



WWF

REPORT

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2016



**ORANG-UTAN RESEARCH AND
HABITAT RESTORATION PROJECT**
in Bukit Piton Class I Forest Reserve

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BACKGROUND

Orang-utans

Orang-utans are Asia's great apes that are only found in the tropical islands of Borneo and Sumatra. They are very dependent on the forests for survival, particularly for food, travel and nesting on a daily basis. There are two species of orang-utan, i.e. *Pongo pygmaeus* in Borneo and *Pongo abelii* in Sumatra. The Bornean orang-utan is classified as "Endangered" by the International Union for Conservation of Nature (IUCN) while the Sumatran orang-utan is classified as "Critically Endangered", which indicates the risk of extinction in the wild.

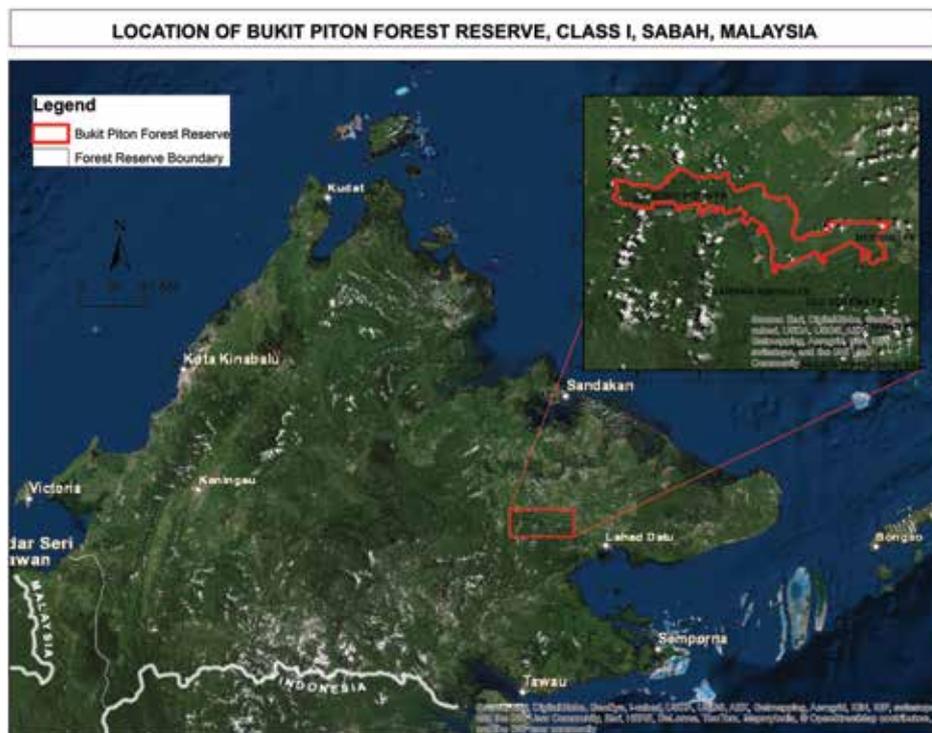
In general, orang-utan populations have declined drastically due to illegal hunting, habitat loss and forest fragmentation. Rapid expansion of oil palm (*Elaeis guineensis*) plantations and logging activities in the 70's/80's are the main causes of forest loss and degradation in Borneo. In terms of orang-utan conservation, this rate of land conversion, means a decrease in wildlife habitats and is worrying as Borneo is home to various endangered wildlife, such as Borneo pygmy elephant and Sumatran Rhino, including the Bornean orang-utan. In Sabah, WWF-Malaysia has been working together with Sabah Forestry Department (SFD) to restore Bukit Piton Forest Reserve, a degraded orang-utan habitat in the central forest of Sabah.

Bukit Piton Forest Reserve

Bukit Piton Forest Reserve is located in the northern part of the Ulu Segama Forest Reserve (Map 1). It is a Class I Protection Forest Reserve and occupies an area of 12,000 ha.

Historically, Bukit Piton Forest Reserve was logged between 1980s and 2007 using conventional chainsaw to fell trees and bulldozer for skidding. This logging technique has been known to be unsustainable. Two major forest fires events in 1983 and 1997-98 had occurred in the area killing most of the residual trees. Hence, some parts of the area are treeless, and where remnant forests exist, much of these are of poor forest structure unsuitable for wildlife habitat especially for orang-utans.

Bukit Piton Forest Reserve was reported to have 170 (2007 estimate, HUTAN, unpublished report) to 300 (2008 estimate, WWF-Malaysia, unpublished report) orang-utans even though the forest was heavily degraded. The distribution of this orang utan population is uneven due to the clearance of forest for oil palm plantations bordering Bukit Piton Forest Reserve to the north and east. On the southern part, the Segama River acts as a physical barrier separating the orang-utan population in Bukit Piton Forest Reserve from the larger population in the Ulu Segama Forest Reserve. The isolation of this orang utan population not only limit their ranging habitat, but lead to their eventual extinction.

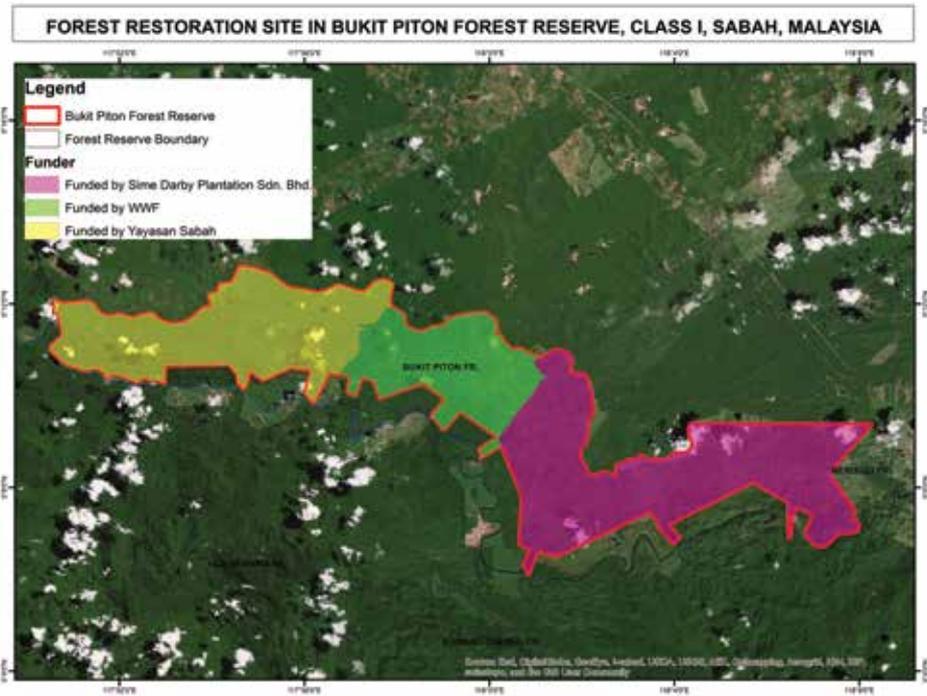


Map 1: Location of Bukit Piton Forest Reserve in Sabah

In 2006, WWF-Malaysia and Sabah Wildlife Department (SWD) conducted an aerial nest-count of orang-utan in the Ulu Segama-Malua Forest Reserve (USM), which is located in the central of Sabah and regarded as one of the main habitats for orang-utans in Sabah. The result of the aerial survey showed that an isolated area at the northern edge of USM had a high density of orang-utan population. This area, Bukit Piton Forest Reserve, was referred to as North Ulu Segama (NUS)¹ prior to its excision from USM and gazettement as Class 1 Protection Forest Reserve.

