

Unit 5 13.2 Human Environment

What are the major factors contributing to environmental change today? How are humans responding to environmental change?

Human Geography

The following information corresponds to Chapter 13 in your textbook. Fill in the blanks to complete the definition or sentence. Note: All of the following information in addition to your reading is important, not just the information in the blanks. p.427 - 440

- Environmental Change**
- The _____ of plants and animals occurs w/ or w/o human activity.
 - More _____ = greater capacity for environmental change (e.g. deforestation was so severe in China that Mao Zedong ordered everyone to plant a tree).
 - MDCs consume more _____ than LDCs; consumption is mostly _____ in LDCs & _____ in MDCs (a baby born in the US will consume _____ times more energy than a baby born in Bangladesh!)
 - MDCs have more technology, and therefore a greater need for _____ (e.g. fossil fuels – cause pollution); tech. enables the population to alter large portions of the planet in a shorter amount of time

Trends in Human Consumption

- Consumption habits have changed as well; for example – the demand for low-cost hamburgers in US (McDonalds) has led to the cutting down of trees in _____ & _____ America to make way for pastures and cattle herds.

* As you can see in the table, the production of meat requires much more water than for crops.

- Improvements in the technology of transportation over time have required more energy at each level:

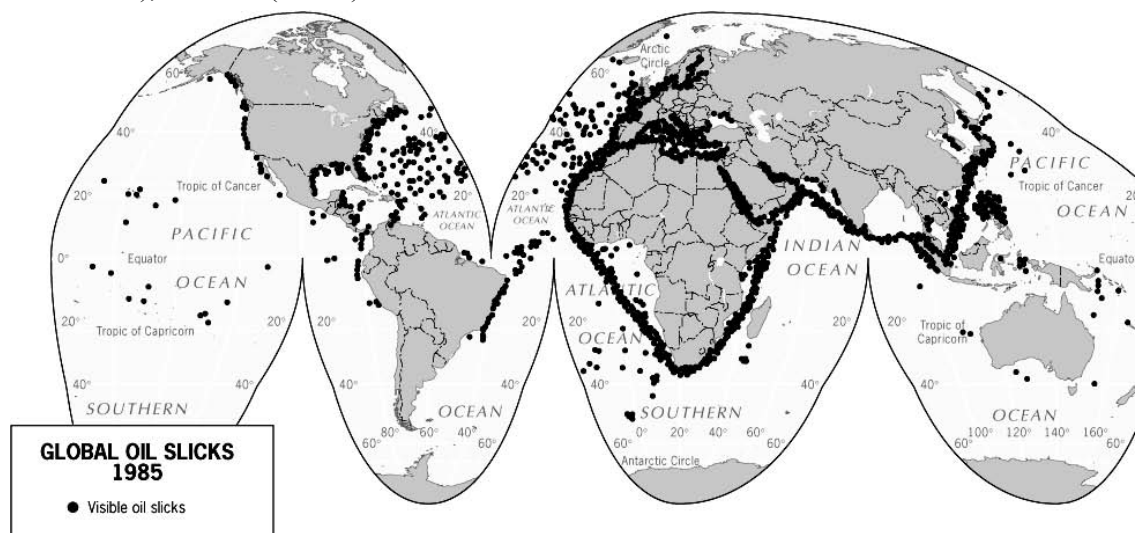
1. By _____ or _____,
2. Domesticated _____,
3. _____ boats
4. _____ engine (invented toward the beginning of the industrial revolution)
5. _____ engine (invented toward the end of the industrial revolution)

Crop
Potatoes
Wheat
Corn
Rice
Chicken
Beef

Liters/Kg Water

- Today's means of transportation causes more _____ (oil slicks) than ever before; moves species to new regions (e.g. Australian fir trees in West Palm Beach), diseases (SARS)

- Before the 1800s, humans relied on _____ energy, mostly through the consumption of plants & animals = wood & meat).
- Global energy production was _____% greater in 1999 than in 1971; and this rate has been steadily increasing.
- _____ power is largely reliable, but not 100% safe (e.g. Three Mile Island ('79), Chernobyl ('86)).



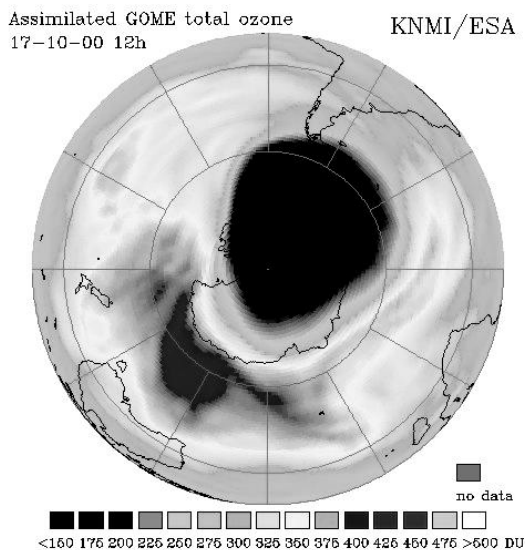
Environmental Policies in Response to Environmental Change

- Many environmental problems do not lie w/in a single _____, or state; often times these difficulties cross political boundaries.
- Many international agreements have been spear-headed by _____ (NGOs) that operate outside the formal political arena.
- One example of an NGO is the _____ (GEF) – a joint project of the United Nations and the World Bank; the GEF funds projects related to four issues (since 1992):
 1. Loss of _____ (plants & animals),
 2. Protection of the _____ layer,
 3. Global _____ change (temperatures have been rising), &
 4. Protection of international _____.
- Although the GEF has been charged with protecting key elements of the world environment – it still functions in a _____-based world.



Specific Policy Examples

- ~170 countries signed an agreement proposed by the UN Environment Program dealing with _____ in 1993; the participating countries (168 today) work to establish a system to reduce activities that have a negative impact.
- It has been an ongoing struggle to find a balance between the need of _____ to promote local economic diversity & preserve biodiversity, which is the richest in the global economic _____; there has also been controversy over the



_____ sharing the costs for conservation.

- A naturally occurring _____ layer exists in the upper levels of the stratosphere (when O₃ is too plentiful in the troposphere (0-16 kilometer altitude), _____ can occur).
- The ozone layer protects the Earth from the Sun's harmful _____ rays; _____ (chlorofluorocarbons) found in refrigerants, fire extinguishers, and aerosol cans used since the 1950s were found to be harmful in the _____; the image to the left shows a "hole" in the ozone layer over _____.
- The _____ was signed in 1987 to deal w/ CFCs.
- The _____ was signed in 1997 by more than 80 countries; it laid out plans to reduce the emission of _____ gases; the _____ has decided to go its own course – and has actually abandoned it unilaterally under the current administration.

The Future

- Global conditions are _____, in that future conditions cannot be reliably predicted; small actions today may impact the world greatly down the road.
- In the 1970s, _____ raised oil prices (gas lines, energy price hikes, increases in smaller automobiles, reduction in speed limits).
- Today, _____ (major "gas-guzzlers") are more popular than ever, and gas is relatively cheap (~1/3 EU); but this poses the potential for another crisis – short memories.
- _____ is not a renewable resource, and as the world becomes more developed, it is consumed in greater quantities & demand increases.
- The _____ may be a: "warmer, more crowded, more connected, but more diverse world."

