



Before the previous "creative destruction" in Nordic forestry. Tar production vanished totally in the beginning of the 2000-th century. Photo: SLU, Forest Library

"Creative destruction" in Finland's forest sector

The forest sector in Finland is in a state of change, which resembles the restructuring that took place in the late 19th century. At that time, tar production vanished and pulp and paper production emerged.

Metla's senior researcher Lauri Hetemäki argues that a similar transformation is taking place in Finland of today, but it is the paper industry that will decrease while other products and services will arise.

The importance of the traditional forest industry has decreased over the last few decades. In 1990, the forest industry accounted for over a third of the total value of Finnish exports, and the industry employed 102,000 people directly. The corresponding figures today are less than half of these. The forest industry accounts for only two per cent of Finland's total employment.



Lauri Hetemäki, METLA

The Finnish forest industry is in a stage of "creative destruction", according to Hetemäki. And Finland is not alone, similar changes are seen in Sweden and North America.

The concept "creative destruction" was founded by Joseph Schumpeter in 1942. It refers to the transformation when an established economic structure is destroyed by the emergence of a new, improved structure.

Paper industry a loser

The destructive process will in the first hand strike the paper industry, we already see decreasing demand for paper and closed industries. Other

branches may come out better, such as the packaging industry and the wood products industry.

Tomorrow's winners

What are the new opportunities that will emerge instead? Hetemäki points at wood-based energy production and chemical products. An example could be forest biorefineries making biodiesel in conjunction with integrated pulp-and-paper mills.

Another new market for the forests may be the creation of wealth through services instead of through wood processing. The demand for forest-related tourism and recreation services is expected to grow fast.

The creative destruction will have both winners and losers. The harmful effects of the destruction could be slowed down by policy measures, but its direction can probably not be changed.

Read more: www.metla.fi

New rules from 2010

Swedish funding requires open access

The Swedish Research Council ("Vetenskapsrådet"), the largest financier of basic research in Sweden, promotes open access.

From 2010, all publications with funding from the council must be published with open access on the internet, which means that the research results will be free for everyone to download and read. A researcher may either archive published articles in open databases, or publish in journals which practice open access.

Other councils have also decided to support the *Berlin Declaration on Open Access* from 2003. The Swedish Research Council *Formas* is one of them. *Formas* is the main funder of basic forest research in Sweden.

– Open access is one more step to reach out with the research results to society, says Rolf Annerberg, Director General of *Formas*, on the council's website.

Formas requires that future research is available as open access within six months after publication.

The steps following the Berlin declaration will likely have implications for the scientific journals. There are over 20 000 peer-reviewed scientific journals worldwide. Several thousand applies open access, but the main part has a traditional financing, with subscription fees and payments for the downloaded articles. Many of them are among the top ranked, such as *Nature*, *Science*, *Cell* and *Lancet*.

Read more: www.formas.se, www.vr.se, Berlin Declaration: http://oa.mpg.de/



Open access journals are available online to the reader without charge.

The Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities is a major international statement. It emerged in 2003 from a conference on open access hosted in Berlin by the Max Planck Society. Organisations that commit to implementing this definition of open access can sign on to the declaration.

source: www.wikipedia.org

Open call for CARs

SNS has over the years 2005–2010 established and supported five CARs (Centres of Advanced Research). An evaluation requested by SNS concluded that the CARs have been successful and should be continued for a further period (see News and Views No. 4, 2009). SNS has therefore decided to announce an open call for new CARs 2011-2015.

The following research areas are open for applications:

- Urban and recreational forestry
- Carbon balance and water
- Industrial processing of wood materials

- Harvesting, bio-energy, long-distance transport operation systems
- Forest diseases and damage
- Genetics, tree improvement and regeneration
- Forest economy
- Inventory and resource mapping

Applications are due 31 May 2010. SNS will fund 4–5 CARs with up to €30 000–60 000 per CAR and year.

Further information about the application process found on SNS website www.nordicforestresearch.org

About CARs

A CAR can be defined as a forum, or a core of, the Nordic forest research in a special subject area or several areas, related to each other.

CARs cover a period of 4–5 years. It is formed as a network headed by a project manager.

A steering group is set up with representatives of the participating countries.



Norway: Charcoal important carbon pool in boreal forest soils

About one percent of the carbon stock in boreal forest soils is found as charcoal, the residue after forest fires. This was estimated by a research group led from Norwegian University of Life Sciences.

On average, 77 g carbon per square meter is stored in this form. The study also found that charcoal is not as persistent as previously believed. The median age of the charcoal particles in the soil samples was expected to be 5,000 years, provided that charcoal was persistent. Instead, the median age was measured to be 652 years. The lead author Professor Mikael Ohlson stresses that the dynamics of charcoal is an important component in the carbon budget of boreal forests.

Read more: *Nature Geoscience* 2, 2009, and www.umb.no

Denmark: Forest research downsizes

Forest & Landscape Denmark struggles with economical cutbacks which forces them to reduce the staff with 10%. The reduction is a result of general cutbacks at Copenhagen University.

– It is distressing and confusing that governmental funding of forest research is cut at a time when forests are placed so high on the international political agenda, says Director Niels Elers Koch in a press release from the university. We will lose competences that has taken decades to build up, he continues.

The cut is the third of this size in the last eight years.

– I deeply hope that it is the last one, says Niels Elers Koch.

