

# Ethics and Climate Change Policy

## Objectives:

- Introduce some basic concepts: tragedy of the commons and theories of justice
- Provide a brief historical overview of UNFCCC
- Introduce some of the complex issues of justice in climate change negotiations

# “Tragedy of the Commons”

Garrett Harden, *Science*, 162 (1968): 1243-1248



The Tragedy:

“Ruin is the destination towards which all men run, each pursuing his own best interest in a a society that believes in the freedom of the commons.”

The atmosphere’s ability to regulate climate is a public good.

The ability of the atmosphere to assimilate wastes (GHGs) while regulating climate has limits.

Solution: “Mutual coercion, mutually agreed upon.”

# Varieties of Justice and Climate Global Change

- Distributive Justice
  - »Mitigation
  - »Adaptation
- Intergenerational Justice
- Environmental Justice
- Procedural Justice

# Questions of Justice

“The core ethical issue concerning global warming is that of how to allocate the costs and benefits of greenhouse gas emissions and abatement (Stephan Gardiner).”

# Central Moral Issue

“Climate change raises difficult issues of justice, particularly to the distribution of burdens and benefits among poor and wealthy nations.”

Two leading approaches:

- Current emissions and populations
- Equal emission rights on a per capita basis

Vulnerable countries and regions that have not benefited from industrialization and fossil fuel consumption may feel the greatest effects.



# Climate Change and Sub-Saharan Africa

- 75-250 million people could face water shortages
- Agriculture fed by rainfall could drop by 50% in some African counties by 2020 (IPCC Report, 2007)





## Some Thoughts on Justice

“Equals should be treated equally, and unequals should be treated unequally.”

“Justice is not simple. It requires judgment.”

“Justice will exist if we act with justice.”



“An unjust law is no law at all.”

“If the end result of [climate change] negotiations is not fair then it will not be fully implemented. Little or no mitigation of climate change is then the unfair outcome to those who will have to bear the brunt of the impacts.”

# Developing Countries Considerations

Problem: How to allocate future emissions so that developing countries can pursue economic development

Two ways of looking at this:

Historical principle: “Developed countries must compensate developing countries for overuse.”  
Redistribution of wealth

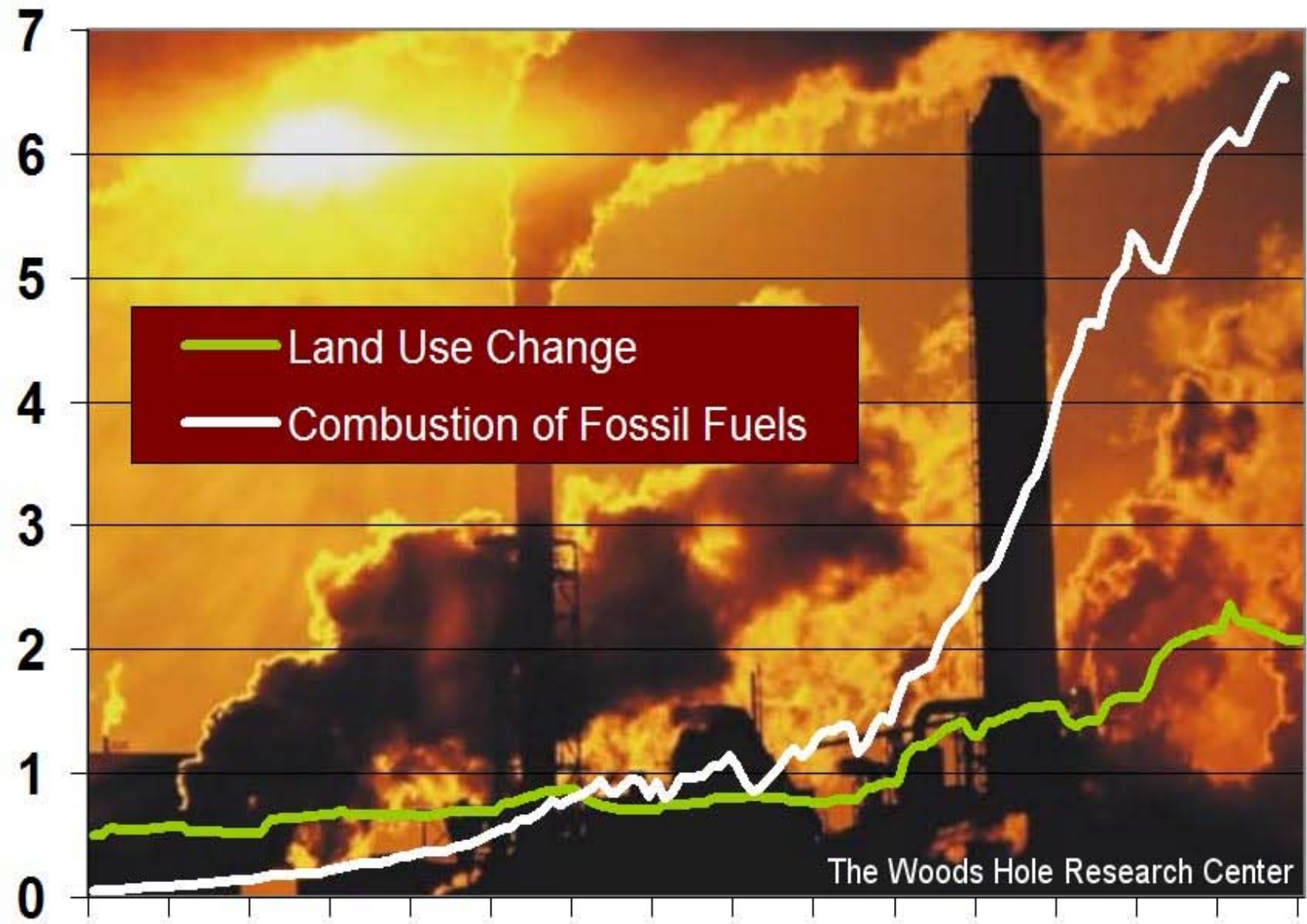
Common pool resource: Capacity to pollute (use the atmosphere as a CO<sub>2</sub> sink) is limited. Developing countries must now be given their share of the atmospheric commons.

