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## **Europe's coniferous forest management can mitigate climate warming – an answer to Naudts et al. (2016)**

In their article Naudts et al. call into question the key contributions made to climate change mitigation by forests through carbon sequestration (Kyoto agreement, COP 21 Paris) and forest management in Europe with the cultivation of coniferous forests. Their conclusions are far-reaching, but have no scientific founding, neither in their methodological approach, nor their results and analysis. The study disregards current scientific research, in particular:

1. The authors completely ignore or incorrectly assess the historical developments which ultimately led to significant changes in the species composition of Europe's forests. The deciduous forests did not disappear and transform into managed coniferous forests as a result of forest management, but rather as a consequence of the industrial revolution which devastated Europe's forests, in particular through agriculture and the exploitation of wood for energy, metallurgy, mining and glassmaking.
2. The authors only focus on the aspect of carbon storage in forests and wood products, thereby fully neglecting the potentials presented by substitution. At the same time, they overlook the opportunities coniferous forests offer for higher wood productivity and material use.
3. The study does not include the positive effects of using wood as a substitute for fossil fuels. Thus, no account is made for the effects of material and energy substitution on the CO<sub>2</sub> balance. Knauf et al. (2015) have shown that these effects are several times greater than the difference in the storage potential of deciduous versus coniferous forests.

M. Knauf, M. Köhl, V. Mues, K. Olschofsky, A. Frühwald, Modeling the CO<sub>2</sub>-effects of forest management and wood usage on a regional basis. Carbon Balance and Management. 10, 13 (2015).

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