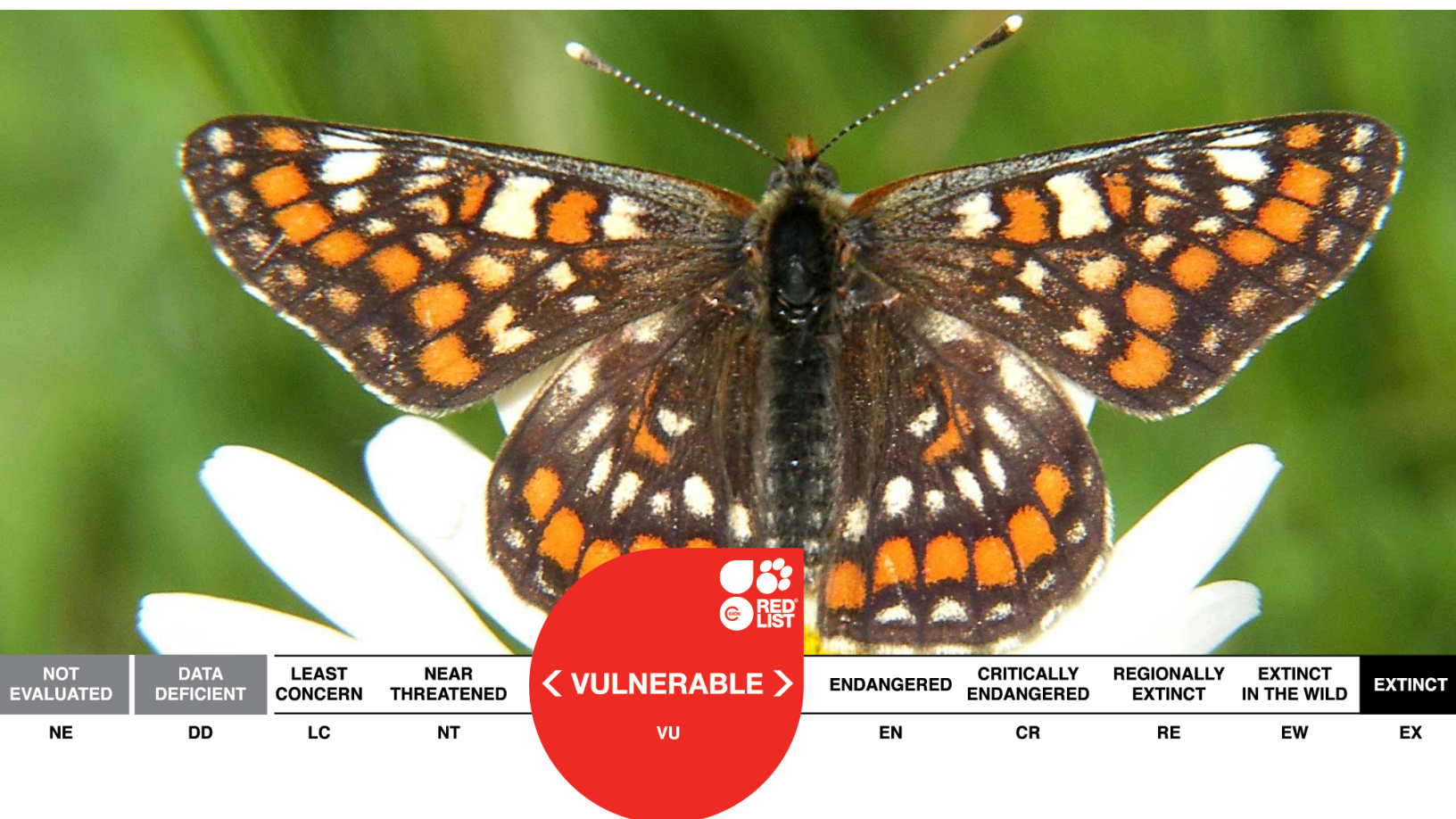


# Luxembourg's biodiversity at risk

A call for action



Luxembourg 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 Luxembourg 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. Luxembourg 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 Luxembourg 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 Luxembourg 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 IUCN RED LIST OF THREATENED SPECIES™

