

Chapters 1 and 2

Environmental Interrelationships
and Environmental Ethics

Interrelatedness



***“Tug on anything at all
and you’ll find it
connected to everything
else in the universe” –
John Muir***



Environment

- Sum of all of the conditions that affect organisms



Environmental Science

- The field that looks at interactions among human systems and those found in nature.
- Systems – any set of interacting components that influence each other by exchanging energy or material.

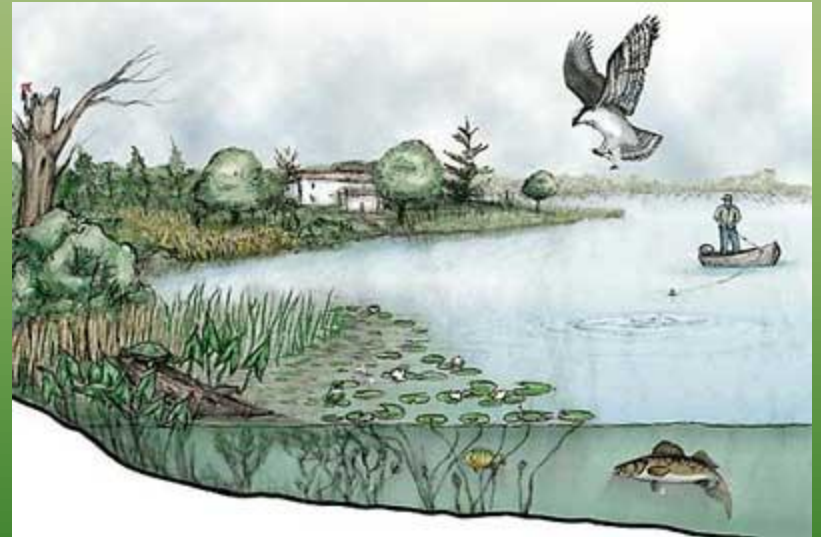
Environmental Studies

- Encompasses environmental science but also involves policy, economics, and often compromise.



Ecosystem

- Particular location on earth with interacting biotic and abiotic factors
- Biotic – living
- Abiotic – non-living



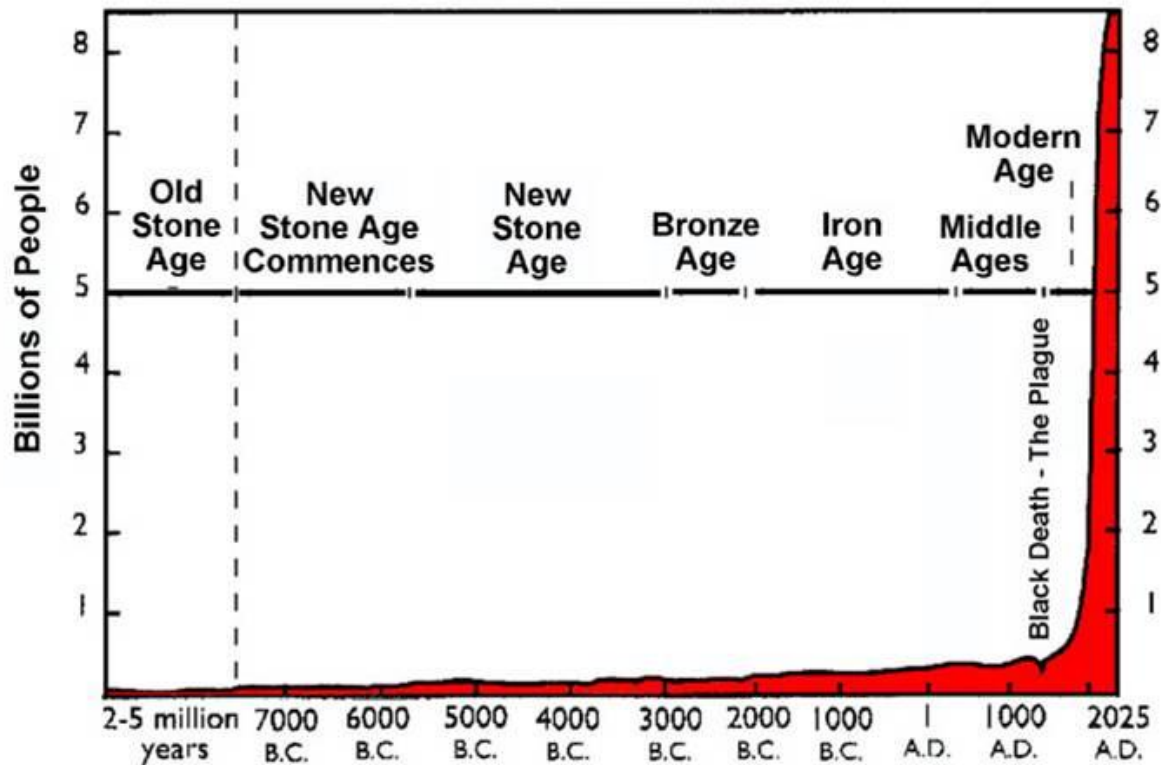
Sustainability

- Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.



