



The international gender conference in Umeå in 2009 discussing silviculture. Photo: Ivar Palo.

Gender research needs a Nordic perspective

– The Nordic forestry sector is doing rather well from an international perspective. However, we still have a long way to go before we reach equality between men and women. Men outnumber women, and the culture is very masculine, says Gun Lidestav.

Gun Lidestav at the Swedish University of Agricultural Sciences, Umeå, is one of the few Nordic forest researchers with a particular focus on gender issues. She is convinced that there will be a shift towards greater equality, but the question is how long this will take.

– The number of female forestry students in Sweden has increased, but there are still only about 30% on the Forest Science MSc programme and 10% on the Forest Management BSc programme. Even if every forestry post that needed to be filled was given to a woman, it would take decades before there was no gender bias, she says.

Recent statistics on gender balance in Nordic forestry are insufficient and it is difficult to compare between countries. A survey in the early 2000s showed that only 7% of the employees in Swedish forestry were women. In 2006, 11% of the forestry posts in the Norwegian Forestry Service were occupied by women. Finland reports that about a quarter of their foresters are women, but they still experience



more gender-related problems on the job than their male colleagues.

This imbalance has implications for individuals, companies and for society. Gun Lidestav notes five reasons why gender equality should be addressed.

- 1. Justice.** If we consider that all people should have equal rights, we can't accept one gender being mistreated.
- 2. Legitimacy.** A company that does not employ equal numbers of each gender will face image problems.
- 3. Competence.** An organisation with a hegemonic masculine culture will have problems attracting not only highly competent women, but also men.
- 4. Efficiency.** Gender-mixed organisations have been shown to be more efficient. →

"Forestry is just as much about people as it is about trees", says Gun Lidestav.

Photo: Calle Bredberg

5. Business and the market. To compete for customers, who nowadays are often women, companies must have sales staff and purchasers with whom the customer can identify.

Closer Nordic cooperation

Gun Lidestav is a network builder, and has been leading the IUFRO network Gender in Forestry. She is also coordinating the SNS-supported network Nordic Network on Gender Research in Forestry. The Nordic network has had a lower profile recently, which Gun Lidestav regrets. She argues for a more active Nordic cooperation.

– Gender issues are typically much more in focus in the international arena, particularly in the developing countries, she says. We may have become less biased in the industrialised countries, but we still have work to do. In particular, the Nordic countries would benefit from regional co-operation.

The Nordic countries are all welfare states, with a similar culture and politics. They are also highly dependent on natural resources.

– Some time has passed since we had a joint project or workshop, she admits. She hopes, inter alia, to expand a current research school to the Nordic level. The school is focused on rural development, and includes gender issues as an important component.

One reason for the limited Nordic cooperation is the low number of researchers directly involved in gender issues. Gun Lidestav also notes that there are different viewpoints in the Nordic countries.

– In Norway, gender research in forestry is basically derived from rural sociology and anthropology; in Finland there has been more of a human-geography approach. Swedish research has, in most cases, developed from forest management and work studies. This situation could, however, be advantageous, she says, since we could weld different disciplines together.

Finally, what does Gun Lidestav hope for in the future as a gender researcher?

– The commitment to implement gender mainstreaming, taken at the

UN Women's Conference in Beijing in 1995, indicates that the integration of gender equality should permeate all major policy and decision-making processes. This way of thinking is slowly increasing on the higher political level, at least in Sweden, but there is still a long way to go in academia and within the scientific community. Since forestry is just as much about people as it is about trees, gender issues and gender perspectives should be considered much more, for example at research conferences.

Masculinity studies

– Another wish is for funding to be made available for masculinity studies, since men and masculine attitudes are predominant features of forestry culture. Through such research we could, for example, develop strategies for dealing with problems of recruiting skilled new forest machinery operators (both women and men).

Shortcuts

Carbon in forest soils

About 9 billion trees bind together more than 800 million tonnes of CO₂ in the Norwegian forests, and every year 26 million tonnes are sequestered through photosynthesis. The Norwegian National Forest Inventory is able to exert control of the resources above the ground, but the amount of carbon in the soil is unknown. Estimates suggest that there is several times more carbon below the surface than in the trees above it. Annual turnover belowground is only about one percent, but it still constitutes an important component of the carbon emission budget.

Forest and Landscape Norway will start to monitor carbon in the soil. Initially, models will be developed. The subsequent soil sampling will be an enormous undertaking, with an annual collection of thousands of soil samples.

Source: www.skogoglandskap.no

New theory for expansion of evergreens

Evergreen trees and bushes have expanded at the expense of deciduous forest in several ecosystems of the world. The expansion has so far been explained by global warming and higher temperatures, but the causal relationships have been questioned. Now, Professor Ülo Niinemets from the Estonian University of Life Sciences proposes, together with Spanish colleagues, a new hypothesis for the increased competitiveness of evergreens – an increase of atmospheric CO₂ itself can be responsible.

