A vibrant photograph of a dense tropical forest. A multi-colored rainbow is visible in the upper half of the image, arching over the tree canopy. The forest is composed of various shades of green, with some taller trees visible in the background.

Heart of Borneo

My home

My island

My future

If you live on the island of Borneo, this booklet is clearly intended for you. Your home is on this island: your future, and that of your children and grandchildren to come, is bound up with the management and wise exploitation of the island's stunningly rich resources.

If your home is elsewhere, can the title of this little book refer to you? It certainly does, as your home is on this planet Earth, and what happens to the tropical rainforests of the world affects us all – our climate, our health and the infinite possibilities of new benefits from the bio-diversity of these pristine* environments. The study of what has happened in Borneo and attention paid to how its future will unfold, will bring us all better understanding of the contrasting treatment of the planet's resources. Will they be stolen and consumed by the greedy? Or preserved, investigated, understood by the wise, and exploited non-destructively for the benefit of us all?*

*Here, then, is a brief introduction to the **Heart of Borneo** initiative between the governments of Brunei Darussalam, Indonesia and Malaysia to conserve a large contiguous* area in the centre of the island from further depredation* by logging, burning and monocultural* plantations. Let us discover why such an initiative is vital and consider how we can support it.*

There are many resources to further your knowledge of Borneo. This booklet refers to some of the publications of World Wide Fund for Nature (WWF) and certain pages on its websites.

The abbreviations used in the footnotes are:

BLW Borneo's Lost World
BBS Biodiscoveries - Borneo's Botanical Secret
BTI Borneo - Treasure Island at Risk
WEB www.panda.org

This booklet is based on information from World Wide Fund for Nature publications and its websites. Permission was granted for the use of WWF photographs from www.panda.org.

Vocabulary Help

bio-diversity - many different types of plants and animals
pristine - unharmed, original and natural
contiguous - joined together
depredation - damage and destruction
monocultural - having just one type of plant (e.g. oil palm)

Heart of Borneo

Now or Never

The governments of Brunei Darussalam, Indonesia and Malaysia have recognised that the critical state of the forest requires urgent attention to protect and manage it, before the damage becomes irreversible.

400 square metres every second

*The sense of urgency comes from seeing the Borneo forest disappearing so quickly. Between 2000 and 2002 the forest shrank at the rate of 1,300,000 hectares per year. This is 400 square metres, about **the size of two school classrooms**, every second. In the time you take to read this single page, an area the size of a large school would have been destroyed.*

No Borders

The cooperation of the three governments was necessary to permit the continued natural development of plant and animal species that know no borders. Many lessons have been learned from the results of land use that has divided the forest into small patches. Some of these effects are discussed in these pages.

