

B16 Human Influences on ecosystems

B16.1 Habitat destruction

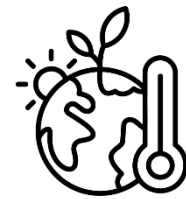
An **ecosystem** is a unit made up of a community of organisms (plants, animals, microorganisms) and their physical environment (air, soil, water, light). They interact through feeding, competition, and energy flow.

Biodiversity means the variety and number of different species living in an area.

- High biodiversity = stable and balanced ecosystems.

Causes of Habitat Destruction

- Land use: clearing habitats for housing, crop farming, and livestock grazing.
- Resource extraction: mining, logging, and quarrying remove habitats.
- Pollution: waste and chemicals entering rivers and seas destroy aquatic habitats.



Explanation of Effects

- Reduced biodiversity & extinction: cutting down forests destroys habitats and food sources, so species populations collapse.
- Extinction – species die out if they cannot adapt or move.
- Loss of soil: tree roots no longer hold soil, leading to erosion - rain washes away exposed topsoil → poorer land for future crops.
- Flooding: without trees, less water absorbed by trees → more surface runoff → rainwater runs off quickly into rivers.
- Increase in CO₂: fewer trees to absorb CO₂ (deforestation reduces photosynthesis), and burning forests releases more (adds CO₂ from decay/burning) → enhances greenhouse effect → global warming / climate change

Summary

Habitat destruction - especially deforestation - reduces biodiversity, causes soil erosion and flooding, and increases atmospheric CO₂, leading to climate and ecosystem imbalance.