



Definitions for primary and old-growth forest mapping in the national context – current status in Finland

Webinar on Mapping EU Primary and Old-growth forests 5.3.2024

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”Primary Forests and Old-Growth Forests in Finland - Commission Guidelines and National Interpretation”

[In Finnish](#) (with English summary) - Together with Finnish Environment Institute (Syke) and Nature Resources Institute Finland (Luke)

Literature review on tree age (Pekka Punttila, unpublished) and **dead wood** (Juha Siitonen, additions to 2001 publication) **of old primary forests** in boreal Northern Europe.

- Also OGF ages of Red Listed forests habitat types are used ([Kouki et al. 2018](#))

Examples of old-growth forests with high level of naturalness based on age and deadwood (OGF main indicators)

+ comparission with some real world localities.

Examples of OGF area based on National Forest Inventories (Kari. T. Korhonen). NFI provides age data, but deadwood is based on subjective assumption

Comparission with earlier inventory methods:

Comission guideline indicators are similar to e.g. old-growth forests inventories (since 1991) and guidelines for Western Taiga

- Former inventories concentrated on state owned land
- Northernmost Finland was not included



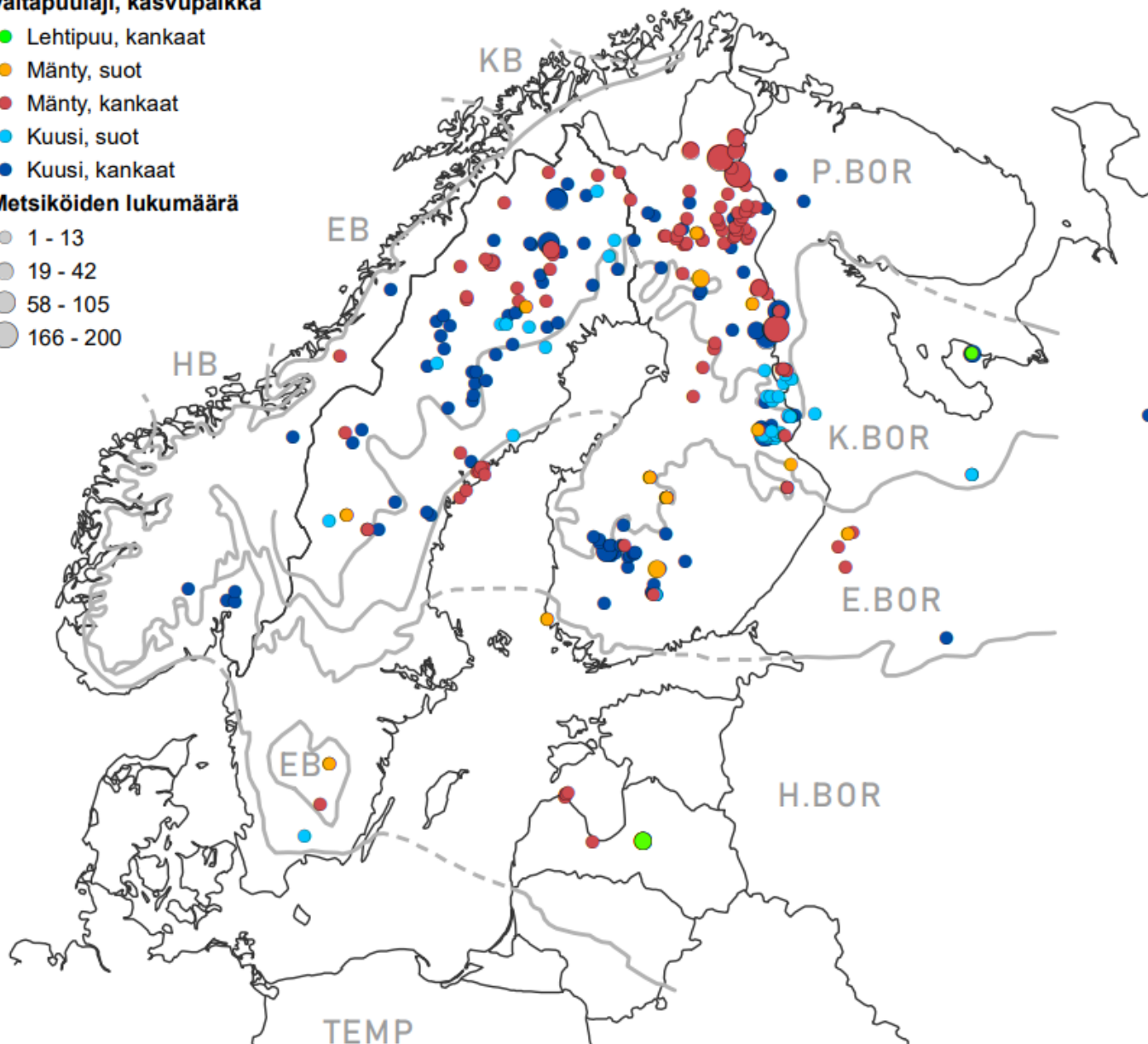
Old primary forest – literature review (P.Punntila)

