



Onko luonnonläheinen metsänhoito
ennallistamista?

Timo Kuuluvainen

Taustalla EU:n biodiversiteettistrategia ja ennallistamisasetus – mitä se tarkoittaa?

- Luonnon tilan parantamista
- Luonnonhoitoa, ei vain suojeleua
- Ennallistamista, joka voi kohdistua talousmetsään
- Käytännössä tämä tarkoittaa metsänhoitoa, jossa palautetaan metsän luontaisia rakenteita, ts luonnonläheistä metsänhoitoa
- Close-to-nature vs. closer-to-nature management

••• Closer-to-Nature Forest Management

••• EFI (2022): From Science to
Policy 12

Jørgen Bo Larsen, Per Angelstam, Jürgen Bauhus, João Fidalgo Carvalho,
Jurij Daci, Dorota Dobrowolska, Anna Gazda, Lena Gustafsson,
Frank Krumm, Thomas Knoke, Agata Konczal, Timo Kuuluvainen, Bill Mason,
Renzo Motta, Elisabeth Pötzelsberger, Andreas Rigling, Andreas Schuck



Closer-to-Nature Forest Management goals (EFI From Science to Policy 12 (2022))

Provide **background** and **tools** for implementation of EU biodiversity and forest strategies

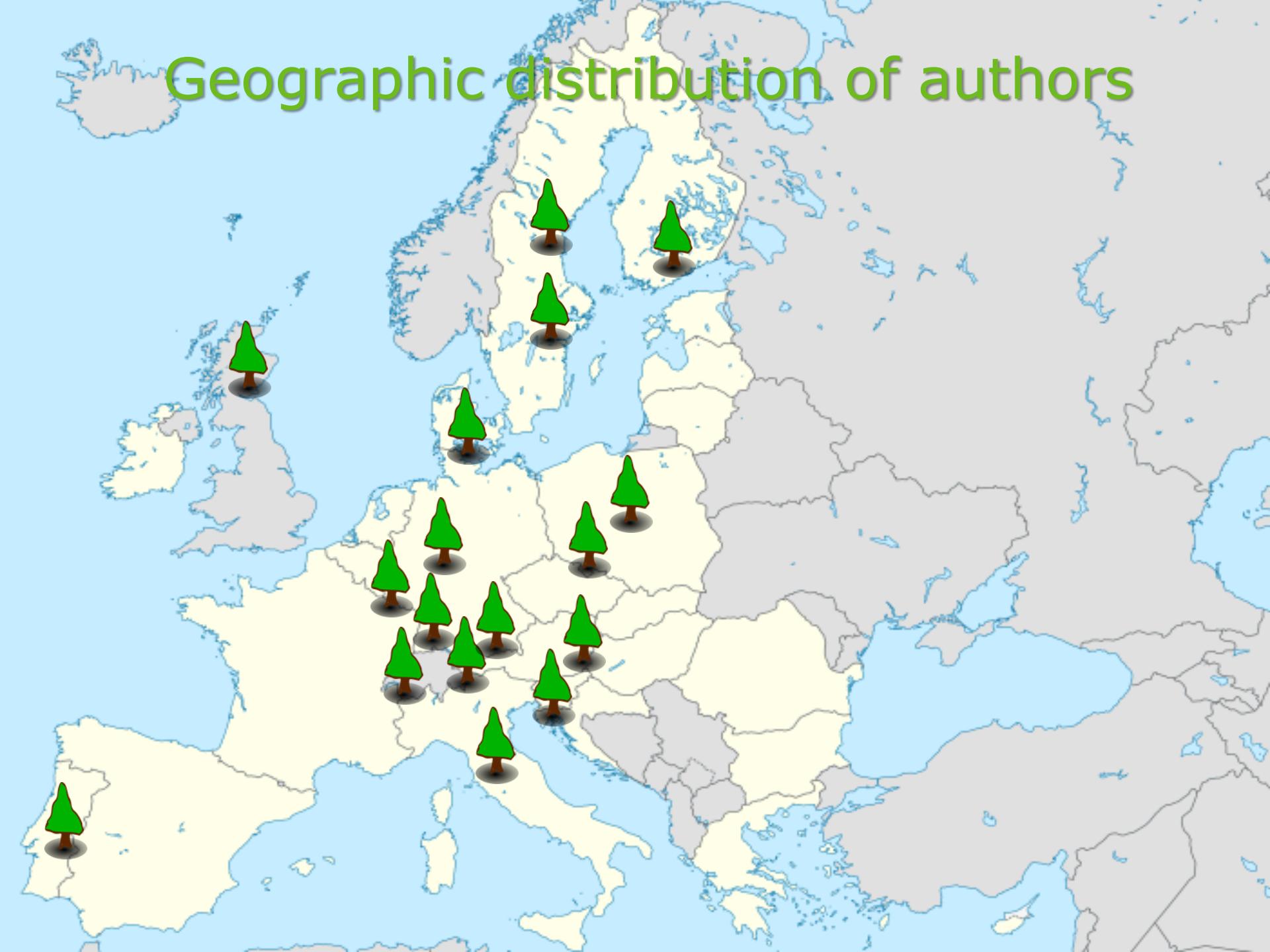
Move **beyond current tools**, low-retention and continuous cover management

