

MTK's Biodiversity Programme

Safeguarding
and enhancing
biodiversity





Biodiversity

= variation at the genetics of species, abundance of species, and diversity at ecosystem level

Natural capital

= renewable and non-renewable natural resources

Ecosystem service

= tangible and intangible services provided to humans by nature (provisioning, supporting, regulation and cultural services)

WE SAFEGUARD AND ENHANCE BIODIVERSITY



- › with best practices in agriculture and forest management
- › with well-targeted nature management and restoration
- › with landowner-based voluntary nature conservation

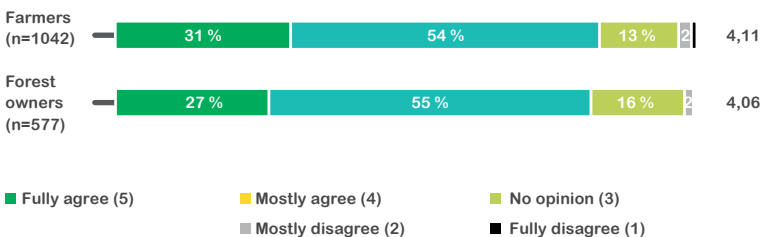
Biodiversity is the basis of life and well-being as well as a prerequisite for food production, productive forests and a healthy environment. Natural capital and ecosystem services are dependent on biodiversity.

Finland is committed to the international target of halting the loss of biodiversity. Central Union of Agricultural Producers and Forest Owners (MTK) and its members work towards safeguarding and enhancing biodiversity. Our values, future competitiveness and intention to act sustainably require us actions for biodiversity.

It is a part of Finnish agriculture and forestry to take care of biodiversity in agricultural environments and forests. In our organization eight out of ten farmers and forest owners say they are developing their operations to become more environmentally sustainable. To support the positive development, landowners need a stable and supportive operating environment as well as reliable information.

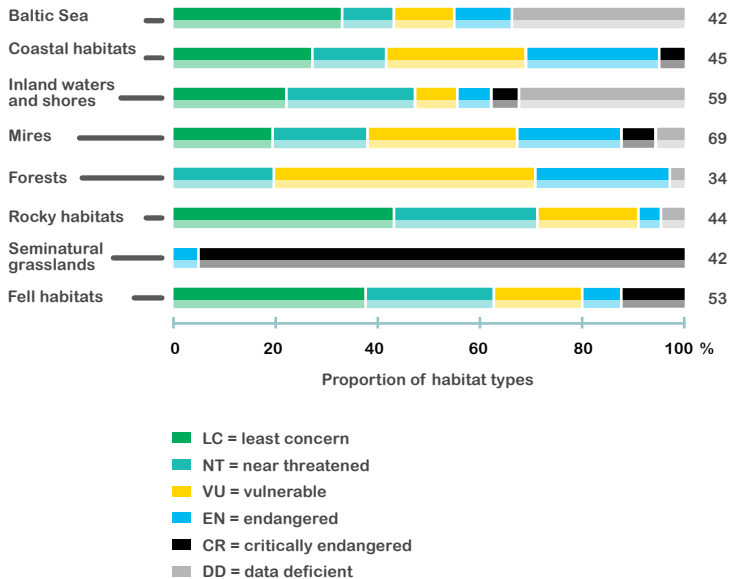
> The members of MTK are ready to take biodiversity into account even more (MTK's Ympäristöluotain survey in 2018).

Biodiversity would be better considered, if more economic incentives were involved.



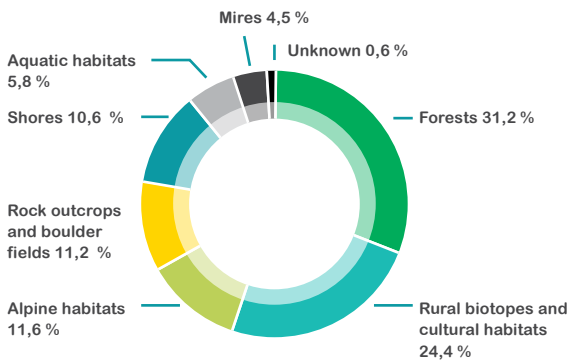
In the second assessment of threatened habitat types in Finland (2018), out of the assessed 388 habitats, almost half (48 %) were categorized as threatened throughout the country. However, in Finland, no habitat type has entirely disappeared. The threat estimate of a habitat type is affected by the loss of the said habitat type, limited natural range, deterioration of the environment and disruption of natural processes.

