



National Red Lists in the Former Yugoslav Republic of Macedonia

Egyptian vultures: *Neophron percnopterus*; Endangered
Photography © Shutterstock / Alvein

Achieving Biodiversity Conservation through Creation and Effective Management of Protected Areas and Mainstreaming Biodiversity into Land Use Planning

UN Environment, in partnership with the Ministry of Environment and Physical Planning, is conducting the project “Achieving Biodiversity Conservation through Creation and Effective Management of Protected Areas and Mainstreaming Biodiversity into Land Use Planning”, funded by the Global Environment Facility.



The objective of the project is to promote biodiversity conservation in the country through three main components:

1. increasing the protected areas network and connectivity,
2. increasing effectiveness of biodiversity management, and
3. mainstreaming land use planning and biodiversity



Testudo hermanni, 'Near threatened'
Photography © Environment Protection Institute of Serbia

Promoting biodiversity conservation in the Former Yugoslav Republic of Macedonia

Because of its impressive variation in climatic, topographic and geologic characteristics, the Former Yugoslav Republic of Macedonia holds a wealth of biodiversity supporting the accompanying ecosystem services. The country forms part of the wider Mediterranean Region; the third most important biodiversity hotspot in the world. Unfortunately, pressures on biodiversity are rising due to intense socio-economic development within the country in combination with other regional processes.

The effectiveness of biodiversity management can be greatly improved by focusing efforts on priority species, which are usually selected based on their level of endangerment, endemism, cultural value, and other considerations. The IUCN Red List of Threatened Species™ is an internationally recognised tool that evaluates the extinction risk of species and as such can help prioritising species.





Bronze Glandular Bush-cricket - *Brachyporus dasyptus* - "Legat concern"
Photography © Shutterstock / taiphoto



By facilitating the national Red List process in the country, IUCN assists the project partners to increase biodiversity conservation knowledge and to build capacity among specialists and policy-makers. The Red List process includes a Red List data availability assessment, Red List Assessor training, assistance with data management, and guiding the production of national Red Lists for a number of taxonomic groups.

This brochure contributes to the second project component in two ways. First, it presents the global IUCN Red List, its principles and its uses to give general background; and second, it highlights the role that national Red Lists can play for effective biodiversity conservation in the FYR of Macedonia.

The IUCN Red List of Threatened Species™

is the world's most comprehensive information source on the global conservation status of animal, fungi and plant species and their links to livelihoods.



Our goal is to catalyse action for biodiversity conservation by providing information and analysis on the world's species, including threats, population status and trends.

"The IUCN Red List is a wake-up call, reminding us that our natural world is becoming increasingly vulnerable. We know that effective conservation can yield outstanding results, saving species from extinction while securing the livelihoods of local communities. The international community must urgently step up conservation efforts if we want to secure this fascinating diversity of life that sustains, inspires and amazes us every day."

Inger Andersen, IUCN Director General (International Union for Conservation of Nature).



About The IUCN Red List



Eastern imperial eagle (*Aquila heliaca*) Vulnerable*
Photography © Shutterstock / belizar

