

FOREST BIODIVERSITY AND PROTECTION

July 2024



Ministry of Agriculture and Forestry of Finland

FORESTS ARE HABITATS WITH ABUNDANT SPECIES

Of all plant, animal and fungus species in Finland, around 2/5 are found in forests.

Finland is estimated to be home to a total of 50,000 animal, plant and fungus species. Of these, 20,000 species live in forests.

When compared internationally, Finland's forest species are exceptionally well studied.

From the perspective of biodiversity, the most important species are aspen, goat willow and broad-leafed species.

There are 30 tree species native to Finland. The majority of these are deciduous trees.





FOREST BIODIVERSITY IS PROTECTED IN A VARIETY OF WAYS

Conserving biodiversity requires protected areas and nature management of commercial forests

The METSO programme is a voluntary based forest protection programme for the forest of Southern Finland. It works to increase the number of protected areas, while the quality of these areas is improved through restoration.

Nature management improves the forest biodiversity in commercial forests. Nature management can be a part of everyday forest management or separate nature management projects. Natural values are also taken into account when managing forests in recreation areas and other specially designated areas. Gene reserve forests ensure the conservation of forest genetic resources.

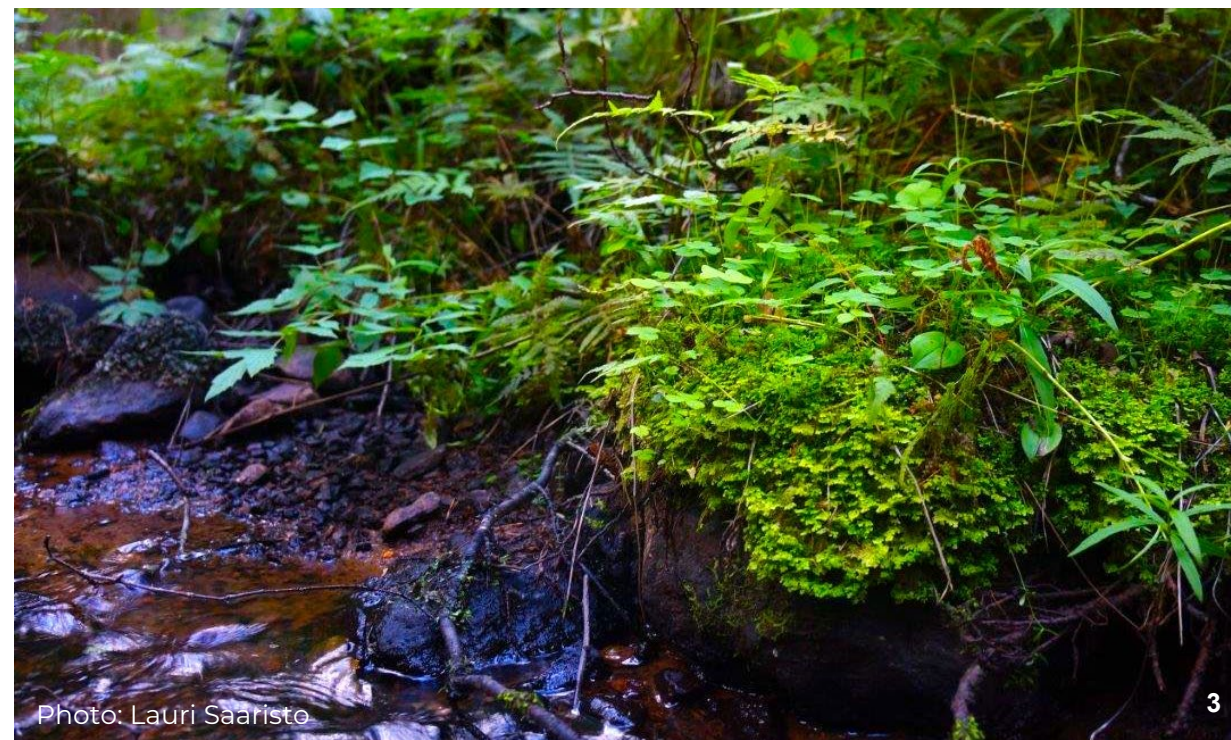


Photo: Lauri Saaristo

NATURE MANAGEMENT CONSERVES THE BIODIVERSITY OF COMMERCIAL FORESTS

Nature management is part of everyday forestry. The end result is always the sum of forest management and nature management objectives and measures.

Nature management of forests:

- Conserves valuable habitats
- Leaves retention tree groups and game cover
- Leaves buffer zones at the edges of river basins
- Conserves decaying wood and creates high stumps
- Protects trees hosting birds of prey
- Carries out controlled burning of forests and burning of retention tree group

Thanks to the development of forestry practices and operating models, around 30 previously threatened species were removed from the threatened species list in 2019.



