The IUCN Red List and The Decline of Our Biodiversity

https://www.iucnredlist.org/

The extinction of the Australian Tasmanian Tiger, otherwise known as the thylacine, is well-known in Australian households, and was first officially recognised in 1982. However, many extinctions occur without recognition or even knowledge that the species existed. Without maintaining a record of our world's biodiversity and the threats to it, we risk losing valuable information and the opportunity to act to conserve it before it's too late. The IUCN Red List aims to address this problem.

What is the IUCN Red List?

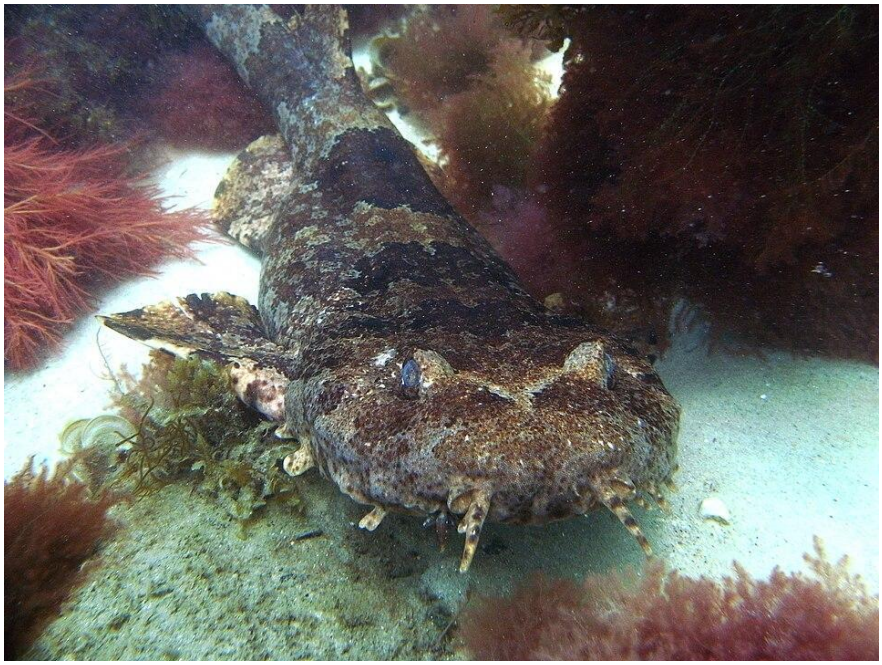
The International Union for Conservation of Nature's Red List of Threatened Species (IUCN Red List) is the world's most comprehensive inventory of the conservation status of plant, animal, and fungi species globally. Established in 1964, it has grown from a specialist reference tool into an indispensable global resource used by governments, researchers, conservation organisations, businesses, and educators worldwide.

The Red List classifies species across nine categories: Not Evaluated, Data Deficient, Least Concern, Near Threatened, Vulnerable, Endangered, Critically Endangered, Extinct in the Wild, and Extinct. These classifications are determined through rigorous, peer-reviewed scientific assessment, taking into account population size, rate of decline, geographic range, and projected future threats. More than 172,600 species have now been assessed, with more than 48,600 considered threatened with extinction. Despite some positive results due to conservation efforts, there is an overall trend of biodiversity declining.

What Does the IUCN Red List Aim to Do?

The organisation behind the Red List, the IUCN, is the world's largest environmental network, created in 1948. It brings together over 1,400 governmental and non-governmental organisations from more than 160 countries, and over 19,000 experts contribute to its work. The IUCN Red List is critically important to inform and drive action to prevent species from becoming extinct. By cataloguing the states of our global species, it aims to draw global attention to the scale of biodiversity loss, influence international policy, and catalyse on-the-ground conservation efforts.

Despite declining biodiversity, the IUCN Red List also demonstrates hopeful news that conservation efforts are effective, and that well planned action and policy can lead to species recovery and improvement in species status on the Red List. To emphasise this, IUCN have established a Green Status of Species, which provides a tool to assess species recovery and conservation success. For example, the Banded Wobbegong, a bottom-dwelling shark that occurs along the coast of Australia on inshore reefs and near offshore islands and is largely threatened by commercial fishing, went from an assessment of Least Concern in 2015 to fully recovered in 2021.



Banded Wobbegong (Orectolobus ornatus). Photo: Sylke Rohrlach, CC BY-SA 2.0, via Wikimedia Commons

Major Achievements

Over six decades, the Red List has become what IUCN terms a "Barometer of Life", an ongoing, evolving measure of the world's biodiversity. Its 60th anniversary in 2024–2025 was marked by the release of a landmark report reflecting on how the list has shaped global conservation, which you can read here. In 2014, the first Barometer of Life target was agreed to assess at least 160,000 species by the Red List's 50th anniversary, and this was achieved in 2024. Red List assessments became downloadable in PDF format in 2015, and these provide a wealth of information regarding the status of assessed species, their distributions, threats, and conservation actions in place. For example, you can download an assessment from 2015 about the Numbat's evaluation as endangered here, which describes the Red Fox and feral cats as their primary threat.

Numbat. Photo: Martin Pot, CC BY-SA 2.0, via Wikimedia Commons

Current Projects and Priorities

The IUCN Red List is operating under an ambitious strategic plan for 2021–2030. Current goals include assessing 260,000 species in total and reassessing 142,000 already-listed species to ensure their status reflects the most current data. Specific targets include reassessing all amphibians, birds, freshwater fishes, reptiles, selected mammal species, and more. Meeting these targets would give conservation efforts the most complete and up-to-date picture of global biodiversity ever assembled. It is essential that the IUCN Red List receives enough funding to support this plan and to guarantee the long-term future of the IUCN Red List.

Another notable initiative occurred in 2025, when IUCN partnered with OceanOmics at the Minderoo Foundation, which is using environmental DNA - genetic material shed by organisms into their surroundings - to detect when species are under threat of extinction. This cutting-edge approach could transform how quickly and accurately species can be assessed, particularly in remote or hard-to-survey environments.

How to Stay Informed

The IUCN Red List website at www.iucnredlist.org is freely accessible to the public and provides searchable species profiles, maps, and detailed assessment data. For broader conservation news including Red List updates, the IUCN's main website at www.iucn.org offers a free newsletter subscription covering the organisation's full range of work globally, as well as options to donate or become a member.