- Historical Responsibility  
“The Polluter Pays Principle”
- Equal Per Capita Entitlements  
Every person has an equal right to the global atmospheric commons
- Priority to the Least Well-Off  
John Rawl’s theory of justice

# Equal Per Capita Entitlements

“The central argument for equal per capita rights is that the atmosphere is a global commons, whose use and preservation are essential to human well being (Baer).”

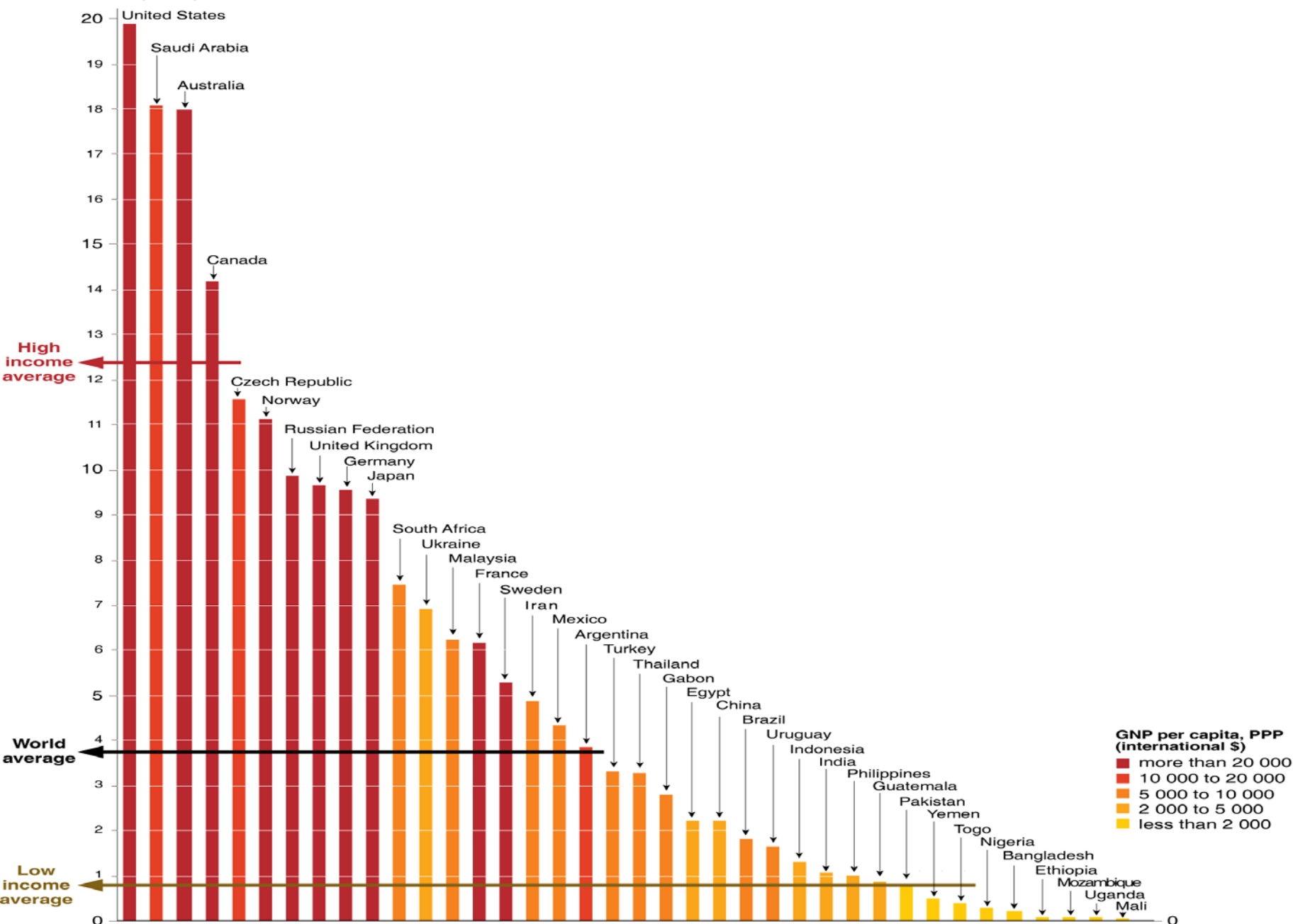
Annual Emissions to the Atmosphere (PgC)