Based on the aerial survey finding, WWF-Malaysia decided to monitor the orang-utan distribution and population. This is to enable the identification of suitable area for restoration using native tree species. This decision was in line with WWF International's commitment to support conservation in areas within the Heart of Borneo (HoB), a tri-national conservation initiative between Malaysia, Brunei, and Indonesia. Other parties such as the Sabah Foundation (Yayasan Sabah) and Sime Darby Plantation Sdn Bhd. have also committed to support this restoration project with SFD as the executing agency (Map 2).

¹ North Ulu Segama, or NUS, is a term created by WWF-Malaysia to refer the northern part of Ulu Segama-Malua) Forest Reserve (USM).



Map 2: Location of Bukit Piton Restoration Programme led by SFD and supported by three organisations: Sabah Foundation, WWF-Malaysia and Sime Darby Plantation Sdn. Bhd.

WWF-MALAYSIA'S CONSERVATION INTERVENTION IN BUKIT PITON FOREST RESERVE



Photo 1: Restoration contractors on their way to the planting site

Since 2007, WWF-Malaysia has been conducting reforestation activity in approximately 2,400 ha of the 12,000 ha of degraded forest in Bukit Piton Forest Reserve. WWF-Malaysia aims to:

- re-establish the forest structure and productivity of the degraded forest,
- preserve the diversity of resident species that was found in the original old-growth forest, and ensure continuity of wildlife species particularly the orang-utans

To date, WWF-Malaysia has successfully planted indigenous tree species including fruit trees for the forest restoration project. After planting, the seedlings are given regular maintenance work (e.g. weeding) to ensure high survive rates for the first two years after planting. Besides planting trees, the Project Team also conducts aerial nest surveys of orang-utan nests annually to determine their distribution and choice of tree species for nesting. Camera traps were also placed at the border of Bukit Piton Forest Reserve from 2011 to 2012 to monitor the presence of orang-utans and other wildlife.

WWF-Malaysia's restoration programme has been supported by funds from:

- Adessium Foundation through WWF-Netherlands
- Marks and Spencer through WWF-United Kingdom
- ITOCHU Corporation and ITOCHU Group through WWF-Japan
- Aeon Co. (M) Bhd
- Senheng Electric (KL) Sdn. Bhd.), and
- WWF Network donors:
 - WWF-Netherlands
 - WWF-Germany
 - WWF-United Kingdom
 - WWF-United States, and
 - WWF-Singapore

**HIGHLIGHT:
WWF-MALAYSIA'S
EFFORTS ON
ORANG-UTAN
CONSERVATION
RECOGNISED BY SFD**

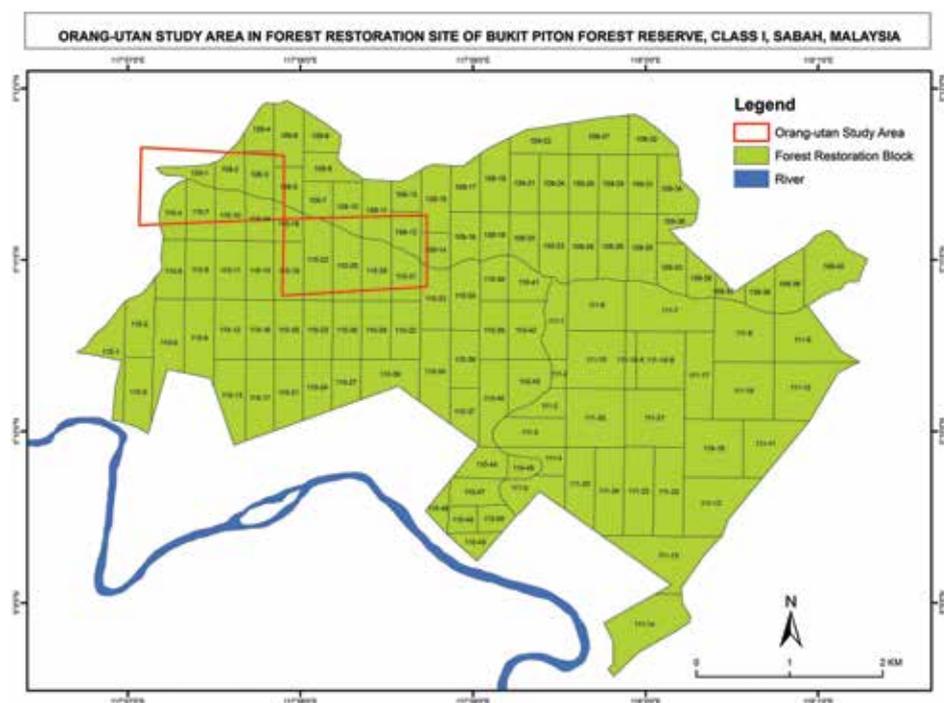
WWF-Malaysia played a pivotal role during the preparation of SFD's Sustainable Forest Management Plan (FMP) for USM (which also included NUS), which was a Class 2 Forest Reserve at that time. This was done by providing valuable inputs on sustainable forest management practices to reduce negative impacts of the forest. After the FMP was implemented, NUS was certified by the Forest Stewardship Council (FSC) for well-managed forest in June 2011.

In recognition of the importance of NUS and WWF-Malaysia efforts, SFD annexed NUS from USM, renamed it to Bukit Piton Forest Reserve and upgraded it to a Class 1 Forest Reserve in March 2012.

Orang-utan monitoring activities

Orang-utans behaviours

A team of field assistants were trained to identify orang-utans in the wild and monitor their behaviour. Once the orang-utan wakes up, the team would follow the orang-utan and record their behaviour until it goes to sleep in its nest. The orang-utan's behaviour is recorded on a five-minute interval. In addition, orang-utan daily activities such as movement, nesting and feeding behaviours were recorded, including the species of plants they feed on and the choice of nesting trees. The team also monitored any records of planted trees used by orang-utan.



Map 3: Orang-utan study site in Bukit Piton

Compilation of plant species which are orang-utan food

- In total, there are 67 species from 61 genera and 36 families of food plants consumed by orang-utan recorded in Bukit Piton Forest Reserve. Another 30 samples of food plants were only identified up to genus level.
- A comparison was made with a previous study on orang-utan feeding observation by MacKinnon in 1974 at Bole River which is located near Bukit Piton Forest Reserve before logging took place.
- Based on this comparison, there was a change of 94% of food plants from the original orang-utan food list. This shows that major interference in forests caused by logging resulted in the loss of the original vegetation composition which has influenced the availability of preferred orang-utan food plants, such as *Pterospermum elongatum* and *Macaranga personii*.
- During the study by WWF-Malaysia, it was recorded that the pioneer species such as Laran (*Neolamarckia cadamba*), Bayur (*Pterospermum elongatum*) and Binuang (*Octomeles sumatrana*) provided food for orang-utans. These species were planted for restoration.

Family	Species	Type	Rank
Moraceae	<i>Ficus spp.</i>	Tree	1
Leguminosae	<i>Spatholobus spp.</i>	Climber	2
Rubiaceae	<i>Neolamarckia cadamba</i>	Tree	3
Convolvulaceae	<i>Merremia spp.</i>	Climber	4
Convolvulaceae	<i>Merremia borneensis</i>	Climber	5
Euphorbiaceae	<i>Macaranga pearsonii</i>	Tree	6
Euphorbiaceae	<i>Macaranga spp.</i>	Tree	7
Rubiaceae	<i>Uncaria spp.</i>	Climber	8
Gramineae	<i>Dinochloa sublaevigata</i>	Climber	9
Sterculiaceae	<i>Pterospermum elongatum</i>	Tree	10

Table 1: Top 10 orang-utan food plants in Bukit Piton Forest Reserve

- In terms of feeding frequency, the important food plants recorded were *Ficus spp.* followed by *Spatholobus sp.* and *Neolamarckia cadamba*.
- *Ficus spp.* and *Spatholobus sp.* are fall back food when other food sources become scarce. They are generally available throughout the year and usually found widely spread out in the forest.
- *Neolamarckia cadamba* is a fast-growing pioneer species which is easily found in a secondary forest.
- Planting more standing *Ficus spp.* can be very essential for the survival of orang-utans in a forest restoration effort which particularly aims to enhance the habitat quality of orang-utan. It is also known to benefit other wildlife like hornbills which are partial to the fruits from these trees.

Nesting trees

Orang-utans need trees that are steady and strong enough to support their large bodies. In Bukit Piton Forest Reserve, their nesting trees are usually less than 70 cm in Diameter at Breast Height (DBH). The selection of such trees might be attributed to the logging practices in the past, which allowed the removal of trees with greater than 60 cm DBH.

Family	Scientific name	Number of sighting
Sterculiaceae	<i>Pterospermum elongatum</i>	32
Rubiaceae	<i>Neolamarckia cadamba</i>	25
Rubiaceae	<i>Nauclea subdita</i>	7
Myrtaceae	<i>Eugenia spp.</i>	4
Rubiaceae	*	4
Sonneratiaceae	<i>Duabanga moluccana</i>	4
Dipterocarpaceae	<i>Shorea spp.</i>	3
Moraceae	<i>Ficus spp.</i>	3
Datisceae	<i>Octomeles sumatrana</i>	2
Dipterocarpaceae	<i>Parashorea tomentella</i>	2

* Only identifiable up to family level

Table 2: Top 10 tree species used by orang-utans for nesting in Bukit Piton Forest Reserve

The results of the monitoring study on orang-utans suggest that restoration efforts should focus on replanting important food plants and nesting trees. More standing ficus trees should be planted as this species proved to be of importance for orang-utans, providing both nesting and food trees. Providing other fruit tree species is also important as orang-utans will feed more on fruits if fruits are available. More than 30 species of trees which served as orang-utan food plants in pre-logging days were not available after logging or had decreased in composition, making it essential to include them in restoration efforts to enhance orang-utan's habitat quality. Loggers should also stop logging standing ficus and instead retain such trees which serve as orang-utan food trees.

The project recommends trees with DBH size of 70 cm and below should be retained to ensure availability of strong nesting trees, while trees shorter than 30 m should also be maintained as this is the average height of orang-utan nests above ground, which is 7 to 29 meters. (Unpublished WWF-Malaysia's research)

Results: Planted trees used by orang-utans identified during observation

Since July 2013, several instances of orang-utans using planted trees have been recorded. Even at this stage when the planted trees have not grown to their full size yet, WWF-Malaysia's orang-utan research team has seen many instances of planted trees being used by orang-utans. Logically, when more trees mature and reach their full size, it is expected that usage of such trees by orang-utans will correspondingly increase.



Photos 2 and 3: Orang-utan nest spotted on a planted Binuang (*Octomeles sumatrana*) tree in July 2012



Photo 4: An orang-utan move through the canopy of planted Laran (*Neolamarckia cadamba*) trees in January 2013



Photo 5: Evidence of orang-utan feeding on the bark of a planted Laran (*Neolamarckia cadamba*) tree in January 2013



Photo 6: An orang-utan perching on a planted tree in Compartment 110, Block 110-4 (June 2013)



Photo 7: An adult male orang-utan climbing a planted Bayur tree (*Pterospermum elongatum*) in October 2013

Annual aerial nest surveys (2008-2013)

Aerial survey of orang-utan nest was conducted annually to map their movement and distribution in Bukit Piton Forest Reserve. More importantly, the survey was to determine if orang-utan distribution is influenced by the increased of forest cover from the restoration efforts. Parallel line transects in an east-west orientation at 1-km intervals were adapted to record the locations of orang-utan nests. A Bell 206B3 Jet Ranger helicopter was hired to fly along the transect lines at a constant speed of 70 miles per hour over 70 - 80 m above tree canopy. Two experienced nest observers counted the nests seen on either side of the helicopter and location their positions using a Garmin Map 62s GPS.