## 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.

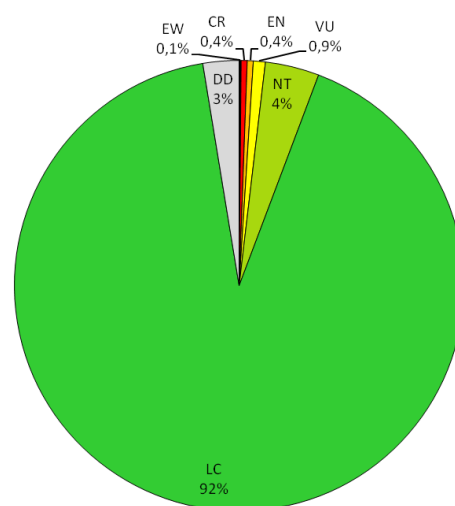
## Conservation status

According to the table below, approximately 12% of the species assessed by the European Red List of Species are present in Luxembourg. For some of the taxonomic groups, the percentages of European species that occur in Luxembourg are particularly high; such as dragonflies, mammals and butterflies.

Of the 695 species assessed that occur in Luxembourg, the groups comprising the highest number of species are vascular plants, butterflies and dragonflies. Of the total number of species assessed in the country two percent\* are considered threatened and at least 4% are Near Threatened at the European level, and one species is Extinct in the Wild. 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 Luxembourg are found mostly in wetlands, grasslands and forests. These ecosystems require particular attention in order to ensure the habitats of these sensitive species remain.

European status of species in Luxembourg



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 Luxembourg	% of European sp. occurring in Luxembourg	No. of threatened sp. in Luxembourg (status at European level)		
				CR	EN	VU
Mammals	233	51	22%	0	0	1
Reptiles	140	6	4%	0	0	0
Amphibians	83	14	17%	0	0	0
Freshwater fishes	522	34	7%	1	0	0
Butterflies	435	82	19%	0	2	3
Dragonflies	137	61	45%	0	0	1
Saproxylic beetles**	431	50	12%	0	0	0
Terrestrial molluscs**	1,233	47	4%	0	1	1
Freshwater molluscs	854	55	6%	2	0	0
Vascular plants**	1,826	295	16%	0	0	0
<b>TOTAL</b>	<b>5,894</b>	<b>695</b>	<b>12%</b>	<b>3</b>	<b>3</b>	<b>6</b>

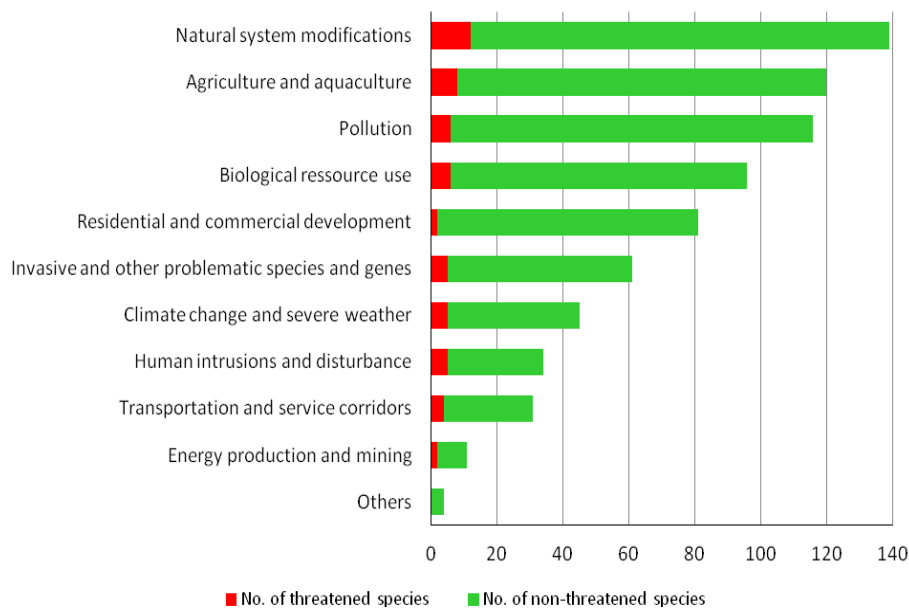
\*\*Not comprehensively assessed, selected species only.