The Woods Hole Research Center

# CO<sub>2</sub> Emissions in 2002

Tonnes per capita

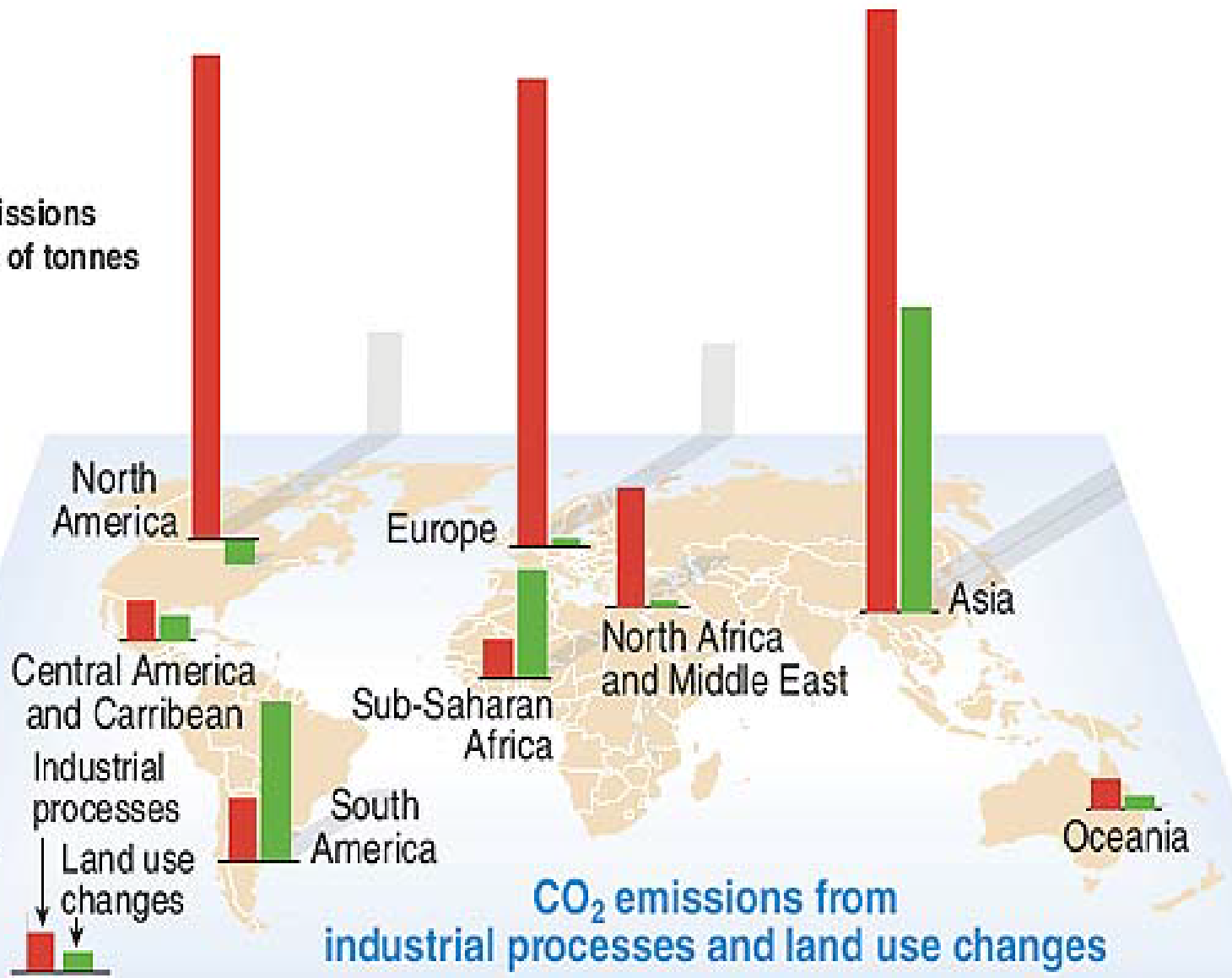


Source : World Bank, online database, 2004.