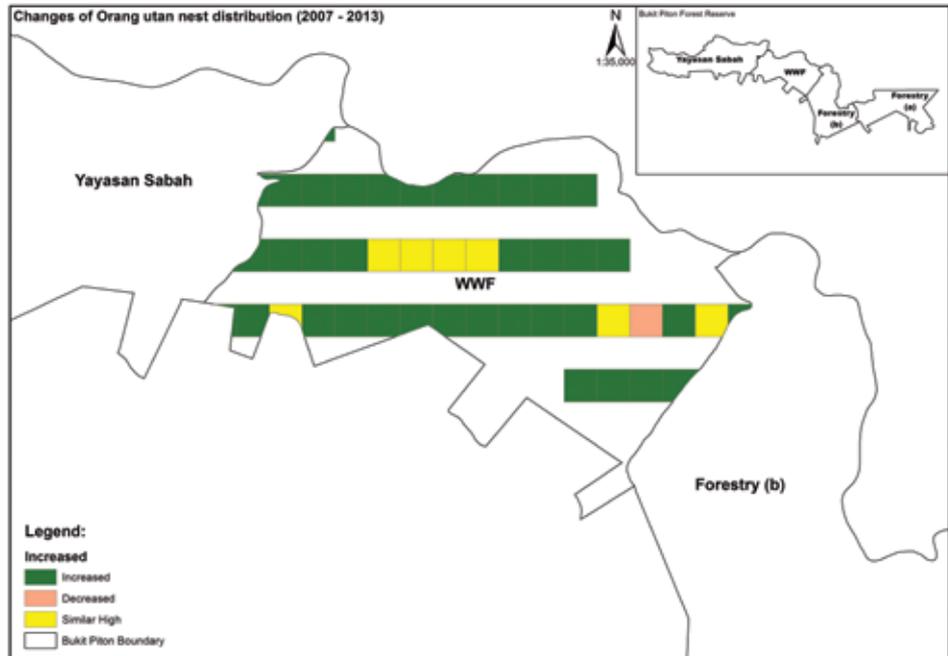


Photos 8 and 9: Counting orang-utan nest survey on either side of the helicopter.



Photo 10: The orang-utan research team - Middle Seen Kapis, Fredinand P. Lobinsiu (Reforestation Manager), Donna Simon, Captain Radhi and William Joseph

Results: Orang-utan nest distribution data from aerial surveys

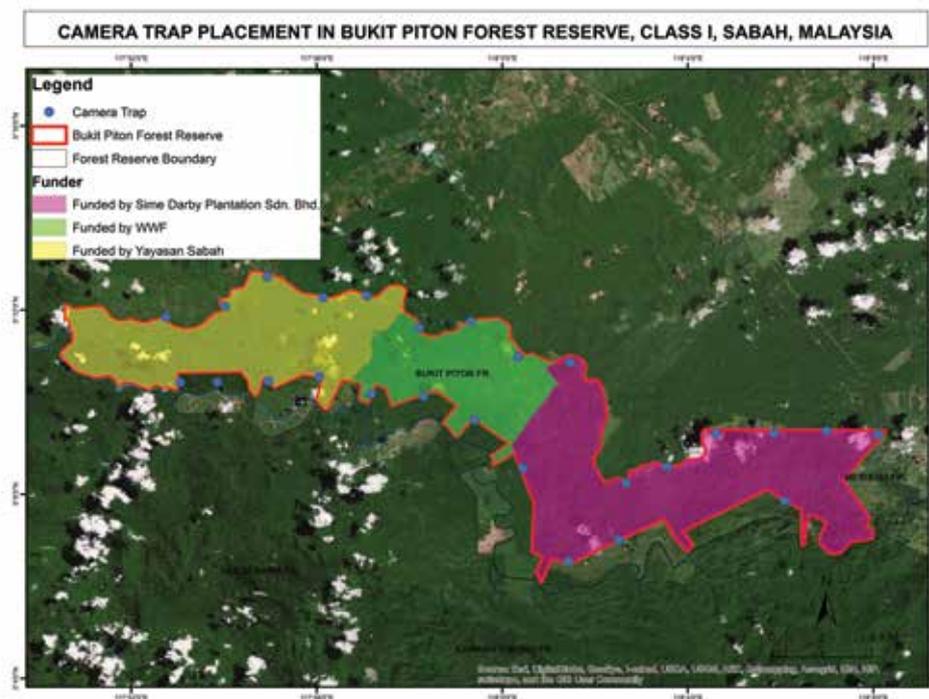


Map 4: Changes of orang-utan nest distribution for 2008 - 2013 in WWF-Malaysia restoration area

Orang-utan movements covered a larger area indicated by the nest count (Map 4). When logging was still active in Bukit Piton Forest Reserve, orang-utans tend to congregate in small isolated areas. In areas with less than five trees per 1km², more than one nest was found in a tree because the orang-utans had to share the few remaining trees for nesting. Even after logging had ceased, orang-utans could not extend their range of movements due to broken canopy cover. Trees planted in the WWF-Malaysia's restoration project made it possible for orang-utans to move to wider areas and provided them with larger foraging grounds.

Camera-trapping at Bukit Piton Forest Reserve boundary

Twenty six camera traps were deployed at the periphery of Bukit Piton from August 2011 until August 2012 to photograph the presence of free-ranging animals found at the forest edges bordering an oil palm plantation (Map 5).



Map 5: Camera trap deployment in Bukit Piton Forest Reserve

Results: Wildlife captured on camera traps

Fifteen types of animals were captured in camera including orang-utan, sun bear, sambar deer and crested fireback pheasant which are classified as vulnerable and near threatened by IUCN (Table 3). These animals can benefit from forest restoration activities.

No.	Common Name	Species Name	*Conservation Status
1	Orang-utan	<i>Pongo pygmaeus</i>	Endangered
2	Crested fireback (Aves)	<i>Lophura ignita</i>	Near threatened
3	Sambar deer	<i>Cervus unicolor</i>	Vulnerable
4	Sun bear	<i>Helarctos malayanus</i>	Vulnerable
5	Bearded pig	<i>Sus barbatus</i>	Vulnerable
6	Common palm civet	<i>Paradoxurus hermaphrodites</i>	Least concern
7	Leopard cat	<i>Felis bengalensis</i>	Least concern
8	Lesser mousedeer	<i>Tragulus kanchil</i>	Least concern
9	Malay civet	<i>Viverra zangalunga</i>	Least concern
10	Long-tailed macaque	<i>Macaca fascicularis</i>	Least concern
11	Pig-tailed macaque	<i>Macaca nemestrina</i>	Least concern
12	Thick-spined porcupine	<i>Thecurus crassispinis</i>	Least concern
13	Common porcupine	<i>Hystrix brachyura</i>	Least concern
14	Masked palm civet	<i>Paguma larvata</i>	Least concern
15	Emerald dove (Aves)	<i>Chalcophaps indica</i>	Least concern

*Classification under the IUCN Red List of Threatened Species. Version 2011.1.

