



# The Democratic Republic of the Congo: Rainforests and Climate Change

The Democratic Republic of the Congo's vast tropical rainforest is a true natural treasure, home to over a thousand species of plants and hundreds of species of mammals, birds, reptiles, and amphibians. The tropical rainforest of the Congo Basin is the world's second largest, after South America's Amazon Rainforest. Situated in the heart of the African tropics, the DRC is home to the greatest expanse of rainforest in all of Africa. Tropical rainforest covers 58.9% of the DRC's territory –



Lush vegetation in the Congo rainforest

– over 515,000 square miles in total. Unfortunately, the global trend toward tropical deforestation has not left this region untouched. In the decade from 1990 to 2000 alone, over 20,000 square miles of the DRC's forests was wiped away. In the current decade, the DRC's rainforest has been shrinking, on average, by 319,000 hectares (over 1200 square miles) annually.

## Why preserving rainforests is essential to the fight against climate change

Tropical rainforests play a key role in the Earth's carbon cycle. The forest's myriad living organisms use photosynthesis to remove carbon from the atmosphere by incorporating it into biomass. These organisms also respire by breaking down carbohydrates, releasing carbon dioxide into the atmosphere in the process. Scientists continue to debate whether undisturbed tropical forests are a net source or sink of carbon, but the effects of human-driven deforestation are well understood. When forests are cleared, carbon stored in the wood returns to the atmosphere, enhancing the greenhouse effect and therefore contributing to global climate change (also known as global warming).

## By the Numbers

**515,000**

Square miles of tropical forest in the DRC, covering over half the country.

**17 million**

Tons of carbon held in the DRC's forests today – the largest carbon stock in Africa.

**1,200**

Number of square miles of forest lost annually due to deforestation.

**57,900**

Approximate number of square miles of forest given as concessions to logging industry by the DRC government, 2002-2005.

**1.5 billion**

Metric tons of carbon emitted into the atmosphere in the 1990s due to tropical deforestation worldwide.

Once the forest is cleared for crop or grazing land, the soils can become a large source of carbon emissions, depending on how the cleared land is managed. Scientists estimate that tropical deforestation in the decade of the 1990s contributed a staggering 1.5 gigatons (1.5 billion metric tons) of carbon to the Earth's atmosphere. This number accounts for over a fifth of all human greenhouse gas emissions for the decade. Yet if humans slow the rate of deforestation in the current century, great savings in greenhouse gas emissions will be realized. According to the journal *Science*, it is estimated that reducing the deforestation rates observed in the previous decade 50% by 2050 would avoid the release of up to 50 gigatons of carbon into the atmosphere – a number equivalent to 6 years' worth of emissions from burning fossil fuels at current rates.

### **Why the DRC's forests are crucial**

The DRC's forests hold the largest carbon stocks of any African country. Due to the

#### **About Friends of the Congo**

The Friends of the Congo (FOTC) is nonprofit advocacy organization based in Washington, DC. Established at the behest of Congolese human rights and grassroots institutions, we work to bring about peaceful and lasting change in the Democratic Republic of Congo, formerly Zaire.

#### **To learn more or contribute:**

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Phone: 202-584-6512  
Fax: 775-371-1064

recent stabilization of the country's political situation following a decade of war and civil unrest, more rapid economic development threatens the country's remaining intact tropical forests. The majority of deforestation in the DRC continues to be driven by small scale slash-and-burn agriculture. However, extractive industries -- mining and commercial logging – are also significant drivers of deforestation. Recent developments underscore the potential for an increased rate of deforestation. In 2007, a Chinese company signed a contract to develop over 3 million hectares in the DRC as palm oil plantations. And from 2002

through 2005, the DRC government issued a staggering 15 million hectares (over 57,000 square miles) of forestland as concessions to logging companies. Reversing the trend towards deforestation in the Congo is essential to combating climate change.

*“ Given the amount of carbon held in the forests of DRC, total long-term emissions to the atmosphere must be constrained to avoid harmful climate impacts.”*

-- excerpt, Woods Hole Research Center report to UN Framework Convention on Climate Change (UNFCCC) Conference of Parties, Bali, Indonesia, December 2007.

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