THE METSO PROGRAMME IS AN IMPORTANT TOOL FOR IMPROVING THE NATURAL VALUES OF FORESTS IN FINLAND

The METSO programme is volunteer-based

Through the programme, a private forest owner can protect their forests either for a fixed term or permanently, or they can carry out nature management work.

The state provides compensation for conservation and nature management as part of the METSO programme. The programme aims to protect forests that have diverse natural values and are particularly valuable habitats for living organisms.

The METSO programme also measure involving communications, training, research, development of nature management and restoration of nature conservation areas. The objective of the programme is to improve cooperation between forest owners and between the environmental and forestry sectors.

The joint programme of the Ministry of the Environment and the Ministry of Agriculture and Forestry will continue until 2025.

Read more at www.metsonpolku.fi



Photo Lauri Saaristo



HELMi PROGRAMME STRENGTHENS THE BIODIVERSITY OF FINNISH NATURE

Helmi Habitats Programme 2021–2030 is run jointly by the Ministry of Agriculture and Forestry and Ministry of the Environment

Helmi Programme strengthens biodiversity in Finland and ensures the vital ecosystem services provided by nature. Actions are targeted to sites both within and outside the protected areas.

The measures of the Helmi Programme help hundreds of threatened species and most of our threatened habitats.

Protection, restoration and nature management are based on voluntary action by landowners.

Helmi Programme contains more than 40 measures.

Effective actions under the Helmi Programme:

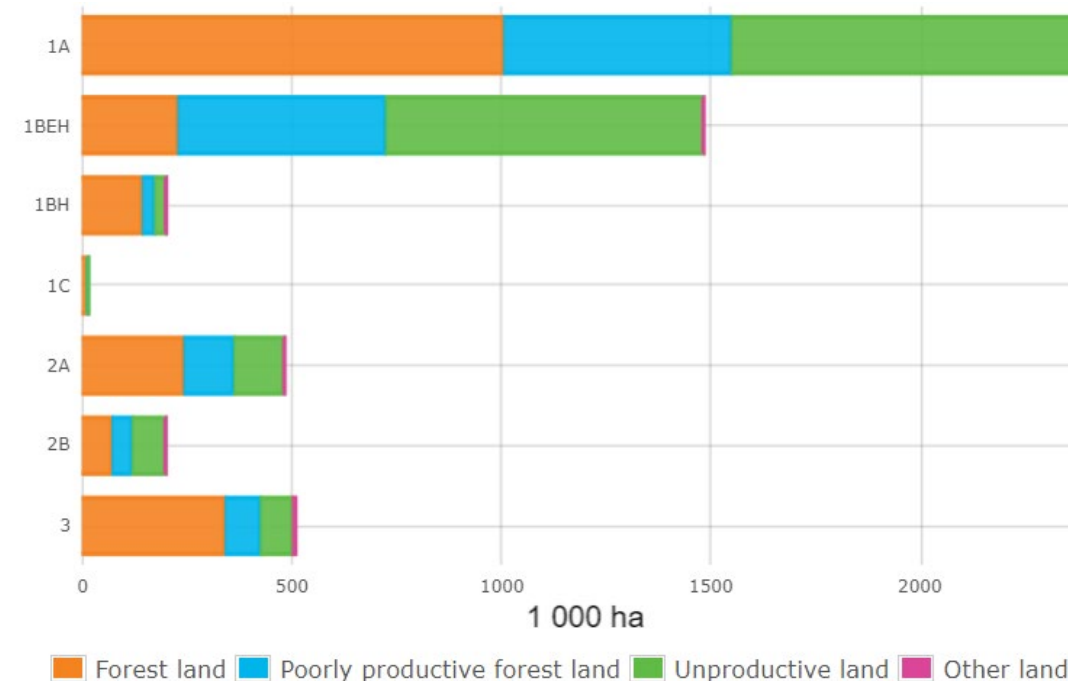
- Protection and restoration of mires
- Restoration of aquatic bird habitats and wetlands
- Restoration and management of semi-natural grasslands
- Protection, restoration and nature management of woodland habitats
- Restoration and management of small water bodies and shore habitats



13 PER CENT OF FORESTS IN FINLAND ARE PROTECTED

The amount of protected forest area has tripled since the 1970s.

Altogether 2.94 million hectares of Finnish forests are protected, which is equivalent to 13 per cent of the country's forest area. Forestry measures are not permitted in most of the protected areas. The majority of protected areas are located in northern Finland.



