



THE IUCN RED LIST OF THREATENED SPECIES™





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).



Eyelash Frog (*Cornufer guentheri*) Least Concern
Photography © Robin Moore

About The IUCN Red List



NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	< ENDANGERED >	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
NE	DD	LC	NT	VU	EN	CR	EW	EX

Green Turtle (*Chelonia mydas*) Endangered
Photography © Kathryn Pintus

About The IUCN Red List

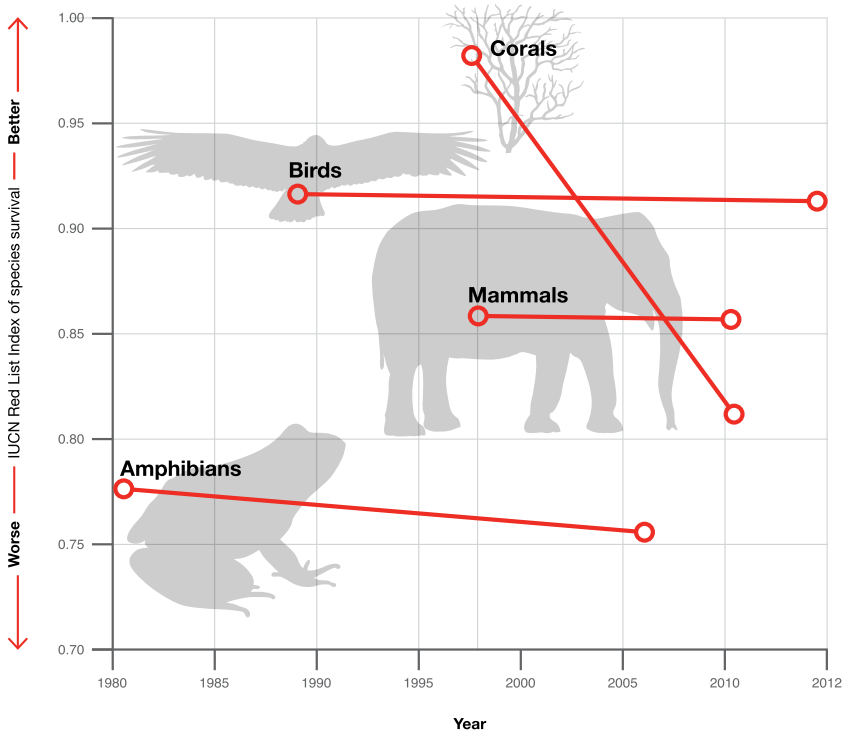
The IUCN Red List is a rich compendium of information on threats, ecological requirements, and habitats of species; and on conservation actions that can be taken to reduce or prevent extinctions.

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.

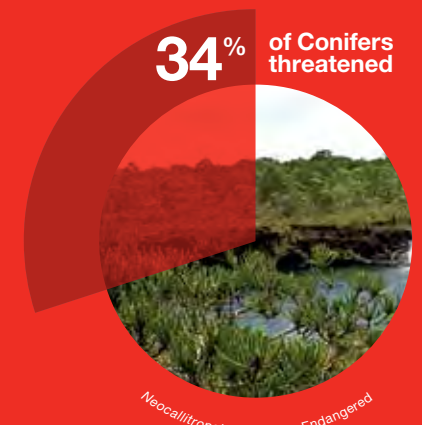
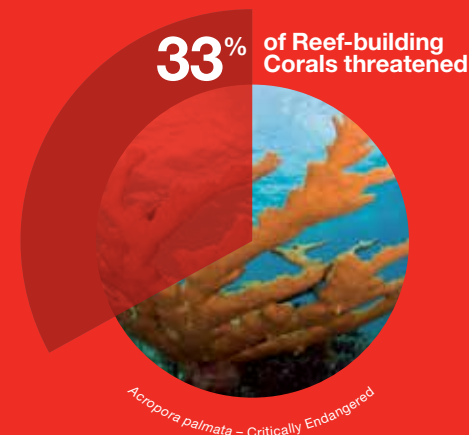
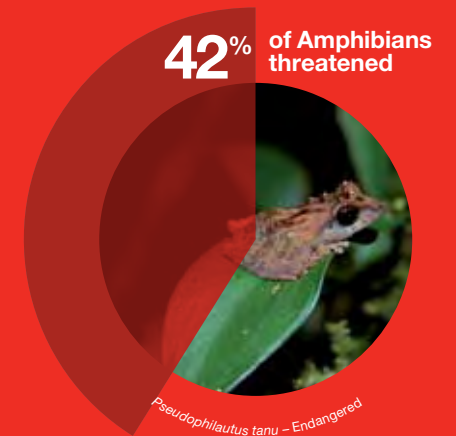
The RLI is calculated from the genuine changes in IUCN Red List Categories of all assessed species in a taxon over time. A decreasing RLI value means the expected rate of extinctions is increasing (i.e. the rate of biodiversity loss is increasing). An upward trend or increasing RLI value means that there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

More than 85,600 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





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.

