Silva Fennica vol. 55 no. 4 article id 10643
Category: editorial
https://doi.org/10.14214/sf.10643
SILVA FENNICA
http://www.silvafennica.fi

ISSN-L 0037-5330 | ISSN 2242-4075 (Online)
The Finnish Society of Forest Science

From the Editor

100 years of national forest inventories

Maltamo M. (2021). 100 years of national forest inventories. Silva Fennica vol. 55 no. 4 article id 10643. 2 p. https://doi.org/10.14214/sf.10643

National Forest Inventories (NFI) are reaching the 100 years time span. Starting from Norway in 1919 (Breidenbach et al. 2021) the establishment of the NFI followed in other counties, including Finland in 1921. Now, hundred years later, it is time to look back, the current state and the future, and celebrate. The background for the NFI was in many cases the threat of overexploitation and lack of information on the availability of timber for future harvest. During the decades many other metrics, such as forest health, biological diversity, and nowadays most noteworthy forests' ability to absorb and store carbon, have influenced on the NFI from planning of the measurements to the calculation of the results. These changes have not only concerned the topics of the forest policy but also development in sampling frames, plot shapes and more technical aspects such as the positioning of field plots and the emergence of the role of remote sensing information, just to mention a few. It is also clear that the role of NFI will remain and even increase in the future when improved forest resource information is more and more useful for planning policies aimed at mitigating the climate change.

These days the role of forests in different carbon related calculations is frequently mentioned in the public discussion. In such conditions, the highly relevant and delightful aspect of the NFI is that is purely based on objective sampling of the forest resources. The results are calculated using established estimators with known properties. Thus, the information on forest resources is objective, it is neither based on anybody's opinion nor the influence of any stakeholder. Changes in data collection and methods are clearly communicated. If you are, for example, interested on the frequencies of different sized trees in Finland, this information can be found from the NFI with known reliability. This is something which is nowadays often forgotten and passed in the public discussion. However, this is also something to develop; how to disseminate the knowledge about forests to politicians.

The role of NFI is not only restricted to information of forest resources for sustainable forestry and forest policy. It has offered excellent research materials and, thus, affected also scientific publishing. Earlier our publisher, The Finnish Society of Forest Science, even published NFI results. Basically, NFI is a long time series of the measurements in the forests at a very large scale. This offers numerous topics for the different disciplines of forest sciences to utilize the information. I just mention one recent paper in Silva Fennica by Siipilehto et al. (2020) where the NFI data from different Nordic countries were used to develop stand-level tree mortality models.

During my research career, I have also used NFI data for different purposes, such as comparing forest structure metrics between forest ownership groups, predicting forest age and classifying forest attributes by combining remotely sensed data and NFI field measurements. These topics would have been difficult to examine without the NFI data. I even started my career in connection with NFI: I utilized diameter distributions from the NFI plots from the whole country in my master's thesis. In addition, during many field excursions and trainings, I have become familiar with the field routines of the NFI. The co-operation with the NFI has been very fruitful and the application of the NFI data has succeeded without any problems.

Now it is time to celebrate the 100 years of National Forest Inventories. Congratulations!

Matti Maltamo
Editor-in-Chief

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