Area of protected areas, biodiversity conservation sites of commercial forests, and special areas supporting conservation of nature values by land class (2022).

Source: OSF: Natural Resources Institute Finland

DESCRIPTIONS FOR CODES IN THE PREVIOUS SLIDE

Suojellut alueet yhteensä (1A+1B+1C+2A+2B)

Protected areas, total (1A+1B+1C+2A+2B)

Lakisääteiset suojelualueet yhteensä (1A+1B+1C)

Statutory protected areas, total (1A+1B+1C)

1A Luonnonsuojelualueet ja luonnonsuojelualueeksi varatut alueet

1A Nature reserves and sites reserved for nature conservation

1B1 Muut lakisääteiset suojelualueet, ei hakkuita

1B1 Other statutory protected areas, no felling

1B2 Muut lakisääteiset suojelualueet, varovaiset hakkuut mahdollisia

1B2 Other statutory protected areas, cautious felling possible

1C Määräaikaisesti rauhoitetut suojelualueet

1C Fixed-term protection areas

Taloussiemien monimuotoisuuden suojelukohteet yhteensä (2A+2B)

Biodiversity conservation sites in commercial forests, total (2A+2B)

2A Taloussiemien erityiset monimuotoisuuskohteet, ei metsätaloustäyttöä

2A Special biodiversity sites in commercial forests, no forestry measures

2B Taloussiemien monimuotoisuuskohteet, rajoitettu metsätaloustäyttö

2B Biodiversity sites in commercial forests, restricted forestry use

3 Luontoarvojen suojelua tukevat metsät, muut erityisalueet ja -kohteet, rajoitettu metsätaloustäyttö

3 Forests supporting conservation of nature values, other special sites, restricted forestry use

Metsä- ja kitumaa muodostavat yhdessä puustoisien alueen, metsän.

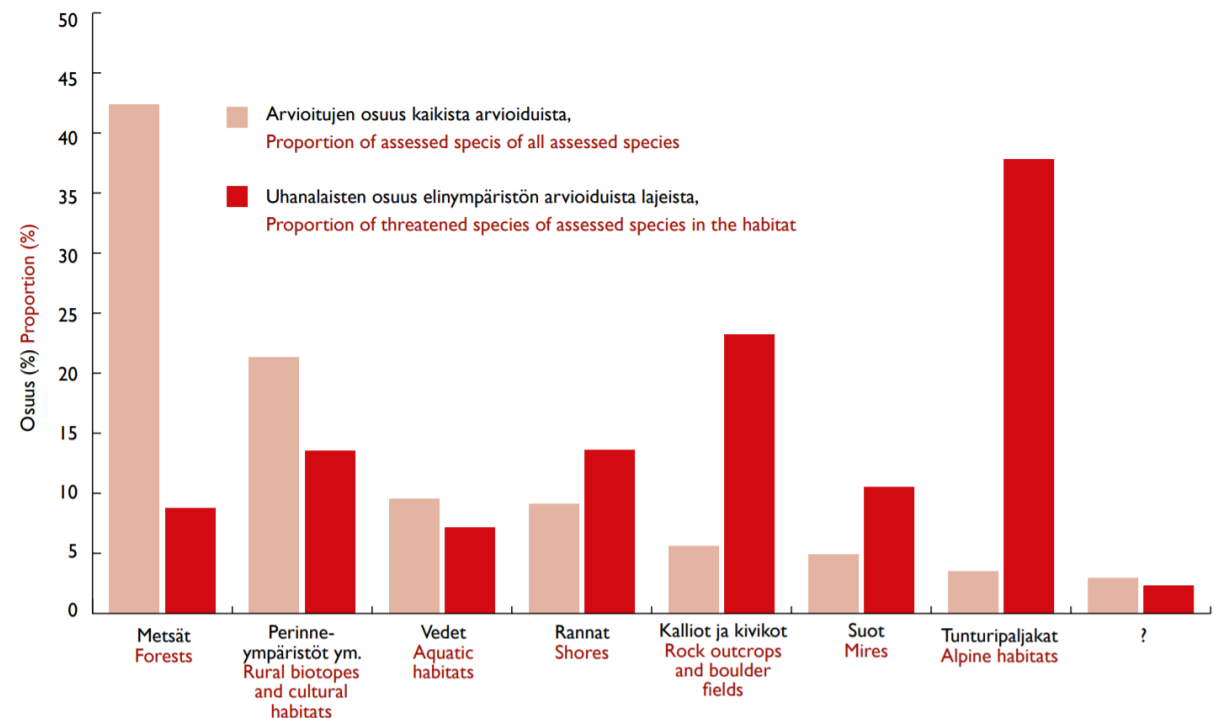
Forest land and poorly productive forest land together form a wooded land area, forest.