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 the European level to species that occur in Luxembourg. For freshwater species, major threats include destruction of suitable habitat due to agriculture expansion and intensification, and livestock farming and ranching. Other major threats come from residential development, pollution caused by agricultural and forestry effluent and logging and wood harvesting.

### Major threats at the European level to species occurring in Luxembourg

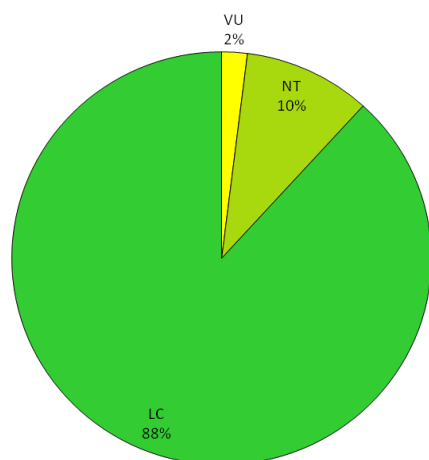




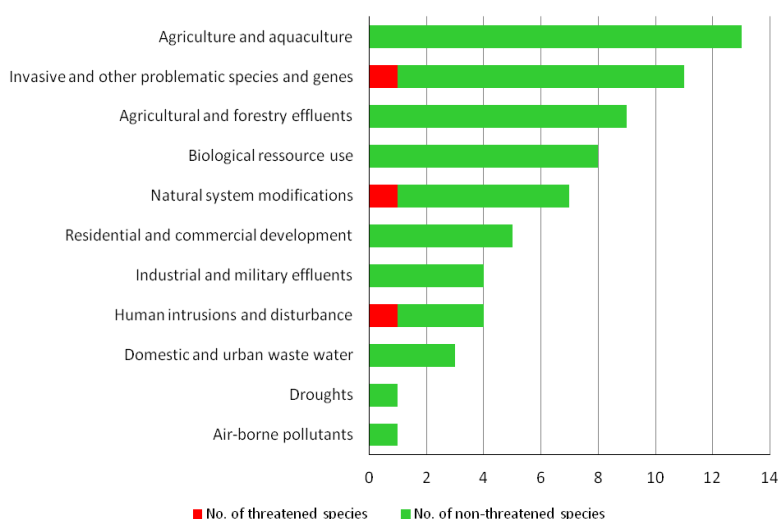
## Mammals

Luxembourg hosts 22% of all the mammals that occur in Europe. Of these 51 species of mammals, 2%\* 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 Luxembourg are livestock farming and ranching and pollution especially the one coming from agricultural and forestry effluents. Mammal populations are also highly threatened mainly by hunting and trapping and invasive non native species.

