



Photo: Mats Hannerz

Koli national park, eastern Finland. Photo: Mats Hannerz

## Finland's forests in good shape

**Finland's forests have improved over recent decades. Growing stock has increased, nature management measures have been undertaken and the area of protected forests has increased. The report "State of Finland's Forests 2011" was handed over to the participants at the 6th Ministerial Conference of the European ministers responsible for forests in June this year.**

The publication was produced by Metla, and followed earlier reviews undertaken in 1997, 2003 and 2007

The growing stock in the Finnish forests has increased by 40% during the past 40 years. Over the same period, 2,200 million cubic metres have been harvested and used.

The use of wood is far lower than the annual growth in Finland, so the forests serve as a carbon sink,

equivalent to about half of the carbon dioxide emissions from industry in the country.

The decline in biodiversity has been halted due to nature conservation measures in commercial forests, and to a tripling of the area of protected forests over the past 35 years. Altogether, 9.6% of all forest land is protected in Finland and efforts to preserve biodiversity continue.

The economic recession of 2008–2009 caused a reduction of nearly 20% in capacity in the pulp and paper industry. Even so, the forest sector accounts for 4% of the GDP of

Finland. Regionally, the percentage may be more than 10%. The proportion of people working within the forest sector has stabilised at 3% of all employed people.

The report also makes a comparison with forestry development across Europe. The forest sector's share of GDP, the proportion of strictly protected forests, and wood-based energy's contribution to the country's total energy consumption are the highest in Europe.

Source: [www.metla.fi](http://www.metla.fi)

	Europe	Finland
Growing stock, million m <sup>3</sup>	32,690	2,206
Volume increase per year	1.2%	1.0%
Carbon sequestration per year, million tons	430	35
CO <sub>2</sub> emissions /CO <sub>2</sub> sequestration	9%	50%
Wood energy / total energy consumed	3.7%	20%





The university library of SLU in Alnarp. Photo: Julio Gonzalez, SLU

## Nordic research frequently cited

**The agricultural universities in Norway and Sweden perform well above the world average in terms of publications and research impact according to a newly presented study. The Swedish University of Agricultural Sciences (SLU) had a relative citation index that ranks it second out of all the Swedish universities. And The Norwegian University of Life Sciences (UMB) has shown a great increase in its number of publications during the last decade.**

### Bibliometric data

The objective of the project *Bibliometric Indicators for the Nordic Universities* within the Nordforsk-supported network NORIA-net was to establish bibliometric indicators using transparent methods and describing differences in university research profiles. The indicators measure research activity through publication, and research impact through citations. The indicators are

also normalised, making it possible to make comparisons within a specific research field. The bibliometric data gives a more detailed overview and insight than traditional university rankings, which receive so much public attention (see next page).

The report lists universities in the Nordic countries with a specified minimum number of publications. The only two universities whose profile is mainly agricultural or forestry-based are SLU and UMB. The table on next page shows selected indicators of publication and citations taken from the report. Many more figures can be found in the original report.

Most Nordic universities are well above the world average of 1.00 in terms of citations. The top ranked university in this respect is the Technical University of Denmark, followed by Aarhus University and Stockholm University.

The publication and citation figures reflect the situation for the second half of the past decade. When compared with the period 2000–2004, UMB

increased their number of publications with 35% and its citation indicator from 1.00 to 1.09. SLU, on the other hand, had a slight decrease in number of publications (-5%), but an increase in citation rate from 1.15 to 1.21.

*Source: Comparing research at Nordic universities using bibliometric indicators. A publication from the NORIA-net "Bibliometric Indicators for the Nordic Universities". Can be downloaded from [www.nordforsk.org](http://www.nordforsk.org).*

### Comments to the table

<sup>1</sup> Full-time equivalents in 2008: teaching and research personnel, including teaching/research assistants and PhD students

<sup>2</sup> Number of fractionalised publications in 2005–2009. A paper with two authors from two different universities is counted as 0.5 of a publication each. Data from humanities and social science are mostly excluded

<sup>3</sup> Citation rates in 2005–2008, normalised to an index where 1.00 is the "world average" for each research field and publication type. An index of 1.10 represents citation rates ten per cent above the world average

