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CONSERVATION

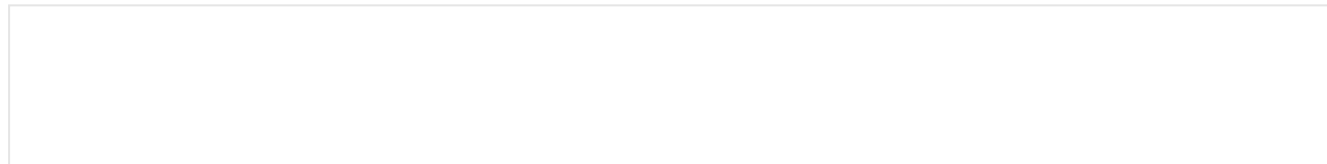
Millions of Trees Were Removed in 2021, Hurting Climate Goals

The dramatic loss of tree cover in the tropics and northern boreal forests is releasing vast amounts of carbon dioxide

By Sara Schonhardt, E&E News on April 28, 2022



Drone aerial view of deforestation on farm with illegal burning of forest trees to make pasture for cattle in Amazon rainforest, Para, Brazil. Credit: Paralaxis/Alamy Stock Photo



The world’s forests are falling under saw blades and flames, releasing massive amounts of carbon dioxide as countries struggle to meet their climate commitments.

Some of the worst effects are happening in carbon-rich tropical canopies, where tree losses in primary forests last year reached 3.5 million hectares (9.3 million acres) due to rising

populations and growing demand for food and energy, according to an analysis released today by the World Resources Institute's Global Forest Watch. As trees in the tropics fell, they released an estimated 2.5 gigatons of carbon dioxide.

That's equivalent to the annual fossil fuel emissions of India, the world's third-largest source of greenhouse gases. Primary forest refers to native, old-growth tree cover that has not been cleared in recent history.

There were even larger losses in less established forests and plantations. Total tree cover loss in the tropics was more than 11 million hectares last year, or 27 million acres, according to the report, which draws on data from the University of Maryland. Losses were highest in Brazil, followed by the Democratic Republic of Congo, Bolivia and Indonesia.

Major losses were also seen in northern boreal forests, driven by more frequent and intense wildfires. Russia lost a record 6.5 million hectares (16.1 million acres) of tree cover due mainly to fires, the data showed.

The 2021 data mostly precedes pledges made by more than 140 countries at last year's climate summit in Glasgow, Scotland, to halt and reverse forest loss by 2030. But it can serve as a warning for how difficult it will be to hit those targets, said Frances Seymour, a senior fellow with the World Resources Institute's forest program.

Primary forest lost has remained persistently high, falling by about the same amount in 2021 as it rose between 2019 and 2020. To achieve the Glasgow commitment, forest loss will need to decline every year for the remainder of the decade. And that means actions to curb it are going to have to be dramatic.

"We have 20 years of data now, and it's pretty consistent: gradual, upward, but between 3 and 4 million hectares [of loss] every year," Seymour said. "So it's clear that whatever we're doing is not enough to make the kind of course correction and rapid decline that we have to find a way to do between now and 2030."

THE BIGGEST LOSERS

Brazil's primary forest loss last year totaled 1.5 million hectares (3.8 million acres), accounting for more than 40 percent of primary forest loss in the tropics. The Democratic Republic of Congo, by comparison, lost nearly a half-million hectares of forest cover—an amount that has remained consistent since 2016. More than a third of the 300,000 hectares of forest loss in Bolivia was due to fire, which is often used to clear land for soy and cattle farming.

Brazil was once an example of how to tackle deforestation, but changes in policy and leadership have unraveled past successes and put its massive Amazon rainforest under threat. Tree loss not related to fire increased by 9 percent between 2020 and 2021, the highest it's been since 2006, when measures were put in place to reduce Amazon deforestation rates, said Mikaela Weisse, deputy director of Global Forest Watch.

Recent research found that the Amazon is losing its ability to respond to climate change, pushing it closer to the point where large parts of the canopy would shift from rainforest to savanna. That would unlock huge amounts of carbon emissions in the process.

“Climate change itself is making it harder to maintain the forest that we still have,” Seymour said.

Indonesia marks another major test.

Once home to some of the world's worst deforestation, Indonesia slowed its rate of primary forest loss by 25 percent in 2021, marking its fifth consecutive year of progress. The reversal stems in part from a series of corporate commitments and government actions aimed at reducing illegal logging and slash-and-burn agriculture, including a permanent ban on primary forest and peatland conversion.

But the government did not renew a moratorium on the expansion of palm oil plantations, raising concern among environmentalists that climbing prices for palm oil—found in everything from cookies to cleaning agents—could reverse those gains.

Demand for palm oil is also a major driver of deforestation in neighboring Malaysia, which has lost nearly a fifth of its primary forest since 2001.

TURNING THE PROBLEM AROUND

In places like the Congo basin—a massive forest expanse that spans six countries and is second in size only to the Amazon—policies aimed at expanding clean energy generation and other employment initiatives could help save forests, since tree loss is largely driven by subsistence farming or the need for timber as fuel.

Measures to improve agricultural yields could also reduce pressure to expand farmland into forests.

And while international support to stop tree loss does matter—such as actions aimed at reducing demand for commodities linked to deforestation—it's domestic policies that can really make the difference, said Seymour.

Another potential solution: performance-based finance that can reward countries for protecting and conserving their forests. Those mechanisms could provide incentives to halt deforestation, but they'll need to be built out and made more transparent to be seen as credible (*Climatewire*, Dec. 9, 2021).

FIRES GROW IN THE BOREAL

The data covers tree cover loss broadly—meaning permanent deforestation as well as temporary loss caused by wildfires or the harvesting of tree plantations. It does not account for replanting or reforestation, so is not a measure of net tree loss.

The analysis typically focuses on the loss of tropical primary forests, where the vast majority of human-caused deforestation takes place, according to WRI. But the latest data also pinpoints forest loss due to fire. And it found that frequent and more intense fires were increasingly common in boreal forests in northern latitudes.

In those ecosystems, tree cover loss increased by a record-setting 30 percent from 2020 to 2021, a trend WRI linked to hotter and drier conditions caused by climate change.

Larger and more intense fires are particularly concerning for Russia because Siberia contains large areas of melting permafrost and peatland, an ecosystem similar to a bog that can release huge amounts of stored carbon when dried out. Indonesia is also home to vast peatland forests.

That situation is likely to worsen in a world where greenhouse gas emissions set the stage for more wildfires, which themselves unlock even more emissions, researchers at WRI cautioned.

“No one should even think anymore about planting trees instead of reducing emissions from fossil fuels,” said Seymour. “It’s got to be both—and it’s got to be now before it’s too late.”

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