ECOSYSTEM

ECO: - Part of the world, SYSTEM: - Co-ordinating unit.

Tear "Ecosystem" given by British Ecologist

- Arthur Tansley (1935)

"Naturally occurring assemblage of life and Environment"

Interaction of biotic and a biotic component which act as self regulating and self sustaining unit.

TYPE OF ECOSYSTEM

TERRESTRIAL ECOSYSTEM

Terra = Earth

Exp- Forest ecosystem, grassland and Desert ecosystem

AQUATIC ECOSYSTEM

Aqua = Water

Pond Ecosystem → Fresh Water

River Ecosystem

Sea Ecosystem → Marin Water

Wetland Ecosystem → Ecosystem

On the basis of Human interference type of Ecosystem.

Natural Ecosystem

- The ecosystem form without the help of Human.
- Exp- Forest ecosystem, Grassland ecosystem, Sea, River etc.

Man-Made Ecosystem

- With the help of Human.
- Exp:- Corp Field/Agro Ecosystem, Aquarium, Zoological Park, Garden, Dams etc.

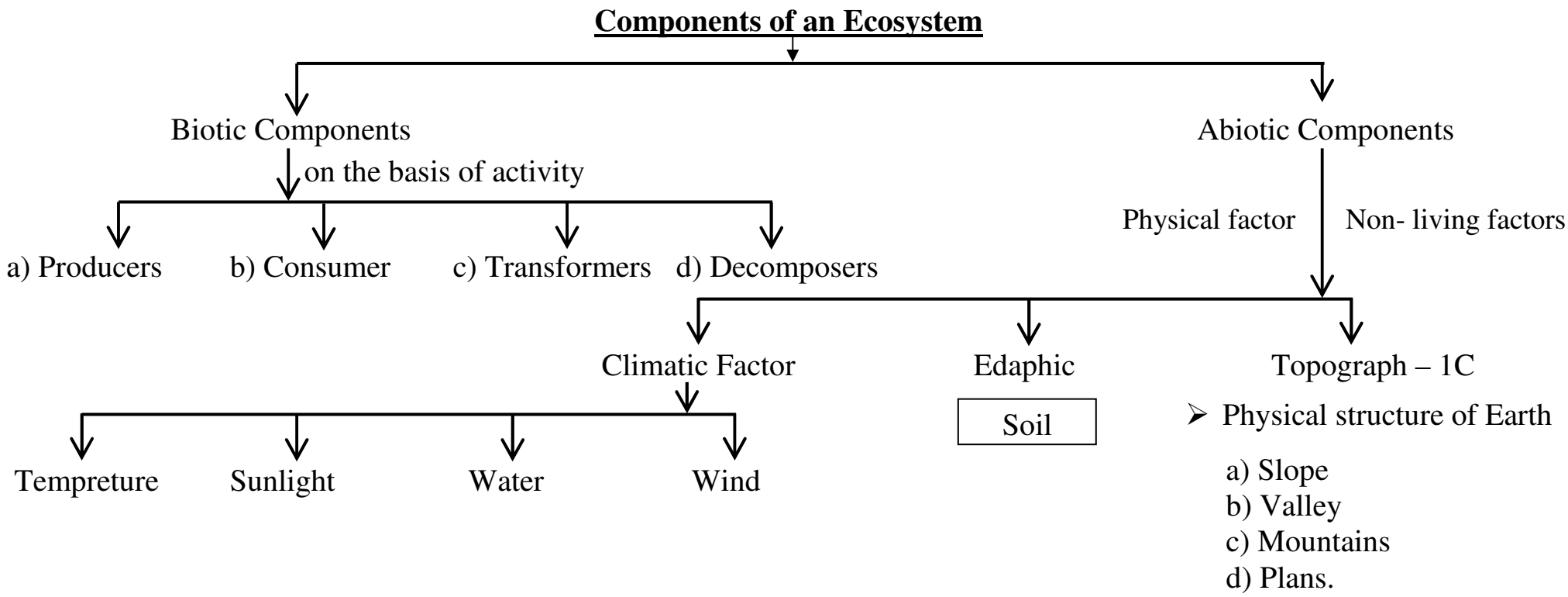
On the basis of size type of Ecosystem.

