Sweden’s biodiversity at risk
A call for action

Sweden 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 Sweden 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. Sweden 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 Sweden 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 Sweden 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

Sweden is host to an estimated 50,000 species of animals and plants. This number represents 32% of the total species described for Europe and could represent more than 3% of the species in the world. According to the table below, approximately 16% of the species assessed by the European Red List of Species are present in Sweden. For some of the taxonomic groups, the percentages of European species that occur in Sweden are particularly high; such as dragonflies, saproxylic beetles and mammals.

Of the 950 species assessed that occur in Sweden, 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 7% 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 Sweden are found mostly in grasslands, forests and wetlands. These ecosystems require particular attention in order to ensure the habitats of these sensitive species remain.

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

<table>
<thead>
<tr>
<th>Species group</th>
<th>No. of sp. in Europe</th>
<th>No. of sp. in Sweden</th>
<th>% of European sp. occurring in Sweden</th>
<th>No. of threatened sp. in Sweden (status at European level)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CR</td>
</tr>
<tr>
<td>Mammals</td>
<td>233</td>
<td>73</td>
<td>31%</td>
<td>0</td>
</tr>
<tr>
<td>Reptiles</td>
<td>140</td>
<td>6</td>
<td>4%</td>
<td>0</td>
</tr>
<tr>
<td>Amphibians</td>
<td>83</td>
<td>12</td>
<td>14%</td>
<td>0</td>
</tr>
<tr>
<td>Freshwater fishes</td>
<td>522</td>
<td>56</td>
<td>11%</td>
<td>2</td>
</tr>
<tr>
<td>Butterflies</td>
<td>435</td>
<td>108</td>
<td>25%</td>
<td>0</td>
</tr>
<tr>
<td>Dragonflies</td>
<td>137</td>
<td>60</td>
<td>44%</td>
<td>0</td>
</tr>
<tr>
<td>Saproxylic beetles**</td>
<td>431</td>
<td>140</td>
<td>32%</td>
<td>0</td>
</tr>
<tr>
<td>Terrestrial molluscs**</td>
<td>1,233</td>
<td>51</td>
<td>4%</td>
<td>0</td>
</tr>
<tr>
<td>Freshwater molluscs</td>
<td>854</td>
<td>72</td>
<td>8%</td>
<td>1</td>
</tr>
<tr>
<td>Vascular plants**</td>
<td>1,826</td>
<td>372</td>
<td>20%</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>5,894</td>
<td>950</td>
<td>16%</td>
<td>3</td>
</tr>
</tbody>
</table>

*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 Sweden. For freshwater species, major threats include water pollution caused by agricultural and forestry effluent, which in many cases is further exacerbated by natural systems modification, climate change and agricultural expansion. Other major threats come from logging and wood harvesting and urbanization and tourism.

**Major threats at the European level to species occurring in Sweden**
Mammals

Sweden hosts 31% of all the mammals that occur in Europe. Of these 73 species of mammals, 6%* are threatened at the European level and at least an additional 4% are considered Near Threatened. The major threats at the European level that can possibly (or potentially) affect mammals in Sweden are hunting and trapping and invasive and other problematic species, both native and non-native. Mammal populations are also highly threatened mainly by industrial, military and agricultural effluents. Logging and wood harvesting and agricultural expansion also pose serious threats to mammals in the country.

Reptiles

Reptile species in Sweden represent 4% of all the reptiles in Europe. The conservation status of reptiles in Sweden based on the European Red List data is relatively good since none of them are considered threatened and all are classified as Least Concern. Habitat loss, fragmentation and degradation especially due to agricultural intensification and urbanization are the main threats to this group at the European level. It is also interesting to note that at least 33% of the reptile species in Sweden may be threatened by human persecution and control, especially snakes.
**Amphibians**

Amphibians in Sweden represent 14% of all amphibians occurring in Europe. The conservation status of amphibians in Sweden based on the European Red List data is relatively good since none of them are considered threatened. The main threat to this group at the European level is the loss and degradation of suitable breeding habitat mainly due to agricultural activities and water pollution caused by agricultural and forestry effluents. Urbanization and invasive non native species also pose threats to this group.

