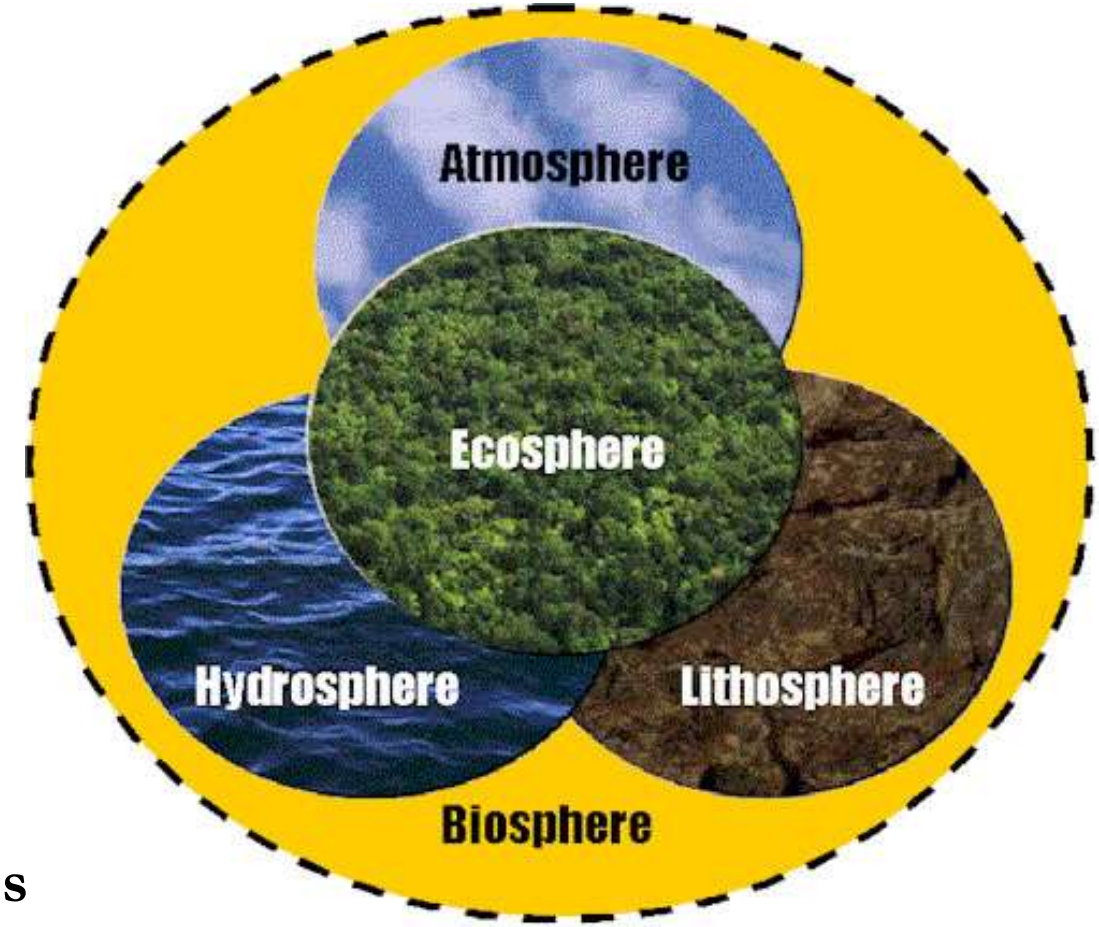
The Biosphere

is all life on Earth.

It is made up of the organisms in the lithosphere, the atmosphere, the hydrosphere, and the ecosphere

Notice how the spheres overlap. Each sphere affects the others.

