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THE LAST STAND OF THE ORANGUTAN

STATE OF EMERGENCY: ILLEGAL LOGGING, FIRE AND PALM OIL IN INDONESIA'S NATIONAL PARKS

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PREFACE

Globalization and international trade are generating wealth on an unprecedented scale and lifting millions out of poverty. However, the growth of global markets is also putting pressure on the Earth's ecosystems or natural assets that in many ways are the foundation of wealth creation in the first place.

The planet's tropical forests are some of these extraordinary and economically important assets – ecosystems playing a vital role in moderating the atmosphere, sequestrating greenhouse gases, delivering watershed management and are home to a rich and biologically important array of plants and animals.

This UNEP Rapid Response report, carried out on behalf of the UN-led Great Ape Survival Project, has used the latest satellite imagery and data from the Government of Indonesia to assess changes in the forests in one part of south-east Asia.

The results indicate that illegal logging, fires and plantations of crops such as palm oil are now intruding extensively into Indonesia's national parks which, for example, are the last safe-holds of the orangutan.

In the past five years more than 90% of over 40 parks have now been impacted putting at risk national and regional attempts to meet the 2010 biodiversity target. The driving forces are not impoverished farmers, but what appears to be well-organized companies with heavy machinery and strong international links to the global markets.

UNEP applauds the Indonesian government's new initiative focusing on new and specially trained ranger units to win back the national parks. It is starting to show some promising results with illegal logging halted in two parks in 2006. But the authorities need more assistance. National parks represent a common heritage and their protection and enforcement is essential in international conservation. UNEP therefore hopes to work even more closely with Indonesia's government in the coming years and support them in this vital work that may hold promise for other nations too.

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Executive Director
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SUMMARY

Orangutans are native to Indonesia and Malaysia. Their survival is seriously endangered by illegal logging, forest fires including those associated with the rapid spread of oil palm plantations, illegal hunting and trade. In the last few years, timber companies have increasingly entered the last strongholds of orangutans in Indonesia: the national parks. Official Indonesian data reveal that illegal logging has recently taken place in 37 of 41 surveyed national parks in Indonesia, some also seriously affected by mining and oil palm plantation development. Satellite imagery from 2006 document beyond any doubt that protected areas important for orangutans are being deforested. The use of bribery or armed force by logging companies is commonly reported, and park rangers have insufficient numbers, arms, equipment and training to cope.

If current logging trends continue, most of Indonesia's national parks are likely to be severely damaged within the next decade, because they are amongst the last areas to hold valuable timber in commercially viable amounts. The situation is now acute for both the Bornean orangutan and Sumatran orangutan. These species are classed as Endangered and Critically Endangered respectively by the World Conservation Union (IUCN), and are listed on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The rapid rate of removal of food trees, killing of orangutans displaced by logging and plantation development, and fragmentation of remaining intact forest constitutes a conservation emergency. More than one thousand orangutans are living in rescue centres in Borneo alone, with uncertain chances of ever returning to the wild.

A series of international and national initiatives have been developed to address illegal logging. However, it is evident that Asian, European and North American markets are still major recipients of illegally logged wood products, which often change ownership and recorded country-of-origin multiple times during transport. An estimated 73–88% of all timber logged in Indonesia is illegal. Less than 20% is smuggled out as logs, and the remaining wood is processed in saw, paper or pulp mills and later exported. These mills have a capacity of two to five times greater than the legal supply of timber.

This assessment, based on a series of independent studies, shows that the disastrous situation in Indonesia's forests is driven mainly by international markets and well-organised timber supply networks. This pattern is also seen in other tropical areas including Latin America and Africa. If the immediate crisis in securing the future survival of the orangutan and the protection of national parks is not resolved, very few wild orangutans will be left within two decades. A scenario released by UNEP in 2002 suggested that most natural rainforest in Indonesia would be degraded by 2032. Given the rate of deforestation in the past five years, and recent widespread investment in oil palm plantations and biodiesel refineries, this may have been optimistic. New estimates suggest that 98% of the forest may be destroyed by 2022, the lowland forest much sooner. Since mature forest is being lost from large areas, the supply of timber will decline further. This means that the incentive to log protected areas will grow. The rate and extent of illegal logging in national parks may, if unchallenged, endanger the entire concept of protected areas world wide. At current rates of intrusion into national parks, it is likely that many protected areas will already be severely degraded in three to five years, that is by 2012.

Indonesia has worked extensively with other countries to reduce illegal logging, but this objective requires the substantial support of the international community, including recipients of illegally logged timber. Efforts to introduce timber certification, and other work to reduce levels of illegal trade are critical, but most likely to have impacts over the long-term. The recent Indonesian initiative of better training and equipment of park rangers, including the development of Ranger Quick Response Units (SPORC – Satuan Khusus Polisi Kehutanan Reaksi Cepat) is therefore the most promising countermeasure, but requires substantial strengthening to deal with the scale of the immediate problem. Currently, 35 national parks have 2 155 ordinary field rangers to patrol an area of 108 000 km^2.

