12 site endemic Bulbophyllum species are all assessed as Vulnerable according to the IUCN Red List criteria. Over 700 food, medicinal, material and magical plant uses were recorded by Ave, although this work has never been published.

Habitat and geology

The karst hills belong to the Kais limestone formation. The complicated landscape of the karst make the different vegetation types difficult to see on satellite imagery. There are three main vegetation types in the area surrounding Ayawasi: 1) Sandy soils

with tall primary rainforest with a relatively open canopy 2) Sandy soils with secondary forest on old garden sites 3) Limestone hills with accumulated humus supporting low primary forest with a dense canopy (Polak 2000). The forest plot inventories showed that there was relatively little overlap in floristic composition between the vegetation types.

Conservation issues

Ayawasi has grown from a village to a small town since the 1990s, but it is still surrounded by large areas of intact forest, with little forest loss visible on satellite imagery, as shown by Global Forest Watch data 2001-2022. The main future threat is the 97,500 Ha logging concession which covers the area and may become active in the future. Ayawasi is also on the route of the Trans Papua Highway, which could increase access to these forests for logging and other resource uses.

Site assessor(s)

Laura Jennings, Royal Botanic Garden Kew

Charlie Heatubun, The Provincial Government of West Papua and Universitas Papua

Jimmy Wanma, State University of Papua

Andre Schuiteman, Royal Botanic Gardens Kew

Date of first assessment:
12th Dec 2023

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
Agalmyla singularis Hilliard & B.L.Burtt	A(iii)	✓	✓	–	✓	–	Unknown
Bulbophyllum barbavagabundum J.J.Verm.	A(i)	✓	✓	–	✓	–	Unknown
Bulbophyllum lagaroglossum J.J.Verm.	A(i), A(iii)	✓	✓	–	✓	–	Unknown
Bulbophyllum luteum J.J.Verm.	A(i)	✓	✓	–	✓	–	Unknown
Bulbophyllum mystax Schuit. & de Vogel	A(i)	✓	✓	–	✓	–	Unknown
Bulbophyllum odontostigma J.J.Verm.	A(i)	✓	✓	–	✓	–	Unknown
Bulbophyllum pendens J.J.Verm.	A(i)	✓	✓	–	✓	–	Unknown
Bulbophyllum ptychostigma J.J.Verm.	A(i)	✓	✓	–	✓	–	Unknown
Bulbophyllum ramulicola Schuit. & de Vogel	A(i)	✓	✓	–	✓	–	Unknown
Bulbophyllum sphaenopus J.J.Verm.	A(i)	✓	✓	–	✓	–	Unknown
Bulbophyllum yumtei J.J.Verm., Schuit. & de Vogel	A(i)	✓	✓	–	✓	–	Unknown
Bulbophyllum zygochilum J.J.Verm.	A(i)	✓	✓	–	✓	–	Unknown
Aglaia monocaula Pannell	A(iii)	✓	✓	–	✓	–	Unknown
Bulbophyllum condensatum J.J.Verm.	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

General site habitats

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Forest - Subtropical/Tropical Moist Lowland Forest	–	Major

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE

Threats

THREAT	SEVERITY	TIMING
Biological resource use - Logging & wood harvesting - Unintentional effects: large scale (species being assessed is not the target) [harvest]	High	Future - planned activity

Management type

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

Bibliography

Polak, M. 2000. **The botanical diversity in the Ayawasi area, Irian Jaya, Indonesia.** Biodievrsity & Conservation, Vol 9, page(s) 1345-1375