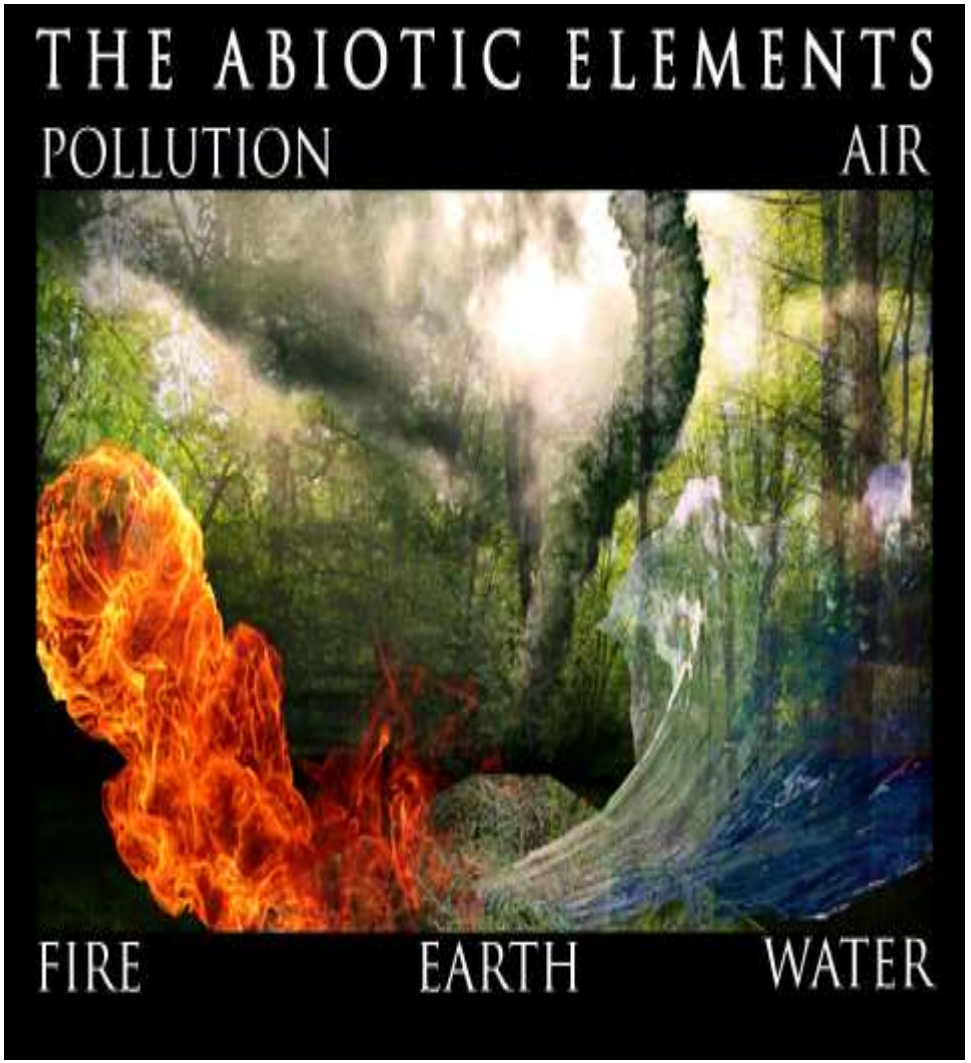


Biotic Factors

the living parts of an ecosystem; for example **microorganisms, plants and animals**.

