

## I. Ecosystem Factors

- A. **Ecosystem:** Community of living things interacting with each other and physical environment
- B. **Biotic Factors:** All organisms (living things) in ecosystem (plants, animals, fungi, microorganisms)
- C. **Abiotic Factors:** Non-living things affecting ecosystem (sunlight, temperature, wind, water)

## II. Levels of organization of organisms

- A. **Individual:** A specific living organism.
- B. **Population:** Total number of organisms of species living in an area
- C. **Community:** Total number of all organisms in area
- D. **Ecosystem:** All interactions (biotic and abiotic) within biome.
- E. **Biome:** Large regions of earth. Weather and terrain of biomes determine which organisms live there.
- F. **Biosphere:** Collections of all ecosystems on earth

## III. Factors that affect population sizes

- A. **Carrying capacity:** Total number of organisms a habitat can support (can be a specific species or sum of all species)
- B. **Limiting factors:** Things that keep populations from growing larger
  - 1. Density-independent (usually physical, not biological)
    - a. temperature
    - b. natural disasters (floods, wildfires)
    - c. pollution
  - 2. Density-dependent
    - a. predators
    - b. competition
    - c. disease

## IV. Types of organisms in ecosystem

A. **Producer:** Organisms that get energy by *making food* from non-living matter

1. plants
2. algae
3. lichens

B. **Consumer:** Organisms that get energy (food) by consuming (eating) other organisms

1. **Carnivore:** Organisms that eat only other animals

- a. lion
- b. wolf
- c. shark

2. **Herbivore:** Organisms that eat only other plants (producers)

- a. deer
- b. rabbits
- c. cows

3. **Omnivore:** Organisms that eat both plants and animals

- a. raccoon
- b. skunks
- c. bear

C. **Decomposer:** Organisms that get energy (food) by breaking down dead or decaying organisms

1. fungi
2. Bacteria