

**Basic Terminology Notes with Multiple Choice Questions**

**Environmental Science Is a Study of Connections in Nature**

**Environmental science:** interdisciplinary science connecting information and ideas from

**Natural sciences:** ecology, biology, geology, chemistry... **Social sciences:** geography, politics, economics, **Humanities:** ethics, philosophy

**Sustainability:** the capacity of the earth's natural systems and human cultural systems to survive, flourish, and adapt into the very long-term future

**Natural Resources + Natural Services = Natural Capital**

**Natural resources:** useful materials and energy in nature

**Natural services:** natural processes such as renewal of air, water, & soil

**Natural capital:** the natural resources and natural services that sustain human population and our economy.

Which of the following is an example of a natural (ecosystem) service?

- a) A parasite attains nutrients from its host.
- b) Wetlands provide flood control for cities.
- c) Copper is extracted from mines.
- d) The movement of tectonic plates causes volcanic activity and earthquakes.
- e) Tsunamis clear coastland debris.

**Some Resources Are Renewable and Some Are Not**

**Resource:** Anything we obtain from the environment to meet our needs

**Perpetual resource:** Solar energy

**Renewable resource**

- Several days to several hundred years to renew
- E.g., forests, grasslands, fresh air, fertile soil

**Sustainable yield**

- Highest rate at which we can use a renewable resource without reducing available supply

**Nonrenewable resources**

- Energy resources
- Metallic mineral resources
- Nonmetallic mineral resources

Specific examples of renewable resources are:

- a. water, soil, air, and oil.
- b. timber, water, and mineral resources.
- c. agricultural crops, soils, and natural gas.
- d. Forests, water, and soil.

## **We are Living Unsustainably**

**Environmental degradation:** wasting, depleting, and degrading the earth's natural capital (a.k.a. natural capital degradation)

- Air pollution
- Climate change
- Shrinking forests
- Soil erosion
- Decreased wildlife habitats
- Species extinction
- Aquifer depletion
- Declining ocean fisheries
- Water pollution

### **Pollution Comes from a Number of Sources**

#### **Sources of pollution**

- Point sources; e.g. smokestack
- **Nonpoint sources;** e.g. pesticides blown into the air

#### **Main type of pollutants**

- Biodegradable
- Nondegradable

### **2 Types of Pollution Control**

- Pollution cleanup (output pollution control)
- Pollution prevention (input pollution control)

Nonpoint sources of pollution include all of the following EXCEPT:

- a. overspill from a stockyard (a large yard containing pens and sheds, typically adjacent to a slaughterhouse, in which livestock is kept and sorted).
- b. runoff from croplands.
- c. a smokestack from a power plant.
- d. urban runoff from streets.