



SUMMARY
REPORT

2017

Executive Summary

The Environmental Status of Borneo 2016 Report

Cover page photo (C) WWF - Indonesia/Arief Destika

A landscape containing a complex of lowland forest, heath forest and upland rainforest at Tumbang Jojang, Murung Raya, Central Kalimantan

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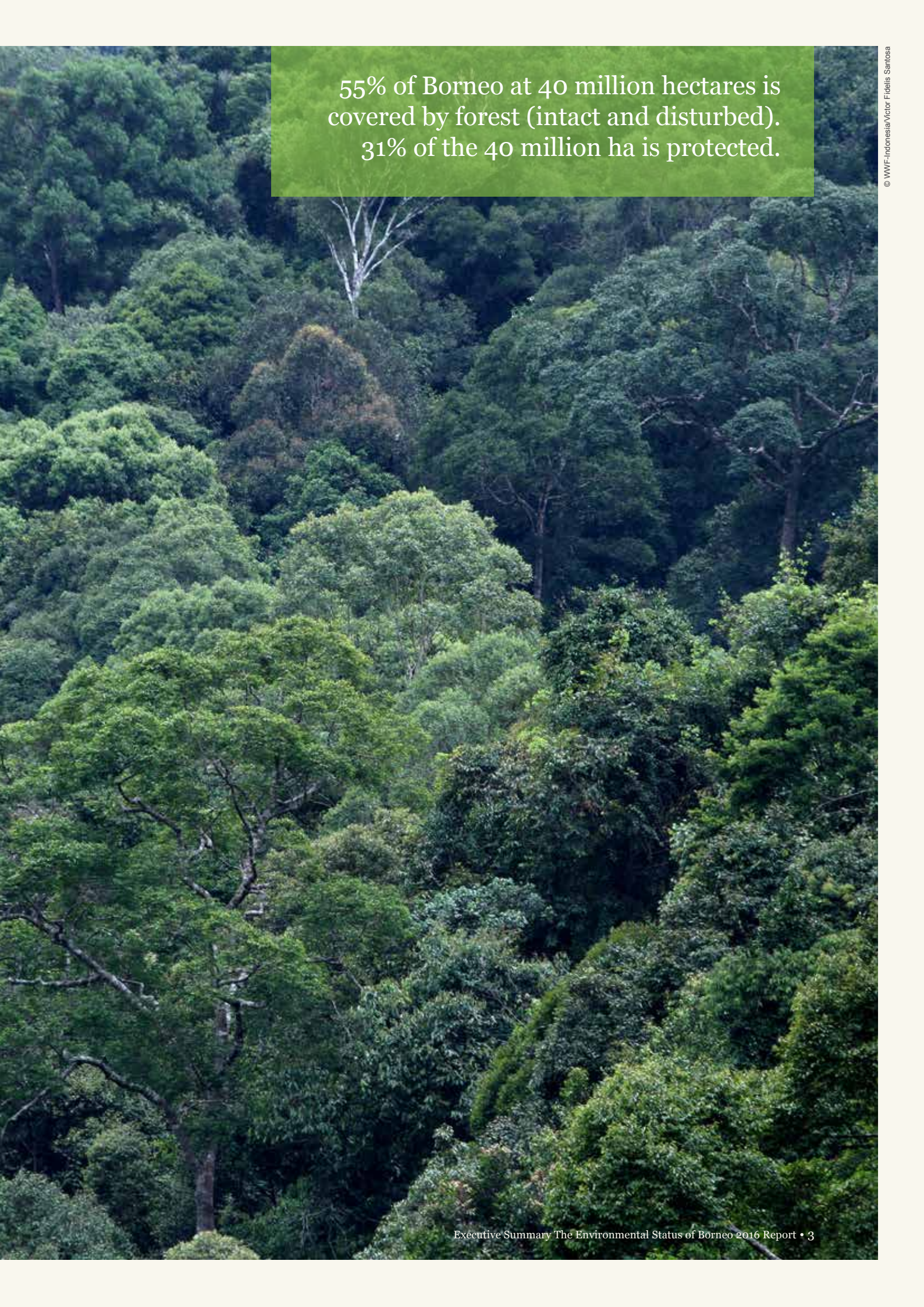
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WWF is one of the world's largest and most experienced independent conservation organisations, with more than five million supporters and a global network active in more than 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.





