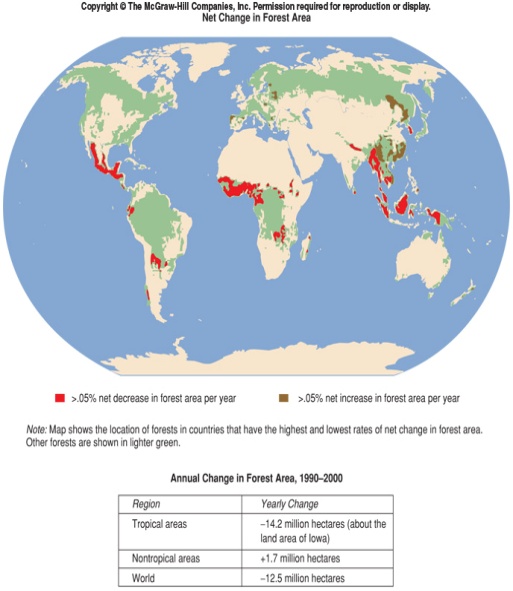
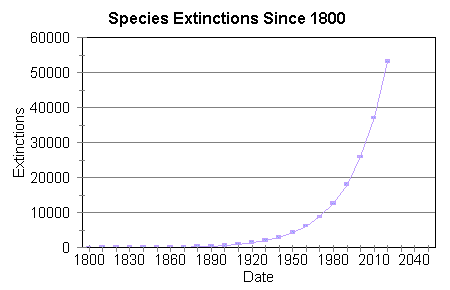
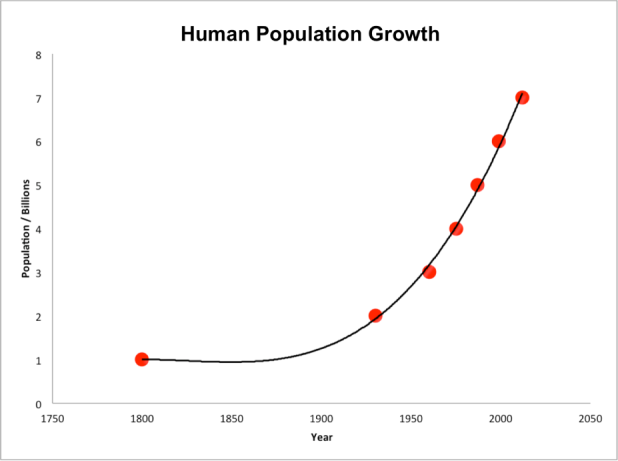
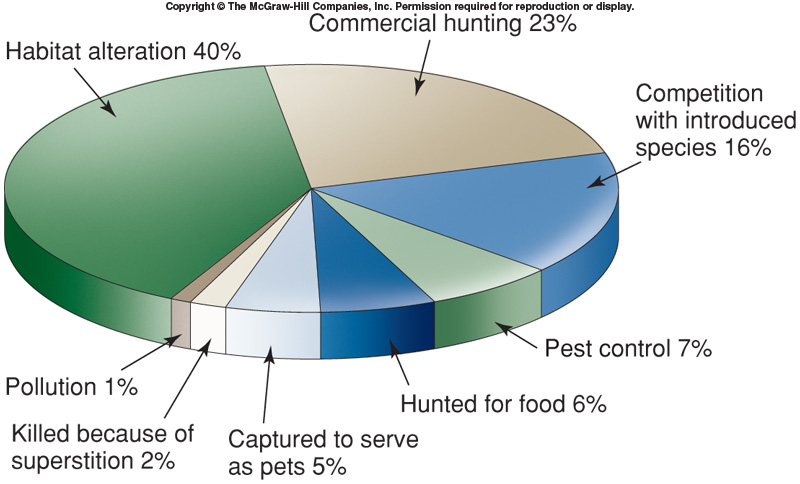
**Threats to Biodiversity**

* Factors that lead to loss of biodiversity include both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Nonhuman activities
    - Natural hazard events
      * Examples
        + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
        + Flood
        + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
        + Ice age (think mammoths)
        + Meteor impact (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
  + [Human activities](http://www.sciencedaily.com/releases/2008/08/080813144405.htm)
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - Overexploitation
    - Introduction of exotic species
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - Agricultural practices

Look at the graphs below. Is there a correlation between species extinction and human population growth?



