

# The Environment and Society

Chapter 1.2

## The Tragedy of the Commons

- To solve environmental problems
  - Consider Human society
  - How we act
  - Why we do what we do
- Issue: We must share common resources
  - Share park space
  - Fishing in the open ocean
- Garrett Hardin's essay addressed this problem

## The Tragedy of the Commons

- Main difficulty is a conflict between short term interests of the individual
- Vs.
- The long term interest of society
- Commons was a plot of land open to the village used to graze sheep

## The Tragedy of the Commons

**Figure 15** ► Hardin observed that when land was held in common (left), individuals tended to graze as many animals as possible. Overgrazing led to the destruction of the land resources. When commons were replaced by enclosed fields owned by individuals (right), people tended to graze only the number of animals that the land could support.

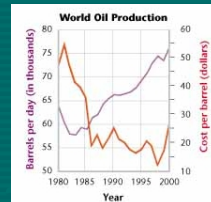


## The Tragedy of the Commons

- Short term interest
  - Graze as much land as possible to feed sheep before someone else does
  - Result = Land rapidly depletes and becomes useless
  - Everyone suffers
- Long term interest
  - Maintain land for future generations
- Someone must take responsibility

## Economics and the Environment

- Supply and Demand
- greater demand for a limited supply of something causes it to cost more
- World oil production

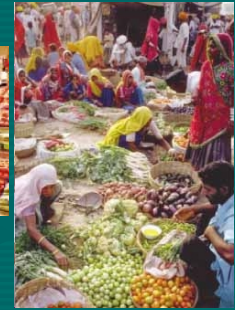


**Figure 16** ► In general, when the production of oil declines, the price of a barrel of oil increases.

## Economics and the Environment

- Cost and benefits
  - Balance the cost of clean up vs. the benefit of that clean up
- Risk Assessment –
  - Determining the Potential for misfortune / loss
  - View the risk accurately
  - Of the environmental issue
  - Of the costs
    - Life
    - Health
    - future

## Developing vs. Developed



## Developing vs. Developed

- 2 main problems w/ Developing Countries
- Population growth
  - Rapid depletion of resources
  - Too much waste to handle
  - disease

## Developing vs. Developed

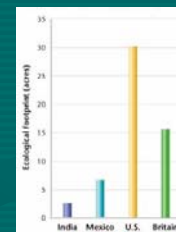
- Developed countries
  - Have education to limit population
  - Technology to deal with waste
  - Can consume more
  - Developed nation make up 20% of world population but consume 75% of its resources

## Developing vs. Developed

Indicators of Development for the United States, Japan, Mexico, and Indonesia					
	Measurement	U.S.	Japan	Mexico	Indonesia
Health	life expectancy in years	77	81	71.5	68
Population growth	per year	0.8%	0.2%	1.7%	1.8%
Wealth	gross national product per person	\$29,240	\$32,350	\$3,840	\$640
Living space	people per square mile	78	829	133	319
Energy use	per person per year (Btu)	351	168	59	18
Pollution	carbon dioxide from fossil fuels per person per year (tons)	20.4	9.3	3.5	2.2
Waste	garbage produced per person per year (kg)	720	400	300	43

## Developing vs. Developed

- Ecological footprint
- The productive area of land required to support a person in a particular country
- 1 acre = size of football field without end-zones



## A sustainable world

- Condition in which human needs are met in such a way that the population can survive indefinitely
- Requires everyone's participation
  - Individual
  - Business
  - Governments

## Sustainability

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- Chicken of the Trees?
  
- List ways the project helps iguanas and farmers too
- Why did the Dr. train farmers to value and raise iguanas? What is her larger goal?
- Think of a project that would be suitable to your area.