55% of Borneo at 40 million hectares is covered by forest (intact and disturbed).
31% of the 40 million ha is protected.

EXECUTIVE SUMMARY

Borneo has long been recognized by WWF as a globally significant biodiversity ‘hotspot’. Representing just 1% of the earth’s terrestrial surface, the island is home to an estimated 6% of the world’s flora and fauna, including WWF flagship species, orangutan, elephant and endemic species, such as proboscis monkey and countless birds and plants.

A paradise of biological wonder. Described by Charles Darwin as: *“One great luxuriant hothouse made by nature for herself.”*

A paradise of biological wonder. Described by Charles Darwin as: “One great luxuriant hothouse made by nature for herself.”

But, all is not well in paradise!

Borneo’s forests and ecosystems are succumbing to the economic and social pressures of life in the 21st century. Many of these pressures are familiar: unsustainable logging, clearance for industrial agriculture and mining - as countries strive to develop their natural resource base.

With the completion of WWF’s latest Environmental Status of Borneo 2016 report, the effect of these pressures is brought into sharp contrast, revealing dire trends and grave consequences for a ‘Business As Usual’ (BAU) approach to economic development on the island.



Borneo is in danger of losing its major ecosystems and the valuable eco-services they provide which are critical to the long-term survival of local communities and the economies - both national and regional - of Brunei Darussalam, the Indonesian provinces in Kalimantan, and the Malaysian states of Sabah and Sarawak.

But it does not have to be this way. Whilst detailing the degradation of the island’s critical ecosystems, the very fact that the three Borneo governments endorse their monitoring offers hope for protection, restoration and rehabilitation.



And where a gram of prevention is worth a kilogram of reparation, the results of the report reaffirm the value and immediate necessity of ‘truly sustainable’ development initiatives led by the three governments - with support from the local and international community. Indeed the findings in this report may be the ‘wake up’ call that all parties need to double their efforts to protect biodiversity and livelihood opportunities.



WWF’s Environmental Status of Borneo 2016 is the third edition of the report which details the environmental health of critical ecosystems and biological plant and animal indicators, from historical records and then in three, five-year intervals, from 2005 to 2015. Using the latest 2015 data, this year for the first time, the report’s brief was extended from the area designated as the Heart of Borneo to the whole of the island - a reflection of the cross boundary landscape approach needed to adequately address the loss of natural capital in globally significant environmental hotspots.

The purpose of gathering the data for this project is twofold. The first is to provide for objective and scientifically based long-term monitoring of the biodiversity on the island - as represented by the 'main report' detailing a range of ecosystems and biological indicator species. The second is more subjective from a conservation point of view, providing a focal point for ongoing management of the conservation and development needs of the island and the three countries that govern it.

The second purpose is represented by the Supplementary Report, which presents a summary of the findings of the main report along with extensive recommendations for the future sustainable management of the island.

Lowland rainforest in Murung Raya, Central Kalimantan



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THE BAD, THE GOOD AND THE INCONVENIENT TRUTH



Proboscis monkey populations are in a similar position with distribution areas estimated to have declined by 30% between 2005 and 2015, due to habitat loss and hunting pressure

31%

By 2005, the elephant habitat based on forest cover dropped to 37% of its estimated historical distribution, further falling to 31% by 2015

THE BAD

Continuing the trend observed with the very first Environmental Status report in 2012, Borneo's forests are in decline. Historical forest cover at the turn of the 20th century was 96% of the island. By 2005 this had dwindled to 71% and the latest report indicates by 2015, this had fallen to little more than half the island (55%) - a figure which includes both intact and degraded forest.

This rate of decline is uneven across the ecosystems, with freshwater swamp forest and heath forest down more than 75% of historic levels to 23% and lowland forest down by more than 50% of historic levels, to 42.3%.

By total area, lowland forest - a critical habitat for the conservation of many unique species - is by far the most converted ecosystem type in Borneo. Ease of access for logging and its suitability for palm oil production and agriculture has made it one of the most endangered habitats on earth. The consequences of any further loss of biodiversity in this ecosystem, projected between 2015 and 2020 to be 10-13 million hectares, in a BAU scenario, will be felt on a global scale.