**Status at European level**



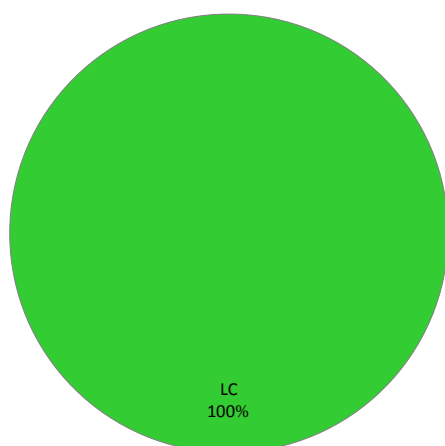
**Threats at European level**



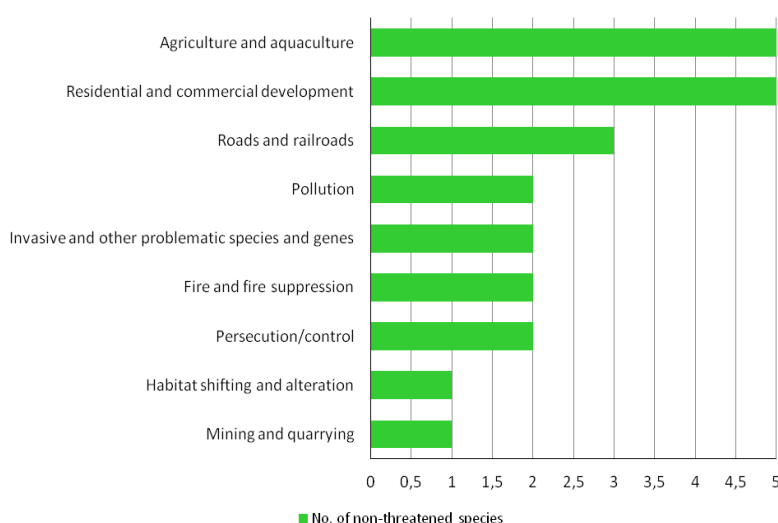
## Reptiles

Reptile species in Luxembourg represent 4% of all the reptiles in Europe. The conservation status of reptiles in Luxembourg 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 Luxembourg may be threatened by human persecution and control, especially snakes.

**Status at European level**



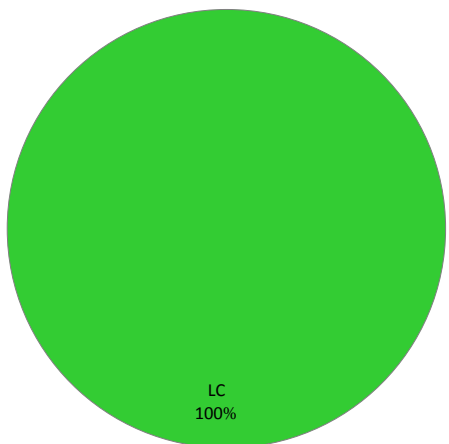
**Threats at European level**



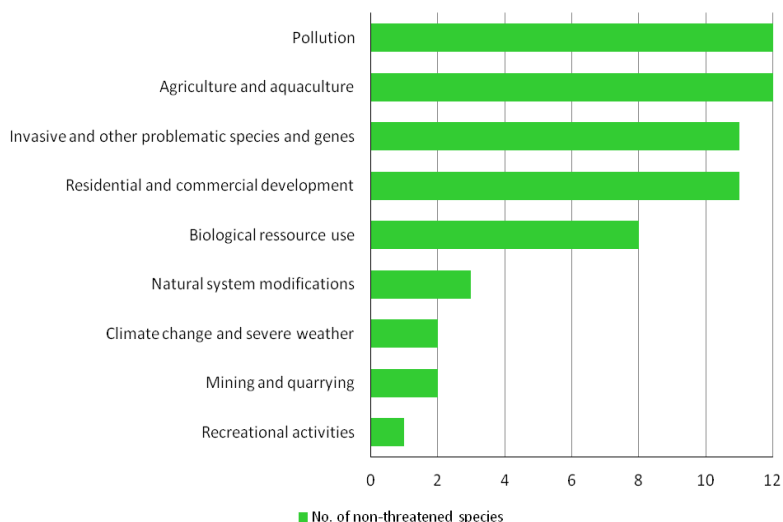
## Amphibians

Amphibians in Luxembourg represent 17% of all amphibians occurring in Europe. The conservation status of amphibians in Luxembourg based on the European Red List data is relatively good since none of them are considered threatened and all are classified as Least Concern. The main threat to this group at the European level is the loss and degradation of suitable breeding habitat mainly due to logging and wood harvesting, urban development, livestock farming and ranching. Declining in water quality caused by agricultural and forestry effluents also pose threat to this group.

