

The Amazon's silent crisis

The Amazon rainforest is the world's largest tract of intact forest and is home to over 24 million people in Brazil alone,¹ including hundreds of thousands of indigenous people.² The forest is essential to their survival, providing food, shelter and medicines, as well as playing an important role in their spiritual life of many. It is also the habitat of an estimated quarter of all known land or freshwater species, including the jaguar, the pink river dolphin and several species of sloth. In fact, the Amazon Basin is one of the richest places on the planet with regard to flora and fauna. It supports approximately 40,000 plant species, 427 mammals, 1,294 birds,

378 reptiles, 426 amphibians and some 3,000 species of fish.³

The Amazon Basin covers an area of approximately 6.5 million km² in nine South American countries, making up 5% of the Earth's surface. It is home to the largest river system on the planet, containing about one-fifth of the world's total volume of fresh water.⁴ Some 63% of the Amazon Basin (4.1 million km²) is inside Brazil's borders. To date some 700,000km² of Brazil's Amazon forest has been deforested – equivalent to more than twice the area of Poland.⁵ Some 18% of the Brazilian Amazon forest has been lost within the past three decades.⁶



One of Ceser Busnello's estates in Pará State. Approved 'Sustainable Forest Management Plans' for Amazon forest can be misused to launder illegal timber. 03/28/2014
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Ipê, also known as Brazilian Walnut or Lapacho, on sale at Lumber Liquidators, the USA's largest national speciality hardwood flooring retailer. 05/07/2014
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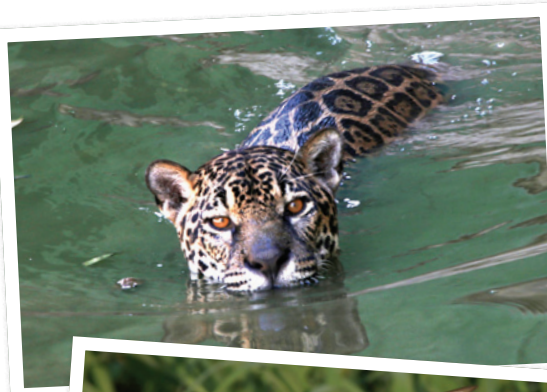


The Amazon and the climate

As well as its incredible biological richness, the Amazon plays an essential role in helping to control the entire planet's atmospheric carbon levels. Its trees take up huge amounts of carbon dioxide from the air, helping to offset greenhouse gas emissions caused by human activity. The Amazon Basin is a vast carbon store, containing approximately 100 billion tonnes of carbon⁷ – over 10 times the global annual emissions from fossil fuel.⁸

However, deforestation not only reduces the amount of carbon the forest can store, but also leads to emissions of greenhouse gases as cleared vegetation decays or is burnt to prepare the land for agriculture. It also leaves the remaining forest fragmented and vulnerable to further deforestation, commercial exploitation, invasive species and the impacts of climate change, such as drought-induced fire. The more vulnerable a forest is to climate change, the greater the danger of its remaining carbon stocks being lost to the atmosphere. Deforestation therefore increases the risk of runaway climate change.

As climate change impacts are felt, there are concerns that the Amazon forest may reach a 'tipping point' in which it undergoes a rapid transition to savannah. The 2014 Intergovernmental Panel on Climate Change assessment⁹ reported that the probability of reaching this tipping point was increased by the combination of climate change and fragmentation acting together. Such a dramatic change would in turn lead to disastrous losses both of biodiversity and of vital ecosystem services currently provided by the forest, such as provision of clean water and climate regulation.



Amazon biodiversity: a Jaguar swimming; a young Wattled Jacana on a Giant Waterlily leaf; a Squirrel Monkey.

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Predatory logging for high-value species degrades intact forest and opens it up to wholesale clearance for ranching and cash crop agriculture.