**GNP per capita, PPP (international \$)**

- more than 20 000
- 10 000 to 20 000
- 5 000 to 10 000
- 2 000 to 5 000
- less than 2 000

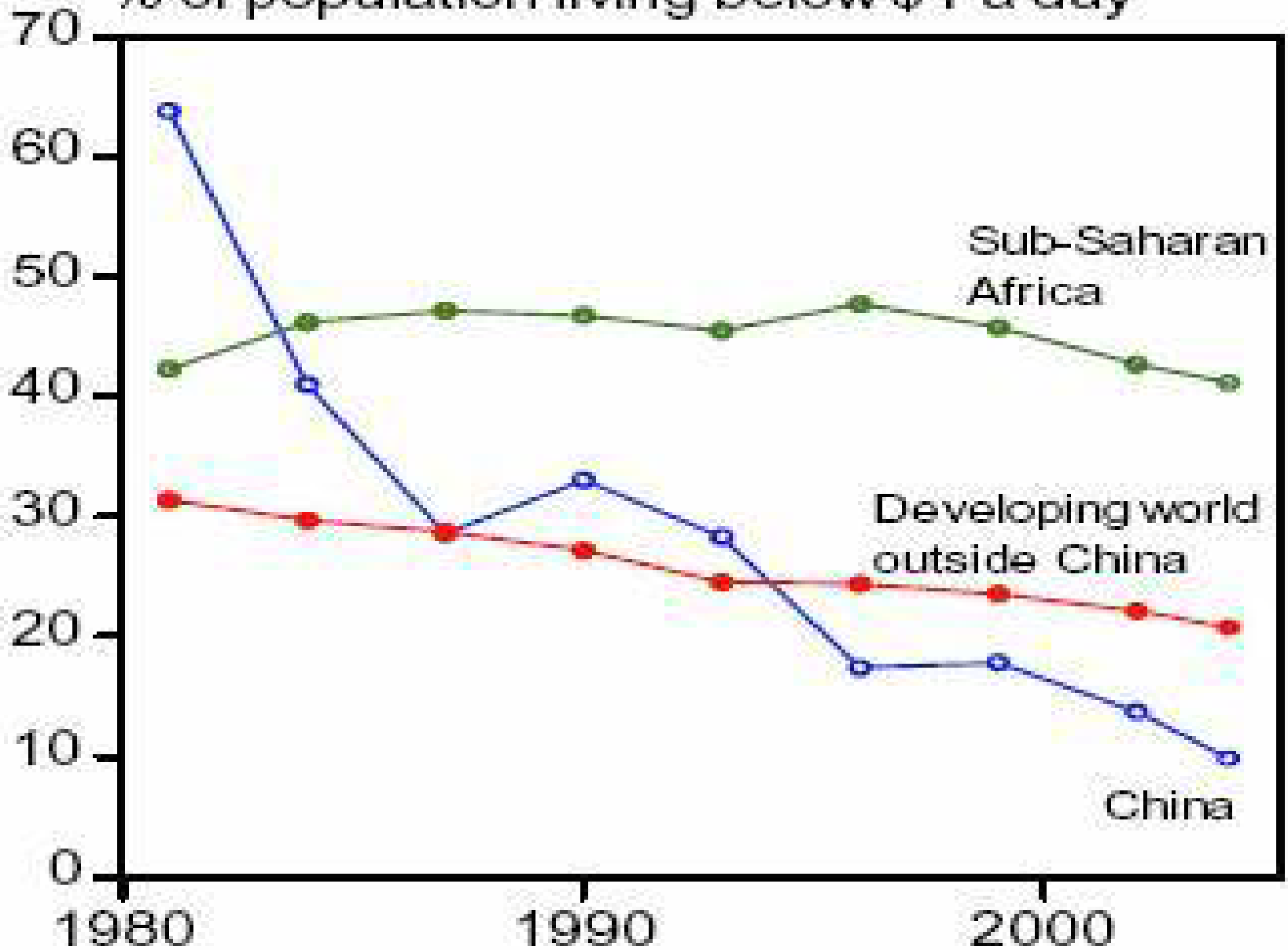
### CO<sub>2</sub> emissions Millions of tonnes



