Estonia’s biodiversity at risk

A call for action

Estonia hosts a large proportion of the species that are threatened at the European level, and has the important responsibility for protecting these species within its territory. Species in Estonia require greater action to improve their status. While many species already receive some conservation attention, others do not. Species can be saved from extinction but this requires a combination of sound research and carefully coordinated efforts. Estonia as an EU Member State has committed to halting biodiversity loss by 2020 but urgent action is needed to meet this target and better monitoring capacity is required to measure if the target is met.

Considerable conservation investment is needed from Estonia to ensure that the status of European species improves in the long term. This document provides an overview of the conservation status of species in Estonia based on the results of all European Red Lists completed to date. It does not provide the status of the species in the country, therefore we invite the reader to cross check national and sub-national Red Lists. Together, they can be used to help guide policies and local conservation strategies.

The European Red List

The European Red List of Species is a review of the conservation status of more than 6,000 species in Europe according to the IUCN Red List Categories and Criteria and the regional Red Listing guidelines. It identifies species that are threatened with extinction at the European level so that appropriate conservation actions can be taken to improve their status. The geographical scope is continent-wide, including European parts of the Russian Federation and Turkey as well as the Macaronesian Islands. The Caucasus region is not included.

To date, European regional assessments have been completed for all mammals, reptiles, amphibians, butterflies, dragonflies, freshwater fishes and freshwater molluscs and a selection of saproxylic beetles, terrestrial molluscs, and vascular plants. Assessments of pollinators, medicinal plants, birds and marine fishes are currently under development.

The European Red List is compiled by IUCN Global Species Programme, with funding from the European Commission.

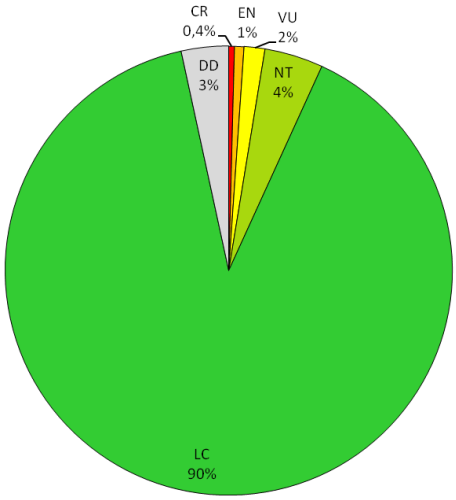
Conservation status

Estonia is host to an estimated 23,300 species of animals and plants. This number represents 15% of the total species described for Europe and could represent more than 1% of the species in the world. According to the table below, approximately 12% of the species assessed by the European Red List of Species are present in Estonia. For some of the taxonomic groups, the percentages of European species that occur in Estonia are particularly high; such as dragonflies, mammals, saproxylic beetles and butterflies.

Of the 732 species assessed that occur in Estonia, the groups comprising the highest number of species are vascular plants, saproxylic beetles and butterflies. Of the total number of species assessed in the country 3%* are considered threatened and at least 4% are Near Threatened at the European level. Many of these species are endemic to Europe and are found nowhere else in the world.

Species that are considered threatened at the European level and occur in Estonia are found mostly in forest, wetlands and grasslands. These ecosystems require particular attention in order to ensure the habitats of these sensitive species remain.

European status of species in Estonia



Number of species assessed within each IUCN Red List category at the European level

