

Facts and figures

Definitions of “Amazon”



Source: J.C. Riveros – WWF Peru

1. The **Amazon biome**: the area covered predominantly by dense moist tropical forest, but with several other kinds of vegetation (savannas, floodplain forests, grasslands, swamps, etc.). Unless otherwise noted, WWF refers to the Amazon Biome when the terms “Amazon”, “Amazon region” or “Pan-Amazon” are used.
2. The **Amazon basin**: the area drained by the Amazon River and its tributaries. Also referred to as the Amazon hydrographic basin or Amazon watershed.
3. The **Political Amazon**: is defined by the Amazon Cooperation Treaty Organization (OTCA is the acronym in Spanish and Portuguese).
4. **Brazil’s “Legal Amazon”** (Amazônia Legal): the area designated by the Brazilian federal government in 1953 as the official extent of the Amazon within Brazil, covering around 5.2 million km², comprising 60% of the Brazilian territory.

1 through 3 are outlined on the map above.

Size

Amazon basin: 6.74 million km².

Amazon biome: 6.70 million km²; spans the borders of eight countries: Brazil, Bolivia, Peru, Colombia, Ecuador, Guyana, Suriname, Venezuela, plus the French Overseas Territory of Guiana.

The Amazon biome and the basin together cover an area around 8 million km².



Distribution of area by country

| Countries | Basin | Biome |
|---------------|-------|-------|
| Bolivia | 10.6% | 6.6% |
| Brazil | 67.0% | 60.1% |
| Colombia | 5.1% | 7.3% |
| Ecuador | 1.9% | 1.8% |
| French Guiana | 0% | 1.2% |
| Guyana | 0.2% | 3.2% |
| Peru | 14.3% | 11.8% |
| Suriname | 0% | 2.1% |
| Venezuela | 0.8% | 5.9% |

The Amazon biome

If the Amazon biome were a country, it would be the seventh largest in the world.

Percentages of the different vegetation types in the Amazon biome

| Vegetation type | % of total biome |
|--|------------------|
| Tropical evergreen forest | 79.9% |
| Antropic (agriculture, pastures & plantations) | 6.8% |
| Savanna | 4.0% |
| Flooded & swamp forest | 3.9% |
| Deciduous forest | 1.4% |
| Water bodies | 1.2% |
| Others | 2.8% |
| TOTAL | 100.0% |



There are 56 ecoregions¹ in the Amazon. Among the 36 that are terrestrial ecoregions we can find the following major types:

- Moist Forests
- Montane Forests
- Swamp forests
- Flooded forests/varzeas
- Savannas/grasslands

Among the 20 freshwater ecoregions we can find the following major types:

- Large Rivers
- Small rivers and streams
- River deltas/estuaries
- River headwaters/piedmont
- Large and small lakes
- Swamps
- Flooded savannas

The Amazon rainforest represents over 40% of the remaining tropical forests in the world.

The Amazon Basin

- Covering an area of 6.74 million km², the Amazon River basin is the largest in the world.
- The Amazon River is by far the world's largest river in terms of volume of water discharged into the sea. Its average discharge of approximately 219,000m³/s represents 15-16% of the world's total river discharge into the oceans.
- The Amazon River system is formed by approximately 1,100 tributaries. The main tributaries are the Madeira, Negro, Xingu, Tapajós, Purus, Marañón, Ucayali, Caquetá-Japurá, Juruá, Putumayo, Trombetas, and Napo.
- The Amazon River has its source in the Andes and discharges into the Atlantic Ocean. The brown waters of the Amazon River can be seen as far as 100km out to sea from the mainland.
- The total length of the Amazon River is a matter of debate, because it is difficult to measure the distance along meandering courses and because of different measuring methodologies applied so far. However it is estimated to be between 6,500 and 6,800km. The longest tributary is the Madeira River (over 3,350km).

¹ - Ecoregions are large areas of relatively uniform climate that harbour a characteristic set of species and ecological communities.