About The IUCN Red List

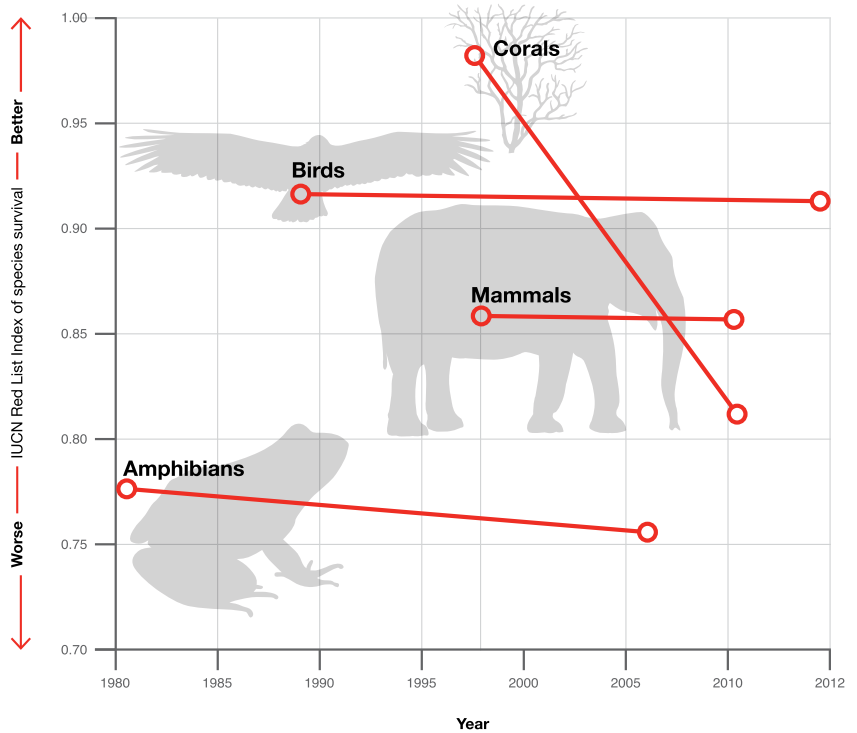
The IUCN Red List is a rich compendium of information on threats, ecological requirements, and habitats of species; and on conservation actions that can be taken to reduce or prevent extinctions.

It is based on an objective system for assessing the risk of extinction of a species based on past, present, and projected threats.

Species assessments are conducted following a standardized process using the rigorous IUCN Red List Categories and Criteria, ensuring the highest standards of scientific documentation, information management, expert review, and justification.

There are eight IUCN Red List Categories based on criteria linked to population trend, size and structure, and geographic range. Species listed as Critically Endangered, Endangered or Vulnerable are collectively described as threatened.

About The IUCN Red List



IUCN Red List Index

The IUCN Red List Index (RLI) reveals trends in the overall extinction risk of species and provides an indicator that is used by governments to track their progress in achieving targets that reduce biodiversity loss.

The Red List Index has been adopted by the United Nations as one of the indicators for the 2030 Sustainable Development Goal 15 on life and land.

The RLI is calculated from the genuine changes in IUCN Red List Categories of all assessed species in a taxon over time. A decreasing RLI value means the expected rate of extinctions is increasing (i.e. the rate of biodiversity loss is increasing). An upward trend or increasing RLI value means that there is a decrease in expected future rate of species extinctions (i.e. a reduction in the rate of biodiversity loss).

More than 93,500 species have been assessed for The IUCN Red List*. This figure includes most of the known species of amphibians; birds; mammals; angelfish; butterflyfish; crocodilians; freshwater crabs, crayfish and shrimps; groupers; gymnosperms (including cycads and conifers); lobsters; mangroves; marine turtles; parrotfish; reef-forming corals; seagrasses; seasnakes; sharks and rays; tunas and billfishes; wrasses; blennies; cacti; magnolias; chameleons; and cone snails.

The results are disturbing with several species groups facing a severe threat of extinction.

“The services and economic value that species provide are irreplaceable and essential to our well-being. Unless we live within the limits set by nature, and manage our natural resources sustainably, more and more species will be driven towards extinction. If we ignore our responsibility we will compromise our own survival.”

Dr Jane Smart
Director, IUCN Global Species Programme

63% of Cycads threatened



Encophalartos laevis – Critically Endangered

41% of Amphibians threatened



Pseudophyllautus tanu – Endangered

33% of Reef-building Corals threatened



Acropora palmata – Critically Endangered

40% of Conifers threatened



Neocallitropsis pancheri – Endangered

25% of Mammals threatened



Tarsius tumpara – Critically Endangered

13% of Birds threatened



Mergus octosetaceus – Critically Endangered

About The IUCN Red List



The IUCN Red List Partnership

Working together for conservation

The IUCN Red List is produced and managed by the IUCN Global Species Programme, the Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.

