

# Types of Ecosystem

Ecosystems are classified into **natural** and **artificial** ecosystems.

**Natural ecosystems** may be **terrestrial** ecosystems or **aquatic** ecosystems. The *terrestrial ecosystems* are those which occur on the landmasses forming 29 per cent of the earth's surface. The terrestrial ecosystems are the major source of food and raw materials needed by man. The plant and animal communities are more diversified on the land than in the oceans. Land organisms have a greater range of tolerance than the organisms in the oceans. Water is a limiting factor in some of the terrestrial ecosystems, while availability of nutrients is the limiting factor in aquatic ecosystems. Terrestrial ecosystems are more productive per unit area than aquatic ecosystems.

The *aquatic* ecosystems are classified into fresh water, estuarine and marine ecosystems. The limiting factors in aquatic ecosystems are the depth upto which sunlight can penetrate, the availability of nutrients and the concentration of dissolved oxygen. Estuarine ecosystems are the most productive of aquatic ecosystems. In marine ecosystems, shallow continental shelves are more productive than open oceans. Though open oceans are most extensive in area, they are the least productive of all ecosystems except the desert scrub on land.

**Artificial Ecosystems** These are maintained artificially by humans where, by addition of energy and planned manipulations, natural balance is disturbed regularly. For example, croplands like wheat, rice fields, etc., where humans try to control the biotic community as well as the physio-chemical environments, are artificial ecosystems.

Whatever be the size and the area occupied by an ecosystem, its concept is a useful model for examining the structure and function of life.

The functional aspects of an ecosystem include the following:

- the rate of biological energy flow, i.e., the production and respiration rates of the community
- the rate of materials or nutrient cycles
- biological or ecological regulation including both regulation of organisms by environment and regulation of environment by the organism.