These rangers have little access to ground vehicles, helicopters, aeroplanes, communication, necessary arms or paramilitary long-range patrol training that would enable them to intercept and stop illegal intrusions at these scales. The training, sufficient arming and equipping of these rangers and SPORC units to locate, intercept, arrest and repel companies from protected areas appear to be among the most promising critical emergency responses. If such programmes are strengthened to become fully operational in the most threatened parks, they may serve as global role-models for the continued protection of national parks for biodiversity conservation.

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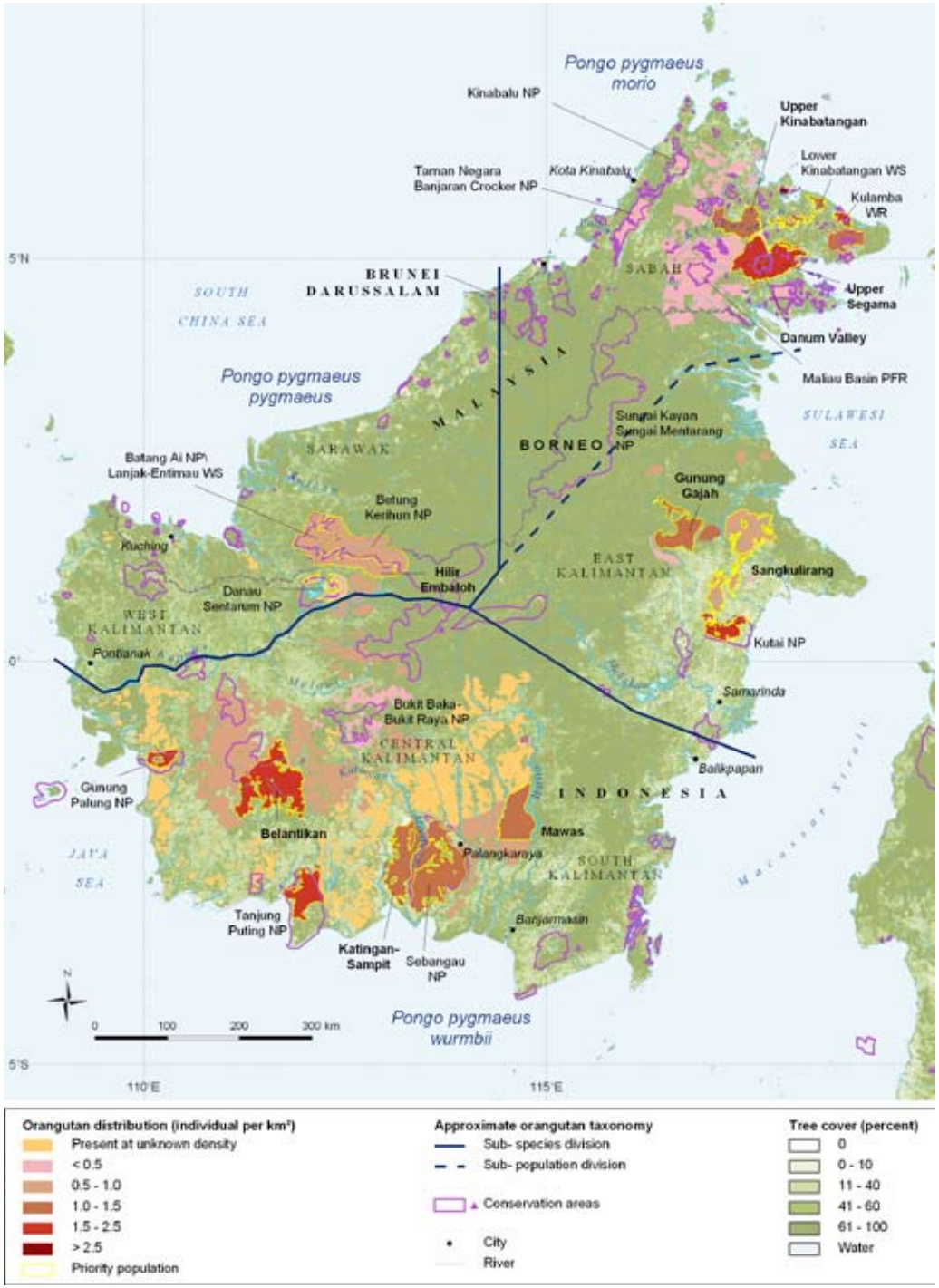

Figure 1: Bornean orangutan distribution, with priority populations highlighted. Reproduced from Caldecott & Miles (2005); updated with GRASP priority populations. Sources: Ancrenaz & Lackman-Ancrenaz (2004); Meijaard *et al.* (forthcoming); Meijaard *et al.* (2004); Singleton *et al.* (2004).

