

## **Article #1: 'The Sumatran rainforest will mostly disappear within 20 years'**

By John Vidal; Sun 26 May 2013; The Observer

In only a few years, logging and agribusiness have cut Indonesia's vast rainforest by half. The government has renewed a moratorium on deforestation but it may already be too late for the endangered animals – and for the people whose lives lie in ruin.

Our small plane had been flying low over Sumatra for three hours but all we had seen was an industrial landscape of palm and acacia trees stretching 30 miles in every direction. A haze of blue smoke from newly cleared land drifted eastward over giant plantations. Long drainage canals dug through equatorial swamps dissected the land. The only sign of life was excavators loading trees on to barges to take to pulp mills.

The end is in sight for the great forests of Sumatra and Borneo and the animals and people who depend on them. Thirty years ago the world's third- and sixth-largest islands were full of tigers, elephants, rhinos, orangutan and exotic birds and plants but in a frenzy of development they have been trashed in a single generation by global agribusiness and pulp and paper industries.

Their plantations supply Britain and the world with toilet paper, biofuels and vegetable oil to make everyday foods such as margarine, cream cheese and chocolate, but distraught scientists and environmental groups this week warn that one of the 21st century's greatest ecological disasters is rapidly unfolding.

Official figures show more than half of Indonesia's rainforest, the third-largest swath in the world, has been felled in a few years and permission has been granted to convert up to 70% of what remains into palm or acacia plantations. The government last week renewed a moratorium on the felling of rainforest, but nearly a million hectares are still being cut each year and the last pristine areas, in provinces such as Aceh and Papua, are now prime targets for giant logging, palm and mining companies.

The toll on wildlife across an area nearly the size of Europe is vast, say scientists who warn that many of Indonesia's species could be extinct in the wild within 20-30 years. Orangutan numbers are in precipitous decline, only 250-400 tigers remain and fewer than 100 rhino are left in the forests, said the International Union for Conservation of Nature.

Millions of hectares are nominally protected, but the forest is fragmented, national parks are surrounded by plantations, illegal loggers work with impunity and corruption is rife in government. "This is the fastest, most comprehensive transformation of an entire landscape that has ever taken place anywhere in the world including the Amazon. If it continues at this rate all that will be left in 20 years is a few fragmented areas of natural forest surrounded by huge manmade plantations. There will be increased floods, fires and droughts but no animals," said Yuyun Indradi, political forest campaigner with Greenpeace south-east Asia in Jakarta.

Last night the WWF's chief Asian tiger expert pleaded with the Indonesian government and the world to stop the growth of palm oil plantations. "Forest conversion is massive. We urgently need stronger commitment from the government and massive support from the people. We cannot tolerate any further conversion of natural forests," said Sunarto Sunarto in Jakarta.

Indonesia's deforestation has been accompanied by rising violence, say watchdog groups. Last year, more than 600 major land conflicts were recorded in the palm plantations. Many turned violent as communities that had lost their traditional forest fought multinational companies and security forces. More than 5,000 human rights abuses were recorded, with 22 deaths and hundreds of injuries.

"The legacy of deforestation has been conflict, increased poverty, migration to the cities and the erosion of habitat for animals. As the forests come down, social conflicts are exploding everywhere," said Abetnego Tarigan, director of Walhi, Indonesia's largest environment group.

Scientists fear that the end of the forest could come quickly. Conflict-wracked Aceh, which bore the brunt of the tsunami in 2004, will lose more than half its trees if a new government plan to change the land use is pushed through. A single Canadian mining company is seeking to exploit 1.77m hectares for mining, logging and palm plantations.

Large areas of central Sumatra and Kalimantan are being felled as coal, copper and gold mining companies move in. Millions of hectares of forest in west Papua are expected to be converted to palm plantations. "Papuan, some of the poorest citizens in Indonesia, are being utterly exploited in legally questionable oil palm land deals that provide huge financial opportunities for international investors at the expense of the people and forests of West Papua," said Jago Wadley, a forest campaigner with the Environment Investigation Agency. Despite a commitment last week from the government to extend a moratorium on deforestation for two years, Indonesia is still cutting down its forests faster than any other country. Loopholes in the law mean the moratorium only covers new licenses and primary forests, and excludes key peatland areas and existing concessions which are tiger and elephant habitats. "No one seems able to stop the destruction," said Greenpeace International's forest spokesman, Phil Aikman.

