

Unit 3.1: Mitigation policy and discourse



Mitigation versus adaptation

- Mitigation: efforts to reduce or reverse the scale of climate change by limiting greenhouse gas emissions or sequestering carbon
- Adaptation: efforts to respond to the risks of climate change by enabling societies to be more resilient and responsive

Cap and trade

- Setting a limit or cap on the total allowable amount of GHGs that can be emitted while enabling firms to trade pollution permits for a price
- Benefits
 - economically efficient
 - comparatively politically more viable
- Drawbacks
 - limited enforceability
 - limited impact in the real world

Carbon tax

- Fixes a tax per ton of emitted carbon: all consumption taxed
- Benefits
 - more direct pressure on firms and individuals to reduce consumption
 - Potentially more readily enforceable once in effect
- Drawbacks
 - politically unpopular
 - Issues of fairness; if everyone has to pay the same price per ton of carbon emitted, there is no distinction between “needed” and “voluntary” use

Local initiatives: municipal level

- ICLEI – International Council for Local Environmental Initiatives
- Some specific examples like PlaNYC
- C40 Cities Climate Leadership
- Many municipal climate change action plans and sustainability initiatives throughout the world

State initiatives: RGGI

- Regional Greenhouse Gas Initiatives 2003
 - Coalition of Northeastern States and Eastern Canadian provinces (QC, ON and NB) to reduce greenhouse gas consumption through regional cap and trade
- California Global Warming Solutions Act of 2006
 - Cap and trade system entered into force 2012
 - 2020 limit of 427 million metric tons of CO₂ equivalent

National and International Programs/ Exchanges

- Carbon Tax in Australia 2012
- New Zealand Emissions Trading Scheme 2008 (internationally linked, uncapped)
- UK Climate Change Act 2008 – incentivizes increasing proportion of renewables
- European Carbon Exchange – tradeable permits for emissions throughout Europe; started as a subsidiary of the Chicago Climate Exchange
- EU emissions trading system in 2005
- Chicago Climate Exchange – operated from 2003 to 2010 as a voluntary entry but binding exchange program with independent verification of GHG emissions for interested parties in North America and Brazil

The US Federal Role: 20th century role

- Issue was first brought before Congress in late 1980s by scientists like Lonnie Thompson and James Hansen
- Some rhetorical differences between Bush Sr. and Clinton
- Little buy in and actual action on the ground in the 1990s (can be attributed in part to ideological wrangling but in part less clarity on the science)

The US Federal Role: Bush era

- Walked away from the Kyoto Protocol
- Largely absent of any meaningful action on issue
- Made specific attempts to undermine and discredit legitimate climate science
- Sent bureaucratic flunky to redact NASA report

The US Federal Role: Obama era

- New fuel efficiency standards/CAFE standards
- Climate action plan 2013
- Some noticeable demonstrated improvements in alternative energy output during the first Obama administration
- Energy policy still heavily driven by desire for energy independence – safety and environmental concerns are somewhat secondary
- Decision on Keystone XL pipeline still pending

US Legislative framework

- McCain-Lieberman Climate Stewardship Act: first attempt in 2003, second in 2005 – both died in the Senate, another iteration in 2007, but didn't go to a vote
- Waxman-Markey : EU like emissions trading scheme, passed the House in 2009, was blocked in the Senate
- Massachusetts vs. EPA and endangerment finding 2009
 - In 2007 the state of Massachusetts sued the EPA on the basis of the premise that GHG control is in the jurisdiction of the EPA on the basis of the 1970 Clean Air Act
 - The case went to the Supreme Court and not only did the Supreme Court find in MA favor, but in 2009 issued an “endangerment finding” arguing that greenhouse gases pose a threat to public welfare

