Unit 5

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

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)
· 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 within 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 with 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.”