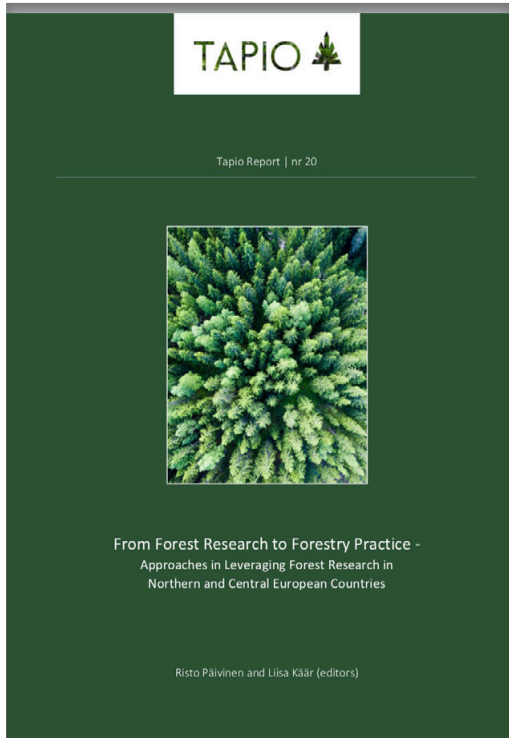


from Nordic Forest Research SNS



The knowledge transfer to decision makers as well as practice must be improved. The report from Tapio summarises the status in nine European countries. Photo: Mats Hannerz.

Better science–practice interaction needed

Forest-related decisions must be based on the best available scientific knowledge. But are they? And if not, how can the process of knowledge transfer be improved? These were key questions discussed at an SNS-supported workshop in Warsaw in May 2017.

The workshop “*Tools for improving science–practice interaction in forestry*” marked the start of a new network, aiming to speed up the process of turning research results into effective practical forestry applications. The presentations have been compiled in a report from Tapio, which includes contributions from nine countries.

In each country forest research contributes to the development of practical forest management through various processes and organisational arrangements, but international cooperation is lacking. This network

and the conference were intended to improve that.

Complex policy issues

So, what are the problems? Policy questions are often broad and complex. One single piece of research does not give the full picture. Another problem is that researchers feel obliged to report all reservations and preconditions for implementing their results. This confuses practitioners. A third problem is that researchers are not given credit for close collaboration with practitioners. Indeed, it may even be counterproductive for their reputation among other scientists.

Why isn't the process working well? In an opening article in the report, it is argued that the low and slow impact of research can be blamed on the “linear” model of communication. Single scientific facts are transmitted to policy makers, who, it is assumed, use them to solve policy problems. Instead, a more integrated approach

could deliver better results. Here, science and policy communities should interact. Probably the most well-known example of a science–policy interface is the International Panel on Climate Change (IPCC), but similar approaches are mostly lacking for other forest-related issues.

Are systematic reviews a solution?

Evidence-based decision making is a hot term, particularly used in the health sector. A key component of evidence-based decisions is the systematic review, a transparent and unbiased method to combine scientific results with different and sometimes contradictory messages.

Systematic reviews were introduced in medicine and public health almost 25 years ago. The mission was to promote evidence-informed health decision-making. Other



disciplines, such as social science and environmental research, followed.

Forest science has just entered the field, and one of the pioneers is Gillian Petrokofsky, who describes the phenomenon in an article in the report. The aim of a systematic review is to overcome problems inherent in single studies by looking more broadly at the literature in a strict, transparent procedure, without excluding conflicting findings.

A systematic review is not simply a bigger literature review, it may actually be smaller, but it is based on strict criteria about how to select the studies. It uses a highly formal approach, which avoids some of the inevitable bias associated with a narrative review. The systematic review supports decision-making by providing independent, unbiased and objective assessments of evidence.

Highlights from the Warsaw workshop:

One size does not fit all. Many platforms, networks and channels are needed for different audiences.

Feedback from practice to research could be better organised.

Forestry discussions on a national level are dominated by conservation and silviculture-related topics, leaving economics and policy behind, despite the need for them to be included.

The impact of communication is related to its quality. Researchers must learn to become good communicators, and fully employ modern communication tools.

A common European platform and international cooperation are necessary for bringing forest science to bear on practical forestry.

Download the report:

Päivinen, R. & Käär, L. (eds.), 2017. From Forest Research to Forestry Practice. Approaches in leveraging forest research in northern and central European countries. Tapio Report No. 20. 96 p.

