News and Views 5 2000

"Local change" and the Swedish forest

We often talk about "global change" these days. The general belief among experts is that the global temperature will rise on average by 2 to 3 ° C in the next century.

But the change will vary between regions. It is believed that the northern hemisphere will be influenced more by the warming than the southern hemisphere.

SweClim, a climate research program, has produced a regional scenario for Sweden. The regional prognosis has been generated from the same model as the global predictions, but at a higher resolution.

4 to 5 degrees warmer in Sweden

In the scenario, the experts have assumed a rise in temperature of 4 to 5 degrees in 50 to 100 years. These results were presented at a conference in Stockholm recently.

A major part of the conference was focusing on the hydrological implications, and the risk of extensive flooding from reservoirs linked to hydro-electric production in northern Sweden.

But the forests were also on the agenda. Göran Örlander, head of silviculture at The National Board of Forestry, presented four forestry-related topics:

1. Today's regeneration material still relevant

There is no acute need for new recommendations for regeneration material. The first few years after the planting comprise the most sensitive period for the plants. And the first vulnerable years of the seedlings we plant today will be spent in today's climate.

2. Increased forest growth

A warmer climate is expected to increase forest growth by some 10 to 30% due to the vegetation period lengthening.

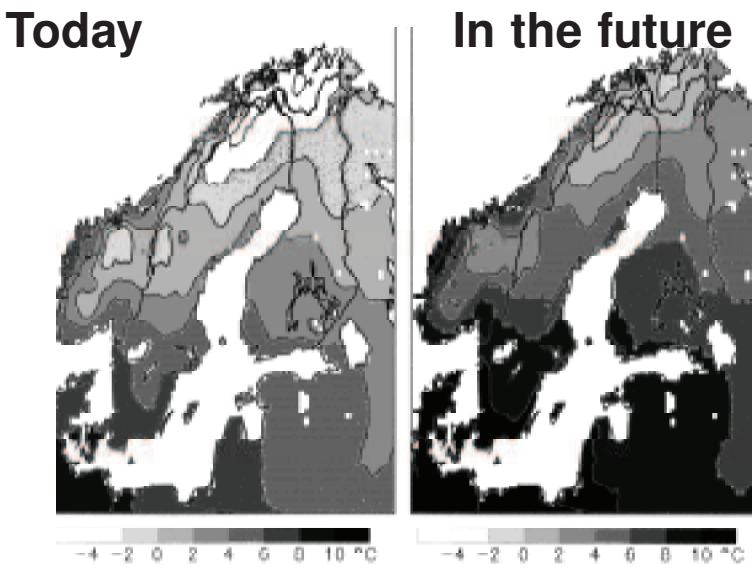
3. Managed forest a carbon sink

A growing forest is a sink for carbon dioxide, as long as carbon is stored in living and dead trees and in the soil. But a managed forest is also a sink for carbon dioxide, that is, if wood products are used instead of steel, aluminium and concrete – materials which all demand a high input of energy input to produce, and a corresponding output of carbon dioxide output.

4. Forestry "not guilty" of flooding

This summer central Sweden was hit by extensive flooding due to heavy rainfall. In the mass media, forestry was accused of contributing to the flooding. Ditching and clear-cuttings were supposed to have accelerated the throughput of the water. But according to Göran Örlander this was not true. Ditching in the forest has no clear effect on the risk for flooding. Moreover, in Sweden ditching has almost totally ceased for the last ten years, and the clear-cut area is a very limited part of the landscape.

Prof. Göran Örlander, Head of Silviculture at the National Board of Forestry, said that a warmer climate may increase forest growth.



The "new" climate in Sweden. The mean annual temperature today and in the scenario for year 2100.

Prize to Pro Silva Denmark

The Danish Forest Association has awarded Pro Silva Denmark its annual "Forest prize".

Pro Silva is an organisation that encourages "close to Nature" forestry. It is a non-political association, and a forum for a lot of people interested in forestry.