**Status at European level**



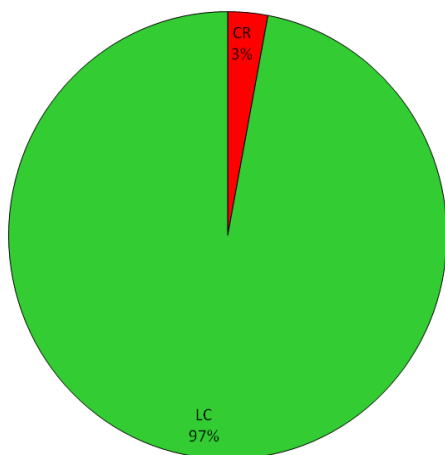
**Threats at European level**



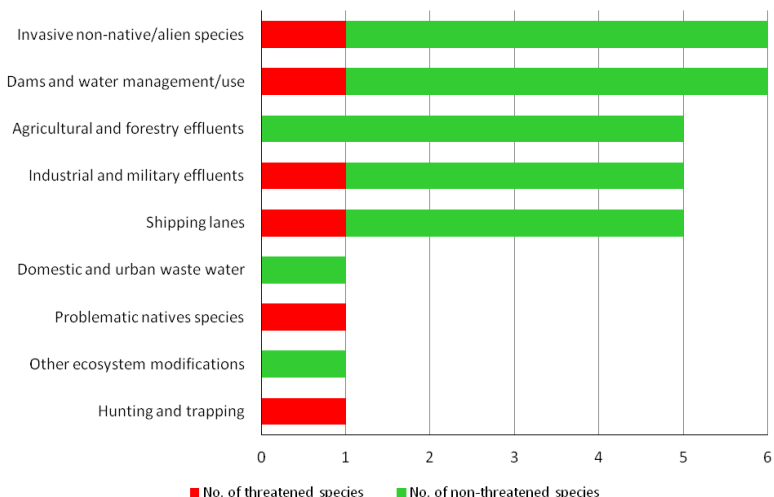
## Freshwater fishes

Freshwater fishes are one of the most threatened groups at the European level. Three percent\* of the species that occur in Luxembourg 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 most important threat to this group at the European level. Shipping lanes and declining water quality caused by agricultural, industrial and forestry effluents are also threats to this group.

**Status at European level**



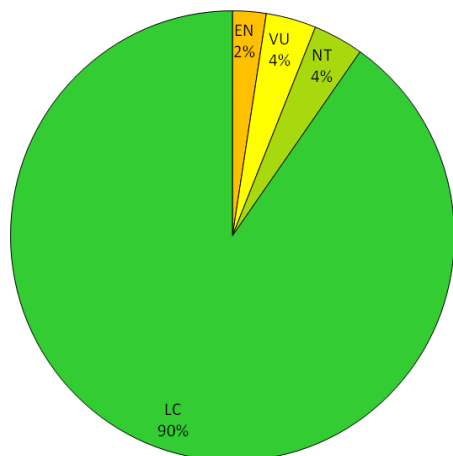
**Threats at European level**



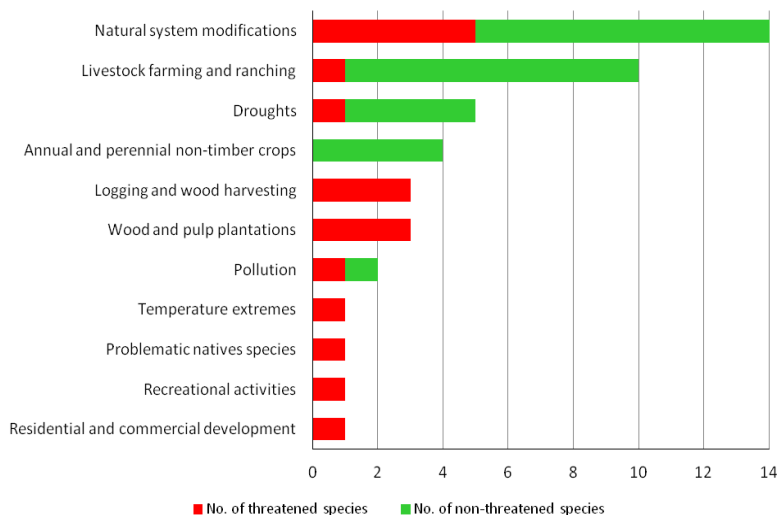
## Butterflies

Luxembourg hosts 19% of all butterfly species in Europe and 6%\* of them are considered threatened at the European level. The conservation status of butterflies in Luxembourg based on the European Red List data is relatively good since approximately 90% 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**



