

# FutMon -project Evolution of a European long-term forest monitoring system



**METLA**



**Contacts**

*Coordinating:*  
Päivi Merilä  
PL 413, FI-90014 Oulun yliopisto  
Tel. +358 29 532 4061  
[paivi.merila@metla.fi](mailto:paivi.merila@metla.fi)

*Extensive monitoring:*  
Seppo Nevalainen  
PL 68, FI-80101 Joensuu, Finland  
Tel. +358 29 532 3036  
[seppo.nevalainen@metla.fi](mailto:seppo.nevalainen@metla.fi)

*Intensive monitoring:*  
Liisa Ukonmaanaho  
PL 18, FI-01301 Vantaa, Finland  
Tel. +358 29 532 5115  
[liisa.ukonmaanaho@metla.fi](mailto:liisa.ukonmaanaho@metla.fi)

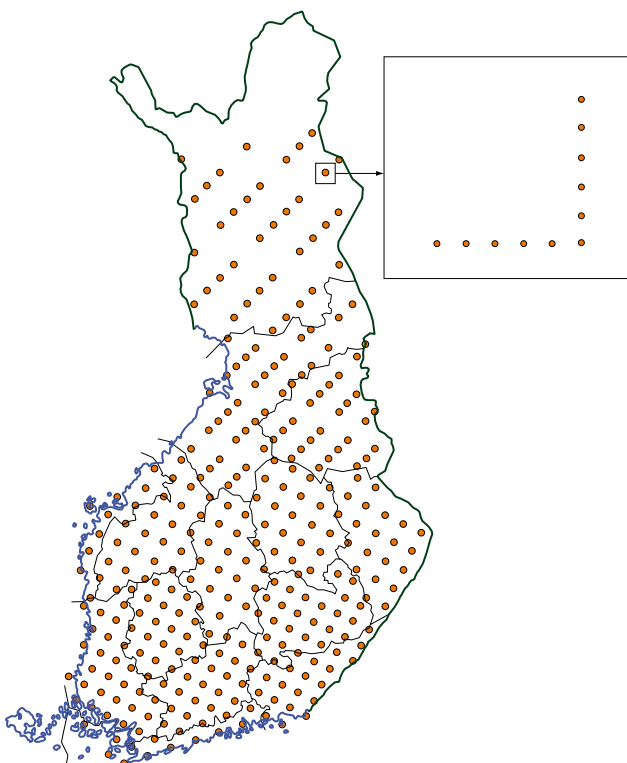
# The European Forest Monitoring Programme is being further developed under the FutMon Project

Forest ecosystems are subjected to a wide range of pressures and disturbances of both natural and anthropogenic origin, and evaluation of the effect of these factors on ecosystem condition and functioning requires scientifically robust, long-term monitoring data. During 2009–2010 the European Forest Monitoring Programme is being continued and further developed under the FutMon Project, which is a co-financed project in the EU/Life+ funding programme.

The FutMon Project marks a new phase in European forest monitoring: the project also aims at the development of new monitoring tools and the harmonisation of existing networks to provide information about the interactive effects of climate change and air pollution on forest ecosystems. The monitoring is being carried out on both a systematic plot network (so-called extensive monitoring, Level I) and a limited number of intensive monitoring plots (Level II).

## Extensive monitoring (Level I)

The monitoring activities at Level I involve the determination of tree condition on the basis of defoliation and discoloration assessments and the occurrence of biotic and abiotic damage on a total of ca. 800 permanent National Forest Inventory plots.



*The network of the extensive forest condition monitoring in Finland.*

## Intensive monitoring (Level II)

The purpose of the intensive monitoring (Level II) is to investigate the effects of anthropogenic, biotic and abiotic factors on the condition and functioning of forest ecosystems. The monitoring activities are carried out on a network of 18 observation plots distributed throughout the country. The data collected on the Level II plots during the FutMon Project will be used to carry out in-depth studies on tree vitality and adaptation, nutrient cycling and critical loads, and water budgets.

### Intensively monitored attributes

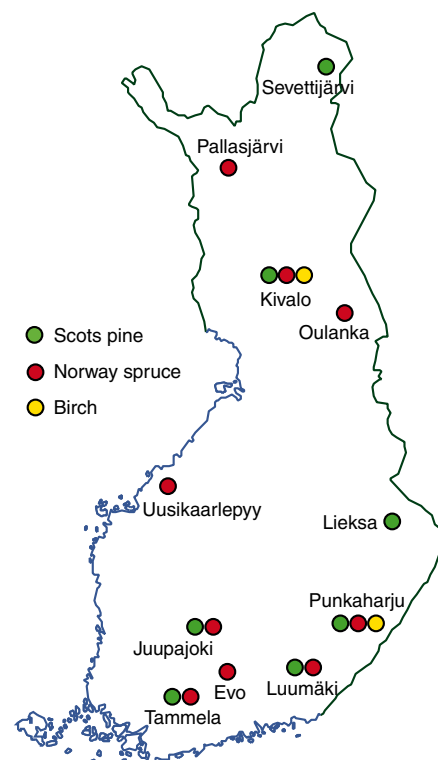
- \* Tree condition
- \* Tree nutrient status
- \* Deposition load
- \* Soil solution composition
- \* Litterfall
- \* Stand growth
- \* Tree phenology
- \* Ground vegetation
- \* Meteorology



### More information

<http://www.metla.fi/ohjelma/myt/index-en.htm>

<http://www.futmon.org/index.htm>



*The intensive monitoring network of forest ecosystems in Finland.*