Upcoming Readings

today: Ch 12, and web-links (Economics)
Tues 20 Nov: professional panel (TNC, USFWS, NPS)
   - bring a question, hand it in at beginning to me
Tues 27 Nov: Galapagos Debate Links
   - Debate on 27 Nov
   - Grading Criteria due 27 Nov
   - Creativity on 29 Nov.

Conservation, Economics, Sustainable Development

That which seems to be wealth may in verity be only the gilded index of far reaching ruin.

- John Ruskin, 1883

Grading Criteria
due 27 November

Out of 100 points.

15 points for your grading effort of other pieces.

Also, tell us soon what resources (table, vertical board, power supply?) you will need

Traditional Neoclassical Economics:

Economy = system of production, distribution, and consumption of goods and services (scarcity)

Driven by wants and needs of govt, society, individuals

Decisions about
A. what goods and services
B. how produce
C. how much
D. how distribute
are made by individuals, governments, businesses

Supply and Demand

Use resources:
A. natural
B. human
C. financial
D. manufactured

Making goods and services
Economic Growth

- increase in capacity to provide goods and services
- accomplish with more people and/or more consumption

- measured as GNP (gross national product)
- also known as GNI (gross national income)
- value of goods and services in a country
- can also compare the purchasing power of different countries for a common set of goods and services
  -(GNI PPP; gross national income in purchasing power parity)

- Can examine on a per capita basis as well

Economics Primer...

- Marginal cost
- Marginal revenue

Adam Smith 1909 (voluntary transactions)
Invisible Hand – “turning selfish, uncoordinated actions into increased prosperity and relative social harmony”

- Tragedy of the Commons
- Externalities
- Private Property

Market Failure
resources misallocated:
“a few individuals or businesses benefit at expense of the larger society” (Primack 2006)

How is Economic Development Different?

- Takes quality of life into account:
  life span, infant mortality
  education
  health care
  environmental quality
  pollution
  clean air and water
  percent of population below poverty line etc.
**Women:**
- Do 2/3 of the work
- 10% of the income
- own 0.01% of the property
- 70% of the world’s poor
- 2/3 of the world’s illiterate
(page 87 Miller 2005)

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**Killing the Natives, Chapter 3**

**U.S.:**
- 4% global population
- 25% fossil fuels
- >25% cars
- 50% advertising spending

**Goods vs. Bads**
- $80 billion on shoes, jewelry, watches
- $65 billion on higher education

**Americans since 1950 have consumed more than all in history preceding**

**# indivs/house dropping in US**

**Jimmy Carter** - malaise speech, reduce consumption...Reagan

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Over the past 50 years, the federal government has provided more than $500 billion in subsidies to the fossil fuel and nuclear industries, investing a fraction of that in energy efficiency and renewable sources of energy such as wind, solar, and geothermal. As a result, coal, nuclear power, oil and gas provide more than 91% of our electricity needs in the U.S. This dependence on fossil fuels carries severe public health consequences, including asthma attacks, respiratory disease, heart attacks, and premature deaths. Moreover, fossil fuels, such as coal and oil, pollute the environment from the point of extraction to combustion in the form of global warming, acid rain, oil spills and runoff pollution. At the same time, nuclear power has left us with a nuclear waste problem for which no safe solution exists.
Index of Sustainable Economic Welfare
(p. 355 Van Dyke 2003)

1  Income Distribution
2  Net Capital Growth
3  Natural Resource Depletion/Environmental Damage
4  Unpaid Household Labor
(social and environmental justice)

Economic Growth vs. Development
- efficiency, sophistication, utility

- Producer Pays/Polluter Pays
- Dramatically less waste (packaging, scrubber sludge)

- Taxation/Subsidies
- Government strategies and regulation
- Stable, democratic government required?

[Nonrival (air to breathe) or nonexclusive goods (UV protection from ozone)]

Internal Market Costs vs. Externalities
- External to Market Forces
  - Noise
  - Pollution
  - Acid rain
  - Erosion
  - Global Warming
  - Eutrophication
  - Disease
  - Asthma
  - Birth Defects
  - Behavior and Intelligence

Eco-Friendly Factory, Low-Guilt Potato Chips

In Eco-Friendly Factory, Low-Guilt Potato Chips

CASA GRANDE, Ariz. — At Frito-Lay’s factory here, more than 500,000 pounds of potatoes arrive every day from New Mexico to be washed, sliced, fried, seasoned and portioned into bags of Lay’s and Ruffles chips. The process devours enormous amounts of energy, and creates vast amounts of wastewater, starch and potato peelings.

