

Wildlife



Every plant and animal species on Earth has evolved to live in a particular habitat with specific living conditions like temperatures and other plant and animal species. Human population growth is drastically altering these habitats. As human numbers grow, we demand more space and natural resources, but taking more for ourselves leaves less for other species. As global population has grown seven-fold in the past two centuries, we've entered an unprecedented age of wildlife extinction and biodiversity loss, commonly referred to as the "Sixth Extinction." This loss of wildlife changes and destroys ecosystems and poses threats to human health. It is the biodiversity, the variety of life on Earth, all interconnected, that makes our survival possible. Properly functioning ecosystems create the air we breathe, break down our wastes, provide our food, purify our drinking water, and provide everything we need to support human life.

Changing Landscape

- **Need for Cropland:** As human populations grow, wildlife habitat is often destroyed when land is cleared to grow food and biofuel crops. More people also require more water resources, but dams and other water diversions built for irrigation and energy purposes can change and destroy the surrounding marine and fresh water ecosystems.
- **Invasive species:** Non-native plants or animals brought to an area either intentionally or unintentionally, are also a threat because they consume the habitat's resources and can push out the original organisms. For example, cane toads, indigenous to South and Central America, were released into Australia in the 1930s to prey on beetles thought to be destroying sugar cane crops. These fast-spawning toads grew to incredible numbers and spread across the entire country, taking land, food, and other resources from native species.

By 2050, our world population is expected to grow by an additional two billion people and communities will require more homes, businesses and roads to support their needs. Wildlife habitat is already being lost to urban and suburban sprawl as forests are cleared and wetlands are drained for residential and commercial development.

Pollution

- **Chemical:** To produce more food, our growing population demands more production from current croplands. Current agricultural practices incorporate many chemical pesticides and fertilizers to produce larger crop yields. Pesticides are intended to kill pests like crop-eating bugs, but also pose a risk to the health and welfare of non-crop-threatening animals in the area. Run-off from fertilizers is detrimental to the biodiversity of surrounding ecosystems as well. When fertilizer run-off enters streams, ponds, and eventually oceans, it promotes the growth of algae that rob the water of oxygen and cause dead zones in which water-dwelling species suffocate and die.

- **Organic Waste:** Livestock run-off (manure) can create a similar problem in the water system, killing marine species and introducing pathogenic (disease-causing) organisms, which, if present in sufficient numbers, create a health hazard.
- **Human-driven Accidents:** Oil spills continue to be one of the major threats to marine ecosystems. Spilled oil can remain in the environment and its organisms for up to 100 years.

Ecosystems Under Attack

Individual ecosystems are impacted in different ways by population pressures such as our growing numbers and affluence. Here are three examples, though there are countless others.

- **Coral Reefs:** Increasing demands for seafood encourages destructive commercial fishing methods, like deep sea trawling and the use of explosives, which destroy diverse coral reef habitats. Another threat, warmer water temperatures due to human-induced climate change, can result in harmful coral bleaching that causes corals to expel the algae living in their tissues, hastening their destruction.
- **Tropical Rainforests:** Rainforests are being clear cut to provide for agriculture and grazing lands. They are also logged to provide raw materials for buildings, pulp for paper, and rubber products. Although tropical rainforests cover only about 7 percent of the Earth's dry land, it is believed that they're home to about half of all the species on Earth. 1
- **Arctic:** Cooler climate-dwelling species may soon run out of habitat as global warming melts the Earth's ice. Many species, like polar bears, depend on sea ice to hunt prey, rest, and breed. The effects of climate change are not just limited to ecosystems like the Arctic in danger of melting – 25 percent of mammals and 12 percent of birds may become extinct over the next few decades as warmer conditions alter the habitat they depend on, and human development blocks them from migrating elsewhere.

Impact on Humans

- **Aesthetic Value:** Habitat destruction ruins the natural beauty of the environment, which could otherwise be enjoyed by all people or utilized to attract eco-tourism.
- **Medicinal Value:** A quarter of all medications come from rainforest plants. Demolishing rainforests for human homes and industry destroys potential cures for human illnesses.
- **Disease:** Habitat loss promotes the spread of disease. In some cases, disease-carrying animals come into closer contact with humans as housing developments push out into the animals' territory (such as disease-carrying bats in Australia). Additionally, fragmenting habitats for development can chase off predators and leave disease carriers. On the East Coast of the U.S., animals like wolves, foxes, and owls were pushed out by development and as a result, tick carrying white-footed mice increased fivefold. 2 Ticks carry and spread Lyme disease.

Sources

<http://earthobservatory.nasa.gov/Features/WorldOfChange/deforestation.php?all=y>

<https://www.nytimes.com/2012/07/15/sunday-review/the-ecology-of-disease.html>