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Selective logging and fragmentation

Besides actual deforestation (clear-felling), selective logging is an important agent of forest fragmentation and degradation of the forest's ecological integrity. It is well documented that the selective logging of mahogany trees in intact primary Amazonian forest was a key driver of the fragmentation process until trade was strictly controlled in 2003 by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which has substantially reduced the scale of the problem.¹⁰ Mahogany logging was the first step in a forest colonisation process involving slash-and-burn agriculture. Colonists advanced along roads built by logging companies, deforesting areas alongside the roads and converting them to arable land and cattle ranches which broke up the continuity of the forest.¹¹

Even though the trade in mahogany has been curbed, selective logging remains a massive problem in the Amazon, with similar consequences. If left unchecked, forest fragmentation will ultimately lead to the disappearance of whole tracts of forest. One of the main drivers of fragmentation today is the demand for high-value species such as Ipê.¹²



Unsawn log
price (domestic):
**US\$169.5 per
cubic metre**

Sawn timber price
(domestic): **US\$859
per cubic metre**

Sawn timber price (export,
FOB Belém/Paranagua
Ports): **US\$1,294 per
cubic metre**

Added value product
– decking boards
(FOB Belém/Paranaguá):
**US\$ 2,330 per
cubic metre¹⁹**

Ipê, also known as Brazilian Walnut or Lapacho, is the most valuable Brazilian tropical timber, and among the most expensive globally. By the time it is exported as decking boards, it is worth 13 times its value as newly felled timber.
09/16/2013

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Ipê – the new mahogany

The group of species known as Ipê (**Handroanthus spp.**¹³) have been described as the ‘new mahogany’. Just like mahogany, they are highly prized, sought-after timber trees, and loggers are willing to go deep into intact primary forest in search of them.¹⁴ Ipê species form large canopy trees that display brilliant pink, yellow or white flowers in August and September – distinguishing them from the rest of the canopy at that time. They yield a valuable timber, known for its durability, strength and natural resistance to decay. Ipê growing in the Amazon has a low population density, with an average of one tree per 10 hectares.¹⁵ This means that large areas of forest need to be opened up to access these valuable trees.

Ironically, Ipê is best known as a tree planted in many Brazilian cities. Ipê is an integral part of Brazilian indigenous history, with various species being used by indigenous peoples for their hunting bows. Ipê bark is widely reputed to have medicinal properties, and is used by the traditional and herbal medicine industries as a remedy for cancer, ulcers, arthritis and fungal infections, among others.¹⁶

Ipê wood (also referred to as Brazilian Walnut or Lapacho) is now the construction industry’s top choice for commercial and residential decking, and is often portrayed as a green option as it does not require weatherproofing or pesticidal treatment

with toxic chemicals. In the DIY market, Ipê is sold as decking and flooring. In the United States, Ipê has been used for many piers, boardwalks and bridges in New Jersey, California, New York (including the Brooklyn Bridge) and elsewhere. In Europe Ipê has been used for decking at iconic sites including the World Trade Centre in Geneva, the Antwerp Law Courts in Belgium and the National Library in Paris (Bibliothèque François Mitterrand). In Europe Ipê has been used for decking at iconic sites including Geneva’s World Trade Centre, the Antwerp Law Courts (Gerechtsgebouw Antwerpen) and Paris’ National Library (Bibliothèque François Mitterrand). In Brazil, Ipê timber is found in many cities, and was recently used for flooring in the library of the Presidential Palace.

Even leaving aside the impact of illegal logging, Ipê species are at risk of serious over-harvesting. Logging companies are permitted to fell 90% of commercial-sized adults, with a second cut permitted after 35 years. However, it has been estimated that after an initial 90% felling it would take at least 60 years for commercial volumes of one species (**H. impetiginosus**) to recover to pre-harvest levels.¹⁷

Ipê is the most valuable Brazilian tropical timber, and among the most expensive globally. While the volumes of Ipê harvested and exported have declined in recent years, the price continues to increase – driving loggers ever deeper into the forest in search of it.

