



How do species become at risk?

On the path to extinction

Although the essential needs of plants and animals differ greatly from one species to another, they can be grouped into three main categories:

- 1 Shelter for protection from the weather and from external threats such as predators;
- 2 Enough food and water to survive; and
- 3 Suitable conditions to reproduce and produce viable offspring.

If a species cannot meet one or more of its essential needs from the resources available in its habitat, its survival could be at risk.

At risk, at home

From the beginning, life on Earth has evolved in response to environmental changes and threats, demonstrating an amazing capacity for adaptation. Today, human activity is accelerating the rate of these changes, increasing the number of threats and significantly transforming the environment and wildlife habitats.

It is often difficult to identify a single reason why a species has become at risk, since the problem is often due to an accumulation of factors. The main causes can be grouped into several major categories.

Habitat degradation and loss

A habitat that no longer meets the essential needs of resident species might lead to their disappearance.

Natural environments are under increasing pressure to meet the needs of a growing human population. Human activity contributes to reducing the quality and quantity of habitats available for all life on Earth.

Environmental pollutants

Pollutants released into the environment directly or indirectly affect a number of species.

Virtually everywhere on Earth, pesticides and other chemicals are being released into the air, water or soil and can poison living organisms or destroy their habitat.





Reduced breeding success

To survive, a species must be able to reproduce and produce viable offspring that can in turn reproduce.

When the population density of a species declines, it can become difficult to find a breeding partner. If there are too few partners or they are too scattered or not sufficiently diversified, a species' offspring will be less abundant and the diversity of its population will decline. These results weaken a species and make it vulnerable to diseases, threats and other disturbances.

Overharvesting and excessive trade

Overharvesting of certain plants or animals can threaten their survival.

Many species are at risk due to overharvesting by humans, not only for food, but also for their medicinal properties, or for their value as hunting trophies, ornamental plants or pets.

Disease

Under certain conditions, an epidemic can decimate a population.

Under normal conditions, the impact of an epidemic is usually limited. An epidemic is often restricted to a specific geographic area, and the genetic diversity of the resident individuals helps the species to survive. However, an epidemic can be devastating to a species with a small remnant population confined to the same area.

Suppression of natural disturbances

Some natural disturbances may be essential to the survival of certain habitats and species.

Natural disturbances contribute to creating the necessary conditions for the survival of certain species. For example, floods fertilize floodplains and regenerate wetlands, while forest fires may prevent woodlands from invading open areas. Indeed, fire is essential to the survival of certain species of trees.

Climate change

A habitat depends on the climate in which it exists.

Changes in climate, whether gradual or rapid, can alter the natural habitats on which certain species depend in order to live, feed or reproduce. A severe storm can destroy a habitat, while a gradual change such as shoreline erosion can alter a habitat, rendering it inhospitable for the resident species.

Alien invasive species

A species is invasive when its presence changes the balance of a habitat and its resident species.

The introduction of a new species in a habitat can have disastrous impacts. If this new species finds the right conditions, it can proliferate and dominate the habitat, threatening the survival of other naturally resident species dependent on this habitat.

This information sheet has been prepared to provide information to the interested public on the *Species at Risk Act* and its implementation. The material has been prepared for informational purposes only and is not to be interpreted as legal advice. If there is a discrepancy between the information presented in this information sheet and the *Species at Risk Act*, the Act prevails.