Provide principles for flexible **European-wide implementation**

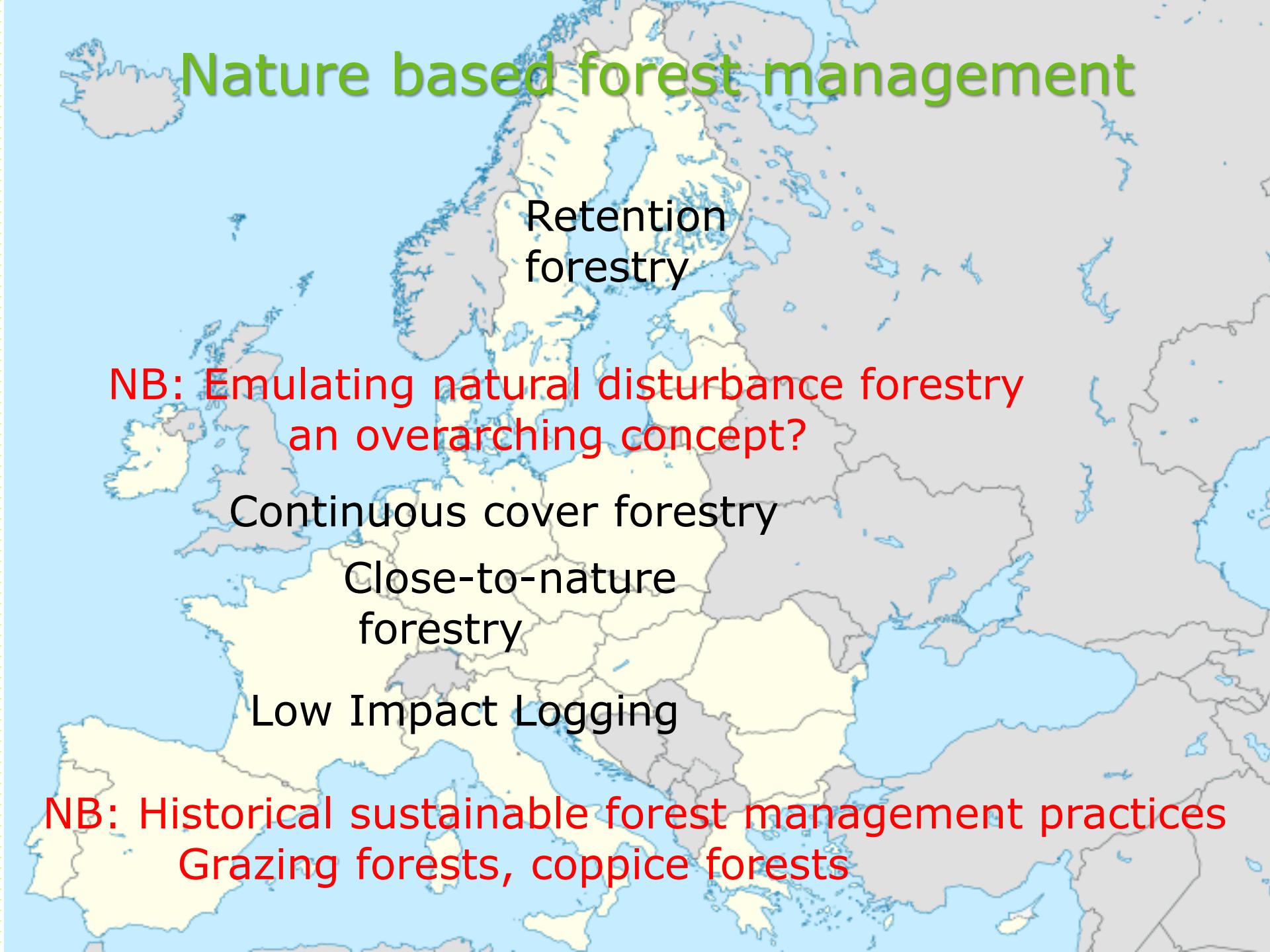
However, term “restoration” is used only 7 times in the 30 page rapport