Similarly, certain species are in rapid decline, or face an uncertain future. The orangutan is perhaps the iconic species most closely associated with the tropical rainforests of Borneo. Yet in early 2016, the International Union for Conservation of Nature (IUCN) reclassified the threat status for the Bornean orangutan from 'endangered' to 'critically endangered', due to destruction, degradation and fragmentation of its habitats and hunting.

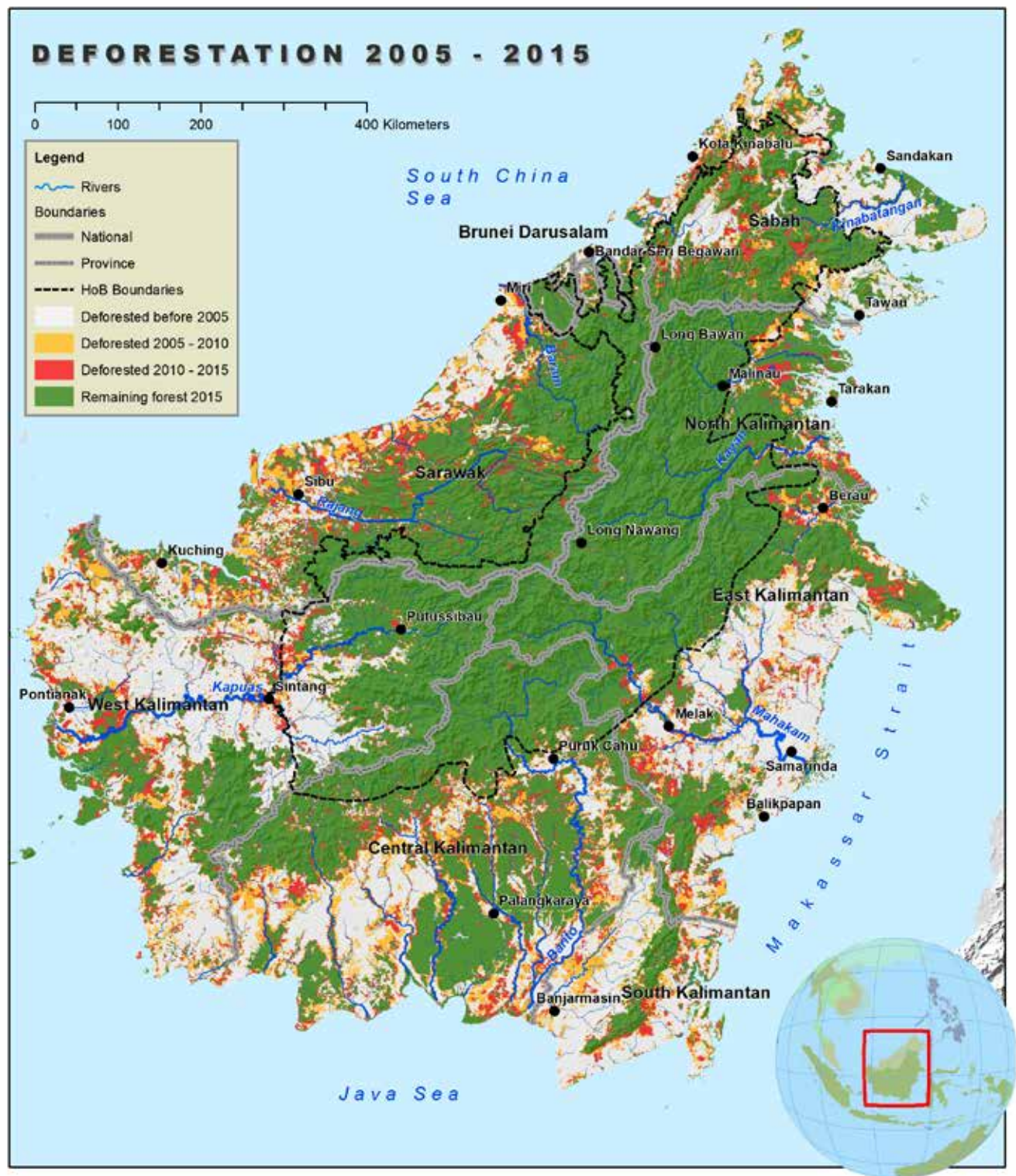
Between 1973 and 2005, orangutan lost almost half their distribution area due to large scale conversion and forest fire. The 2016 report indicates that between 2005 and 2015 another 9% of that was lost, with significant increased fragmentation of the area that was left.

