



Measuring timber volume is today only one of many tasks for the national forest inventories. Photo: Lars Sandved Dalen.

## Celebrating 100 years of national forest inventories

By Lars Sandved Dalen, Norwegian Institute of Bioeconomy Research

**The Norwegian National Forest Inventory (NFI), established in 1919, has provided valuable information about Norway's forest resources for more than 100 years.**

In May 2019, more than 200 researchers and practitioners from 30 countries gathered at Sundvolden Hotel outside Oslo in order to celebrate a century of the National Forest Inventory (NFI) in Norway.

- Long-term forest research and monitoring is fundamental for sustainable forest resource management. Long time series, such as those provided by the Norwegian National Forest Inventory, are extremely important and valuable, NIBIO Director General Nils Vagstad emphasised while opening the conference.

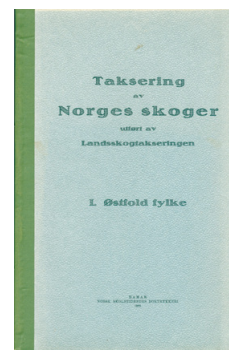
According to Vagstad, establishing a national forest inventory in the early 1900s was crucial for saving Norway's vanishing forests.

- In 1919, the forest situation in Norway was critical. Forestry was not at all sustainable. Much of the forest had been degraded, and measures were needed to restore the Norwegian forests, he said.

- That is why it is so important to support these long-term monitoring programmes and take good care of them. It's impressive today to think about the foresight they had 100 years ago.

### On the brink of disaster

Early in the 20<sup>th</sup> century, there was a general concern for the state of the Norwegian forests. It was assumed that harvesting was not sustainable and that the Norwegian forests were "... on the brink of disaster" ("*...med stormskridt mot undergangen*"), as



The report "Taksering av Norges skoger – I. Østfold fylke" (Survey of Norway's Forests – I. Østfold) is probably the world's first national forest inventory report. Photo: Lars Sandved Dalen, NIBIO.

Agnar Barth, later Professor in Forest Management at the Agricultural College of Norway, wrote in an article in 1916. Following up on Professor Barth's worries, in 2017 the Norwegian Parliament provided funding for the establishment of what later became the world's first national forest inventory.



## NFI 100 years, cont.

- The allocation of funds made it possible to start planning and hire people, and the first county was surveyed in 1919, Aksel Granhus, today's head of the Norwegian NFI explains.



Nils Vagstad: "Forest research and monitoring is a prerequisite for the sustainable management of our forest resources. In this regard, long-term time series are both extremely important and extremely valuable." Photo: Lars Sandved Dalen.

During the 1920s, only a few years after the establishment of the Norwegian NFI, Finland, Sweden and the USA followed suit, with similar inventory programmes. Finland carried out its first national forest inventory in 1921-1924, and Sweden followed with the launch of Riksskogstaxeringen in 1923.

### New tasks for an old institution

In the beginning, the national forest inventories were set up to answer the fundamental question: is there enough timber for future harvests? Nobody had reliable large-scale estimates on the forest growth and the sustainability of harvests. Overall, there was widespread fear for overexploitation. There was an urgent need for facts about the condition of Norway's forests.

During recent decades, data pertaining to topics other than simple cubic metre timber volume have become a part of the sampling for the national forest inventories. Assessments of forest health, biological diversity, and the forest's ability to absorb and store carbon are

all examples of new and important metrics for the national forest inventories. Societies' changing demands have made NFIs all over the world change with respect to the data that are collected and what methods are employed.

- Climate change, and the initiatives that have been taken during the last decade to reduce deforestation, such as REDD+, have also led to many developing countries establishing national forest inventory programmes, Granhus says.

Traditionally, forest inventories are based on field sampling. However, this is changing with the inclusion of auxiliary airborne or space-borne data sources.

- The greatest technological changes have been within the interplay between field measurements carried out by humans and remote sensing, i.e. measurements from satellites, airplanes and drones, Granhus explains.



Aksel Granhus: "During the last couple of decades metrics other than volume have become part of the national forest inventory 'menu', such as forest health, biodiversity, deforestation and carbon storage." Photo: Lars Sandved Dalen.

