

Environment and its Components

1. Definition of Environment

- The environment consists of everything that surrounds us and affects our lives.
- It includes both living (biotic) and non-living (abiotic) things.
- The environment influences the growth, survival, and activities of all living organisms.

Examples of Environmental Components:

Air, water, land, sky, plants, animals, etc.

2. Components of the Environment

The environment consists of two main factors:

- **Abiotic factors** → Non-living components.
- **Biotic factors** → Living components.

A. Abiotic Factors (Non-living Components)

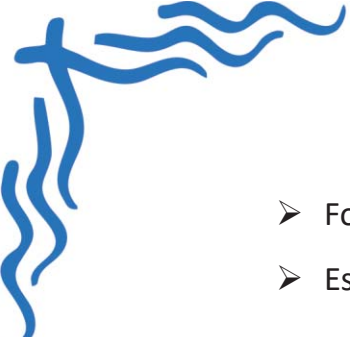
- Abiotic factors are the non-living parts of the environment.
- They influence the survival of living organisms.

Examples:

- **Air:** Provides oxygen for breathing and carbon dioxide for plants.
- **Water:** Essential for drinking, agriculture, and survival of all organisms.
- **Soil:**
 - Provides nutrients to plants.
 - A habitat for earthworms and insects.
- **Sunlight:**
 - Provides energy for plants through photosynthesis.
 - Warms the earth's surface.
- **Temperature:** Affects plant growth and animal behavior.

Example: Some animals hibernate during winter.

- Minerals:

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- Found in soil and water.
 - Essential for plant growth and human health.

Importance of Abiotic Factors:

- Support plant growth through water, sunlight, and soil nutrients.
- Regulate the temperature and weather patterns.
- Provide essential resources like oxygen and minerals.

B. Biotic Factors (Living Components)

- Biotic factors are the living organisms in the environment.
- They interact with each other and with abiotic factors.

Examples:

- Plants:
 - Producers → Prepare food through photosynthesis.
 - Provide oxygen and food to other organisms.
- Animals:
 - Consumers → Depend on plants or other animals for food.
 - Include herbivores, carnivores, and omnivores.
- Microorganisms:
 - Bacteria, fungi, and viruses.
 - Help in decomposition of organic matter.
 - Some bacteria are used in fermentation and medicine.

Importance of Biotic Factors:

- Maintain the balance of ecosystems.
- Decompose waste through microbial action.
- Provide food and oxygen.