Source: www.sl.ku.dk

Finland: Metla moves to a function-based organization

The Finnish Forest Research Institute (Metla) has moved over to a functions-based organization consisting of core and support processes. At the same time, a new regional organization is set up, with research units responsible for research projects and information services. The units and their centrals are:

- Southern in Vantaa
- Eastern in Joensuu
- Western in Parkano
- Northern in Rovaniemi

Metla's general management and coordination as well as the administration and internal services are situated in Vantaa.

Source: www.metla.fi

Swedes underestimate the role of bioenergy

Over a third of the Swedes believe that bioenergy contributes with less than 10 % of the energy use in Sweden. Only 14 % believe that the share is over 30 %. The correct answer is (currently) 29 %.

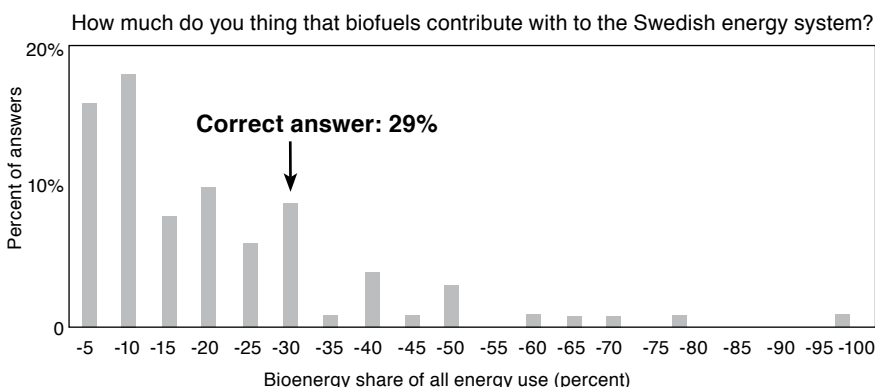
The poll, made by the organization Sifo in January 2010, showed some surprising results. Respondents with a higher education were less correct

in their estimates of the bioenergy share than respondents with a short education.

More correct estimates were given by women, as well as respondents living outside the big cities.

Male respondents, and people living in Stockholm with a university degree, tended to underestimate the role of bioenergy most.

source: www.svebio.se



Denmark: Leads teak development

Lars Graudal at Forest & Landscape Denmark, Copenhagen University, has been elected Director of Teaknet, a worldwide union of researchers and forest managers working with teak (*Tectona grandis*).

Denmark has a long tradition of protecting and managing teak forests. By the 1950s, cooperation between Thailand and Denmark was already underway. The organization Danida was heavily involved in the work of preserving genetic resources, and Danish researchers have played a key role in progeny testing of teak across its entire range.

Lars Graudal is currently the head of the Forest Genetic Resources division at Forest & Landscape Denmark, and has previously been director and senior adviser at Danida Forest Seed Centre.

Read more: www.teaknet.org



Ten actions to combat climate change

Forest have a key-role to mitigate climate change in Europe. But lack of capital and political is a hindrance for immediate measures.

The first Koli Forum, held in Koli, Finland, in October 2009, gathered 70 European opinion-leaders, including names such as Martti Ahtisaari, former president of Finland and Noble Prize winner; Jorma Ollila, chairman and former CEO of Nokia Corporation and Göran Persson, former prime minister of Sweden

The forum formulated three theses with suggestions to European decision makers.

The first two stated that Europe has a shortage of non-renewable resources but a high potential for renewable ones. Among the latter, forest play a key role in the fight against climate change. They also post that Europe could have a leading role in the world in technological innovation and development. However, investment is lacking and there are political and economic risks in implementing "green growth".

The third thesis states that actions are necessary to transfer the good

intentions to reality. Ten main actions were agreed on:

1. Stimulate sustainable production and use of domestic biobased resources
2. Develop new tools for economic analysis, planning and fiscal measures which account for e.g. carbon
3. Use land, energy and materials efficiently
4. Optimize the streams of materials over its whole life cycle
5. Mobilise existing renewable natural resources more completely and efficiently
6. Use finite natural resources efficiently
7. Tailor implementation to local conditions
8. Speed up actions while ensuring sustainability
9. Improve data availability and quality on natural resources
10. Strengthen high-quality science and education dealing with development and application of technology and innovations

*Source: EFI news, November 2009
www.efi.int*

Sweden: Identification of recreational forests

The Swedish Forest Agency has been commissioned by the government to identify forests that have high value for society. The inventory will be completed by the end of 2010. The forests that the agency is interested in are those that are important (because of their quality and geographic location) for recreation, outdoor activities and tourism.

The basis for identifying such forests is a set of experiential qualities that people may feel when visiting forests: contact with things untouched and mystical; sensing the forest; freedom and space; knowledge of species and natural diversity; cultural history; activities and challenges; service and togetherness. Such experiences, together with accessibility factors (notably proximity to a population centre and the ability to reach them by road) are key aspects of the value of forests to society.

The range of positive experiences obtained from forest visits implies that people may have different preferences for forests, depending on the activity they wish to undertake. Those carrying out physical exercise, such as jogging may favour one forest-type, while a ramble wishing to de-stress will prefer another.

The forests identified will be recorded and used to guide forest management.

Read more: www.skogsstyrelsen.se

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www.nordicforestresearch.org

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- relevant to the Journal
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