Over the next several years, Frito-Lay plans to install high-tech filters that would recycle most of the water used to rinse and wash potatoes, as well as the corn used to make Doritos and other snacks, and then burn the leftover sludge to create methane gas to run the plant’s boiler.

The company will also build at least 50 acres of solar concentrators behind the plant to generate solar power. A biomass generator, which will probably burn agricultural waste, is also planned to provide additional renewable fuel.

The retrofit of the Casa Grande factory, scheduled to be completed by 2010, would reduce electricity and water consumption by 90 percent and its natural gas use by 80 percent. Greenhouse gas emissions would be cut by 50 percent to 75 percent, the company said.

Since 1999, Frito-Lay companywide has reduced its water use by 38 percent, natural gas by 27 percent and electricity by 21 percent, cutting $55 million a year in utility costs.
Net Zero

Frito-Lay officials maintain that trying net zero provides a hedge, particularly if the most pessimistic predictions about climate change and the availability of water and petroleum hold true.

“If the price of these resources continues to rise, we will be very happy we made these investments,” said Rich Beck, senior vice president for operations.

Possible?

What do we spend our money on?


Private Property?

nomadic Maasai

<table>
<thead>
<tr>
<th>TABLE 28.1 Water use by people in different sorts of communities in Africa</th>
<th>Domestic water use per person/day (L)</th>
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</thead>
<tbody>
<tr>
<td>Modern urban without water meters</td>
<td>0</td>
</tr>
<tr>
<td>Modern urban with water meters</td>
<td>550</td>
</tr>
<tr>
<td>Traditional agricultural villages</td>
<td>20</td>
</tr>
<tr>
<td>Small urban settlement with supply by government water truck</td>
<td>20</td>
</tr>
<tr>
<td>Small urban settlement with traditional water sources</td>
<td>24</td>
</tr>
</tbody>
</table>

Wright and Nebel 2002
Herman Daly
Former Environmental Economist with Worldbank
Professor at U. Maryland

Utility vs. Throughput
Utility not measurable; it is an experience

Circulatory system vs. digestive system
(perpetual motion machine)

Wealth vs. Ilth (accumulation of goods vs. bads)

Micro vs. Macro economics
(MR=MC vs. endless)

If resources infinite then price = 0,
but if pay for resources then can redistribute wealth

Center for the Advancement of the
Steady State Economy

http://www.steadystate.org/Index.html
Billionaire Warren Buffett told the Senate Finance Committee on Wednesday that Congress should keep the estate tax rather than repeal it and help a few rich Americans like him.

"I think we need to... take a little more out of the hides of guys like me," Buffett told the panel.

One of the world's richest men and biggest philanthropists, Buffett has been outspoken against efforts, mostly by Republicans, to repeal or reduce the federal tax on inheritances. Democrats argue that a repeal would amount to a huge windfall for the nation's wealthiest families.

Estates worth up to $2 million this year and next will be exempt from the federal estate tax. Portions of estates above that threshold will be taxed at 45 percent.

In 2009, the exemption level rises to $3.5 million, and by 2010 the estate tax will be repealed — but only for a year. Unless Congress changes the law, it comes roaring back in 2011 with an exemption threshold of only $1 million and a top tax rate of 55 percent.

Buffett said inheritance taxes preserve a measure of meritocracy, and with it opportunity, by recycling portions of great wealth through public coffers.

"The resources of society I don't think should pass along in terms of an aristocratic dynasty of wealth," Buffett told the panel. "I believe in keeping equality of opportunity as much as you can in this country."

Committee Chairman Max Baucus, D-Mont., citing information from the IRS, said that of nearly 2.5 million deaths in 2004, about 10,000 estates paid the estate tax.

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**Warren Buffett: Tax Inherited Estates**

By LAURIE KELLMAN - 14 Nov 2007

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