Conspiracy theories

- **Of the “deniers” directed at the “believers”:** climate change is a bogeyman invented by liberals to advance a socialist, big government agenda. The climate science community is on board because they get lots of funding for it (but the research isn’t really independent because science that challenges convention isn’t published)
- **Of the “believers” directed at the “deniers”:** the fossil fuel lobby has a deep financial incentive to spread misinformation about climate change and to stymie action because they stand to make record profits. Conservative politicians are on board because they often get kickbacks. Many of the “scientific” skeptics are being funded by conservative think tanks or directly by the fossil fuel lobbies.
- **For comparison:** Richest, most established, respected climate scientists tend to have six figure salaries, whereas oil, coal and natural gas execs often make seven or eight figure salaries (especially when bonuses and stock holdings are included)

Why do many people who are otherwise intelligent not “believe” in anthropogenic climate change?

- **It's scary** and there is a human tendency to want to live in happy psychological head space
- **We're all responsible** (in that we all emit GHGs – especially in the developed world) and there is a psychological resistance to that feeling of guilt
- **It's political** and people who are politically conservative on other fronts are predisposed to trust “conservative narratives” and mistrust “liberal narratives”
- **It seems counterintuitive** that we mere humans could create such a massive change to our climate system
- **It's difficult** to know how to respond (the changes would need to be massive) and it's easy to blame others and pass the buck
- **It requires humility and open-mindedness** for a skeptic to become a believer

Why is the discourse so contentious and political domestically?

- The media has a tendency to create drama for the sake of ratings
- Many of the “skeptics” are very vocal and well-funded
- The coal and oil lobbies are extremely powerful, receive large subsidies to artificially depress the prices of fossil fuel derived energy
- The coal and oil lobbies have a vested interest in spreading misinformation

Classical economic perspectives

- Dichotomy between nature and economy
- Natural resources viewed as “externalities” because of human-centered view of the economy that discounts the true value of natural resources
- Perception of future costs of response underestimated to justify little or no policy action

Climate, Capitalism and Culture

- The psychology of capitalism encourages material consumption and environmental degradation in the service of material prosperity and in particular, the exploitation of a global economic system which often involves a great deal of trade travel from raw materials to finished products
- A serious, thoughtful engagement with climate change requires that we seriously examine how much we consume material possessions, go on vacations to exotic places, etc.
- Climate change is perceived as a leftist cause at odds with the “individualism” of “Real America” (when, in fact, there is nothing particularly “individualistic” about being so highly dependent on non-renewable, polluting fuels that are sourced in large quantities from overseas)

Structuralist/Marxist perspective

- The legal and economic framework of our society is such that many powerful corporations have an interest and a fiduciary responsibility to maximize profits, even at the expense of the environmental or equity considerations
- Because of the obscene amounts of money in our political system, powerful multinational corporations have enormous control over the actual business of politics
- This political and economic structure reinforces the tendency towards very short term political and policy thinking, the undervaluing of natural resources and the concentration of wealth in the hands of the few at the expense of the many
- This can lead to “greenwashing”: companies that clearly have a vested interest in using fossil fuels trying to gain public favor through some cosmetically appealing actions (often while privately lobbying to continue fossil fuel subsidies in other areas of their business)

Developed vs. developing world perspectives

- Developed world perspective: many of the emerging economies are growing so rapidly, that we (in the developed world) have to safeguard our strategic and economic interests and if we spend too much money on addressing climate change (especially without adequate buy in from the emerging economies), this will be economically problematic for us
- Developing world perspective: we (in the developing world) didn't create this problem, but we are going to bear the brunt of the consequences; we have a human right to aspire towards a higher level of development and economic affluence; the developed world created the majority of the problem, so they bear the majority of the responsibility for fixing it

Why is climate so contentious internationally?