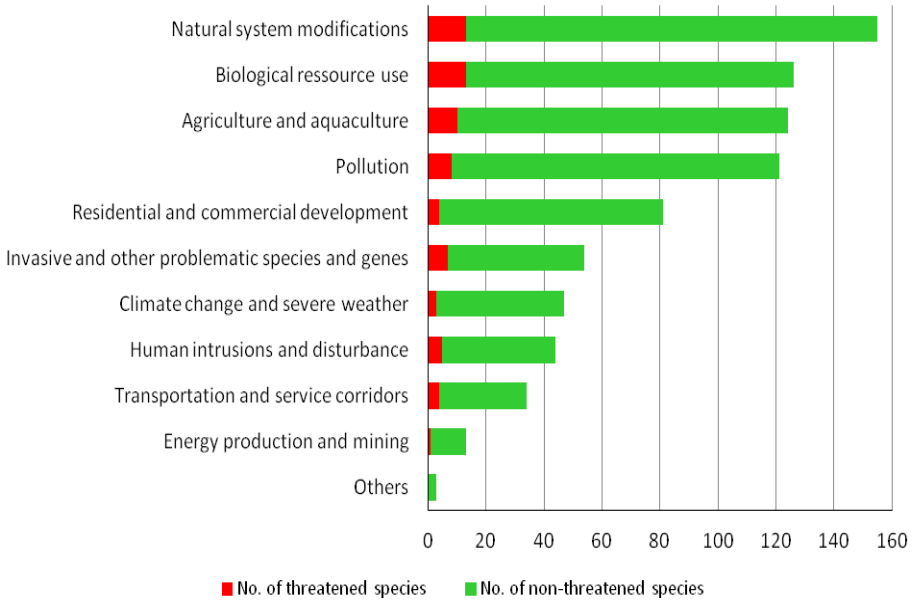
Species group	No. of sp. in Europe	No. of sp. in Estonia	% of European sp. occurring in Estonia	No. of threatened sp. in Estonia (status at European level)		
				CR	EN	VU
Mammals	233	59	25%	1	0	2
Reptiles	140	6	4%	0	0	0
Amphibians	83	10	12%	0	0	0
Freshwater fishes	522	42	8%	1	0	1
Butterflies	435	98	23%	0	1	4
Dragonflies	137	54	39%	0	0	0
Saproxylic beetles**	431	102	24%	0	3	1
Terrestrial molluscs**	1,233	30	2%	0	0	1
Freshwater molluscs	854	58	7%	1	0	1
Vascular plants**	1,826	273	15%	0	1	1
TOTAL	**5,894**	**732**	**12%**	**3**	**5**	**11**

**Not comprehensively assessed, selected species only.
This table does not include the Not Applicable (NA) species in Europe (species introduced after AD 1500 or species of marginal occurrence).
The data are based on the results of the European Red List (European region wide assessment).

Major threats

Habitat loss, fragmentation and degradation are the most significant threats at the European level to species that occur in Estonia. For freshwater species, major threats include the over-extraction of water, which in many cases is further exacerbated by pollution due to agricultural and forestry effluents and the introduction of alien species. Other major threats come from farming and ranching as a result of agricultural expansion and intensification, and logging and wood harvesting.

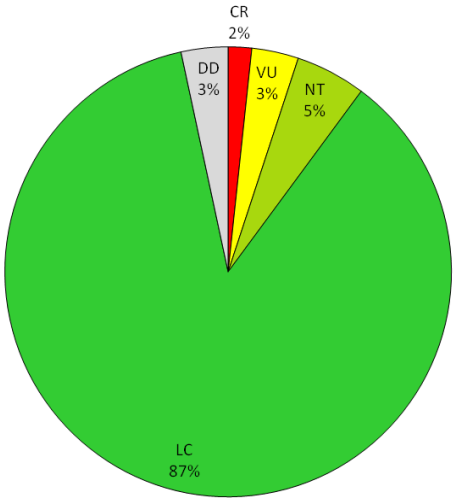
Major threats at the European level to species occurring in Estonia