Table 3: List of wildlife photographed at Bukit Piton Forest Reserve boundary

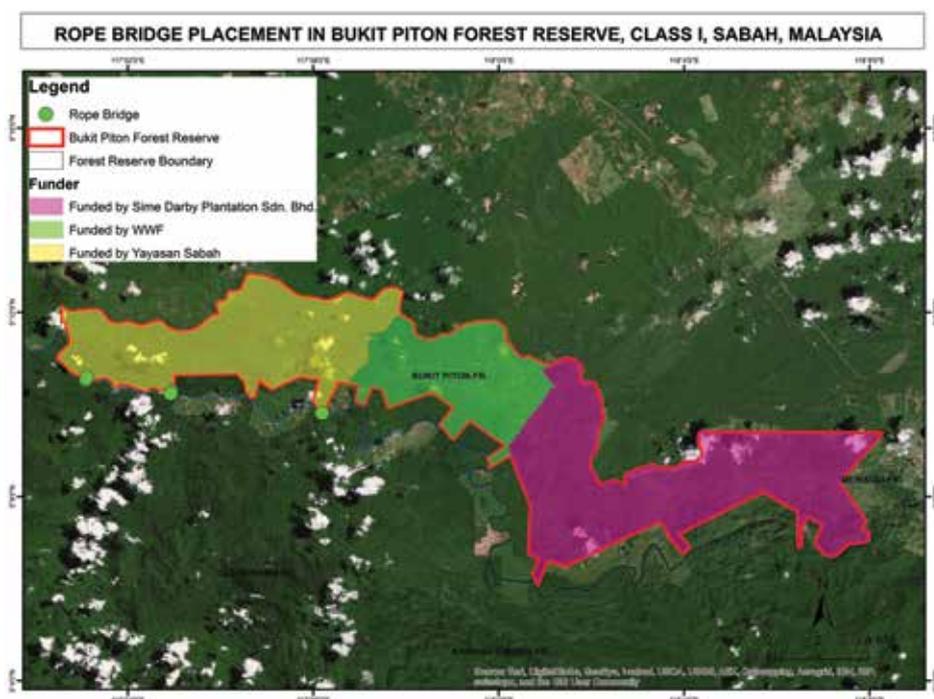


Photos 11 and 12: An orang-utan and a sun bear captured on camera traps while crossing the forest boundary

OTHER ACTIVITY: MONITORING USAGE OF ROPE-BRIDGES BY ORANG-UTAN IN ULU SEGAMA FOREST RESERVE, SABAH

In Sabah, extensive, indiscriminate logging and forest clearing for oil palm plantations have fragmented forest habitats and removed large riparian trees along river banks. The large trees were previously used as natural bridges by orang-utans to move across rivers. Connecting the fragmented habitats by restoring forests and providing natural bridges by replanting trees along river banks would be necessary for the long-term conservation of orang-utans.

As an immediate mitigation measure, three rope-bridges were constructed in 2013 across Segama River to provide connectivity for orang-utans in Bukit Piton Forest Reserve to the larger habitat in Ulu Segama Forest Reserve at the south of the Segama River (Map 6). Camera traps were set up on each side facing the rope bridges to monitor the usage of rope bridges by orang-utans or other wildlife.



Map 6: Locations of rope-bridges across Segama River (see Photo 13)



Photo 13: Oil palm plantations developed along Segama River in the southern border of Bukit Piton Forest Reserve



Photo 14: Orang-utan rope bridge constructed along Segama River to provide connectivity for orang-utan from Bukit Piton Forest Reserve to USM

Results: Information captured by camera traps at orang-utan rope bridge



Photo 15: A photo of orang-utan and a long-tailed macaque (*Macaca fascicularis*) captured by camera traps near the orang-utan rope bridge

During the monitoring period, no orang-utans were recorded using the rope bridges, although they did linger nearby. For unknown reasons the orang-utans refuse to use the rope bridges to travel to the other side of forest reserve. This shows that rope bridges may not be an effective way of providing connectivity for orang-utans in Bukit Piton Forest Reserve. This also means that forest restoration is more effective for orang-utan conservation especially for isolated populations.

Forest restoration and rehabilitation programme

Programme background



Photo 16: A degraded patch of forest in Bukit Piton Forest Reserve

WWF-Malaysia has identified 5 priority areas for forest restoration to reinstall habitat connectivity in Bukit Piton Forest Reserve. The identification of these priority areas is based on the following criteria:

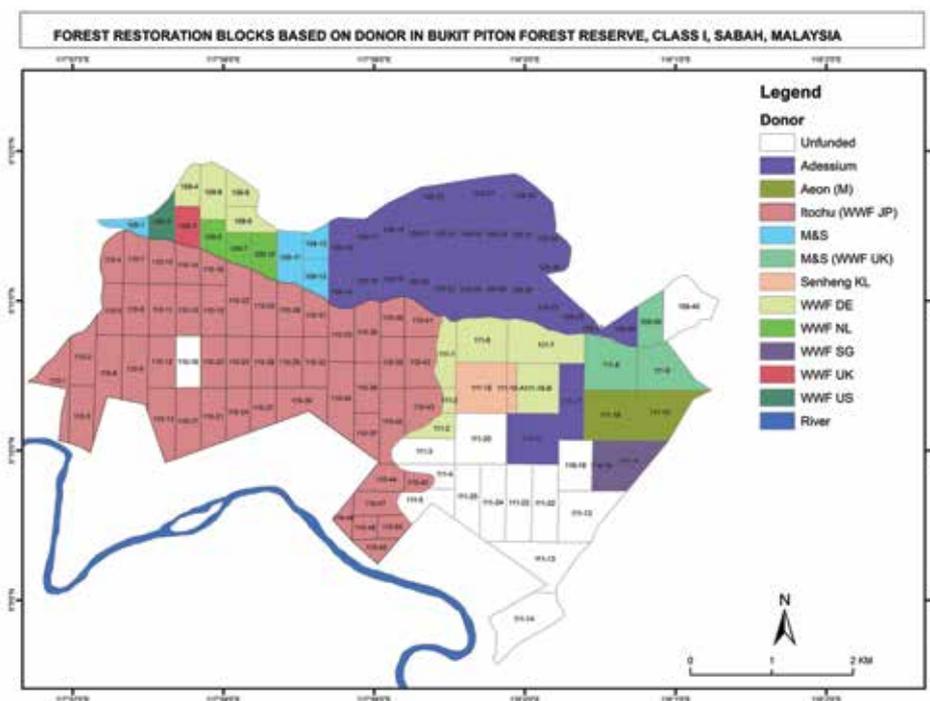
- Orang-utan density;
- Land capability classification;
- Terrain elevation;
- Forest type; and
- Status of the forest areas.

Identified priority areas should undergo a preliminary technical assessment and evaluation process, similar to NUS/Bukit Piton Forest Reserve as follows:

- Preliminary and secondary data collection on forest condition and orang-utan distribution, desktop study and background history of NUS/Bukit Piton Forest Reserve;
- Defining criteria and objectives of restoration;
- Site selection based on certain criteria/ parameters;
- Aerial survey to assess site condition;
- Ground truthing for site verification, and
- Final document write up and restoration plan for Bukit Piton Forest Reserve prepared by WWF-Malaysia and shared internally and externally such as SFD.

WWF-Malaysia collaborated with SFD in reforesting an area approximately 2,400 ha.

The identified project area consists of three compartments (109, 110 and 111) which have been divided into 99 blocks, ranging from 19 to 38 ha per block. As of March 2015, approximately 2,084 ha out of the total 2,400 ha are funded for restoration. This leaves a balance unfunded area of approximately 340 ha.



