

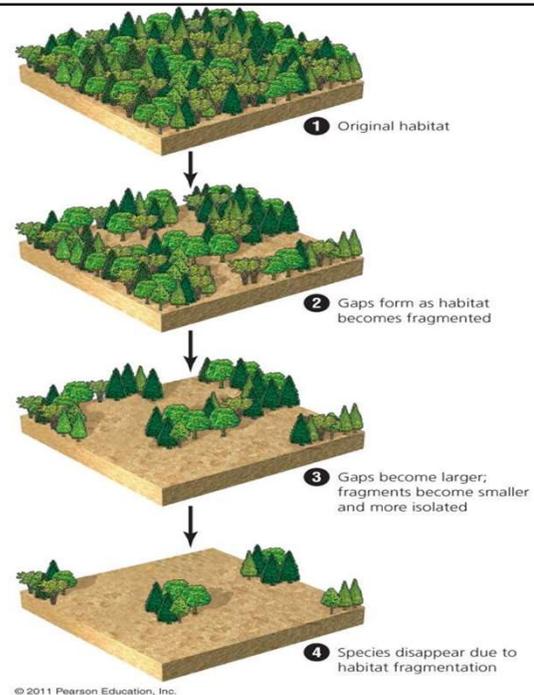
## *Day 6: Invasive Species*

### **Habitat alteration causes biodiversity loss**

- *The greatest cause of biodiversity loss*
- *Habitats are destroyed, fragmented, and degraded*
  - *Farming simplifies communities*
  - *Grazing modifies grassland structure and composition*
  - *Clearing forests removes resources organisms need*
  - *Hydroelectric dams turn rivers into reservoirs*
  - *Suburban sprawl replaces natural communities*

## Habitat fragmentation

- *Habitat fragmentation = Continuous habitats are broken into patches*
  - *Farming, roads, logging, etc.*
  - *Species needing that habitat disappear*



## Overharvesting causes biodiversity loss

- *Vulnerable species: are large or provide food*
  - *Large, few in number, long-lived, and have few young*
- *The Siberian tiger & rhinos are hunted without rules and regulations*
  - *Powerful economic incentives increase poaching*
- *Many other species are affected*
  - *Whales, sharks, gorillas*
  - *The oceans contain only 10% of the large animals they once did*

## Climate change causes biodiversity loss

- Emission of greenhouse gases warms temperatures
  - Modifying global weather patterns
- The frequency of extreme weather events increases
  - Droughts, floods, etc.
- Increased stress forces organisms to shift their geographic ranges
  - Most animals and plants will not be able to adapt
  - 20–30% of species are at increased risk of extinction

## Warming has been the greatest in the Arctic



*Because of melting ice, polar bears can't hunt seals, so they were added to the endangered species list in 2008*



## Keystone species:

- *Their strong interactions with other species affect the health and survival of these species*
  - *Keystone species:*
    - *Pollinate*
    - *Scatter seeds*
    - *Modify habitats*
    - *Predation to control prey populations*
    - *Help plants get nutrients*
    - *Recycle animal waste*

## Keystone species:

