

## 4.5 Causes of Species Extinction

Extinction is the complete disappearance of a species from Earth. A species becomes extinct when no living members remain. Extinction has happened many times throughout Earth's history, and many species continue to face extinction today.

### 1. Definition of Extinction

Extinction is the permanent disappearance of a species from the planet. When a species cannot survive or reproduce successfully, its population decreases until all members die.

### 2. Natural Causes of Extinction

Some extinctions occur naturally due to environmental changes or natural events. **Climate change:** Sudden changes in temperature and rainfall may affect survival. **Natural disasters:** Floods, volcanic eruptions, earthquakes, droughts, and wildfires can destroy habitats. **Diseases:** Epidemics may kill large numbers of organisms. **Competition:** Stronger species may outcompete weaker species for food and shelter. **Predation:** Some species may be hunted heavily by predators.

### 3. Human Causes of Extinction

Human activities are major causes of species extinction today. **Deforestation:** Cutting forests destroys habitats. **Pollution:** Air, water, and soil pollution harm living organisms. **Overhunting and overfishing:** Excessive hunting reduces populations. **Urbanization:** Building cities and roads destroys natural environments. **Introduction of invasive species:** New species may compete with native species. **Climate change caused by humans:** Global warming affects ecosystems.

### 4. Examples of Extinct Species

**Dodo bird:** Became extinct because of hunting and habitat destruction. **Dinosaurs:** Became extinct millions of years ago, possibly because of asteroid impact and climate changes.

**Passenger pigeon:** Became extinct due to overhunting.

## 5. Effects of Extinction

Extinction has serious effects on ecosystems and biodiversity. Loss of biodiversity. Disruption of food chains. Imbalance in ecosystems. Loss of useful plants and animals. Reduction in natural resources.

## 6. Ways to Prevent Extinction

Species extinction can be reduced through conservation efforts. Protecting forests and habitats. Reducing pollution. Creating national parks and wildlife reserves. Controlling hunting and fishing. Raising environmental awareness. Planting trees and conserving ecosystems.

## Summary

Extinction is the complete disappearance of a species. It may occur naturally or because of human activities. Climate change, natural disasters, pollution, deforestation, and overhunting are major causes of extinction. Conservation efforts are important to protect biodiversity.

## Summary Questions and Answers

### 1. What is extinction?

Extinction is the permanent disappearance of a species.

### 2. Name two natural causes of extinction.

Climate change and natural disasters are natural causes of extinction.

### 3. How does deforestation cause extinction?

Deforestation destroys habitats needed for survival.

### 4. Give one example of an extinct species.

The dodo bird is an example of an extinct species.

### 5. How does pollution affect species?

Pollution harms organisms and damages ecosystems.

### 6. Why is extinction harmful?

It reduces biodiversity and disrupts ecosystems.

**7. How can extinction be prevented?**

By protecting habitats, reducing pollution, and conserving wildlife.