**Freshwater fishes**

Freshwater fishes are one of the most threatened groups at the European level. Five percent* of the species that occur in Sweden are threatened at the European level, while the percentage of total threatened species that is observed in the European region is 40%*. Additionally, freshwater fishes have a high percentage of endemism in the European region: up to 80%. Modification of the physical and chemical characteristics of freshwater rivers and lakes due to dam construction is the main threat to this group at the European level.
Butterflies

Sweden hosts 25% of all butterfly species in Europe and 7%* of them are considered threatened at the European level. The conservation status of butterflies in Sweden based on the European Red List data is relatively good since approximately 85% of the species 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 such as overgrazing, undergrazing or changes in forestry practices.

**Status at European level**

<table>
<thead>
<tr>
<th>Status</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC</td>
<td>85%</td>
</tr>
<tr>
<td>EN</td>
<td>3%</td>
</tr>
<tr>
<td>VU</td>
<td>5%</td>
</tr>
<tr>
<td>NT</td>
<td>7%</td>
</tr>
</tbody>
</table>

**Threats at European level**

- Natural system modifications
- Livestock farming and ranching
- Droughts
- Logging and wood harvesting
- Wood and pulp plantations
- Habitat shifting and alteration
- Pollution
- Recreational activities
- Annual and perennial non-timber crops
- Temperature extremes
- Problematic natives species
- Residential and commercial development

![Butterfly Graph](image)

Dragonflies

Forty-four percent of all the dragonflies in Europe are present in Sweden. The conservation status of dragonflies in Sweden based on the European Red List data is relatively good since approximately 95% of the species are classified as Least Concern. This group is adversely affected by desiccation caused by dry weather, fires and increased water extraction. River species are also affected by ecosystem modifications such as the construction of dams and reservoirs, water quality deterioration and agricultural expansion and intensification.

**Status at European level**

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</tr>
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<tbody>
<tr>
<td>LC</td>
<td>95%</td>
</tr>
<tr>
<td>NT</td>
<td>3%</td>
</tr>
<tr>
<td>DD</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Threats at European level**

- Droughts
- Agriculture and aquaculture
- Habitat shifting and alteration
- Agricultural and forestry effluents
- Dams and water management/use
- Other types of pollution
- Recreational activities
- Residential and commercial development
- Other ecosystem modifications
- Temperature extremes
- Logging and wood harvesting

![Dragonfly Graph](image)
Saproxylic beetles

Thirty-two percent of the beetle species assessed by the European Red List are present in Sweden. Approximately 3%* of the species in this group are considered threatened at the European level, which is less than half of the percentage of threatened saproxylic beetle species in Europe, and none of them are Critically Endangered. Fourteen percent of them are considered as Near Threatened. 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.

Terrestrial molluscs

Four percent* of the terrestrial molluscs assessed that are present in Sweden are threatened and 10% are Near Threatened at the European level. The major threat to this group at the European level is continuous destruction of suitable habitat caused by inappropriate ecosystem management. Logging and wood harvesting, mining and quarrying, and human intrusions for recreational activities are also main threats to this group.
Freshwater molluscs

Three percent* of the freshwater molluscs that are present in Sweden are threatened at the European level. Water pollution, especially the one coming from agricultural, forestry, domestic and industrial effluents is the main threat to this group at the European level. Natural system modifications, dams construction, shipping lanes and invasive non native species are also main threats to this group.

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 372 species are found in Sweden, which represent 20% of the total of species assessed in Europe. Two percent* of the 372 vascular plant species assessed in Sweden are considered threatened at the European level. For terrestrial plants, agricultural expansion and urbanization have the worst impacts. For aquatic species, direct habitat loss caused by natural ecosystem modifications, and pollution caused by agricultural effluents are the main threats.
REFERENCES


*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.