Implementation of European Forest Accounts, and links with SEEA-EA

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Luke in brief

Profitable and responsible primary production

Circular bioeconomy

Climate smart carbon cycle

CO₂

N₂O

CH₄

Vision
A sustainable future and well-being from renewable natural resources

Mission
Through research, we create value and solutions for our customers by solving local and global challenges

Adaptive and resilient bioeconomy

Competent personnel and motivating organisation

Data-driven solutions

Inter-disciplinarity and inter-sectorality

Modern research platforms

22 locations

1337 employees

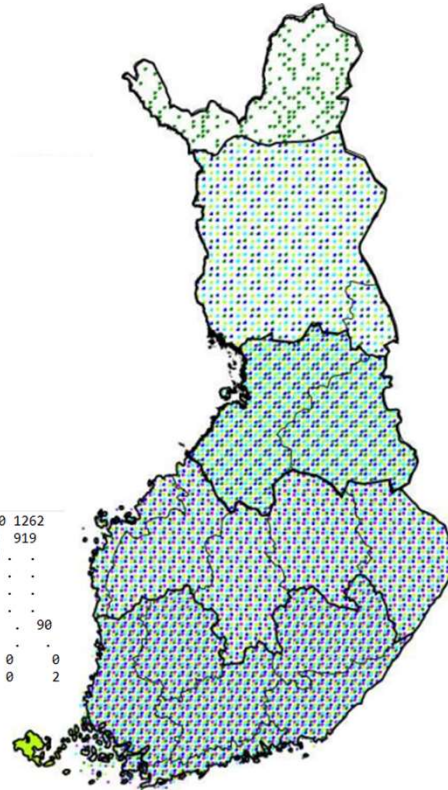## 133 M€ turnover

National Forest Inventory (NFI)

- The National Forest Inventory (NFI) is a monitoring system that produces information concerning national and regional forest resources - volume, growth and quality of growing stock, land use structure and forest ownership, forest health, biodiversity of forests and forest carbon stocks and their changes.

- NFIs have been made regularly in 5–10 year cycles. They are conducted by the Natural Resources Institute Finland (Luke)

- The results of the inventories are used to monitor the forest resources and the information obtained is also valuable for international reporting and strategic planning. The results of the NFIs are publicly available.
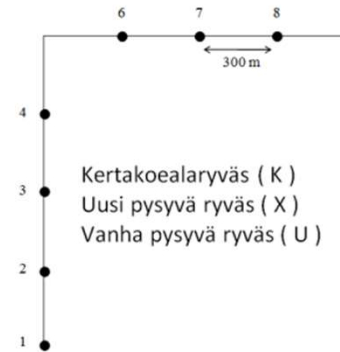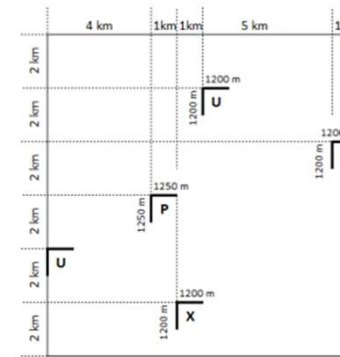
National Forest Inventory (NFI) Sampling Design

- Systematic cluster sampling

- About 60 000 sample plots

- Annually measured one fifth of the sample plots

- About 1 000 000 trees measured

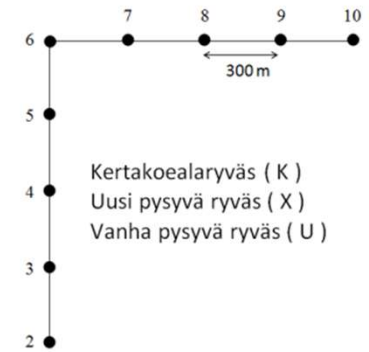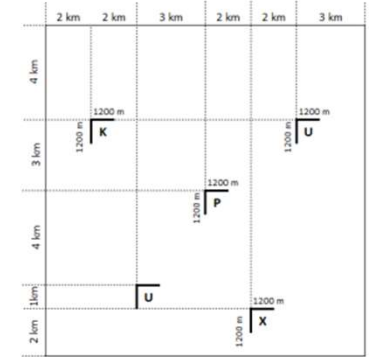- Temporary and permanent sample plots