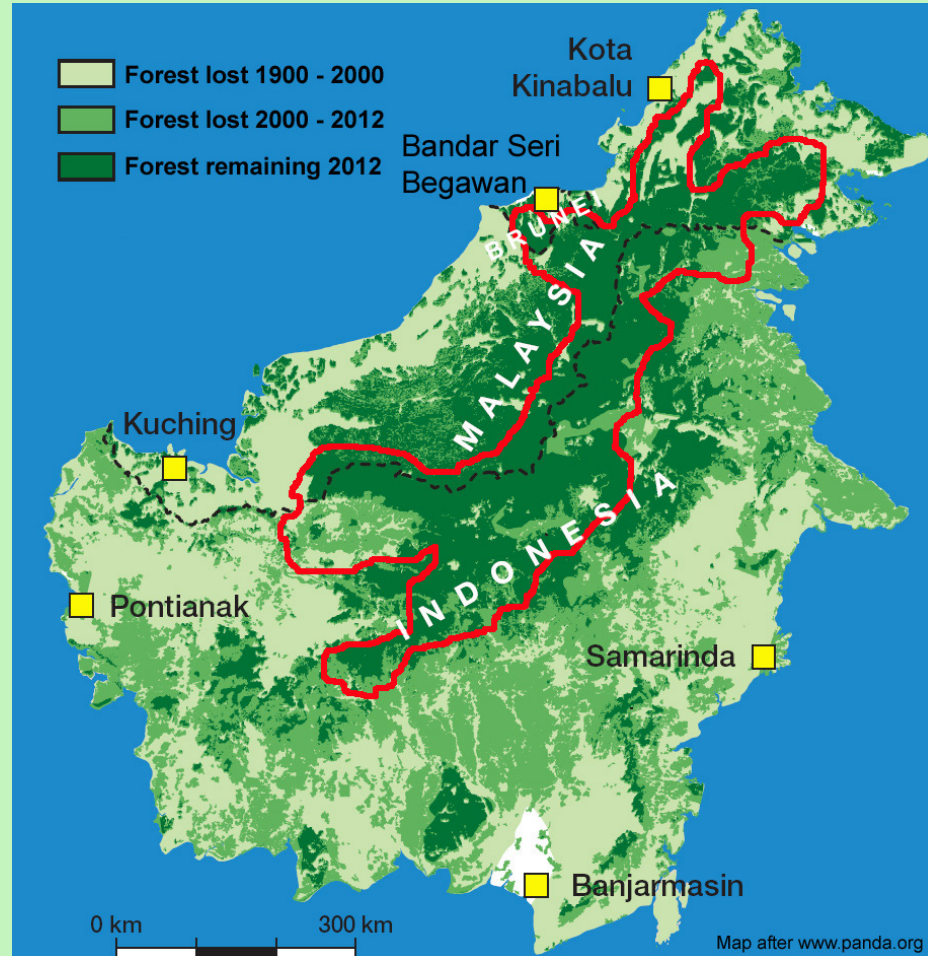
Precious habitat

The Borneo forest is the habitat of 15,000 types of flowering plants, 3,000 species of trees, 210 mammal species, and is home to people who speak no less than 220 different languages or dialects. The lives of all are affected as the forest is destroyed.

400 square metres every second

The map shows in light green how much of the forest was likely to be lost by 2012, if things continued as they were. Since it shows the changes since 2000, a lot of this has, of course, already gone.

Heart of Borneo The line in red gives an idea of the major remaining unspoiled areas - the heartland where, through international co-operation, Borneo's heritage can be protected.



Work it out!

A football field is 100 x 50 metres. How many football fields would have been cleared of trees in five minutes in 2002? Ans p5

Precious Habitat

Borneo's rainforest is full of unique and wonderful plant and animal life

Different Species Found	Germany	Netherlands	UK	BORNEO
Plants	2683	1221	1623	15000
Birds	247	192	229	620
Mammals	76	55	50	221

Compared with other parts of the world, the **range of species** is astounding. More are discovered each year. Between 1994 and 2004, scientists found 361 new species¹. In 2006 alone, another 52 species were found including 30 unique fishes, two tree frogs, 16 ginger species, three trees and one large-leaved plant². The **diversity is the highest in the world**: in Lambir Hills, Sarawak, researchers counted 1175 different species of trees in one 52 hectare plot³.

Many special animals live on Borneo: the **orang-utan**, **Sumatran rhinoceros**, **clouded leopard**, **Borneo pygmy elephant**, **proboscis monkey**, **flying lemur**, **gibbon**, **tarsier** and **slow loris**. Laws are in place to protect them and CITES* regulations do not allow them to be traded. But on the third largest island in the world, the thieves are hard to control.

Tropical forests are increasingly found to hide **plants with special medical properties** - to cure life-threatening diseases⁴. This scientific work requires the forest to be protected too.

The Heart of Borneo forests are also vital because they are the source of most of the **island's major rivers** and provide life sustaining freshwater and other ecosystem services not only for the environment, but for the food and water security of the nations that live on the island⁵.

CITES = Convention on International Trade in Endangered Species of Wild Fauna and Flora

1 BLW p4 2 BLW p7 3 WEB 4 BBS p14 5 WEB



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Now or Never

The plants and animals are being destroyed at an increasing rate

It is a paradox that while new species are discovered, others are facing **extinction**. It is mostly the large mammals and some tree species that are endangered. But even insects suffer.*

The danger comes from two sources: loss of forest trees and illegal trade in wildlife. Unfortunately, in Borneo, these two activities have grown together. Roads are created to allow trees to be transported out and these permit easy and fast access to poachers, especially to areas which otherwise would be very hard to reach. They take elephants, rhinos, orang-utans, sun-bears and clouded leopards - all of them endangered. Some of the animals are cut up to sell body parts or skins, others are sold into miserable lives as pets.*

Trees are cut down for their valuable wood and to make way for plantations. Both of these activities divide the remaining forest into small patches - too small for the large mammals to find food and mates. And every new forest edge is a new place for the drying heat of the sun, creating soil conditions unacceptable to trees used to deep forest.