> Distribution of habitat types in different categories according to the number of habitats in different habitat groups in the whole of Finland. (Assessment of threatened habitat types in Finland 2018)

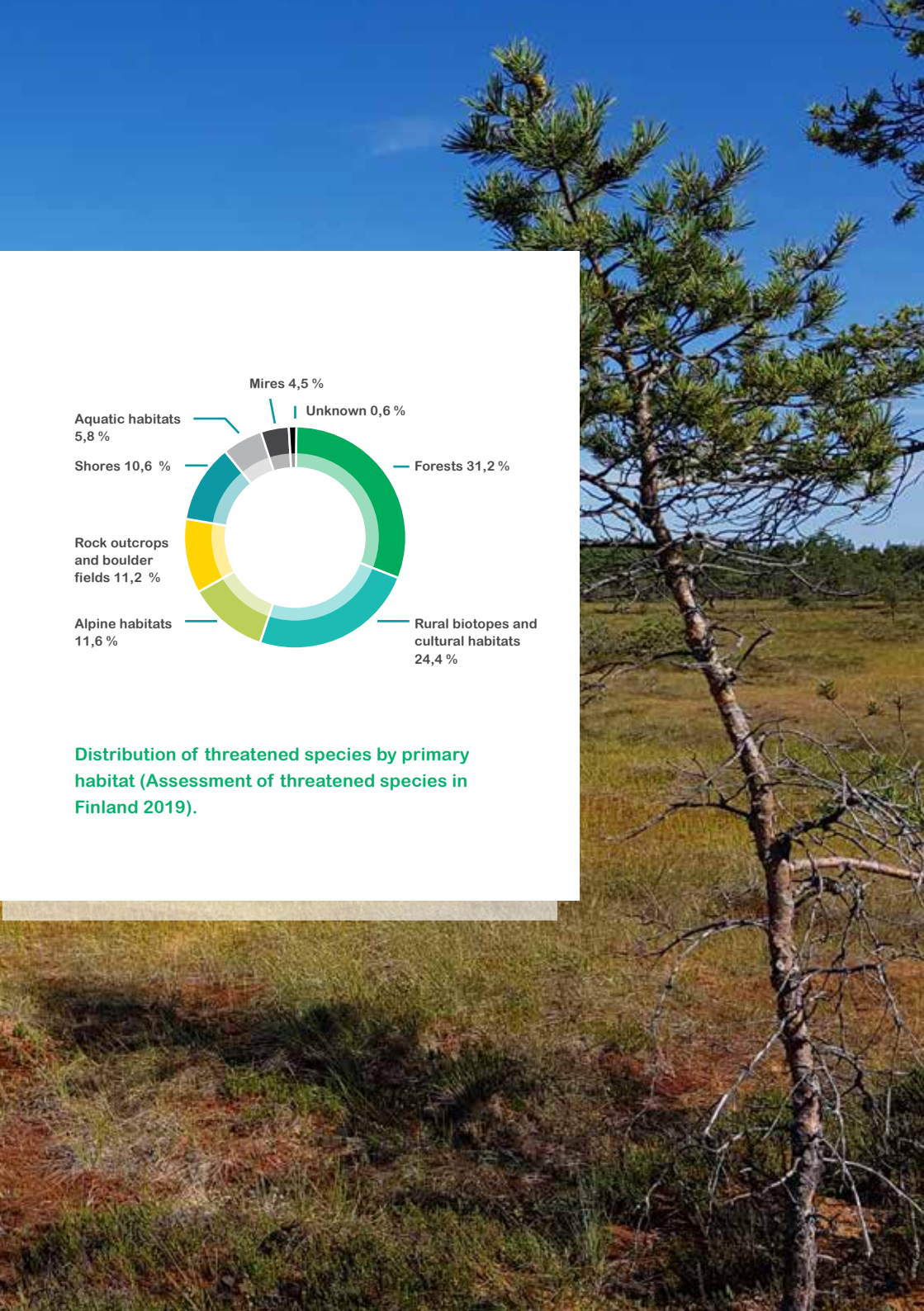


VU, EN and CR are considered as threatened.

According to the fifth assessment of threatened species in Finland (2019), the negative development in species biodiversity continues. Out of all the evaluated species in different habitats, 11.9 % are threatened. Finland has plenty of forests and most of the threatened species live primarily in forests. Out of the assessed forest species, 9 % are threatened. The second most threatened species live in rural biotopes and cultural habitats, i.e. seminatural grasslands, meadows, pastures and grazed woodlands. A field as an arable land is neither a rural biotope nor a cultural habitat. Out of the assessed species in rural biotopes and cultural habitats, 14 % are threatened.

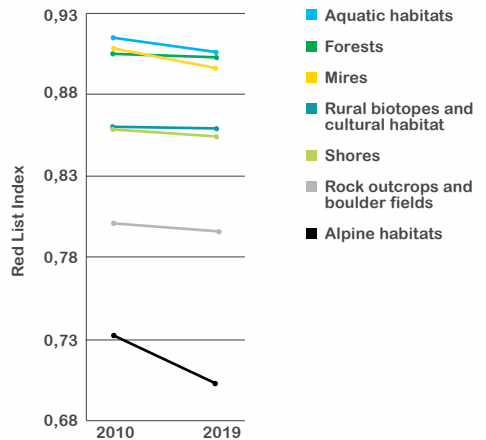


Distribution of threatened species by primary habitat (Assessment of threatened species in Finland 2019).





In forests and in rural biotopes and cultural habitats, the negative development is more under control than in other habitats since the negative change has been the smallest according to the Red List Index. In mires, the species continue to become more threatened.



Successful decisions are based on information. Knowledge of the state and trends of habitat types and species is a prerequisite for effective and efficient prioritisation and targeting of the necessary measures. Science-based information is essential for developing environmentally sustainable everyday farming and forestry practices. Reliable and objective information is needed, for example, to properly design and implement the protected area network and biodiversity protection measures. At the same time, it is essential to take into consideration climate change and water protection, and to ensure that the restoration measures are targeted cost-effectively.