Proboscis monkey populations are in a similar position with distribution areas estimated to have declined by 30% between 2005 and 2015, due to habitat loss and hunting pressure. The Borneo elephant population is also in trouble. By 2005, the elephant habitat based on forest cover dropped to 37% of its estimated historical distribution, further falling to 31% by 2015.



Orangutan near Pungualas, Sebangau National Park

© WWF-Indonesia/Pradino/Ajim Ariadi/Restu



Map 1: Deforestation in Borneo 2005 - 2015

THE GOOD

The 2016 report does provide good news on some ecosystem fronts.

Upland rainforests and montane forests do not suffer high rates of deforestation, with nearly 90% and 96% respectively of historical coverage still remaining.

Indeed, the area known as the Heart of Borneo has fared far better than the lowlands and coastal areas. Highlighting perhaps the wisdom, forethought and relative success of the three Borneo Member Countries' 2007 historic Declaration to conserve the Heart of Borneo (HoB), an area then covering 22 million, but now 23 million hectares (234,000 km²) in the centre of the island. Considerable work has been carried out under the HoB banner by the three Member Countries and its local and international supporters, not the least being WWF.

With 2017 being the 10th anniversary of the HoB Declaration, the 2016 Environmental Status report findings may provide the impetus for a renewed focus on Borneo's environmental issues. A new focus is needed because, if action is not taken, the projections in the report reveal an 'inconvenient truth' regarding the future of the island's stunning biodiversity.

THE INCONVENIENT TRUTH

The inconvenient truth revealed by the report is that it is almost too late for some ecosystems in Borneo. Without unprecedented, concerted and large scale efforts in restoration, reforestation and protection, the majority of the original ecosystem conservation goals set by WWF's team of international and Bornean experts, are rapidly moving out of reach.

For example: Lowland forest, with an original conservation goal of 45% as determined in 2012, was down to 43% in 2015, and is projected to be as low as 32% by 2020. Limestone forest with conservation goal of 60% declined from 71% to 53%. Freshwater swamp forest at a goal of 40% is down from 45% to 23%; and the original goal of mangrove ecosystems at 60% is now down to 50%. Likewise, the original conservation goals for heath forest and peat swamp forests of 50% and 60% respectively, can no longer be realistically met, unless there is rapid and dramatic policy change to provide enabling factors to reverse the trends.

What's more, according to projections in the report, if the 2005-2015 deforestation rates continue, under a Business-As-Usual scenario (BAU), a further 6 million ha of forest may be deforested over the next five year period from 2015 and 2020.

The largest projected deforestation will occur in lowland rainforest and peat swamp forest, but deforestation rates in heath forest, limestone forest and freshwater swamp forest will also be unsustainably high.

Better news is that for upland rainforest and montane ecosystems, the original conservation goals of 80% and 90% respectively, could easily be achieved with an immediate reduction of deforestation rates.