* Reasons for endangerment:
* 
* Habitat Destruction
  + The World Conservation Union estimates that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of threatened species are under threat as a result of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Habitat loss and fragmentation are thought to be a major cause of past extinctions.
  + About 40% of the world’s land surface has been converted to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and permanent pasture.
    - This leads to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_—one type of organism, for example corn only)
  + Typically, the most productive natural ecosystems (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) are the first to be modified by humans.
  + Pressures to modify the environment are greatest in areas with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Habitat Destruction due to Deforestation
  + Originally, half of the U.S., three-fourths of Canada, and almost all of Europe, and significant portions of the rest of the world were forested.
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**is the process of destroying a forest, often for the purposes of fuel, building materials, or to clear land for farming.
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have greater species diversity than any other ecosystem.
    - They are not as likely as temperate forests to regenerate after logging due to poor soil characteristics.
    - Currently, few tropical forests are being managed for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Several concerns are raised by tropical deforestation:
    - It significantly \_\_\_\_\_\_\_\_\_\_\_\_\_\_ species diversity in the world.
    - It impacts the climate via lowered \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    - Deforested lands are easily \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    - Without the forests to trap CO2, there may be increased \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    - Human population pressure is greatest in tropics, and still increasing.
  + Many lumber companies maintain forest plantations as crops and manage them in the same way farmers manage crops.
    - Plant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, even-aged forests of fast growing hybrid trees.
    - Competing species are controlled by fire, and insects controlled by spraying.
    - Trees mature to harvestable size in as low as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (vs. 100).
    - Quality of lumber reduced.
    - Low species diversity and wildlife value.
* Habitat Destruction due to Grazing
  + The conversion of rangelands to grazing by domesticated animals has major impacts on biodiversity.
    - Selective eating habits of livestock tend to reduce certain species of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    - Important to regulate number of livestock on rangelands, especially in dry areas.
      * Overgrazing is a severe problem where human population pressures are great.
      * **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** can occur due to overgrazing.
* Threats to Marine Biodiversity
  + Trawls are nets dragged along the bottom.
    - They disturb the seafloor and cause habitat damage.
  + About 25% of catch is undesirable, and thus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but they are usually dead, and their removal further alters the ecological nature of the seafloor.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + According to the World Conservation Union, overexploitation is responsible for over \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of endangered animal species and 8% of endangered plant species.
  + The World Wildlife Fund estimates illegal trade in wild animals globally produces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ annually.
    - These activities have already resulted in local extinctions.
  + The United Nations estimates 70% of world’s marine fisheries are overexploited or are fully exploited and in danger of being overexploited.
    - Amount of fish caught has remained relatively constant since 1989.
  + Meat from wild animals is often referred to as **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
    - Examples include chimpanzees, gorillas, leopards, monkeys
  + The Wildlife Conservation Society estimates 70% of wildlife species in Asia and Africa and about 40% of species in Latin America are being hunted \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_much of it for bush meat.
    - Hunting of wildlife is a part of all subsistence cultures.
    - Many kinds of wildlife are considered delicacies and are highly prized for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* + Harvest of living animals for the pet and aquarium trade is a significant problem.
    - The method of capture is often problematic.
      * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of bird nests.
      * \_\_\_\_\_\_\_\_\_\_\_\_\_ used to stun fish.
  + Wildlife are also hunted because parts of the animal may have particular value.
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Systematic killing of certain organisms that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ also results in reduced biodiversity.
    - Large predators have been locally exterminated because they preyed on domestic animals.
      * Example: Wolves
  + Pollution
    - Many different types of pollution have lead to a decrease in biodiversity
      * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
      * Soil pollution
* Introduced Species

An introduced species is any organism that was brought to an ecosystem as a result of human actions.

If an environment has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that the introduced species can exploit, or if the introduced species is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, original species may be pushed out or die. This particularly happens when there are no predators for the introduced species.

When an introduced species has established itself in a new ecosystem, it is called an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* + Examples include:

