Sumatran Orangutan

Pongo abelii Lesson, 1827
Indonesia (Sumatra)
(2000, 2002, 2004, 2006, 2008)

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Sumatran (*Pongo abelii*) and Bornean (*P. pygmaeus* Linnaeus, 1760) orangutans are now considered to be two distinct species, comprising the genus *Pongo*. Three subspecies are recognized for *P. pygmaeus*, but the Sumatran orangutan is a single taxonomic unit. The long-term viability of the entire genus is in question, but the Sumatran orangutan faces the more immediate threat of extinction and is listed as Critically Endangered on the IUCN Red List of Threatened Species.

The species is endemic to Sumatra, Indonesia. Truly wild populations are restricted to the remaining lowland forests of the two most northerly provinces of the island, Nanggroe Aceh Darussalam (NAD) and North Sumatra. A small reintroduced population is also currently being established in Jambi Province, further to the south.

About 6,600 wild individuals remain (based largely on nest density surveys and 2002 satellite imagery). They survive in just 10 fragmented habitat units stretching from the central regions of NAD, south to the Batang Toru River in North Sumatra, with a notable gap in their distribution immediately west of Lake Toba. The southernmost populations in North Sumatra could be genetically and culturally distinct from their more northern relatives due to isolation. The largest populations occur within Nanggroe Aceh Darussalam, where until 2005 a separatist conflict made monitoring and conservation work problematic. Recent surveys appear to have confirmed the absence of orangutans in the northernmost forests of NAD such that almost all orangutans in Aceh can be found within what is known as the Leuser Ecosystem.

The Leuser Ecosystem is a 26,000 km^2 conservation area established by presidential decree that encompasses the smaller Gunung Leuser National Park (10,950 km^2; itself part of the Sumatran Rainforest World Heritage Site) and the 1,025 km^2 Singkil Swamps Wildlife Reserve. About 5,800 orangutans are considered to remain in the Leuser Ecosystem. The Leuser Ecosystem, and the smaller National Park and Wildlife Reserve within it, forms the only conservation area where viable wild populations of the Sumatran orangutan, Sumatran tiger, Sumatran rhinoceros and Sumatran elephant, each of which is endangered in itself, still occur side by side. The National Park, however, mostly comprises high mountains, and as the orangutan is predominantly a lowland species, rarely being found above 1,000 m above sea level, the majority of orangutans are found within the larger Leuser Ecosystem but outside of the National Park itself. For example, the Ecosystem harbors *c.*88% of the remaining 6,600 Sumatran orangutans whilst only 30% are found within the National Park and 23% within the Singkil Swamps Wildlife Reserve.

Throughout its range, the primary threat to the Sumatran orangutan is habitat conversion and fragmentation. Logging, both legal and illegal, often leads to total conversion of forests for agriculture or oil palm plantations. Roads are also a constant threat, since they further fragment already declining populations and also give access for additional logging and encroachment. Although precise rates of forest loss are difficult to determine, primary lowland forests in Sumatra have been devastated over the last 30 years. One study of forest cover concludes 301,420 ha, or 13% of the original 2,284,771 ha of forests, were lost in North Sumatra Province alone between 1990 and 2000 (Gaveau *et al.* 2007). A second analysis, more focused on orangutan habitat in Sumatra concluded that habitat supporting around 1,000 orangutans was being lost each year in the Leuser Ecosystem alone during the late 1990s (van Schaik *et al*. 2001). This

was largely due to legal logging concessions and conversion of lowland forests to oil palm estates, but also to illegal logging and encroachment in some places.

Fortunately, the rate of habitat loss decreased markedly in many areas during the Aceh civil conflict, as even loggers did not consider it safe to work in the forests. In fact, Gaveau *et al.* (2007) found that satellite data indicated that the rate of loss was five times faster in Aceh between 1990 and 2000 (294 km^2 or 0.75% per year) than it was between 2000 and 2006 (58 km^2 or 0.15% per year). Orangutan populations have nevertheless plummeted in those regions that have still been affected by logging. Even small-scale selective logging can reduce local orangutan densities by as much as 60% in Sumatra (Rao and van Schaik 1997).

Encroachment and conversion, especially by settlers fleeing the conflict in NAD and migrants from Nias Island, also accelerated habitat loss in some parts. After the 2004 tsunami many people moved from coastal areas, and the subsequent increase in demand for timber still poses a significant threat. Several new roads (part of a project known as Ladia Galaska) have also begun further fragmenting remaining orangutan habitat. Proposed new roads are a particular concern in the Singkil Swamps Wildlife Reserve, especially as Sumatra's peat swamp forests support the highest densities of orangutans in the world. This is expected to become a major problem in coming years as illegal loggers and settlers gradually move in and open up new agricultural land. Throughout their range, orangutans are sometimes killed as pests at the forest edge as they raid agricultural crops (particularly highly prized fruits such as durian), and in parts of North Sumatra Province they are occasionally still hunted for food. A small yet still significant trade in young Sumatran orangutans as pets also persists.

Key conservation interventions rely heavily on a dramatic and rapid improvement in enforcement of wildlife and forest laws and far greater consideration for environmental issues in spatial planning decisions. Implementing patrols, improving law enforcement (especially the number and frequency of cases actually prosecuted), stopping illegal logging, halting legal logging and forest conversion to plantations, promoting forest restoration, halting road construction, addressing human-orangutan conflict, and providing connectivity in the landscape to allow for genetic exchange are all seen as prerequisites for the species' survival. There is some cause for optimism, however. The Indonesian government has developed a National Strategy and Action Plan for Orangutan Conservation 2007–2017 (DitJen PHKA 2007) and the Government of NAD has also imposed a moratorium on all logging in the Province. Nevertheless, as with so many plans and laws, if not strictly followed and enforced, both could result in little or no change from business as usual. Indeed, if pre-civil conflict rates of habitat loss resume in NAD and the protected status of remaining habitat outside of the Leuser Ecosystem is not quickly enhanced, we could see a further 50% of Sumatran orangutans vanish within a decade. Effective long-term solutions to conserve northern Sumatra's remaining lowland primary forests are still urgently needed.

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