

Can we increase harvest of woody biomass from European forests?

June 8 2015

The supply of woody biomass from the forests in the European Union can be increased significantly beyond the current level of resource use. However, this involves trade-offs with biodiversity and other services that forests provide to humans.

Countries in the European Union (EU) promote the use of renewable energy and have agreed on targets for 2020 and 2030. As a result, there has been a focus on the availability and mobilization of wood in Europe. According to a new doctoral dissertation from the University of Eastern Finland, forests in the EU could potentially supply 620 to 891 million cubic meters per year in 2030.

"This potential suggests that it is possible to significantly increase harvest levels beyond the current resource use; however, mobilising this potential would imply drastic changes in the management of European forests. Furthermore, forests provide many other benefits to society than wood production and it is important to understand if, and how, policies affect the provisioning of [forest ecosystem services](#)," says Hans Verkerk, MSc, in his doctoral dissertation analysing and evaluating the impacts of intensified biomass production and biodiversity protection on ecosystem services provided by European forests.

Increases in resource utilisation in terms of [woody biomass](#) removals will involve trade-offs with other ecosystem services provided by forests. For example, biodiversity in European forests could be affected due to a reduction in the amount of deadwood in forests, which is an important

substrate for many plant and animal species. Furthermore, European forests have been acting as a carbon sink for decades, but the sink is projected to decline in scenarios that include policy measures to intensify the use of existing forests to produce more woody biomass as compared to projections without such measures.

The study highlights the need for careful planning to accommodate both the need for protection of biodiversity, the expected growing demand for wood as well as the provisioning of other services by forests. Such planning requires identifying not only where biodiversity protection should be prioritised and where wood production could be maximised, but also where both [biodiversity](#) and wood production could be combined through integrated forest management.

The assessments presented in the study can be used to guide forest-related policy development and implementation, as they provide consistent information across Europe. Indeed, multiple European countries have used results presented in the study as part of international climate agreements.

The findings were originally published in *Environmental Management*, *Forest Ecology and Management*, *GCB Bioenergy*, *Ecological Indicators*, and *Ecosystem Services*.

More information: The dissertation is available online:
www.metla.fi/dissertationes/df197.htm

Provided by University of Eastern Finland

Citation: Can we increase harvest of woody biomass from European forests? (2015, June 8)
retrieved 6 May 2024 from

<https://phys.org/news/2015-06-harvest-woody-biomass-european-forests.html>

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