

DIFFERENT FORESTS FOR RESEARCH



Research forests consist of state-owned forests which have been specifically reserved for research. The current network of research areas covers the entire country and represents all vegetation and climatic zones found in the Finnish forest environment.

Nature conservation areas – national parks, strict nature reserves and other

ecologically and culturally valuable areas – are an important part of the research forests. **The Koli National Park**, famous for its cultural and ecological heritage, is the largest of the conservation areas. The conservation areas are managed in strict accordance with the requirements of nature conservation. They also serve research purposes.

Approximately 4,500 hectares of the research forests is assigned for **training and information** purposes and managed in collaboration with forestry schools and colleges.

An example of a Metla project: a study of the forest carbon store and flows of greenhouse gases. Here CO₂-emission are being measured in the Kivalo Research Area.



THE FINNISH FOREST RESEARCH INSTITUTE

The Finnish Forest Research Institute (Metla) builds the future of the forest sector through research.

Metla's social task is to promote – through research – economically, ecologically and socially sustainable management and utilisation of the forests.

Metla was established in 1917. Metla currently exists as a nationwide research institute with a network of research centres, research stations and research forests covering the entire country.

Monitoring networks for tree flowering, seed yield of forest trees, phenology, and yield of forest berries and mushrooms, have been established in the research forests.



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RESEARCH FORESTS

Research, extension services
and forest experiences

SUOMI

ENGLISH

SVENSKA



KOLARI

Kilpisjärvi Research Area and Malla Nature Park     

These arctic, virtually treeless areas are ideal for studies on, e.g., the ecology of timberline forests and the effects of climatic change. Also under study here are pine and birch origins, exotic tree species and plant ecology, as well as populations of insects, small-mammals and birds.

Kolari Research Area    

Peatlands dominate on these flat areas with mainly silty soils. Topics under study include, e.g., peatland forests, biodiversity of forest nature, and forest fertilisation. The tree breeding studies concentrate on pollination rates for natural forests and seed orchards, the time of flowering, the ripening of pine seeds, and plus-tree progeny.

Laanila Research Area     

Nearly half of the Laanila Research Area consists of treeless or sparsely populated high-land. The area is used for studies on the structure and development of protection forest areas, the ecology and management planning of timberline forests, and nature-based tourism and other recreational use of forests.

For more information, please visit www.metla.fi/ko/

ROVANIEMI

Pallasjärvi Research Area   

This research area is situated next to the Pallas-Ounastunturi Fells and the National Park. Here, the forest and air condition are studied as part of an international arctic cooperation project. Other topics of interest include, e.g., the ecology of timberline forests, carbon and nutrient flows, and fluctuations in populations of the rodents and predatory animals. The northern-most silver-birch stand in Finland is situated in Sätkenä, near the Levi tourist centre.

Kivalo Research Area     

The majority of the Kivalo Research Area is located up to 200–300 metres above sea level. Forest regeneration and silviculture, northern peatland forestry, carbon and nutrient flows as well as the dynamics of natural and managed forests are examples of ongoing areas of research in the area.

For more information, please visit www.metla.fi/ro/

MUHOS

Muhos Research Area   

The research area is located in a peatland-dominated region of northern Ostrobothnia. Current research projects include, e.g., tending of seedlings and young forest stands, forest regeneration on peatlands, and forest succession on coastline forests.

Paljakka Research Area    

Old spruce stands and birch-dominated old slash-and-burn areas are characteristic of the Paljakka Research Area, situated in the beautiful hilly region of Kainuu. The main research topics in Paljakka include forest regeneration, restoration of the features of pristine forests in managed stands, development of natural forest stands, and the effects of altitude on snow conditions and temperature. The internationally unique Environmental Specimen Bank, used for long-term sample storage, is also situated in Paljakka. The Environmental Specimen Bank also houses an interesting exhibition open to visitors upon request.

