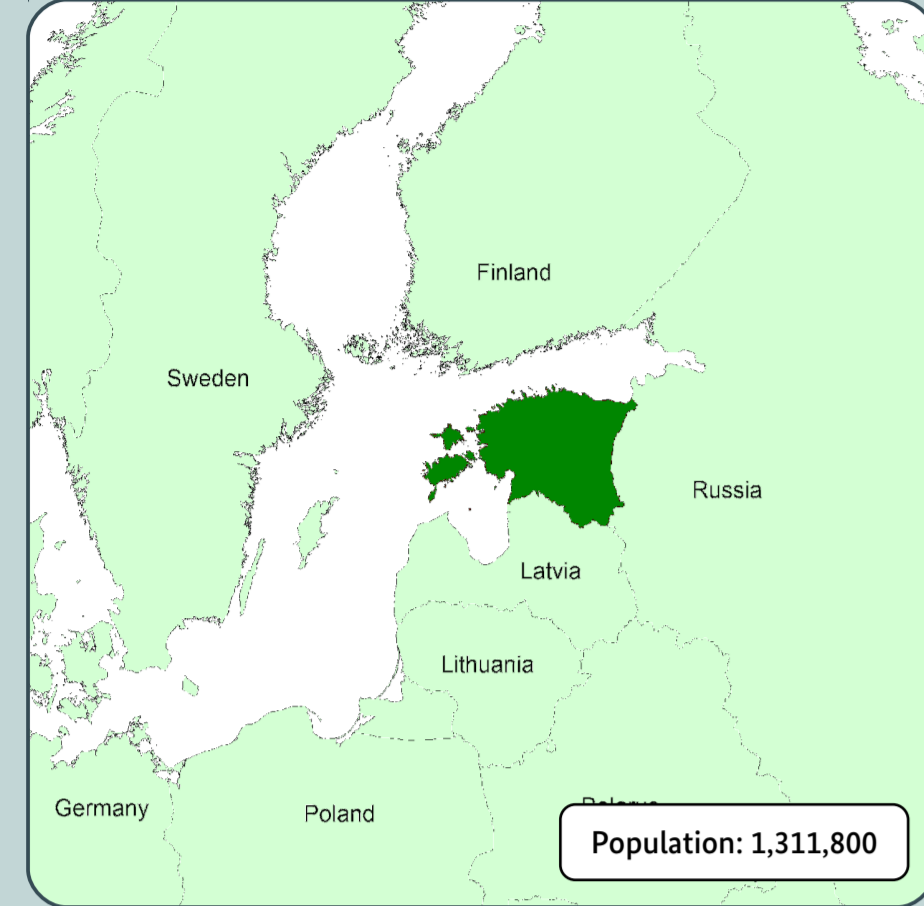


Estonia

Achieving biodiversity targets



Estonia, located in North-East Europe, one of the smallest (45,227 km²) members of the EU, is very rich in biodiversity. We have variety of different habitats including coniferous and broad-leaved forests, coastal cliffs and dunes, sandy and stony beaches, bogs, fens, old-growth forests and semi-natural communities. Natural conditions like this, low population density and our history have created biodiversity unique to the region.

Our coastal sea with numerous small islands, bays and coastal meadows is the most important stopover between nesting and wintering grounds for millions of birds in Eastern Atlantic migratory route. About half of Estonia is covered with forest, which makes us the 4th most forest-rich country in Europe. Various mires, which have disappeared in densely populated regions of Europe, make up to 7% of our territory. Comparatively well preserved natural conditions of

Estonia provide home for e.g. for hundreds of bears, wolves and lynx. However, problems like decrease of natural habitats and their fragmentation and degradation of some species population still exist. To tackle these problems Estonia adopted its Nature Conservation Development Plan (NCDP) until 2020 in 2012.

Acronyms	
CBD	Convention on Biological Diversity
EU	European Union
IAS	Invasive alien species
MoE	Ministry of the Environment
NBSAP	National Biodiversity Strategy and Action Plan
NCDP	Nature Conservation Development Plan (Estonian NBSAP)
ODA	Official Development Aid

A



The awareness about biodiversity is rising (Photo above: Environmental Board)

Many activities help rising awareness about the importance of nature and biodiversity. We have a functioning system of protected areas and natural habitats. Investments are being made into visitor infrastructure such as log fire sites, bird-watching towers and boardwalks. There is a network of nature education centers established all over Estonia. Since 2012 people who participated in nature study programs or visited nature trails have risen considerably.