It is a popular organisation. Their meetings often attract more than 100 people, ranging from forest owners, foresters, "ordinary citizens" and officials, researchers and practitioners.

Forestry which follows their guidelines will, according to the organisation, both increase profitability and diversity – a win-win situation.

Source: SKOVEN x 2000

Some key-words for Pro Silva

- Maintaining site productivity
- Continuous forest cover
- Natural regeneration
- Minimisation of regeneration costs
- Variation and spreading of risks
- Use of tree species adapted to the site
- Single-tree management
- Production of trees with high timber quality
- Minimisation of the production of small trees
- Vitality and stability

Naturally regenerated spruce. Silviculture in line with Pro Silva guidelines.

Interactive Forestry CD for schools

My forest!

"You will inherit my forest. That is my last will and testament. But first, you must learn to manage the property". This is the game plan for a new interactive CD-ROM, released by the Swedish "Forest in School-project".

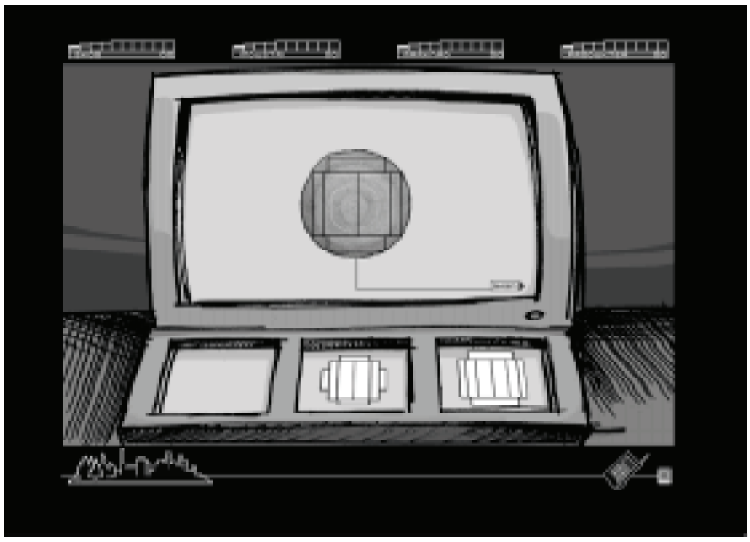
Forestry, industry and market

The CD is primarily designed for pupils in their early teens. It covers three main areas: forestry, forest industries and the market. The potential heir must learn how to manage a forest, process the timber and sell the products.

To get his/her property, the heir must finally answer a number of questions. If correct, the 300-hectare-property is his/hers.

Learn to thin

In the forestry-section, the heirs have to do an appropriate thinning and decide which trees to take away and which trees to leave for further growth.



From the multimedia: The pontial heir must decide how to saw up the log to get the best economcial output.

The heir must also handle a harvester– and decide how to buck the trees into sawlogs and pulp-wood for optimal economic output.

Make the best of a log

In the sawmill, the potential heir must find optimal settings for the saw-blades, to get as much money as possible from each single log. In the pulp-mill, he/she must decide what chemicals, temperature and time is needed to optimise the process.

Finally, the heir must meet the market and actively sell the products from the sawmill.

On the CD, there is also a library, where the student can find more information.

New instrument for biodiversity

Environmental registration in the forest

Endangered, red-listed species are not clustered in the landscape. On the contrary, they are quite evenly distributed throughout the old forests. This is an important finding from the Norwegian MIS project (an acronym for the Norwegian words for Environmental Registration in the Forest).

In the project, six inventory sites in different parts of Norway were carefully examined. Each site covered 140 to 200 hectares. Furthermore, a number of study-plots in nine test-districts were registered.

60% of older stands with redlisted species

The inventory showed that more than 60% of the older stands have one or more red-listed species. Hence, a single finding of a red-listed species is not automatically a criterion for protection or special care of a stand. Especially not if the species found is of the lowest class in the red-list.