Map 7: Forest restoration blocks in Bukit Piton Forest Reserve by donors

The project was funded by various donors. In addition, WWF-Malaysia administers, manage, coordinate and monitor the project jointly with SFD. All costs are borne by the donor funds raised by WWF-Malaysia.

The restoration programme commenced in 2008, with a few pilot blocks (totalling 200.34 ha) funded by WWF-Netherlands, WWF-United Kingdom (Marks & Spencer), WWF-Germany, and WWF-United States.

Prior to starting the restoration project, WWF-Malaysia collaborated with SFD to draft and finalise a mutually-agreed Standard Operating Procedures (SOP) for forest restoration work which, besides specifying planting regime, also included an agreed Tree Planting List consisting of 70% dipterocarp, 20% pioneer and 10% orang-utan food/fruit tree species.

A Tender & Contract Award system was drawn up and agreed between WWF-Malaysia and SFD to invite tender applications from restoration contractors, with the winning tender requiring mutual approval from SFD and WWF-Malaysia.

Implementation

Implementation is divided into three main stages based on the agreed Planting Regime as stated in the SOP, which are:

Planting regime:	8 meters X 8 meters
Planting line interval:	8 meters



Photos 17 and 18: A planting site is cleared to make way for planting lines.

Stage 1	Line demarcation/preparation. Wooden stakes/poles with ribbons marking delineated eight x eight meter planting points;
Stage 2	Planting of tree seedlings at the designated planting point along each planting line; and
Stage 3	Maintenance work i.e., general weeding along each planting line and weeding around the base of the planted seedlings; initially scheduled for ten times over the span of two years after planting. This was later reduced to nine times with approval from SFD) as a time & cost-cutting measure.

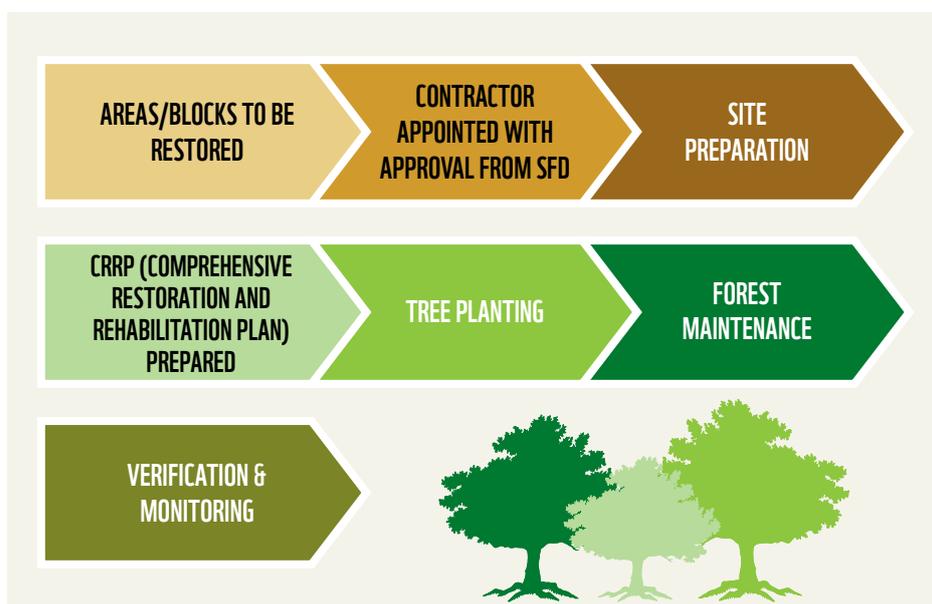


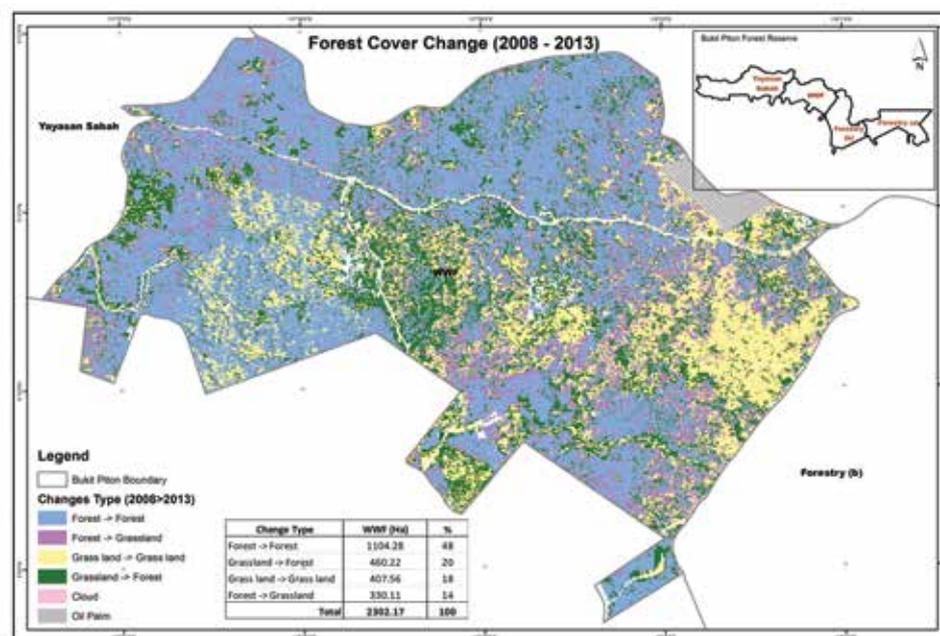
Figure 1: The flow of reforestation implementation

Current updates

The whole funded area of 2084 ha has been fully planted in September 2015 with approximately 465,000 trees with average of 88% survival rates and 12% mortality rates (census as of July 2015).

Out of 2084 ha planted, 2012 ha have been fully completed up until the last round maintenance, while, the remain 72 ha still undergone maintenance round, which were projected to be completed by February 2017.

OVERALL RESULTS AND OUTPUTS (2008-2013)



Map 8: Changes of forest cover between 2008 and 2013 in WWF-Malaysia's restoration area in Bukit Piton Forest Reserve Class I

Map 8 showed changes of forest cover in WWF-Malaysia restoration area, with a total of 1,564.5 ha (78% of total restoration area, i.e. 2,400 ha) yielding forest cover. This clearly shows the effectiveness and success of the restoration project in producing more forest cover in the period of 2008 - 2013. The project also contributed significantly to orang-utan conservation as the increase in canopy cover not only provides more suitable shelter but it also allows orang-utans to move easily from tree to tree to forage and to travel.