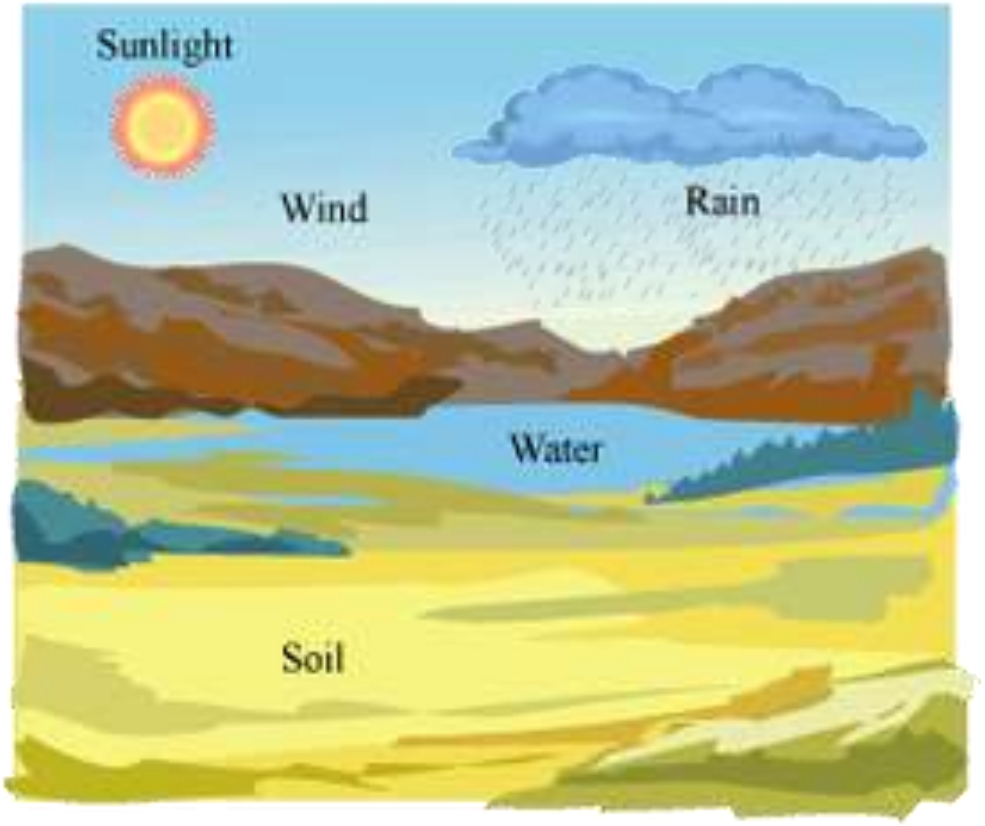
Abiotic Factors

are non-living chemical and physical factors in the environment which **affect ecosystems and biodiversity**.



Abiotic Factors

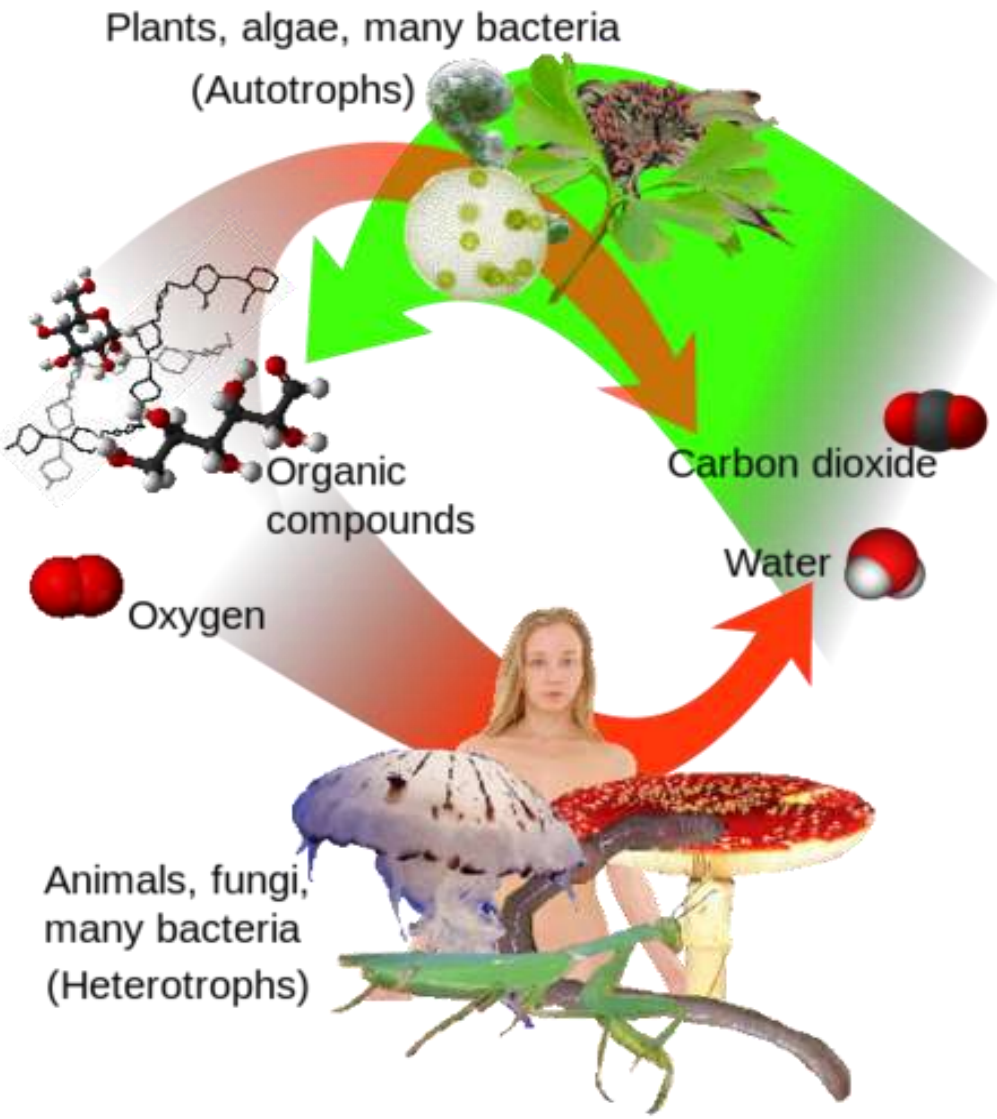
temperature,
rainfall,
altitude,
soil,
nutrients,
latitude,
sunlight