- And this is also our main goal with the 100<sup>th</sup> anniversary conference – to hear how the different countries collect their data and employ new technology and new methods – methods that can give us better and even more relevant information and knowledge about our forests in the years to come, Granhus says.

Christoph Kleinn, Professor in forest inventory and remote sensing at the Georg August University in



Christoph Kleinn: "How data are communicated to users and target groups determines how the data are used." Photo: Lars Sandved Dalen.

Göttingen in Germany, brought up the issue of how to communicate factual information from the NFIs. Christoph Kleinn addressed the traditional manner of thought that pervades NFIs all over the world – a naive belief that science, facts and fact-based knowledge will be able to affect policy in a one-to-one relationship.

- The very few studies that have been undertaken in this field show that it is of great importance to find good ways to disseminate knowledge about forests to politicians, NGOs and other actors, Kleinn argued.

### Theory and practice

Nevertheless, even though remote sensing and other auxiliary data sources are becoming an important part of NFIs, traditional fieldwork still makes up the cornerstone of the data acquisition – and there are different ways of collecting field data and setting up the field plots between different countries. The jubilee-conference, therefore, also included one day of field excursions, during which the participants were able to see the systems employed by the five Nordic countries – Norway, Finland, Sweden, Denmark and Iceland.

**Contact:** Lars Sandved Dalen,  
[Lars.Dalen@nibio.no](mailto:Lars.Dalen@nibio.no)

**Read more about the Norwegian NFI:**  
<https://www.nibio.no/en/news/national-forest-inventories-and-remote-sensing--better-information-better-decisions>

## Nordic Women in Forestry hold their first conference



Eighty women from Sweden, Norway and Iceland discussed forestry and gender at the conference. Photo: Mats Hannerz.

**Women own a significant proportion of forest properties, almost 40% in Sweden, but their representation in decision-making boards and as members of forestry staff is still low. Gender balance has a long way to go in the forest sector.**

One effort to break the “glass ceiling” is the newly established network *Nordiske Skogskvinner* (Nordic Women in Forestry), which met in July for its first conference in Jönköping, Sweden. The conference assembled about 80 participants from Sweden, Norway, Iceland and Austria.

### Transition to green economy

The three-day conference had a full programme with presentations from a broad range of speakers talking about the forest in the green transformation and the role of women in the forest sector. There were also excursions to meet entrepreneurs, forest owners and researchers in the field.

– The theme of this conference was “Forest as an income source”. It is important to emphasise that forest owners are also entrepreneurs. The forest has a unique role in the transition to a green bioeconomy, and this transition needs to engage both men and women, as well as senior and junior people, says Kerstin

Dafnäs, chair of the Swedish network Spillkråkan and part of the conference organising team.

### Gender matters

One of the speakers was Gun Lidestav, Associate Professor at SLU with a research focus on gender and forestry. She highlighted the role that women can play in the transition.

– Gender matters, she said. The timber stack is a male symbol of industrial forestry, but now we see the evolution of new services besides the timber stack. Here, women can contribute with new ideas and perspectives.

Gun Lidestav also called for a new view on the forest owner in the creation of the bioeconomy.

– The forest owner is mostly

invisible in the process leading to a consumer product. Compare this with efforts made in the food industry, where the farmer is often visible in advertisements. We need to remind consumers that their toilet paper or wooden flooring has a primary producer, she said.

Kerstin Dafnäs agrees with Gun Lidestav.

– The forest owner produces so many benefits for society: carbon sequestration, biodiversity, recreation and energy, besides the traditional roundwood products. We need to invent new ways to get paid for our work, and we need to make people aware of the services and goods we deliver. I believe that we will see several new niche markets develop, she says.

### Initiated in 2017

*Nordiske Skogskvinner* was an initiative presented to the Nordic



Gun Lidestav: “Women can contribute new ideas and perspectives.” Photo: Mats Hannerz.