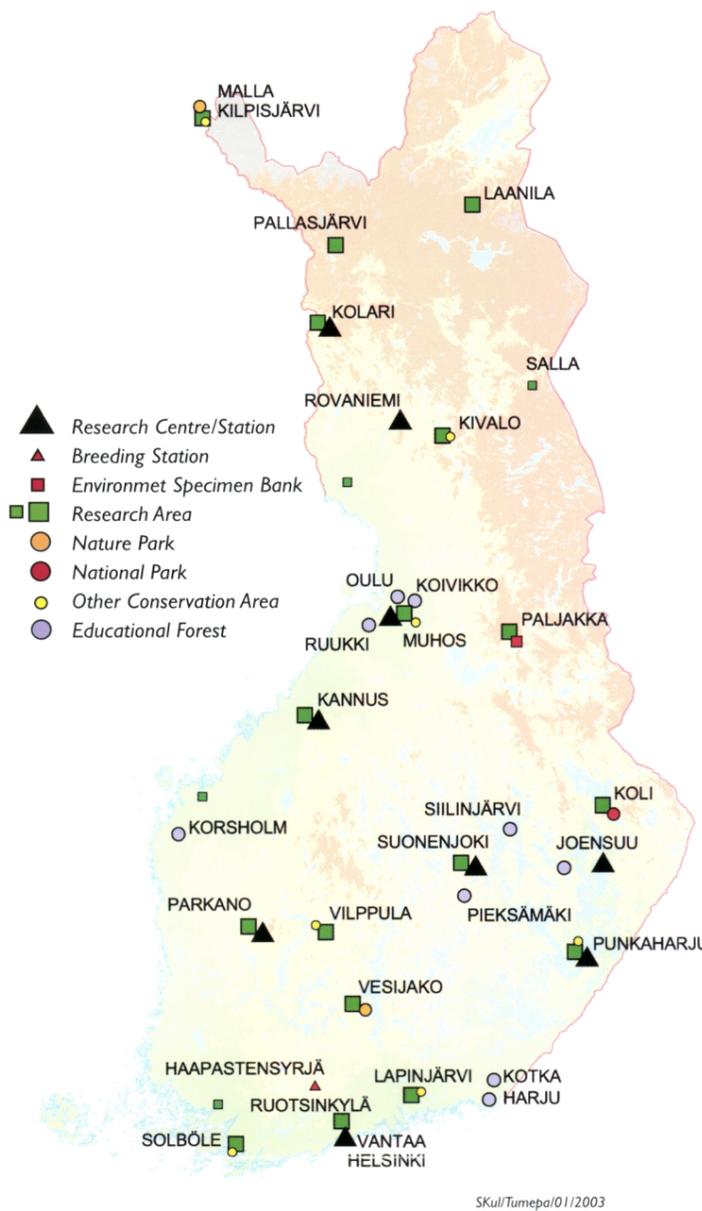
School of Renewable Natural Resources at Oulu Polytechnic, Educational Forest   

Countryside College of Ruukki, Educational Forest 

For more information, please visit www.metla.fi/mu/

Services in the research forests

-  Nature Path
-  Tree species collection or Arboretum
-  Hiking trail
-  Fire place/wilderness hut
-  Points of interest for active visitors
-  Points of historic or cultural heritage



JOENSUU

Koli National Park and Research Area     

The Koli area, located on the shores of the lake Pielinen, has been conserved for its magnificent landscapes and ecologically diverse hill forests. The conservation area is also important for maintaining the plant ecosystems of the traditional slash-and-burn agriculture. Due to the ecological, historical and geological uniqueness of the Koli area the research topics cover a wide range of interest: geology, history, culture, biological diversity, snow damages to forests, application of forest management practices, etc.

Joensuu Educational Forest 

For more information, please visit www.metla.fi/jo/

PARKANO

Vilppula Research Area     

Peatland forests have been studied in the Jaakkoinsoo-area in Vilppula since 1909. Other research topics in the Vilppula Research Area include, e.g., forest tree breeding and the natural development of forests. Factors affecting forest condition are also monitored here. The Elämänmäki old-growth conservation area is well worth a visit, either in its natural environment or virtually via the Internet.

Parkano Research Area   

More than half of the Parkano Research Area, situated on the western highlands of the Suomenselkä area, is made up of peatland. The most important research topics are related to peatland forestry and forest condition monitoring.

For more information, please visit www.metla.fi/pa/

KANNUS

Kannus Research Area    

The Kannus region is characterised by geologically young soils, barren peatland areas, watershed areas between numerous rivers, a scarcity of the most fertile soil types, and regionally also by stony soils. The most important research fields in the Kannus Research Area include peatlands and peatland forestry, the growth and use of timber for energy, the forestation of agricultural areas, and coastline forests.

