

ENVIRONMENTAL STUDIES

LECTURE-15

Functions of Ecosystem

The functions of the ecosystem are as follows:

1.
 1. It regulates the essential ecological processes, supports life systems and renders stability.
 2. It is also responsible for the cycling of nutrients between biotic and abiotic components.
 3. It maintains a balance among the various trophic levels in the ecosystem.
 4. It cycles the minerals through the biosphere.
 5. The abiotic components help in the synthesis of organic components that involve the exchange of energy.

Types of Ecosystem

An ecosystem can be as small as an oasis in a desert, or as big as an ocean, spanning thousands of miles. There are two types of ecosystem:

- Terrestrial Ecosystem
- Aquatic Ecosystem

Terrestrial Ecosystem

Terrestrial ecosystems are exclusively land-based ecosystems. There are different types of terrestrial ecosystems distributed around various geological zones. They are as follows:

1. Forest Ecosystem
2. Grassland Ecosystem
3. Tundra Ecosystem
4. Desert Ecosystem

Forest Ecosystem

A forest ecosystem consists of several plants, particularly trees, animals and microorganisms that live in coordination with the abiotic factors of the

environment. Forests help in maintaining the temperature of the earth and are the major carbon sink.

Grassland Ecosystem

In a grassland ecosystem, the vegetation is dominated by grasses and herbs. Temperate grasslands and tropical or savanna grasslands are examples of grassland ecosystems.

Tundra Ecosystem

Tundra ecosystems are devoid of trees and are found in cold climates or where rainfall is scarce. These are covered with snow for most of the year. Tundra type of ecosystem is found in the Arctic or mountain tops.

Desert Ecosystem

Deserts are found throughout the world. These are regions with little rainfall and scarce vegetation. The days are hot, and the nights are cold.

Aquatic Ecosystem

Aquatic ecosystems are ecosystems present in a body of water. These can be further divided into two types, namely:

1. Freshwater Ecosystem
2. Marine Ecosystem

Freshwater Ecosystem

The freshwater ecosystem is an aquatic ecosystem that includes lakes, ponds, rivers, streams and wetlands. These have no salt content in contrast with the marine ecosystem.

Marine Ecosystem

The marine ecosystem includes seas and oceans. These have a more substantial salt content and greater biodiversity in comparison to the freshwater ecosystem.