Complementary biotopes

Since the species are not clustered, protection of a few selected "key habitat biotopes", is not an efficient way of promoting biodiversity in a landscape. The project instead recommends protecting "complementary biotopes" to safeguard habitats for a broad spectrum of species.

"Dead wood on a wet, rich site" is one example of a biotope in the MIS guide. A "dry and poor rock-face" is another. Naturally, the species living in the first biotope are quite different from those in the other.

For incorporation in forest-management planning

By protecting a sufficient number of different biotopes in a landscape, it is possible to cover a wider range of red-listed species than merely by protecting a number of stands with similar properties.

One of the study areas. Old forests appear darker than young. White spots show the number of redlisted species found per inventoried plot.

It is recommended that the MIS guide should be incorporated in standard forest-management planning regimes. The focus of the MIS-registration should be on older, mature stands.

Source: Skoven? 6/2000

Scandinavian Journal of Forest Research in Kuala Lumpur

In connection with the 21st IUFRO world congress in Kuala Lumpur, there was an exhibition in which Scandinavian Journal of Forest Research took part. The objective was to promote the journal and, ultimately, increase the number of subscriptions.

According to the publisher, a lot of delegates visited the exhibition stand, there was strong interest in the journal, and a large number of Author's Instructions were given out. One can anticipate a number of papers from congress delegates.

There was also a "win a free year's subscription contest". The two winners were:

- M. Ghazali Hasan, Forest Research Institute, Malaysia
- Oscar Bustos, Forest Engineering Department, Talca, Chile

Picture of the Scandinavian Journal exhibition stand in Kuala Lumpur taken early in the morning. Half an hour later the stand was surrounded by delegates.

New Director of EFI

The Board of The European Forest Institute (EFI) has appointed Dr. Risto Päivinen, Finland, as the new Director of the institute. He will begin his term of office on 1 October 2000.

Dr. Päivinen has been Deputy Director of the Institute since its establishment in 1993.

Dr. Päivinen has extensive experience in international forestry. His field of expertise is forest inventory and monitoring, especially remote sensing applications, as well as management planning and information systems in forestry.

In addition to his role as Deputy Director of EFI, Dr. Päivinen is also professor of Forest Mensuration at the University of Joensuu, and co-ordinator of the Global Forest Information Service of IUFRO.

The European Forest Institute is an independent, non-governmental research body conducting forest research at the pan-European level. The Institute is based in Joensuu, Finland. The Institute has currently 133 members from 35 countries, and is steered by an international Board and a Scientific Advisory Board.

Dr. Risto Päivinen

Denmark

Commission seeks way to lower regeneration costs

At the initiative of the Centre for Forest, Landscape and Planning, a "commission for forest regeneration" has been appointed. The objective is tough: to find ways to reduce the cost of forest regeneration substantially within five years, without jeopardising timber quality.

Low profitability

The background to the commission is the low profitability in Danish forestry - in combination with the extensive windfalls in many of the country's Norwegian spruce stands.

According to the chairman of the commission, Esben Møller Madsen, it is not a question of lowering the number of stems in the young stands. The challenge is to find ways to get more plants but at a lower cost.

