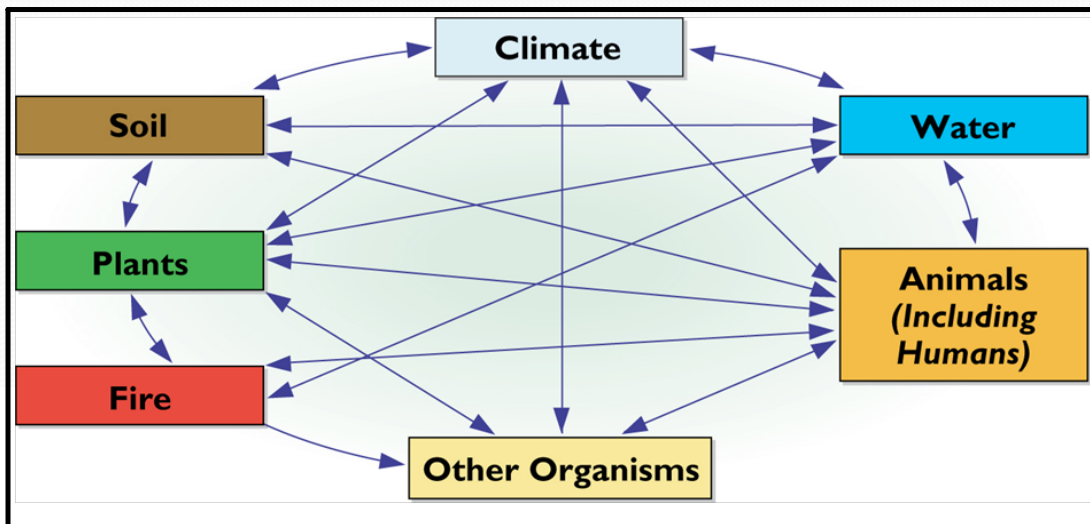


Ecosystems

- All of the organisms living in an area together with their physical environment.
 - There can be great variation from one ecosystem to another.
 - However, ecosystems overlap.
 - Requirements include energy, mineral nutrients, water, oxygen, and living organisms.



Components of an Ecosystem

- **Biotic** factors (living) include...
 - Plants
 - Animals
 - Dead organisms & Waste Products
(came from living at one time)
- **Abiotic** factors (nonliving) include...
 - Air
 - Water
 - Rocks
 - Sand
 - Light
 - Temperature

Habitat

- The place where an organism lives.
- Specific characteristics that the organism needs to survive.
- Typically, a species cannot survive for very long if their habitat changes too drastically.

Do you see evidence of habitat fragmentation in this photo? If so, identify the human activities responsible for fragmenting the landscape.



Let's visit GeoNB...

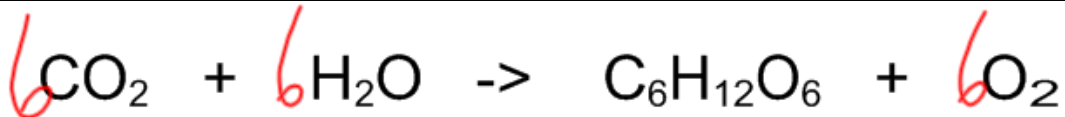


FEEDING RELATIONSHIPS...

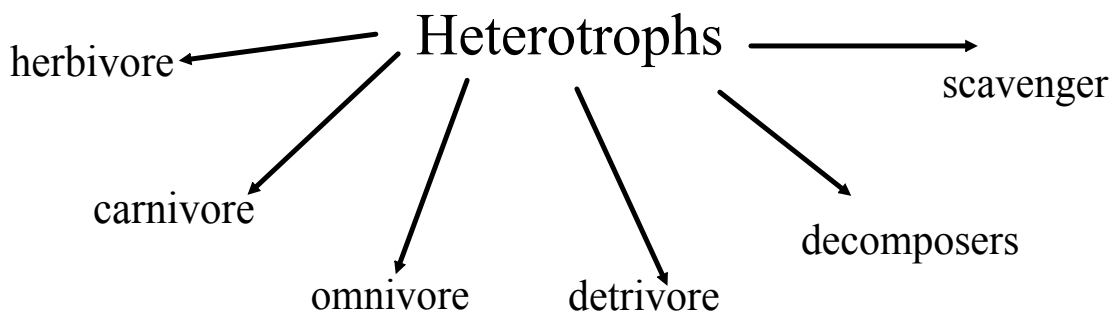


Energy Flow

- The flow of energy through an ecosystem is one of the most important factors that determines the system's capacity to sustain life.
- **Sunlight** is the main energy source for life on Earth. Some organisms rely on energy stored in inorganic chemical compounds.
- **Autotrophs** (producers) capture energy from sunlight or chemicals to produce their own food. **PHOTOSYNTHESIS**



- Organisms that rely on other organisms for their energy and food supply are called **heterotrophs** (consumers). These include animals, fungi and bacteria.
- When organisms use chemical energy to produce carbohydrates, the process is called **chemosynthesis**. The process is performed by several types of bacteria that live in volcanic vents, hot springs and tidal marshes.



- Herbivores**, such as cows, obtain energy by eating only plants.
- Carnivores**, such as snakes, eat only animals.
- Omnivores**, such as humans, eat both plants and animals.
- Detrivores**, such as earthworms, feed on dead matter.
- Decomposers**, such as fungi, break down organic matter.
- Scavengers**, such as vultures, consume the carcasses of other animals.