< The trends of Red List Index by primary habitats in 2010 and 2019. (Assessment of threatened species in Finland 2019).

- › Regular and comprehensive assessments of threatened habitat types and species are to be continued. Methodological consistency of the different assessments should be promoted in order to ensure that information from different assessment periods are comparable and that real changes can be detected.
- › Key knowledge gaps in biodiversity protection are identified and research activities supported.
- › The quality and availability of advisory services provided by public authorities and advisory organisations is improved.

The main objective of the current biodiversity strategies is to halt biodiversity loss by 2020. The target will not be achieved in Finland, the EU or globally, thus effective measures supported by strategies should be continued. Although biodiversity loss is a global problem and many elements of negative development are common across the world, functional solutions vary by countries and regions. The most effective measures are taken as a part of everyday operation.

- › Instead of new restrictions, the focus should be on expanding and reinforcing existing best practices through various incentives.
- › Strategies should be developed in partnership so that the practical knowledge and views of forest owners and farmers are taken into account and advantage is gained from their knowledge.
- › Strategies should have a balance between responsibility for the environment and protection of property as defined in the Constitution of Finland as well as between economic, social and environmental sustainability.



BIODIVERSITY WITH BEST PRACTICES IN AGRICULTURE AND FOREST MANAGEMENT

Vibrant agriculture and forestry as well as the countryside as a whole, are part of diverse environment. Responsible and profitable agriculture and forestry as well as biodiversity are mutually supportive, while at the same time generating well-being on a large scale. The balance between environmental, social and economic aspect of sustainable development is a prerequisite for promoting biodiversity in an acceptable way.