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.	
E. Enhance implementation through participatory planning, knowledge management and capacity-building.	17: National biodiversity strategies and action plans developed.	✓
	18: Traditional knowledge respected and reflected in the implementation of the Convention.	✓
	19: Knowledge and technologies improved and shared.	✓
	20: Financial resources increased.	

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.

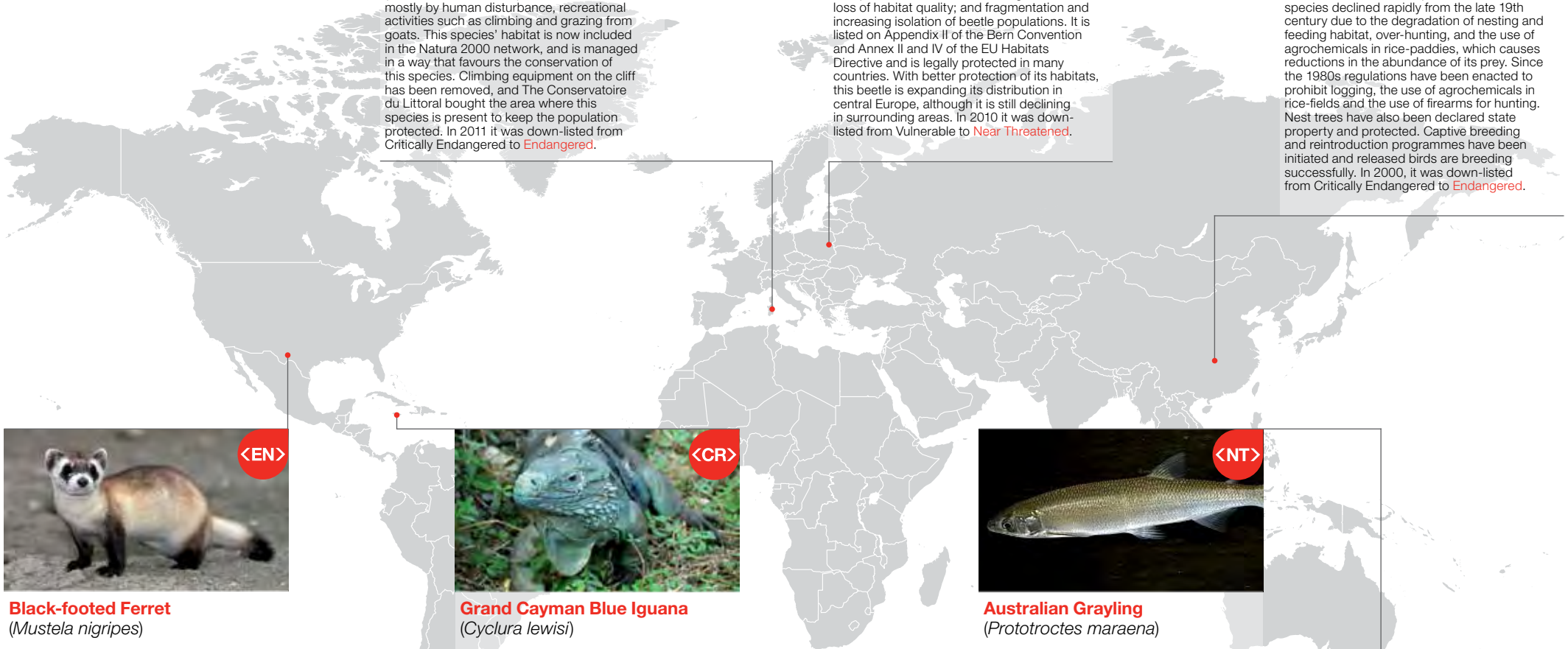
The IUCN Red List website (www.iucnredlist.org) is also regularly used by educators and students of all ages.

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.



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.



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**.



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**.



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**.



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**.