Population Growth

World Population Growth Through History



From "World Population: Toward the Next Century," copyright 1994
by the Population Reference Bureau

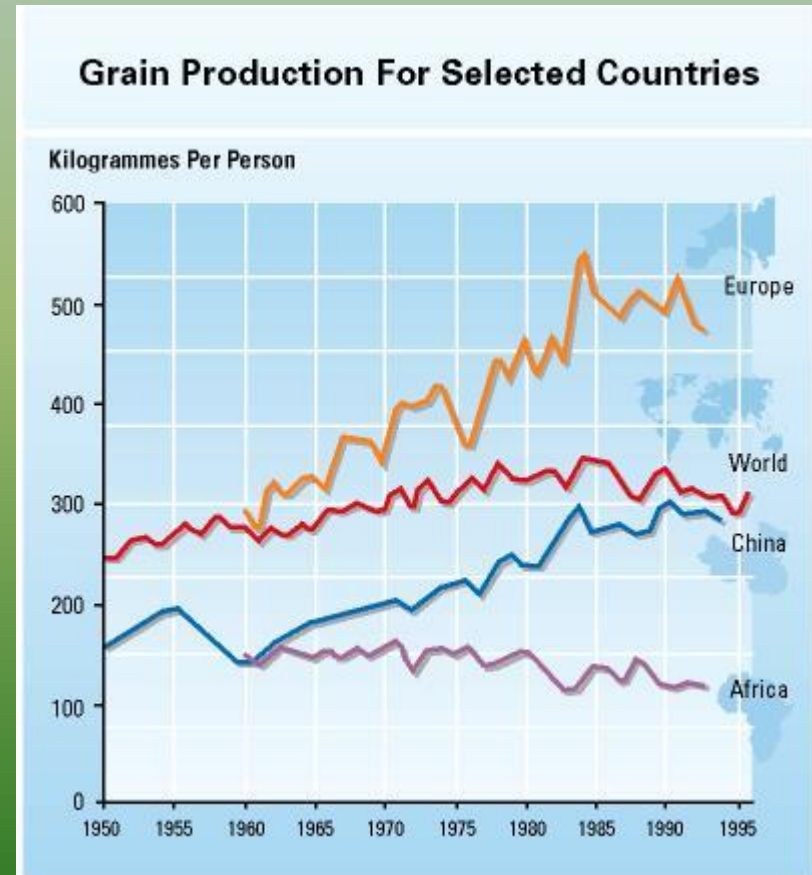
Ecosystem services

- **Provisioning:** food, minerals renewable energy
- **Regulating:** Waste decomposition, pollination, purification of water and air and pest and disease control
- **Cultural:** Spiritual, cultural and recreational
- **Supporting:** Nutrient cycling, photosynthesis, soil formation



Food Production

- Unequal distribution of food



Environment and Health



- Air pollution
- Water pollution
- Malaria
- Accidents (many traffic related from poor roads and vehicles).
- Cancer and coronary heart disease
- Emerging diseases (HIV, flu, MRSA etc.)

Invasive Species

- Tamarisk
- Quagga mussels
- Outdoor cats



Energy and the Environment (2 Issues):

1. Inadequate, costly and insecure supplies
2. Environmental damage from overconsumption of energy



Developing Countries

- Developing, “less” developed, or underdeveloped countries: underdeveloped industrial base and a low Human Development Index (HDI)
 - Examples: Liberia, Congo, Burundi



Developed countries

- Developed, industrialized, more economically developed countries: highly developed economy and advanced technological infrastructure.
 - Examples: Norway, Australia, Netherlands

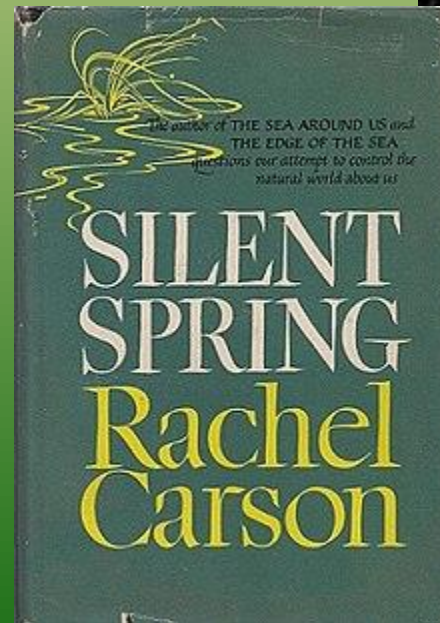


3 approaches to Environmental Ethics

- **Anthropocentrism:** environmental concern derives from human interests.
- **Biocentrism:** all life has a right to exist.
- **Ecocentrism:** the environment (not just the living organisms) deserves protection.
 - (Aldo Leopold linked with this one)