Evergreen leaves contain more structural tissue not involved in photosynthesis, and the cells are more densely packed with thicker cell walls, compared to deciduous leaves. Due to their more robust structure, the CO₂ diffusion into chloroplasts, where photosynthesis takes place, is limited to a greater degree. Consequently,

CO₂ limits photosynthesis more than in deciduous plants. Thus, the increase in ambient CO₂-concentration enhances the photosynthesis of evergreens more than in deciduous species.

The hypothesis is published in the top journal in ecology: *Trends in Ecology & Evolution*.

Source: www.emu.ee



Three new projects supported by SNS

1. Looking under the canopy – what is preferred?

Recreation is one important service provided by the Nordic forests. Which type of forest people prefer is, therefore, an important question, and extensive preference studies have been being carried out for almost four decades – but only for trees, not for the field layer.

Earlier studies have focused on trees and other above-ground features, while the field layer characteristics have received little attention. Nevertheless, the recreational and scenic values of a forest may be greatly affected by what grows on the forest floor.

Young forests with relatively species-poor field layers are increasing, and they tend to dominate in urban areas. A better knowledge of preferences for types of field layers, with respect to different recreational uses, could help forest management,

particularly in urban areas where special measures could be taken.

Research into this subject is now being carried out by a new SNS-supported project, which will evaluate forest preferences as affected by field layer characteristics and if this varies between the Nordic countries.

A questionnaire survey will be conducted, in which respondents will be asked to rank photos of different

forest types. The photos will differ with respect to a single factor – the field layer characteristics.

The studies will focus on young, middle-aged and mature oak forests without an understorey, and mixed hardwood forest with an understorey. These forest types represent typical stands found in urban forests in Denmark and the nemoral and boreonemoral zones of Norway, Sweden and Finland.

The project runs for three years, and includes partners from Sweden (SLU), Denmark (Forest & Landscape) and Norway (Norwegian Institute for Nature Research).

Project title: Forest preferences as affected by field layer characteristics

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Preferred field layer? Photo: Anders Busse Nielsen.

2. How to communicate environmental credentials of wood?

What is an environmentally-friendly wood product? The answer will vary among different end-users, depending on their attitudes and how the issues are communicated. Industrial consumers may also have different views on environmental labelling.

Environmental performance measures (EPM) provide information for benchmarking wood products against substitutes and for communicating environmental information to the market and stakeholders (such as the general public and investors).

The importance, but also the number, of EPMs is increasing. But which is the most important? And which should be communicated to an end-user of a doorframe? Or to a

furniture industry processing the raw wood material?

An SNS-supported pilot project will review the EPMs currently applied in the wood working industry and in the industries they supply material for. It will also compare EPMs with

other environmental indicators that are generally used among different customer groups and other influential stakeholders, such as ethical funds, ENGOs and government agencies.

The pilot study covers the Scandinavian situation, and may become a basis for a larger project at a European level.

Partners in the project come from Sweden (SLU), Finland (Metla and University of Helsinki) and Norway (Tretknisk). The project will be completed in 2011.

Project title: Improving market communication of wood product's environmental values.

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Environmental friendly wood product? Photo: Mats Hannerz

3. Forests are leaching – but how much?

The Baltic Sea receives very high loads of nitrogen and phosphorous from the surrounding land and from atmospheric deposition. The loads are at least partly responsible for the algal blooms that occur every summer.

Leaching from forests is one source of nutrient loads in water systems. The level of leaching is low when assessed per hectare, but the total area of forested land around the Baltic Sea is large. According to FAO definitions, forests and woodland occupy 71 million hectares in the Nordic-Baltic region.

Background leakage and the effects of various forest management regimes have been examined in a large number of plot-based experiments and run-off studies in catchments throughout the region. A new SNS-supported project aims to compile this mass of information in order to quantify the leaching of carbon, nitrogen and phosphorous. With a meta-analysis* including both published and unpublished data, background leaching and losses associated with various forest management operations (clear felling, site preparation, ditching and ditch cleaning) can be described.

Corresponding meta-analyses have been carried out in North America.

** Meta-analysis refers to the use of statistical methods to summarise research findings across studies.*

In central Europe, the effects of N deposition on N-leaching have been studied in detail. However, the findings from these studies cannot be directly applied to Nordic/Baltic conditions.

The project has its base in the SNS-funded project Centre for Advanced Research – Environmental Service (CAR-ES), and involves experts from all Nordic countries, Latvia and Lithuania. Their total source of data corresponds to a meta-database of 137 catchment studies, 59 plot studies and more than 200 monitoring sites. Studies of nitrogen and phosphorous leaching have been reported in more than 55 publications, and still more are to be published. The project will test four hypotheses:

1. The per-hectare leaching of N and P decreases with increasing latitude,

and the relative importance of organic N compared to inorganic increases with increasing latitude.

2. C, N and P leaching increases with increasing peatland coverage.

3. Nutrient-rich sites exhibit higher rates of N and P leaching than nutrient-poor sites.

4. N leaching is, to a large degree, driven by N deposition; site quality is the second most important factor.

The project started in 2011, and will finish at the end of 2013.

Project title: Leaching of carbon, nitrogen and phosphorus from forest land in the Nordic and Baltic countries.

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How much is leaching from the forest?
Photo: Mats Hannerz



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www.nordicforestresearch.org

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