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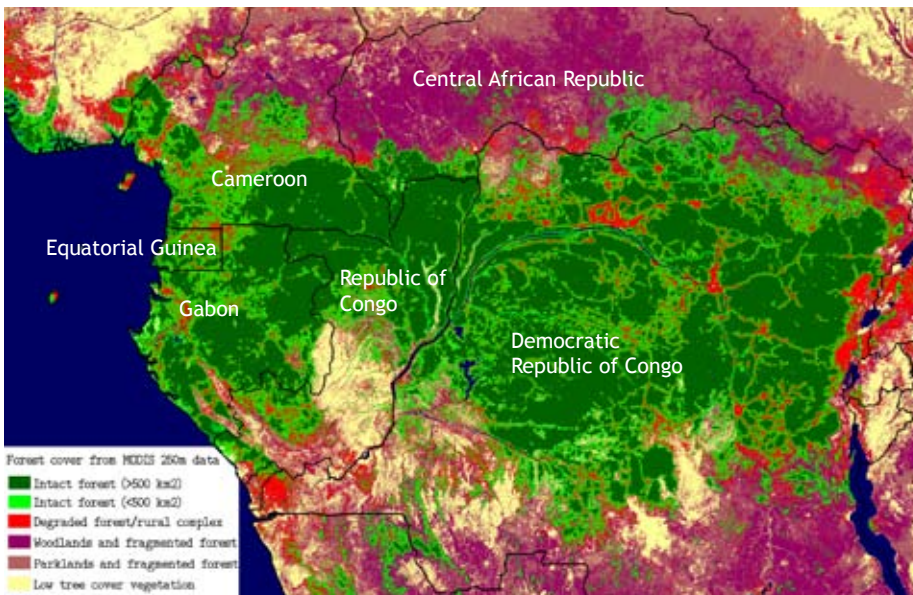
Congo Basin Forests

Forest Area Key Facts & Carbon Emissions from Deforestation

Forest location and brief

description

The Congo Basin forests of Central Africa cover a massive expanse of over 180 million hectares, spreading across the Democratic Republic of Congo (DRC), most of Congo-Brazzaville, the southeastern reaches of Cameroon, southern Central African Republic (CAR), Gabon and Equatorial Guinea. The region comprises 10 per cent of the world's remaining tropical rain and moist forests and forms the second largest block of rainforest in the world, after the Amazon.



South Dakota State University, University of Maryland and USAID CARPE project

An incredibly diverse range of forests is found here, including evergreen rainforest, semi-deciduous forest, evergreen montane and sub-montane forests, swamps and inundated forests.

Unique qualities of forest area

The Congo River Basin forests are globally outstanding, harbouring one of the richest concentration of the world's biodiversity. The

- The Congo Basin forests are estimated to contain between 25-30 billion tonnes of carbon. This is roughly equal to 4 years of current global anthropogenic carbon dioxide emissions.
- Over half of the carbon is stored within the forests of the Democratic Republic of Congo, making it the fourth largest forest carbon reservoir of any country in the world.
- Protecting an additional 1% of forests in Central Africa would preserve 230 million tonnes of carbon, or about a third of the UK's annual greenhouse gas emissions, and which in today's carbon market is worth more than USD 500 million.



region supports the world's largest populations of tropical forest vertebrates including lowland gorillas, chimpanzees, bonobos (pygmy chimpanzees), and forest elephants. Although records are very incomplete, the biodiversity inventory so far includes some 400 mammal species, 1,000 bird species (of which 36 per cent are endemic), 700 species of fish, and over 10,000 plant species (of which 3,000 are endemic).

These forests are also important to indigenous groups who have lived there for thousands of years. Approximately 30 million people, representing more than 150 indigenous groups, live in the Congo River Basin.

The Congo Basin forests are also a major source of wealth for the region, from hunting activities to timber extraction and non-timber forest products. Hundreds of millions of USD per annum are generated from the forest as revenue for national governments, mainly in the form of logging fees.

A critical feature of the Congo River Basin forests is that they generate between 75-95 per cent of the region's rainfall (water) through local evaporation and evapotranspiration. This differs dramatically from other major tropical forests and watersheds of the world. For example, the Amazon Basin generates 50 per cent of its own rainfall through this water recycling process, while rainforests in Asia generate perhaps less than 20 per cent.

Deforestation data

According to the UN Food and Agriculture Organization (FAO), Central Africa lost approximately 91,000 km² to deforestation between 1990 and 2000. Current estimates put the region's annual deforestation rate as 0.27 per cent or 487,000 hectares, and forest degradation at 0.1 per cent or 180,460 ha per year.