THE STATUS OF ENDANGERED SPECIES IS ASSESSED REGULARLY

The status of endangered species was assessed for the fifth time in 2018.

A total of 833 threatened species live primarily in forests. Forests are home to the majority (31 per cent) of threatened species. The number of threatened forest species is high because the number of forest species in general is high. The proportion of threatened species out of all species is lowest in forests (9 per cent).

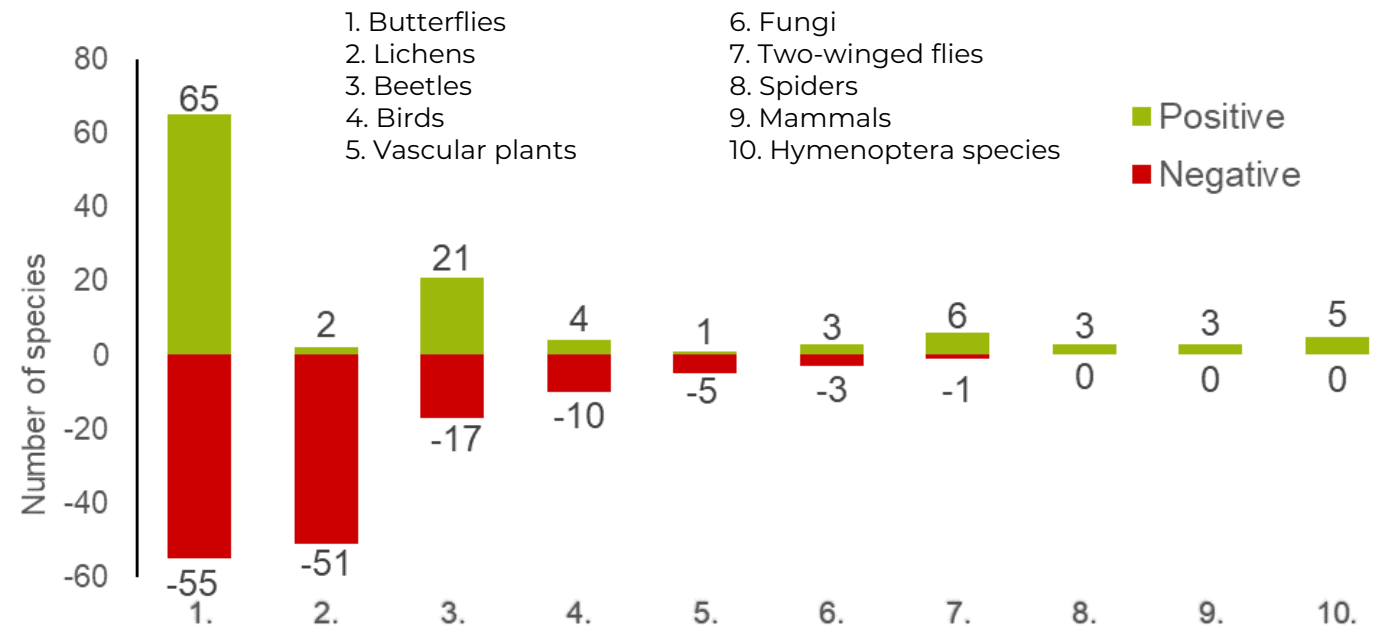
The majority of endangered forest species in Finland are fungi, lichens and insects.



THE CHANGE IN ENDANGEREDNESS OF FOREST SPECIES

Measures to restore endangered populations are slow to take effect

According to the latest inventory (2018), there are both positive and negative changes in endangeredness of forest species. However, there are still more negative changes than positive ones. The negative change has been greatest in butterflies and lichens.