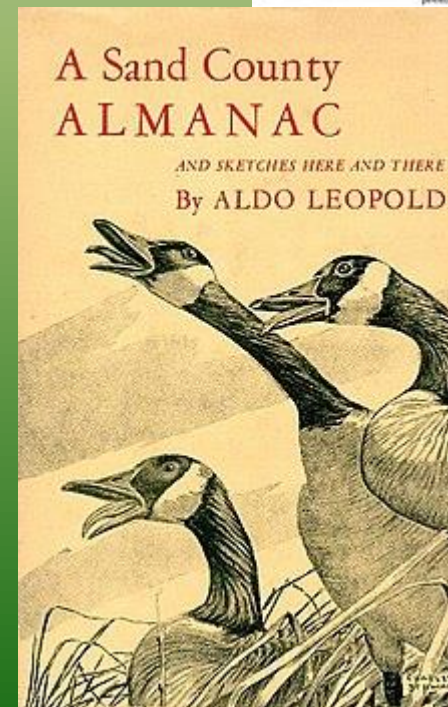
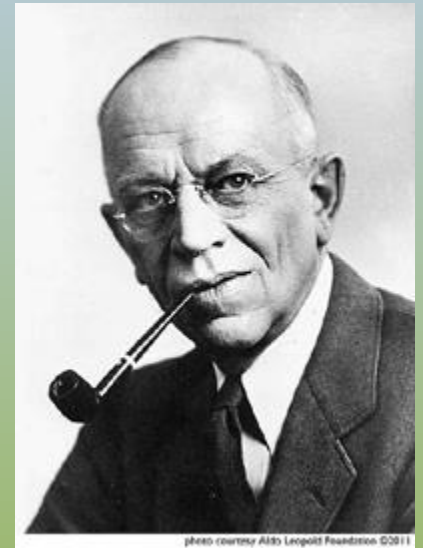
Rachel Carson

- Silent Spring
- Pesticides (DDT)
- “Precautionary Principle”



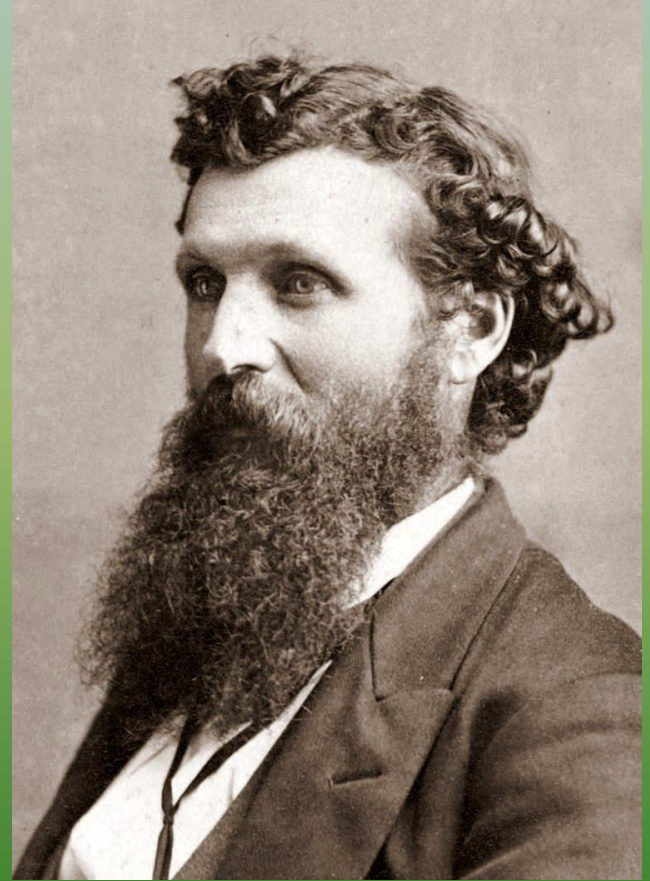
Aldo Leopold

- Sand County Almanac
- Fish and Wildlife Service
- Game Management



John Muir

- Sierra Club
- Yosemite
- Spiritual Connection
- Preservationist



Environmental Attitudes

- **Development**: The earth is for humans – most anthropocentric
- **Preservation**: Preserve large portions and only develop parts (intrinsic value) – most ecocentric
- **Conservation**: Balance of the other two

Wangari Maathai

- Nobel Peace Prize for the Green Belt Movement

