

Ecosystem

A functional unit of nature, where biotic and abiotic factors interact

Terrestrial- forest, grassland

Aquatic- ponds, lake, sea

Primary Productivity

Biomass production rate by primary producers

Gross primary productivity (GPP)- the rate of biomass production by photosynthesis

Net primary productivity (NPP)- available biomass for consumption by herbivores, it is obtained by subtracting respiratory loss from GPP

Decomposition

Breaking down of complex organic matter of dead and decaying remains and excreta of plant and animals into inorganic substances

Example of decomposers- bacteria, fungi

Photosynthetically
active radiation
(PAR)

The spectrum of light utilised by plants for photosynthesis

400-700 nm

Accounts for ~50% of solar radiation, out of which only 2-10% is captured by plants

Pyramid of energy

Always upright

Only 10 percent of energy is transferred from each trophic level to the next trophic level

Pyramid of biomass

Mostly upright

Inverted in the sea ecosystem as the biomass of large fish is more than phytoplanktons

Climax community

A community, which is in equilibrium with its environment

Ecological succession

Gradual changes in the composition of species in a given area

Seral communities

Transitional communities during successive changes

Hydrarch succession

The succession of plants in wet areas from hydric to mesic conditions

Xerarch succession

The succession of plants in dry areas from xeric to mesic conditions

Pioneer species

Species that grow on a bare area

E.g. lichens on a rock,
phytoplanktons in water

Standing state

Amount of nutrients present in the soil at a given time

Depends on seasons and types of ecosystems

