

# Bulgaria's biodiversity at risk

A call for action



Bulgaria hosts a significant 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 Bulgaria 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. Bulgaria 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 Bulgaria 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 Bulgaria 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 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.

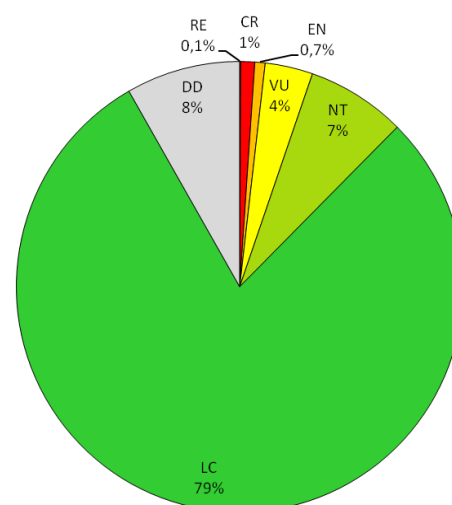
## Conservation status

Bulgaria is host to an estimated 41,493 species of animals and plants. This number represents 26% of the total species described for Europe and could represent more than 2% of the species in the world. According to the table below, approximately 25% of the species assessed by the European Red List of Species are present in Bulgaria. For some of the taxonomic groups, the percentages of European species that occur in Bulgaria are particularly high; such as saproxylic beetles, dragonflies, and butterflies.

Of the 1,476 species assessed that occur in Bulgaria, 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 around 6%\* 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 Bulgaria are found mostly in wetlands, forests and grasslands. These ecosystems require particular attention in order to ensure the habitats of these sensitive species remain.

European status of species in Bulgaria



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 Bulgaria	% of European sp. occurring in Bulgaria	No. of threatened sp. in Bulgaria (status at European level)		
				CR	EN	VU
Mammals	233	93	40%	2	1	9
Reptiles	140	34	24%	0	0	2
Amphibians	83	17	20%	0	0	0
Freshwater fishes	522	106	20%	6	2	5
Butterflies	435	214	49%	0	3	4
Dragonflies	137	67	49%	0	1	4
Saproxylic beetles**	431	214	50%	0	1	3
Terrestrial molluscs**	1,233	101	8%	1	0	4
Freshwater molluscs	854	86	10%	6	1	15
Vascular plants**	1,826	544	30%	0	2	5
<b>TOTAL</b>	<b>5,894</b>	<b>1,476</b>	<b>25%</b>	<b>15</b>	<b>11</b>	<b>51</b>

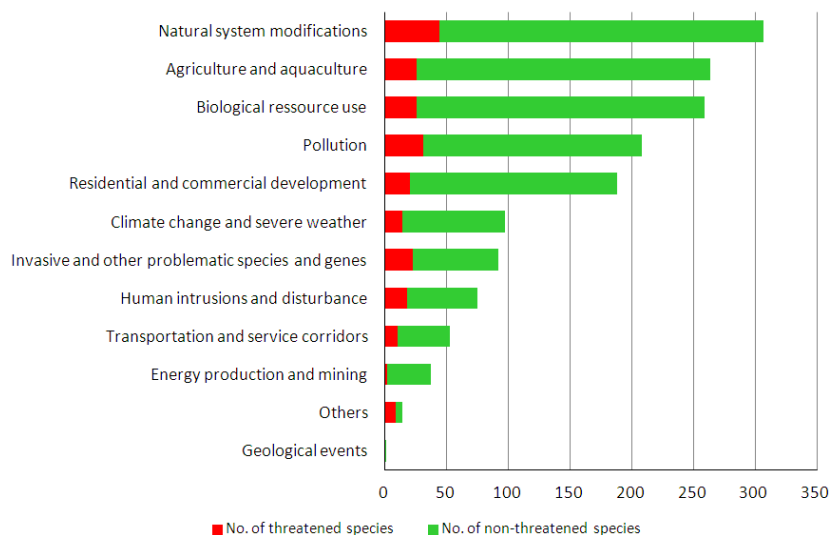
\*\*Not comprehensively assessed, selected species only.

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 at the European level to species that occur in Bulgaria. 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.