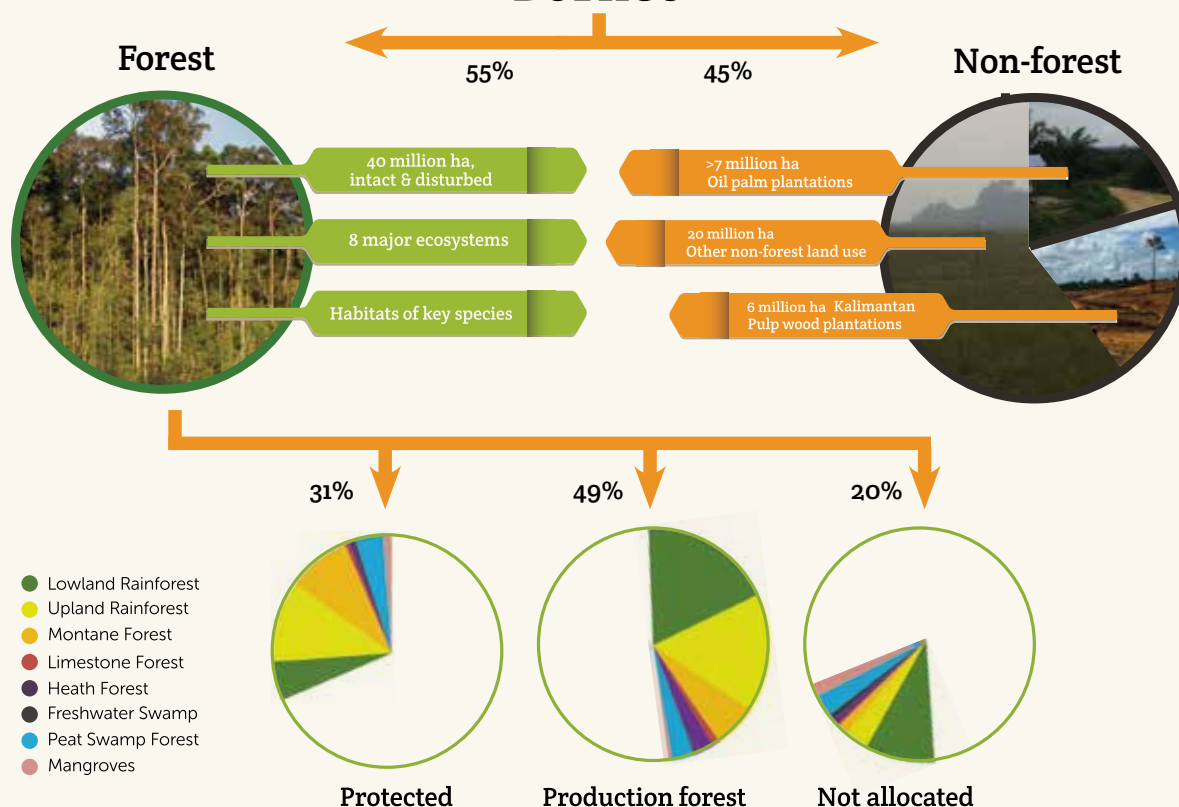
Furthermore, a number of animal indicators such as clouded leopard and banteng which are currently doing well, could thrive under such a scenario, while those under more threat could see a reduction in their risk status. Indeed, almost all the indicators in the report could be significantly improved with concerted and targeted action by the three Member Countries and state and provincial governments, with support from international and local agencies.



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Borneo



THREATS

As part of the analysis, the report looked at the developments and ‘threats’ currently facing Borneo’s ecosystems and not surprising, a number of repeat offenders were identified.

