

# Demand for natural forests in western Europe leads to logging of old growth in Russia

## Problem

Forest management in western Europe is changing fast towards an orientation on nature. Where management was once concentrated on timber production, this is now broadening. Biodiversity values are in the spotlight and forest owners (also pressed by low stumpage values) prolongate rotations, leave trees to die, or stop active management totally. This has large impacts on the state of the forest resource in the long-term and on international trade in wood products.

## Objectives

The objective of these studies was to gain insight in the long-term impacts of nature-oriented forest management on the state of European forests and on the supply of wood.

## Approach

European scale forest scenario studies consist of projections of forest resources and forest management under various scenarios. These studies cover 330 million ha of forest and offer insight in effects of forest management. Alterra conducts these strategic studies using the EFISCEN model in collaboration with the European Forest Institute. The state of the forest resource is depicted in terms of growing stock and increment, but also degree of indigenous species, age classes, dead wood etc.

## Results

Results show that current trends in forest management may lead to a shortfall in supply of round wood of 195 million m<sup>3</sup> per year by 2060. Results also show that biodiversity values may not always increase as a result of set aside of older forests; namely pressure may increase on other old forests. Under current trends of management, the growing stock continues to increase and with the ongoing ageing, the increment

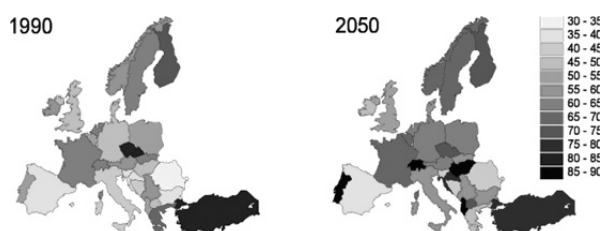


Figure 1. Percentage of the annual increment that is harvested in each country in 1990 and 2050 under a multi-functional scenario as projected with the EFISCEN model. Due to ageing of the forest and increases in consumption, the felling pressure will increase in the future.

goes down. This leads to enhanced felling pressure in terms of share of increment harvested in the long term (Fig 1).

Due to changes in management in western Europe, the international trade in wood products shifts. More pressure is put on Scandinavian forests and finally on Russia. Central and eastern European forests do not cover the lack of supply of wood from western European forests. The increase in fellings in the East is just enough to cover own consumption increase.

Due to nature-oriented management, the forest ages, but only slowly. Dead wood production increases slightly compared to a baseline scenario. In general we can state that management changes do not alter the forest resource quickly. It takes decades before large-scale impacts can be seen. But then, impacts are drastic.

## Follow-up

This work will continue in EU projects under the sixth Framework. In these projects a broader rural areas perspective will be incorporated, in which integrated sustainability analyses are carried out. Also impacts of climate change and carbon sequestration aspects will be important.



## Commissioned by

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