National Forest Inventory (NFI) based data set

National Forest inventory produces all forest resources estimates (areas, growing stock, increment of the growing stock)
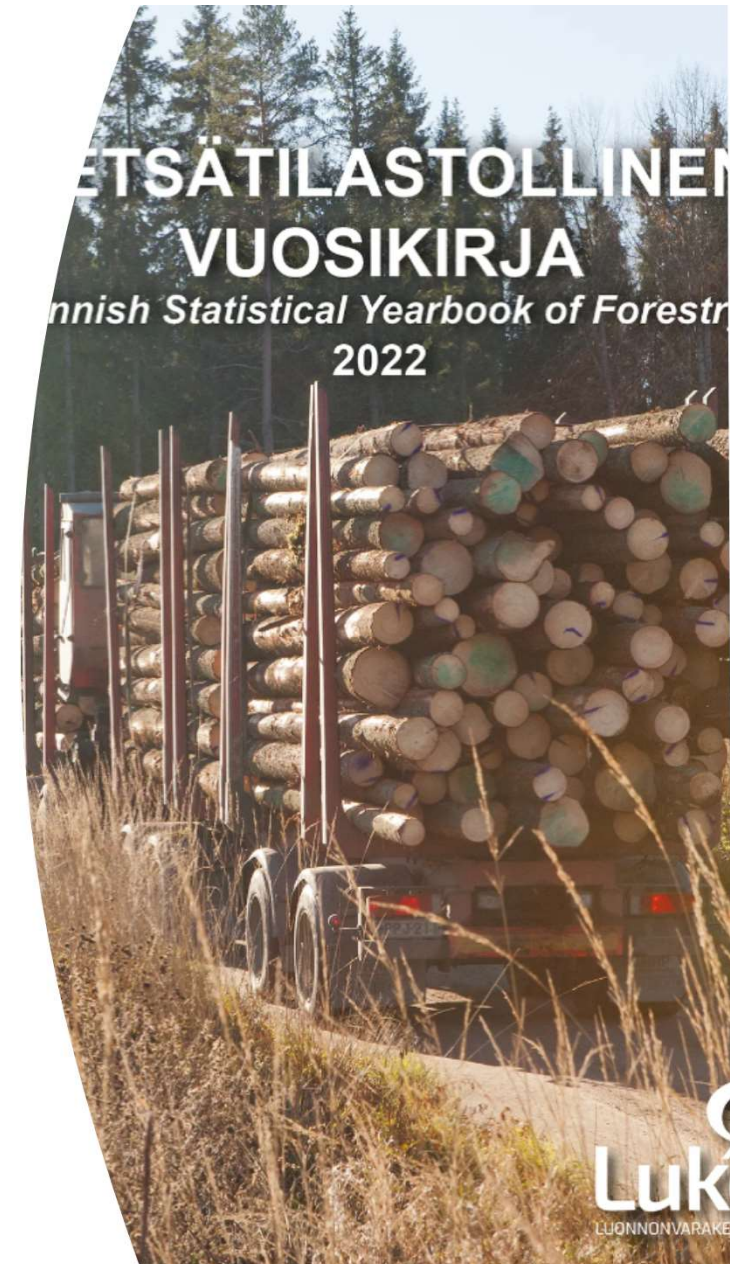
Task: To create a script/scripts that produce Forest accounts data set from the NFI data (R & SAS)

Challenges in calculation and features of National Forest Inventory:

- Forest Accounts handbook is not ready yet; definitions are essential for producing estimates
- Some national classifications differ from the classification used in Forest Accounts reporting
- The inventory results are the averages for the last five years
- Estimates based on NFI are calculated from field measurement data
- NFI data includes FRA land use classes
- NFI data includes information on availability for wood production. Question: how well the classification matches to Forest Accounts definitions
- Amount of roundwood is available broken down in roundwood assortments (tree species, logs, pulpwood, waste wood)
- More standard error for small area estimates -> How good are results concerning land use changes

Luke's statistics

- Luke's statistics generate food and natural resources statistics in support of sustainable decision-making.

- **Forest statistics** are responsible for producing statistics on roundwood prices, commercial roundwood fellings, roundwood removals and drain, forest protection etc.