The landscape with forests and mires, fields, water bodies and yards and gardens represent a diverse range of habitats and ecosystem services, as well as cooperation between nature and humans. Finland is a country with a lot of vegetation and especially forests (86 % forestry land of the land area, Luke 2019), with plenty of water bodies. Compared to many other countries, the amount of agricultural land in use in Finland is small (7 % of the land area, Luke 2019). Finland is also characterized by mires and peatlands, which make up about one third of the country's land area (Assessment of threatened natural habitats in Finland 2018).



The main underlying causes for the past negative development and for the future of threatened forest species and habitats are the reduction of decaying wood, old-growth forests and individual old trees, and changes in tree species composition. Forest management has an impact on the structure of forest and therefore on biodiversity. All levels of biodiversity must be considered when developing and applying different forest managements practices.

- › Sites with high biodiversity values and known occurrences of threatened species are set aside or subject to special treatment.
- › The natural structural features of forests are preserved and enhanced by increasing the diversity of tree species, the proportion of deciduous trees and the amount of decaying wood, and by leaving retention trees in the harvested areas, of which aspens, sallows and broad-leafed deciduous species are particularly valuable.
- › Buffer zones along water bodies and other sensitive sites are managed in a way that they protect biodiversity and game habitats.
- › Forest regeneration is done by using tree species suitable for the habitat, mainly native species. The changing climate is taken into account when selecting the species of trees.
- › The lightest appropriate method for soil preparation is preferred.
- › Dead and decaying wood is left on site in forestry operations.
- › Various forest management methods are used to diversify the structure of forests.
- › Nature values and their protection is discussed and agreed with the forest owner when planning forestry operations, and measures are taken to meet the set objectives.

Game management is a part of biodiversity protection. Overly dense populations of moose and deer hinder the regeneration of deciduous trees and the diversification of tree species composition. When spread, invasive alien species are a threat to the native nature.

- › Thickets for game are maintained in forestry operations.
- › The adverse effects of game feeding are reduced.
- › Moose and deer populations are controlled in a way that also the cultivation of deciduous trees is possible. Overly large game populations can be restricted with planned hunting.
- › Controlled hunting can be used to combat invasive alien species.