Sources: Ministry of the Environment and Finnish Environment Institute



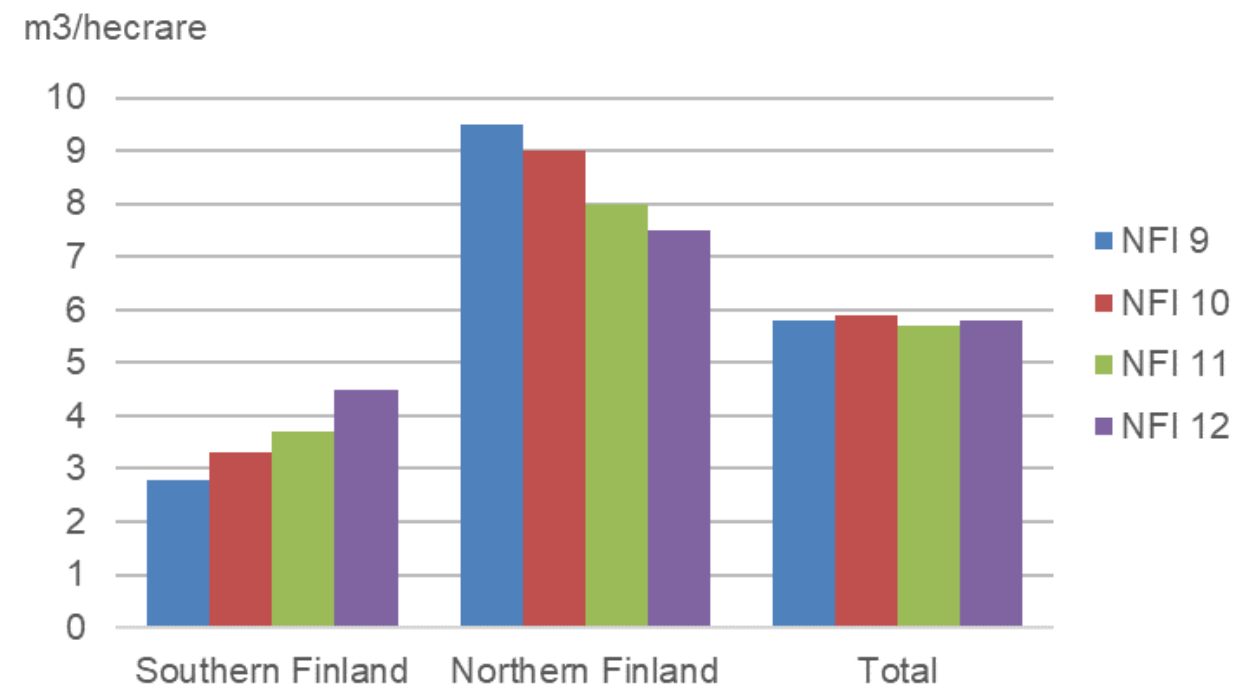
DECAYING WOOD ENRICHES FORESTS

Several forest species need decaying wood to survive

The amount of decaying wood in southern Finland has increased in the 21st century. In northern Finland it has decreased due to the lack of storms in both commercial forests and conservation areas. According to the latest inventory (2019-2022) however, the decrease has stopped.

The amount of dead wood in commercial forests can be increased by leaving retention trees and creating high stumps.

Deciduous trees and a small quantity of coniferous trees felled due to a storm or other forest damage should be left in the forest in order to increase its biodiversity.

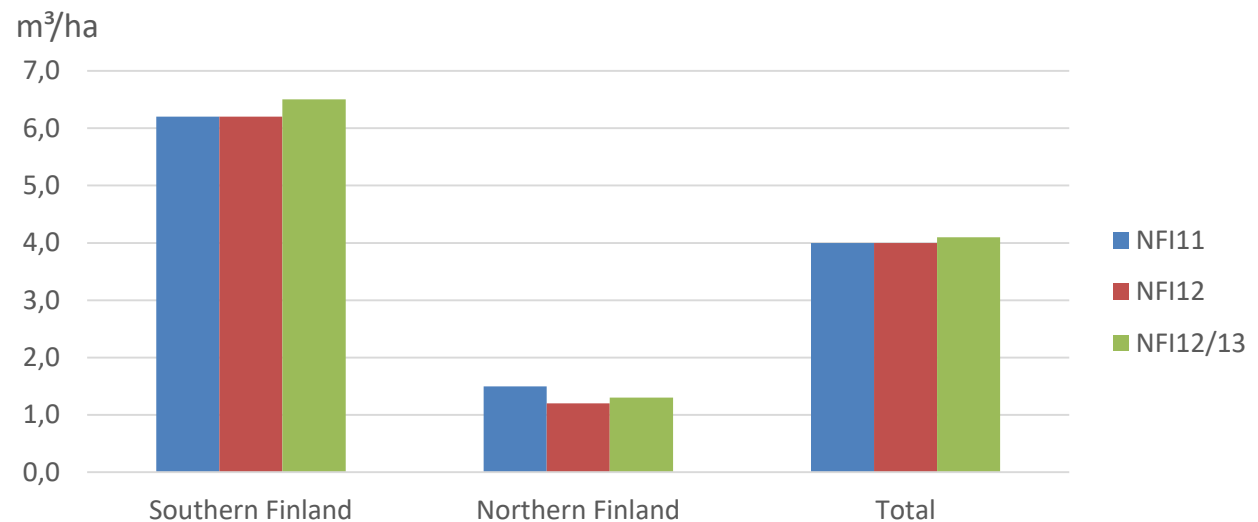


Average volume of decayed wood (m³/ha) by inventory period.
Source: Natural Resources Institute Finland

MIXED FOREST STANDS INCREASE BIODIVERSITY

Mixed stands increase the biodiversity of forest environments, improve the landscape values of forests and reduce the risk of damage. Broad-leaved (deciduous) trees increase the diversity of surface vegetation and in mixed stands the numbers of species of many living organisms are higher than in single-species stands.