The scientists studying these conditions predicted that by 2012 there would be no lowland forest left¹ - and of course no habitat for the wildlife. Urgent action is needed.*

Vocabulary Help

paradox - situation which seems unlikely, but is true
poachers - people who capture wild animals illegally
predicted - told of future events

1 BTI p7

Answer from p3: an area the size of 24 football fields in just five minutes!

Endangered Species

Some plants and animals may disappear in the wild within our lifetime. These are some species from Borneo that are on the danger list.

Rajah's Pitcher Plant
Rothschild's Slipper Orchid
Sander's Slipper Orchid
Price's Rafflesia
Banteng or Tembadau
Bornean Marbled Bay Cat
Otter-civet
Bornean Tree Shrew

Asian Elephant
Borneo Rhinoceros
Spiny Terrapin
Proboscis Monkey
Orang-utan
Asian Arowana (Golden Dragon Fish)
Storm's Stork
Spotted Greenshank



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What can you do?

We should not pretend ignorance now we know there is a problem. Animals and plants are stolen and sold. Don't become part of the problem by carelessly becoming a buyer. You can learn what is endangered and protected. You can share your knowledge with friends and family. Don't let it happen in our lifetime!

*Get pictures of endangered species from: www.iucnredlist.org
Get information about illegal sales from: www.traffic.org*



© Peter Boyce

What happens when parts of the forest are cleared?

Most soil in Borneo is very infertile. When the forest is felled and the land scraped clear, nothing can grow. The richness of life in the forest comes only from the dying vegetation. It is a true cycle of life. Break the cycle, and that area cannot support life at all.

Most forest animals like to hide and lead private lives. What happens when the leafy cover and shady habitat is cut down? How can they travel from place to place to find their food? The normal life of larger animals involves constant migration as the food stocks of an area become exhausted.



The mix of so many plants and trees means many thousands of different food sources for the thousands of creatures living here. Mammals, birds, plants, insects, amphibians, reptiles, all depend upon each other, creating a unique habitat we humans are only beginning to understand. This involves mutual protection, pollination, seed dispersal, breaking down wastes for re-use and many other services, besides just being food for one another!

The People of the Forest



Groups of families also live in the forest. Their lives too are disrupted when farming, forestry or business interests build roads, cut down trees and change the living environment they have enjoyed for generations.

Those of us who live in cities may not appreciate their lifestyle and may even be frightened to live where they do. But the more we realise the need to preserve our environment, the more the knowledge and experience of these families grow in importance. **These are the guides for the scientists and, in the future, for the tourists. They are a rich source of information about the medicinal use of plants and understand the habits of animals.**

Time for Research

Do you know anything about the Kayan, the Kenyah, the Kelabit, the Iban, the Bidayuh, the Barito, the Dusun, the Kadazan, the Murut, the Penan?

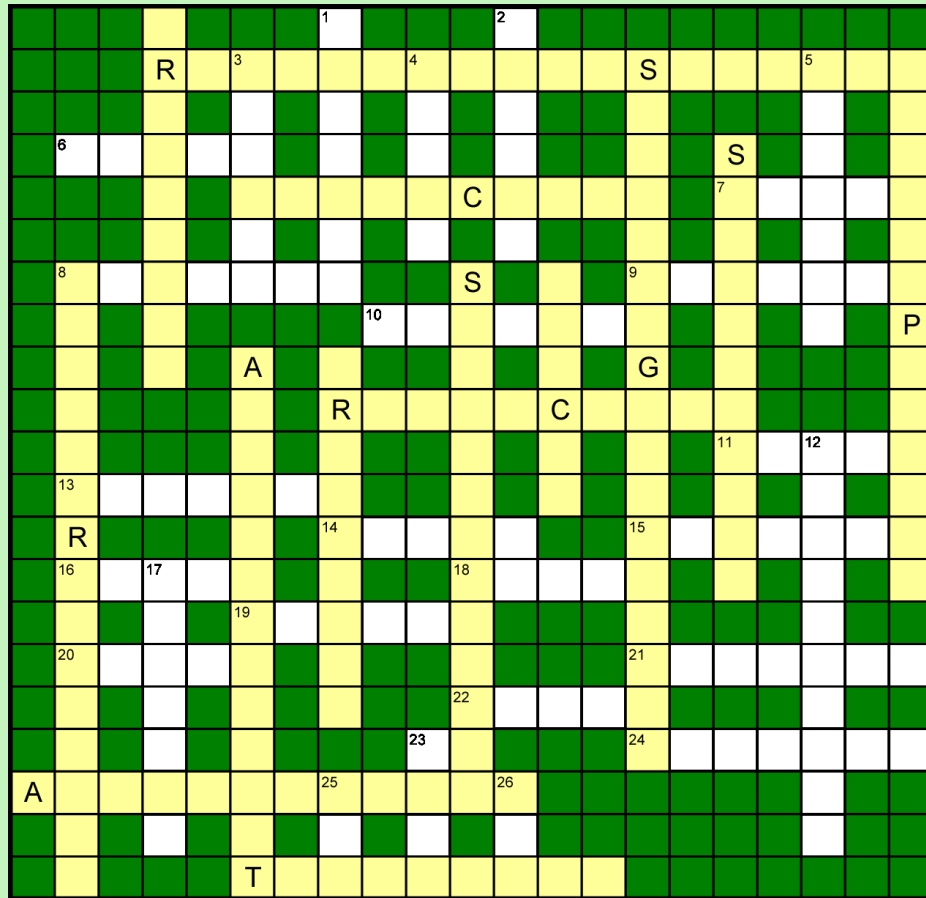
If you live on Borneo, you may recognise the **value of tourism** as an alternative industry that increases the value of traditional ways of life, just as it can earn income from untouched forest!