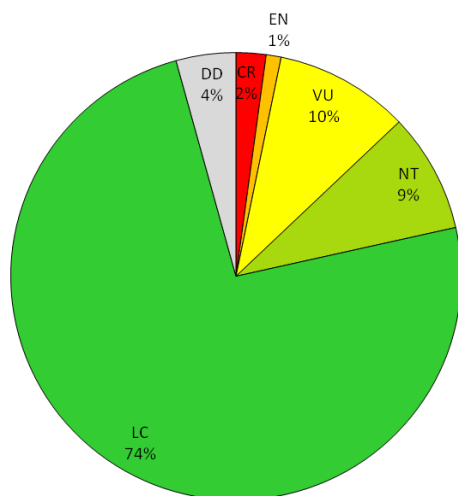
**Major threats at the European level to species occurring in Bulgaria**



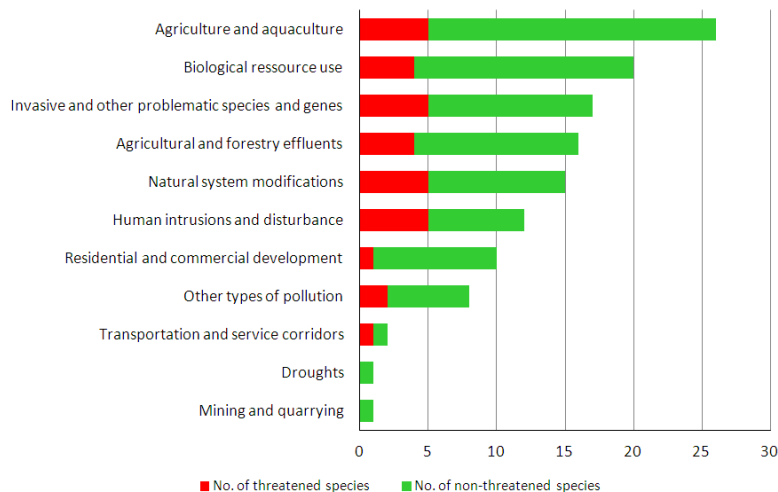
## Mammals

Bulgaria hosts 40% of all the mammals that occur in Europe. Of these 93 species of mammals, 13%\* are threatened at the European level and at least an additional 9% are considered Near Threatened. The Balkan Peninsula is a hot spot of species richness in Europe, but the country also has one of the highest concentrations of threatened species in the region. The major threats at the European level that can possibly (or potentially) affect mammals in Bulgaria are agricultural expansion and intensification as well as hunting, trapping, logging and wood harvesting.

Status at European level



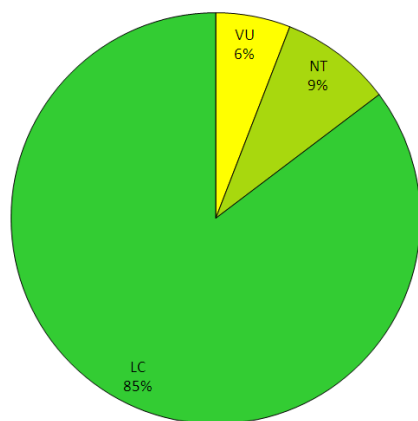
Threats at European level



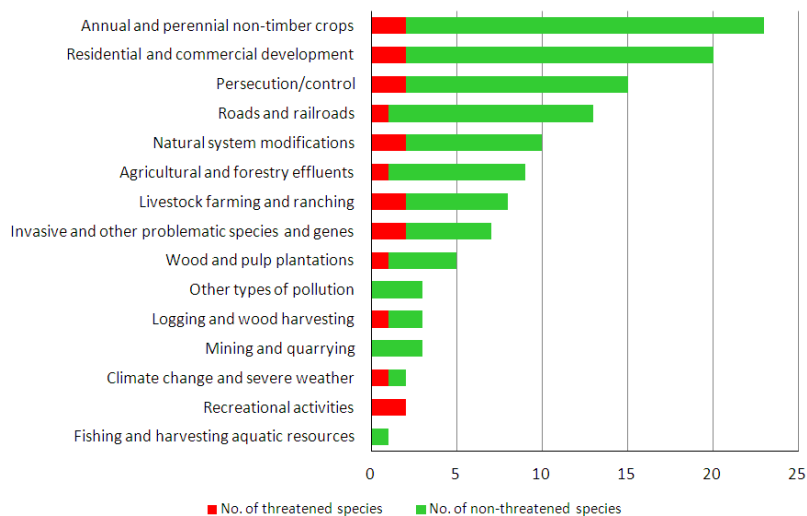
## Reptiles

Reptile species in Bulgaria represent 24% of all the reptiles in Europe. Six percent\* of the reptile species that occur in Bulgaria are considered threatened at the European level. The group shows a particularly high species richness in the Balkan Peninsula, being Bulgaria the country with the fifth highest number of species in Europe. 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 44% of the reptile species in Bulgaria may be threatened by human persecution and control, especially snakes and vipers.

