

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:		Effects of truncating the angle count sampling method on the proceedings of the Austrian NFI
Take-home message:		<i>Truncating the angle count sampling method entails quite some changes but it is feasible and works well.</i>
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General topic, see website: <small>(please double click on the check box and activate the relevant one)</small>	<input type="checkbox"/>	Improving future NFIs by learning from the past
	<input checked="" 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>		

Truncating the angle count sample by introducing a maximum distance - effects on the proceedings of the Austrian NFI

Ambros Berger

Introduction: Angle count sampling is a very efficient way to estimate growing stock and it is widely used. But its disadvantage is that the plot size is not the same for all plots. This causes problems when trying to connect plot data with remote sensing data with a clearly defined border. With this motivation it was chosen to change the sampling method by introducing a maximum distance. This has several implications on the further processing of NFI field data which are presented here.

Materials and methods: Data from the Austrian NFIs as well as special larger scale plots are used to simulate angle count samples. The original data and the simulated changed data are used to analyse the resulting changes in models (upper diameter, bole volume) and NFI results (stock, growth).

Results: Truncating the sample means that single tree stocks have to be upscaled to hectare-values differently. Large trees are represented not as well as before. This results in an increase of the standard deviation of ACS-estimates. Models for the upper diameter are based on a different sample which in turn results in a different parameterisation of the models. Yet the effects on the overall NFI results are negligible.

The impact on modelling with remote sensing data turned out to be small. The truncation results in less field work and the probability to overlook a sample tree is reduced to almost zero.

Conclusion: The adaptation of the sampling design causes changes in several places - among others the estimation of stock and growth - but overall it is worth the effort.