Timber from the Brazilian Amazon



Under pressure from vested interests, the Brazilian government has recently relaxed rules on deforestation and has limited the capacity of the federal environmental agencies that enforce those rules. Accordingly, while annual deforestation rates in the Brazilian Amazon had fallen in recent years, between August 2012 and July 2013 deforestation actually increased by 28% compared with the previous year.²⁰

The states with the largest increase in deforestation by area, Mato Grosso and Pará, also have the highest levels of illegal logging. Pará state is the largest timber producer and exporter in

the Brazilian Amazon,²¹ yet between August 2011 and July 2012 an estimated 78% of logging (by area) in the state was illegal.²² Similar analysis of Mato Grosso, the second-largest producer and exporter,²³ shows that over the same period 54% of the total logged area was logged illegally.²⁴

This illegal logging is fuelled by a lack of governance in public areas, indigenous lands and other protected and community lands; a lack of inspection and enforcement capacity on the part of local authorities; high demand for timber, including high-value species; and illegal deforestation for agriculture (with illegal timber as a by-product).

Governance of the timber sector in the Brazilian Amazon is weak and open to exploitation. Studies have demonstrated vast discrepancies between volumes of timber harvested and the quantities actually authorised. The national system for approval of forest management plans is structurally flawed, as is the chain-of-custody system, leading to systemic crime in the logging sector. Large amounts of illegal timber enter national and international timber markets after being laundered using genuine documents obtained by fraudulent means [see 'The 5 ways to launder illegal timber' - [hyperlink](#)].

According to the Brazilian Institute of Environment and Renewable Natural Resources (**Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis – IBAMA**), the federal environmental agency responsible (alongside state environmental secretariats) for monitoring and inspecting the Amazon timber industry, in Maranhão and Pará states alone almost 500,000m³ of timber had fraudulent documents in 2013 – enough to fill 14,000 trucks.²⁵ Given the magnitude of the fraud and corruption, there is no question that official documents issued in Brazil to certify the legality of timber are largely unreliable and cannot alone be considered as evidence of legality.



Left: Trucks loaded with timber near Santarém in Pará State. In 2011–12 nearly 80% of the area logged in the state was illegal.
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Right: A timber yard and sawmill in Marituba, Pará State.
04/01/2014
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A different path is necessary

The timber industry in the Brazilian Amazon is currently a key driver of forest degradation and a catalyst for deforestation. Logging, particularly for valuable timber species including Ipê, is the first phase in the deforestation cycle, drives colonisation of once remote intact forest areas, and is a major source of greenhouse gas emissions. In addition to environmental damage and biodiversity loss, it also leads to social conflict when timber is taken from public or indigenous lands and other conservation areas without community knowledge or in defiance of community wishes. Furthermore, illegal logging is characterised by appalling working conditions, often using slave labour, and is accompanied by violence, death threats and sometimes even assassinations of those who oppose it.

A different way of approaching the forest and those whose livelihoods depend on forest products is not only possible, but absolutely necessary. Investment and capacity building need to be focused on giving communities the skills to undertake quality community forest management. The Brazilian government must strengthen the regulation of timber harvesting, and the enforcement of regulations. Command and control measures and monitoring systems should be transparent and able to operate in real time so that communities, civil society and other stakeholders can be sure that those harvesting timber are complying with rigorous government regulations. Such changes will give those purchasing Amazon timber greater reassurance that it is not linked to forest destruction and social conflict. Protecting the Amazon and creating a sustainable and fair development plan for the region could generate opportunities for forest-dependent peoples, at the same time as preserving the region's rich biodiversity and safeguarding its important role in the fight against climate change.



Logging trucks driving through forest in Uruará, Pará. In Maranhão and Pará states alone almost 500,000m³ of timber had fraudulent documents in 2013 – enough to fill 14,000 trucks like these. 03/29/2014

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