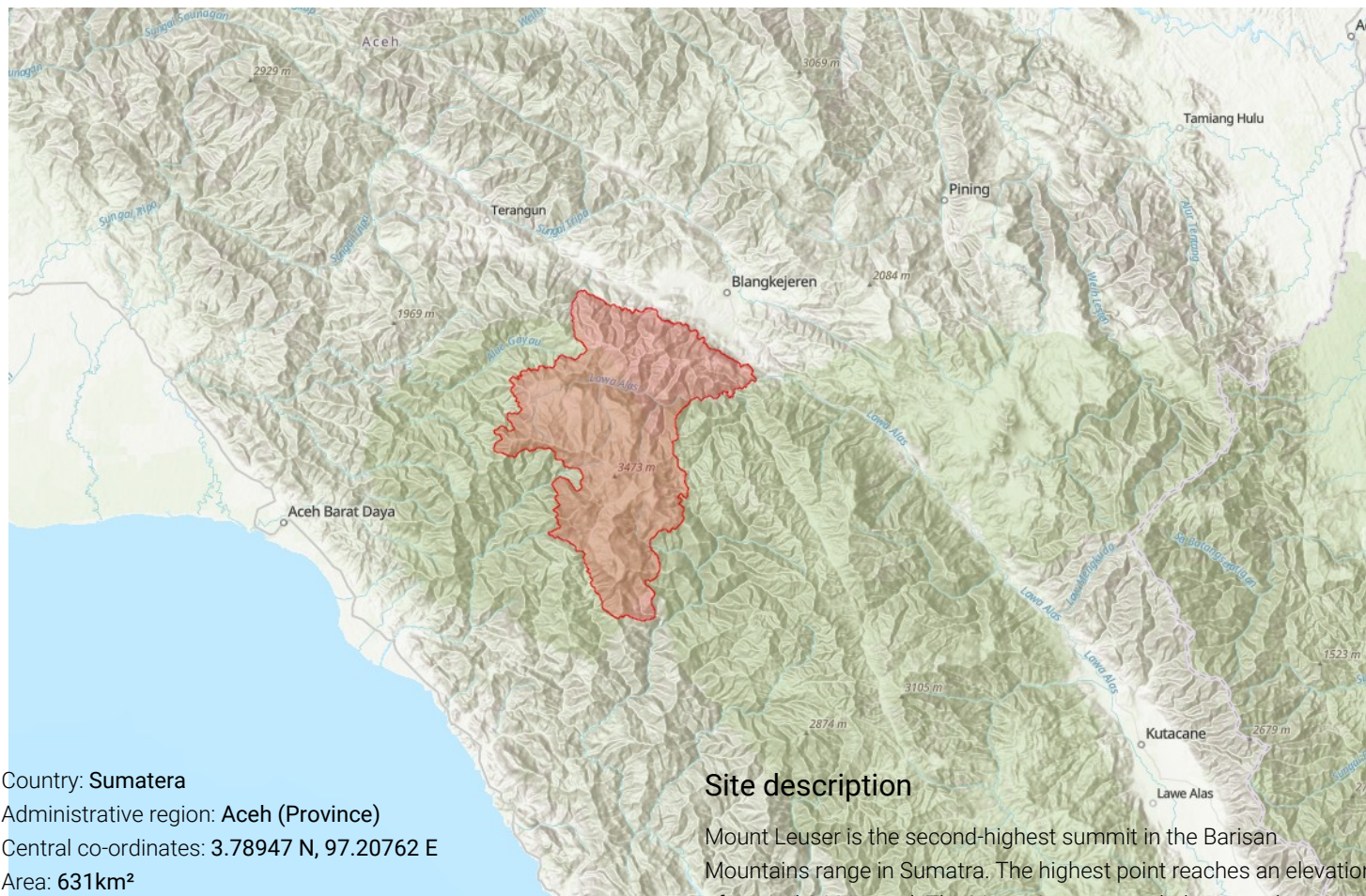


Mount Leuser

SUMTIPA003



Country: Sumatera

Administrative region: Aceh (Province)

