

Abstract template for the conference “A century of national forest inventories – informing past, present and future decisions”

Dear author. This is a two-page template that in the first page will ask for information on presenter name, topic, and preferred presentation form.

On page two, you are asked to fill in your abstract in the format and font size indicated. Please remember to include authors affiliation information in the footer section of page two. The length of the abstract may not be more than one page including references.

Abstract title:		
Take-home message:		<i>Understanding the dynamics of coarse wood debris is essential for improving the sustainability of forest management. In this project, we will use a compilation of the Finnish, Norwegian and Swedish NFI data to develop improved models for coarse woody debris dynamics</i>
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General topic, see website: <small>(please double click on the check box and activate the relevant one)</small>	<input checked="" type="checkbox"/>	Improving future NFIs by learning from the past
	<input type="checkbox"/>	NFIs today and in the future
	<input type="checkbox"/>	Cutting edge and futuristic inventory techniques and technologies
Preferred presentation form:	<input checked="" type="checkbox"/>	Oral presentation
	<input type="checkbox"/>	Poster
<i>Abstracts will be reviewed by members of our scientific committee and you will be given information on decisions in due time after the submission deadline has passed.</i>		

Models of coarse woody debris dynamics based on the Finnish, Norwegian and Swedish NFI data

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Introduction: Coarse woody debris (CWD) is an integral component of natural boreal forests, serving multiple functions, including habitat and a source of nutrition for a variety of dead wood-dependent organisms, and as a dynamic storage of carbon. As a result of intensive and long-term use of forests in Finland, Norway and Sweden, the amount of coarse woody debris has drastically decreased from the levels encountered in the natural forests. Consequently, increasing the amount of CWD is one important aim when improving the ecological sustainability of forest management. However, current information on CWD dynamics (i.e., their rate of change and persistence) remains fragmentary. Earlier research has suffered from suitable empirical data for developing and testing models that could reliably predict CWD dynamics for different tree species, sizes, forest types and climatic conditions that are all known to influence CWD decomposition rates. Understanding snag dynamics and the factors that drive this variability would be essential for predicting snag dynamics and more efficiently incorporating them into forest management. The aim of this study is to compile the Finnish, Norwegian and Swedish NFI data to develop models for coarse woody debris dynamics, and the associated carbon dynamics.

Materials and methods: In this study, we will compile and harmonize the dataset of CWD measurements in Finnish, Norwegian and Swedish NFIs on permanent sample plots that have been accumulating since the mid-1990s, when systematic dead wood measurements began in these inventories. Using this dataset and a set of auxiliary variables, we will develop decay class transition models for the main tree species, so that variability in tree size, site types, and climatic conditions are taken into account. In addition, we will collect field samples for linking the decay class transitions to changes in carbon stored in the CWD pieces.

Results: Here, we will present first results of this study.

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