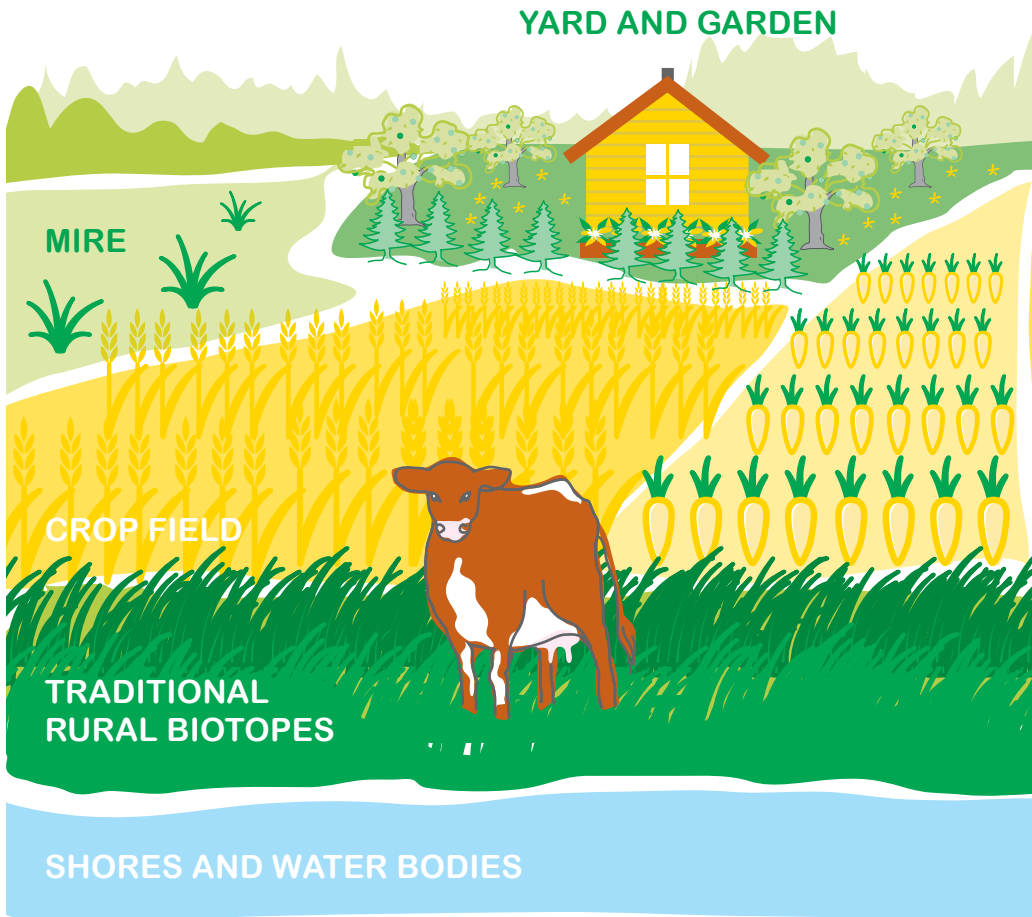
Drainage, clearing for agriculture, peat extraction and hydraulic construction have been identified as the most significant factors affecting the state of mire habitat types and species. Water protection in agriculture and forestry aims to reduce diffuse pollution. Wetlands enrich biodiversity both in forests and in agricultural environments.

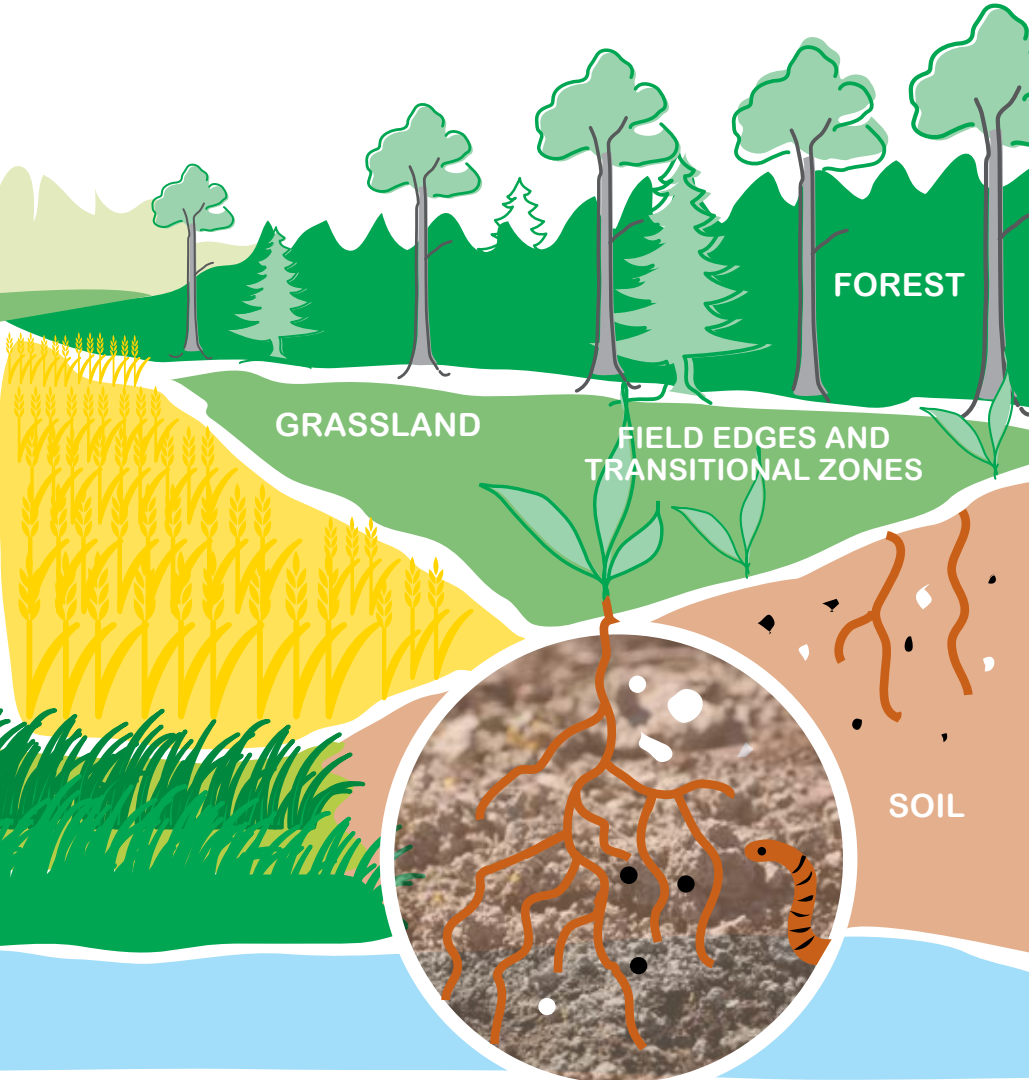
- › Mires of a natural or semi-natural state are not drained and alternatives to clearing for agriculture are being sought.
- › More research is needed to determine how to better safeguard the mire environment in forestry operations.
- › The movement of fish and the habitats of threatened aquatic organisms are taken into account in the planning and implementation of the construction and maintenance of roads and ditches.
- › Nature-based solutions for controlling water in agriculture and forestry and the establishment of wetlands are promoted.
- › Transitional zones between different habitats are managed in a way that safeguards important structural features.
- › Biodiversity-positive catchment level solutions for water control are developed in cooperation with landowners and research.





