Introduction to EVS

Defanations Environmental Studies

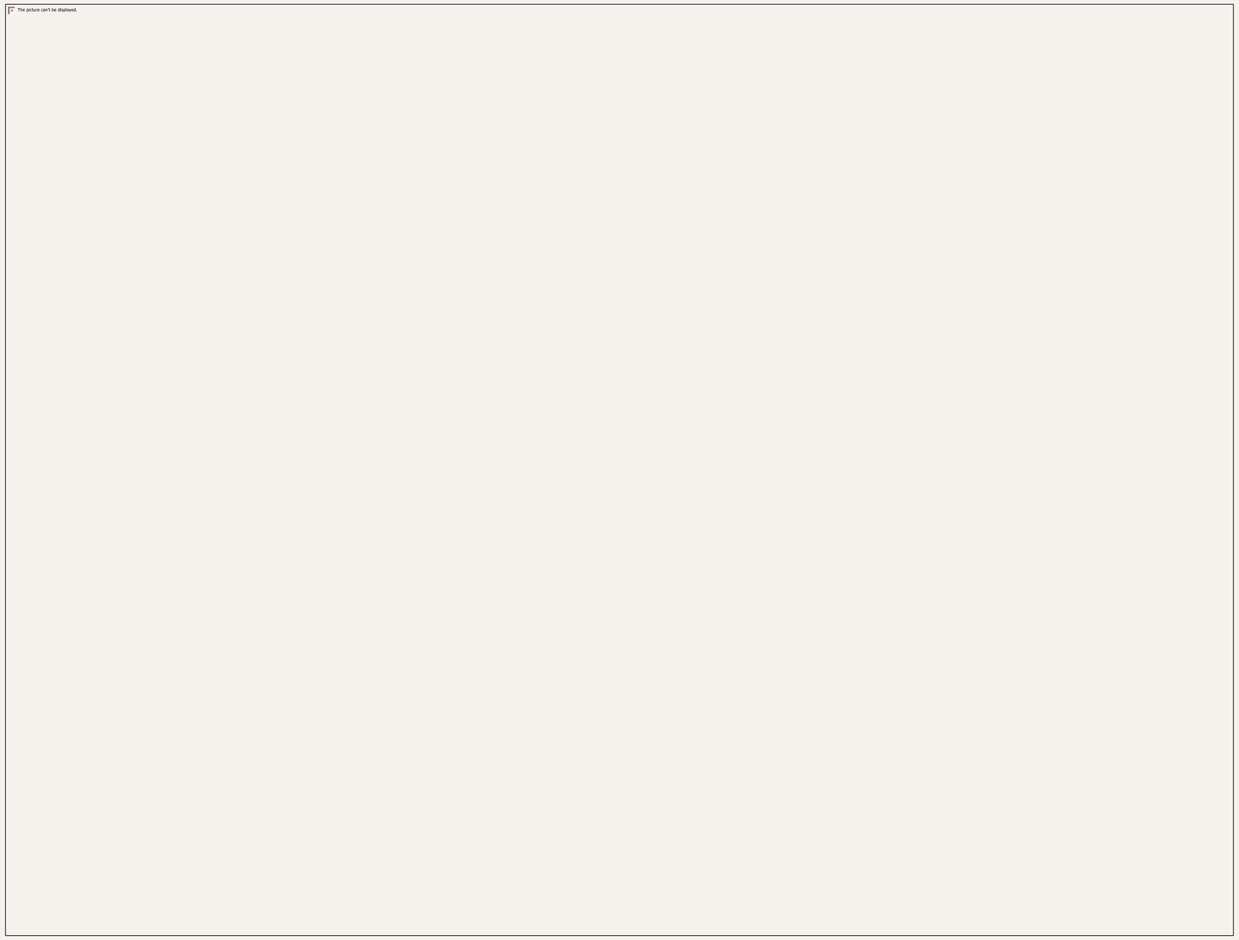
Environmental studies (EVS) is a multidisciplinary field of study that examines the relationship between humans and the environment. It uses scientific methods and ethical principles to understand, analyze, and solve environmental problems.

Environmental studies are the study of human interaction with the environment and in the interests of solving complex problems. Environment includes which we are directly or indirectly dependent for our survival, whether it is living component like animals, plants or non living component like soil, air and water.