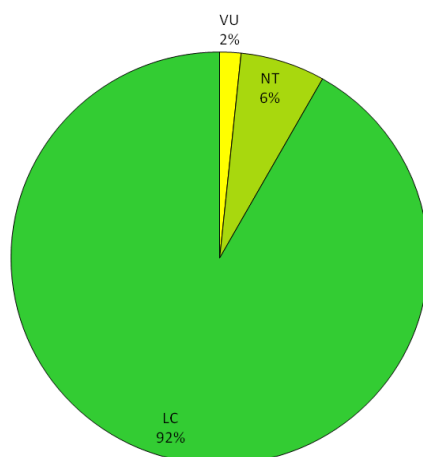
**Threats at European level**



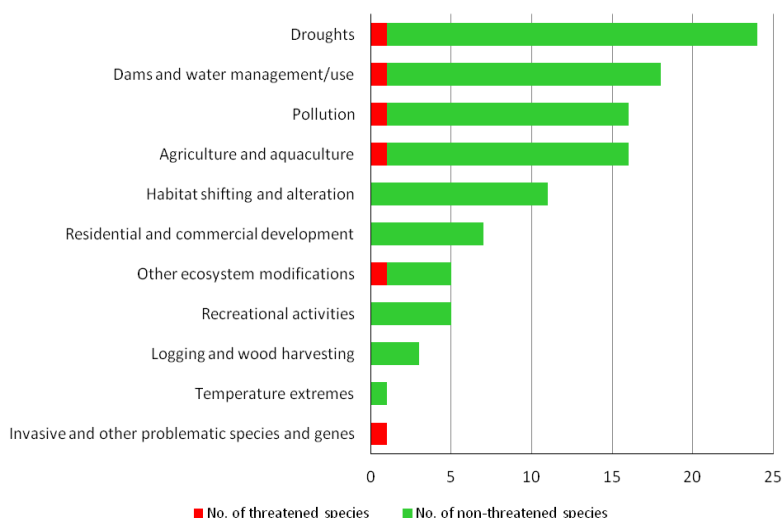
## Dragonflies

Forty-five percent of all the dragonflies in Europe are present in Luxembourg. In Luxembourg, 2%\* of the dragonflies are considered threatened at the European level. 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 caused by agricultural and forestry effluents.

