

Comments on the recent paper “Europe’s forest management did not mitigate climate warming¹”

Pekka E. Kauppi*, Richard A. Birdsey#

*Department of Environmental Sciences, P.O. Box 65, 0014, University of Helsinki, Helsinki, Finland; pekka.kauppi@helsinki.fi, phone: +358 40 7605072

#USDA Forest Service, Northern Research Station, Newtown Square, PA, USA

The retrospective study of European forests (Naudts et al. 2016) assesses the long-term impact of forest management on climate by estimating the combined effects of removing CO₂ from the atmosphere and altering the energy balance and evapotranspiration. However, the broadly stated headline that forest management may not be an appropriate climate mitigation strategy refers to a historical period that does not represent current forest management objectives and practices. The period from 1750 to present is an inappropriate analog for assessing the post-WW2 trends and the potential of current forest management practices to assist with climate change mitigation. Over the last 70 years, European forests have been managed far more intensively than forests of most other regions while the tree species distribution has remained virtually unchanged and the timber resources have significantly increased. It is very unlikely that European forest management represents a net release of C to the atmosphere especially if the effects of harvesting wood products are fully accounted for.

The methodology is also seriously flawed. The authors fail to account for the reduced use of fossil fuels when substituting wood products for materials that require high energy inputs to manufacture, such as steel and concrete. And some of the data used or cited in the study is questionable, such as: the exceptionally high rate of forest harvest is not consistent with published data; and the large warming impacts shown for Eastern Europe are not consistent with timber harvest data showing more intensity in Germany, France, Austria, Sweden and Finland.

The author’s conclusions rightfully suggest that assessment of forest management practices to mitigate climate warming should account for both reductions in atmospheric CO₂ and biophysical effects. However, because of the methodology issues and unique history and intensity of European forest management, the results are misleading for Europe and cannot be extrapolated to other regions such as the U.S. and China, as suggested by the study authors.

¹ Europe’s forest management did not mitigate climate warming

By Kim Naudts, Yiyang Chen, Matthew J. McGrath, James Ryder, Aude Valade, Juliane Otto, Sebastiaan Luyssaert
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