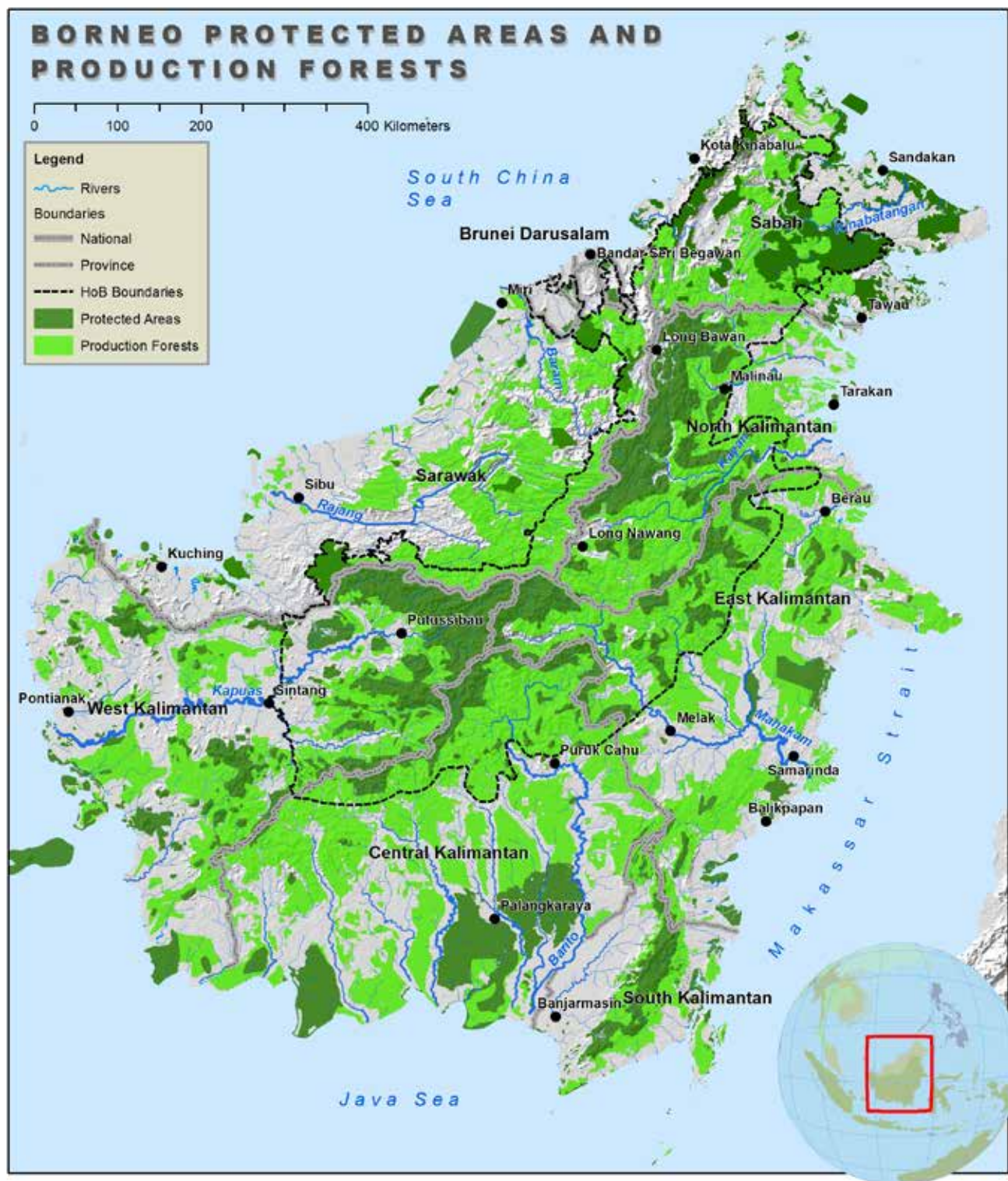
Fire: Fires are a major threat, particularly to peat swamp forests and lowland rainforests and especially at the edges of oil palm plantation areas, where their ‘accidental’ nature must be questioned as they pave the way for further development of the existing plantations.

Land conversion: Expansion of oil palm and pulpwood plantations and large areas of natural forest destruction inside mining concessions, are major factors in the continued deterioration of Bornean ecosystems.



Fires are a major threat, particularly to peat swamp forests and lowland rainforests

Inadequate spatial planning: The lack of coordinated spatial planning has resulted in allocation of licenses into environmentally sensitive areas as well as habitats for species that include orangutans and elephants. Conversely, spatial planning has a huge role to play in moving away from Borneo’s BAU model. The 2016 report notes that 31% of the remaining 40 million ha natural forest is currently allocated for protection (constituting 17% of Borneo’s total land area) while 49% is allocated for production forest. The remaining 20% has not yet been allocated or designated for retention as forest. Terms, however, can be deceiving. In Kalimantan, for example, the classification of APL (*Areal Penggunaan Lain / Other Land Use*) can effectively mean ‘allocated for conversion.’ Likewise, the 17% of Borneo’s land area allocated for protection appears to be in line with the IUCN protected areas targets. However, this figure includes large areas (such as *Hutan Lindung*/Protection Forest) which do not conform to the IUCN definition of a protected forest.



Protected Areas	
Kalimantan	: National Park, Nature Reserve, Wildlife Sanctuary, Great Forest Park, Nature Tourism Park, Protection Forest
Brunei Darussalam	: National Park, Nature Reserve, Wildlife Sanctuary, Forest Reserve
Sabah	: Park, Wildlife Conservation Area/Wildlife Sanctuary, Protection Forest, Virgin Jungle, Wildlife Reserve, Class V: Mangrove Forest
Sarawak	: National Park, Nature Reserve, Wildlife Sanctuary
Production Forest	
Kalimantan	: Limited Production Forest, Production Forest
Sabah	: Class II: Commercial Forest, Class III: Domestic Forest, Class IV: Amenity Forest
Sarawak	: Permanent Forest Estate

Map 2: Borneo Protected Areas and Production Forests



Protected Areas

Kalimantan : National Park, Nature Reserve, Wildlife Sanctuary, Great Forest Park, Nature Tourism Park, Protection Forest