Status at European level



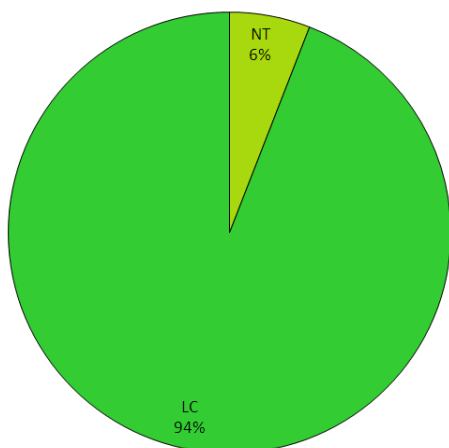
Threats at European level



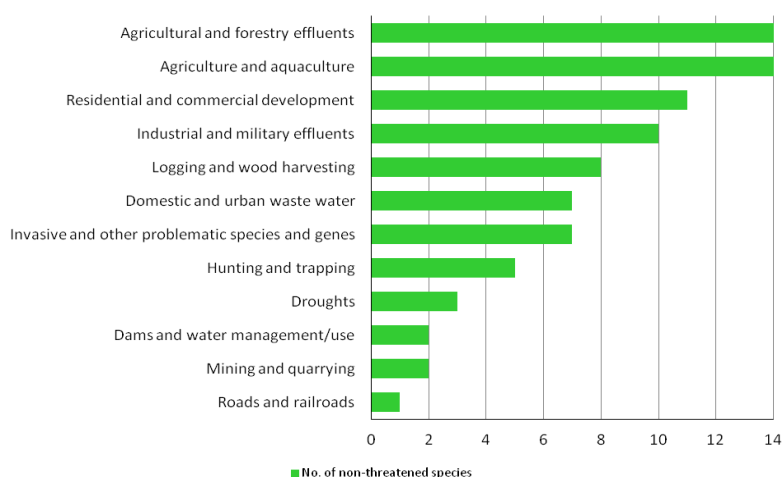
## Amphibians

Amphibians in Bulgaria represent 20% of all amphibians occurring in Europe. The conservation status of amphibians in Bulgaria based on the European Red List data is relatively good since none of them are considered threatened and 94% 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 agricultural activities through excessive water withdrawal and water pollution by agrochemicals.