**Status at European level**



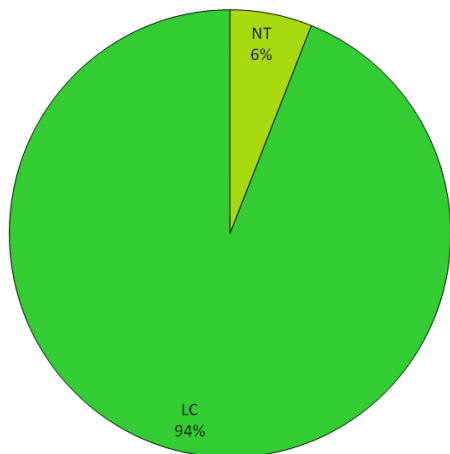
**Threats at European level**



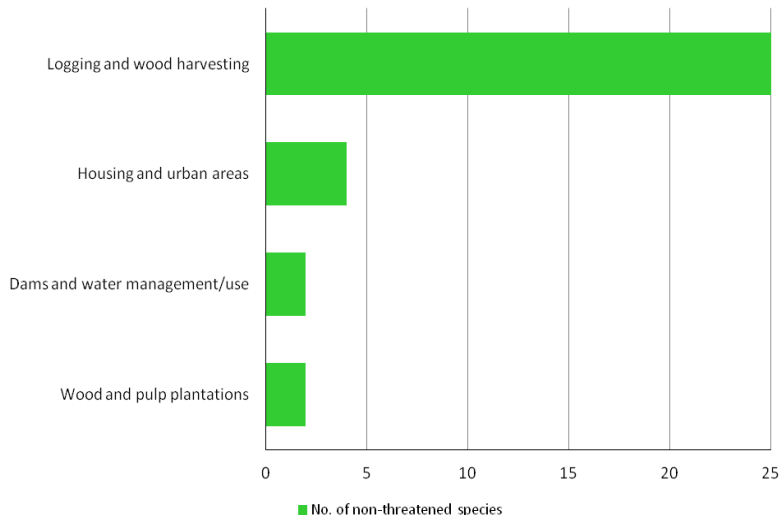
## Saproxylic beetles

Twelve percent of the beetle species assessed by the European Red List are present in Luxembourg. The conservation status of saproxylic beetles in Luxembourg based on the European Red List data is relatively good since none of them are considered threatened, 6% are classified as Near Threatened and 94% are considered as Least Concern. 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**



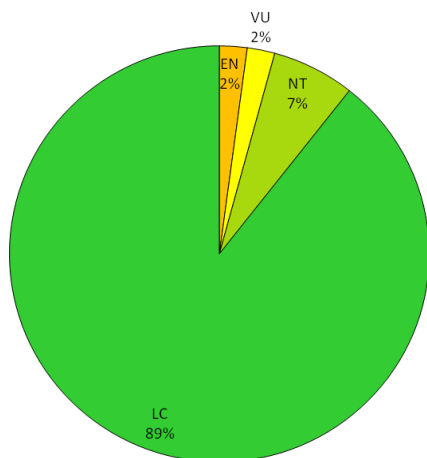
**Threats at European level**



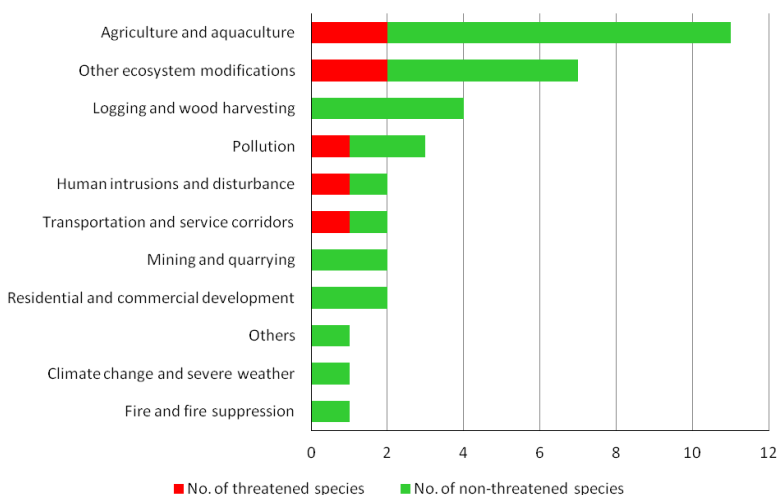
## Terrestrial molluscs

Four percent\* of the terrestrial molluscs assessed that are present in Luxembourg are threatened and 7% are Near Threatened at the European level. The major threat to this group at the European level is continuous destruction of suitable habitat from inappropriate ecosystem management, agricultural expansion and livestock farming and ranching.

