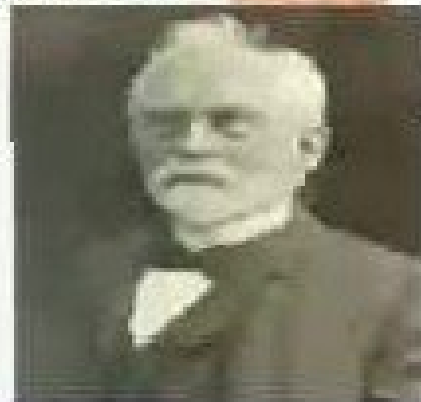


- The meaning of the word ecology was given by German Biologist Haeckel in 1869.
- The word ecology is derived from Greek words 'Oikos' meaning house, habitat or place of living and 'Logos' meaning to study.
- After that.... Danish botanist, Eugenius Warming elaborated the idea of Ecology.



Definition

Ecology is the study of interactions among organism or group of organisms with their environment. The environment consists of both biotic components (living organisms) and abiotic components (non - living organisms).



Ecology is study of interactions between

Non-living components in the environment...

Light

Water

Wind

Nutrients in soil

Heat

Solar radiation

Atmosphere, etc.

AND...



Living organisms...

Plants

Animals

Microorganisms in soil, etc.

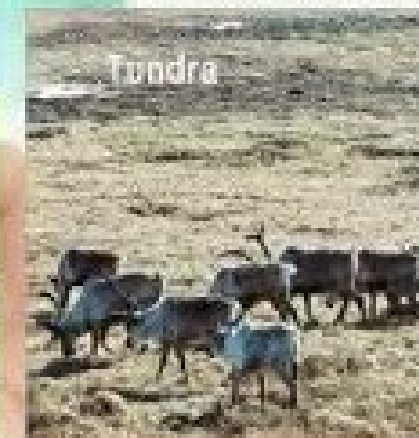
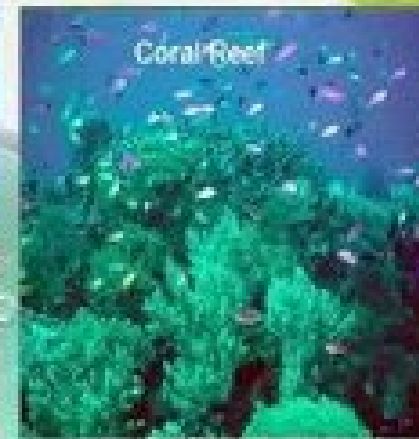
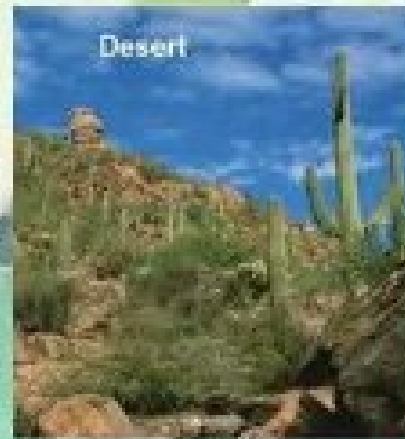
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Ecosystem

The term Ecosystem was first proposed by A.G. Tansley in 1935.

An ecosystem consists of the biological community that occurs in some locale, and the physical and chemical factors that make up its non-living environment. There are many examples of ecosystems - a pond, a desert, a forest, an estuary, an ocean.



Ecosystem is the basic functional unit of Ecology.