It is also due to a good accessibility and small size of Estonia that brings people into the nature, e.g. it just takes 1 h from the main cities to arrive to a forest where bears or wolves might be spotted.

Citizen science is contributing to species monitoring and nature education. Several IT tools (apps) have been created to help learn about nature, e.g. Nature Observation Database LVA, recognition apps about sounds in nature, mushrooms, fish, plants, birds etc.



Snowy nature walk by the Valgejõgi river at Lahemaa National Park (Photo: Siim Veski)

The number of people visiting nature has risen constantly. 89% of people consider themselves as environmentally-aware and assess the environmental situation of Estonia good.

Nature conservation policy prioritizes ecosystem approach when using natural resources. Ecosystem service assessment projects are supported and one of these will set up nationwide system on assessing and valuing ecosystem services by 2023.

During 2016-2017 MoE leads the project that reassesses current fees and regulations of natural resource exploitation.

We have effectively working packaging collecting system and state is taking measures to minimize plastic bag usage.

C



The status of some protected species is improving e.g. white-tailed eagle's (Photo above: Gunnar Sein)

Latest nature conservation success story is the rise in threatened eagles' population. From the six eagle species in Estonia, the population of four is increasing or stable. One of these species is white-tailed eagle (*Haliaeetus albicilla*). All the eagles in Estonia are strictly protected. In addition to that the situation of some forest birds like woodpeckers and owls has improved as well.

Estonia is the only country that has managed to re-introduce critically endangered European mink back into the wild – the most threatened small carnivore in the world.

Tallinn Zoo and SA Lutreola lead the international program for breeding the animal in artificial conditions. Creating suitable habitats and reintroductions into the wild take place in Hiiumaa island since 2000.



Baby European minks (Photo: Herdis Fridolin)

We have 18.5% of land and 27% of sea area protected, and 10% of forests are under strict protection. In addition to protected area management plans, we have ecosystem based action plans e.g. for protected mires and semi-natural habitats.

Threatened species are protected by law and action plans for their status improvement are compiled. In addition to classical protected areas, there are also species protection sites. There are some species that show increase in numbers.

To ensure the conservation of genetic diversity of cultivated plants, a national program on plant genetic resources has been running since 2002. We have financial support schemes for local crop varieties and threatened breeds under the Estonian Rural Development Plan.

D



Restoration of habitats providing water-related ecosystem services (Photo above: NGO Wildlife Estonia)

Last six years 85 river dams were made passable for fish. Spawning areas are being restored. Due to that the status of river habitats has been improved and populations of threatened fish species are also stable.

On the photo above you can see how during the restoration project Happyfish several oxbow lakes were re-connected with river Emajõgi (largest river in Estonia), saving valuable habitats for spawning of fish.

Active restoration is going on with mire habitats (see also target 15).

On the photo below we can see a natural bog of Estonia – valuable for multiple ecosystem services (retention and cleaning of water, carbon sequestration, nature tourism etc).



