

Land area in natural condition



Native habitat losses

For all aspects of **biodiversity**, current pace of change and loss is hundreds of times faster than previously in recorded history and the pace shows no indication of slowing down.

Virtually all of Earth's **ecosystems** have been dramatically transformed through human actions, for example, 35% of mangrove and 20% of coral reef areas have been lost.

Land areas where the changes have been particularly quick over the past two decades include:

- the Amazon basin and Southeast Asia (deforestation and expansion of croplands);
- Asia (land degradation in drylands); and

- Bangladesh, Indus Valley, parts of Middle East and Central Asia, and the Great Lakes region of Eastern Africa.

Across the world, ecosystems have continued to be converted for agricultural and other uses at a constant pace over at least the last century. Conversion has been slower in areas, such as Mediterranean forests, where most suitable land for agriculture had already been converted by 1950 and where the majority of native habitats had already been lost.



Extinction rates



Threatened bird species

Population Index = 100 in 1970



Living planet index

Species extinction is a natural part of Earth's history. However, over the past 100 years humans have increased the extinction rate by at least 100 times compared to the natural rate. The current extinction rate is much greater than the rate at which new species arise, resulting in a net loss of biodiversity.

Within well-studied groups (conifers, cycads, amphibians, birds, and mammals), between 12% and 52% of species are threatened with extinction, according to the IUCN Red List (see <u>Red</u> <u>List Indices for birds</u>

). In general the most threatened species are those that are higher up the food chain, have a

low population density, live long, reproduce slowly, and live within a limited geographical area. Within many species groups, such as amphibians, African mammals, and birds in agricultural lands, the majority of species have faced a decline in the size of their population, in their geographical spread, or both. Exceptions are almost always due to human interventions, such as protection in reserves, or to species that tend to thrive in human-dominated landscapes.

The Living Planet Index compiled by the WWF is an indicator of trends in the overall abundance of wild species. Between 1970 and 2000, it indicates declines in all environments.

Since 1960, intensification of agricultural systems coupled with specialization by plant breeders and the harmonizing effects of globalization have led to a substantial reduction in the genetic diversity of domesticated plants and animals. Today a third of the 6 500 breeds of domestic species are threatened with extinction.

Comparing different types of measurements of biodiversity loss is not simple. The rate of change in one aspect of biodiversity, such as loss of species richness, does not necessarily reflect the change in another, such as habitat loss.

Furthermore, the fact that the distribution of species on Earth is becoming more homogeneous as a result of human activities represents a loss of biodiversity that is often missed when only considering changes in terms of total numbers of species. <u>More...</u>