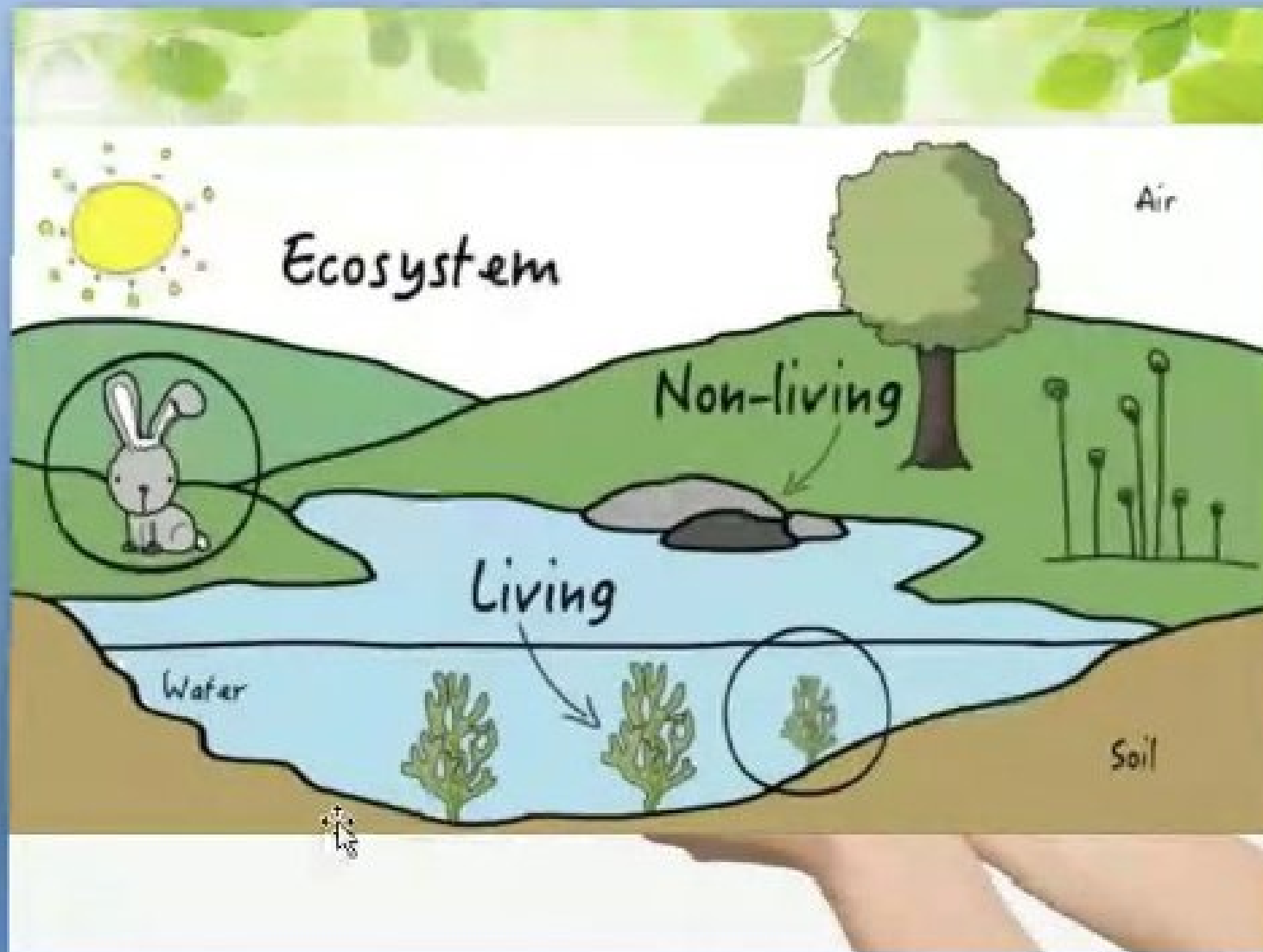
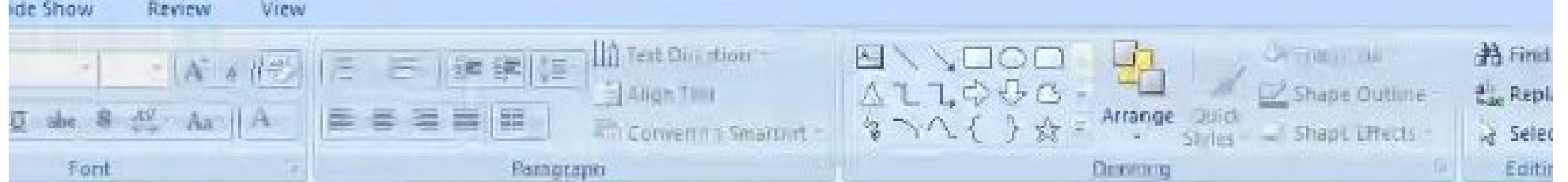
Definition

A group of organisms interacting among themselves and with environment is known as ecosystem. Thus an ecosystem is a community of different species interacting with one another and with their non living environment exchanging energy and matter.

Ecology is the study of ecosystems.

Example

Animals cannot synthesis their food directly but depend on the plants either directly or indirectly.



