

UNIT

5

Biosphere

Learning Objectives

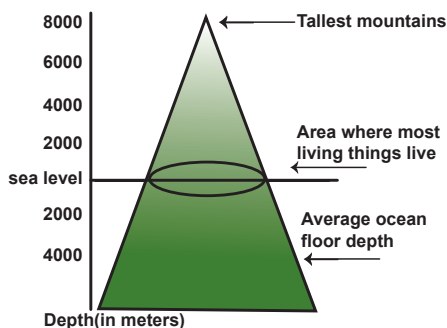
- To understand the scope and meaning of biosphere
- To understand the meaning of ecosystem, its components, functions and biodiversity
- To know the major biomes of the world
- To know the need for the conservation of biomes



Introduction

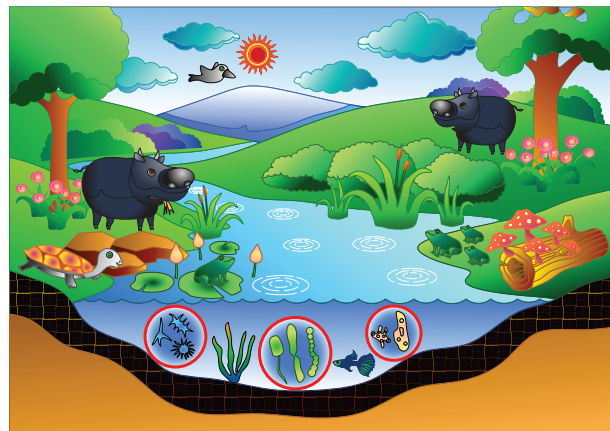
Biosphere, the fourth sphere of the Earth, is a life supporting layer that exists on the earth's surface. This layer on earth encompasses the Lithosphere, Hydrosphere and Atmosphere. It includes flora and fauna that thrive on or near the earth's surface. The vertical range of the biosphere is approximately 20 km, which is measured from the ocean floor to the troposphere. However, most plants and animals live in a very narrow section for about 1 km above and below the Mean Sea Level (MSL). Biosphere is made up of different ecosystems and biomes. All living things, large or small, are grouped into **species**. The area in which an animal, plant or micro organism lives is called its **habitat**. A wide variety of plants and animals live in a particular habitat known as **biodiversity**.

VERTICAL RANGE OF BIOSPHERE ON EARTH



5.1 Ecosystem

An ecosystem is a community, where all living organisms live and interact with one another and also with their non-living environment such as land, soil, air, water etc. Ecosystems range in size from the smallest units (Eg: bark of a tree) that can sustain life to the global ecosystem or ecosphere. (Eg: Cropland, Pond ecosystem, Forest ecosystem, Desert ecosystem etc.). Biosphere harbours all ecosystems on the earth and sustains life forms including mankind.



Activity

Narrate the forest ecosystem in your own words.