The diverse rural landscape is a combination of different habitats







The diverse characteristics of agricultural parcels with their edge areas and the living soil, are an important part of agricultural biodiversity. Finland has a lot of field edges and transitional zones that are important for biodiversity. They provide habitats for many species.

- › Controlled non-maintenance by avoiding, for example, mowing of field edges is encouraged, while at the same time the spreading of invasive alien species is prevented.
- › Taking care of the quality of field edges by paying attention to their openness and semi-openness is promoted so that the habitat changes gradually.

Crop rotation and mixed crops, green manuring, nature management fields and forage with multiple species, as well as catch crops and undersown crops, increase the richness of the species in fields. The diversity of buffer strips and buffer zones established to promote water protection, and the use of biodiversity strips planted in fields can be further promoted. The management of the soil condition and the amount of organic matter supports biological activity in the soil. The usage of versatile and environmentally friendly tilling methods, crop rotation and, for example, catch crops also aim to improve nutrient use and the structure of the soil, which have a positive impact on the micro-organisms in the soil.

- › Spring cereal dominated crop rotations are diversified by cultivating also protein and oil crops, winter cereals, perennial plants and grass.
- › The plant cover of fields in the wintertime is increased as it provides habitats for many species in addition to water protection benefits.
- › The demand of plant protection products is reduced by increasing grass to crop rotations.

Grazing attracts invertebrate species and field birds as well as makes space for meadow plants also in other areas than traditional rural biotopes. Grass that is grown to be used as animal feed usually contains several species and varieties. Also, the use of manure as a fertilizer stimulates the activity of soil microbes and improves soil fertility.

- › Farms are encouraged to promote grazing as a part of good animal care.
- › Rearing of local breeds is promoted.

Organic production plays an important role in safeguarding and enhancing agricultural biodiversity. In organic production mixed crops are often grown. The amount of plant protection products that is allowed is low and plant protection products are used mainly in the cultivation of specialised crops. Fields under organic production provide habitats for a wide range of species.

- › Farms using conventional production methods are encouraged to use organic production methods too.