STRUCTURE OF AN ECOSYSTEM

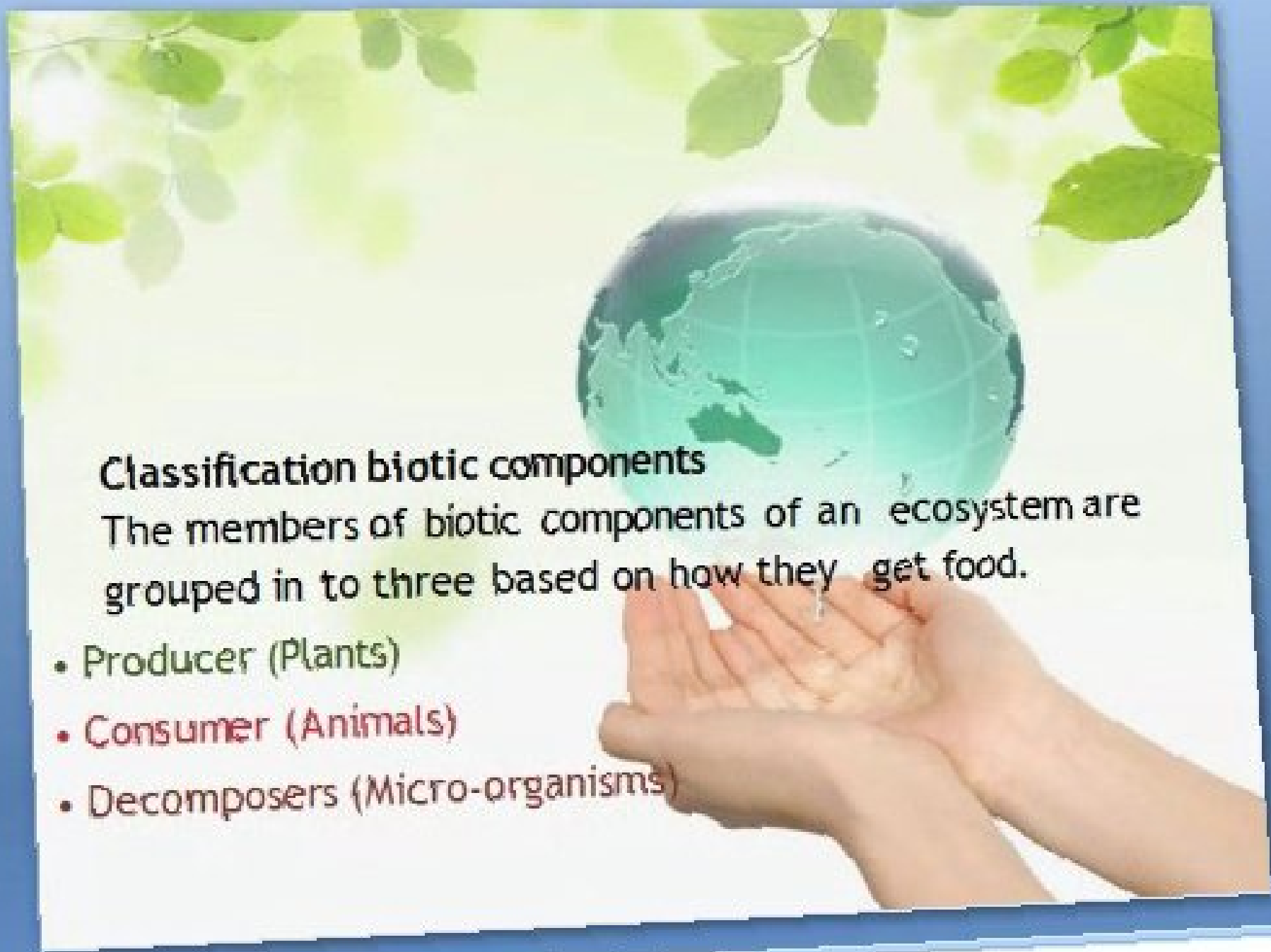
The term structure refers to the various components of an ecosystem.

An ecosystem has two major components

- Biotic (living) components
- Abiotic (non living) components

The living organisms (or) living members in an ecosystem collectively called biotic components (or) biotic community.

Ex: Plants, Animals, Microorganisms



1. Producers (Autotrophs)

Producers synthesise their food themselves through photosynthesis

Ex: All green plants, trees.

Photosynthesis

The green pigment called chlorophyll, present in the leaves of plants, converts CO_2 and H_2O in the presence of sunlight into carbohydrates.



This process is called photosynthesis

2. Consumers also called as Heterotrophs:

Classification of consumers

Consumers are further classified as

(i) Primary consumers or Herbivores or Plant eaters:

Primary consumers are also called herbivores, they directly depend on the plants for their food. So they are called plant eaters.

Examples : Insects, rat, goat, deer, cow etc.

I

(ii) Secondary consumers (primary carnivores) (Meat eaters):

Secondary consumers are primary carnivores, they feed on primary consumers. They directly depend on the herbivores for their food.

Ex: Frog, cat, snakes, small birds, etc.,

(iii) Tertiary consumers (Secondary carnivores) (Meat-eaters)

Tertiary consumers are secondary carnivores, they feed on secondary consumers. They depend on the primary carnivores for their food.

Ex: Hawk, Eagle, Tiger, Lion, etc.,