

Finnish Forest Research Institute Rovaniemi Research Unit

*Northern boreal forest nature, silvicultural methods and
the multiple use of forests*



METLA

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Northern boreal forest nature, silvicultural methods and the multiple use of forests

The Rovaniemi Unit aims at being an internationally leading research unit for Northern boreal forest nature and forest utilisation. The unit serves the development of industries based on forest in northern Finland. Established in 1970, the unit employs 25 researchers and one professor. Permanent employees number 70. The Rovaniemi Unit of the Finnish Forest Research Institute (Metla) shares premises with MTT Agrifood Research Finland's Plant Product Research Unit and with ProAgria Lappi.

RESEARCH

The Rovaniemi Unit participates in some 30 of Metla's research projects. Research is also carried out in cooperation with Finnish and international universities and research institutes.

The unit's research activities are distributed across Metla's areas of focus:

Forest-based enterprise and business activities

The unit performs research on livelihoods based on forest utilisation and the matching of the livelihoods with each other. Research focuses on silvicultural and forest management methods, especially regeneration and its economy. The aim is to investigate and find regeneration methods that lend themselves to the conditions prevalent in northern Finland, are profitable and accommodate other sources of livelihoods. These methods must also support the business and enterprise activities of forest owners and others engaged in forestry.

Nature-based tourism research produces knowledge that can be used to improve the industry's operational conditions and also to reach international tourists better. The unit serves reindeer husbandry by producing information on the relationships between reindeer farming and forestry and on the adaptation of reindeer husbandry to climate change.

Social impact of forests

In the area of priority, the unit investigates and develops operation models that make the overlapping activities of various livelihoods and forest utilisation forms sustainably possible. Special emphasis is on the significance of forestry, reindeer husbandry, tourism and nature conservation from the viewpoint of the local economy and culture as well as on the matching of these livelihoods with one another.

In nature-based tourism research, the focus areas are tourists' appreciation of the landscape and the environment, the attitude of foreign tourists towards various forest management methods, the matching of tourism and traditional rural livelihoods, and the planning of tourist centres and their impacts on life in remote areas.

The unit also carries out research on policy methods used in safeguarding the biodiversity of private forests and the impacts of such methods.

Structure and functioning of forest ecosystems

The unit carries out diversified research on climate change. It is participating in research such as a comprehensive study called

the European Climate of the Last Millennium. Research is also performed on the impacts of climate change on forest nature, forest growth, incidence of pests insect and the damage caused by them. Soil microbes and their cold resistance mechanisms are studied in arctic tundra and forest ecosystems.

The need for ditch network maintenance on peatland forests is investigated with the help of studies of the significance of tree stands and climate for the water balance of drained peatland forests.

Research is also carried out on the incidence of damage caused by moose and the dependence of moose stocks on landscape structure as well as the utilisation of knowledge obtained from such research in decision-making related to moose.

Information databank of Forestry and Forest environment

The unit is a participant in the implementation of a pan-European forest health-monitoring programme and is responsible for Finland's part in its international coordination.

The reindeer-pasture inventory produces time- and place-bound information on pastures. This information can also be used as material for longitudinal studies in the future.

SERVICES

The unit serves its customers by producing research information and applying it to the various tasks of experts, in stakeholder development projects, and in reports and commissioned studies. Customers may also purchase laboratory services.

The unit also has offices at Salla and Pallasjärvi. Salla serves Metla's researchers by collecting and pre-processing research material. Pallasjärvi specialises in providing services for air quality and environmental monitoring studies. Its services are used by Finnish and foreign research institutes.

