1 sl

**biodiversity loss**, also called **loss of biodiversity**, a decrease in [biodiversity](https://www.britannica.com/science/biodiversity) within a [species](https://www.britannica.com/science/species-taxon), an [ecosystem](https://www.britannica.com/science/ecosystem), a given geographic area, or [Earth](https://www.britannica.com/place/Earth) as a whole. Biodiversity loss describes the decline in the number, genetic variability, and variety of species, and the biological communities in a given area. This loss in the variety of life can lead to a breakdown in the functioning of the ecosystem where decline has happened.

2 sl

Even though a species is not eliminated from the ecosystem or from the biosphere, its [niche](https://www.britannica.com/science/niche-ecology) (the role the species play in the ecosystems it inhabits) diminishes as its numbers fall. If the [niches](https://www.merriam-webster.com/dictionary/niches) filled by a single species or a group of species are critical to the proper functioning of the ecosystem, a sudden decline in numbers may produce significant changes in the ecosystem’s structure. For example, [clearing](https://www.britannica.com/science/deforestation) [trees](https://www.britannica.com/plant/tree) from a [forest](https://www.britannica.com/science/forest) eliminates the shading, [temperature](https://www.britannica.com/science/temperature) and moisture regulation, animal habitat, and [nutrient](https://www.britannica.com/science/nutrient) transport services they provide to the ecosystem.

3 sl

An area’s [biodiversity](https://www.britannica.com/science/biodiversity) increases and decreases with natural cycles.

Biodiversity loss is typically associated with more permanent ecological changes in [ecosystems](https://www.britannica.com/science/ecosystem), landscapes, and the global [biosphere](https://www.britannica.com/science/biosphere). Natural [ecological disturbances](https://www.britannica.com/science/ecological-disturbance), such as [wildfire](https://www.britannica.com/science/wildfire), [floods](https://www.britannica.com/science/flood), and [volcanic eruptions](https://www.britannica.com/science/volcanism), change ecosystems drastically by eliminating local populations of some species and transforming whole [biological communities](https://www.britannica.com/science/community-biology).

4 sl

In contrast, biodiversity losses from disturbances caused by humans tend to be more severe and longer-lasting. Researchers have identified five important drivers of biodiversity loss:

* [Habitat](https://www.britannica.com/science/habitat-biology) [loss](https://www.britannica.com/science/habitat-loss) and degradation—which is any thinning, fragmentation, or destruction of an existing natural habitat—reduces or eliminates the food resources and living space for most species. Species that cannot migrate are often wiped out.
* [Invasive species](https://www.britannica.com/science/invasive-species)—which are non-native species that significantly modify or disrupt the ecosystems they colonize—may outcompete native species for food and habitat, which triggers population declines in native species. Invasive species may arrive in new areas through natural [migration](https://www.britannica.com/science/migration-animal) or through human introduction.
* [Overexploitation](https://www.britannica.com/topic/overharvesting)—which is the harvesting of [game](https://www.britannica.com/topic/game-meat) animals, [fish](https://www.britannica.com/animal/fish), or other organisms beyond the capacity for surviving populations to replace their losses—results in some species being depleted to very low numbers and others being driven to [extinction](https://www.britannica.com/science/extinction-biology).
* [Pollution](https://www.britannica.com/science/pollution-environment)—which is the addition of any substance or any form of [energy](https://www.britannica.com/science/energy) to the [environment](https://www.britannica.com/science/environment) at a rate faster than it can be dispersed, diluted, decomposed, recycled, or stored in some harmless form—contributes to biodiversity loss by creating health problems in exposed organisms. In some cases, exposure may occur in doses high enough to kill outright or create reproductive problems that threaten the species’s survival.
* [Climate change](https://www.britannica.com/science/climate-change) associated with [global warming](https://www.britannica.com/science/global-warming)—which is the modification of [Earth’s](https://www.britannica.com/place/Earth) [climate](https://www.britannica.com/science/climate-meteorology) caused by the burning of [fossil fuels](https://www.britannica.com/science/fossil-fuel)—is caused by industry and other human activities. Fossil fuel [combustion](https://www.britannica.com/science/combustion) produces [greenhouse gases](https://www.britannica.com/science/greenhouse-gas) that [enhance](https://www.merriam-webster.com/dictionary/enhance) the [atmospheric](https://www.britannica.com/science/atmosphere) absorption of [infrared radiation](https://www.britannica.com/science/infrared-radiation) ([heat](https://www.britannica.com/science/heat) energy) and trap the heat, influencing [temperature](https://www.britannica.com/science/temperature) and [precipitation](https://www.britannica.com/science/precipitation) patterns.

5 sl

For example, pangolins are significantly affected by the illegal wildlife trade, and are critically endangered because of it.

Out-of-control trade has severe impacts on seahorse populations. In Asia alone, within a 10-year period beginning in the 1990s, seahorse populations had declined by an estimated 50%