According to latest NFI results (2019–2022), there has been some increase in the total volume of deciduous trees (excl. birch) in southern Finland. The decrease in the volume of deciduous trees in northern Finland has stopped and in the whole country their volume has stayed about the same during the whole period 2009–2022.



Volume of deciduous trees (excl. birch) in Finnish forests by NFI periods.

NFI = National Forest Inventory

Source: Natural Resources Institute Finland



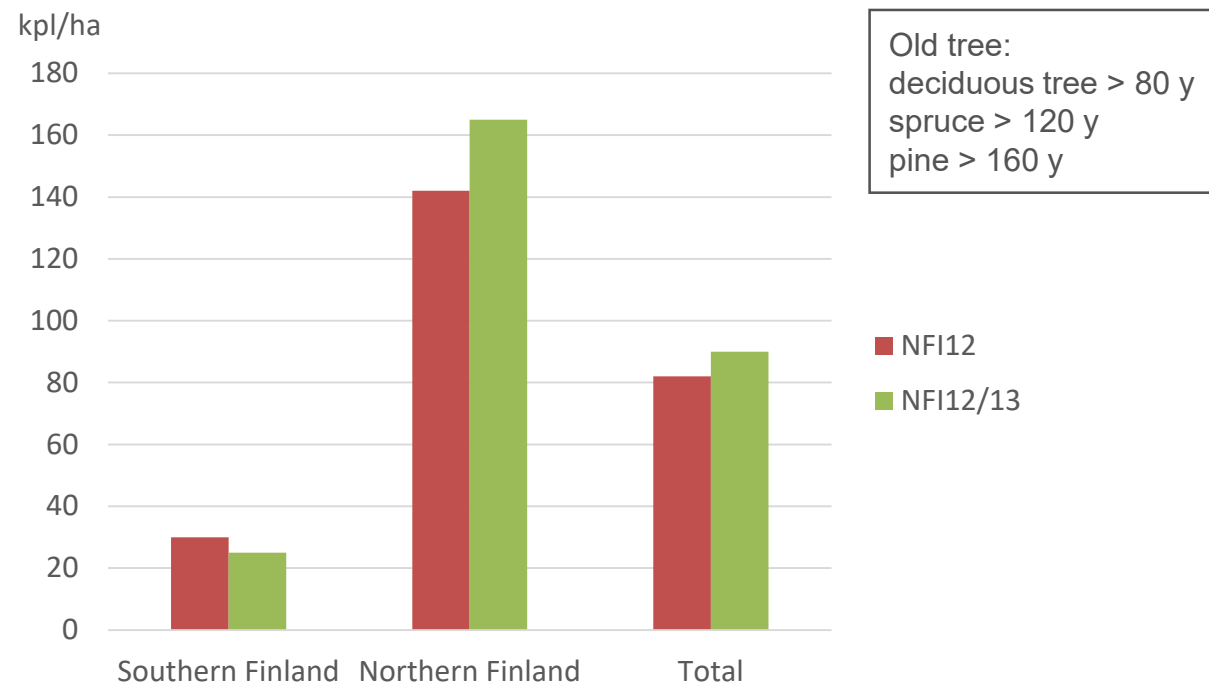
OLD TREES OFFER IMPORTANT HABITATS

Old trees are habitats for many cavity nesting birds, insects, fungi, mosses and lichens

As trees grow older, changes take place in their structure that promote biodiversity. Damages, cavities and decaying spots appear in old trees. Their bark becomes thicker and cracked. These structural changes create micro-habitats that offer nutrition, shelter and habitats for numerous species.

The number of old trees is increased by leaving retention trees in connection with forest management and harvesting operations, either as individual trees or groups of trees. In terms of biodiversity, large deciduous trees are the most beneficial.

According to the latest NFI results (2019–2022), the number of old trees has increased in northern Finland and in the whole country, but there has been some decrease in southern Finland.



Number of old trees in Finnish forests by NFI periods.

NFI = National Forest Inventory

Source: Natural Resources Institute Finland



FINLAND FOCUSES ON STRICT PROTECTION OF FORESTS

Forest conservation can be implemented in a variety of ways. The Forest Europe process monitors and collects statistics on forest conservation throughout Europe. Conservation practices vary from country to country, so it is difficult to compare them internationally.