“The IUCN Red List tells us where we ought to be concerned and where the urgent needs are to do something to prevent the despoliation of this world. It is a great agenda for the work of conservationists.”

Sir David Attenborough

How is The IUCN Red List used?

Guide Scientific Research

Scientific journals regularly cite The IUCN Red List in peer-reviewed literature. Each year numerous new conservation articles examine the values of The IUCN Red List and refer to its important contribution to conservation planning. Downloads of IUCN Red List data from the website show that academics from research institutions worldwide export IUCN Red List data for research purposes on a daily basis.

Inform Policy and Conventions

The **IUCN Red List** is used to inform decisions taken by Multilateral Environmental Agreements. It is often used as a guide to revise the annexes of some agreements, such as the Convention on International Trade in Endangered Species (CITES) and the Convention on Migratory Species (CMS).

The **IUCN Red List** assessments of freshwater species have also contributed to the work of the Ramsar Convention in selecting sites that are important for freshwater biodiversity.

The **IUCN Red List** will contribute to the function of the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES) to strengthen the science-policy interface on biodiversity and ecosystem services to improve decision making.

How is The IUCN Red List used?

IUCN Red List data are being used to report on and measure progress toward the Aichi Biodiversity Targets, adopted by governments at the Conference of the Parties to the Convention on Biological Diversity (CBD), 2010 - in particular, Target 12: *By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.*

CBD Strategic Goal	Aichi Targets for 2020	IUCN Red List
A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.	1: Public awareness increased.	✓
	2: Values of biodiversity recognized.	
	3: Incentives reformed.	✓
	4: Sustainable production and consumption promoted.	✓
B. Reduce the direct pressures on biodiversity and promote sustainable use.	5: Habitat loss reduced.	✓
	6: Towards sustainable management of fisheries.	✓
	7: Sustainable management (agriculture, aquaculture and forestry).	
	8: Pollution reduced.	✓
	9: Invasive alien species combated.	✓
	10: Pressures on vulnerable ecosystems impacted by climate change or ocean acidification minimized.	✓
C: improve the status of biodiversity by safeguarding ecosystems, species and genes.	11: Protected areas increased.	
	12: Extinction prevented.	✓
	13: Genetic diversity maintained.	✓
D. Enhance the benefits to all from biodiversity and ecosystem services.	14: Ecosystems are restored and safeguarded.	✓
	15: By 2020, ecosystem resilience enhanced.	✓
	16: Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force.	
	17: National biodiversity strategies and action plans developed.	✓
E. Enhance implementation through participatory planning, knowledge management and capacity-building.	18: Traditional knowledge respected and reflected in the implementation of the Convention.	✓
	19: Knowledge and technologies improved and shared.	✓
	20: Financial resources increased.	



How is The IUCN Red List used?

The IUCN Red List shows where action needs to be taken to save the building blocks of nature from extinction. It provides a straightforward way to factor biodiversity needs into decision-making processes by providing a wealth of useful information on species.



Influence Resource Allocation

The Global Environment Facility (GEF) has included information from The IUCN Red List in its resource allocation framework since 2008. Other foundations and funding instruments, such as the Critical Ecosystem Partnership Fund; SOS - Save Our Species; and Mohamed bin Zayed Species Conservation Fund also use the results of The IUCN Red List assessments to guide their investments in conservation.

Inform Conservation Planning

Several conservation planning methodologies use The IUCN Red List to identify important areas for conservation including: Important Bird Areas; Important Plant Areas; and Alliance for Zero Extinction sites. For example, one of the criteria that Alliance for Zero Extinction sites must meet is that they contain at least one Endangered or Critically Endangered species, as listed on The IUCN Red List.