Photo 19: A nursery in Bukit Piton Forest Reserve



Photo 20: A sapling struggling to grow due to dry weather



Photo 21: Evidence of wildlife disturbance

CHALLENGES ON THE GROUND

- Limited supply sources for tree seedlings.
- With large planting areas, demand for tree seedlings by contractors has increased which affected the limited local supply and also increased the cost price for seedlings.
- Unpredictable localized weather patterns and conditions have hampered project implementation causing delays on the ground, e.g. extended periods of dry and/or wet weather does not allow continuation of groundwork, especially planting.
- Dry/hard packed soil in open areas due to dry weather is not conducive for planting young tree seedlings.
- Floods also prevent access to project areas.
- Wildlife disturbances on planted trees where young leaves/new sprouts are munched by sambar deer and trees are dug by wild boar are frequent causes of mortality for planted seedlings.
- No known mitigation measures for this particular problem. However, WWF-Malaysia, SFD and the tree planting contractors still looking on the best solution for this.

OVERALL CONCLUSIONS



Conservation efforts carried out in Bukit Piton Forest Reserve have led to a series of changes to the area in terms of protection status and a positive direct impact from the implementation of the reforestation work. The main success is the change of forest classification status from commercial forest (Class 2) to fully protected forest (Class 1) for Bukit Piton Forest Reserve which prohibits logging, extraction of any forest products or wildlife species dwelling within the area. The direct impact would be the eventual recovery of full forest canopy coverage, thus contributing to positive changes in orang-utan distributions, i.e., orang-utans have already started to move out from the pocketed 'refugee' centres to the expanding reforested areas. WWF-Malaysia's orang-utan research team have observed orang-utans using planted trees to nest, feed and travel.

THE FUTURE OF BUKIT PITON FOREST RESERVE

Restoration work in Bukit Piton Forest Reserve has faced a lot of challenges. However, it is the most significant conservation efforts towards orang-utan conservation as it directly improves their habitat. It is crucial to continue the restoration work in Bukit Piton and also replicate it in other crucial orang-utan habitats in Sabah. A long-term monitoring programme is also important to observe the progress of the forest restoration programme. This monitoring programme should include close observation of orang-utan behaviour as a result of adaptation to the new forest structure.

ANNEX: NEWS COVERAGE ON BUKIT PITON FOREST RESERVE



Green news: A volunteer planting a sapling at Bukit Piton Forest Reserve in Lahad Datu, Sabah, as part of the Plant A Tree programme by Senheng Electric. © GING SOON HAN/THE STAR

Senheng Electric managing director K.M. Lim Zing has hit to green the planet.



Tree seedlings were planted in neat rows at Bukit Piton Forest Reserve.

By CHRISTINE CHEAH
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LIVING in their little bubbles of comfort zone, many people hardly realise how our forests have gradually depleted through time. Last month, Google released a map highlighting the world's alarming rate of deforestation.

The global forest map showed Malaysia to have the highest rate of forest loss between 2000 and 2012 – at 14.6% which translates to 47,728sqkm of lost vegetation. Though reforestation efforts have been ongoing, they are still not enough to sustain the extensive decline of natural forests.

While Borneo was once known for its virgin forests and orang utans, it is not really the case anymore, especially for Sabah. Sabah Forestry Department senior research officer Dr Robert Ong said that an estimated 60% of Sabah's forests is reserved for timber production and the rest are conservation areas, which does not include the already deforested grounds for agriculture purposes.

"There were criticisms that we

Grow a forest

Reforestation effort in Sabah gets a helping hand from the corporate sector.

were putting efforts into logged forests and were not saving pristine forests, but reforestation efforts are important, too.

"It takes at least 50 years for a reforested area to resemble a naturally grown forest but in just five to six years, you would be able to see some impact," Ong said.

On the bright side, he added that reforestation was becoming a trend. "Protected areas have increased through the years and we are trying to convert production areas into protected areas."

The corporate sector has heeded the call to assist in reforestation efforts in Sabah, with the latest one being Senheng Electric, which

It's a great activity and we felt that it was worth spending a few hundred thousand on this three-year partnership.

— K.M. LIM

has vowed to reforest 48ha in North Ulu Segama, Lahad Datu. The area to be reforested is the Bukit Piton Forest Reserve, which is part of the Ulu Segama Mahua

Forest Reserve. Late last month, Senheng brought 20 people that included employees and guests to plant 200 tree seedlings in its Plant A Tree programme jointly conducted with World Wide Fund for Nature Malaysia (WWF).

"It's a great activity and we felt that it was worth spending a few hundred thousand on this three-year partnership to reforest the area," said Senheng managing director K.M. Lim.

They planted fruit trees which the orang utans feed on.

WWF forest restoration manager Ferdinand Lobonisa explained that seeds of trees that grow on the edge of the forest reserve were collected and planted in a nursery.

After six to 12 months, the seedlings were ready to be planted in the forest.

"There are a total of 30 species of trees planted here. There needs to be a variety of tall trees and short ones," said Lobonisa.

He explained that once the forest cover was established, it would attract orang utans and other species to colonise the space.

Bukit Piton was once home to many orang utans. In 1983, the Ulu Nenu drought left detrimental effects on the habitat – some 12,000ha was razed and it was left uncolonised.

In the last aerial and ground survey of 2006, it was found that the orang utan population in Bukit Piton was between 130 to 220.

The surrounding areas of the forest are now oil palm plantations. Hence, most of the surviving orang utans are now isolated in the northern region of the Ulu Segama Mahua Forest Reserve.

With extensive reforestation efforts by WWF, Senheng and other parties, hopefully in a few years time, orang utans will return to where they once call home.

The Star
 30 December 2013

Border orangutan protection urged

From Page One

"We call on companies to adopt the Orangutan Transboundary Action Plan where orangutans occur in these protected areas which are next to their logging concession areas," he said.

He pointed out that better protection of orangutans can benefit other flora and fauna species in those areas. "Our study shows that 70 per cent of orangutan population in Betung Kerihun National Park in West Kalimantan is located in transboundary areas, bordering with Malaysia's Lanjak Entimau Wildlife Sanctuary," said WWF-Indonesia CEO, Dr. Efransjah.

"This highlights the importance of collaboration between the two countries in protecting the species". In Kalimantan, more than 70 per cent of orangutans live outside protected areas, including in forest concessions, giving a challenge for them to survive, he said.

Therefore, participation of businesses for management of wildlife habitat in their concession areas, is vital to ensure orangutans' protection.

"WWF-Indonesia has been working with concessions owners in Kalimantan to help them protect the orangutan on their lands by developing and implementing orangutan management plans.

"The concessions cover 300,000 hectares, which is over a third of orangutan priority area in the Arut Belantikan orangutan landscape in Kalimantan," he said.

Through WWF facilitation, one of the concessions, PT Suka Jaya Makmur, located in Ketapang, West Kalimantan managed to integrate management plan between production forest and Orangutan conservation, and therefore received globally accepted FSC certification.

This is the first time in Indonesia that a forestry company has developed such plan for orangutan and reaching gold standard sustainable practices.