Pollination is a crucially important ecosystem service for food production. For food security, it is essential that pollination can be safeguarded also in the future.

- › Biological plant protection and precision plant protection are promoted and further developed.
- › The living conditions of pollinators are improved for example by growing flowering plants.
- › The changes in the number of pollinators are monitored through research. New operating models are developed to better and better support the well-being of pollinators.
- › Pollination services based on cooperation between beekeepers and landowners are promoted.

Encouraging landowners to consider the nature values more actively and to support diverse ecosystem services will not only benefit biodiversity but also create new business opportunities. New ways to improve profitability of agriculture and forestry can be developed, for instance by promoting cooperation between landowners.



In order to create new market-based financing models, efforts should be made to commercialize ecosystem services, i.e. tangible and intangible services provided by nature. There are already well-established markets for several provisioning services (e.g. trade of natural products), but the markets for regulating and supporting services (e.g. CO₂ sequestration of forests) and for cultural services are only just developing. The positive impact of productive land in the network of ecosystem services, as well as the role of farmers and forest owners, should be valued in such a way that the society is ready to recognize and, when needed, support actions related to ecosystem services more extensively than just for non-productive services.

BIODIVERSITY WITH WELL-TARGETED NATURE MANAGEMENT AND RESTORATION

Nature values can be strengthened by nature management. With restoration, the recovery of degraded habitats towards natural or semi-natural state can be accelerated.



Active nature management and restoration require both knowledge and resources, and therefore measures must be carefully targeted to ensure cost-effectiveness. Nature management and restoration can further support the work of everyday agriculture and forestry for the benefit of biodiversity. Sites located within existing protected areas are prioritised in restoration.

Certain forest habitat types are of particularly important to biodiversity. These include, for example, herb-rich forests, hardwood-spruce swamps and sunny eskers.

- › Herb-rich forests are managed in order to prevent deciduous trees from being replaced by spruce.
- › The ridge forests are maintained by keeping them open.
- › Prescribed and restoration burning are promoted to restore the natural succession of a forest area and to increase the amount of burnt and dead wood which is valuable for biodiversity.
- › Efforts are made to restore springs and other small water bodies.

Instead of actively restoring mires in some sites, allowing self-restoration would be the most effective way and lead to the best outcome. When choosing a method of implementation, attention must also be paid to climate mitigation and water protection aspects.

- › The restoration of the natural water balance of forests and mires is promoted by blocking ditches and by using dam structures.
- › The establishment and management of wetlands is promoted and supported.
- › Active restoration methods for different habitats are developed, such as the flowing of water into protected mires during ditch maintenance to restore the natural water balance.
- › Low-production oligotrophic mires are left to recover.

All types of seminatural grasslands in Finland are threatened. Clearing for agriculture, afforestation and overgrowth after grazing and mowing have ended make it difficult for species and nature habitats to survive. Habitats related to agriculture require active management in order to be preserved, so grazing, mowing and other agricultural activities are crucial for a rich variety of traditional rural biotopes and agricultural landscapes. At the moment, the managed area is approximately 30,000 hectares (Assessment of threatened natural habitats in Finland 2018).

- › The managed area of seminatural grasslands and other types of rural biotopes and cultural habitats is increased and the management is well-targeted to ensure regional representativeness.
- › Sufficiently attractive economic incentives are ensured to encourage farmers to the grazing of animals and to other forms of management of traditional rural biotopes.
- › Operation models that facilitate the encounter of grazing animals and pasture areas are developed.

Rural biotopes and cultural habitats such as seminatural grasslands and wooded pastures have different characteristics and require different management methods. In the assessment of threatened habitat types 40 different habitat types of this category were identified.





Ecological compensation (also known as ecological offsetting) can be a new way of compensating for the harm caused to nature due to land use change or construction. Farmers and forest owners can, through their actions in the areas they own, provide opportunities for ecological compensation. Operation models of ecological compensation should be developed primarily on a voluntary basis and through market mechanisms in order to broaden the sources of funding for biodiversity protection and to ensure cost-effectiveness.



