Our natural capital is shrinking – the trend can be turned

Functioning ecosystems are a foundation for human well-being and sustainable economy. Biodiversity contributes to the resilience and adaptiveness of ecosystems.

The latest research shows that Finland's biodiversity continues to degrade: 12% of species and 48% of habitat types are threatened.[1, 2] Biodiversity loss is a global phenomenon, much like climate change, threatening the conditions for life globally. However, it is possible to use ecosystems and natural resources sustainably and thereby safeguard human well-being. We need targeted solutions to support the fight against biodiversity loss and climate change.

The natural environment is degrading at a fast pace. Human activity has already resulted in the loss of 34% of global biodiversity, and the deterioration continues.[3]

Stopping the loss of biodiversity requires urgent and widespread action. Action should be taken by all, including governments and municipalities as well as companies, landowners and private citizens.

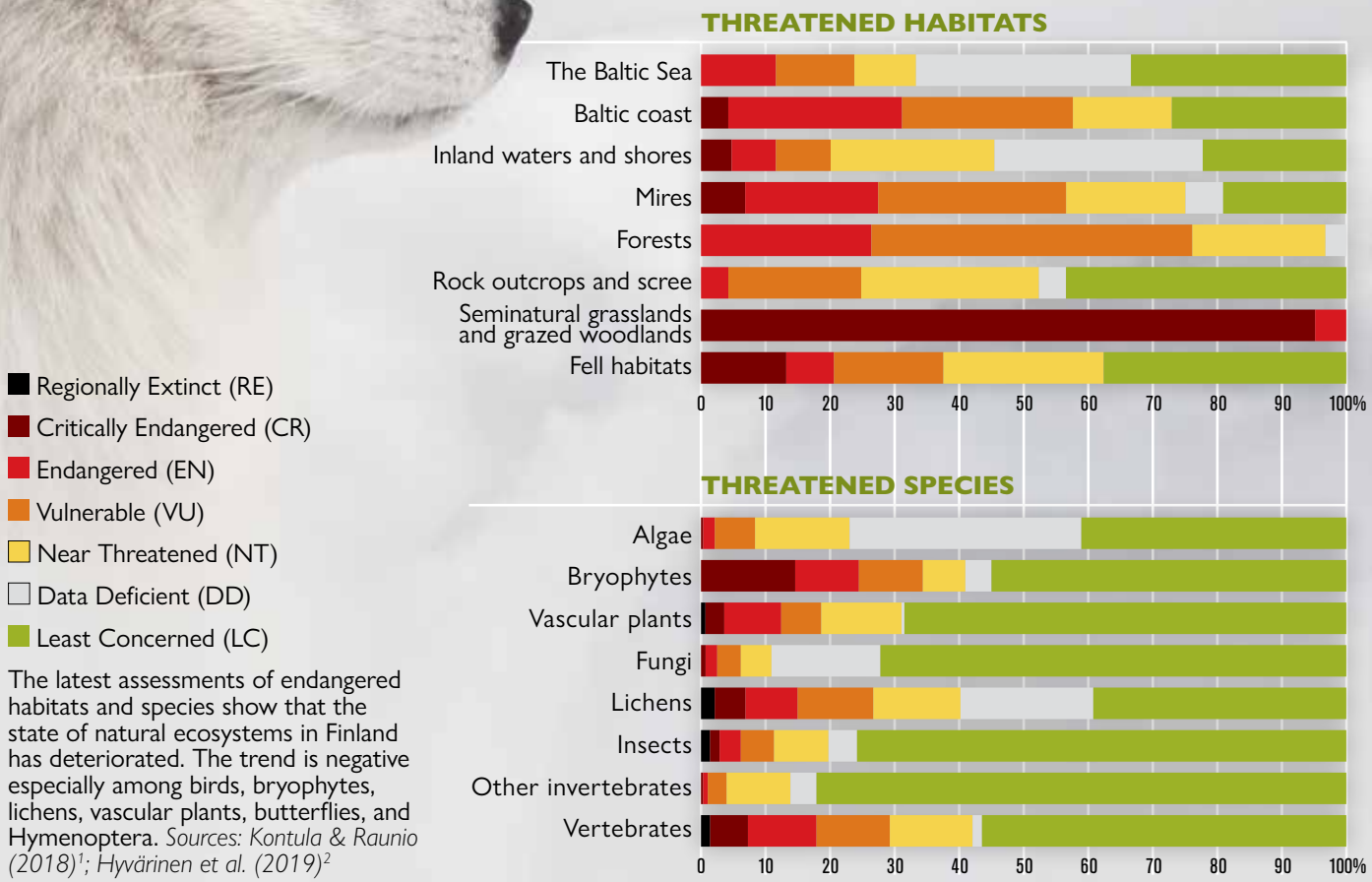
The solutions need to build on up-to-date information and mobilise effective practices. The economy must be based on sustainable use of natural resources.