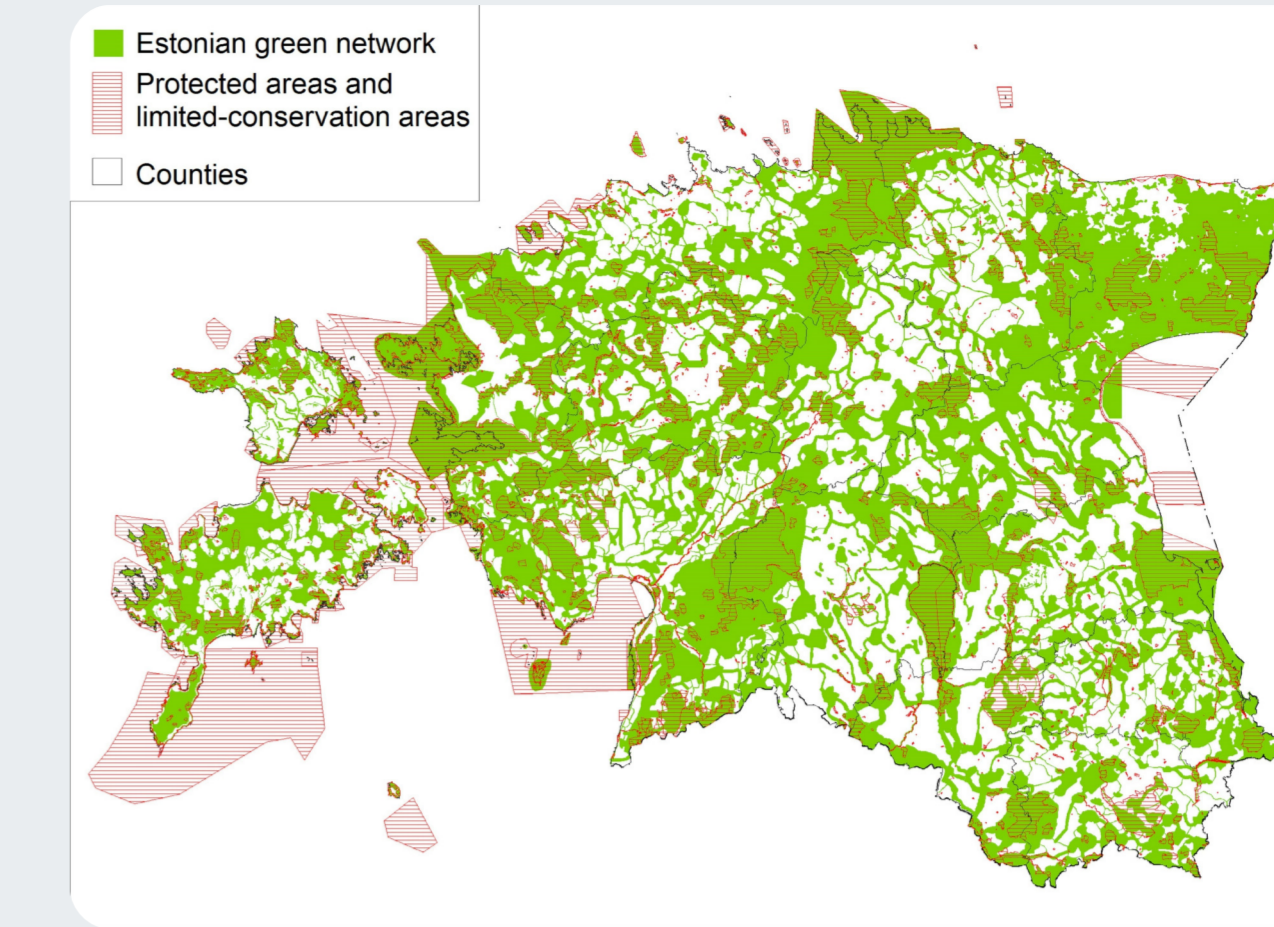
Bogs are Estonia's nature jewels (Photo: Herdis Fridolin)

We are actively dealing with restoration of natural habitats e.g. river habitats are restored contributing also to a flood protection.

Active habitat restoration during the last four years: 1) mire habitats with restored water regime have risen from 100 ha to 1,700 ha; 2) area of restored abandoned peat fields have risen from 0 ha to 177 ha; 3) semi-natural areas are being restored and managed at 27,000 ha, annual restoration is more than 1,000 ha, the goal is 45,000 ha.

Estonia is in the process of ratifying Nagoya Protocol. The EU regulation of it is also directly applicable to us.

B



There is a nationwide Green Network developed and enhanced.

Fishing pressure has decreased. Economically important fish stock in good status has risen from 41% to 46% since 2012.

Biodiversity conservation in agricultural land and forests is supported under Rural Development Plan. Agri-environmental support schemes are widely applied in arable land.

On Sept 8, 2018, "World Cleanup Day", 150 countries will clean trash globally - the biggest positive civic action the world has seen. The action was initiated in Estonia in 2008.

We have a legally binding black list of IAS. There are state run projects e.g. poisonous hogweeds are eradicated both on public and private land.

Promoting and enhancing the functioning of ecological network - Green Infrastructure (Map above: Environmental Agency)

The spatial planning of ecological network (Green Infrastructure) in Estonia was launched in 1999, however, the concept of it is much older. Network complements the spatial pattern of protected areas, combining them into an integral system through natural or semi-natural areas. Network includes core areas (e.g. protected areas) and their closest surroundings as well as corridors between them, ensuring territorial coherency. Green infrastructure supports biodiversity conservation, species movement and provision of ecosystem services (air purification, water generation etc). It is obligatory to consider ecological network in nationwide planning processes. During the last 17 years that ecological network has been developed in Estonia it has been integrated into all administrative level spatial plans (state, county and municipal level). Today there is going on a revision of county level plans and facilitation of municipalities in integration of the sustainable ecosystem services concept into local level spatial plans.