	Academic staff <sup>1</sup>	No. publications <sup>2</sup>	Citations <sup>3</sup>
<b>Denmark</b>			
Aalborg University	1 351	1 089	1.03
Aarhus University	3 486	4 071	1.38
Roskilde University	553	219	1.12
Technical University of Denmark	2 245	3 859	1.40
University of Copenhagen	4 135	6 584	1.23
University of Southern Denmark	1 624	1 395	1.22
<b>Finland</b>			
Aalto University	2 328	2605	1.10
Åbo Akademi University	659	895	1.09
Lappeenranta University of Technology	562	357	0.84
Tampere University of Technology	1 154	917	0.84
University of Eastern Finland	1 386	2 081	0.98
University of Helsinki	3 807	5 624	1.18
University of Jyväskylä	1 407	1 374	1.08
University of Oulu	1 562	2 007	0.87
University of Tampere	1 082	866	0.96
University of Turku	1 477	2 328	0.96
<b>Iceland</b>			
Reykjavik University	143	48	-
University of Akureyri	113	28	-
University of Iceland	925	735	1.05
<b>Norway</b>			
Norwegian University of Life Sciences	509	880	1.09
Norwegian University of Science and Technology	2 686	3 320	1.07
University of Bergen	2 022	2 815	1.11
University of Oslo	3 354	4 573	1.11
University of Stavanger	599	256	0.75
University of Tromsø	1 135	1 205	1.04
<b>Sweden</b>			
Chalmers University of Technology	853	2 628	1.10
Karlstad University	548	293	0.73
Karolinska Institutet	1 576	6 200	1.21
Linköping University	1 333	2 421	1.02
Linnaeus University	834	476	0.81
Luleå University of Technology	475	697	0.81
Lund University	2 205	6 493	1.18
Mid Sweden University	395	303	0.81
Royal Institute of Technology	1 242	3 985	1.08
Stockholm University	1 878	3 069	1.36
Swedish University of Agricultural Sciences	1 286	2 456	1.21
Umeå University	1 607	2 594	1.11
University of Gothenburg	2 256	3 701	1.11
Uppsala University	2 036	5 746	1.08
Örebro University	503	373	1.14

## Other well-known university rankings

A mass of university rankings have become available during the last decade. These lists usually receive high media exposure. However, such rankings have been extensively criticised in terms of their validity and the reliability of their indicators. The problems occur because the different scientific profiles of universities are ignored, and the general indicator does not say anything about the strengths and weaknesses within each university's scientific portfolio.

### Shanghai ranking (ARWU)

The Academic Ranking of World Universities by Shanghai Jiao Tong University includes only universities that have Nobel Laureates, Fields Medalists, Highly Cited Researchers or papers published in Nature and Science. The ranking should mirror the reputation of the university, and weighs Nobel prize winners highly, as well as articles published in Nature and Science. The ranking does not include a traditional citation analysis. The Shanghai ranking puts the University of Copenhagen at the top of the Nordic universities with rank 40, closely followed by Karolinska Institutet (rank 42).

### THE university ranking

Times Higher Education (THE) states that the 2010 list delivers its "most rigorous, transparent and reliable rankings tables ever". The ranking puts together several performance indicators designed to capture the full range of university activities, from teaching to research and knowledge transfer. Reputation surveys are allocated high weightings, as are the number of publications and citations.





## Jan Svensson, new board member

Jan Svensson replaces Hans-Örjan Nohrstedt as the new SNS board member, representing Sweden. Jan Svensson is a senior research officer at The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning – Formas. He holds a PhD in forestry from North Carolina State University, and has been planning, managing and evaluating R&D programmes in the Formas sectors of forestry and plant biology since 2004.

### Why do you believe in Nordic forest research cooperation?

"The Nordic countries have the advantages of common history and a long tradition of cooperation. Forests

are of great value and a source of income to the Nordic countries both from wood, pulp and paper industries, as well as bioenergy and recreation.

The forested areas have the potential to generate more values that have yet to be identified and managed.

The Nordic research collaboration will help coordinate research efforts and their results be used in managing the different types of services that Nordic forest ecosystems can provide. Forest management has the opportunity to show how sustainable use of natural resources could be implemented and provide for the needs of growing global populations without losing ecosystem productivity and biodiversity."

## New board members in EFI

Professor Lisa Sennerby Forsse, Sweden, and Professor Giuseppe Scarascia-Mugnozza, Italy, were elected as new board members of the EFI (European Forest Institute) for the period 2011–2014. Meanwhile, Liisa Saarenmaa (Finland) and Miroslav Benko (Croatia) have now left the board and were thanked for their contribution over recent years.

Source: [www.efi.int](http://www.efi.int)



Lisa Sennerby Forsse, Vice-Chancellor of SLU, Sweden, and former board member of SNS, was elected to the EFI board. Photo: Julio Gonzalez, SLU

## New research directors at Metla

Dr. Taneli Kolström and Dr Leena Paavilainen have been appointed Directors of research at the Finnish Forest Research Institute (Metla). The research directors are responsible for coordinating, developing and steering Metla's research activities..

Source: [www.metla.fi](http://www.metla.fi)

## Contact News & Views

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More info about SNS:

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

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