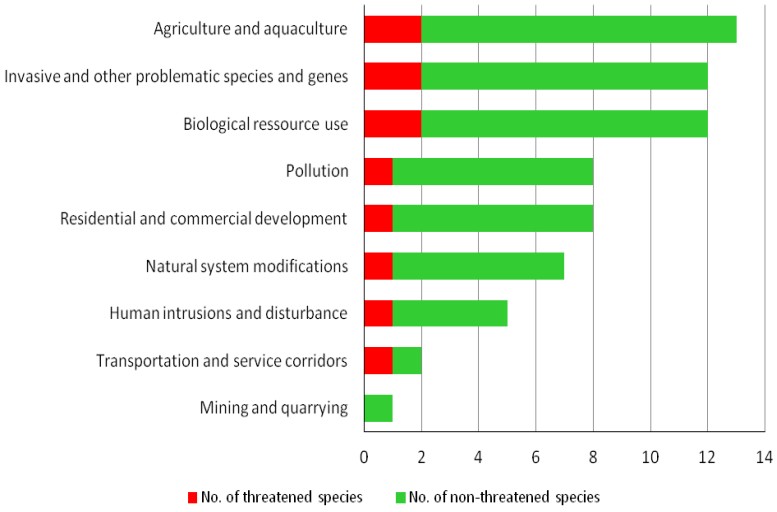
Mammals

Estonia hosts 25% of all the mammals that occur in Europe. Of these 59 species of mammals, 5%* are threatened and at least an additional 5% are considered Near Threatened at the European level. The major threats at the European level that can possibly (or potentially) affect mammals in Estonia are the loss and degradation of habitat as a result of agricultural expansion and intensification and invasive and other problematic species, both native and non-native. Mammal populations are also highly threatened mainly by consumptive use of natural resources and pollution caused by agricultural and forestry effluents.

Status at European level



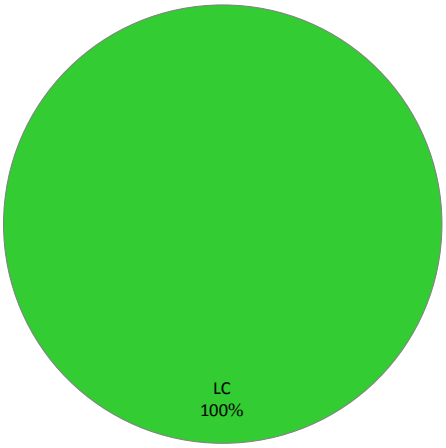
Threats at European level



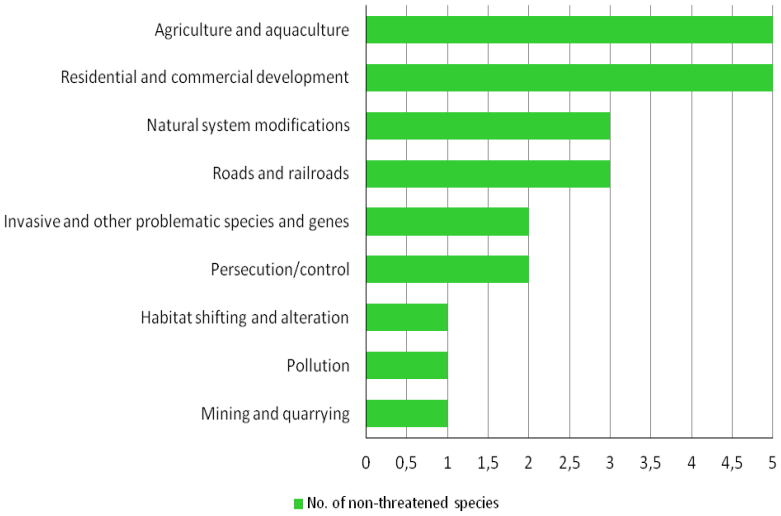
Reptiles

Reptile species in Estonia represent 4% of all the reptiles in Europe. The conservation status of reptiles in Estonia based on the European Red List data is relatively good since all species are classified as Least Concern. Habitat loss, fragmentation and degradation especially due to agricultural intensification and urbanization are the main threats to this group. It is also interesting to note that at least 33% of the reptile species in Estonia may be threatened by human persecution and control, especially snakes.

