

Unit 13.1 Human Environment**5**

How has the Earth environment changed over time? How have humans impacted Earth's environment?

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.410 – 426

Field Note: Disaster along Indian Ocean Shores

- On December 26, 2004 a natural disaster in the form of a _____ swept across the Indian Ocean from Indonesia to Thailand to Sri Lanka to Somalia, and the Maldives. A _____ results from an undersea _____ involving a large displacement of the Earth's crust. It claimed about _____ lives and ruined the livelihood of millions.

How Has the Earth Environment Changed over time?

- In reconstructing the planet's history, _____, a climatologist – geographer to propose the _____ hypothesis, which suggests there was once a supercontinent he called _____ that fragmented into what we know today as _____.
- The earth is called the _____ planet because it is made up of more than _____% _____. Originally the atmosphere was loaded with _____ and would have appeared _____, but the _____ absorbed the _____ and turned the skies _____.
- The _____ raised the level of _____ content. The _____, an ocean girdling zone is an area of crustal _____, _____, and earthquakes.

The Little Ice Age in the Modern Era

In the 14th c (_____) there was a period of increasing _____, decreasing _____, frigid _____, and a shortened _____, which resulted in dwindling _____, failing _____, and seas to stormy for _____. But weather extremes included _____ and raging _____. This resulted in _____ all over Europe. This period ended in the mid _____ century.

How Have Humans Impacted the Earth's Environment?

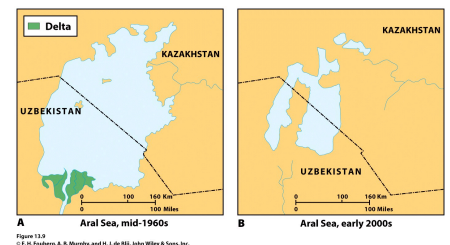
Over the last 500 years, the _____ and _____ at which humans have modified the earth has _____ dramatically.

Environmental Stress

- Several examples of **environmental stress** are cutting of _____, the emission of _____, burying _____ that foul _____ supplies, dumping of vast amounts of _____, and the use of _____ in farming. Human built _____, _____, _____, have modified the environment and may be constructive as well as destructive.

Water

- _____ is a renewable resource, but is not distributed evenly around the globe. The _____ cycle brings _____ and _____ from the oceans to the land. Most of the water is lost through _____ and _____, but enough seeps down into _____ to provide _____ with a steady flow.
- Adequate water is a problem in many areas around the world like many parts of Africa, Southern California, South _____ and in _____ on the Mediterranean. _____ overuse of the _____ Aquifer had resulted in _____ entering the aquifer from the _____ Ocean. Over time this would permanently destroy a _____ aquifer.
- Three quarters of all the fresh water is annually consumed by _____, not in cities.
- One of the great ecological disasters of the 20th c. occurred in Kazakhstan and Uzbekistan with their common boundary on the _____. Streams that fed this large body of water were diverted for irrigation in the surrounding desert (mostly for commercial cotton production). Chemical _____ have ruined the groundwater below, causing a major health crisis.
- The Aral Sea also began to dry up. By the 1990s it had lost more than _____ if its original surface area.



Water & Politics

Water is a particular problem in relation to _____ and its neighbors. As much as ½ of Israel's water comes from sources outside of Israel's state. The water issue will complicate the return of the _____ to Syria, since about 30% of the water reaching the Sea of Galilee comes from there. Water will also complicate the establishment of an independent state of the _____ because about 30% of Israel's water comes from the _____ aquifer.

Atmosphere

- The atmosphere is a largely _____ resource.
- Global _____ could be around 3.5°F – 5.5° F over the next 50 years. In March 2002, a _____-sized chunk broke off Antarctica.
- _____ gases are increasing at a rate of 2% per decade (CO₂, methane, nitrous oxides, etc)
- _____ rain is caused by the burning of fossil fuels (coal, oil, natural gas) ; emitted by cars, industries, etc. It can be _____ enough to do great damage over time (e.g. acidification of lakes, stunting of forests, loss of crops& fish, etc.

The Land

- Forests convert CO₂ to _____ through photosynthesis and related processes, which release oxygen into the atmosphere.
- In the 1980s, the Food and Agricultural Organization (FAO, an organization under the United Nations) studied the effects of _____ & determined that 44% of the global tropical rainforests are already affected by cutting.
- 1% logged in every year, which means that at that rate the entire equatorial forest would be gone in less than _____ years.
- _____ has been called the “quiet crisis”. _____ pressure has been a major cause as pressure on the land increases, farmers have less time for the soil to recover

Waste Disposal

- The US is the largest producer of _____ waste, debris, and _____. The US is estimated to produce _____ pounds of solid waste **per person per day!**
- The growing volume of waste must be _____. Open dumps have been replaced with _____ in countries that can afford it, but poor countries with open dumps have problems with vermin, like rats, and waste liquids contaminating the _____.
- The US, EU, and Japan _____ solid (and hazardous) waste to developing countries in Africa, Central and South America and East Asia.

Hazardous Materials

- _____ waste: caused by chemicals, infectious materials
- Radioactive waste - _____ level waste comes from small amounts of radiation from hospitals, research facilities, nuclear power plants and _____ level waste comes from nuclear power plants & nuclear weapons facilities, may cause massive pollution and contamination.
- _____ level radioactive waste has been disposed of in _____ drums placed in six gov't run landfills.
- _____ level radioactive waste is more difficult, and must be stored in remote places where they will not contaminate water, air or the environment. Some suggested sites are _____, _____, _____ or _____
- In 2000 the US developed two major disposal sites: _____ & _____

Biodiversity

There are between _____ & _____ million species in the world today
Only around _____ million species have been identified
_____ travel has introduced new species worldwide, and has threatened many species (e.g. Colombian Exchange), the combination of human population pressure, technology, & economic forces lead to _____ endangerment & extinction. The _____ bird was hunted to extinction by humans, dogs, and rats on the island of Mauritius.