Generally, the Bornean orangutan is listed on Appendix I of CITES which means the species is threatened with extinction. The great apes face threats in the form of conversion of forests for agriculture, mining and settlement, which reduced their habitat by at least 55 per cent over the past 20 years. They also face threats from forest fires and demand for young orangutans in the pet trade.

In 2004, it is estimated that there are about 54,000 orangutans in Borneo, distributed across lowland tropical rainforests in Indonesia and Malaysia.

Head of Indonesia's Heart of Borneo National Working Group, Dr. Prabianto Mukti Wibowo, said the government of Indonesia is committed in conservation and

sustainable development of the HoB.

To ensure delivery of HoB vision, including tackling deforestation and biodiversity conservation, he said it is pivotal to restore deforested critical areas and ensure connectivity of wildlife corridors for biodiversity, while at the same time promote sustainable management of timber production forests and also sustainable palm oil.

Thus, participation of private sectors and local communities in the area are key factors. "This vision will showcase real implementation of green economy thinking, in which business operates without harming endangered species."

Borneo is unique as it has three distinct populations or subspecies of Orangutans: *Pongo pygmaeus pygmaeus* (northwest populations), *Pongo pygmaeus morio* (northeast and east populations) and *Pongo pygmaeus wurmbii* (southwest populations). Forest Department Sarawak Director, Sapuan Ahmad, said currently research is still done by various organisations on orangutan and other species in the HoB and surrounding areas.

"The department's main concerns are sustainable forest management, ecotourism-based on culture, adventure and nature, conservation of biological diversity, sustainable agriculture and land use and community-based rural poverty eradication programme."

In view of the importance of the area, the department will monitor all programmes carried out to ensure that these are in line with the stated policy of sustainable management and conservation of habitat, he said. WWF-Malaysia commended concerted conservation efforts made by Sabah State Government which resulted in orangutan coming back to the area.

The Sabah Forestry Department Director, Datuk Sa'm Mannan, said together with WWF-Malaysia, they carried out reforestation of degraded orangutan habitat in an area of about 2,400 hectares in Bukit Piton Forest Reserve since 2005.

Bukit Piton Forest Reserve was critically degraded due to logging and forest fire in the past, with a small orangutan population of 170 to 300 between 2007 and 2008.

However, restoration work showed a positive impact when records of orangutan seen nesting, feeding and travelling on planted trees were recorded.

Orangutan surveys in North Ulu Segama, Malua and Sungai Bole have provided input to scientific arguments for establishing wildlife corridors in Malua-Deramakot and Ulu Kalumpang-Ulu Segama, sites within the HoB that will further protect orangutan habitats, he said.

Orang utan make comeback

Tree-planting in logged forest by WWF-Malaysia attracts great apes

By PATRICK LEE
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PETALING JAYA: Ten years ago, a heavily-logged forest in central Sabah was nearly empty of its original dwellers, the orang utan.

The tall trees that once dotted the Ulu Segama-Malua forest range had been wiped off by loggers, leaving the area with bushes and only a few small trees.

Today, the great apes are coming back, thanks to WWF-Malaysia, which has been planting trees in an area a quarter of the size of Petaling Jaya.

"After so many years of logging, Sabah's forests had become badly degraded ... The quality of forest wasn't good enough to support the orang utan.

"Now we're seeing nests in areas where there were none," WWF-Malaysia chief executive Datuk Dr Dionysus Sharma told *The Star*.

He said orang utan were less likely to breed if the forests were in a poor state, with little food to eat or if there were any disturbances like logging.

Orang utan are also solitary animals with females having one baby every five to six years, he said.

Dr Sharma hoped that by having a more complete forest, the great apes would return. This, he said, was done by putting in fruit trees and other plant species.

There are only about 53,000 to



Natural habitat: A mother orang utan with her baby hanging from the branch of a tree that was planted at the Ulu Segama-Malua forest range, now known as the Bukit Piton Forest Reserve.

60,000 orang utan left in all of Borneo, one of only two places worldwide where they exist.

The island was home to 300,000 orang utan in 1900. Many died because of logging and over-development.

After nearly a decade of replanting, WWF's work there led the state government to turn 2,400ha of the

jungle into a Class One forest reserve, meaning it cannot be logged. It was even given a new name, and is now known as the Bukit Piton Forest Reserve.

However, some 300ha of forest still needs to be replanted with more new trees.

"It is back-breaking work and also expensive," said Dr Sharma.

Some RM8mil was spent to reforest the first batch of 2,100ha and RM2mil is needed for work that will go on until 2017.

Dr Sharma said he was confident that the orang utan would once again nest in this part of Sabah.

For more information on how to help fund the effort, visit www.simplygiving.com/50for50.

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Sabah to restore 200,000ha of degraded forests

KOTA KINABALU: Sabah is targeting to restore some 200,000ha of degraded forests – an area almost seven times the size of Penang island – within a decade.

Describing the target as a modest one, state Forestry Department director Datuk Sam Mannan said about a quarter of it had been achieved at the Ulu Segama-Malua

forest reserve in Sabah's east coast.

He said about 60,000ha of degraded jungles had been replanted with native tree species, making Ulu Segama-Malua the world's largest rehabilitated dipterocarp forest in the world.

It was recovered from the ravages of uncontrolled logging, forest fires and encroachment.

Mannan added that determination and political will were needed to achieve the target.

The Sabah government phased out logging activities in 2007 and seven years later, nearly 243,000ha of forests were classified as totally protected areas.

Restoration of Ulu Segama-Malua began earlier in March 2006 with

the primary aim of protecting the vital habitat for orang utan.

The restoration was also aimed at protecting the buffer zones for the pristine Danum Valley conservation area.

The Ulu Segama-Malua area is home to some 3,500 to 4,000 orang utan, which make up 30% of the state's orang utan population.

The restoration efforts appeared to have borne fruit, based on frequent sighting of orang utan nesting areas in previously degraded forests at Bukit Piton, in northern Ulu Segama, Mannan said.

He said work to restore another 10,000ha of degraded forests would begin soon, thanks to RM50mil funding from the palm oil sector.

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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.

www.panda.org

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About WWF-Malaysia

WWF-Malaysia (World Wide Fund for Nature-Malaysia) was established in Malaysia in 1972. It currently runs more than 90 projects covering a diverse range of environmental conservation and protection work, from saving endangered species such as tigers and turtles, to protecting our highland forests, rivers and seas. The national conservation organization also undertakes environmental education and advocacy work to achieve its conservation goals. Its mission is to stop the degradation of the earth's natural environment and to build a future in which humans live in harmony with nature, by conserving the nation's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

About WWF-Japan

Established in 1971, WWF-Japan has now about 43,000 individual supporters and 420 corporate supporters. WWF-Japan works on various conservation projects both nationally and internationally that Japan has significant humanity's impacts on.