

The Finnish Forest Research Institute (Metla)

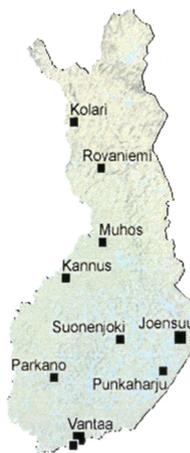
The Finnish Forest Research Institute (Metla) was established in 1917. Metla is a governmental, sectoral research institute, subordinated to the Ministry of Agriculture and Forestry. Metla's mission is to promote economically, ecologically and socially sustainable management and utilisation of forests.

The Institute's key strengths are its highly professional staff, high standard scientific research, experimental forests and active national and international cooperation.

The nine Research Units are responsible for carrying out research, information services and management of the research forests.

Research activities are organized into problem-oriented research projects and multi-disciplinary research programmes. In 2006 Metla employed about 700 people on a permanent basis, of whom 300 were researchers.

Research Units of Metla



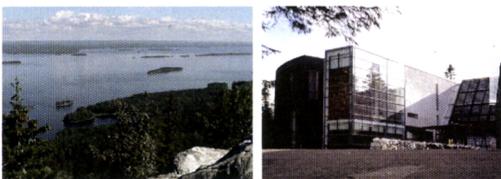
Multidisciplinary Units

Joensuu
Vantaa

Specialised Research Units

Kannus
Kolari
Muhos
Parkano
Punkaharju
Rovaniemi
Suonenjoki

← Metla/Joensuu
+ Koli National Park



Koli National Park (left) and Ukko Heritage Centre in Koli National Park (right).

Photos: Erkki Oksanen/Metla, Martti Rosendahl, Scanfoto, Jussi Tiainen
Text: Jari Parviainen, Markus Lier
Layout: Markus Lier

Metla in Joensuu

The Metla Joensuu Research Unit is a multidisciplinary expert research organisation responsible for promoting forestry and forest-products based business activities in rural areas. Metla has started its activities in Joensuu in 1981 on the campus area of the University. In 2006 a total of 150 people were working at the Metla/Joensuu, including 85 permanent and 50–60 contract employees. The number of scientists reached up to 85 people. Six of Metla's 18 research professors are working in Joensuu.

The researchers are participating in over 60 projects. The research is concentrated in the following fields:

Forest management planning (Prof. **Tuula Nuutinen**) covers methods for combining information about forest resources and the operational environment of forestry, with multiple objectives of decision making.

Silviculture, including the impacts of forestry on the environment, (Prof. **Leena Finér**) concentrates on forest management alternatives, and their application and development, on the effects of silvicultural operations and peatland management on the nutrient status of the forests, nutrient leaching and groundwater quality.

Forest technology (Prof. **Antti Asikainen**) focuses on timber procurement and logging, as well as on rationalisation, management and logistics. The research area covers also harvesting and procurement of wooden biomass for energy and heating.

Wood science and technology (Prof. **Erkki Verkasalo**) concentrates on the physical and mechanical properties of wood and logs, timber scaling, customer and market orientated analysis of the use of wood.

Forest economics (Prof. **Pekka Ollonqvist**) focuses on business economics and the local, regional and national economic operating environment, and on the markets for forestry and forest industry products.

International forestry (Prof. **Timo Karjalainen**) concentrates on research of forestry in Russia and countries with undergoing economic transition in Europe.

The **National Forest Inventory of Finland (NFI)** (Dr. **Kari T. Korhonen**), producing large-area forest resource information, is coordinated from Joensuu. Furthermore the NFI research group is responsible for the calculation of the forest resources results. Other special research topics at Metla Joensuu are: forest entomology, elk and forest interactions, forest certification, forest berries and mushrooms, protected forest areas and calculation of carbon sequestration in peatlands and wooden biomass.

Metla/Joensuu is actively cooperating with universities, research institutes and forest organisations in and outside Finland. Furthermore it is participating in international forest policy processes and international organisations.

The **Koli National Park** is situated near Joensuu and has been managed by Metla, Joensuu since 1923. The area was designated as National Park in 1991. The National Park was created to protect the Finnish national landscape of Koli, the forests of the highlands, the specific geology and to maintain the plant communities created in the past by slash-and-burn cultivation.

