France’s biodiversity at risk
A call for action

France 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 France 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. France 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 France 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 France 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

France is host to an estimated 54,766 species of animals and plants. This number represents 35% 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 34% of the species assessed by the European Red List of Species are present in France. For some of the taxonomic groups, the percentages of European species that occur in France are particularly high; such as dragonflies, butterflies and saproxylic beetles.

Of the 1,975 species assessed that occur in France, the groups comprising the highest number of species are vascular plants, butterflies and saproxylic beetles. Of the total number of species assessed in the country more than 9% are considered threatened and at least 8% are Near Threatened at the European level, one species is Extinct in the Wild and seven species are already Extinct. 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 France are found mostly in wetlands, forests and grassland. These ecosystems require particular attention in order to ensure the habitats of these sensitive species remain.

<table>
<thead>
<tr>
<th>Species group</th>
<th>No. of sp. in Europe</th>
<th>No. of sp. in France</th>
<th>% of European sp. occurring in France</th>
<th>No. of threatened sp. in France (status at the 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>117</td>
<td>50%</td>
<td>3</td>
</tr>
<tr>
<td>Reptiles</td>
<td>140</td>
<td>35</td>
<td>25%</td>
<td>0</td>
</tr>
<tr>
<td>Amphibians</td>
<td>83</td>
<td>36</td>
<td>43%</td>
<td>0</td>
</tr>
<tr>
<td>Freshwater fishes</td>
<td>522</td>
<td>83</td>
<td>16%</td>
<td>3</td>
</tr>
<tr>
<td>Butterflies</td>
<td>435</td>
<td>244</td>
<td>56%</td>
<td>0</td>
</tr>
<tr>
<td>Dragonflies</td>
<td>137</td>
<td>92</td>
<td>67%</td>
<td>0</td>
</tr>
<tr>
<td>Saproxylic beetles**</td>
<td>431</td>
<td>238</td>
<td>55%</td>
<td>0</td>
</tr>
<tr>
<td>Terrestrial molluscs**</td>
<td>1,233</td>
<td>226</td>
<td>18%</td>
<td>5</td>
</tr>
<tr>
<td>Freshwater molluscs</td>
<td>854</td>
<td>223</td>
<td>26%</td>
<td>8</td>
</tr>
<tr>
<td>Vascular plants**</td>
<td>1,826</td>
<td>681</td>
<td>37%</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>5,894</td>
<td>1,975</td>
<td>34%</td>
<td>23</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 France. For freshwater species, major threats include the over-extraction of water, which in many cases is further exacerbated by increasing droughts due to climate change, pollution and the introduction of alien species. Other major threats come from farming and ranching as a result of agricultural expansion and intensification, urbanization and tourism.
Mammals

France hosts 50% of all the mammals that occur in Europe. Of these 117 species of mammals, 11%* are threatened at the European level and at least an additional 10% are considered Near Threatened. The major threats at the European level that can possibly (or potentially) affect mammals in France are invasive and other problematic species, both native and non-native. Mammal populations are also highly threatened mainly by agricultural and forestry effluents and noise pollution. Agricultural expansion and intensification and livestock farming and ranching also pose serious threats to mammals.

Reptiles

Reptile species in France represent 25% of all the reptiles in Europe. Almost 12%* of the reptile species that occur in France are considered threatened at the European level. Habitat loss, fragmentation and degradation especially due to agricultural intensification and natural or semi natural ecosystems “management” are the main European threats to this group. It is also interesting to note that at least 37% of the reptile species in France may be threatened by human persecution and control, especially snakes and vipers.
Amphibians

Amphibians in France represent 43% of all amphibians occurring in Europe. This group shows high endemic species richness in France, which also has the second highest species richness of amphibians, after Italy. Six percent* of the amphibian species that occur in France are threatened and an additional 14% are Near Threatened at the European level. The main threat to this group at the European level is the loss and degradation of suitable breeding habitat mainly due to urban and touristic development, agricultural activities through excessive water withdrawal and water pollution by agrochemicals.

Freshwater fishes

Freshwater fishes are one of the most threatened groups at the European level. Eight percent* of the species that occur in France 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%. Although areas with the highest species richness clearly coincide with the lower parts of large rivers flowing to the Black and Caspian Seas, some of the highest concentrations of threatened freshwater fish species are found in the northern Mediterranean coast, which includes the Mediterranean coast of France. The most important threat to this group at the European level is the change of water flow patterns due to dam construction and operation and the abstraction of water from underground or from the streams and rivers themselves.
Butterflies

France hosts 56% of all butterfly species in Europe and 4%* of them are considered threatened at the European level. The mountainous areas of France have a rich variety of butterfly species as well as a high number of endemic species. The conservation status of butterflies in France based on the European Red List data is relatively good since approximately 88% 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](image)

![Threats at European level](image)

Dragonflies

Sixty-seven percent of all the dragonflies in Europe are present in France. After Italy, France hosts the highest number of dragonflies in Europe. In this country, 3%* of the species are considered threatened at the European level. A large concentration of threatened species is found on the south of the country, especially in the Mediterranean region. 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](image)

![Threats at European level](image)
Saproxylic beetles

Fifty-five percent of the beetle species assessed by the European Red List are present in France. Approximately 5%* 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. Fifteen 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

More than 13%* of the terrestrial molluscs that occur in France are threatened at the European level. The south-east part of the country hosts a high number of threatened terrestrial molluscs. This region, especially the Alpine arc, is home to a large number of endemic species of terrestrial molluscs. The major threat to this group at the European level is continuous destruction of suitable habitat from agriculture and increased overflow of settlements into the countryside.
Freshwater molluscs

Thirty-one percent* of freshwater molluscs that occur in France are threatened at the European level. One of the species assessed within this group has already gone Extinct, *Bythinella gibbosa* which was endemic to France. Water pollution is the main European threat to this group at the European level, especially the one coming from agricultural effluents and domestic and urban wastewater. Modification of the physical and chemical characteristics of freshwater rivers and lakes due to dam construction is also one of the major threats at the 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 681 species are found in France, which represent 37% of the total of species assessed in Europe. Six percent* of the 681 vascular plant species assessed in France are considered threatened at the European level. For terrestrial plants, intensified livestock farming, especially intensive grazing activities have the worst impacts. For aquatic species, direct habitat loss caused by draining for development, agriculture and pasture is the main threat.
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.