- The Amazon basin contains the largest number of freshwater fish species in the world, estimated at more than 3,000. One of the largest scaled freshwater fishes in the world is found in the Amazon River - *Arapaima gigas*, called the pirarucu in Portuguese and paiche in Spanish, which can reach nearly 2.5m in length.

Species

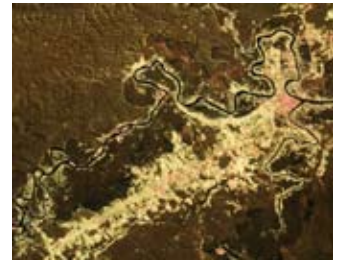
It is estimated that there are roughly 12.5 million species on the planet, and that the Amazon is home to a tenth of that. The number of species cited below are those that have been scientifically classified to date:

- 40,000 plant species
 - 427 mammals
 - 1,300 birds
 - 378 reptiles
 - more than 400 amphibians
 - over 100,000 invertebrate species in Brazil alone have been described by scientists.
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- Mammals include the pink and the gray river dolphin, the manatee, jaguar, puma, giant otter, peccary, tapir, capybara, sloth, and many primates.
 - The largest river turtle and caiman in South America are found in the Amazon.
 - Bird species include the harpy eagle and macaws.

People

- Around 30 million people live in the Amazon (17 million in Brazil), including more than 2.7 million indigenous people.
- Number of indigenous groups in the Amazon
 - >220 in Brazil
 - 59 in Peru
 - 33 in Bolivia
 - 10 in Ecuador
- Number of indigenous languages in use in the Amazon
 - 180 in Brazil
 - 52 in Colombia
 - 33 in Bolivia
 - 17 in Venezuela

- In the Brazilian Amazon Portuguese is spoken by at least 97% of the population, whilst in other Amazonian countries a large number of speakers of Native American languages can be found, though Spanish predominates.
- Outside the major cities, most people in the Amazon region exist on fishing, hunting, gathering, and subsistence agriculture.
- In Manaus a duty-free zone was created by the Brazilian government in the 1970s to bring light industries, mostly electronics, to the region.



Problems and threats

- It is generally agreed that 78-80% of the original Amazon forest still stands.
- Percentage of the original Brazilian Amazon biome lost: 17.1%. Another 17% could be degraded, especially by selective logging.
- In Brazil, from 2002 to 2007, on average over 52km² (or >6,500 football fields) of the Amazon were deforested every day.
- The recovery of a forest, which once recovered will be a secondary forest, requires on average 10-12 years to consolidate with mature species. Some areas with higher biodiversity can take 25 years (within secondary forests, some species with a lifetime of 100 years or more need at least 25 years to mature).
- Threats
 - Cattle ranching and agriculture
 - Logging – legal and illegal
 - Infrastructure - roads, waterways, power lines, and dams
 - Mining
 - Resettlement
 - Oil and gas extraction
 - Over-exploitation of fisheries
 - Expansion of urban centers
 - Wildlife trade – mainly birds (alive or for feathers), reptiles (for their skins), and mammals (especially primates)
 - Fire – both natural and human-induced
 - Climate change
 - Water contamination by sewage, agrochemicals, hydrocarbons, and mining effluents
 - Invasive species



Highlights

- The deforestation of tropical forests is responsible for up to 20% of global CO₂ emissions, the main greenhouse gas.
- The USA has consistently been the largest importer of mahogany, followed by the EU (UK being the largest importer within the EU) and, more recently, the Dominican Republic. Big-leaf mahogany is classified as “vulnerable” on the IUCN Red List 2002 and has been listed on Appendix II of CITES since 2002.
- Amongst all tropical forests, the Amazon has the highest chance of success in terms of conservation, considering not only the area currently preserved, but also the organized social movements and the potential for efficient governance.

About WWF's work

WWF promotes biodiversity conservation and the sustainable use of natural resources in the Amazon.

