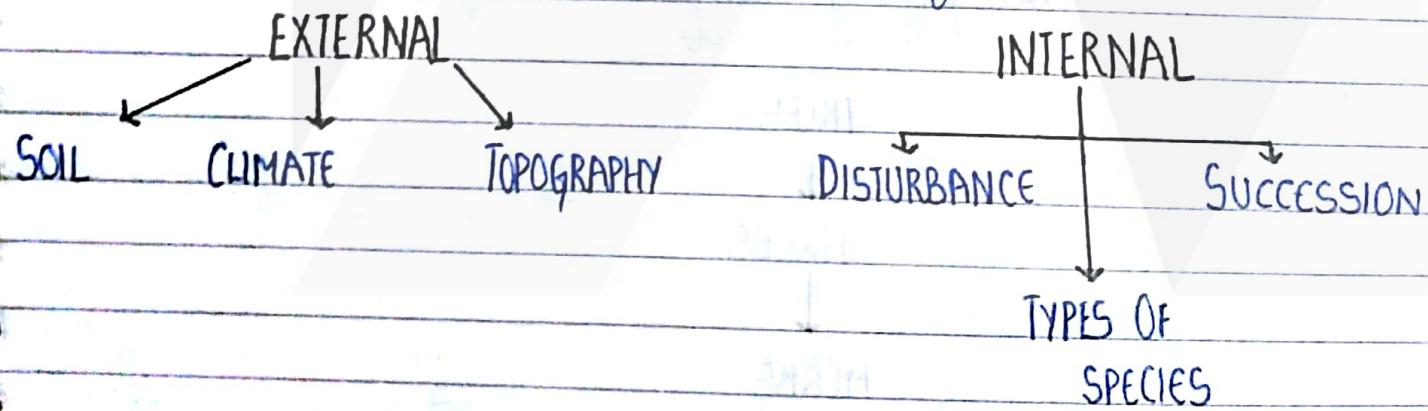


MODULE - III : ECOSYSTEMECOSYSTEM [A.G. TANSLEY , 1935]

- ⇒ The Basic Functional and Ecological unit in which living organisms Interact
 - Among Themselves
 - With surrounding Environment
- The components are linked together through
 - BIOTIC
 - ABIOTIC
 - Nutrient cycles
 - Energy flows
- The ENERGY that flows through ecosystems are primarily OBTAINED FROM SUN.

Ecosystems are DYNAMIC ENTITIES.

Ecosystems are controlled by both factors :

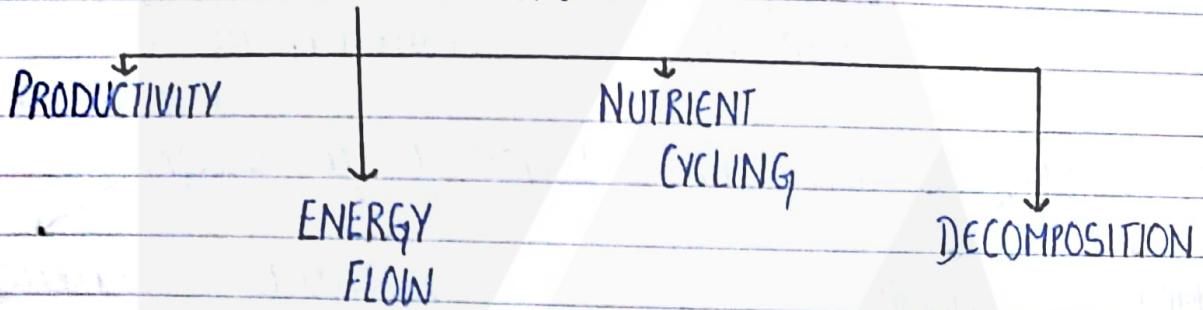


GLOBAL ECOSYSTEM : The Entire Biosphere consisting of several local ecosystems.

ECOSYSTEM STRUCTURE AND FUNCTION

SPECIES COMPOSITION: The Identification and Enumeration of plant and animal species in an ecosystem.

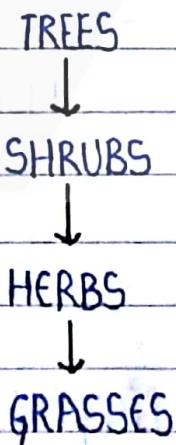
MAJOR FUNCTIONS



The function of ecosystem is AFFECTED BY BIODIVERSITY.

Ecosystem also PROVIDES a wide variety of goods and services upon which people depend.

STRATIFICATION: Vertical distribution of different species occupying different strata.



ENERGY FLOW IN AN ECOSYSTEM

- **PAR** : Photosynthetically Active Radiation \Rightarrow 50% out of the total incident solar radiation.
- Plants capture only 2-10% of the PAR. This small amount energy sustains the entire living world.
- There is UNIDIRECTIONAL FLOW OF ENERGY :



- The energy in an ecosystem is TRANSFERRED in the form of FOOD.
- Major part of food energy is lost as heat during metabolic activities.
- Only a very small fraction becomes stored as BIOMASS.

1) PRODUCERS

⇒ The GREEN PLANTS in the ecosystem which can

TRAP SOLAR
ENERGY

CONVERT ENERGY INTO
CHEMICAL ENERGY

2) CONSUMERS

⇒ The animals that depend on plants for food.

3) DECOMPOSERS

⇒ The biotic components which decompose dead organic matter FOR REUSE by autotrophs.