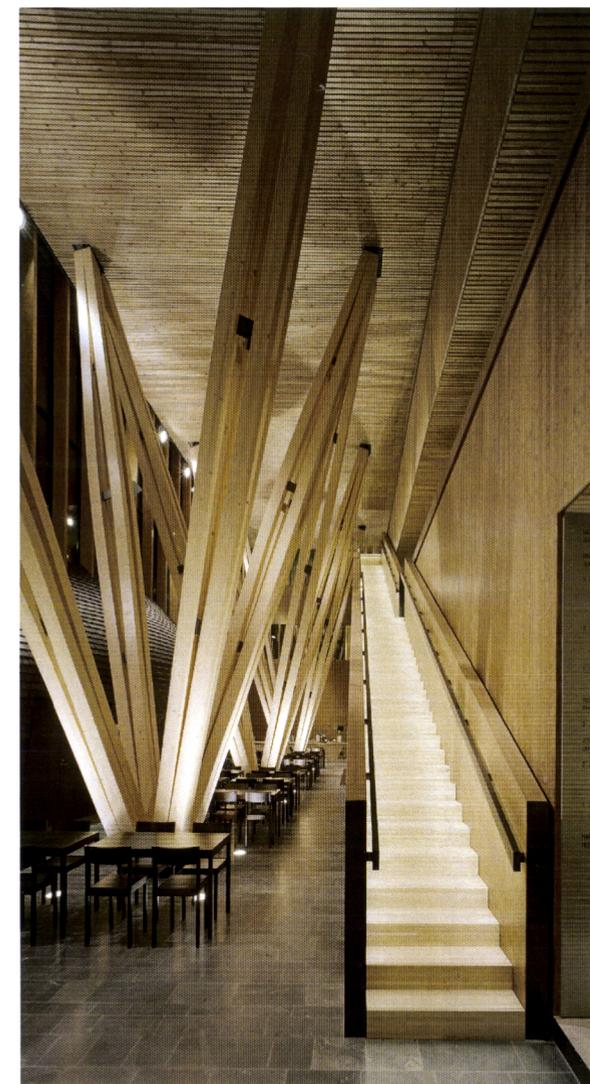
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Metla House located on the university campus area.

The Finnish Forest Research Institute (Metla) in Joensuu



Metla House
The first large wooden office building
in Finland

The three-storey wooden building built in 2003–2004 has aroused an unexpected amount of interest both in Finland and abroad and has also won several national awards. An architectural competition was arranged for the construction of the Metla House in 2002. The winning entry was designed by SARC Architects Ltd with Antti-Matti Siikala as principal architect. The competition brief was to design a timber-framed building that would provide an efficient and inspiring working environment for forest researchers and at the same time to promote innovative use of Finnish wood.

The plan of the Metla House is the archetype of an ancient educational institution, where a common inner courtyard is encircled by communal areas. The entrance to the building and the inner courtyard is through a forecourt bordered by walls clad with 100-year-old reclaimed logs. The ceiling of the entrance hall is supported by magnificent clustered wooden columns, which have been inspired by the log booms from floating logs down rivers. The new building houses an assembly hall designed in the shape of an overturned boat and laboratory facilities.

The wooden structures of the Metla House differ from conventional office buildings. Wood was to provide a viable alternative to other materials used to build offices. The use of wooden hollow-core slabs and wood and concrete composite beams is a solution which had not been used in Finland before. This system was implemented in the form of 7,2 m modules. The columns, beams and box slabs of the frame are made from spruce glulam. The height of the box slab intermediate floors is that of a concrete intermediate floor. The facade elements have been clad with vertical spruce planks on the outside and plywood on the inside.

The most commonly used wood is spruce. Chairs made of 12 different types of deciduous tree species are a special feature of the conference and meeting rooms. The whole building has been equipped with sprinklers and a fire alarm system.

The Metla House is proof of the suitability of wood for multi-storey building projects. Innovative construction solutions, such as galleries and stairwells which act as meeting places, light-filled workrooms and many conference areas and common spaces create an atmosphere which is conducive to interactive research.

Technical data: gross area 7 653 m², volume 33 151 m³, construction costs EUR 16 million.

Construction and maintenance: Senate Properties

