**Stability and Structure of Ecosystem!**

An organism cannot live in isolation. It needs other organisms, nutrients from its environment, and so on, to survive.So, nature has provided functional units in which different organisms of a given area can live and interact among themselves and with their surroundings.

An ecosystem is a functional unit consisting of all the living beings of an area and the non-living components of their environment, interacting to form a stable system.There are different kinds of ecosystems. They can be natural ecosystems such as deserts, grasslands, forests and lakes, or man-made ecosystems such as gardens, aquariums and crop fields. An ecosystem may be as small as an aquarium or as big as an ocean.

A pond is an example of an aquatic ecosystem. All the algae, plants, insects, microorganisms and fish in the pond, and the water and soil of the pond are part of this ecosystem.The organisms of the pond get everything they need from the pond itself. And they help to keep its water and soil in good condition, replenishing the nutrients they take from them. This makes the ecosystem self-sustaining.

 Now let us look at the ecosystem of a garden. In a garden you will find different plants and animals such as bees, butterflies, earthworms, frogs and birds. They depend on each other and on the non-living things like the soil, air and water.

For example, the earthworm gets nutrition from the soil. In turn, they keep the soil fertile. So do certain kinds of bacteria living in the soil. Birds, bees and butterflies get food from the plants in the garden. They help to keep the ecosystem working by helping in the pollination of the plants.

#### Stability in Ecosystems:

All ecosystems are stable systems. This means that they maintain a natural balance. An ecosystem involves the flows of nutrients and energy (in the form of food). If the organisms Having in an ecosystem use up nutrients, like nitrogen, from their environment, without replenishing them, soon the system will collapse.However, a balance is maintained between the availability and use of nutrients by recycling them through natural processes. You already know how things like nitrogen and carbon are recycled in nature. A balance is also required to provide different amounts of energy (from food) needed by different organisms.

As we shall see, the numbers of different organisms in an ecosystem are balanced in such a way that each organism gets the required amount of food. For example, in a forest ecosystem, the numbers of the prey (like rabbits) are always more than the numbers of the predator (like foxes), to ensure adequate food for the predator.