Biotic Factors & Abiotic Factors

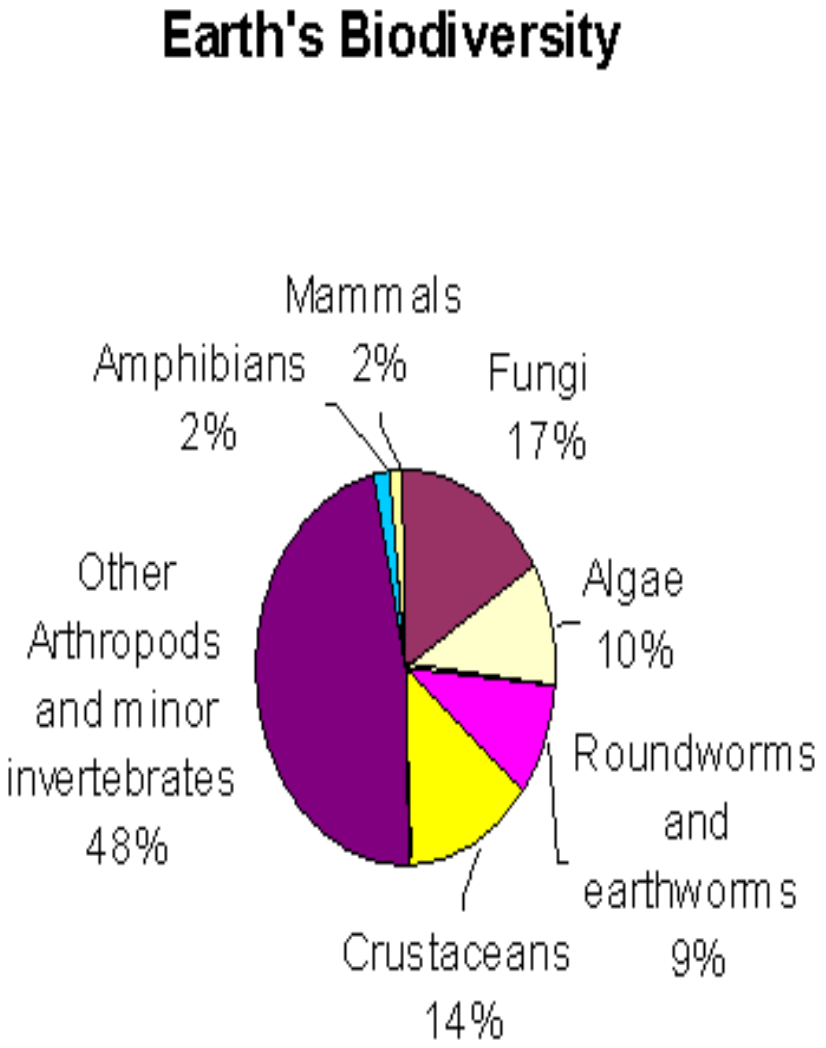
Interact to determine biodiversity of an area

Responsible for various biomes



Biodiversity

biological diversity in an environment; genetic variation within populations; variation of populations within ecosystems