For industry: IEA, CDIAC, WRI (The Climate Analysis Indicator tools)  
For Land use Change: Houghton, R.A. 2003. "Emissions (and Sinks) of Carbon from Land-Use Change, '94 (Estimates of national sources and sinks of carbon resulting from changes in land use, 1950 to 2000). Report to the World Resources Institute from the Woods Hole Research Center. WRI (The Climate Analysis Indicator tools)



% of population living below \$1 a day



“China is on track to add 562 coal-fired plants—nearly half the world total of plants expected to come online in the next 8 years. India could add 213 plants and the US 72.”

**The cheapness and security of coal are overwhelming the desire to be clean.**



# Science, Ethics and Climate Change



James Garvey, “Doing Nothing,”  
Chapter 4, *The Ethics of Climate  
Change*

Technological Rescue/Technological Fix

Geoengineering

Existing Technologies

# Values, Uncertain Science and Climate Change Policy

## Uncertainty and Sound Science

Climate Skeptic, Three Claims:

1. The Earth is not warming
2. The Earth may be warming, but human activities are not responsible
3. Future climate warming will almost certainly be small

# Fourth Skeptical Approach

The science of climate change is highly uncertain, so incurring potentially large costs to protect against climate change is imprudent and wasteful.

# Republican political strategy memo for the 2004 election that was leaked to the press

## Talking points:

“The response to climate change must be based on sound science, not on speculation or theory. We must not rush to judgment before all the facts are in. There is too much uncertainty and too much that we do not know about climate change. It would be irresponsible to undertake measures to reduce emissions, which could carry high economic costs until we know these are warranted.”

David Michaels, *DOUBT Is Their Product*, *Scientific America*, 2005

- “The vilification of threatening research as “junk science” and corresponding sanctification of industry-commissioned research as “sound science” has become nothing less than standard operating procedure in some parts of corporate America.”



Chris Mooney, *The Republican War on Science* (New York, Basic Books, 2005)

“When George W. Bush and members of his administration talk about environmental policy, the phrase “sound science” rarely goes unuttered.”

“We've got some regulatory policy in place that makes sense. But it says we're going to make decisions based upon **sound science**, not some environmental fad or what may sound good -- that we're going to rely on the best of evidence before we decide.” --President Bush, Remarks to Environmental Youth Award Winners

# “Sound Science”

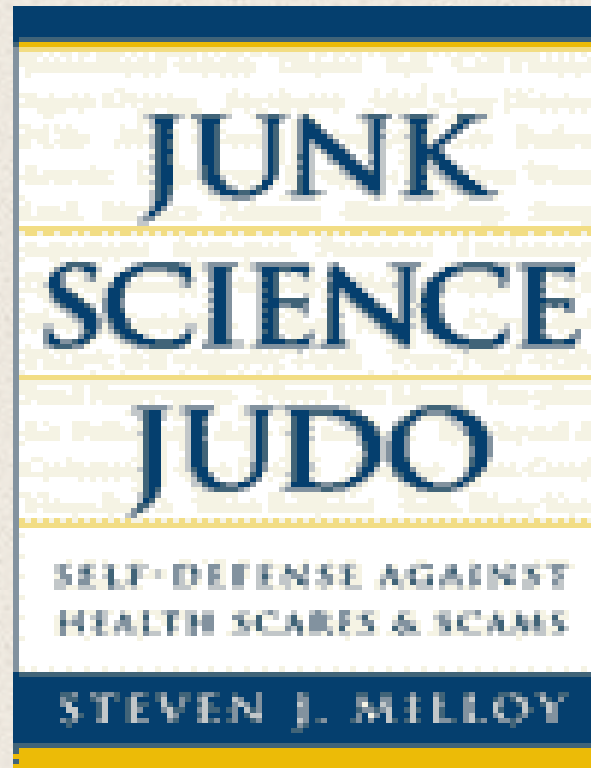
“‘Sound science’ is shorthand for the notion that anti-pollution laws have gone to extremes, spending huge amounts of money to protect people from minuscule risks.”