Macro Ecosystem

- Macro = Large.
- Dimension and Spread Forest, Lake etc.

Micro Ecosystem

- Micro = Tiny, Smaller.
- Dimension and Spread Aquarium etc.


Components of an Ecosystem
Biotic Components
Abiotic Components
on the basis of activity
a) Producers
b) Consumer
c) Transformers
d) Decomposers
Physical factor
Non- living factors
Climatic Factor
Edaphic
Topograph – 1C
Soil
Tempreture
Sunlight
Water
Wind
Physical structure of Earth
a) Slope
b) Valley
c) Mountains
d) Plans.

Biotic Components:-

A) PRODUCERS/Autotrophs

- Make their own food.
- Use inorganic raw material
- CO_2 Fixation ⟶ Sugar (C-C Bond) Energy

SUNLIGHT

PHOTOAUTOTROPHS

Exp: - Green Plants

Blue green algae

CHEMICAL REACTION

CHEMOAUTOTROPHS

Exp: - Chemosynthetic Bacteria

Producer act as converters and Transducers

Light Energy ⟶ **Chemical Energy**

B) CONSUMERS :- HETEROTROPHIC ORGANISM

The organisms whose food requirements are met by feeding on other organisms. They consume the food materials prepared by the producers (Autotrophs).

Depending upon their food Consumers

PRIMARY CONSUMERS

- Herbivors / Plant eaters
- First order consumers

T.E.S.	A.E.S.
Birds, Insect, Grashopper, Rabbit, Goat, Sheep etc.	Mollusca, Tadpole, Mosquito etc.

SECONDARY CONSUMERS

- 1st Carnivores
- Second order consumers
- Feed primary consumers

T.E.S.	A.E.S.
Spiders, Snakes etc.	Frogs, Fish, Hydra etc.

TERTIARY CONSUMERS

- 2nd Carnivores
- Third order consumers

T.E.S.	A.E.S.
Wolf	Large Fish.

Top Carnivores: - Lion, Tiger, Panther etc.

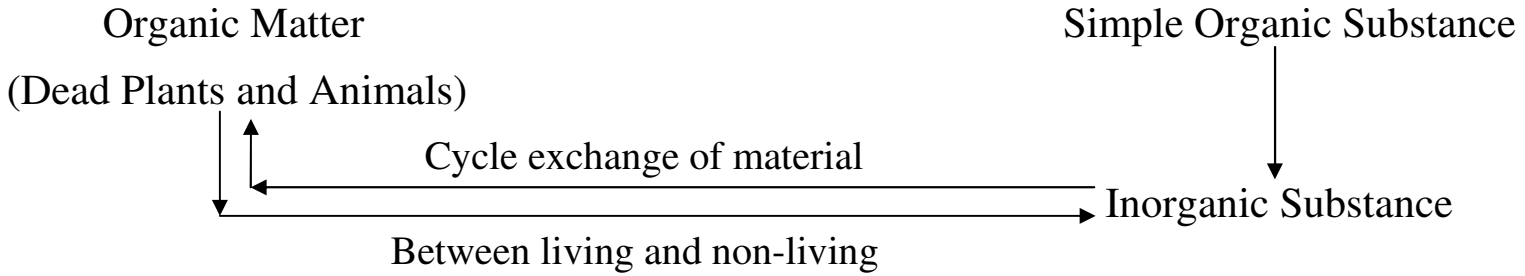
<u>TRANSFORMERS</u>: - Certain type of bacteria.

Attack on materials excreted by other living organism (even dead plants and animal). They transform the above into organic substances. These are suitable for the nutrition of green plants.

DECOMPOSERS / Micro consumers / Saprophytic

- Obtain their food from organic matter present in dead plants and animals.

  Exp: - Fungus and Bacteria.