Korsholma Educational Forest   

For more information, please visit www.metla.fi/ka/

PUNKAHARJU

Punkaharju Research Area and Nature Conservation Area     

The esker of Punkaharju is one of the national sceneries in Finland. Metla's research forests in Punkaharju, offer the visitor the opportunity to become acquainted with traditional Finnish forest landscapes as well as with a number of exotic tree species, represented also in the arboretum. Other topics studied in Punkaharju include, e.g., the genetic diversity of forest trees and the effects of climatic changes on them.

For more information, please visit www.metla.fi/pu/

SUONENJOKI

Suonenjoki Research Area  

Forest regeneration, forest planning methods, eco-physiology and forest condition are the key areas of study in the Suonenjoki Research Area. The Metla research nursery, annually producing a total of 1–2 million tree seedlings for Metla's own forests and for other customers, is also situated in Suonenjoki.

Pieksämäki Educational Forest   

Siilinjärvi Educational Forest  

For more information, please visit www.metla.fi/su/

VANTAA

Vesijako Research Area and Strict Nature Reserve    

The research forests in Vesijako are ideal for studies on forest regeneration, use of undergrowth in regeneration, thinnings and the effects of the final harvest in peatland forests on adjacent water systems. Ongoing studies in the Vesijako Strict Nature Reserve are focussed on natural forest ecosystems, bracket fungi and insects.

Ruotsinkylä Research Area  

The topics studied in the Ruotsinkylä Research Area, located in the capital region of the country, include, e.g., exotic tree species, forest pathology, and the effects of air pollutants and climatic change. A guided forest path, which provides an introduction to Finnish forestry and forest research is also situated in the research area.

Solböle Research Area   

The Solböle Research Area is situated in the hemiboreal vegetation zone in the southern part on Finland and has a relatively maritime climate. Exotic tree species and valuable broad-leaved trees and their genetic diversity are examples of study areas in Solböle.

Lapinjärvi Research Area    

In the Lapinjärvi Research Area, the role of rot fungi in forest regeneration, regeneration and management of aspen, and elk damage are studied.

Haapastensyrjä Forest Tree Breeding Station  

The Haapastensyrjä Tree Breeding Station is specialised in practical forest tree breeding. A number of tree collections and experimental plantations are situated close to the station. A visit to the station's collection of special forms of Finnish tree species is well recommended.

Harju Educational Forest Kotka Educational Forest

For more information, please visit www.metla.fi/va/



A HERITAGE FOR FOREST RESEARCH

Metla manages a total of 90,000 hectares of state-owned forests, in the form of a number of so called research forests. These are managed in order to create and maintain a wide variety of differently managed as well as unmanaged forest stands for research purposes, taking both the current and future needs of research into consideration.

Research forests are crucial for the implementation of long-term trials and experiments in forest management practices. New forest management methods and other research findings can also be tested in the research forests before gaining wider application in practical forestry.

The long-term trials and experiments provide an opportunity to monitor different factors and phenomena over several decades as well as an essential source of information for decision-making and management practices in Finnish forestry. Research forests are also widely used for information and extension purposes.



Extensive field trials are often needed in studies on forest regeneration, forest management and forest tree breeding. Provenance trial, Punkaharju.

RESEARCH FORESTS - SERVICES FOR VARIOUS TARGET GROUPS

A number of Metla's cooperative partners use research forests for their experiments and other activities. Apart from field experiments, research forests are widely used for various co-operation projects, for excursions, and for educational purposes.

The research forests offer you the opportunity to become acquainted with the Finnish nature. There is a wide variety of outdoor recreation services, facilities, and points of interest in the research forests:

- Nature paths and research trails
- Information on research projects and experiments
- Tracks and trails for hikers
- Campfire sites, lean-to shelters and wilderness huts
- Points of historic and cultural heritage.

The research forests can be used for recreation, berry and mushroom picking and other outdoor activities in accordance with the public right of access. A license is required for fishing and hunting.



Exotic tree species have been studied in Finland since the end of the 19th century. The original aim was to study the possibilities of using exotic tree species in Finnish forestry, although this has since been proven to be unfeasible. Nowadays the experiments can be used for other purposes such as studies on the effects of climate change, etc. Further information on

these trials and exotic tree species is provided in Metla's arboreta and along the research trails in the research forests.