Status at European level



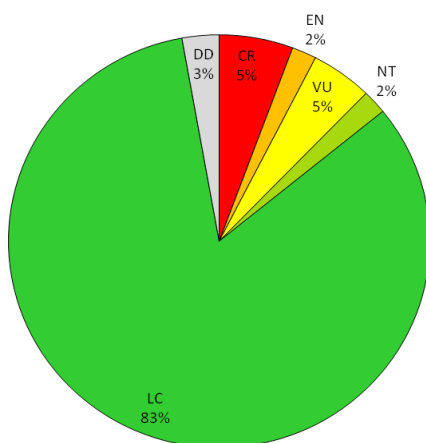
Threats at European level



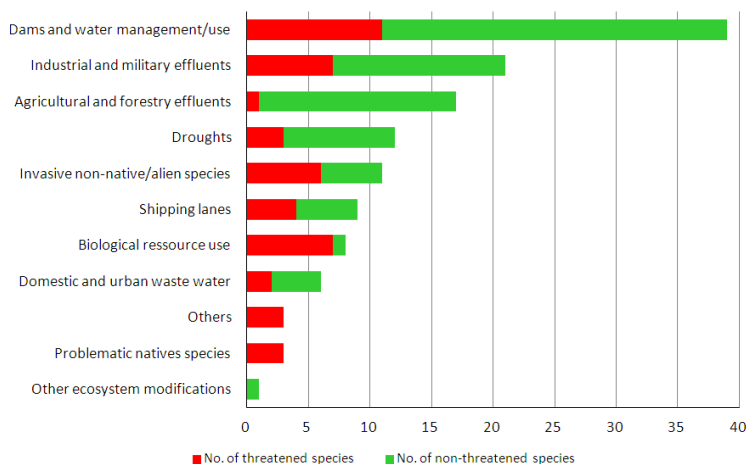
## Freshwater fishes

Freshwater fishes are one of the most threatened groups at the European level. Thirteen percent\* of the species that occur in Bulgaria are threatened at the European level. Freshwater fishes have a high percentage of endemism in the European region: up to 80%. Areas with the highest species richness clearly coincide with the lower parts of large rivers flowing to the Black and Caspian Seas and some of the highest concentrations of threatened freshwater fish species are found in the coastal streams from Bulgaria. 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. Declining water quality in freshwater rivers also poses serious problems.

Status at European level



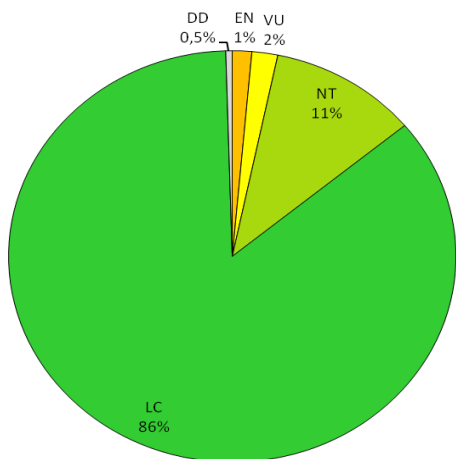
Threats at European level



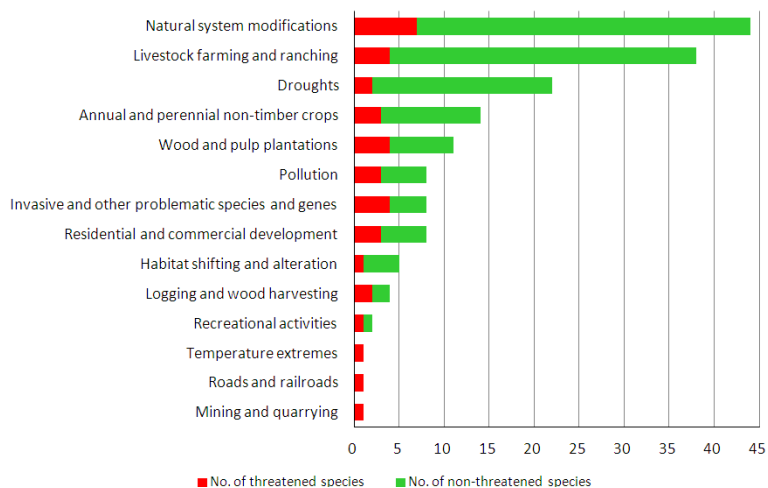
## Butterflies

Bulgaria hosts 49% of all butterfly species in Europe and more than 3%\* of them are considered threatened at the European level. The mountainous areas of Bulgaria have a rich variety of butterfly species as well as a high number of endemic species. The conservation status of butterflies in Bulgaria based on the European Red List data is relatively good since approximately 86% 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**