The conflicts often arise when companies are granted dubious logging or plantation permissions that overlap with community-managed traditional forests and protected areas such as national parks.

Nine villages have been in conflict with the giant paper company April, which has permission to convert, with others, 450,000 hectares of deep peat forests on the Kampar Peninsula in central Sumatra. Because the area contains as much as 1.5bn tons of carbon, it has global importance in the fight against climate change.

"We would die for this [forest] if necessary. This is a matter of life and death. The forest is our life. We depend on it when we want to build our houses or boats. We protect it. The permits were handed out illegally, but now we have no option but to work for the companies or hire ourselves out for pitiful wages," said one village leader from Teluk Meranti who feared to give his name.

They accuse corrupt local officials of illegally grabbing their land. April, which strongly denies involvement in corruption, last week announced plans to work with London-based Flora and Fauna International to restore 20,000 hectares of degraded forest land.

Fifty miles away, near the town of Rengit, villagers watched in horror last year when their community forest was burned down – they suspect by people in the pay of a large palm oil company. "Life is terrible now. We are ruined. We used to get resin, wood, timber, fuel from the forest. Now we have no option but to work for the palm oil company. The company beat us. The fire was deliberate. This forest was everything for us. We used it as our supermarket, building store, chemist shop and fuel supplier for generations of people. Now we must put plastic on our roofs," said one man from the village of Bayesjaya who also asked not to be named.

Mursyi Ali, from the village of Kuala Cenaku in the province of Riau, has spent 10 years fighting oil plantation companies which were awarded a giant concession. "Maybe 35,000 people have been impacted by their plantations. Everyone is very upset. People have died in protests. I have not accepted defeat yet. These conflicts are going on everywhere. Before the companies came we had a lot of natural resources, like honey, rattan, fish, shrimps and wood," he said.

"We had all we wanted. That all went when the companies came. Everything that we depended on went. Deforestation has led to pollution and health problems. We are all poorer now. I blame the companies and the government, but most of all the government," he continued. He pleaded with the company: "Please resolve this problem and give us back the 4,100 hectares of land. We would die for this if necessary. This is a life or death," he says.

Greenpeace and other groups accuse the giant pulp and palm companies of trashing tens of thousands of hectares of rainforest a year but the companies respond that they are the forest defenders and without them the ecological devastation would be worse. "There has been a rampant escalation of the denuding of the landscape but it is mostly by migrant labor and palm oil growers. Poverty and illegal logging along with migrant labor have caused the deforestation," said April's spokesman, David Goodwin.

"What April does is not deforestation. In establishing acacia plantations in already-disturbed forest areas, it is contributing strongly to reforestation. Last year April planted more than 100 million trees. Deforestation happens because of highly organized illegal logging, slash-and-burn practices by migrant labor, unregulated timber operations. There has been an explosion of palm oil concessions."

The company would not reveal how much rainforest it and its suppliers fell each year but internal papers seen by the Observer show that it planned to deforest 60,000 hectares of rainforest in 2012 but postponed this pending the moratorium. It admits that it has a concession of 20,000 hectares of forest that it has permission to fell and that it takes up to one-third of its timber from "mixed tropical hardwood" for its giant pulp and paper mill near Penabaru in Riau.

There are some signs of hope. The heat is now on other large palm oil and paper companies after Asia Pulp and Paper (APP), one of the world's largest such companies, was persuaded this year by international and local Indonesian groups to end all rainforest deforestation and to rely solely on its plantations for its wood.

The company, which admits to having felled hundreds of thousands of acres of Sumatran forest in the last 20 years, had been embarrassed and financially hurt when other global firms including Adidas, Kraft, Mattel, Hasbro, Nestlé, Carrefour, Staples and Unilever dropped products made by APP that had been made with rainforest timber.

"We thought that if we adopted national laws to protect the forest that this would be enough. But it clearly was not. We realized something was not right and that we needed a much higher standard. So now we will stop the deforestation, whatever the cost. We are now convinced that the long-term benefits will be greater," said Aida Greenbury, APP's sustainability director. "Yes. We got it wrong. We could not have done worse.

## **Article #2:**

### **Amazon's doomed species set to pay deforestation's 'extinction debt'**

**Ian Sample, science correspondent; 12 Jul 2012 The Observer**

Ending forest clearance would not save some species from the effects of decades of destruction, scientists find.)