Fundamental Principles of Environment

- Sustainability
- Protect Biodiversity
- Use Renewable Energy
- Precautionary Principle
- Public Participation
- Conserve Natural Resources
- Take care of Environment

Different Components of Environment



- Hydrosphere
- Lithosphere
- Biosphere

Biosphere

The **biosphere** is the part of Earth where life exists, including all living organisms and their interactions with the environment.

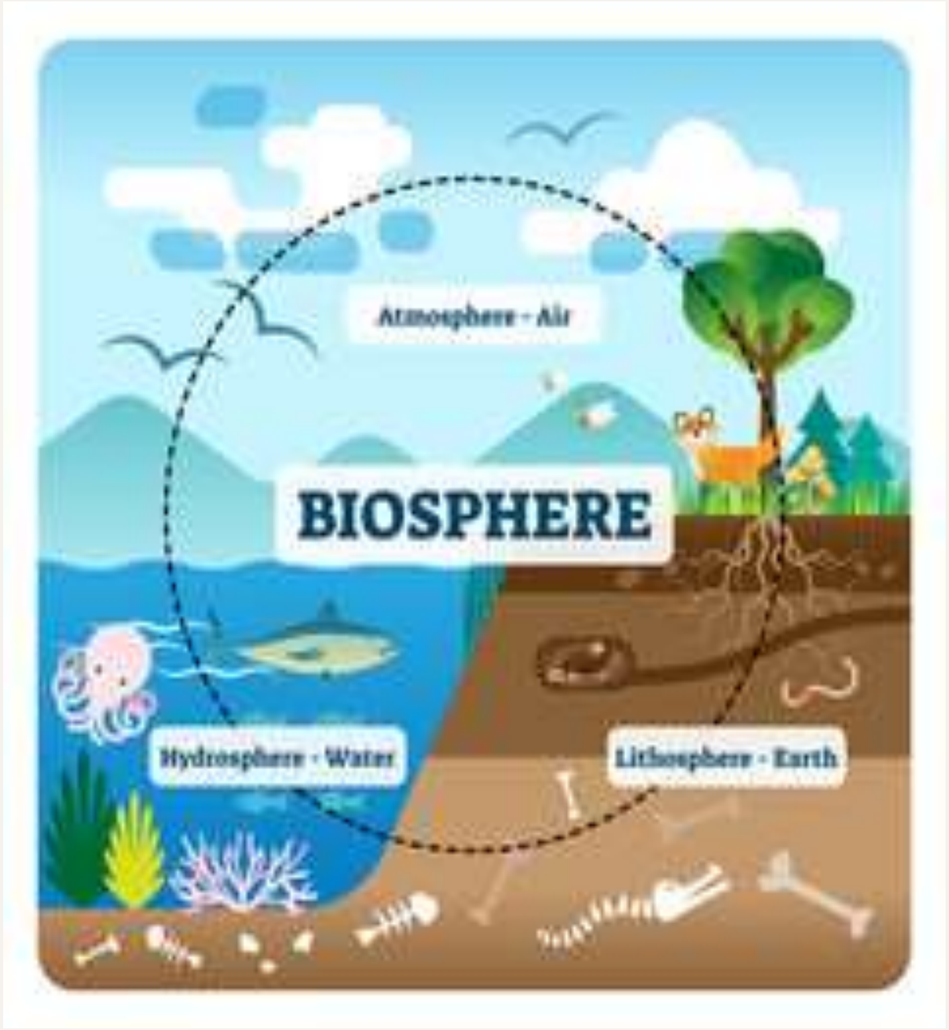
Key Features:

•Includes plants, animals, microorganisms, and humans.

•Extends into the atmosphere (birds, insects), lithosphere (soil organisms, plant roots), and hydrosphere (marine life, freshwater organisms).

•Maintains ecological balance through food chains, energy flow, and nutrient cycles (carbon, nitrogen, oxygen cycles).

•Influenced by climate, geography, and human activities (deforestation, pollution, conservation efforts).



Lithosphere

The **lithosphere** is the solid outer layer of the Earth, consisting of the crust and upper mantle.

Key Features:

•Composed of rocks, minerals, and soil.