A new direction in 2020

We are currently experiencing the sixth mass extinction in history. Vertebrate species are disappearing a hundred times faster than a natural pace.[4] Their populations have shrunk by 60% on the average since the 1970s.[5] The same trend can be seen in insect populations.

The clearest pressure on Finnish nature comes from the use of natural resources, land use and land use change. In addition, climate change is accelerating the loss of species by altering their living conditions faster than they can adapt.

The International Convention on Biological Diversity requires new and more effective actions to curb biodiversity loss, from 2020 onwards. Securing the functions of Finland's natural ecosystems is a pre-condition for the well-being of today's Finns and future generations. Finland must also carry its global responsibility: our consumption should not result in habitat degradation in other parts of the world.



The latest assessments of endangered habitats and species show that the state of natural ecosystems in Finland has deteriorated. The trend is negative especially among birds, bryophytes, lichens, vascular plants, butterflies, and Hymenoptera. *Sources: Kontula & Raunio (2018)[1]; Hyvärinen et al. (2019)[2]*

Information paves the way for new solutions

The status and changes of biodiversity and ecosystems can be measured more accurately and robustly than before. Remote sensing and the combination of spatial information and modelling provide new insights on how different activities impact ecosystems, in addition to general trends.

National accounting can be complemented with ecosystem accounting, which allows assessing the sustainability of natural resource use and comparing the benefits and environmental impacts of economic activity, supporting e.g., sustainability assessments of bioeconomy.

Better information paves the way for new and more efficient solutions. When the ecologically valuable terrestrial and water ecosystems have been identified, they can be integrated in spatial planning. Finland has already drawn up management plans aiming at a good status for 6,000 largest water bodies.

Nature-based solutions bring win-win opportunities. For example, flood hazards induced by climate change can be mitigated with wetland arrangements that benefit biodiversity.

Halting biodiversity loss

Governing biodiversity requires societal change and integrated policies, comparable with those tackling climate change. A new level of ambition in developing more sustainable practices is required especially in agriculture, forestry and construction.

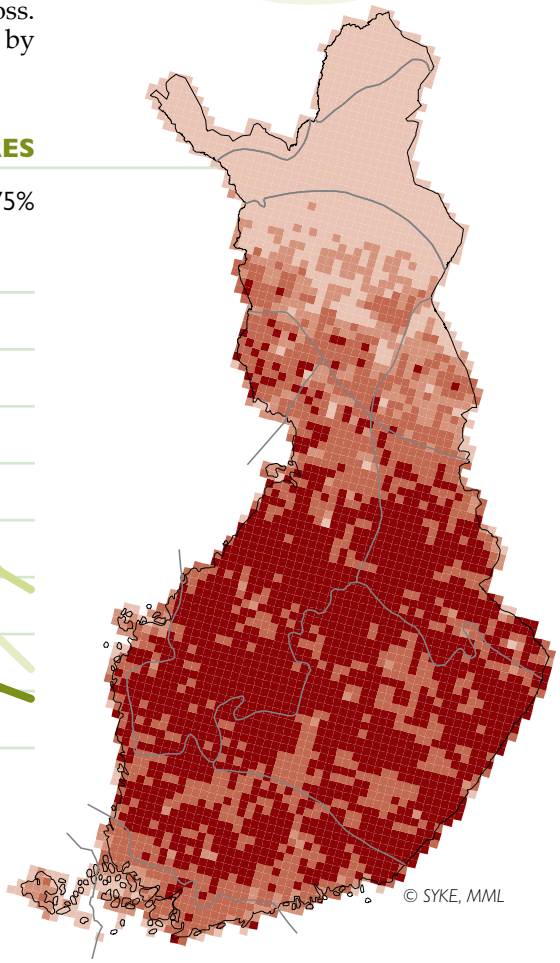
The best comprehensive solutions emerge through tackling climate change alongside biodiversity conservation. Mire restoration and moderate levels of annual forest fellings support biodiversity and increase carbon sinks. It is important to identify and remove harmful subsidies that undermine biodiversity and climate targets, including those supporting the use of peat for fuel.

The annual balance of diversity must be positive. Projects must be designed so as to avoid net loss of biodiversity, or to mitigate and compensate the loss. If habitats are damaged in one place, the damage must be compensated by restoring or conserving habitats elsewhere.