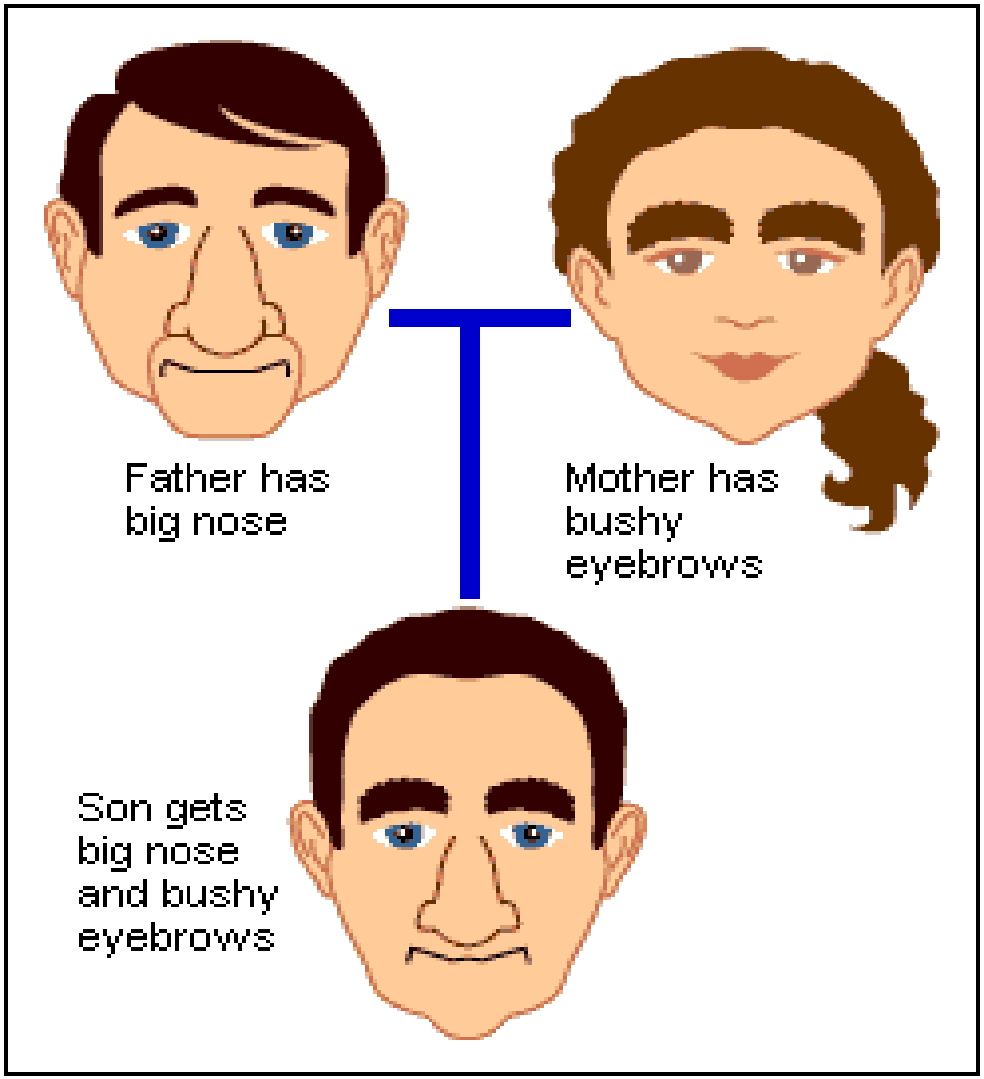
Biodiversity includes

Mutations within the genes of an individual organism

- Pigeons with genetic variations

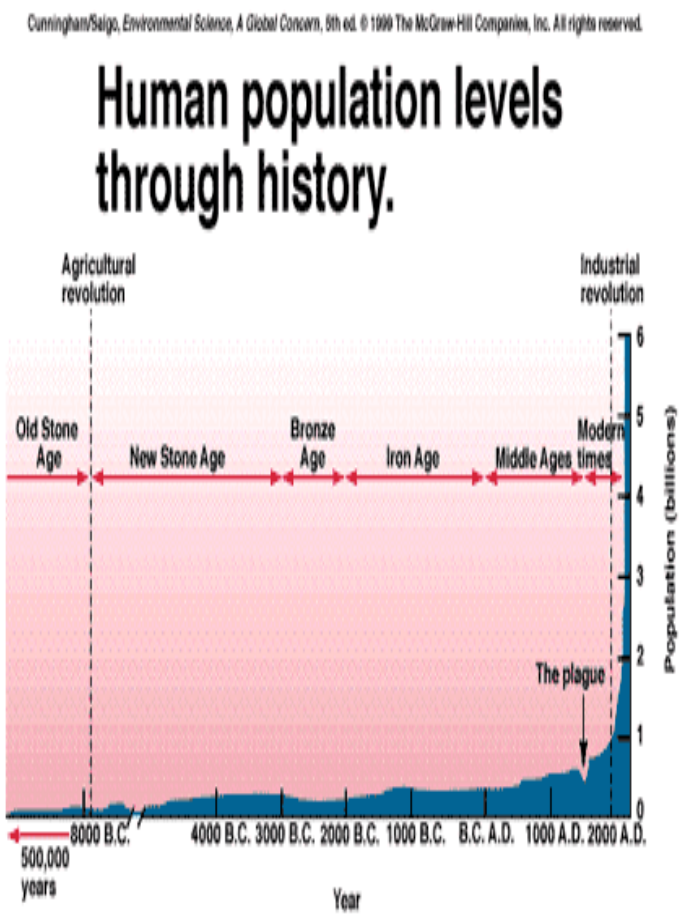
What is genetic variation?

Describes **naturally-occurring differences between individuals in the same species**



North American Biomes

Tundra, Taiga, Desert, Tropical Rainforest, Grassland, and Deciduous Forest.



Human activities impact biodiversity.

1. human population growth
2. habitat alteration
3. introduction of invasive species
4. pollution
5. overharvesting