### About Spillkråkan

*Spillkråka* is the Swedish name for the Black woodpecker, the largest woodpecker in the Nordic forests, and also a symbol of environmental focus in the forest sector. Spillkråkorna is an organization assembling women forest owners in Sweden. It was founded in 1998 and has about 400 members. [www.spillkrakan.se](http://www.spillkrakan.se)

### About NIKK

NIKK started out as an acronym for the Oslo-based resource and information centre Nordisk Institutt for Kunnskap om Kjønn (Norwegian for ‘the Nordic institute for knowledge about gender’). In 2011, following reorganisation efforts by the Nordic Council of Ministers, the Institute was closed. In 2012 its successor opened in Gothenburg, Sweden. The international name is Nordic Information on Gender. NIKK remains a Nordic co-operative body under the Nordic Council of Ministers. [www.nikk.no](http://www.nikk.no)

## Nordiske skogskvinner, cont.

Council in 2017 by the Norwegian network *Kvinner i skogbruket*. Established Swedish networks were soon involved in preparations, and also a group of women from Iceland.

– We were able to get funding for a pilot study from NIKK, (Nordic Information on Gender), a body under the Nordic Council of Ministers. A subsequent step was to plan for a more formalised network and a schedule of joint conferences, says Kerstin Dafnäs.

The planning for the conference took place in 2018, and funding was provided by *Jämställdhetsmyndigheten* in Sweden (Swedish Gender Equality Agency) and the foundation Seydlitz MP Bolagen. The conference will be repeated biannually, with the next one in Norway in 2021 with the theme Diversity in the forest sector.

Nordiske Skogskvinner has now become a Nordic network with members from Norway (*Kvinner i*

*skogbruket*), Sweden (*Spillkråkan* and *Skogskvinnorna i Värmland*) and Iceland (*Konur i skógi*).

– So far, there are no formalised networks for women forest owners in Finland and Denmark, but we are working on also involving these countries, says Kerstin Dafnäs.

– We also need to put figures on the gender balance, this is largely lacking from the forest statistics. We therefore look forward to the report initiated by SNS, which hopefully will be launched later this year, she says.

### Read more:

[www.nordiskeskogskvinner.org](http://www.nordiskeskogskvinner.org)

[www.kvinneriskogbruket.no](http://www.kvinneriskogbruket.no)

[www.spillkrakan.se](http://www.spillkrakan.se)

[www.skogskvinnorna.se](http://www.skogskvinnorna.se)

*Konur i skógi* (Iceland), Facebook group



Kerstin Dafnäs: "It is important to emphasise that forest owners are also entrepreneurs." Photo: Mats Hannerz.

### About "Gender balance in the Nordic Forest Sector"

A report initiated by SNS (Nordic Forest Research) is currently being compiled by a Nordic group of researchers led by Birger Vennesland, NIBIO in Norway. The aim is to report on the state of equality in the Nordic forest sector. News & Views will naturally report the results once the report is published.

## Book now for the Matchmaking Day in Iceland!

The next Matchmaking Day takes place in Reykjavik, Iceland, on 19<sup>th</sup> September. The day is dedicated to creative ideas for new joint projects together with other Nordic partners. An expert on innovation and business development will be there to boost the creative process. In the afternoon, there will be a field excursion to the famous Geysir and Gullfoss. The Matchmaking Day is open to all who are interested in Nordic research cooperation within the green sector.

The Matchmaking Day is jointly organised by SNS (Nordic Forest Research), Forest Bioeconomy Network (former EFINORD), NKJ (Nordic Joint Committee for Agricultural and Food Research) and NordGen Forest.

### Read more:

[www.nordicforestresearch.org](http://www.nordicforestresearch.org)



The Great Geysir is one of the most famous of Iceland's geysers. Eruptions at Geysir can hurl boiling water up to 70 metres in the air. Photo: Wikipedia commons.

## Contact News & Views

Write to the editor:

Mats Hannerz,

Silvinformation AB

[mats.hannerz@silvinformation.se](mailto:mats.hannerz@silvinformation.se)

More info about SNS:

[www.nordicforestresearch.org](http://www.nordicforestresearch.org)

News & Views is a newsletter from SNS containing short, popularized articles covering Nordic forest research and forestry. Articles presenting SNS-supported activities are prioritized. The newsletter is published eight times per year, and is available for download from the SNS and Scandinavian Journal of Forest Research websites.



News & Views is written, edited and produced by Mats Hannerz, Silvinformation AB