- Most statistics are compiled annually

- More information: https://www.luke.fi/sites/default/files/2022-04/Tilasto-ohjelma-ENG.pdf
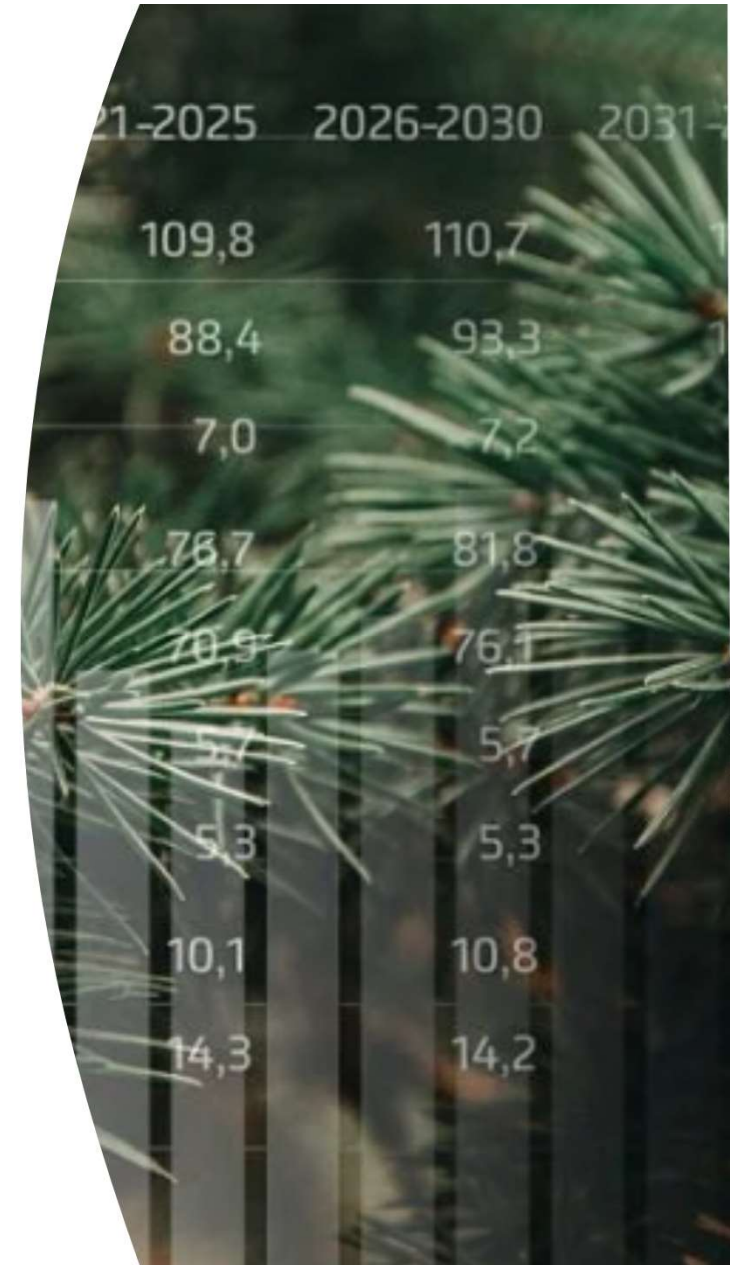
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Forest statistics based data set

- NFI produces the amount of timber broken down to the classification of forest accounts data set

- Luke's statistics task is to create system for valuation the timber obtained from the NFI report (SAS & Excel)

- Timber price statistics are produced by provinces, the price of wood is lower in the northern Finland than in the southern Finland

- Luke produces statistics 'Volumes and prices in industrial roundwood trade'. The statistics are based only on commercial wood -> Problem of valuation timber in nature protection areas must be solved.

Forest Accounts project for Finland

- The general objective of the project is to develop Finnish forest account system to produce the dataset for Finland to meet the foreseen reporting requirements in relation to the Eurostat proposal for amending regulation (EU) 691/2011 on European environmental accounts.

- Develop a system to provide forest accounts data set from the Finnish national forest inventory data

- Develop a system to estimate the value of timber broken down to the classification of forest accounts data

- Project duration: 12 months, Budget, work: 9,75 months, EU Grant funding

Thank you!

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