

Russia Says Its Forests Can Absorb Its Greenhouse Gas Emissions. Climate Change and Poor Forestry Standards Make This Unlikely.

While officials boast that Russia's vast forests can help the country achieve its climate goals, experts say this won't be possible without significant change.

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Taiga in the Krasnoyarsk region of Russia. Alexander Solomakhin (CC BY 3.0)

As the climate crisis intensifies, Russia is pinning its hopes on its vast forests to make up for its carbon emissions — the world's fourth-highest — and even help the country become a global leader in carbon absorption.

But the country's substandard conservation and ineffective forestry practices, combined with the impacts of climate change itself, make it more likely that Russia's forests will become a carbon source rather than a sink in the next decade, experts told The Moscow Times.

"If the trend of increasing wildfires continues ... then within the next one or two decades, Russian forests will become a carbon source," a Russian forestry expert said.

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And according to the expert's estimates, about a quarter of all logging in Russia targets its largely untouched old-growth forests — a major carbon reservoir.

As the planet continues to warm at an <u>unprecedented</u> rate due to human activity, carbon capture by ecosystems — alongside human emissions reduction — is becoming a significant climate solution, making forest preservation crucial, scientists say.

During the 2021 UN climate conference in Glasgow, President Vladimir Putin <u>said</u> that Moscow takes "the most serious and rigorous" measures to preserve forests by ramping up reforestation and combatting illegal logging and wildfires.

Yet experts doubt whether current measures will be enough for the future of Russia's forests.

All three experts interviewed by The Moscow Times for this article requested anonymity due to the risks of speaking to a media outlet labeled a "foreign agent" by Russia.

Absorption quandary

In a persistent narrative framing the country's forests as a catch-all solution to the climate problem, Sergei Ivanov, Putin's special envoy for the environment, went as far as to claim that Russia's forests could absorb the majority of global emissions.

"The more forests that are there, the more emissions are captured. And in this regard, Russia is a world leader. This gives me grounds to publicly state that Russia is the planet's ecological donor," Ivanov <u>said</u> at the St. Petersburg International Economic Forum (SPIEF) in 2022.

At SPIEF 2024 this week, Economic Development Minister Maxim Reshetnikov echoed this view, <u>saying</u> that Russia's "colleagues" — an apparent reference to Western countries — emphasize emissions reduction while neglecting absorption.

"The underlying reason is clear: the country [Russia] exports mainly carbon-containing natural resources and does not want to do anything" to reduce its emissions, a Russian forest management expert and member of the Scientific Council on Forests of the Russian Academy of Sciences said.

"That's why everyone has latched onto the role of forests without truly understanding the real situation [with them]," they added.

Related article: Siberian Carbon 'Sink' May Soon Become Net Source of Emissions – Study

Researchers from the Moscow-based Izrael Institute of Global Climate and Ecology <u>found</u> that Russia's greenhouse gas emissions appear to be higher than what its ecosystems can absorb.

The report's authors also warned that Russia's ecosystems could become a carbon source after 2050 due to increased methane release from the continental shelf and melting permafrost.

An international team of researchers <u>came</u> to a similar conclusion in a 2022 study, saying that wildfires and droughts make the carbon-sink status of Siberia's forests less certain.

Russian forests fail to offset even the country's own emissions, let alone those of others — and their absorption capacity has declined by nearly 20% since 2009, an exiled Russian environmental economist said.

Multiple threats

Experts say that the increasing frequency and severity of wildfires in Russia's regions every year are perhaps the biggest threat to the country's forests.

According to the forestry expert, the area of forests lost to fires each year exceeds the area lost to clear-cut logging by two to three times on average.

Other climate-induced problems include the spread of pests that now survive warmer winters and destructive windfalls in some regions, the environmental economist said.

The picture becomes even bleaker when forest management practices are factored in, the forestry expert noted, with crucial decisions sometimes based on a "bouquet of legends" rather than scientific knowledge.

Specifically, reforestation efforts often involve planting spruce, pine and oak, which grow slower and therefore absorb less carbon than fast-growing birch or aspen, which would naturally overgrow if left untouched.

"Moreover, pioneer species are initially cleared [before reforestation] and during the growing process. And everything that is cleared rots away and goes into the atmosphere," they said.

The expert also pointed to the Far East Sakhalin region, which as part of its <u>plan</u> to achieve climate neutrality is <u>planting</u> larch. Because the chosen site is a raised bog peat with very poor soil, the expert said, the plantation will not survive.

"Roslesinforg [the federal forestry body] has lost so many specialists during Putin's time that they might no longer understand basic things like this," they said.

The forest management expert said the widespread practice in Russia of planting coniferous monocultures — a technique that dates back to the 18th century — appears to be outdated in today's changing climate, given that conifers burn more easily than mixed or small-leaved forests.

"It is believed that if something dies or burns, we need to take budget money and spend it on the most expensive seedlings ... of spruce or pine," they said. "But the climate has changed, and there are more wildfires."

The country also lacks incentives for long-term sustainable forest management, the environmental economist said, as forest users often lease rather than own plots.

"After clear-cutting — which is the main approach to timber harvesting [in Russia] — the plots are turned into a devastated wasteland for many decades. Reforestation measures are generally not very effective, and they are not truly implemented," they said.

Related article: Russia Unprepared for 'Alarming' 2024 Wildfire Season, Experts Warn

A study of reforestation in the Moscow region from 1999 to 2022 by the Earth Touches Me environmental project <u>showed</u> that some young plantations perished due to a lack of proper care.

Hemp fields

Russian researchers have sought out creative ways to enhance carbon absorption beyond the capacity of the country's forests.

Outside Russia's fourth-largest city of Yekaterinburg, scientists who <u>planted</u> industrial hemp discovered that it absorbs carbon dioxide up to five times more effectively than conifers.

The researchers envision long-term carbon storage products made from hemp ranging from clothing and ropes to tableware.

Their endeavor is part of a <u>network</u> of 18 sites across Russia known as "carbon polygons," in which scientists explore the absorption capacities of various plants in hopes of helping Russia achieve carbon neutrality.

While experts doubt hemp's reliability for carbon storage, they see the polygons' benefit in enhancing Russian researchers' knowledge, particularly in the regions.

"Clothing made from hemp becomes unusable within a few years, and the carbon contained in it will be released into the atmosphere," the environmental economist said. "Today in the EU ... wooden houses can be <u>certified</u> as carbon removals if they last for 50 years or more."

"When individuals start to understand that deciduous species capture carbon more effectively and rapidly than conifers, there is hope that forestry management will eventually become more meaningful," the forest management expert said.

Despite Russia's already strained carbon-capture capacities, the country <u>aims</u> to more than double carbon absorption by ecosystems by 2050.

Experts said this plan would be unrealistic unless significant additional actions are taken.

The forestry expert said that three key measures could bring Russia closer to fulfilling this task: banning logging in virgin forests, improving firefighting and developing forestry on abandoned agricultural lands.

Without more competent forestry management, Russia will not be able to preserve this natural treasure.

"As things stand now, there are absolutely no chances of saving the forests," the expert said.

"And the situation will only worsen."

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