Valtapaulaji, kasvupaikka

- Lehtipuu, kankaat
- Mänty, suot
- Mänty, kankaat
- Kuusi, suot
- Kuusi, kankaat

Metsiköiden lukumäärä

- 1 - 13
- 19 - 42
- 58 - 105
- 166 - 200



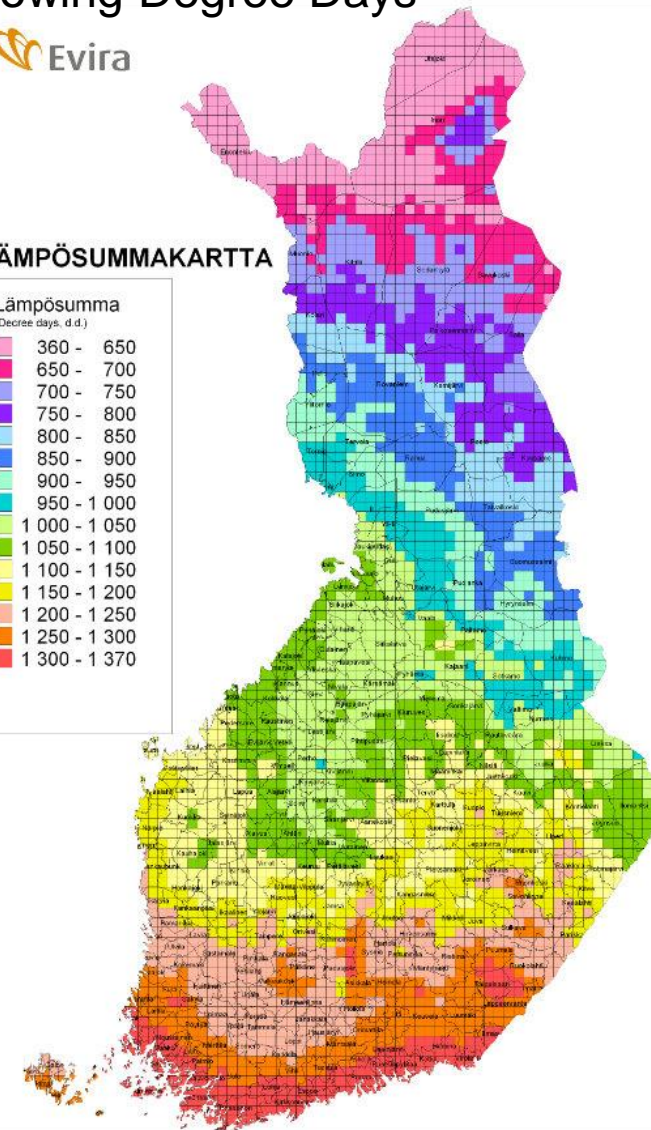
Growing Degree Days



LÄMPÖSUMMAKARTTA

Lämpösomma
(Degree days, d.d.)

| |
|---------------|
| 360 - 650 |
| 650 - 700 |
| 700 - 750 |
| 750 - 800 |
| 800 - 850 |
| 850 - 900 |
| 900 - 950 |
| 950 - 1 000 |
| 1 000 - 1 050 |
| 1 050 - 1 100 |
| 1 100 - 1 150 |
| 1 150 - 1 200 |
| 1 200 - 1 250 |
| 1 250 - 1 300 |
| 1 300 - 1 370 |



Outcomes of report "Primary Forests and Old-Growth Forests in Finland - Commission Guidelines and National Interpretation"

Report provides alternatives to study primary and old-growth forests

Lower limit for OGF is not defined in report (cannot be defined based on science – finally subjective decision)

Flexibility in interpretation is needed - "exchange ratio" between indicators

- Typical threshold value for deadwood over 20-30 m³/ha
 - If age over 140 then 10 m³/ha with continuity enough
 - If plenty more of deadwood then 100 year age enough
 - Sites with low productivity no threshold value for deadwood

Comparison with earlier inventory methods:

Earlier methods can be used in inventories of OGF's

Report does not handle use of complementary indicators



Mapping process – current status

- Definition of old-growth is under political process
- In Finland there is not such a good data on locations of primary and old-growth forests like in [Sweden](#)
- Probably most of primary and old-growth forests at privately owned land are already set-aside e.g. by forest certifications and Forest Act – voluntary conservation by METSO programme
- Also in state owned forests many sites are not in forestry use, but still not strictly protected
- During 2024-2025 inventories will take place at state owned forests
- “In line with the precautionary principle, Member States should without delay strictly protect those forest areas for which there is a strong probability, on the basis of the currently available information, that they meet definitions and criteria set out in this document”
- Recent inventories done at state owned forests mainly by NGO’s
 - high conservation value forests are observed (without any protection)
- Remember large enough ecological buffers and connectivity!

A photograph of a forest floor. In the foreground, several large, weathered logs lie horizontally across the ground, which is covered in green moss and small plants. In the background, numerous tall, thin tree trunks stand vertically, creating a dense forest. The lighting is soft and diffused, typical of a forest interior. The text 'THANK YOU!' is overlaid in the center of the image.

THANK YOU!

Foto: Seppo Tuominen

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