White-cheeked spider monkeys are endangered largely because of the expansion of farmland and road building (see photo in article link).

The destruction of great swaths of the Brazilian Amazon has turned scores of rare species into the walking dead, doomed to disappear even if deforestation were halted in the region overnight, according to a new study. Forest clearing in Brazil has already claimed casualties, but the animals lost to date in the rainforest region are just one-fifth of those that will slowly die out as the full impact of the loss of habitat takes its toll. In parts of the eastern and southern Amazon, 30 years of concerted deforestation have shrunk viable living and breeding territories enough to condemn 38 species to regional extinction in coming years, including 10 mammal, 20 bird and eight amphibian species, scientists found.

The systematic clearance of trees from the Amazon forces wildlife into ever-smaller patches of ground.

Though few species are killed off directly in forest clearances, many face a slower death sentence as their breeding rates fall and competition for food becomes more intense.

Scientists at Imperial College, London, reached the bleak conclusion after creating a statistical model to calculate the Brazilian Amazon's "extinction debt", or the number of species headed for extinction as a result of past deforestation. The model draws on historical deforestation rates and animal populations in 50 by 50 kilometre squares of land.

It stops short of naming the species most at risk, but field workers in the region have drawn attention to scores of creatures struggling to cope with habitat destruction and other environmental threats.

White-cheeked spider monkeys, which feed on fruits high in the forest canopy, are endangered largely because of the expansion of farmland and road building. The population of Brazilian bare-faced tamarins has halved in 18 years, or three generations, as cities, agriculture and cattle ranching has pushed into the rainforest. The endangered giant otter, found in the slow-moving rivers and swamps of the Amazon, faces water pollution from agricultural runoff and mining operations in the area. Writing in the journal *Science*, Robert Ewers and his co-authors reconstructed extinction rates from 1970 to 2008, and then forecast future extinction debts under four different scenarios, ranging from "business as usual" to a "strong reduction" in forest clearance, which required deforestation to slow down 80% by 2020.

"For now, the problem is along the arc of deforestation in the south and east where there is a long history of forest loss. But that is going to move in the future. We expect most of the species there to go extinct, and we'll pick up more extinction debt along the big, paved highways which are now cutting into the heart of the Amazon," Ewers told the Guardian from Belém, northern Brazil.

Under the "business as usual" scenario, where around 62 sq miles (160 sqkm) of forest are cleared each year, at least 15 mammal, 30 bird and 10 amphibian species were expected to die out locally by 2050, from around half of the Amazon. Under the most optimistic scenario, which requires cattle ranchers and soy farmers to comply with Brazilian environmental laws, the extinction debt could be held close to 38 species.

Ewers said the model reveals hotspots in the Brazilian Amazon where conservation efforts should be focused on the most vulnerable wildlife. "This shows us where we are likely to have high concentrations of species which are all in trouble, and that becomes a way for directing our conservation efforts. We are talking about an extinction debt. Those species are still alive, so we

have an opportunity to get in there and restore the habitat to avoid paying that debt," Ewers said.

The Brazilian Amazon is home to 40% of the world's tropical forest and one of the most biodiverse regions on the planet. About 54% of the area is under environmental protection, and in the past five years, stricter controls and better compliance have driven deforestation rates down to a historical low.

The trend towards less deforestation might not last though. Under pressure from the financial crisis, the Brazilian government has proposed a rapid development program in the Amazon to fuel the economy. The move foresees the construction of more than 20 hydroelectric power plants in the Amazon basin and an extensive push into the rainforest.

Environmentalists are further concerned about an overhaul to Brazil's Forest Code, which is widely expected to weaken the protection of the rainforest, and potentially speed up deforestation once more, according to an accompanying article in *Science* by Thiago Rangel, an ecologist at the Federal University of Goiás in Brazil. "Extinction debts in the Brazilian Amazon are one debt that should be defaulted on," he writes.

Reducing the rate that extinction debts build up is not enough to preserve the Amazon's biodiversity, Rangel argues. "The existing debt may eventually lead to the loss of species. To prevent species extinctions, it is necessary to take advantage of the window of opportunity for forest regeneration. Restored or regenerated forests initially show lower native species richness than the original forests they replaced, but they gradually recover species richness, composition and vital ecosystems functions, reducing extinction debt and mitigating local species loss," he writes.