Brunei Darussalam: National Park, Nature Reserve, Wildlife Sanctuary, Forest Reserve

Sabah : Park, Wildlife Conservation Area/Wildlife Sanctuary, Protection Forest, Virgin Jungle, Wildlife Reserve, Class V: Mangrove Forest

Sarawak : National Park, Nature Reserve, Wildlife Sanctuary

Production Forest

Kalimantan : Limited Production Forest, Production Forest

Sabah : Class II: Commercial Forest, Class III: Domestic Forest, Class IV: Amenity Forest

Sarawak : Permanent Forest Estate

Map 3: Remaining Forest 2015 Not (Yet) Allocated for Protection and Permanent Production Forest



Elephants in Sabah

As such, systematic spatial planning that integrates the environmental conservation aspects across the island, a better clarity of classifications based on ‘tighter’ definitions, as well as rigorous enforcement of forest regulations, would do much to halt the slow march of deforestation across Borneo.

There are continuing difficulties in enforcing protected status. It is essential to remember that even the designated Heart of Borneo landscape was never a ‘national park’, as many have erroneously perceived it to be. It was always a ‘mosaic’ of protected areas, wildlife corridors and sustainable land-use areas. The value of the Heart of Borneo approach was that it recognized the need to balance conservation and sustainable development to ensure a secure future for biodiversity, habitat conservation and indigenous livelihoods as well as meeting the ever-present government requirements for development.

STATE AND PROVINCIAL DEVELOPMENTS

The report also provides an update on individual states, provinces and in the case of Brunei, country progress on all relevant biological indicators. Here there is hope for the optimist, but encouragement also for the pessimist. Hope springs eternal in the new protected areas in Sabah, more forests to be retained in Sarawak, ongoing protection in Brunei and more watershed forest cover in Kalimantan, measures that were undertaken during 2016 and therefore outside the scope of this analysis.

However less hopeful are the large natural forest areas not allocated to be retained across the island, as well as the very many locations of illegal forest conversion and expansion by stealth around many of the palm oil plantations.

A WAY FORWARD

There are many responses possible to the challenges ahead. Whilst not prescriptive, the 2016 Supplementary report, puts forward a number of recommendations for state and federal government policy makers, industry, international agencies and civil society.

Key amongst them are:

- Ensure ecological connectivity of the landscapes of Borneo through island-wide spatial planning for effective conservation of biodiversity and ecosystem services.
- Evaluate spatial planning per location or landscape to ensure retention of as much natural forest and species habitats as possible.
- Identify and establish a new baseline for all idle non-forest land, and consider it as the only alternative for new plantations.
- Develop monitoring systems and prescriptive action to ensure that all production forests remain under natural forest cover.
- Expand protected areas to include entire landscapes and better representation of all ecosystems and species habitats.




There are many challenges in adequately enforcing protection: illegal logging, forest fires, conversion to agriculture/palm oil/pulpwood, wildlife trade and mining are among the most difficult of those. The 2007 HoB Declaration was in some respects a line in the sand from which all three national governments acknowledged the need to begin to address these challenges.

The HoB, however, does not exist in isolation and neither do Borneo's endangered species. For example, a majority of orangutans live outside the HoB. The goals for HoB conservation cannot be truly achieved without taking the whole of Borneo into consideration, hence our recommendations span priority conservation across the island.

With 2017 being the 10th anniversary of the HoB Declaration, the 2016 Environmental Status report findings may provide the impetus for a renewed focus on Borneo's environmental issues and challenges within and beyond the HoB.





More than 7 million hectares of Borneo is under oil palm plantations and 6 million hectares of pulp wood plantations is in Kalimantan.

Under business-as-usual scenario, a further 6 million hectares may be deforested between 2015 and 2020 in Borneo.

BORNEO FOREST FACTS

PAPER FROM
RESPONSIBLE
SOURCES

FOREST LOSS

About half of Borneo's natural forest has been lost and losses continue at a rapid pace.

3rd LARGEST

Borneo is the third largest island on the planet.



850,000

Between 1985 and 2005 Borneo lost an average of 850,000 hectares of forest every year. If this trend continues, forest cover will drop to less than a third by 2020.

75.5 MILLION

East Kalimantan alone is believed to lose over €75.5 million a year in business tax revenue due to illegal logging and illegal timber processing.



Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

wwf.panda.org/borneo