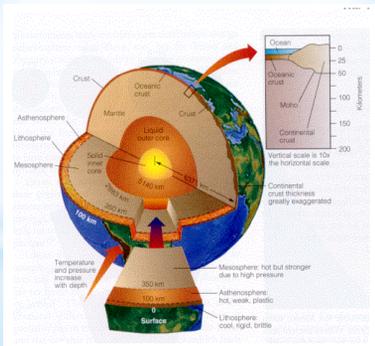


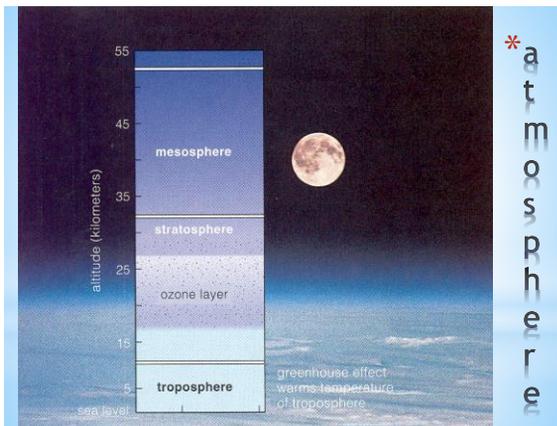
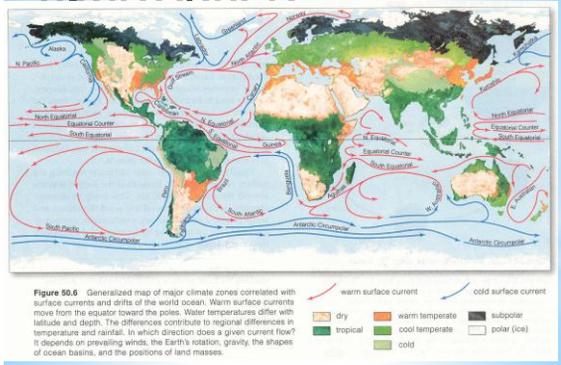
* Introduction to the Environment



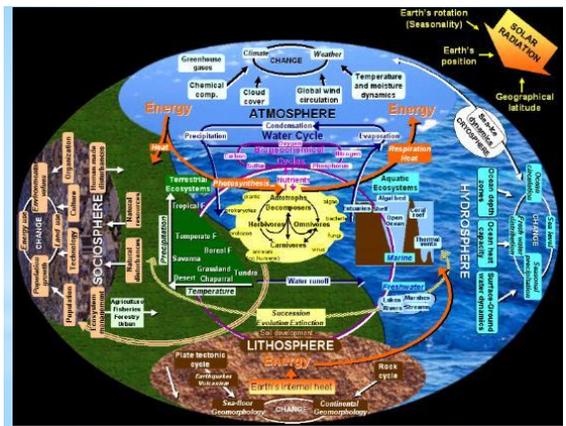
* lithosphere



* hydrosphere



* atmosphere



* Humans affect this complex system

* Environmental management is...

- * The human management of all biological, physical and chemical components in both biotic (living) and abiotic (non-living) areas of the environment
- * The interaction of social, cultural, and economic environment with the bio-physical environment.



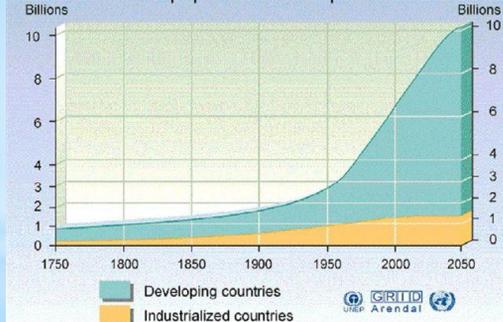
* Monitor effects with "environmental indicators"

* Five major global indicators:

- * Biological diversity (genetic, species, ecosystem diversity)
- * Food production (need to be able to feed people)
- * Temperature and CO2 concentrations (increasing because of humans)
- * Resource depletion (how much stuff we've used)
- * Human population: Number one environmental issue. Why?



World population development



* Why is environmental management important?

- * Human population growth is rapid
- * More people = more needs on the same amount of space
- * People tend to crowd together, which leads to a host of problems:
 - * Loss of arable land
 - * Over fishing
 - * Water shortage
 - * Air & water pollution
 - * Stress on cities' infrastructure
 - * Per capita decrease in facilities like health care



* Why is environmental management important?

* Humans use more of the environment, in more ways, than every other species on Earth combined.