The network *Improving the Effectiveness of Forest Research Results* will continue with a workshop in Ås, Norway, in May 2018.

Network contact: Liisa Käär, liisa.kaar@tapio.fi

Gillian Petrokofsky: "The purpose of a systematic review is to provide the best available evidence on the likely outcomes of various actions and, if the evidence is unavailable, to highlight evidence gaps."

Shortcuts from Nordic-Baltic forest research

Finland: 113 cubic metres per hectare

That is the average standing volume on forest land in Finland, according to the most current national forest inventory (VMI12 for the period 2014-2016). The average annual growth is 4.8 cubic metres per hectare. Scots pine constitutes 50%, Norway spruce 30% and deciduous trees 20% of the species present.

Source www.luke.fi

Estonia: The mystery of leaf size cracked

Why are leaves generally larger in the tropical jungles and smaller in the north? Professor Ülo Niinemets from the Estonian University of Life Sciences is one of the co-authors of an article, which appeared in *Science*. An international research team analysed leaves from 7,600 species and were able to establish a series of equations that can predict the maximum viable leaf size anywhere in the world based on the risk of daytime overheating and night-time freezing. They showed that the risk of damage by frost at night is an important driver.

The paper: Wright, I. J. et al. 2017. *Global climatic drivers of leaf size. Science* 357, 917-921.

Source: www.emu.ee

Norway: Subalpine fir popular for Christmas

Norwegian producers and researchers have seen a growing interest in using subalpine fir (*Abies lasiocarpa*) as a Christmas tree. There is a trend for Norwegian households to take their trees indoors long before Christmas. Many travel away during the holidays and want to enjoy the green decoration for a longer period. Subalpine fir does not drop its needles as quickly as the domestic Norway spruce. The latter tree species is declining in popularity, but has still a share of 40% of the sold Christmas trees on Østlandet.

Source: www.nibio.no

Iceland: Forest film recognised by National Geographic

A five-minute film describes the comeback of forests in Iceland, a land still mostly treeless. The film "*Afforesting Iceland – a cause for optimism*" was produced as part of the EUFORGEN programme. Thröstur Eysteinson, Director at Iceland Forest Service guides the audience through the film.

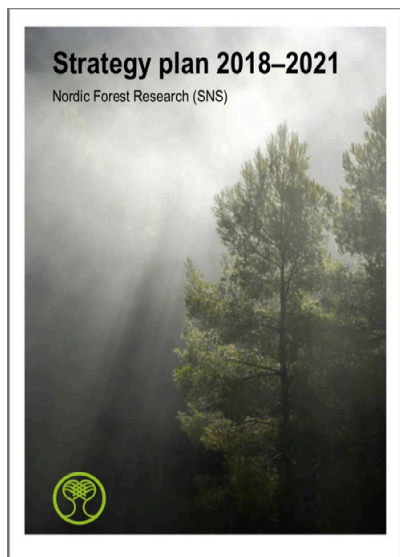
The film is highlighted in the National Geographic Short Film Showcase, where editors select exceptional short films from around the world.

Source: www.skogur.is and www.nationalgeographic.com



The reforestation on Iceland is summarised in a five-minute film.

In the new strategy: Equality and social inclusion



The strategy plan.

The SNS strategy plan sets out the frameworks for activities and support for a four-year period. The 2018-2021 plan was agreed by the SNS board at a meeting in October 2017.

Three focus areas:

- Meeting the demands of sustainable forest management in a growing bioeconomy
- Maintenance and increased utilisation of ecosystem services
- Climate change adaptation and mitigation.

Five tools to achieve the goals:

- **Funding.** SNS will prioritise funding of activities which aim to decrease the gap between research and applied forestry, facilitating the transfer of knowledge into practice.
- **Equality and social inclusion.** Improving gender equality and social inclusion ensures that equality becomes a regular feature of work in the Nordic forest sector. Gender equality is necessary to achieve well-functioning organisations with the ability to recruit competence

from the whole labour market. Gender work has been shown to spill over into other equality aspects, such as nationality and age. An equal sector will be more attractive, competitive and will simplify social inclusion and integration of new citizens.