MCPFE CLASSES: Map footnote for Finland:

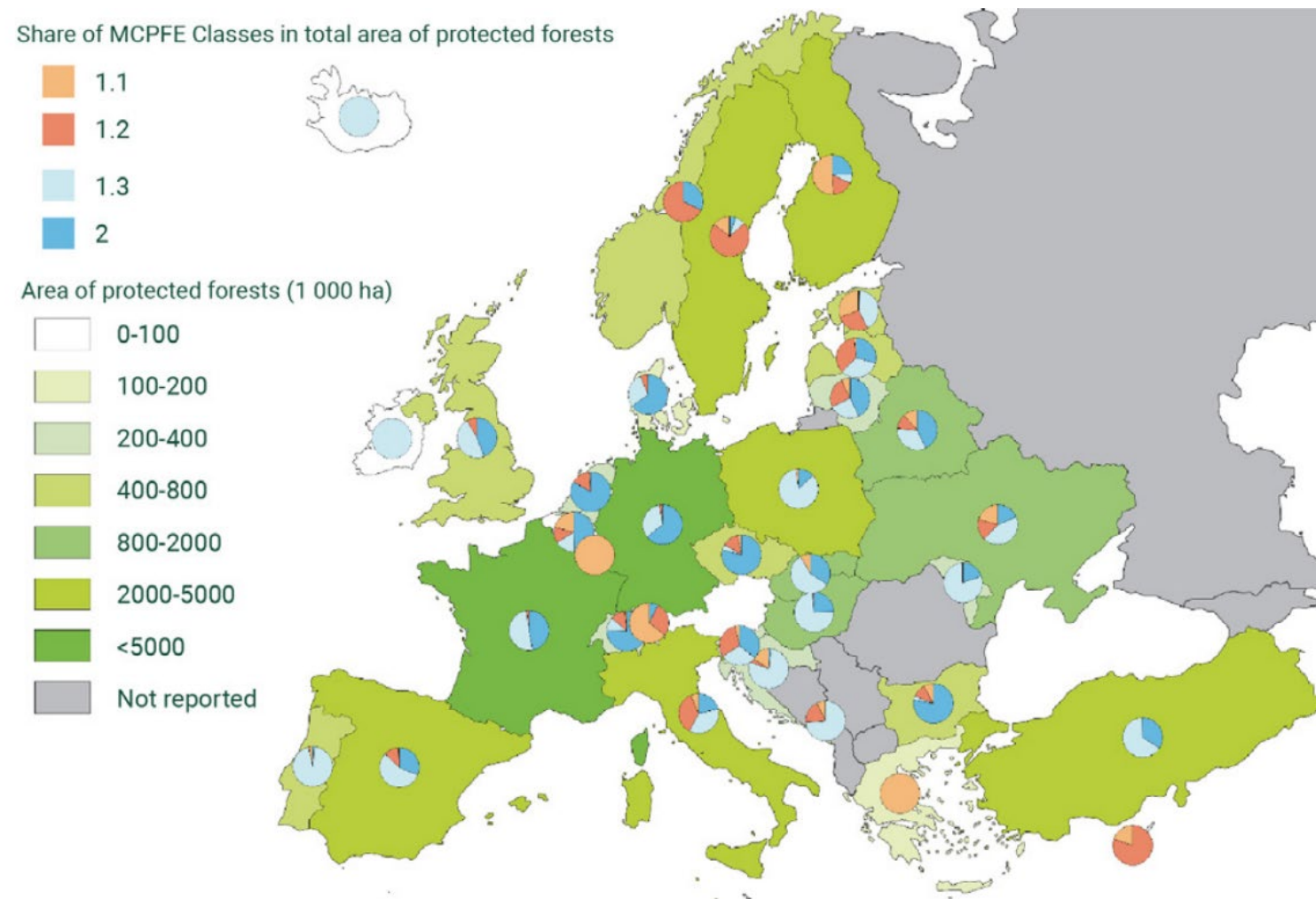
- 1.1 No active intervention: Includes nature reserves, protected old-growth forests, and other protected forests where forestry operations are prohibited in forests owned by Metsähallitus, excluding national parks.
- 1.2 Minimum intervention: National parks, forest protected with the decision of Metsähallitus, other protected forests.
- 1.3 Conservation through active management: Other legally protected forests where operations are possible to maintain the natural elements, other protected forests (with owners decision or land use planning) where forestry operations are prohibited).
- 2 Management objective: Protection of Landscapes and Specific Natural Elements.