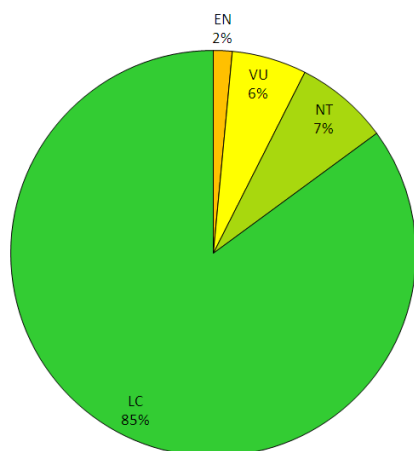
**Threats at European level**



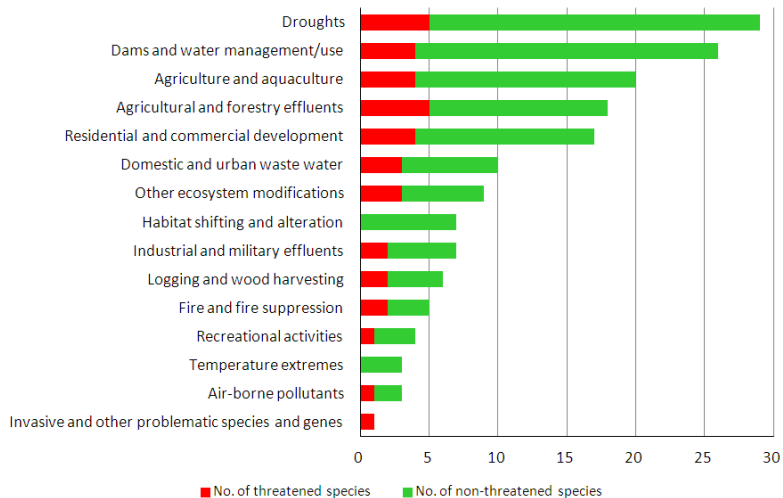
## Dragonflies

Forty-nine percent of all the dragonflies in Europe are present in Bulgaria. As part of the Balkans, Bulgaria is home to large number of endemic and threatened species. In this country, 7%\* 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.

**Status at European level**



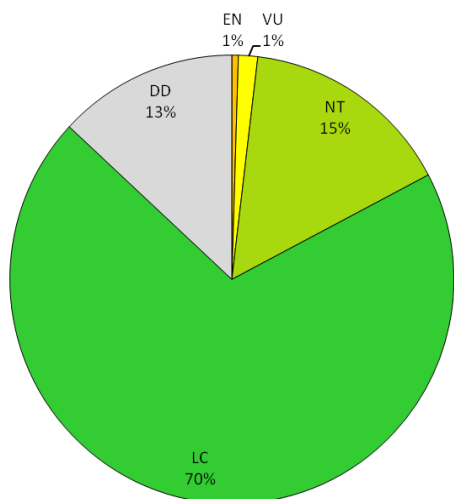
**Threats at European level**



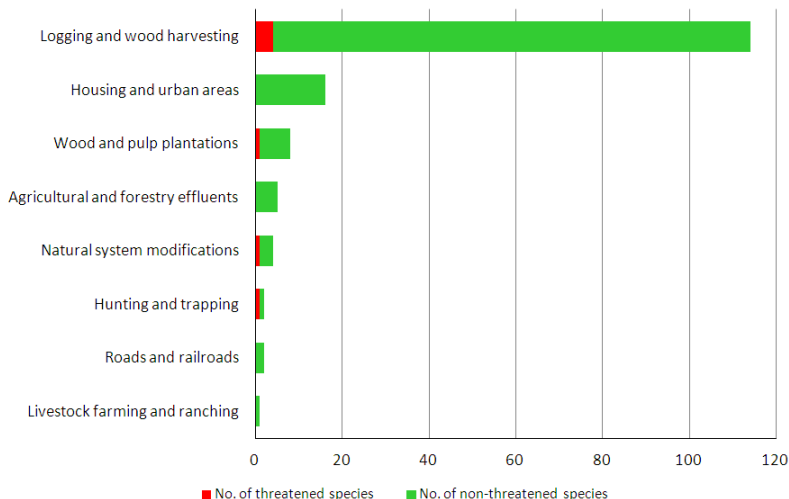
## Saproxylic beetles

Almost 50% percent of the beetle species assessed by the European Red List are present in Bulgaria. Approximately 2%\* of the species in this group are considered threatened at the European level, and none of them are Critically Endangered. Nevertheless, 15% of them 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



