

HUMAN EFFECTS ON THE BIOSPHERE

A. Irreplaceable Environmental/Ecosystem Services

1. Maintenance of hydrological cycle
2. Vegetation modifies climate
3. Absorption of pollutants
4. Transformation of toxic chemicals
5. Erosion and flood control
6. Creation of soil
7. Pest control
8. Insect pollination
9. Maintenance of oxygen and nitrogen cycles
10. Carbon storage and maintenance of carbon cycle
11. Decomposition
12. Biological diversity

B. History of Human Impact on the Environment

Example: Tigris and Euphrates valleys (Fertile Crescent)

C. How We Alter Ecosystems

1. Agriculture simplifies ecosystems
2. Require energy subsidies
3. Human-managed ecosystems: stopping succession
4. Effects of increased agricultural production
5. Increase of pollution
 - a) new pollutants
 - b) increased quantities of natural pollutants