

THE MAIN CAUSES OF BIODIVERSITY LOSS AND ITS EFFECTS ON HUMANS

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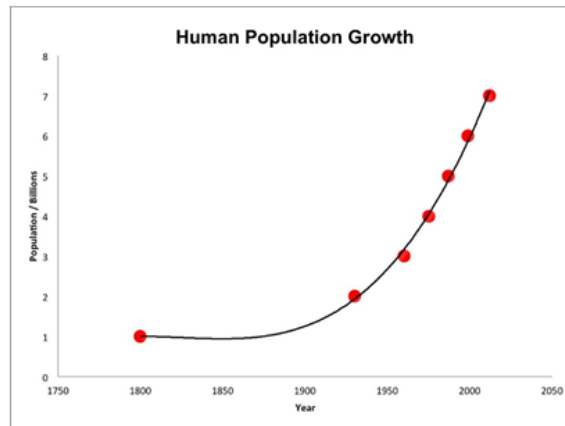
Annotation: *This article is about factors that affect biodiversity and how humans manage them.*

Key words: *biodiversity loss, pollution, hunting, zoos, botanic gardens, conservation.*

In the last century, the Earth had a huge biodiversity loss. Globally, the average abundance of species population has declined by 44% since 1970 (Utrecht University). Urbanization, population growth, and industrialization are one of the causes of this. The following article will include how these factors caused biodiversity loss, how this will affect humans, and how biodiversity can be conserved.

Biodiversity is defined as the number of types of species, the diversity of genes within species, and the variety of habitats and ecosystems on Earth. Loss of biodiversity is a decline in the numbers of these parameters. Sometimes biodiversity is associated with species richness (the number of individuals of the same species in a particular area). The researches show that 543 species of vertebrates have gone extinct since 1900, and more than 500 species are endangered, as only a few of them are left. The following are some causes:

1. Human population growth. More people tend to consume more, so more space is needed for planting crops. More space is required to build cities for the growing population. These lead to deforestation, cutting off the trees for more space. Therefore, habitat for species is lost, which leads to their extinction as they cannot adapt to live in a different habitat.



2. High rates of competition. Humans compete with other species for water, food, and place. These leave animals and plants with limited resources, which reduces their number, and they become endangered.

3. Pollution. Pollution of air and water destroys species' habitats. For example, released oil into oceans pollute water organisms' habitat and usually causes their death, reducing the biodiversity of marine life.



4. Rise in atmospheric temperature. Harmful gases released by factories and car engines have a greenhouse effect, which led to increased atmospheric temperature. As a result, sea levels rose, glaciers started to melt, and the temperature of the oceans rose. These also led to the destruction of the ecosystems.

5. Hunting. Nowadays, hunting is a sport, and hunting endangered species is popular among hunters. After some time, this leads to the extinction of endangered species, causing biodiversity loss.



6. Diseases. Species with small population numbers have low genetic diversity. When a disease comes to the population, they are less likely to survive as there are no resistant organisms to a particular disease, which also causes a decline in the number of individuals.

7. Introduction of species. When non-native species are introduced into particular habitats, they rise in numbers as there are no natural predators. They take native species' lands and food and cause their extinction.

Biodiversity plays a significant role in human health. Loss in biodiversity affects our health as follows:

1. Effect on traditional medicine. Some plants are used to make medicines and cure many diseases. If their habitats are lost, these species might go extinct.

2. To maintain the climate. Plants are needed to stabilize atmospheric carbon dioxide concentration, which is the cause of climate change. A rise in temperature in some countries causes death by increasing the body temperature and denaturation of body proteins.

3. Nutritional impact. Biodiversity loss may change our diet composition, which affects our health by lacking nutrients.

There are many conservative methods to reduce the biodiversity loss rate. Many organizations present to conserve species and maintain biodiversity. There are several ways they try to save species. One of them is to preserve the habitat where endangered species live, and another is to help species reproduce and increase their population.

National and marine parks help to save habitats where endangered species live by strict regulations. Hunting is banned, humans have limited access to this place, and industrial activities are banned.

Zoos are organized to help endangered animal species to reproduce and increase in number in several ways, such as IVF (in Vitro fertilization), and embryo transfer. Also, zoos help to raise awareness among people about endangered species.

Botanic gardens and seed banks are organized to maintain plant species' biodiversity. Botanic gardens establish the population of the endangered species in captivity. Assisted reproduction helps to increase their numbers and reintroduce them to the wild in the future. Seed banks store seeds of many species from all around the world. Seeds are kept under low temperatures, which enables them to be stored for a long time. This helps to maintain genetic biodiversity as well as species biodiversity.



It is impossible to stop biodiversity loss, but we can reduce its rate by following the methods stated above. Biodiversity is important to save the Earth from widespread starvation and keep people healthy. Not only zoos, or botanic gardens should take care of biodiversity, but every person should contribute to it, at least by not polluting the environment.

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