

AQA B7b Ecology COMBINED FOUNDATION

Key word	Definition
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Biodiversity	The variety of all different species of organisms on Earth, or within an ecosystem
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Maintaining a great biodiversity

- **Ensures the stability of ecosystems** by reducing the dependence of one species on another for food, shelter and maintenance of the physical environment
- **Ensures the future of the human species.** Many human activities are reducing biodiversity.

Scientists and concerned citizens have put programs in place to reduce the negative impacts of humans on biodiversity including:

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| <ul style="list-style-type: none"> • Breeding programs for endangered species • Protection and regeneration of rare habitats • Field margins and hedgerows in agricultural areas where farmers grow one crop | <ul style="list-style-type: none"> • Reduction of carbon dioxide emissions and deforestation by governments • Recycling resources rather than dumping waste |
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Waste management

Rapid human population growth and increase in standard of living means that more waste is being produced.

This causes pollution which can kill animals and plants, reducing biodiversity

Pollution can occur:

- In water from sewage and toxic chemicals
- In air from smoke and acidic gases
- On land from landfill and toxic chemicals

Land use

- Humans reduce the amount of land available for plants and animals by for example: building, farming, quarrying and dumping waste
- Decay or burning of peat from peat bogs releases a large amount of carbon dioxide to the atmosphere as peat bogs are a major **carbon sink**
- Destruction of peat bogs and other areas to produce garden compost reduces biodiversity

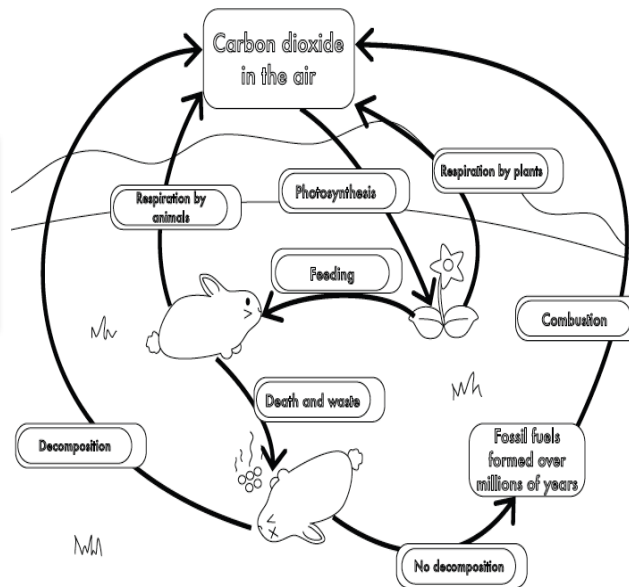
Large scale deforestation has occurred across the world, particularly in tropical areas to:

- Provide land for cattle
- Provide land for rice fields
- Provide land for growth of biofuels

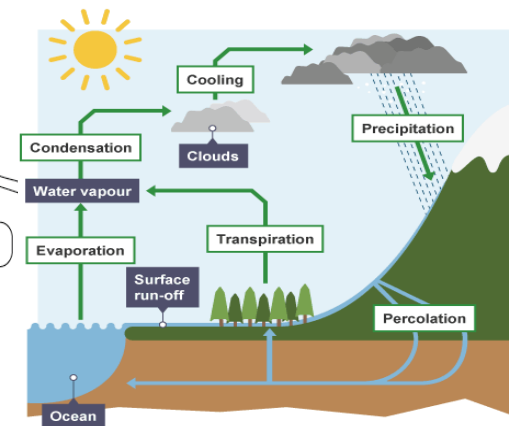
This deforestation leads to a reduction in biodiversity.



The carbon cycle



The water cycle



All materials in the living world are recycled to provide building blocks for future organisms

Microorganisms cycle materials by returning carbon to the atmosphere as CO₂ and mineral ions to the soil.

Global warming

- Levels of carbon dioxide and methane are increasing in the atmosphere due to human activity
- There is a global consensus about the human impact on global warming and climate change, based on thousands of **peer reviewed** publications.

Some effects of global warming on biodiversity are:

- Sea level rise
- Decreased land availability caused by sea level rise
- Damaged and destroyed habitats due to temperature rise
- Extreme weather events harm populations of plants and animals

Global Warming Predictions