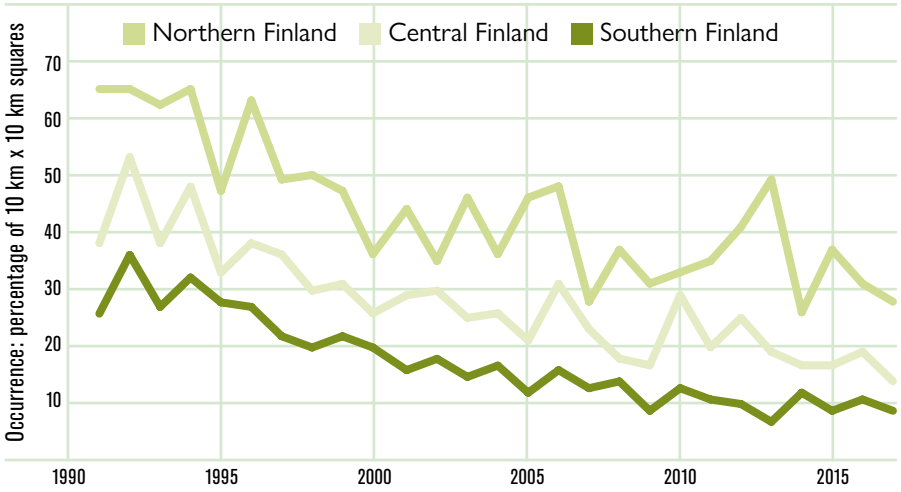
The loss of insects is threatening both plant pollination and the food supply of birds. Agrienvironmental subsidies should favour biodiversity enhancing management methods.

PROPORTION OF DRAINED MIRES

< 25% 25–50% 50–75% > 75%



OCCURRENCE OF MIRE BUTTERFLIES 1992–2017



Sixty percent of Finland's mires have been drained leading to the loss of wetland species. Butterfly species living especially in open bogs have suffered. The decline of mire butterflies and mire habitats has continued even though new ditching has been abandoned. *Sources: Kontula & Raunio (2018)[1]; Luonnontila.fi*

A protected area network crucial for adapting to changing climate

Conservation areas in Finland are mostly situated in the treeless and sparsely wooded lands in the north. Of forest land, 6.6 percent is protected, less in Southern Finland. This is far from the internationally agreed target of protecting 17% of land area and restoring 15% of degraded ecosystems.[6]

Providing incentives to landowners for protecting habitats is an important tool for increasing conservation. The financing of the popular Metso Programme should be increased, and its scope should be broadened to include other habitats, especially mires.

Climate change brings additional requirements for protected areas. Species must be able to move from one area to another as living conditions change. Connectivity of protected areas should be improved and the viability of ecosystems lying between them should be safeguarded.

The SYKE-based study shows that the benefits of conservation can multiply when it is targeted effectively to the areas that complement the current conservation network.

A carefully targeted increase of one percent in Finland's protected marine areas would double the conservation effectiveness in marine habitats.[7]

Finland has a good opportunity to improve the status of its biodiversity and ecosystems.
None of our habitat types have yet been lost, and nature values can be restored.
There is still space for nature, and Finns have the know-how.
Many companies are looking for solutions that burden ecosystems less, and consumers are willing to pay for these solutions. A turn for the better is possible.

Biodiversity revived

Network of protected areas, representative and well-connected

- Forest conservation increased in Southern Finland
- Metso Programme extended to mires
- Targeted increase of marine protection areas

Natural functions of degraded ecosystems restored

- Mire restoration increased
- Streams and rivers restored in Southern Finland
- Restoration burning of forests increased
- More natural flood control

Biodiversity in the areas in commercial use recovered

- Habitat data in efficient use in spatial planning
- More old trees and dead wood in forests
- Controlled burning in nutrient-poor forests
- Continuous cover forestry in peatland forests
- Improved reindeer grazing cycle
- Flowering plants for pollinators in agricultural areas
- Greenspaces managed more naturally

Habitat management adequate and effective

- Area of seminatural grasslands doubled
- Overgrown beaches opened
- Bird wetlands restored
- Invasive alien species combatted

Status of the Baltic Sea and inland waters improved

- Nonpoint source pollution curbed
- Nutrients circulated
- Water protection to the level of catchment areas
- Small water bodies and shores included in river basin management
- Fish migration barriers removed

Finland's nature will remain viable and diverse, if action is taken.
The image contains key instruments.
The corner stone is sustainable living where excessive consumption is avoided and efforts are made towards responsible production and circular economy.

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