

# Ecology

1. Study of inter relationship between living organisms and their environment.
2. Various population of living in a definite place is called Biotic Community.
3. Ecosystem or Ecological system word was first coined by the scientist namely Tansley.

Every ecosystem is made up of two components —

- (a) Biotic component – Living part
- (b) Abiotic component – Non living part

**(a) Biotic components :** It is divided into three part —

- (1) Producer (2) Consumer (3) Decomposers

**(1) Producer :** Those components that make their own food. Like – green plants.

**(2) Consumer :** Those components that consume the food made by plant. Consumers are of three types —

**(i) Primary consumers** In this category those organisms are included that lives on green plants or some parts of them

**(ii) Secondary consumers :** In this category those organisms are included that depends on the primary consumers as their food. Like – fox, wolf, peacock etc.

**(iii) Tertiary consumers :** In this category those organisms are included that depends on the secondary consumers. Like – Tiger, lion, cheetah etc.

**(3) Decomposers :** Mainly fungi and bacteria are included in this category. These decompose dead producers and consumers and changes them into physical elements.

**(b) Abiotic components :** Abiotic components are as follows –

(i) Carbonic substance, (ii) Non-carbonic substance, (iii) Climatic factor Example : Water, light, temperature, air, humidity, minerals etc.

**4. Food Chain :** Transfer of energy from the producer through a series of organisms.

## Nitrogen cycle

1. Nitrogen fixation is a process in which free atmospheric nitrogen is converted by living organism into nitrogenous compound that can be used by plant

**2. Ammonification :** Formation of ammonia from organic compound like proteins and nucleic acid by microorganism.

**3. Nitrification :** A process in which ammonia is converted into nitrites and nitrates by Nitrobacteria.

**4. Denitrification :** It is the process of converting fixed nitrogen like nitrites, nitrites and ammonia into free nitrogen by denitrifying bacteria eg Pseudomonas.