Status at European level



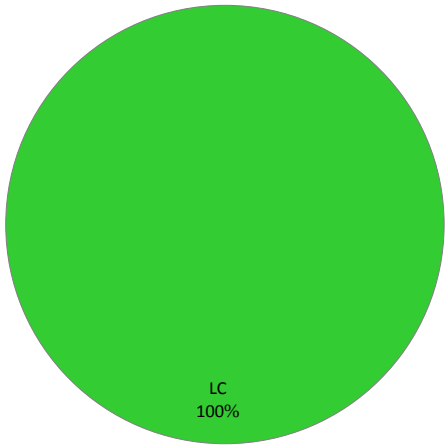
Threats at European level



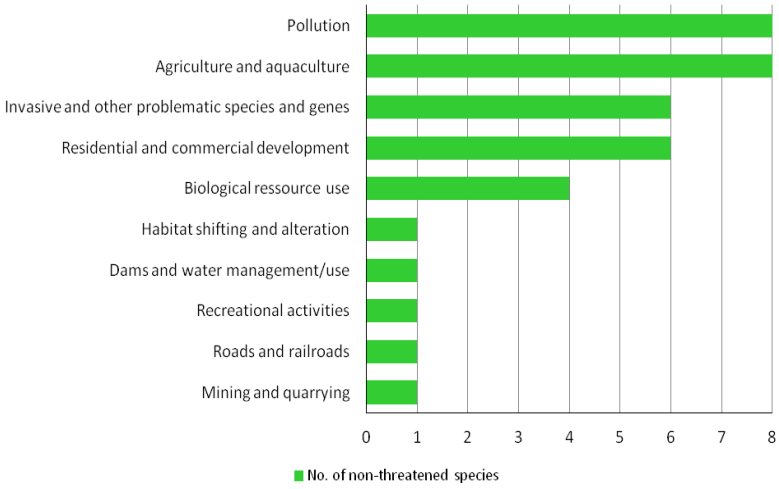
Amphibians

Amphibians in Estonia represent 12% of all amphibians occurring in Europe. The conservation status of amphibians in Estonia based on the European Red List data is relatively good since all species are classified as Least Concern. The main threat to this group at the European level is pollution caused mainly by domestic and urban waste water and agricultural and forestry effluents. Loss and degradation of suitable breeding habitat mainly due to livestock farming and ranching and urbanization, and invasive and other problematic species also pose threats to this group.

Status at European level



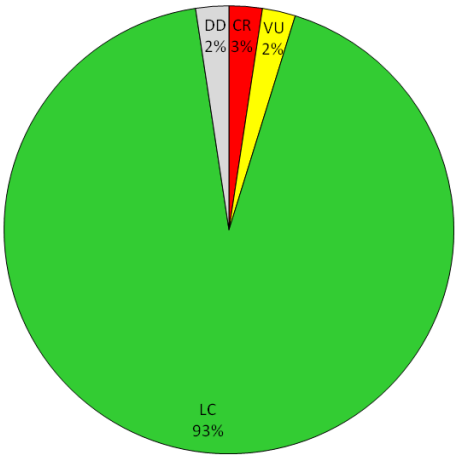
Threats at European level



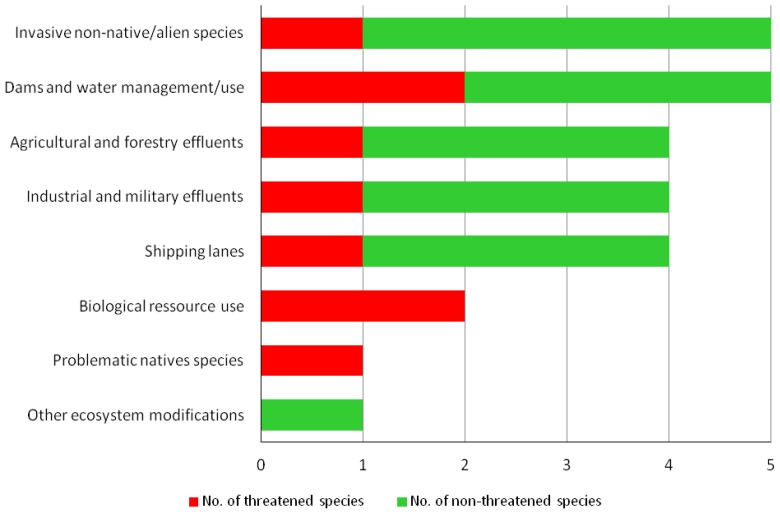
Freshwater fishes

Freshwater fishes are one of the most threatened groups at the European level. Five percent* of the species that occur in Estonia are threatened and 93% are classified as Least Concern at the European level. Modification of the physical and chemical characteristics of freshwater rivers and lakes due to dam construction and the existence of invasive non-native species are the major threats for this group at the European level. Shipping lanes and pollution caused by industrial and agricultural effluents also pose threats to this group.

