Mapped: 30 Years of Deforestation and Forest Growth, by Country

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Global Deforestation and Forest Growth over 30 Years

Forests are the great carbon capturers of our planet, and they are a key source of wildlife habitats and vital resources for people around the world.

But deforestation is threatening this natural infrastructure, releasing carbon into the atmosphere while simultaneously reducing wildlife diversity and making our environment more susceptible to environmental disasters.

This graphic looks at global deforestation and forest growth over the past 30 years, mapping out the net forest change by country and region using data from the UN's Food and Agriculture Organization (FAO).

The State of Deforestation by Region

Today, forests make up around 31% of the Earth's total land area, spanning 15.68 million square miles (40.6 million km²). Over the past three decades, the world lost a bit more than 4% (685,300 square miles) of its forests, which equates to an area about half the size of India.

Europe and Asia were the only two regions which had significant overall forest growth during this time period, while Oceania saw no significant change and North and Central America saw a slight reduction.

Region	Forest area change (1990-2020)	Percentage change in forest area
Asia	+146,718 sq mi	+6.10%
Europe	+88,803 sq mi	+2.26%
Oceania	+1,057 sq mi	+0.0015%
North America and Central America	-7,722 sq mi	-0.27%
Africa	-409,268 sq mi	-16.64%
South America and the Caribbean	-501,932 sq mi	-15.40%
Global total	**-685,401 sq mi**	**-4.19%**

Source: UN Food and Agriculture Organization

Africa along with South America and the Caribbean were the regions with the greatest amount of deforestation, both losing more than 15% of their forests over the past 30 years. This is largely because these two regions have large amounts of forest area available, with the underlying land in high demand for agriculture and cattle-raising.

Although the net forest loss around the world is massive, the rate of forest loss has slowed down over the past three decades. While an average of 30,116 square miles were lost each year between 1990 to 2000, between 2010 to 2020 that number has dropped to 18,146 square miles, showing that the rate of deforestation has fallen by almost 40%.

The Countries and Drivers of Deforestation and Forest Growth

Despite an overall slowing down of deforestation, certain countries in South America along with the entirety of Africa are still showing an increase in the rate of deforestation. It's in these regions where most of the countries with the largest reduction in forest area are located:

Brazil, home to most of the Amazon rainforest, saw 356,287 square miles of net forest loss, largely fueled by farmers using the land to raise cattle for beef. It's estimated that 80% of the deforested

Land area of the Amazon has been replaced with pastures, with the resulting beef production known to be among the worst meats for the environment in terms of carbon emissions.

Country	Net change in forest area (1990-2020)	Percentage change in forest area
Brazil	-356,287 sq mi	-15.67%
Indonesia	-101,977 sq mi	-22.28%
Democratic Republic of the Congo	-94,495 sq mi	-16.25%
Angola	-48,865 sq mi	-15.97%
Tanzania	-44,962 sq mi	-20.29%
Myanmar	-41,213 sq mi	-27.22%
Paraguay	-36,463 sq mi	-36.97%
Bolivia	-26,915 sq mi	-12.06%
Mozambique	-25,614 sq mi	-15.29%
Argentina	-25,602 sq mi	-18.84%

The other great driver of deforestation is seed and palm oil agriculture. These oils account for about 20% of the world's deforestation carbon emissions, and their production concentrated in Indonesia and Malaysia is now expanding to other Asian countries along with Africa.

While the demand for beef and palm oils drives deforestation, initiatives like the Central African Forest Initiative (CAFI) are providing incentives to protect forest land.

Select countries in the European Union along with the United Kingdom and South Korea have committed $494.7 million to six central African nations (Cameroon, Gabon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, and the Republic of Congo) for them to preserve their forests and pursue low emission pathways for sustainable development. The initiative has seen $202 million transferred thus far and an anticipated reduction of 75 million tons of CO_2 emissions.

Forests and the Climate Crisis

It's estimated that forests absorb around 30% of the world's carbon emissions each year, making them the greatest and most important carbon sinks we have on land. When you pair this with the fact that deforestation contributes around 12% of annual greenhouse gas emissions, the importance of forest preservation becomes even more clear.

But we often forget how much forests protect our environment by acting as natural buffers against extreme weather. Forests increase and ensure rainfall security, making nearby land areas significantly less susceptible to wildfires and natural droughts in hot and dry seasons along with flooding and landslides in wet seasons.

With every dollar invested in landscape restoration yielding up to $30 in benefits, reducing deforestation and investing in reforestation is considered an effective way to reduce the difficulty and costs of meeting climate and environmental protection goals. This is without even considering the benefits of maintaining the world's largest wildlife habitat and source of species diversity, the home of the nearly 70 million indigenous people who live in forests, and the livelihood of 1.6 billion people who rely on forests every day.

Preserving and Regrowing Forests for the Future

Despite the short-term acceleration in forest loss seen in 2020, there have been positive signs about forest regrowth coming to light. A recent study found that previously deforested land can recuperate its soil fertility in about a decade, and layered plants, trees, and species diversity can recover in around 25-60 years.

Along with this, in some instances these regrowing "secondary forests" can absorb more carbon dioxide than "primary forests", giving hope that a global reforestation effort can absorb more emissions than previously thought possible.

From better financial incentives for local farmers and ranchers to preserve forest area to larger scale policies and initiatives like CAFI, curbing deforestation and promoting reforestation requires a global effort. Reversing deforestation in the coming decades is a daunting but necessary step towards stabilizing the climate and preserving the environment that billions of animals and people rely on.

Source: https://mail.google.com/mail/u/0/#inbox/FMfcgzGmtNWvwGkjBbRFmFvdBGlXDGrW