Improve Decision-making

The IUCN Red List can help guide environmental impact assessments. The wealth of information on habitats and threats to species are used in biodiversity management plans and site rehabilitation plans. Combining conservation planning analyses with information on threats from The IUCN Red List has also lead to partnerships with industry to explore opportunities to reduce the negative impact on biodiversity and promote more sustainable production. Initiatives of the petrochemical, mining, aggregate and financial industry such as Net Positive Impact (NPI) and No Net Loss, benefit from access to information on the distribution of species and their conservation status.

Awareness and Education

New information from The IUCN Red List generates significant media interest resulting in hundreds of articles on the web, printed newspapers, television, radio and special interest magazines; raising public awareness of the plight of species and the larger environmental issues surrounding them. The Zoo, Aquarium and Botanic Garden networks are supporting The IUCN Red List by including the IUCN Red List status on their species information signs.

The IUCN Red List website (www.iucnredlist.org) is also regularly used by educators and students of all ages.

Health Care

The IUCN Red List distribution information is frequently used by researchers in the health sector to look at the distributions of species which are known or suspected vectors of human and domestic-animal diseases to develop models on predicted future occurrences of the diseases. The IUCN Red List also helps to highlight those medicinal plants which are being unsustainably harvested to ensure appropriate conservation actions can be implemented to conserve these species.

Conservation Action

Conservation action delivers results. Many species on The IUCN Red List have been saved from extinction through conservation programmes based on sound science. These are a few examples selected to illustrate the breadth of successful interventions which have happened across the world.



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a Valerian
(*Centranthus trinervis*)

This herbaceous plant is endemic to Corsica (a Mediterranean island) and it is threatened mostly by human disturbance, recreational activities such as climbing and grazing from goats. This species' habitat is now included in the Natura 2000 network, and is managed in a way that favours the conservation of this species. Climbing equipment on the cliff has been removed, and The Conservatoire du Littoral bought the area where this species is present to keep the population protected. In 2011 it was down-listed from Critically Endangered to **Endangered***



Black-footed Ferret
(*Mustela nigripes*)

The Black-footed Ferret was considered Extinct in the Wild in 1996. A captive breeding programme initiated in 1985 by the Wyoming Game and Fish Department in cooperation with the US Fish and Wildlife Service resulted in more than 6,000 Black-footed Ferrets being born in captivity. Ferrets have been reintroduced in western US states and in Mexico. In 2008 this species was reassessed for the IUCN Red List as **Endangered***. Ongoing conservation is essential to continue their recovery.



Grand Cayman Blue Iguana
(*Cyclura lewisi*)

Found only on Grand Cayman, this iguana is severely threatened by introduced species (such as feral dogs, cats, and rats) and habitat conversion. In the early 1990s the wild population was believed to be less than 25 individuals. Conservation programmes, such as captive breeding, have resulted in the release of over 600 animals into three protected areas, where feral predators are controlled. In 2012 it was down-listed to **Endangered*** and the future looks encouraging due to the extensive conservation work.



a Saproxylic Beetle (*Cucujus cinnaberinus*)

This beetle is found throughout much of Europe. The main threats are degradation or loss of habitat quality; and fragmentation and increasing isolation of beetle populations. It is listed on Appendix II of the Bern Convention and Annex II and IV of the EU Habitats Directive and is legally protected in many countries. With better protection of its habitats, this beetle is expanding its distribution in central Europe, although it is still declining in surrounding areas. In 2010 it was down-listed from Vulnerable to **Near Threatened**.



Asian Crested Ibis (*Nipponia nippon*)

The Asian Crested Ibis historically nested in the Russian Far East, Japan, and China. The species declined rapidly from the late 19th century due to the degradation of nesting and feeding habitat, over-hunting, and the use of agrochemicals in rice-paddies, which causes reductions in the abundance of its prey. Since the 1980s regulations have been enacted to prohibit logging, the use of agrochemicals in rice-fields and the use of firearms for hunting. Nest trees have also been declared state property and protected. Captive breeding and reintroduction programmes have been initiated and released birds are breeding successfully. In 2000, it was down-listed from Critically Endangered to **Endangered**.