Status at European level



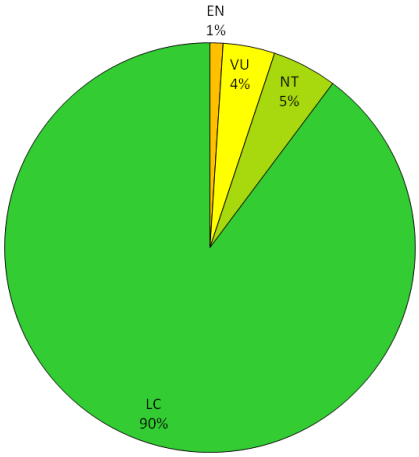
Threats at European level



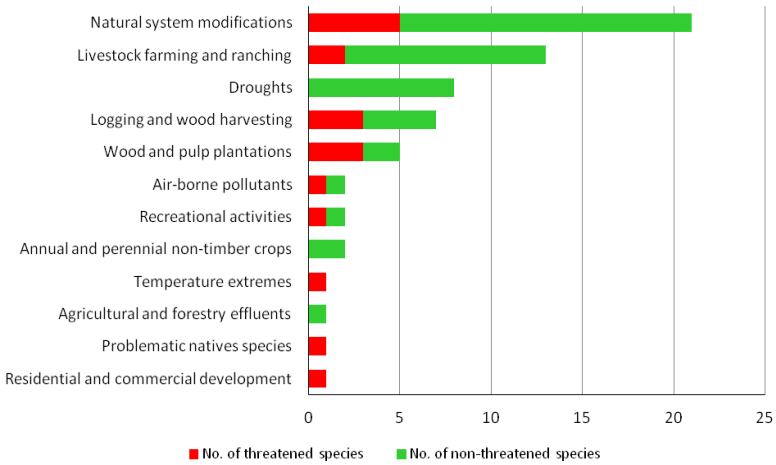
Butterflies

Estonia hosts 23% of all butterfly species in Europe and 5%* of them are considered threatened at the European level. The conservation status of butterflies in Estonia based on the European Red List data is relatively good since approximately 90% of them are classified as Least Concern. However, butterflies have very specific food and habitat requirements at different stages of their life cycle so they are very sensitive to changes in their environment, especially to habitat management or changes in forestry practices. Habitat loss, fragmentation and degradation especially due to agricultural intensification and natural or semi natural ecosystems “management” are the main threats to this group.