BIODIVERSITY WITH LANDOWNER-BASED VOLUNTARY NATURE CONSERVATION

The protected area network and other areas under protection measures cover at least 17 % of Finland's land area (6th CBD National Report of Finland 2019). 13 % of forests (out of forest land and poorly productive forest land, Luke 2019) and 15 % of mires (out of drained and undrained total area, Assessment of threatened habitat types in Finland 2018) are protected. About two thirds of Europe's strictly protected forests are situated in Finland (State of Europe's Forests 2015).

The establishment of protected areas complements the other actions safeguarding biodiversity and ecosystem services. In the targeting of protection, attention must also be paid both to the location of protected areas and to the nature values. It is possible to promote all important elements, i.e. the amount, the even regional distribution and ecological quality of protected areas, through voluntary measures with economic incentives. Practical examples have shown that landowners are willing to increase the amount of permanently protected areas when it is done in a landowner-based manner and through negotiations.

- › Proper advisory services are needed to ensure that a landowner is aware of the valuable natural areas on his land and of the different options for conservation.
- › Choosing a conservation option should be at least as profitable for the landowners as any other form of economic use of the area.
- › Forest protection is continued in accordance with the principles of the METSO programme also after the end of METSO, that is 2025 onwards.
- › Targets related to the protections of mires and other habitats included in the HELMI Habitats Programme are implemented through voluntary measures based on negotiations and genuine agreements with landowners.
- › Sufficient and stable funding required for the extension of the protected area network is ensured.



With the help of Forest Biodiversity Programme for Southern Finland (METSO), private forest owners have been able to safeguard and enhance biodiversity of their forests since 2008. METSO has been a success: it is widely accepted thanks to its voluntary-based approach, various implementation options and economic support. In addition, the programme has also been shown to be ecologically effective. Based on the METSO's mid-term evaluation (Ministry of the Environment 2019), METSO has been able to create an ecologically high-quality protected area network, which has also succeeded in taking into account the connectivity of the protected areas. The quality of the protected area network created by METSO can be further developed by targeting implementation actions to areas with high nature values.



Biodiversity is widely acknowledged in the Finnish legislation. In addition to the Nature Conservation Act, biodiversity is protected and promoted through legislation governing the sustainable use of natural resources. At the EU level, the most important protection regulations are the Habitats and Birds Directives, which have been implemented by national legislation. From the perspective of landowners, especially effective and fair compensation systems contribute to the acceptability of biodiversity protection and reflect the principle that nature and its biodiversity as well as the environment in general are the responsibility of everyone and that the responsibility shall be distributed across the society.

- › It is ensured that the mechanisms of the Nature Conservation Act continue to contribute to the protection of biodiversity at different levels and that economic losses caused by protection measures are fairly and promptly compensated.
- › With a high-quality legal system it is ensured that coercive measures are always based on well-defined regulations and justifiable decisions by the authorities.
- › Regardless of the applicable law it is assured that the landowner is entitled to a fair compensation in the event of economic losses in accordance with the constitutional provisions.
- › The social and economic sustainability of nature conservation and the flexibility of the implementation of the Habitats and Birds Directives is improved by using derogations, for example, to manage the negative consequences related to overly abundant species populations.

Despite the comprehensive legislation protecting and promoting biodiversity, land use planning is used as a conservation method in areas where there are no grounds for restrictions under the actual Nature Conservation Act or acts governing the use of natural resources. The usage of land use planning for protection that is not based on other legislation does not comply with the principle of law in administration, legal protection, or protection of property. The authority should choose the most favourable method for the landowner to reach the objectives.

- › Protection of property and landowner's legal protection are strengthened in land use planning.
- › Protection through land use planning is resiled from and more functional and more cost-effective ways, primarily through voluntary-based approaches, are created to achieve the set objectives.

- › The regulative markings used in land use planning should be derived from the legislation in order to eliminate overlapping regulation and to clarify the roles of the authorities.



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