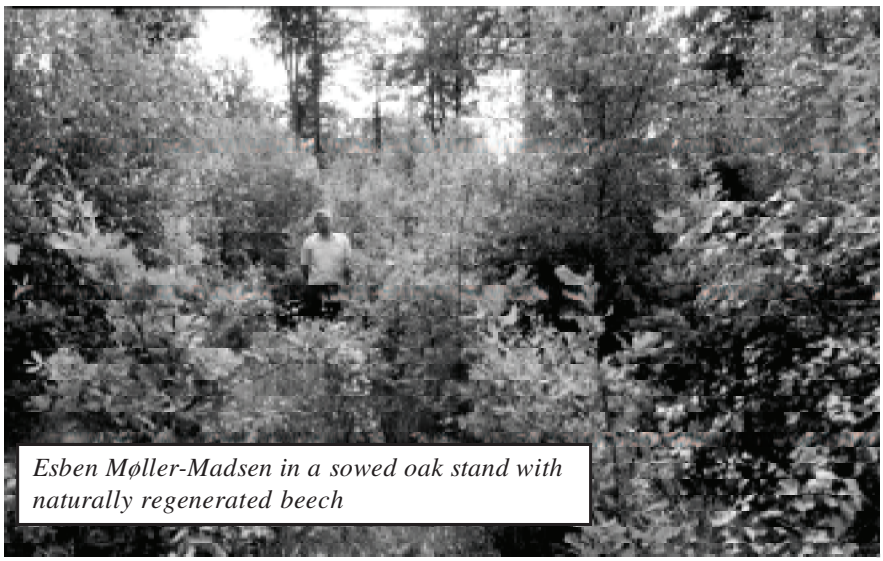
Local experience

It is primarily not a research task. It is more a matter of co-ordinating all the local knowledge and experience there is among foresters and forest owners in Denmark. To gather and make public results from all the "small-scale" trials carried out by forest owners.

In an article in the Danish newspaper SKOVEN, Esben Möller Madsen points out a number of ways to reduce regeneration costs:

- More effective production in the nurseries can give cheaper seedlings
- The use of nurse stands is an old, well-tried, but today almost forgotten, method to prepare a site for forthcoming regeneration.
- Sowing is an attractive possibility for reducing regeneration costs and at the same time increasing the number of seedlings.

Source: SKOVEN 8 2000



Esben Møller-Madsen in a sowed oak stand with naturally regenerated beech

Tim Peck Young Scientist Award given to Gert-Jan Nabuurs

The Foundation of the European Forest Institute (EFI) has awarded Mr. Gert-Jan Nabuurs, The Netherlands, the Tim Peck Young Scientist Award.

The Tim Peck Young Scientist Award is given annually to a young scientist who has made or is making a significant contribution to research in the field of forestry and forest industries.

Scenario modelling

Mr. Nabuurs has made a major contribution to forest scenario modelling. Many changes are taking place in the external conditions that influence forest dynamics and the possible future uses of forests. Scenario modelling is of growing importance in analysing alternative management strategies and in assessing the consequences of different management alternatives.

Mr. Nabuurs has been the leading force in the development of a large-scale scenario model, EFISCEN, which is a joint effort between the European Forest Institute and the Alterra institute in the Netherlands.

EFISCEN has a European scope, but it has also had several applications at the regional level. The model can be used for evaluating 'what if' scenarios for the future development of forests under alternative management regimes. The model has also been used for assessing the impact of climate changes on carbon budgets of European forests.

Carbon balance

In addition to scenario studies Mr. Nabuurs has been involved in a wide range of activities related to the study of the carbon balance of forests and the role of forests in mitigating climate change. Among other things, he is a lead author of the Intergovernmental Panel of Climate Change (IPCC) Special Report on Land-Use, Land-Use Change and Forestry.

Finnish researcher leads IUFRO

Prof. Risto Seppälä, from Metla, has been made President of the International Union of Forest Research Organizations (IUFRO). The post is for five years. The appointment was announced at the IUFRO XXI World Congress in Kuala Lumpur, Malaysia. He has earlier acted as vice-president of the organisation.

Prof. Seppälä is research professor at the Finnish Forest Research Institute (Metla). He has been working on

- policy analysis and long-term strategic problems of forestry and the forest industry
- systems analysis and modelling of the forest sector
- roundwood markets and wood supply
- forest research policy
- sampling methods and their applications in forest research.

Need for more member organisations

In his inaugural speech, Prof. Seppälä, emphasised an important task for IUFRO for the forthcoming five years: to increase the number of member organisations. Just one example: according to a recent study of the European Forest Institute, there are in Western Europe alone more than a thousand institutions dealing with forest-related research. Out of these only 176 are IUFRO members. Prof. Seppälä's guess was that the situation was similar in other parts of the world. Thus, there is a huge potential for growth.