AREA OF PROTECTED FORESTS AND THE SHARE OF MCPFE CLASSES, BY COUNTRY IN 2015

For trends only countries that have provided data for all periods are included.

Source: [FOREST EUROPE, 2020: State of Europe's Forests 2020.](#)

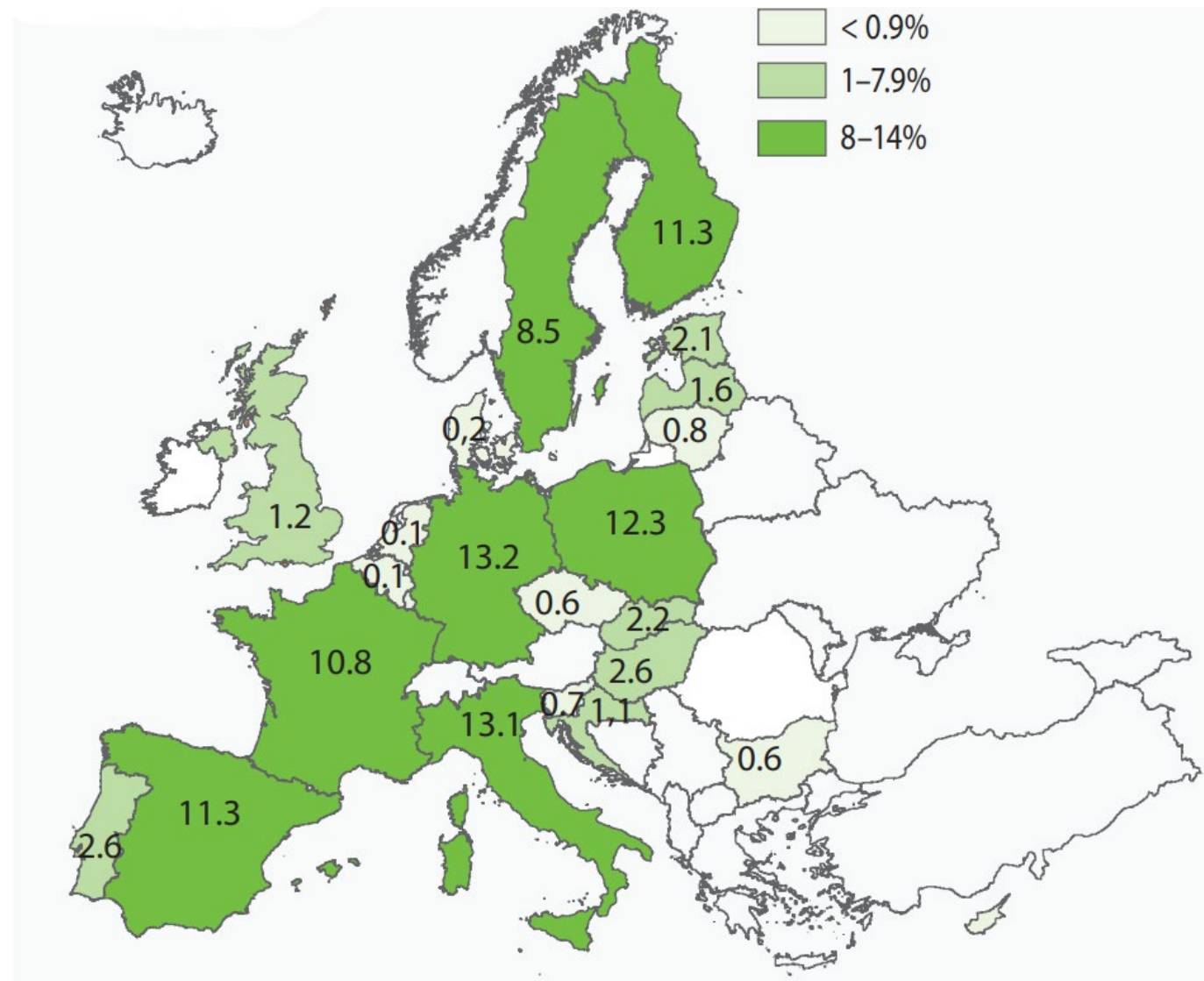


SHARE OF PROTECTED FORESTS FOR BIODIVERSITY IN EU

Share in percent of total EU-28 forest protected for biodiversity (MCPFE 1.1-1.3), by country in 2015.

For trends only countries that have provided data for all periods are included.

Source: [FOREST EUROPE, 2020: State of Europe's Forests 2020](#). AND [Natural Resources Institute Finland](#)





MORE INFORMATION:
mmm.fi/en/frontpage



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