ORANGUTANS ON THE EDGE

Orangutans survive only in the dwindling tropical rainforests of Borneo and northern Sumatra, being dependent on the forest for food and nesting sites. Orangutan populations are seriously affected when their forest is destroyed or logged, not least because they are often killed for meat or to protect newly planted crops. For example, in the Sebangau swamp forests of central Borneo, orangutans fled from illegal logging operations, moving into less ideal habitat (Husson *et al.* 2002). The resulting overcrowding led to an increased death rate among young orangutans, and fewer births amongst females. When the forest started to regenerate, the orangutans were able to return. In Malaysia, the Kinabatangan Orangutan Conservation Project has studied the effects of the transformation wrought by logging on dipterocarp forests. The removal of most large trees means that the heavy adult male orangutans were forced to move along the ground, increasing their vulnerability, but on the other hand, the invasion of the logged forest by vines and pioneer species soon resulted in an increased abundance of fruit (Ancrenaz *et al.* 2005). If they are not killed in the process, orangutans in these habitats can survive selective logging. Evidence from Ketambe and Gunung Leuser in Sumatra suggests that the ability of these forests to support orangutans initially declines with selective logging, but can recover over time. Over Borneo and Sumatra as a whole, illegal logging has led to huge declines in orangutans and other wildlife. Where forests are converted to plantations of oil palm (*Elaeis guineensis*) or other crops, the consequences are even more serious, with many orangutans starving.

Like all great apes, orangutans have long lifetimes, long "childhoods" and relatively low reproductive rates, which makes it difficult for them to recover when large numbers are killed. Recent estimates suggest that there are 45 000 to 69 000 Bornean orangutans and only 7 300 Sumatran orangutans remaining in the wild (Caldecott & Miles 2005). The Bornean orangutan is classified as Endangered by IUCN (the World Conservation Union), indicating that it has a very high risk of extinction in the wild in the near future. There are at least three subspecies of Bornean orangutans: *Pongo pygmaeus pygmaeus* (northwest), *Pongo pygmaeus wurmbii* (central) and *Pongo pygmaeus morio* (northeast) (Figure 1). The central Bornean orangutan is the largest, followed by the northwest subspecies, and the northeast subspecies is the smallest.

Orangutan biology

Orangutans are intelligent, strong, large primates, and live a semi-solitary life in the trees. A balanced orangutan diet consists of fruits and seeds, but they are also able to eat foodstuffs such as bark, leaves and insects to survive in times of shortage. Fresh sleeping nests are built from branches and leaves almost every evening.

Sumatran orangutans (*Pongo abelii*) are only found in Indonesia, and Bornean orangutans (*Pongo pygmaeus*) only in Indonesia and Malaysia, with occasional males reported as wandering into Brunei Darussalam. The Bornean and Sumatran species have formed separate breeding populations for around one to two million years, differing in genetics, behaviour, diet, life history and morphology (MacKinnon *et al.* 1996; Delgado & van Schaik 2000, Wich *et al.* 2004; McConkey 2005; Wich *et al.* 2006a, b; Taylor 2006). Neither species is territorial, but fully developed adult males tend to avoid one another, and occasionally fight if they do meet.

The Sumatran orangutan is classified as Critically Endangered by IUCN, indicating that it has an extremely high risk of extinction in the wild in the near future. Since 1900, the number of Sumatran orangutans is thought to have fallen by about 91%, with a rapidly accelerating loss towards the end of the twentieth century (McConkey 2005). As a result of logging, infrastructure development, internal migration and plantation development, Sumatra's

forest area was reduced by 61% between 1985 and 1997. The remaining orangutan population is therefore fragmented, with the core of its range being the Leuser Ecosystem. This conservation area is itself recognised in Indonesian law, and contains the Gunung Leuser National Park, which forms part of the Tropical Rainforest Heritage of Sumatra World Heritage Site.

There is a serious need for conservation action on both islands, because even within these formally protected areas, orangutans are under pressure. Priority populations for conservation action (Figure 1, 2) have been identified by scientists working with the Great Apes Survival Project (GRASP). The goal is to retain viable populations of both orangutan species and all three Bornean subspecies in their natural habitats wherever they exist, conserving their genetic, cultural and ecological diversity.

Figure 2: Sumatran orangutan distribution, with priority populations highlighted. Reproduced from Caldecott & Miles (2005); updated with GRASP priority populations. Sources: Dadi & Riswan (2004); Singleton *et al.* (2004).