In the 1990’s conservative politicians used the phrase to attack, what they felt were excessive and stifling regulations. The move was to raise the bar for scientific evidence that could be used to support regulations of potentially harmful activities or products.

# “Sound Science”

**“‘Sound science’ means requiring a higher burden of proof before action can be taken to protect public health and the environment. In other words, ‘sound science’ isn’t really a scientific proposition at all.”**

# Junk Science



# Why does sound science—junk science rhetoric work?

- Scientific projections are inherently uncertain
- Regulations stifle innovation and development.
- Regulations should only be made when needed.
- The need for regulations should be based on the best science possible.

# Rio Declaration of 1992

"In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. When there are threats of serious or irreversible damage, *lack of full scientific certainty* shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

- Key Words: "serious," "irreversible"  
"damage" "cost-effective"

# Precaution and Burden of Proof

- ❖ It is better to let a guilty person go free than to send an innocent person to jail. Hence, the burden of proof is on the prosecution.
- ❖ The PP says: It is better to lose certain economic benefits than to risk possible consequences of unmitigated climate change. "Better safe than sorry."



# UNFCCC

United Nations Framework Convention on Climate  
Change (1992, 192 parties)

# COP

Conference of Parties



# The Three Phases of International Climate Change Negotiations

## Phase I

- 1992, Rio Earth Summit, United Nations, Framework Convention on Climate Change (FCCC)
- Annex I countries (industrialized countries) should voluntarily stabilize their emissions at 1990 levels by 2000. Annex II countries (developing countries) should monitor their emissions

## Article 3, 1992 U.N. Framework Convention on Climate Change

“The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effect thereof.”

# UNFCCC Goal

“[To achieve the] stabilization of green house gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystem to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”

## Phase II

- Kyoto, 1997
- Binding emission targets are necessary.
- Kyoto Protocol
- Annex I countries should accept binding constraints and commit to reducing emissions to 5% below 1990 levels between 2008 and 2012.
- Two major compromises: it allowed countries to count forest sinks and to meet their commitments through buying unused capacity from others, through permit trading.

Kyoto Protocol (1997) ends in 2012

Ratification by 55 Annex I countries

Russia ratified Kyoto in 2004

### Market-based mechanisms

- Clean Development Mechanisms (CDM)
- Certified Emission Reduction Credits (CERs)

# Gravey' (pages 114-118) List of Criteria for Moral Adequacy for Mitigation Proposals

- Historical responsibilities (Polluter Pays Principle)
- Present capacities (extra duties based on abilities just distribution)
- Sustainability (future generations, rights of future people)
- Procedural fairness (Who gets a seat at the table? Whose voice counts?)

# Criticisms of Kyoto

- How was the 5% reduction of 1990 levels by 2010 levels reached? self-interest or science and ethics?
- Was there procedural fairness?
- Is the CDM just?
- Are nonbinding targets adequate?
- What problems does the exclusion of Annex II countries create?



March, 2001, Bush administration withdraws support

“I’ll tell you one thing I’m not going to do is I’m not going to let the United States carry the burden for cleaning up the world’s air, like the Kyoto Treaty would have done. China and India were exempted from that treaty. I think we need to be more *even handed*.”



# Waiting for Others to Act

## The Bush Worry

Kyoto is an ineffective treaty because it does not require developing countries to cut emissions.

Historical responsibility does not matter, emissions are emissions.

## The Blair Worry

Individual efforts do not matter. Even if Britain's emissions were somehow magically cut to zero in less than a year the growth in China's emissions would cut out the gains. Why bother.



The senate passed a resolution 95-0 opposing the ratification of a Kyoto treaty *until developing countries committed to binding emission limits* in the same time frame as the United States.

**Phase III: Post-Kyoto**  
**Bali, COP-13 Bali Road Map**  
**Poznan, COP-14**  
**Copenhagen, COP-15 (2<sup>nd</sup> Commitment Period)**