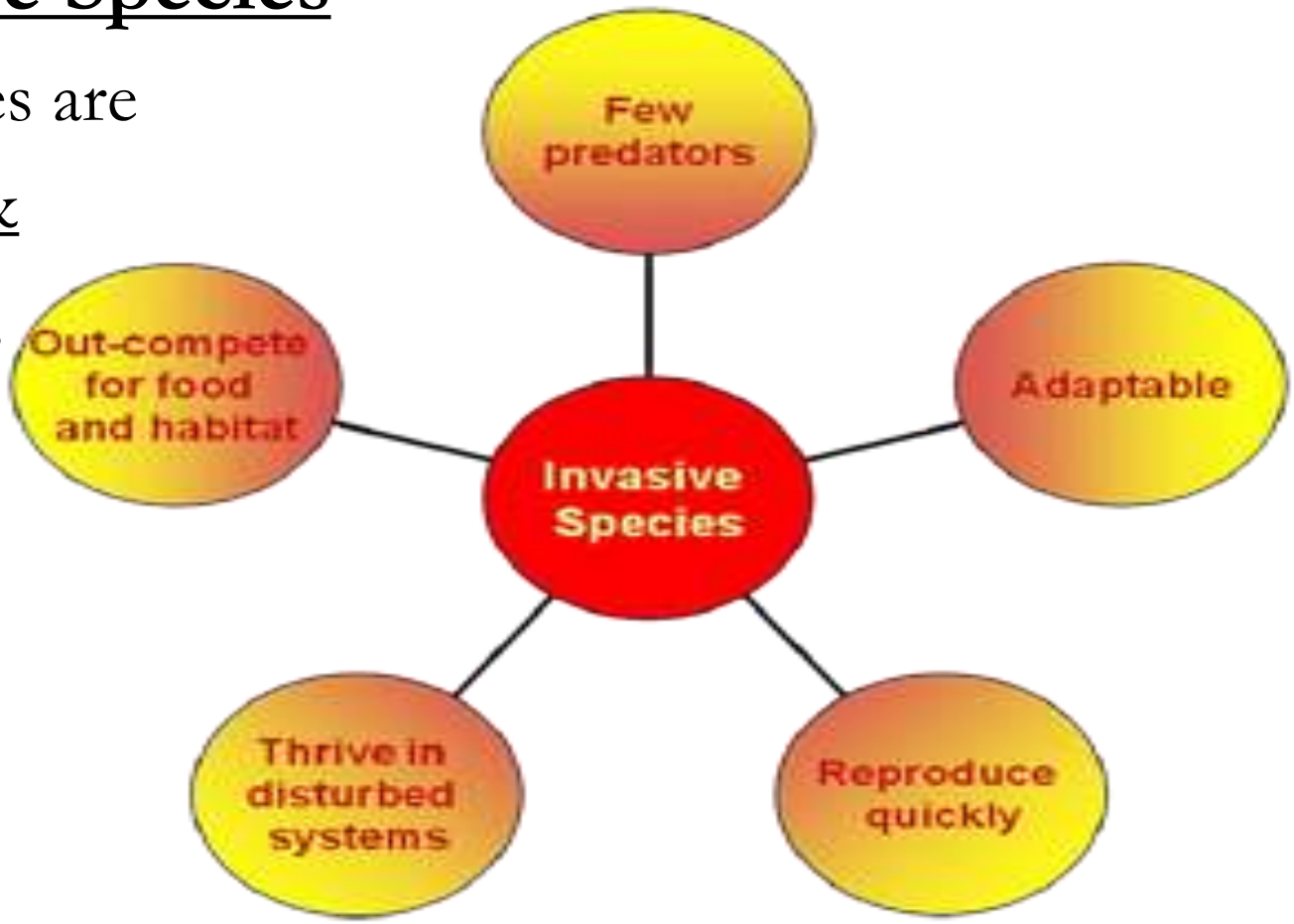
Invasive Species

Examples are

Kudzu &

Fire ants

in NC



Overharvesting

means taking more than can be replaced. Extreme farming, grazing, fishing, deforestation are all **harmful in the long term:**

run out of the resource

Causes of Biodiversity Loss

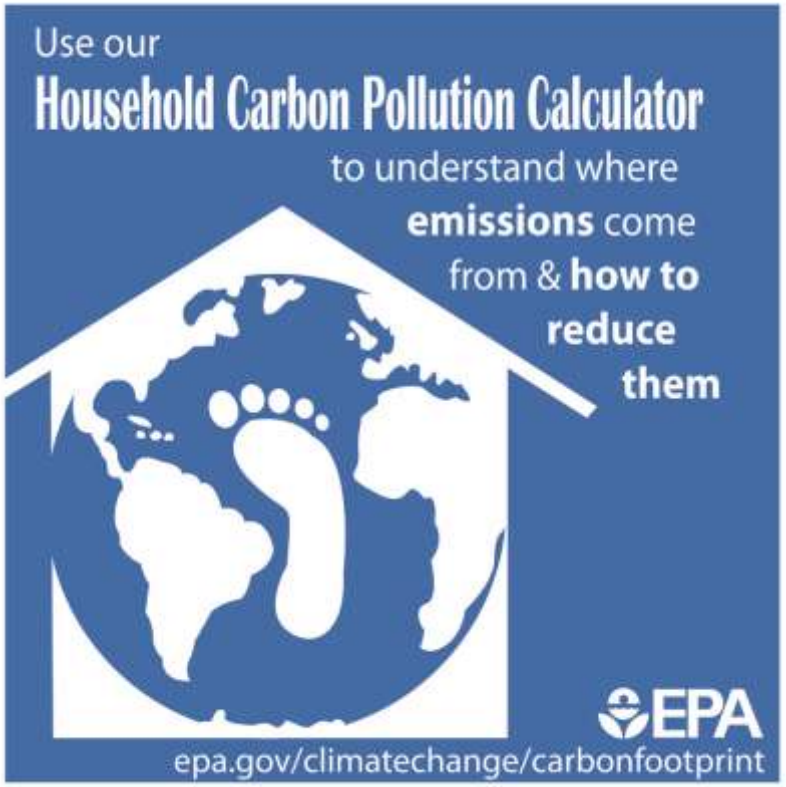
- According to most sources, the major direct causes of human-induced biodiversity loss are

1. land-use change (the fragmentation, degradation or loss of habitats)
2. pollution (air and water)
3. the over-exploitation of natural resources
4. the introduction of non-native (alien or exotic) species
5. climate change-induced biodiversity

Mitigate Human Impacts

Reverse the harm done to the environment.

- Reforestation
- Habitat restoration
- Pollution clean up and control
- Sustainable land use practices
- Reduce "carbon footprint"



Sustainable Agriculture