



ERA OF EXTINCTION

"Death is one thing an end to birth is something else"

Animals and plants become extinct for various reasons. Some of the causes of extinction occur naturally, such as competition with other species, disease or habitat alteration due to climatic change. However, we are now witnessing a rate of species extinction between one thousand and ten thousand times faster than at any time previously in the history of the Earth. The rapid loss of species today is a result of a range of factors including destruction of habitat, pollution or over-exploitation - almost all of which are human-induced.

WHAT IS AN ENDANGERED SPECIES?

Today, scientists have described approximately 1.4 million species of animals and plants. The total of all animals and plant species on Earth is unknown, but is estimated to vary from 5 to 30 million. It is further estimated that 17,500 species would become extinct every year - that is about one every 30 minutes!

Figure 1.
Pie charts showing the approximate percentage of species in major vertebrate groups that have been assessed for threatened status, together with the proportion of those assessed that are considered threatened or not threatened. [IUCN, 1993]

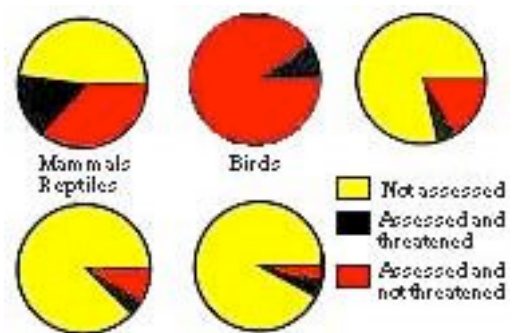




Table 1. Definition of various terms used to describe the status of animals (IUCN).

Term	Definition	Example
Extinct	A species is not definitely located in the wild during the past 50 years	<i>Dodo Raphus Cucullatus</i> (became extinct in 1681)
Endangered	A species is in danger of extinction and whose survival is unlikely if the causal factors continue to operate	Giant Panda <i>Ailuropoda melanoleuca</i>
Vulnerable	A species is believed likely to move into the 'endangered' category	African Elephant <i>Loxodonta africana</i>
Rare	A species has a small world population that are not at present 'endangered' category	Texas Kangaroo Rat <i>Dipodomys elator</i>

THREATS TO ENDANGERED SPECIES

Threats can be looked at in two different ways. First, there are the immediate threats; and then there are the underlying factors that give rise to these threats.

Table 2. Tables showing examples of endangered species.

Species	Estimated No. (Year)	Distribution	Threats to them
Giant Panda <i>Ailuropoda melanoleuca</i>	<1,000	Sichuan, Gansu and Shannxi provinces in Southwest China	Scattered population, habitat and illegal poaching
Blue Whale <i>Balaenoptera musculus</i>	<8,500	North Atlantic, North Pacific, S. Hemisphere	Illegal Whaling
All Rhicoceros species	About 12,000 (1994)	Africa, Asia	Habitat loss, illegal poaching
Tiger	5,000-7,400 (1994)	North Asia, South-east Asia	Habitat loss and illegal poaching

The immediate threats include such factors as loss of habitat; direct over-exploitation; competition with introduced/invasive species; and low viability of populations due to their small size. Of these, habitat loss is generally considered to be the most severe.



Particular concern has been raised about this issue in relation to the loss of tropical forests and wetlands - it is estimated that over 40,000 ha of forest are being cleared or degraded every week, and half of the world's wetlands have been lost, which will eventually push thousands of species to the brink of extinction.

Another factor, which is becoming of increasing concern with respect to wildlife conservation is trade. International wildlife trade is worth around US \$25 billion each year - a quarter of which is illegal - remains a considerable threats in rare and endangered species.

Direct and indirect effects of pollution are other major causes of species extinction world-wide. The 'Greenhouse Effect' may have devastating impacts ranging from the inundation, as a result of rising sea levels, of low-lying coastal areas, to the loss of some vegetation types, especially at high altitudes and high latitudes.

'Acid Rain' is killing forests over substantial areas of North America, Europe, China and elsewhere. Acid rain also results in reduced pH levels in waterbodies and increased aluminium concentrations, which can have deleterious impacts on the survival of aquatic wildlife.

The severe effects of the pesticide DDT on the Peregrine Falcon *Falco peregrinus*, which resulted in widespread breeding failure and population declines, are well known, but the effects of many other human-made chemicals released to the environment are only just being discovered.

WHY BOTHER ABOUT SPECIES EXTINCTION?

First of all, every life forms in nature has its own irreplaceable role irrespective of human understanding.

Humans, like all other mammals, are at the top of the food chain and depend on a diverse ecosystem for survival. In the process of civilisation, man utilises all sorts of natural resources for survival and for the further development in human society. Unsustainable exploitation of natural resources causes habitat destruction or alteration, and eventually extinction of species.

The relations between the organisms found on Earth are very complex and are inter-dependent on each other to sustain further generations. Whenever a species declines suddenly, other species, including mankind, will be affected. After a wide range of wildlife become extinct, it is questionable whether ever mankind will even be able to survive.

Extinction is forever. The loss is irreversible and that is why it is urgent that we protect our natural environment now!



Further Reading:

1. *Encyclopaedia of Endangered Species*. 1994, IUCN - The World Conservation Union, Gale Research Inc., Detroit
2. 1994 IUCN *Red List of Threatened Animals*. 1994, IUCN - the World Conservation Union.
3. *The Atlas of Endangered Species* by J.A. Burton and D. Bellamy. 1992, David and Charles
4. *Birds to Watch 2 - The World List of Threatened Birds* by Collar, Crosby & Slattersfield. 1991, Bird Life International.
5. WWF Species Status Reports and TRAFFIC - Species in Danger Series.