Geographic distribution of authors



Nature based forest management



Retention
forestry

NB: Emulating natural disturbance forestry
an overarching concept?

Continuous cover forestry

Close-to-nature
forestry

Low Impact Logging

NB: Historical sustainable forest management practices
Grazing forests, coppice forests

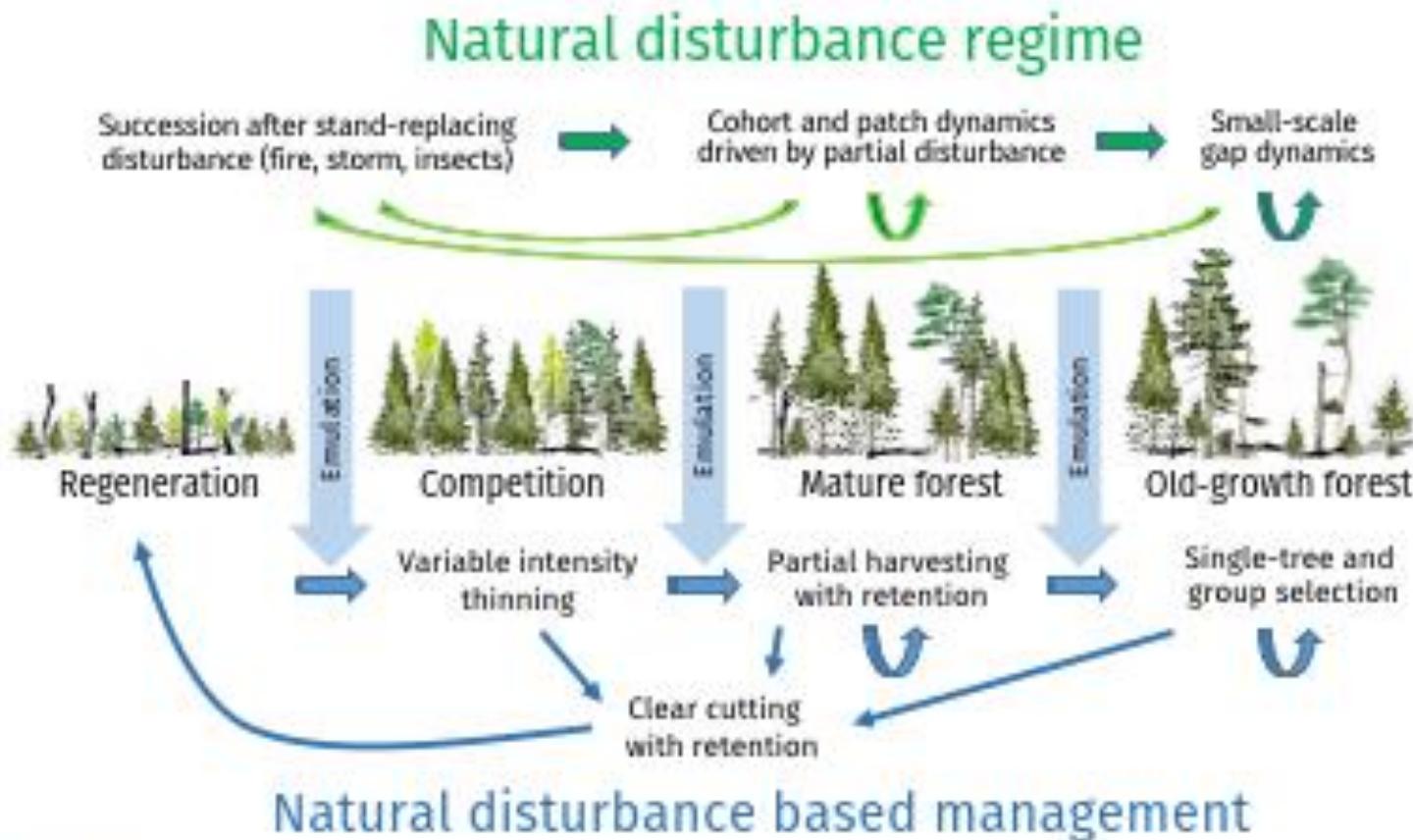
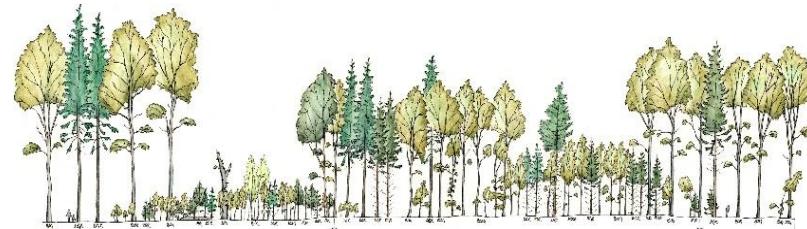
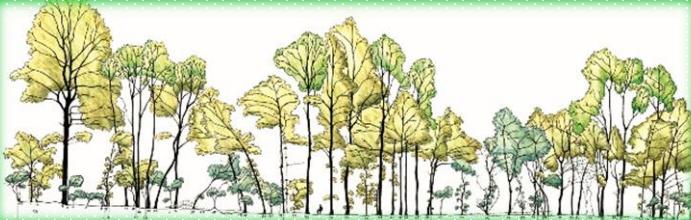