Central co-ordinates: 3.78947 N, 97.20762 E

Area: 631km²

Site description

Mount Leuser is the second-highest summit in the Barisan Mountains range in Sumatra. The highest point reaches an elevation of around 3466 m asl. The Mount Leuser area belongs to the northern Sumatra mountain complex, characterised by undulating terrain with upper elevations, especially above 2400 m asl, consisting of subalpine vegetation, the highest vegetation type in Sumatra. This vegetation was partially burnt in the 1990s. In this zone, there is a unique type of vegetation named 'Blang', a grassland type vegetation, hosting the Leuser unique flora (De Wilde & Duyfjes 2001). The forest landscape is an important habitat for larger mammals like the Sumatran tiger and rhino. Most parts of Mount Leuser are protected by the government as part of the Gunung Leuser National Park. Mount Leuser is also a popular mountain climbing with a 51 km long trail from Penosan Sepakat as the nearest village to the westernmost summit.

Qualifying IPA criteria

A(i), A(iii), A(iv)

IPA assessment rationale

Mount Leuser is an important habitat for five globally threatened plants, four Endangered and one Vulnerable. This includes the Endangered *Quercus steenisii*, a species where the entire global population are restricted to the subalpine zone of Mount Leuser. The other three EN species are *Lithocarpus atjehensis*, *Elaeocarpus brigittae*, and *Daphniphyllum woodsonianum*. One Vulnerable species is a remarkably important tree for the Gayonese people, the Merkus' pine, *Pinus merkusii*. There are four narrow endemics that only can be found in Mount Leuser and populations for seven northern Sumatra endemics can be found here, mostly species restricted to the Gayo Plateau. There are studies on useful plants by the local Gayonese people in the surrounding areas but most of the species are usually widespread species and collected outside the assigned TIPA area.

Botanical significance

Mount Leuser harbours entire global population of endangered van Steenis' oak (*Quercus steenisii*), the Leuser endemic and Data Deficient *Eurya steenisii*, two orchids (*Coelogyne atjehensis* and *Coelogyne leuserensis*), one wild balsam (*Impatiens calendulina*), and one grass (*Garnotia spadicea*). This is also the habitat of northern Sumatran endemic plants including two pitcher plants, i.e.

Nepenthes angasanensis and Nepenthes densiflora. The exploration in the vast area of the subalpine areas is still limited, in particular the rock cliffs. Merkus' Pine (Pinus merkusii) which occurs in some parts of the area is a valuable species for the locals as it is used in daily lives like lighting fires and minor timber source. Plants from Fagaceae, either Quercus or Lithocarpus, are used here as the source of timber called 'gesing' but the detailed information is lacking. Some species in the subalpine vegetation are also used by the local guides for firewood including gesing, ericaceous plants including the northern Sumatra endemic Rhododendron adinophyllum, and the common shrub or trees Leptospermum javanicum.

Habitat and geology

Vegetations growing in the TIPA area vary from submontane (1200-1500 m asl), montane (1500-2000 m asl), upper montane (2000-2400 m asl or slightly above), and subalpine (above 2400 m asl) (Laumonier 1997). Starting from an elevation around 2300 m asl, the trunk of most trees is covered by mosses. There is also a special vegetation called 'Blang' or 'Mountain Blang', appearing similar to heath vegetation (De Wilde & Duyfjes 2001). In the valley, on elevation below 2000 m asl, there is still quite an extensive Merkus pine forest. De Wilde & Duyfjes (2001) suggested that the subalpine zone of Mount Leuser is inhabited by a unique composition of plant species, including the presence of endemic species. The area included in TIPAs consists of four main bedrocks with the Loser formation as the largest component covering nearly 60 percent. It is a unique formation surrounded by the larger bedrock named Kluet Formation. In the northeast, where the mountain range is separated by the Alas River, the mountain ridge consists of two main bedrocks named Blangkejeren and Peutu formations (Muksin et al. 2023).