IUFRO has now some 680 member organizations, which provide its basic funding. In recent years IUFRO has also received new members, but at the same time too many of the old

members are no longer able or willing to pay their fees. When IUFRO loses a member organization, it also often loses its associated scientists because it is troublesome and expensive for individuals to become IUFRO members.

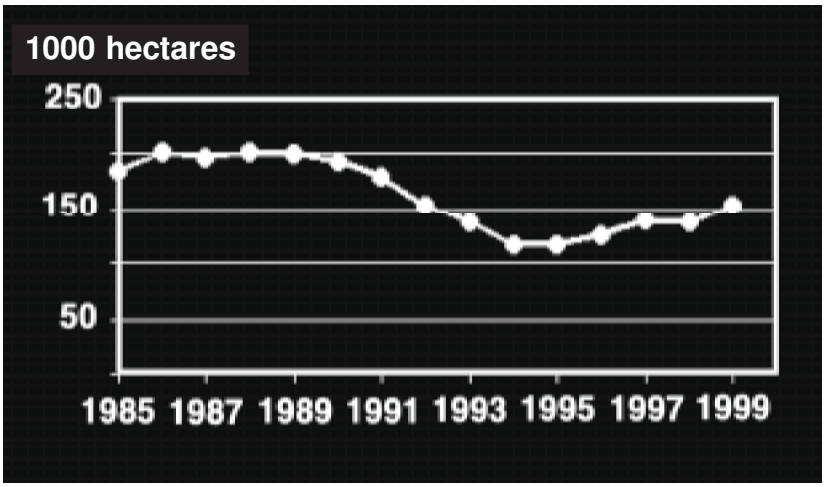
Increasing the planting area in Sweden

In 1999 more than 150.000 hectares were planted in Sweden. This was a 12% increase compared with the previous year. The annual area has risen by almost 50% since the low point in 1994–1995.

But still there is a long way to go to reclaim the high levels seen in the late 1980s, when over 200.000 hectares were planted annually.

Restocking of blanks is, however, still decreasing, and the 1999 restocking figure was the lowest of the last decade.

Source: National Board of Forestry, Sweden



Danish forest more healthy

The Danish forests are getting more and more healthy. Ninety percent of the coniferous trees and 81 percent of the hardwood trees were classified as healthy in 1999. These are the best figures for several years. This is probably an effect of the favourable weather in 1999 (Apart from the hurricane!). Both the winter and summer were warm and rainy.

Source: SNS May 2000

20,000 learned about forest

In Denmark, there is an annual event called "Forest Day", inviting the public to learn more about forests and forestry. "The new forest" was the topic this year, showing both plant´-ings on former arable land and forests re-planted after the devastating hurricane in December 1999. The Forest Day attracted, in total, more than 20,000 people to 65 different excursion sites.

Source: SNS May 2000

Per Angelstam Awarded

The Swedish researcher Dr. Per Angelstam was one of ten people receiving IUFRO Scientific Achievement Awards at a global conference in Kuala Lumpur in August.

Per Angelstam is an ecologist, working with strategies to enhance biodiversity in the forest.

One of his important contributions is a model for a forestry model simulating the effects of natural disturbances, primarily forest-fires. The hypohtesis is that species living in ecosystems affected by frequent fires are more resilient following disturbances such as clear-cuttings, than species on wetter sites. Hence, there is an extra need for a precautious, "close-to-Nature" forestry practices on wetter sites.

Letters to the editors

Send your letter to
SNS, secretariat
SJFR.
P.O. Box 6488
SE-113 82 STOCKHOLM. SWEDEN
sns@sjfr.se

We strongly encourage our readers to contribute to a lively and interesting journal. Letters to the News & Views section will be published if they are:

- short
- relevant to the Journal
- interesting for the readers.

Examples: comments on papers published in the Journal, views on ongoing research, trends in research policy, opinion about forestry practice etc.

News & Views is edited by Areca Information AB. **Contact:** Carl Henrik Palmér. chp@areca.se