

press release

Managing the climate crisis: Outlook for forest and timber utilization CAREFORPARIS presents scenarios by BFW, BOKU, Wood K plus and Umweltbundesamt

Vienna, October 2019: Forests can contribute to climate change mitigation; however, managing this contribution correctly requires a comprehensive understanding of how forestry and climate change influence one another. In Austria, a significant proportion of the national anthropogenic CO₂ emissions are offset by CO₂ uptake in Austrian forests. Furthermore, the use of wood instead of non-renewable materials leads to *avoided emissions* elsewhere. Nonetheless, forests and the forestry sector are, and will continue to be, impacted by climate change thus raising a question mark over the national future sink strength and anthropogenic emissions in other sectors. Direct climate change impacts as well as the consequences of climate change adaptation may diminish forest carbon storage and affect timber utilisation, which could significantly increase Austria's future net greenhouse gas emissions.

This is demonstrated by scenarios from the project CAREFORPARIS, a collaboration of the Austrian Federal Research Centre for Forest (BFW), the University of Natural Resources Life Sciences, Vienna (BOKU), Wood K plus and the Environmental Agency Austria (Umweltbundesamt). The results were presented at a workshop on October 23 2019 at BOKU. The simulation assumes diverse climate change and adaptation scenarios for the Austrian forestry sector and project possible developments until the year 2150. The project focussed on the greenhouse gas balance of the forest, the greenhouse gas balance of timber products, and the avoidance of greenhouse gas emissions by replacing other products with timber products.

BFW: Austrian forests cannot be an eternal carbon sink

Austrian forests sequester carbon dioxide from the air and store carbon in wood. This carbon storage is currently increasing and will continue to increase in the near future thus contributing to climate change mitigation. If the global warming will not be limited to 2°C as stipulated in the Paris Climate Agreement, this contribution is at risk. Higher temperatures and the subsequent necessary adaptation measures can substantially impact the sink function of forests as well as the forestry sector in general. "Austrian forests will be a CO₂ sink for the next 30 to 100 years. After that, the scenarios show a contrasting picture: The forest will become a CO₂ source," reports Dr. Thomas Ledermann of the Austrian Federal Research Centre for Forest. "If we want to reach the Paris climate goal, the avoidance of greenhouse gas emissions must have highest priority."

BOKU and Wood K plus: Invest in long-lasting timber products

Long-lasting timber products constitute additional carbon storage. However, the scenarios indicate this storage is continually reduced due to limited options of application, limited life cycle duration, and limited resources.

"Global warming will also change the economic framework conditions for forestry and the timber economy," explained Dr. Peter Schwarzbauer from BOKU. There is currently a trend to transform pure coniferous stands into mixed stands. Broadleaved species are increasingly introduced. In the scenarios, the continuation of this development and further measures for the adaptation to climate change were simulated. In order to retain its capacity to compete, the Austrian timber industry needs to adapt to these developments, e.g. increase the capacity to process timber of broadleaved species and develop new, innovative timber products. Innovation is required to maintain utilisation of timber as the tree species mix changes.

Austrian Environmental Agency: Replace fossil resources with timber

If timber products are used, emissions can be avoided because timber products have a smaller carbon footprint than substitute products made from other raw materials. This is a permanent positive effect on the greenhouse gas balance for the entire simulation period from 2020 to 2150 - even if the forest becomes a carbon source and if the carbon footprint of substitute products is reduced due to decarbonisation of the energy sector. "The utilization of timber contributes greatly to climate change mitigation. The carbon storage potential is twice the forest carbon sink even with a moderate increase in temperature," explains Dr. Peter Weiss from Umweltbundesamt. "If less timber is used, the forest is a bigger CO₂ sink for a limited period of time but the overall balance is worse, because the wood has to be substituted by other raw materials with higher carbon footprints. For decarbonisation, timber is an indispensable resource." The researchers from all participating institutions conform unanimously that the restriction of global warming to 2°C is essential to maintain the contribution of Austrian forests to the fight against climate change.

Contacts for interviews and questions:

Contact of Bundesforschungszentrum für Wald, bfw.ac.at
Christian Lackner, 0664/8412702, 01 878 38-1218, christian.lackner@bfw.gv.at

Contact of Umweltbundesamt: www.umweltbundesamt.at
Mag. Ingeborg Zechmann, +43 1 313 04-5413, ingeborg.zechmann@umweltbundesamt.at

Contact of Universität für Bodenkultur, Institut für Marketing und Innovation: www.boku.ac.at
Ao.Univ.Prof. DI Dr. Peter Schwarzbauer, + 43 1 476 54-73523, peter.schwarzbauer@boku.ac.at

Contact of Wood K plus - Kompetenzzentrum Holz GmbH, www.wood-kplus.at, Franziska Hesser, +43 1 47654 73518, f.hesser@wood-kplus.at