Conservation Action



Mallorcan Midwife Toad
(*Alytes muletensis*)

Endemic to Mallorca (a Mediterranean island), the major threats faced are predation by the introduced Viperine Snake, competition for space with Perez's Frog and development. Conservation programmes have been put in place to remove the Viperine Snake from the toad's range, and the Balearic Government and Jersey Wildlife Preservation Trust have undertaken captive breeding, re-introduction and other conservation initiatives. At least 10 populations have been successfully reintroduced. In 2006 it was down-listed from Critically Endangered to **Vulnerable**.



Nile Crocodile
(*Crocodylus niloticus*)

Native to Africa, the Nile Crocodile is at threat from hunting for their meat (which is believed to have curative properties) and leather; pollution and entanglement in fishing nets. International trade controls and national laws are now in place, and the extinction risk to the Nile Crocodile has decreased. In 1996 it was down-listed from Vulnerable to **Least Concern**, although it may still be threatened in parts of its range.



Humpback Whale
(*Megaptera novaeangliae*)

By 1968 commercial whaling had seriously depleted all Humpback Whale populations. Conservation action came via the International Whaling Commission in the form of protection from commercial whaling. The species has demonstrated remarkable resilience, and most populations have increased since the end of whaling. In 2008 they were reassessed from Vulnerable to **Least Concern** on the IUCN Red List, with a population that is estimated at over 60,000 animals and is increasing.



Lear's Macaw
(*Anodorhynchus leari*)

This rare bird is severely threatened by trade, and in 1983 the global population was estimated to number just 60 birds. It is listed on CITES Appendix I and II and is protected by Brazilian law. Infiltrations of trading networks and improved surveillance at breeding sites have resulted in arrests of poachers, smugglers and collectors. In 2009 this species was reassessed from Critically Endangered to **Endangered**, and the most recent population estimates are of over 1,000 birds.



Seychelles Magpie Robin
(*Copsychus sechellarum*)

Originally present on several islands in the Seychelles, but by 1965 only 12-15 birds remained – all on one island. The major causes of the decline were predation and competition by introduced species such as cats and rats, and reduction in the quality and quantity of habitat linked with the commercial production of crops such as banana. A recovery programme was initiated in 1990. In 2005 the species was down-listed from Critically Endangered to **Endangered**, and in 2006 the population reached 178 birds on four islands - a tenfold increase in forty years.



Arabian Oryx
(*Oryx leucoryx*)

The regal Arabian Oryx was hunted to near extinction, with the last wild individual believed to be shot in 1972. Thanks to successful captive breeding and re-introduction efforts, the Arabian Oryx is now facing a more secure future with its wild population standing at around 1,000 individuals. In 2011 it was down-listed from the Endangered category to **Vulnerable**.

Our target is to make
The IUCN Red List a more complete

“Barometer of Life”

A broader taxonomic base to species
assessments will enable better
conservation and policy decisions.

A provisional target of 160,000
assessed species has been proposed
and the estimated cost of this
ambitious plan is USD 60,000,000.

160,000
GOAL

85,604
SO FAR

Assessment Goal – 160,000
Species Assessed 2016 – 85,604
Described Species – 1,889,587

African Elephant (*Loxodonta africana*) Vulnerable
Photography © Robin Moore

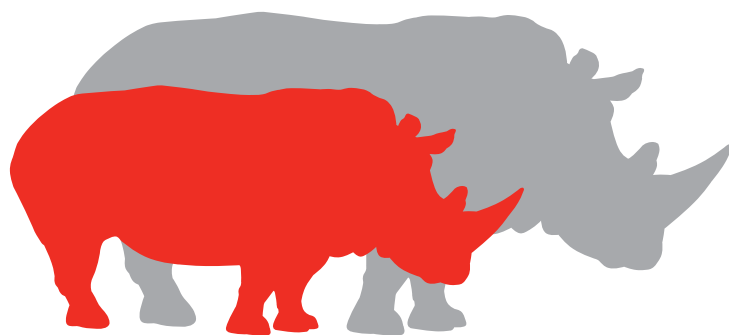


White Rhinoceros (*Ceratotherium simum*) Near Threatened
Photography © Robin Moore



Comma (*Polygonia c-album*) Least Concern (European regional assessment)
Photography © Marilyn Peddle

Nature's backbone
Vertebrates



Assessment Goal 61,635
Species Assessed 44,694 (2016)
 Described Species 64,788

An estimated 99% of all organisms are
Invertebrates



Assessment Goal 45,344
Species Assessed 18,609 (2016)
 Described Species 1,359,365