Australian Grayling (*Prototroctes maraena*)

Native to Australia, these fish need to migrate to and from the sea to complete their life cycle. The construction of barriers such as dams and weirs, water quality decline and competition from introduced brown trout have had a major impact on populations in some river systems. Now the focus of a number of conservation measures, the population has started to recover, and in 2009 it was down-listed from Vulnerable to **Near Threatened**.

National Red Lists

The global IUCN Red List of Threatened Species™ is the most authoritative inventory of the worldwide conservation status of species. However, species conservation policy is typically developed at the national level. Since the extinction risk of species is often not uniform across their entire global range, developing Red Lists to evaluate extinction risk at the national scale provides additional information that is directly applicable to national conservation policy. For example, national Red Lists may be used to inform lists of nationally protected species, or the presence of threatened species at a site may be used to protect habitats and ecosystems.





In short, national Red Lists can assist countries with:

Determining species conservation status and trends

Identifying species or ecosystems under greatest threat

Informing conservation planning and priority setting for species and areas

Integrating biodiversity values into development and planning processes

Reporting to international conventions and EU directives

Raising awareness of threatened species

Highlighting important gaps in knowledge and understanding of the ecology and conservation of species

The strength of National Red Lists lies in providing countries with a clear, repeatable method of collecting this information and using it to tailor solutions for their particular biodiversity threats.

The website www.nationalredlist.org provides an overview of the national red-listing process and existing national Red Lists in all countries across the world.

Red Lists in FYR of Macedonia


More than 22,500 species of fungi, plants and animals are known to live in the FYR of Macedonia. The extinction risk for over 1,100 of them has been assessed on the global scale, resulting in 110 species being listed as threatened on the global IUCN Red List. However, many species face a higher extinction risk within the FYR of Macedonia than on the global level. For example, the Yellow water-lily (*Nuphar lutea*) is listed globally as Least Concern, but is considered to be under threat within the FYR of Macedonia. Unfortunately, a national Red List assessment for this species is not yet available.

Over 1,000 species (and potentially much more) in the FYR of Macedonia are endemic to the country: their entire global population resides in the FYR of Macedonia. This means that the country has the global responsibility to track these species' conservation status and prevent their extinction. In fact, national Red List assessments for such species are simultaneously their global assessments.



Balkan lynx, *Lynx lynx balcanicus*, 'Critically Endangered'
Photography © Shutterstock / animalphotography

The Macedonian Law on Nature Protection prescribes the development of national Red Lists using the IUCN Red List Categories and Criteria. Although several national Red Lists have been drafted thus far (e.g. grasshoppers, butterflies and fungi), the extinction risk of most species in the FYR of Macedonia has not been assessed.



Red Lists only indicate extinction risk and do not directly translate into species conservation priority lists. While extinction risk is a crucially important factor in the selection of national priority species, international commitments as well as biological, cultural and economic factors also need to be considered. In the FYR of Macedonia, species conservation priorities and measures are primarily defined by the **'Lists of Protected and Strictly Protected Wild Species'** – a regulation provided by the Law on Nature Protection.



Shepherd's leaf: *Sideritis scardiacae*, Near Threatened*
Photography © Shutterstock / Ariana

Because the national conservation status of most species has not been evaluated, the species on these lists are currently selected taking into account their global and regional Red List assessments, as well as their importance for international conventions and EU directives. National Red Lists will enable updating these species lists based on nationally relevant extinction risk assessments.

For more information, please contact

www.nationalredlist.org

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The designation of geographical entities in this brochure, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN or other participating organisations concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

*IUCN Red List of Threatened Species™ (2018-1)



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European tree frog (*Hyla arborea*) "Least Concern"
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