**Status at European level**



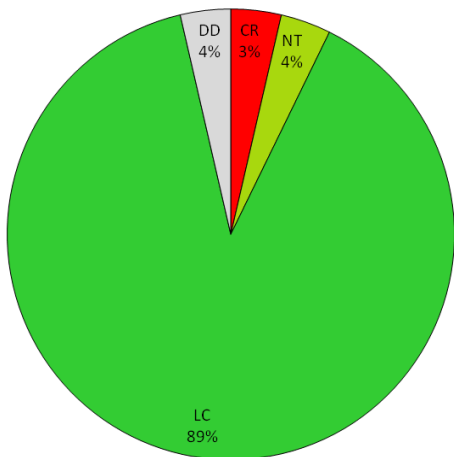
**Threats at European level**



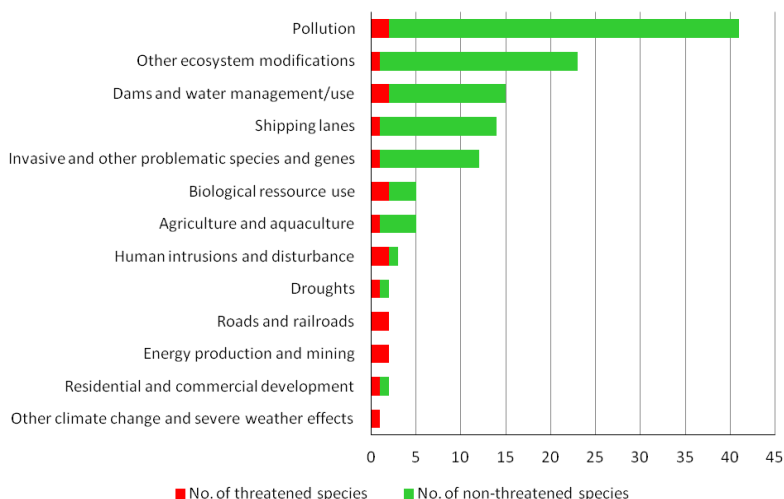
## Freshwater molluscs

Four percent\* of freshwater molluscs that occur in Luxembourg are threatened at the European level and all of them are classified as Critically Endangered. Declining water quality in freshwater rivers and lakes caused by agricultural, forestry and domestic effluents is the main threat to this group at the European level. Habitat degradation as a result of inappropriate ecosystem management shipping lanes and the construction of dams are also major threats to this group.

Status at European level



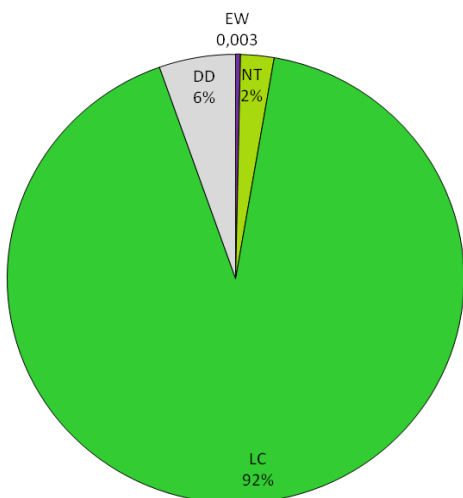
Threats at European level



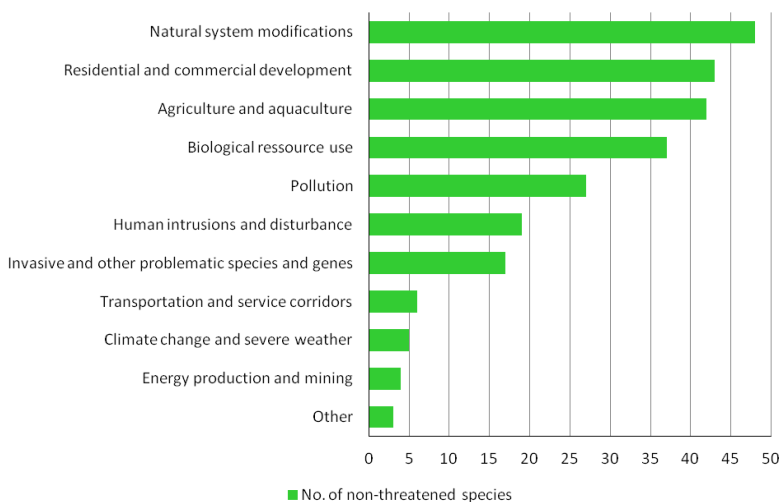
## Vascular plants

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 295 species are found in Luxembourg, which represent 16% of the total of species assessed in Europe. The conservation status of vascular plants in Luxembourg based on the European Red List data is relatively good since less than 1%\* of them are considered threatened and 92% is classified as Least Concern at the European level. For terrestrial plants, habitat degradation due to urban development has the worse impacts. For aquatic species, natural system modifications are the main threat.

Status at European level



Threats at European level







## INTERNATIONAL UNION FOR CONSERVATION OF NATURE © May 2013

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

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Cover photo by Matt Rowlings (*Euphydryas maturna*)

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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.