•Divided into tectonic plates that move over time, causing earthquakes, volcanoes, and mountain formation.

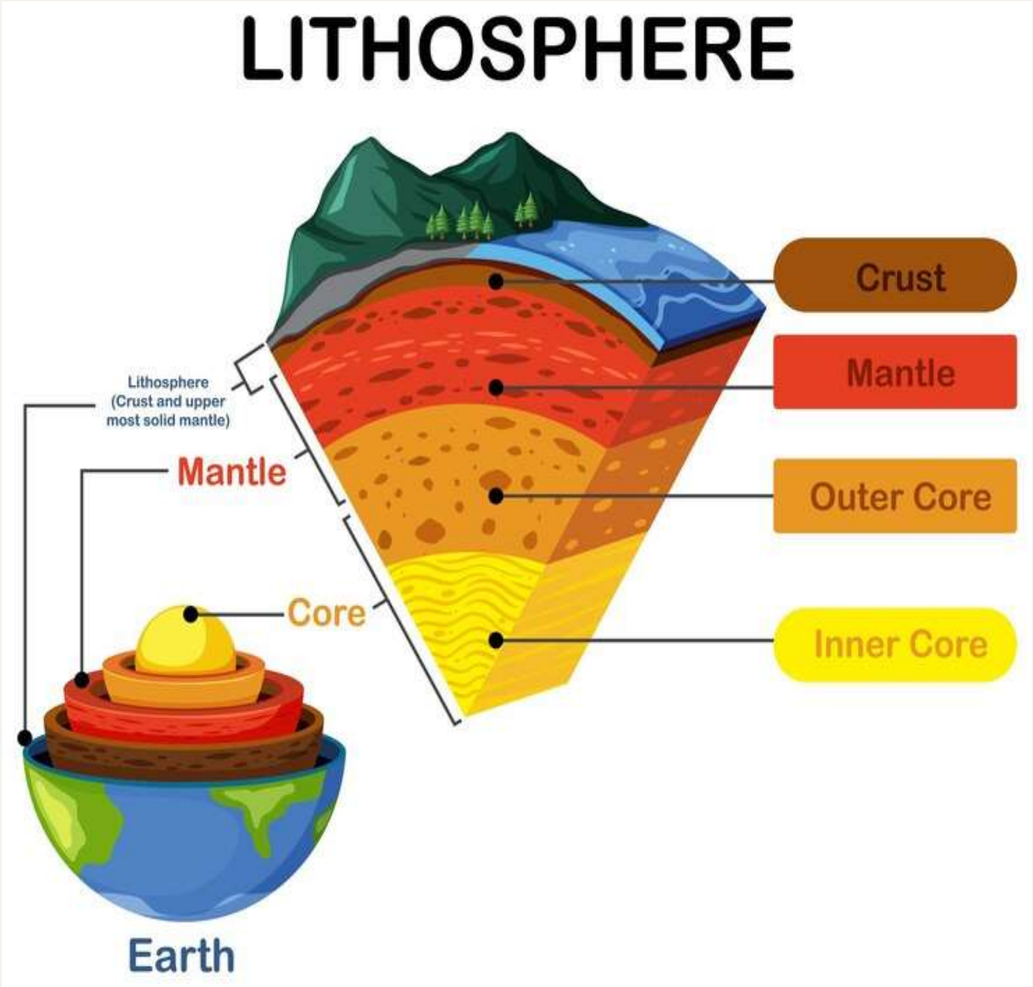
•Provides essential resources like soil for agriculture, minerals for industry, and fossil fuels for energy.

•Undergoes continuous processes like weathering, erosion, and sedimentation.