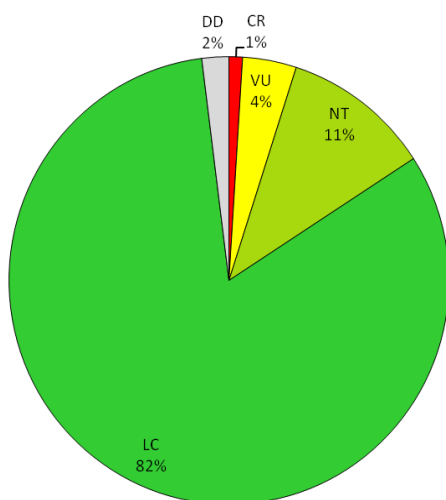
Threats at European level



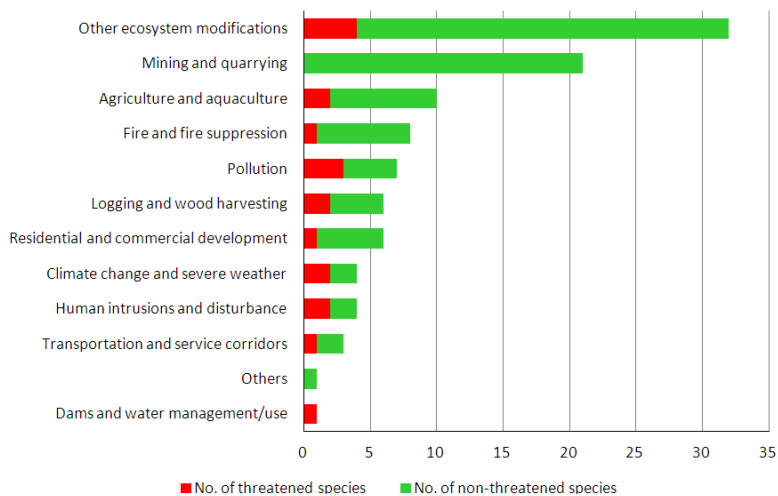
## Terrestrial molluscs

Five percent\* of the terrestrial molluscs assessed that are present in Bulgaria are threatened and 11% are Near Threatened at the European level. The major threats to this group at the European level are continuous destruction or degradation of suitable habitat from inappropriate management of natural or semi natural ecosystems and mineral extraction to produce construction material.

Status at European level



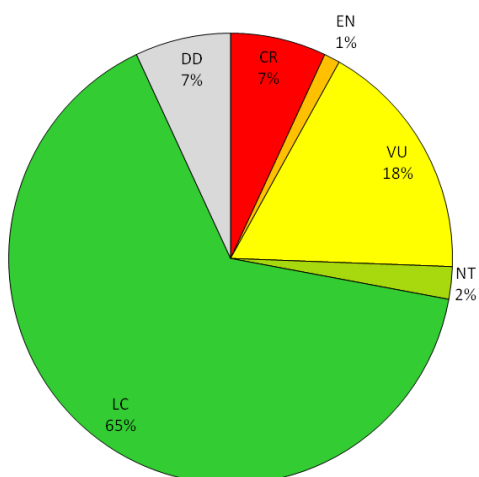
Threats at European level



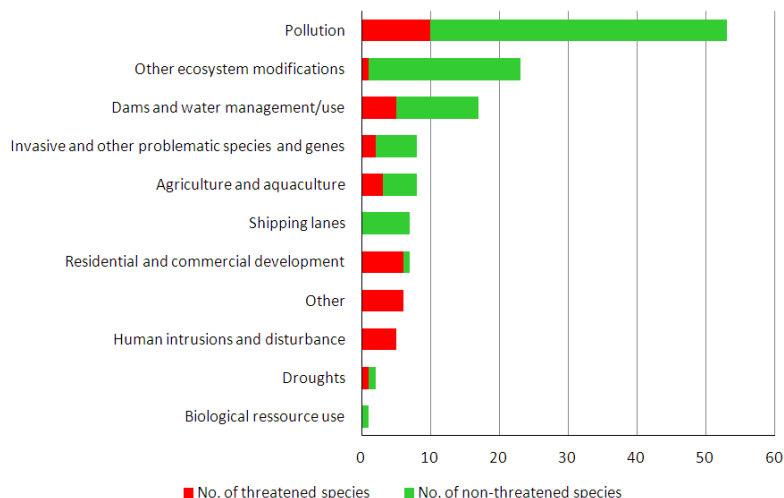
## Freshwater molluscs

Twenty-eight percent\* of freshwater molluscs that occur in Bulgaria are threatened at the European level. Declining water quality in freshwater rivers and lakes caused mainly by agricultural activities and domestic and urban wastewater is the main threat to this group at the European level. Water abstraction is also one of the major threats to this group.