* Resources come in two forms

- * Renewable: replaceable within a human lifetime (typically replacement of <30 years)
 - * Biosphere resources (trees, animals) and regenerating resources (wind and solar power, etc.)
- * Nonrenewable: not replaceable within a reasonable time period—Hundreds to millions of years to generate
 - * Metals, fossil fuels, water, etc. → non-living or finite resources

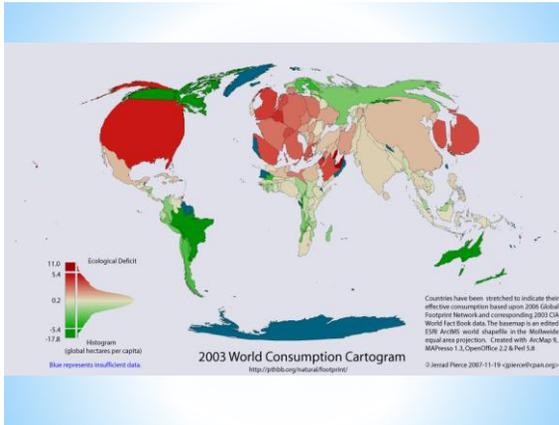


* Why is environmental management important?

* Ecological footprint: a measure of an individual's consumption, measured in land

* Per capita ecological footprint: a country's total footprint divided by population





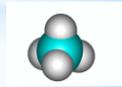
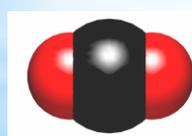
*Why is environmental management important?

- *Humans are using resources rapidly and unevenly.
- *More Economically Developed Countries (MEDC's) use much more per capita resources than Less Economically Developed Countries (LEDC's) or Newly Industrialized Countries (NIC's)
- *Huge lack of access to the basic energy requirements in certain parts of the world
- *Energy poverty is one of the main factors of overcrowding of urban areas in LEDCs

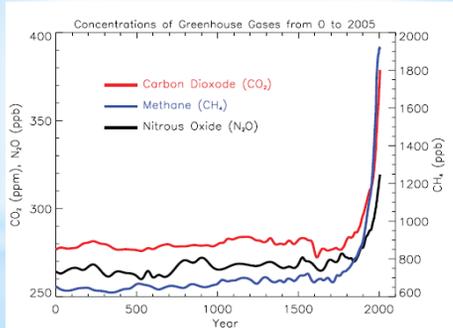


*Why is environmental management important?

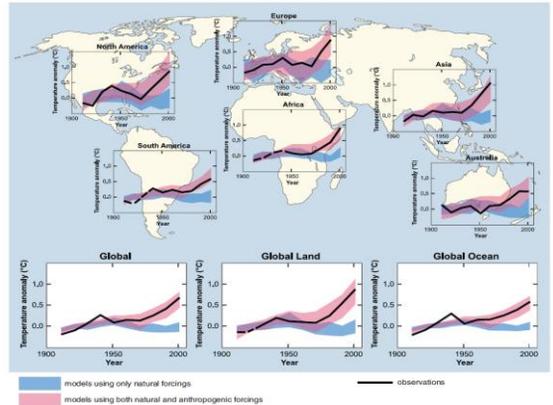
- *Human consumption of resources gives off greenhouse gases (more to come)
- *Increases global temperatures
- *Slight increases in temperature can cause catastrophic changes.

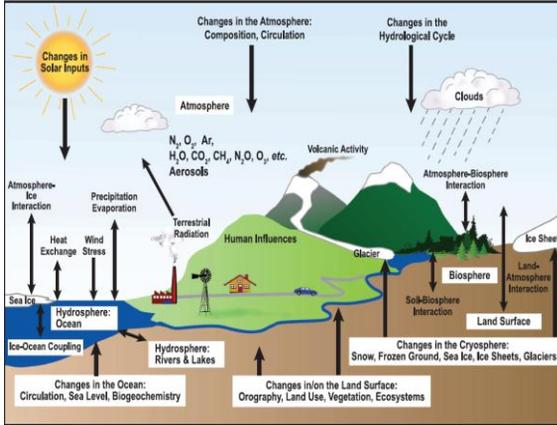


*Concentration of GHGs



Global and continental temperature change





* Human beings need resources

- * We're not going to stop using stuff, so we need to start using what we have **sustainably**
- * Cannot damage environment past its ability to recover.
- * Cannot use renewable resources faster than they become available naturally.
- * Need to limit the use of nonrenewable resources.