Status at European level



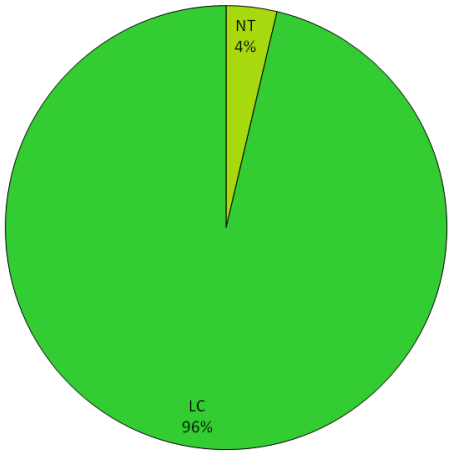
Threats at European level



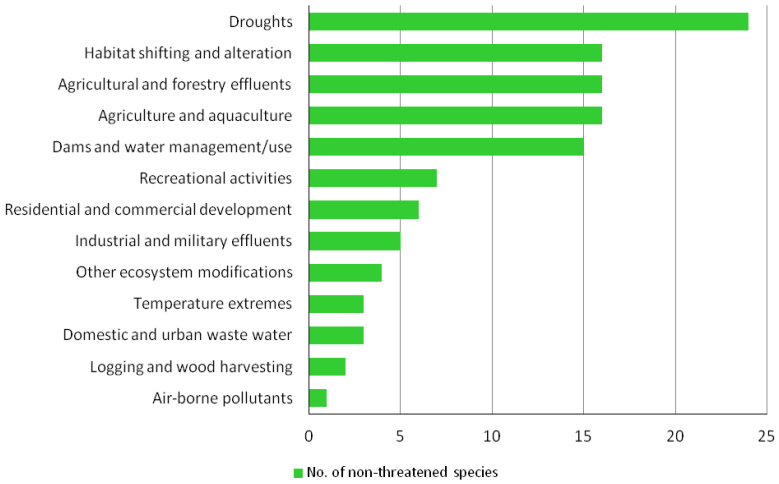
Dragonflies

Thirty-nine percent of all the dragonflies in Europe are present in Estonia. The conservation status of dragonflies in Estonia based on the European Red List data is relatively good since approximately 4% of them are considered as Near Threatened and 96% are classified as Least Concern. This group is adversely affected by desiccation caused by dry weather, fires and increased water extraction for irrigation and human consumption. River species are also affected by ecosystem modifications such as the construction of dams and reservoirs and water quality deterioration.

Status at European level



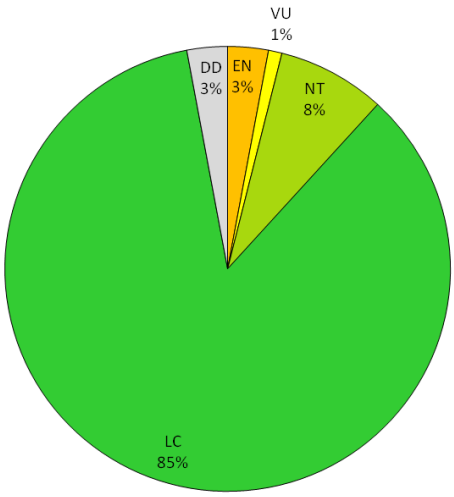
Threats at European level



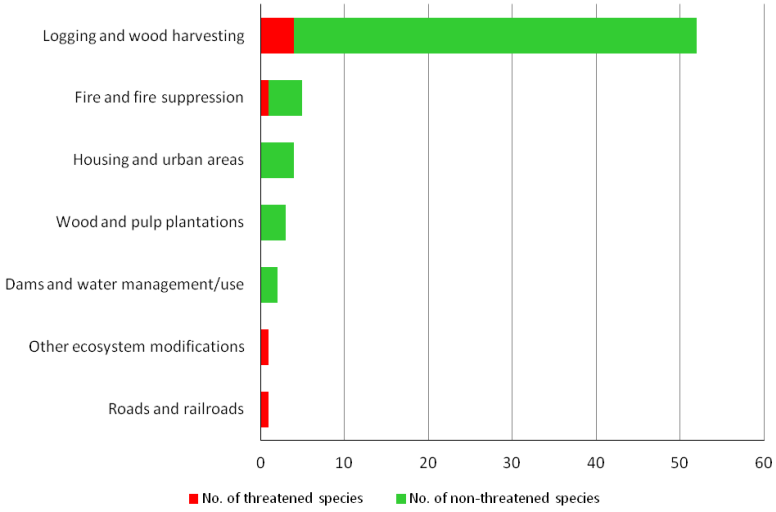
Saproxylic beetles

Twenty-four percent of the beetle species assessed by the European Red List are present in Estonia. Approximately 4%* of the species in this group are considered threatened and 8% are considered as Near Threatened at the European level. The species in this group are very dependent on the dynamics of tree aging and wood decay processes. The major threat to this group is logging and wood harvesting; therefore these beetles require sensitive conservation management of tree populations irrespective of their situation.

Status at European level



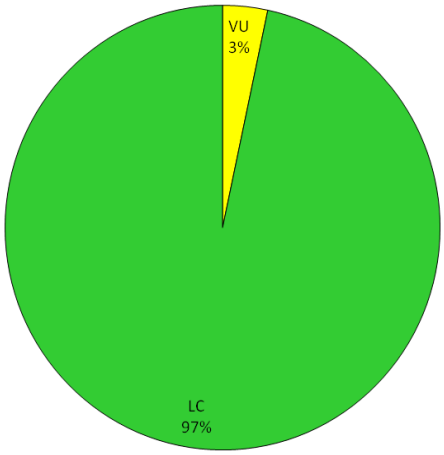
Threats at European level



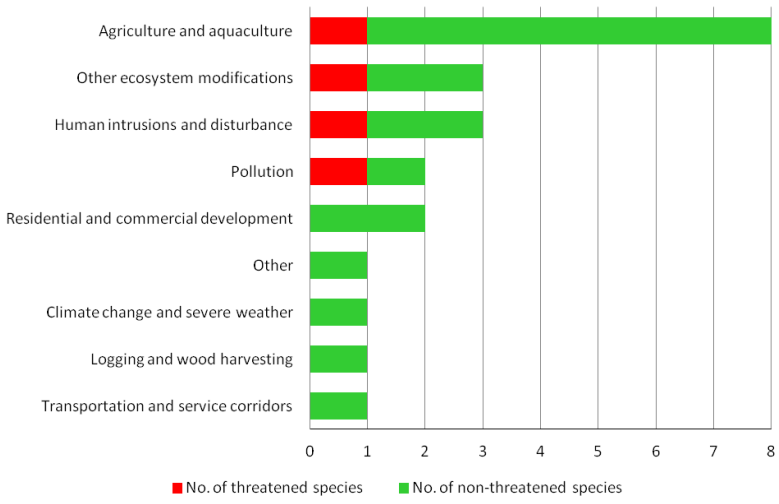
Terrestrial molluscs

Three percent* of the terrestrial molluscs assessed that are present in Estonia are threatened and 97% are classified as Least Concern at the European level. Habitat loss, fragmentation and degradation caused by livestock farming and ranching are the major threats to this group at the European level. Natural or semi-natural ecosystem management and destruction of suitable habitats due to human intrusions for recreational activities also pose threats to this group.

Status at European level



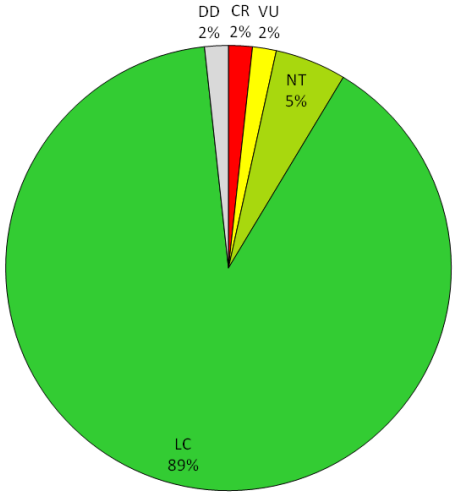
Threats at European level



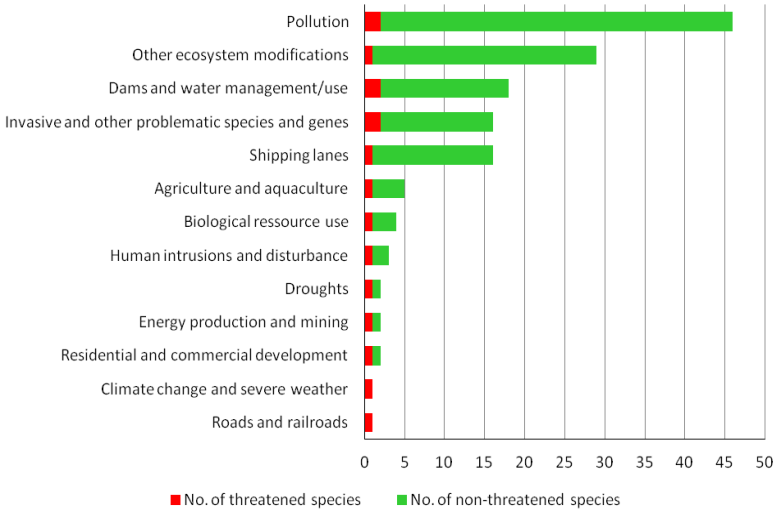
Freshwater molluscs

Approximately 4%* of the species in this group are considered threatened and 5% are considered as Near Threatened at the European level. Declining water quality in freshwater rivers and lakes caused by agricultural activities is the major threat to this group at the European level. Water abstraction from underground or from streams and rivers themselves, natural and semi-natural ecosystems 'management', invasive and other problematic species and shipping lanes are also threats to this group.

Status at European level



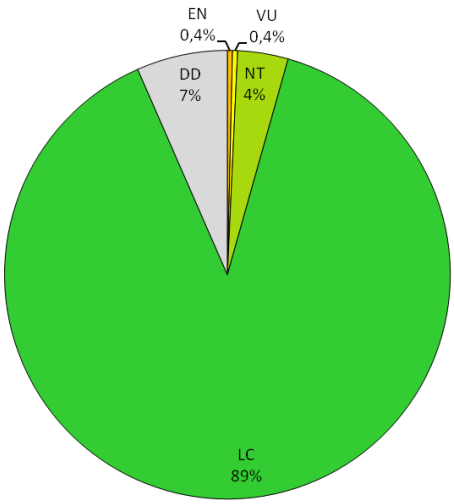
Threats at European level



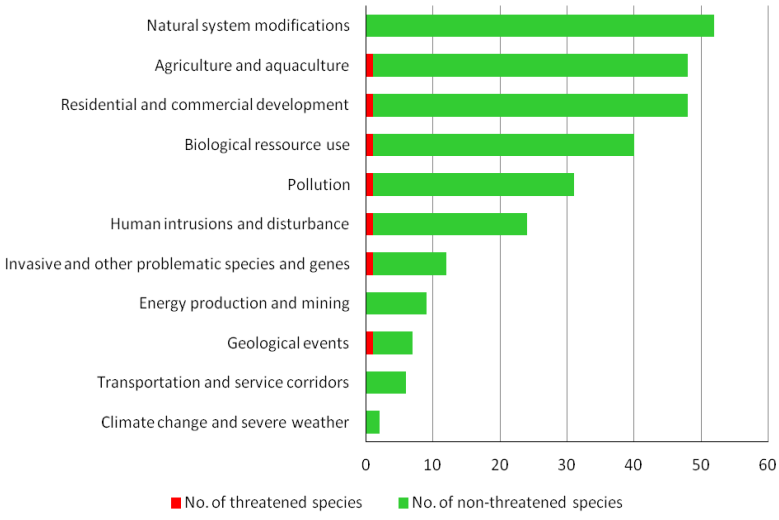
Vascular plants

At European level, priority crop wild relatives, aquatic plants and all species included in the annexes of the Habitats Directive, Bern Convention and CITES have been assessed. A total of 273 species are found in Estonia, which represent 15% of the total of species assessed in Europe. One percent* of the 273 vascular plant species assessed in Estonia are considered threatened at the European level. For terrestrial plants, natural systems modification has the worst impacts. For aquatic species, direct habitat degradation and habitat loss caused by agriculture are the main threats.

Status at European level



Threats at European level



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http://ec.europa.eu/environment/nature/conservation/species/redlist and
http://www.iucnredlist.org/europe

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*The proportion of threatened species in this document is calculated as follows: (EW + CR + EN + VU) / (total number of species assessed - EX - RE -DD). Since the number of threatened species is often uncertain because it is not known whether DD species are actually threatened or not, this formula considers that DD species are equally threatened as data sufficient species.