Conservation issues

Despite being a national park, forests in the lower elevation (about 2000 m asl) are threatened by the expansion of agricultural fields, including coffee, tobacco, and other minor commodities. This threatens the vegetation of the submontane to the montane forest. Once, there was also a forest fire happened in the eastern range, in the first peak named Pucuk Angkasan. There is a place called Burni Telong on the climbing trail, which means a mountain of fire, referring to the burnt mountain – a name given by the local people in the past. However, the fire seems already ceased for now. Minor threats from climbing activities are also happening, especially for firewood harvesting that includes the northern Sumatra endemic plant species and or threatened species like gesing (oak family). The landscape is also a habitat for the threatened large fauna like the Sumatran tiger (Panthera tigris sondaica), Sumatran orangutan (Pongo abelii), Malayan sun bear (Helarctos malayanus), muntjacs (Muntiacus muntjac), and Thomas' langur (Presbytis thomasi).

Site assessor(s)

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Date of first assessment:

2nd Jun 2025

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>Quercus steenisii</i> <i>Soepadmo</i>	A(i)	✓	✓	✓	✓	—	Abundant
<i>Lithocarpus atjehensis</i> Hatus. <i>ex Soepadmo</i>	A(i)	✓	✓	✓	—	—	Abundant
<i>Elaeocarpus brigittae</i> Coode	A(i)	✓	✓	✓	—	—	Unknown
<i>Daphniphyllum woodsonianum</i> <i>T.C.Huang</i>	A(i)	✓	✓	✓	—	—	Occasional
<i>Pinus merkusii</i> <i>Jungh. & de Vriese</i>	A(i)	—	—	—	—	✓	Occasional
<i>Eurya steenisii</i> de Wit	A(iii)	✓	✓	✓	✓	—	Unknown
<i>Coelogyne atjehensis</i> (J.J.Sm.) <i>M.W.Chase & Schuit.</i>	A(iii)	✓	✓	✓	✓	—	Unknown
<i>Coelogyne leuserensis</i> (J.J.Wood & J.B.Comber) <i>M.W.Chase & Schuit.</i>	A(iii)	✓	✓	✓	✓	—	Unknown
<i>Impatiens calendulina</i> Grey-Wilson	A(iii)	✓	✓	✓	✓	—	Unknown
<i>Garnotia spadicea</i> <i>Ohwi</i>	A(iii)	✓	✓	✓	✓	—	Unknown
<i>Calamagrostis atjehensis</i> Ohwi	A(iii)	✓	✓	✓	—	—	Unknown
<i>Vaccinium korinchense</i> Ridl.	A(iii)	✓	✓	✓	—	—	Unknown
<i>Nepenthes densiflora</i> Danser	A(iii)	✓	✓	✓	—	—	Occasional
<i>Impatiens steenisii</i> Grey-Wilson	A(iv)	✓	✓	✓	—	—	Scarce
<i>Gaultheria losirensis</i> Sleumer	A(iii)	✓	✓	✓	—	—	Unknown
<i>Helictotrichon sumatrense</i> Ohwi	A(iii)	✓	✓	✓	—	—	Unknown
<i>Nepenthes angasanensis</i>	A(iv)	✓	✓	✓	—	—	Occasional

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>Maulder, D.Schub., B.Salmon & B.Quinn</i>							

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 Montane Forest	—	Major
Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands [generally over 8 ha]	—	Minor
Rocky Areas - Rocky Areas [e.g. inland cliffs, mountain peaks]	—	Minor

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Tourism / Recreation	—	Minor
Harvesting of wild resources	—	Minor
Nature conservation	—	Major

Threats

THREAT	SEVERITY	TIMING
Residential & commercial development - Housing & urban areas	Low	Ongoing - stable
Biological resource use - Gathering terrestrial plants - Intentional use (species being assessed is the target)	Low	Ongoing - trend unknown

Protected areas

PROTECTED AREA NAME	PROTECTED AREA TYPE	RELATIONSHIP WITH IPA	AREAL OVERLAP
Gunung Leuser National Park	National Park	protected/conservation area encompasses IPA	—

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