

EU forests can't help climate fight: study

October 10 2018, by Patrick Galey



Europe's forests are under threat from extreme weather events, such as droughts and storms, made worse by climate change

Europe cannot rely on its forests to help ward off the effects of climate change, experts warned Wednesday, calling instead for nations to protect their natural resources against the warming planet.

The world's current roadmap to mitigate [climate](#) disaster encourages EU nations to use their forests to help suck [greenhouse gases](#) out of the atmosphere.

But European scientists now say no approach to forest management complies with the goals of the 2015 Paris Climate Agreement, which aims to limit global temperature rises to "well below" two degrees Celsius (36 Fahrenheit) above pre-industrial levels.

They warn that attempts to use forests to store greater amounts of carbon dioxide and other greenhouse gases might have unexpected side effects—including darkening the Earth's surface leading to higher surface temperatures—and that it would be better to protect woodland from climate change.

"The amount of carbon captured over the next 90 years by trees—around 2 parts per million (ppm)—would be low compared to the amount of carbon released into the atmosphere under the most likely scenario—500 ppm," Guillaume Marie, a climate and environment scientist at the University of Paris-Saclay, told AFP.

Marie and the team examined models of different European-wide forest management strategies aimed at limiting [climate change](#).

These include attempts to maximise the amount of carbon forests can store, and increasing the amount of sunlight that reflects back into space to reduce surface temperatures.

They unearthed a climate Catch-22.

The so-called "sink-maximising" forest plan, which could save the equivalent of 8 billion tonnes of CO₂ by the end of the century, would require converting an area the size of Spain from deciduous to

coniferous forest.

The authors of the study, published in the journal *Nature*, said the resulting darkening of the landscape would offset in temperature any relative gains in carbon reduction.



EU nations have been encouraged to use their forests to help take greenhouse gases from the atmosphere

"The classic error is to think that CO₂ capture and storage equates to global cooling," said Marie.

"That's true if we don't change the optical, chemical or physical

properties of the planet. With forests, it's not the case, because we would change a large section of Earth's surface.

"If you favour coniferous forests over deciduous, you darken the leaf colour, which is an important factor in calculating atmospheric temperature," he said.

Trees use photosynthesis to extract [carbon dioxide](#) from the atmosphere, and lighter leaves reflect more sunlight, helping to keep temperatures down.

Woodlands under threat

Europe's forests cover more than 180 million hectares (1.8 million square kilometres), over 40 percent of the continent's surface area.

In the wake of the Paris deal, the 28 EU member states committed to reduce domestic greenhouse-gas emissions by 40 percent by 2030, around a quarter of which is expected to come from land use and forests.

But the bloc has struggled to preserve its woodlands, which are under threat from extreme drought, storms, insects, and even the actions of individual nations.

The EU's top court in April ruled Poland's right-wing government broke the law by logging in one of the continent's last primeval forests.

Poland is due to host vital UN climate talks in December, where nations must finalise on a legal framework to implement what was agreed in Paris.

The report advised governments to focus efforts "to adapt the [forest](#) cover to future climate in order to sustain the provision of wood and

ecological, social and cultural services" woodland provides "while avoiding positive climate feedbacks from fire, wind, pests and drought".

More information: Sebastiaan Luyssaert et al. Trade-offs in using European forests to meet climate objectives, *Nature* (2018). [DOI: 10.1038/s41586-018-0577-1](https://doi.org/10.1038/s41586-018-0577-1)

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