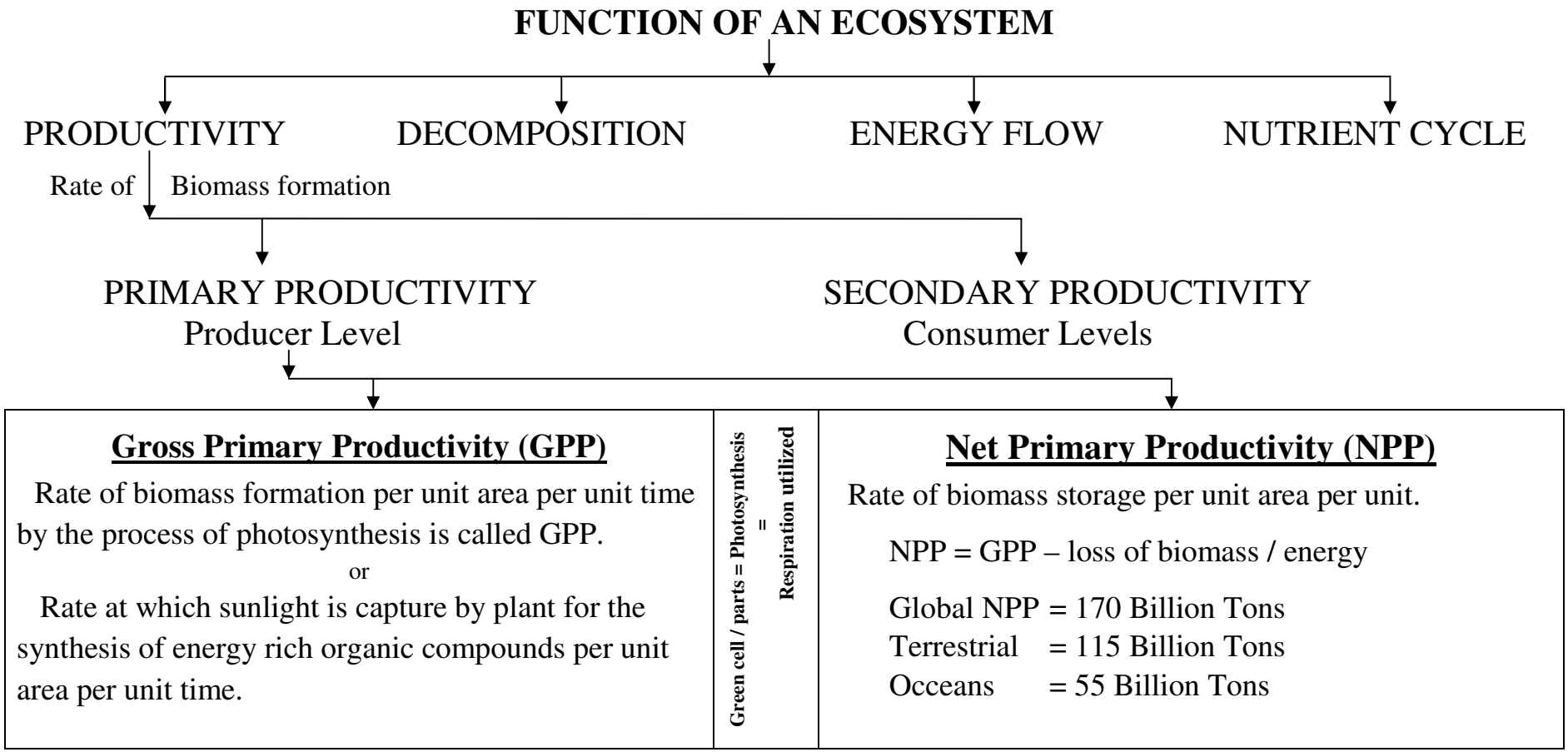
Decomposers play vital role:-

1. Natural Scavengers

   Organic waste removes by them
2. Mixed the nutrients in the soil.

FUNCTION OF AN ECOSYSTEM: -

Capacity of natural processes and components to provide goods and services that satisfy human needs, either directly or indirectly. Its functions are subset of ecological processes and ecosystem structure. Each function is the result of the natural processes of the ecological sub-system.



FACTORS AFFECT PRIMARY PRODUCTIVITY:-

1. Photosynthetic efficiency of plants
2. Solar radiation
3. Soil nutrients
4. Soil moisture
5. Temperature