Threatened black stork profits river and vast forest areas of green network (Photo: Merike Linnamägi)

E



Nature conservation research shows species status and habitat requirements e.g. for brown bear (Photo above: Erik Mandre)

Research projects give valuable information for conservation activities: 1) Project LOORA in 2015 showed that vast forest areas including protected areas are functionally suitable for our large carnivores bear, wolf and lynx. The population of bears (>650) and wolves (>200) in Estonia are one of the strongest in Europe. However, their long term viability depends on the quality of forests connecting the protected areas.

2) The population of one of our nature conservation symbols, Western capercaillie (*Tetrao urogallus*), has been in a long trend of decline. The state study on habitat quality factors in 2016 showed that that low breeding success and predation contribute to its decline. Habitat manipulation projects are still going on to find out the suitable habitat structure for capercaillie.

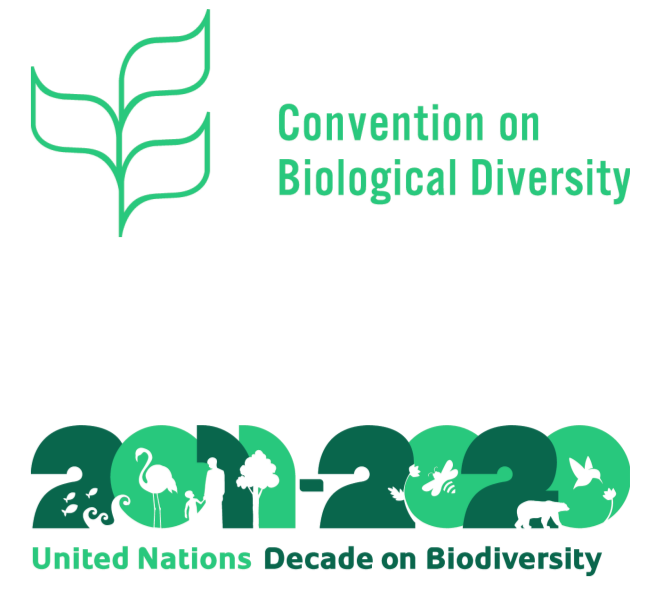


The population of Western capercaillie will benefit from conservation research outcomes (Photo: Tauri Pärna)

Estonia has adopted its Nature Conservation Development Plan (NCDP) until 2020 in 2012, which serves as well the European Union's strategies on biodiversity.

Nature conservation policy prioritizes the enhancement of scientific research for nature conservation. There have been recently several useful projects on species habitats connectivity and requirements. Another project - NATARC, making data in natural history museums digital and easily available, is going on.

There has been a rise in national and the EU funding for nature conservation. Environmental exploitation tax is transferred through Environmental Investments Center also to biodiversity projects. We have increased the funding (ODA) for international biodiversity connected projects.



AICHI BIODIVERSITY TARGETS STRATEGIC GOALS

Target "dashboard"

- On track to exceed target (we expect to achieve the target before its deadline)
- On track to achieve target (if we continue on our current trajectory we expect to achieve the target by 2020)
- Progress towards target but at an insufficient rate (unless we increase our efforts the target will not be met by its deadline)
- No significant overall progress (overall, we are neither moving towards the target nor moving away from it)
- Moving away from target (things are getting worse rather than better)

A

Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

- Target 1: By 2020, at the latest, people are aware of the value of biodiversity and the steps they can take to conserve and use it sustainably.
- Target 2: By 2020, at the latest, biodiversity values have been integrated into national accounting, as appropriate, and reporting systems.
- Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions.
- Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

B

Reduce the direct pressures on biodiversity and promote sustainable use

- Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.
- Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.
- Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.
- Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.
- Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.
- Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

C

To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

- Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.
- Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.
- Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

D

Enhance the benefits to all from biodiversity and ecosystem services

- Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.
- Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.
- Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

E

Enhance implementation through participatory planning, knowledge management and capacity building

- Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.
- Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.
- Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.
- Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.