WWF work includes landscape-wide research and scientific analyses, supporting protected area establishment and management effectiveness, capacity-building, policy development and reform, environmental education, and creation of alternative sources of income for local communities.

Amazon Region Protected Areas (ARPA) is a program led by the government of Brazil, implemented in partnership with the Brazilian Biodiversity Fund (FUNBIO), the German Development Bank (KfW), the Global Environment Facility (GEF), the World Bank and WWF. ARPA is a 10-year effort aimed at bringing 12% – 50 million hectares or 500,000 km² – of the Brazilian Amazon under protection and establishing a US\$ 240 million trust fund to finance the effective management of the protected areas in perpetuity. It was announced by the Brazilian government in 2002, with implementation beginning in 2003.



Results

Protected Areas

- On February 28th, 2007, the Amazonian Park was created in French Guiana, with a core area of 20,000km² and a potential free-membership area to be defined, but not exceeding 13,000km². The park will link up with other protected areas in neighboring Brazil, including the Tumucumaque Mountains National Park, Grão-Pará Station, and the recently declared Maicuru Reserve. Together, this cross-border protected areas network totals more than 120,000km², making it the world's largest expanse of tropical forest under conservation. WWF-France has supported the creation of this park, which will help preserve the habitat of endangered species such as the jaguar and the harpy eagle.
- In Brazil, by the end of 2006, ARPA had created over 235,000km² of new parks and reserves, among them the Tumucumaque Mountains National Park, with 38,800km², roughly the size of Switzerland.
- Also through its partnership in ARPA, WWF supported a major step forward in 2005: two new protected areas were created in the Terra do Meio, located in the heart of the Amazon. Totalling over 38,000km², these new protected areas added critical pieces of a mosaic of contiguous protected areas, reserves, and indigenous territories that are helping to break the runaway deforestation and land tenure conflicts of the region.
- With the support of WWF, in June 2006 the Juruena National Park was established in the Brazilian Amazon. A WWF expedition into the 19,000km² park discovered new species of birds, mammals, primates, reptiles, fish, and amphibians.
- In Peru, WWF's first major initiative helped lead to the creation of Manu National Park, home to nearly 10% of all bird species on Earth.
- In March 2005, the Peruvian government created one of the largest combined indigenous reserves and protected areas in the world, in the Alto Purus area. WWF, which had worked to establish the 27,000km² Alto Purus National Park and Communal Reserve (nearly the size of Belgium), hailed the

announcement as a major step in protecting biodiversity while respecting the rights of indigenous communities.

Sustainable Use

- Through the efforts of WWF and a Peruvian non-governmental organization, the Association for Integrated Research and Development (AIDER), five Shipibo-Konibo communities living along the Ucayali River in the Peruvian Amazon now manage their own forests. They harvest the trees and market the lumber following a long-term plan that will sustain the forest and maintain its variety of species. The 35,000 hectares of rainforest belonging to these communities obtained Forest Stewardship Council (FSC) certification in November 2005. This was the first forest in Peru to achieve the FSC label certifying that the forest's managers adhere to strict environmental and social standards.
- The Brazilian Institute of Environment and Renewable Natural Resources, Ibama, has recognized new fishing agreements, giving them force of law. The agreements were established by communities with WWF's financial and technical support to guarantee the sustainable use of the fishing resources in fluvial lakes across the Amazon.
- A study conducted in the floodplains of Santarém (Pará, Brazil) showed that lakes with functioning fishing agreements were on average 60% more productive than lakes without such agreements. As a result, fishermen's average income increased 25%. Income was also increased by the introduction of shrimp fishing, sustainable agriculture and cattle ranching, and stingless bee breeding.



All images have been supplied by WWF-Canon Photo Database. André BÄRTSCH, Mark EDWARDS, Diego M. GARCÉS, Michel GUNTHER, Zig KOCH, Roger LE GUEN, Oliver PHILIPPS, Y.-J. REY-MILLET.

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