Figure 2: Illustration of how the understanding of natural disturbance regimes can guide natural disturbance-based management. The forest successional sequence after stand-replacing disturbance is divided into four developmental phases, with their typical internal dynamics. Silvicultural tools are used in each phase to emulate natural disturbances. The retention of ecological legacies (living and dead trees) is applied in regeneration cutting, variable-density thinning is used to emulate competition-phase dynamics, partial harvesting and high-retention cutting can be used to imitate group dynamics and opening up of the canopy, and structure and dynamics of old forests are emulated by selective and group harvesting. The desired proportions of developmental phases are ideally derived from a reference landscape or from the historical reference-disturbance regime (modified from Kuuluvainen et al. 2017, 2021).

Segregated - - - - - **Mosaic (TRIAD)** - - - - - **Integrated**

Natural forests (non intervention + old land-use forms)



Closer to Nature Forests
(Integrated multifunctional forest landscapes)



Forest plantations (ligni-culture)

The general principles

- Instead of homogeneity, permitting natural processes embracing heterogeneity and complexity of forest structures and patterns
- Emphasizing forest functions more at small spatial scales
- Using a variety of silvicultural systems based on knowledge of natural disturbance patterns of the region
- Low-impact timber harvesting with equal attention being paid to what is retained in the forest as what is removed.

Cont. Closer to Nature general principles

- Retention of habitat trees and dead wood
- Promoting native tree species as well as site adapted non-native species
- Promoting natural tree regeneration
- Partial harvests and promotion of structural variation (emulating natural disturbances)
- Promoting tree species variation and genetic diversity
- Avoidance of intensive management operations
- Supporting landscape heterogeneity and functional habitat networks

To conclude

- Closer-to-Nature Forest management has potential **to integrate different mgmt. objectives**
- Essential to respect **regional variation** in ecological, economic and social/cultural settings
- It is a journey which **will take time** and long-term commitment
- Need for consistent long-term financial support for private owners who embark on this journey
- Importance of a **European-wide support network** of demonstrations etc. to aid the transformation



Onko luonnonläheinen metsänhoito
ennallistamista?

Se riippuu... / It depends!
Yleisesti ottaen kyllä
Terminologian käyttö sekavaa!

Is it restoration? – It depends

Retention from
standing stock

Terminology

- 1-10%  Low-retention, CNFM, CCF
- 10 - 50%  Closer-to-nature forest mgmt
- 50 – 100%  "True" restoration