- **Collaboration.** SNS has a role in strengthening collaboration that cannot be achieved through national funding sources. The collaboration will target Nordic stakeholders and institutions, as well as the EU and global organisations such as IUFRO and IBFRA.
- **Policy support and advice.** A major part of the SNS mission is to link research and policy, for example by providing Nordic countries and the Nordic Council of Ministers with targeted policy advice.
- **Communication.** SNS facilitates communication between researchers and policy-makers by organising meetings, funding network activities, and also via its website, newsletter and social media. The Policy Briefings will be continued to be an important tool to communicate research outcomes and network activities.

Download the strategy plan:
www.nordicforestresearch.org

From the Strategy plan 2018-2021:

The key components of SNS's mission are to encourage, coordinate and enhance Nordic research efforts, to raise the international profile of Nordic forest research, and to actively participate in European forest policy and research.

Shortcuts

Sweden and Norway: Borderless cooperation on game management

A new project *Grenslevilt* will improve the management of moose, wolves and wolverine in the extensive forests of Scandinavia, including forests in both Norway and Sweden. The 2.4 Million Euro project will run for 3 years as a collaboration between the Swedish University of Agricultural Sciences and the Inland Norway University (INN). The major part of the funding comes from EU Interreg.

INN was established in 2017 after a merger between Hedmark University of Applied Sciences and Lillehammer University College.

Read more: www.slu.se (search for *Grenslevilt*)

Norway: 2.9 % protected forest

In total 4,891 km² of forest is protected in Norway, 4 percent of the forested area. The proportion is lower in productive forest (2.9%) and higher in forest with limited productivity (6.7%). The figures are based on the national forest inventory in Norway (*Landskogtakseringen*), which measures 13,000 plots belonging both to protected and managed forests.

Source: www.nibio.no

Denmark: Knowledge transfer service celebrates 25 years

Forest research in Denmark continues to be communicated to end-users through the series *Videntjenesten*. The first issue was launched in 1992, now 25 years ago. Those who subscribe to *Videntjenesten* represent a wide range of users, including municipalities, landscape architects, forest owners, Christmas tree growers and students. Research results relevant for forestry, landscape and urban planning are made available to non-experts through the series *Videblade*. A subscription to *Videntjenesten* also gives access to expert advice.

Read more: <http://videntjenesten.ku.dk/>

Global deforestation in the past, present and future



The estimates of the global deforestation vary widely, but the speed of deforestation tends to go DOWN. Photo: Mats Hannerz.

A look to the future follows a historical review of deforestation in a recent report from the Swedish University of Agricultural Sciences. Reidar Persson, working with the global forest situation since 1968, has written the comprehensive report.

Some key points:

- Officially, the global forest area totals 4 billion hectares, but there are different definitions, giving figures from 1 to 7 billion hectares!
- Historically, 30-40 % of the forests have been lost.
- Gross deforestation is about 9 million hectares per year, and the net deforestation about 3 million hectares, which is 0.1 % of the total forest area. Both gross and net deforestation are tending to go down. On the other hand, definitions vary, and there are arguments suggesting a deforestation level of zero hectares as well as 50 million hectares per year.
- The main reasons for deforestation have historically been population

growth and clearing for agriculture, but in recent times the causes are much more complicated. Driving forces are often economic – land use change may be more profitable than maintaining the forest.

- Deforestation has stopped in most developed countries, and decreased in some of the developing countries.
- There are no quick fixes for deforestation problems. Many political attempts and UN-processes have been ongoing but the results are limited. The effects of REDD+ have often been overestimated. The author argues that economic forces seem to work in a way that will reduce deforestation no matter what we try to do politically.

The report (written in Swedish but with an English abstract) can be downloaded from SIFI's website, www.sifi.se:

Reidar Persson, 2017, Den globala avskogningen - I går, i dag och i morgon. SLU, Dept of Forest Products, Report No 24.

NordPlant: Cooperation for future forest production

Five Nordic universities are cooperating in the NordPlant consortium with the aim of tackling the challenges of future Nordic climate change on forest and agricultural production. There is pressure to adapt crops to new conditions, for example warmer and wetter summers. Climate modelling and plant phenomics are part of the project. Phenomics is a field of research that studies the interactions between genotypes, phenotypes and the environment.

The project: NordPlant – A climate and plant phenomics hub for sustainable agriculture and forest production in future Nordic climates.

Read more: www.nordforsk.org



Time to apply for scholarship

NordGen and SNS has announced a call for scholarships available for young students or professionals working with forest management. Deadline for application is 15 February.

Read more on SNS webpage, www.nordicforestresearch.org

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More info about SNS:

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.



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