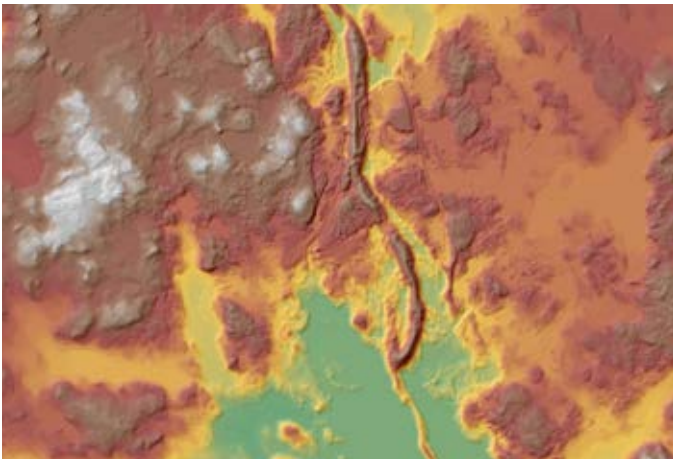


## RESEARCH AND DEVELOPMENT - CORNERSTONES OF THE NFI

The reliable results of the NFI are based on continuous research, methodological development and product development. The current research topics include, for example,

- use of remote sensing data in large area inventories: 3D point cloud data from Lidar or aerial images
- use of Terrestrial Laser Scanning (TLS) techniques for tree measurements
- advanced sampling techniques for improving efficiency.



©National Land Survey, digital elevation model 2014

## CUSTOMER SERVICES AND INTERNATIONAL ACTIVITIES

Forest resource related information services and international and national customer services, as well as consulting services related to forest inventory systems, have increased during recent years. Depending on the needs of the customer, statistics, thematic maps and expert analysis are tailored for different topics and geographic regions.

Our Finnish forest monitoring expertise have in recent years been utilised in our projects in Nepal, Vietnam, Cambodia, Mongolia, Kenya, and Tanzania. Currently, we are providing forest monitoring training for Myanmar forestry experts.

The Finnish NFI team is part of the European National Forest Inventory Network (ENFIN). Within this network, we are coordinating a large H2020 research project DIABOLO, with 35 partners from 25 European countries/National Forest Inventories.

### CONTACT INFORMATION

- Prof. Annika Kangas, forest inventory
- Dr Kari T. Korhonen, Principal Scientist, NFI leader
- Prof. Tuula Packalen, forest planning

### PHOTOS AND GRAPHICS

Luke 2017

### MORE INFORMATION

[www.luke.fi/en/natural-resources/forest/forest-resources-and-forest-planning/forest-resources/](http://www.luke.fi/en/natural-resources/forest/forest-resources-and-forest-planning/forest-resources/)

[www.luke.fi](http://www.luke.fi)



# National Forest Inventories (NFI)

- multi-purpose forest information

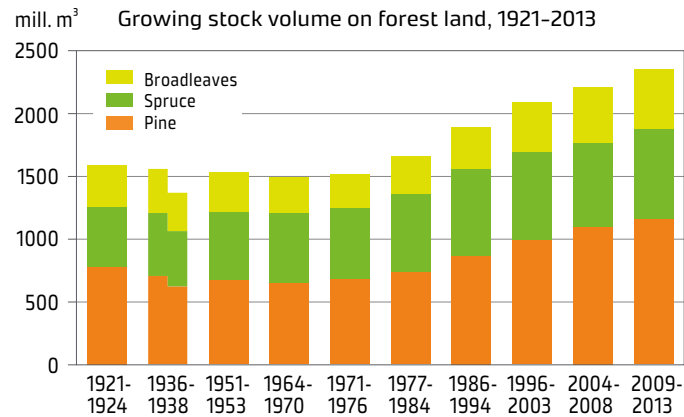


## NATIONAL FOREST INVENTORY OF FINLAND (NFI)

For almost 100 years - since early 1920's - the national forest inventories (NFI) of Finland have produced reliable time series on national and regional



- forest resources - volume, growth and quality of the growing stock,
- land use structure and forest ownership
- forest health
- biological diversity of forests



The NFIs build a unique database concerning the forest resources and their development in Finland. The inventories have been repeated at 5-10 year intervals. The most recent, 11th inventory (NFI11), was implemented in 2009-2013, and the 12th inventory (NFI12) was started in 2014.

## FIELD MEASUREMENTS - BASE OF THE INVENTORIES

Extensive field measurements are the backbone of the national forest inventory

- over 70,000 field plots on forestry land (NFI11)
- over 150 characteristics measured or assessed
- half a million tallied trees
- a sub-sample of the tally trees are measured in more detail for assessment of growth, health and timber assortments.

The NFI is continuously developed in order to better meet the changing information needs of the forestry sector and other information end-users. For example, new assessments of forest health parameters were included in the 1980's, measurements on the biological diversity of the forests in 1990's and land use changes for green house gas (GHG) reporting in the 2000's.



## INFORMATION AND DATA FOR DECISION MAKING

The main results of the NFI are published by Natural Resources Institute Finland (Luke) as statistics (stat.luke.fi). NFI data are used also for analysing national and regional cutting possibilities and future forest development (<http://mela2.metla.fi/mela/tupa/tupaindex-en.htm>). The results are widely used, both nationally and regionally, for

- decision making within forestry
- national forestry and nature conservation programmes
- monitoring sustainability of forestry
- assessing the investments of forest and bioenergy industries.

We also publish open data - the pixel level multi-source NFI data are freely available for public, see: <http://kartta.luke.fi/index-en.html>