Status at European level



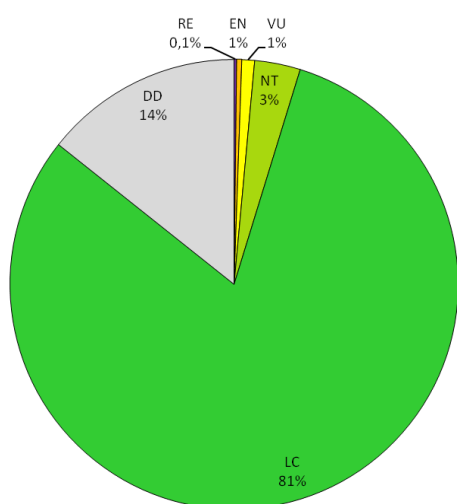
Threats at European level



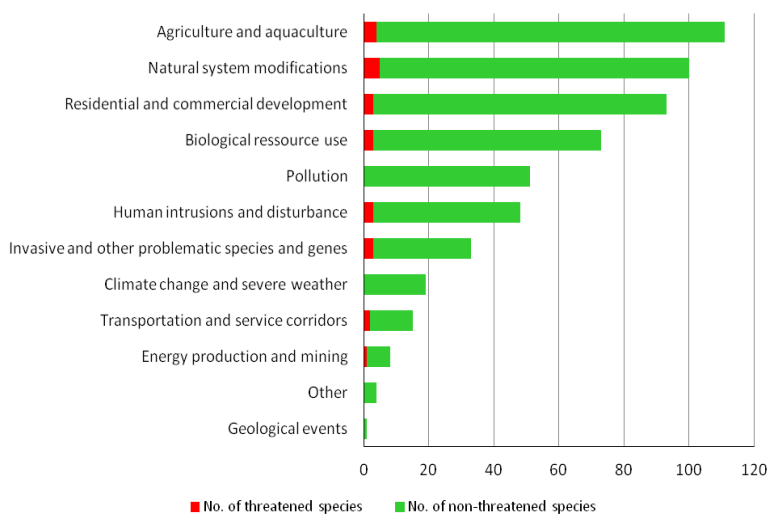
## Vascular plants

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 544 species are found in Bulgaria, which represent 30% of the total of species assessed in Europe. Two percent\* of the 544 vascular plant species assessed in Bulgaria 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.

Status at European level



Threats at European level







## INTERNATIONAL UNION FOR CONSERVATION OF NATURE © May 2013

Document prepared by Andrea Pino del Carpio, Silvia Sánchez, Ana Nieto and Melanie Bilz  
European Union Representative Office  
Boulevard Louis Schmidt 64  
1040 Brussels, Belgium  
+32 2 739 03 13

For more information please contact: [ana.nieto@iucn.org](mailto:ana.nieto@iucn.org)

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

The European Red List is a project funded by the European Commission.  
Cover photo by Kamiel Spoelstra (*Myotis bechsteinii*)

## REFERENCES

- Bilz, M., Kell, S. P., Maxted, N. and Lansdown, R.V. 2011. *European Red List of Vascular Plants*. Publications Office of the European Union, Luxembourg.
- Cox, N.A. and Temple, H.J. 2009. *European Red List of Reptiles*. Office for Official Publications of the European Communities, Luxembourg.
- Cuttelod, A., Sheddon, M and E. Neubert. 2011. *European Red List of Non-marine Molluscs*. Publications Office of the European Union, Luxembourg.
- Freyhof, J. and Brooks, E. 2011. *European Red List of Freshwater Fishes*. Publications Office of the European Union, Luxembourg.
- Kalkman, V.J., Boudot, J-P., Bernard, R., Conze, K-J., De Knijf, G., Dyatlova, E., Ferreira, S., Jović, M., Ott, J., Riservato, E. and Sahlén, G. 2010. *European Red List of Dragonflies*. Office for Official Publications of the European Communities, Luxembourg.
- Nieto, A and Alexander, K.N.A. 2009 *European Red List of Saproxyllic Beetles*. Office for Official Publications of the European Communities, Luxembourg.
- van Swaay, C., Cuttelod, A., Collins, S., Maes, D., López Manguira, M., Šašić, M., Settele, J., Verovnik, R., Verstrael, T., Warren, M., Wiemers, M. and Wynhoff, I. 2010. *European Red List of Butterflies*. Office for Official Publications of the European Communities, Luxembourg.
- Temple, H.J. and Terry, A. 2009. *The status and distribution of European mammals*. Office for Official Publications of the European Communities, Luxembourg.
- Temple, H.J. and Cox, N.A. 2009. *European Red List of Amphibians*. Office for Official Publications of the European Communities, Luxembourg.

\*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.