To encourage people to come to Borneo, you could **research** and **learn** about all aspects of the island which foreign visitors find special and interesting. **Build yourself a future!**

You can find a basic outline of these peoples in BTI pages 27-33. Maybe your teacher can organise communication between students from town and students from the interior of the island.

Endangered Species Crossword

Words using white areas have clues below. All the words for the yellow areas are endangered species from the list on page six. There are some letters provided for these to help you!



ACROSS

- 6 River of Rome
- 7 Prefix for four
- 8 To keep hands in
- 9 Makes angry
- 10 Clap
- 11 Subject
- 13 Support life
- 14 Colour of forest
- 15 Care for
- 16 Crisp fruit

- 18 Surfaces for driving
- 19 Mail
- 20 Sign of fire
- 21 Not professional
- 22 Seafood with legs
- 23 Irrational number
- 24 Bringing death

For solution, go to:
<http://heartofborneo.cfbt.org>

DOWN

- 1 Large farms
- 2 Peaceful
- 3 King's seat
- 4 Pump in a body
- 5 Money for mail
- 12 Stealing
- 17 Flat land
- 23 Animal feet
- 25 Singular number
- 26 What we breathe

My Home, My Island, My Future

The economies of Indonesian and Malaysian Borneo rely on trees. Palm oil and timber are valuable trading commodities and can contribute to the wealth and well-being of developing nations. The Heart of Borneo initiative protects key areas of forest without interfering in this valuable economic activity.

Oil palm has the highest yield of all edible oils, so in this sense is an efficient user of land. It is predicted to become the leading oil in the world in ten years' time. Already it accounts for 23% of world production and 51% of global trade in edible oil with Malaysia and Indonesia producing 84% of that in 2002.¹

Timber plantations on Borneo are expected to achieve three things: grow hardwood for building and woodworking;

grow fuel wood for energy and charcoal;

grow quick-growing trees for pulp, paper and rayon

In fact the timber industry is not yet well developed, as land-clearing produces high value timber that has taken hundreds of years to grow, and tree planting activities are a long term investment.²

The **Heart of Borneo** initiative gathers the precious untouched parts of the island into one continuous corridor, with one goal - to preserve it for the future. This does not mean the area will become unproductive for the peoples of Borneo. On the contrary, the National Parks can be managed for tourists. Those with local knowledge become invaluable as guides and teachers. And the pharmaceutical and other scientific discoveries that emerge from the rainforests will bring financial benefits.

On Borneo, like the best of home-owners, three neighbours will cooperate to manage the land on their boundaries for the sake of the rainforest and all its natural bounty. The treasure of this island is a gift to the World.

What can I do?

Treat the planet Earth as your home - as you treat your own home. After all, it is not merely OUR home, but the future home of our children, grandchildren, great-grandchildren.....

Even if you don't live on Borneo, you can help by spreading the word about the Heart of Borneo initiative. Why not write to your newspaper, local or central government to show your support and encourage wider participation?

1 BTI p44 2 BTI p 46



This booklet was originated by the British High Commission Brunei Darussalam and produced and printed with their kind support. Special thanks are due to Peter Boyce, the author and designer, and to WWF for permission to use their material throughout.