

Researchers find Europe's forests moving toward carbon sink saturation point

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Credit: Wikipedia.

(Phys.org) —A team composed of researchers from several European countries has found that, due to aging forests and deforestation, Europe's forests appear headed for a carbon sink saturation point much earlier than anticipated. In their paper published in *Nature Climate Change*, the team describes that the amount of carbon dioxide being absorbed by forests on the European continent has been slowing since 2005.

The amount of carbon dioxide in the atmosphere can be reduced in two ways. The first and most obvious is for people to stop pumping so much of it into the air. The second is to take more out (i.e., create carbon sinks), which for now at least, means planting more trees. As many of us may recall from grade school, trees pull carbon dioxide out of the air and store it in new growth—in return, [oxygen](#) is released into the atmosphere. Absorbed carbon remains in the wood until it either rots or is burned. For that reason, those concerned with reducing the amount of carbon in the atmosphere and the associated rise in [global temperatures](#) promote the idea of planting more trees, while reducing [deforestation](#).

Europe is unique in that it's one of the few places on the planet that has more trees now than it did a century ago. Replanting was initiated as part of rebuilding the continent after the ravages of two World Wars—particularly in France and Germany. Unfortunately, trees don't live forever—those trees planted after the wars have grown so old that their ability to absorb carbon is slowing. The research team estimates these trees will reach a [saturation point](#) by 2030. The researchers also found that some parts of the continent have seen some deforestation as trees are cut to make room from expanding towns and cities. Cutting down trees and using the wood from them isn't a problem of course, it's when they are cut and not replaced that the problem occurs. For that reason, the research team suggests that old wood forests become part of harvesting programs to replace older trees with newer growth.

The researchers also note that older forests are more at risk—fires, disease and insects all contribute to killing trees, allowing the carbon they hold to be released into the atmosphere. Cutting the trees and using the wood before they are killed, and then replacing them, the team notes, would make far more sense.

More information: First signs of carbon sink saturation in European forest biomass, *Nature Climate Change* (2013) [DOI](#):

[10.1038/nclimate1853](https://doi.org/10.1038/nclimate1853)

Abstract

European forests are seen as a clear example of vegetation rebound in the Northern Hemisphere; recovering in area and growing stock since the 1950s, after centuries of stock decline and deforestation. These regrowing forests have shown to be a persistent carbon sink, projected to continue for decades, however, there are early signs of saturation. Forest policies and management strategies need revision if we want to sustain the sink.

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