According to expert analysis and developed models, the major sites of deforestation are in southern Cameroon and DRC. Deforestation rate for DRC, which holds approximately 108 million hectares of the region's forests, is estimated at 0.33 per cent per year, or 358,000 ha.

Key threats

The expansion of unsustainable industrial logging, mainly to meet timber demand from around the world, is one of the biggest threats to the Congo Basin forests. China, Europe and the US are importing vast quantities of wood products from the forests of Gabon and Cameroon, providing a powerful incentive for the continued extraction of wood from these forests.

Activities such as agriculture, bush-meat hunting, and mineral and oil extraction also have direct impacts on the forests and wildlife. Climate change, population growth, conflict and disease, governance problems, lack of forest management capacity, a shortage of funding and a lack of awareness are some of the factors that worsen these issues.

A growing problem has been road-building by logging companies, which gives bush-meat hunters access to previously remote forests. This has led to extreme over-hunting of vulnerable species such as the western lowland gorilla, elephant and leopard.

Protection status

In Central Africa, approximately 18.5 million hectares of forests (10.2 per cent) are found within national parks or other protected areas.

Progress on strengthening protected areas is underway, much of which can be traced to the 1999 WWF-organized Yaoundé Forest Summit in Cameroon, and the 2005 Brazzaville Summit. These landmark events brought together Central African heads of state

Climate change impacts in the Congo Basin

The effects of climate change in the Congo River Basin are not yet fully understood. However, evidence from a few studies has highlighted several severe long-term impacts on forests and species.

For example, many of the region's endemic species, such as the endangered mountain gorilla, are highly at risk from minor climatic changes. The mountain gorilla lives at altitudes of between 2,500 and 4,000 metres, within a small range on the

to discuss their countries' forests and wildlife, and led to commitments to protect vast tracts of forest in the Congo Basin, including an agreement to protect over 7.5 per cent of the Congo Basin forests.

Carbon emissions from deforestation

While fossil fuel combustion is the primary source of carbon dioxide (CO₂) emissions globally, deforestation and forest degradation collectively is the largest source of CO₂ in Central Africa, accounting for about 90 per cent of the annual release from the region.

The Congo Basin region is currently not a large global source of carbon emissions, when compared with countries like Brazil and Indonesia. Estimates of carbon emissions from deforestation for Central Africa range from 20 to 60 million tonnes (t) per year. However, the potential for dramatic increases in carbon emissions from deforestation is massive. The vegetation and soils of the remaining forests of this region contain a vast storage of carbon. In fact, the Congo Basin's forests are estimated to contain between 25-30 billion t of carbon in their vegetation alone. This amount is equivalent to about 4 years of current global anthropogenic emissions of CO₂. Over half of the carbon is stored within the forests of the DRC, making it the fourth largest forest carbon reservoir of any country in the world.

DRC is the most significant source of carbon emissions from land-use change in the region. It has been estimated that the DRC accounts for between 47-56 per cent of the total carbon emissions from land-use change for Central Africa. If the country's entire area of 60 million hectares of "production forest" were to actually open up to new industrial logging activities, it would potentially release an additional 3 to 6 Gt (1 Gt = 1 billion tonne) of carbon into the atmosphere. A further similar amount could be released if these logged forests are eventually cleared. Predictions for future deforestation in Central Africa estimate that by 2050, forest clearance in the DRC will release over 30 billion tonnes of CO₂, approximately equivalent to the UK's CO₂ emissions over the last 60 years.

Protecting an additional 1 per cent of current forested land area in the Central African region would preserve 230 million tonnes of carbon

borders of the Democratic Republic of Congo, Rwanda and Uganda, surrounded by a dense human population. As the climate changes, the mountain gorilla's habitat may also change to such an extent that it will no longer be suitable for the gorilla's survival.

Source: CARPE. 2005. *Forests of the Congo River Basin: A preliminary assessment*. Balmar. Washington DC





(roughly a third of the UK's annual greenhouse gas emissions), which in today's carbon market is worth more than USD 500 million.

WWF Forest Activities

WWF has been working in the Congo Basin for four decades on landscape conservation approaches that recognize the rights and needs of indigenous peoples and local communities. These approaches integrate protected area management, species conservation, sustainable forest management, and development of local livelihood needs.

Sources/References

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Notes

Annual deforestation rates cited here are gross deforestation rates, as opposed to net deforestation rates. Data taken from the report, *The Forests of the Congo Basin: State of the Forests, 2006*, prepared for the Congo Basin Forest Partnership (CBFP).



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