Werauhia insignis (Mez) Not Evaluated
Photography © W. Till Barfuss and R. Samuel



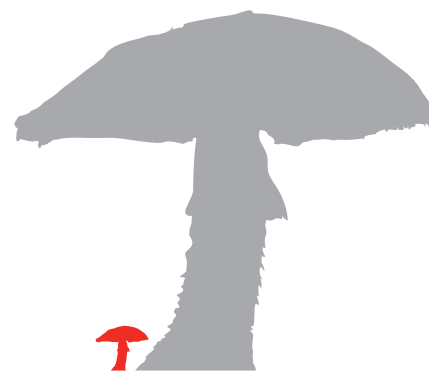
Amanita muscaria Not Evaluated
Photography © Christine Majul

The Earth's lungs **Plants**



Assessment Goal 38,521
Species Assessed 22,253 (2016)
Described Species 310,129

The most under-researched and under-funded **Fungi and other species groups**



Assessment Goal 14,500
Species Assessed 48 (2016)
Described Species 165,305

The IUCN Red List is the starting point for conservation action

Toyota is supporting over 28,000 species assessments globally to make The IUCN Red List a more complete “Barometer of Life”. Increased knowledge will help protect livelihoods and food security.

For The IUCN Red List to become a more complete “Barometer of Life”, investment is needed to: increase the number of experts trained to carry out IUCN Red List assessments; significantly increase the number of species being assessed each year; and carry out regular reassessments of species groups.

Lend your support?
Contact iucnredlist@iucn.org for more information.
www.iucnredlist.org/donate



TOYOTA

“When tackling threats to the global environment, it is important to act early and boldly with concrete steps that will make a difference in people’s lives. We did it in 1997 with Prius, and more recently with the hydrogen fuel cell Mirai. But protecting the environment is not just about CO₂ and emissions: biodiversity is equally important to human lives. By entering this partnership with IUCN, we are very proud to take an additional step toward the challenge of establishing a future society in harmony with nature.”

Didier Leroy
Executive Vice President of Toyota Motor Corporation

Cultivated rice (*Oryza sativa*) Not Evaluated
Photography © Alamy Photo Stock, Image DHB96

For more information, please contact
iucnredlist@iucn.org
www.iucnredlist.org



Species on The IUCN Red List page – Photography Credits

Encephalartos laevifolius – © SANBI
Pseudophilautus tanu – © Milivoje Kravac - Department of Biology and Ecology UNS
Acropora palmata – © Jan Paul Zegarra/USFWS Southeast
Neocallitropsis pancheri – © Mickael T Wikimedia Commons
Tarsius tumpara – © Geoff Deehan
Mergus octosetaceus – © Adriano Gambarini

Conservation Action Map Page 1 – Photography Credits

Centranthus trinervis – © Antonie van den Bos for www.aycrronto.com
Cucujus cinnaberinus – © Gouix Nicolas and Brustel Hervé
Nipponia nippon – © Andy Li, CC 2.0, NoDerivs
Mustela nigripes – © Michael Lockhart, USFWS, CC 2.0
Cyclura lewisi – © Peter J. Markham, Loretto, MN, CC 2.0, sharealike
Prototroctes maraena – © Gary Backhouse, DSE, Arthur Rylah Institute, CC 2.5

Conservation Action Map Page 2 – Photography Credits

Alytes muletensis – © Bert Willaert, www.bertwillaert.com
Crocodylus niloticus – © Sarah McCans, CC 2.0
Megaptera novaeangliae – © Whit Welles, CC 3.0
Anodorhynchus leari – © Ashok Khosla, www.seeingbirds.com
Copsychus sechellarum – © Adrian Scottow, CC 2.0, sharealike
Oryx leucoryx – © Topiltzin Contreras MacBeath

Design: PlanningUnit.co.uk

Short-eared Owl (*Asio flammeus*) Least Concern
Photography © Gordon Ellmer





THE IUCN RED LIST
OF THREATENED SPECIES™

TOYOTA

IUCN
Rue Mauverney 28
CH-1196 Gland
Switzerland
Tel: + 41 22 999 0000
Fax: + 41 22 999 0015
www.iucn.org/redlist
www.iucnredlist.org
www.iucnredlist.org/donate

© IUCN 2017



Phelsuma antaresus Critically Endangered
Photography © J. C. Handrianantoandro