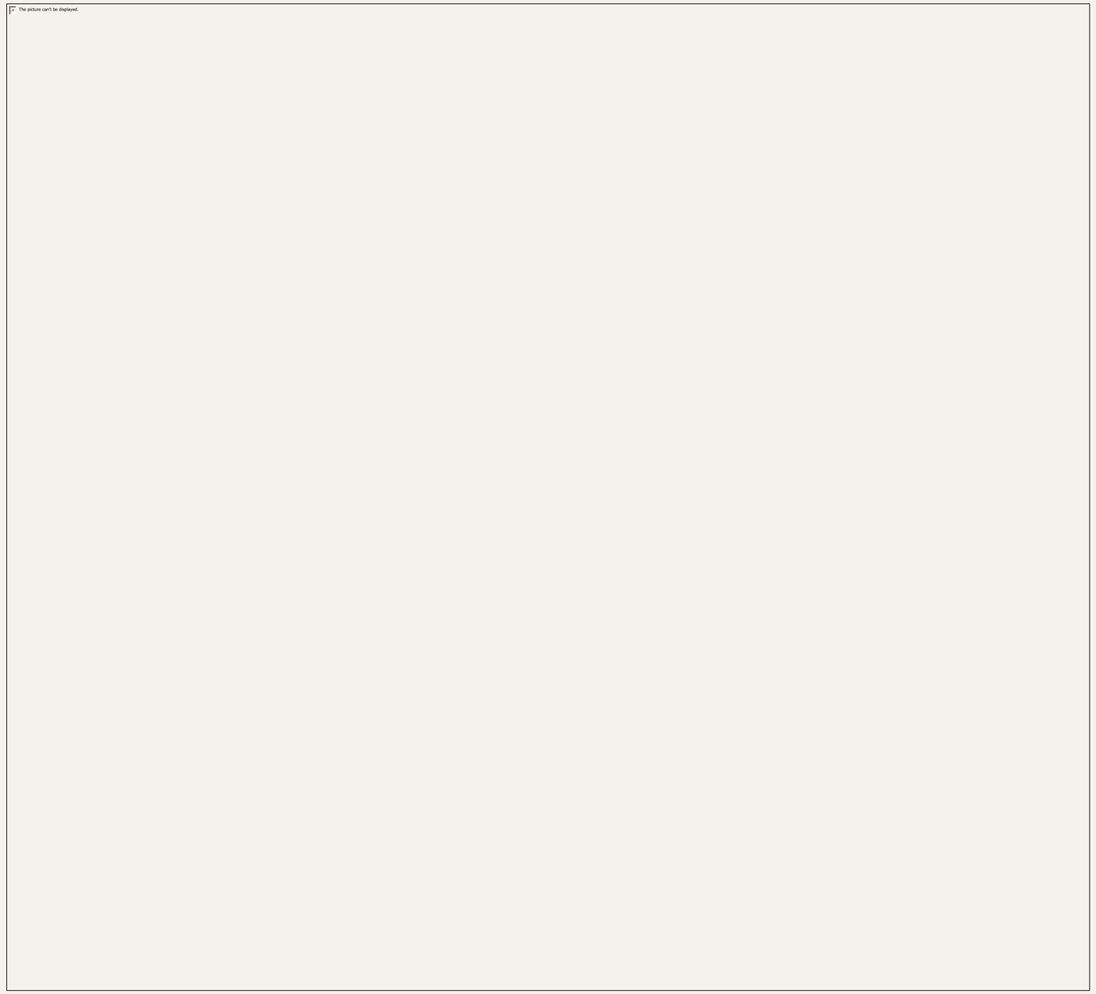
Examples:

•Continents, mountains, plateaus, valleys, and ocean floors.

•Mineral deposits like coal, iron, and petroleum.



Hydrosphere



The **hydrosphere** includes all the water on Earth, in various forms (liquid, solid, and gas).

Key Features:

- Covers about **71% of Earth's surface**.
- Found in oceans, rivers, lakes, glaciers, groundwater, and atmospheric moisture.
- Essential for climate regulation, weather patterns, and sustaining life.
- Undergoes the **water cycle** (evaporation, condensation, precipitation, and runoff).

Examples:

- Oceans (Pacific, Atlantic, Indian).
- Rivers (Ganga, Amazon, Nile).
- Glaciers (Antarctica, Himalayas).

Interconnections Between Biosphere, Lithosphere, and Hydrosphere

These spheres interact with each other in various ways:

- **Plants (biosphere) grow in soil (lithosphere) and need water (hydrosphere)**
- **Rivers (hydrosphere) shape landforms (lithosphere) and provide habitat (biosphere)**
- **Volcanic eruptions (lithosphere) release gases affecting climate and ecosystems (biosphere & hydrosphere)**

Thanks!