- Apart from the broader meta-narratives just mentioned, there are a complex web of partnerships and tensions and individual national interests that play into international climate negotiations
- Complex interplay between climate concerns, development concerns and pre-existing structures of power

UNFCCC and international negotiations

- UNFCCC – United Nations Framework Convention on Climate Change; signed into existence 1992, effective 1994
- Has a meeting every year since 1995 (Conference of the Parties) and other meetings of smaller coalitions
- The goal is to create meaningful international legislation to address climate change
- 41 countries part of “Annex I”: developed countries and economies in transition
- 24 countries part of “Annex II”: countries in Organization for Economic Cooperation and Development (OECD)
- LDCs – least developed countries – not required to adhere to treaties regarding emissions reductions, but can gain credit through the CDM

Associations of nations: AOSIS, LDCs, EU, Umbrella group, EITs

- AOSIS – Association of Small Island States
- LDCs – Least Developed Countries
- EITs – Economies in Transition
- Annex I – nations obligated to reduce emissions under Kyoto Protocol
- Annex II – subset of nations that are wealthy enough to have additional financial responsibilities to help finance development of cleaner technology

Kyoto Protocol

- Developed at COP 3 in 1997 in Kyoto, Japan
- Arguably the most robust international agreement thus far to address climate change, but still very limited and ineffective in the face of population and development pressure
- first commitment period intention was to reduce aggregate emissions of Annex I countries to 95% of 1990 levels by 2008-2012
- The US backed out and as the world's largest GHG emitter for most of the 1990s and 2000s, global benefit was limited
- Second commitment period agreed to at Doha in 2012 for 2013-2020

CDM, JI, post Kyoto assessment

- CDM – Clean Development Mechanism
 - Clean development mechanism is a way in which countries a party to Kyoto protocol can gain emissions credits by undertaking projects in developing countries to limit greenhouse gas emissions and facilitate greener development – rather controversial
- JI – Joint Implementation
 - A way for Annex B countries to trade emissions reduction credits with each other
- Post Kyoto? – where to go from here given track record of international cooperation, embedded nationalistic interests and differences between top down and bottom up approaches

Copenhagen

- UNFCCC COP 15 in 2009 – was supposed to be watershed
- First opportunity for Obama administration to make sure US is not a stumbling block
- Rhetorical shift, but relatively little actual implicit change
- produced Copenhagen accord
 - Not legally binding
 - Endorses continuation of the Kyoto Protocol into a second commitment period (2012-2020)
 - Acknowledges findings of IPCC
 - developed nations “should” adopt emissions reduction targets related to 2020 emissions

Durban

- 2011 COP to UNFCCC – no legally binding agreement reached, but there was an agreement to reach an agreement by 2015
- Some progress made on adaptation with creation of a Green Climate Fund – to give 100 million USD/year to developing countries to help with adaptation

REDD

- Reducing Emissions from Deforestation and Degradation – co-sponsored by FAO, UNDP and UNEP
- Motivated by an acknowledgement that deforestation is responsible for a significant share of GHG emissions
- Places financial value to local communities to preserve forests
- Project began in 2008
- 50 partner countries in Latin America, Africa and Asia
- <http://www.un-redd.org>
- REDD+ includes conservation, sustainable management, and enhancement of forest carbon

Global winners, losers, leaders and slackers

- Winners
 - wealthy people and corporations with the financial assets to shelter themselves from the impact of climate change
 - Oil and gas interest who want to explore the Arctic Ocean (that exploration will be easier in a warmer climate with less sea ice)
 - Agriculture and mineral interests in high northern latitudes
- Losers
 - Global poor, especially in coastal areas, high-latitude indigenous populations and areas with high levels of hydroclimatic sensitivity
 - Businesses and developments in areas of high exposure
- Leaders
 - While some generalizations can be made about nation-states, to a large degree, this should be examined on the basis of the individual actor or firm
- Slackers
 - While some generalizations can be made about nation-states, to a large degree, this should be examined on the basis of the individual actor or firms

What can we do as individuals

- Do less long haul air travel
- Drive hybrids and/or drive less
- Use more public transit
- Use more energy efficient lighting
- Use less AC in the summer and less heat in the winter
- Buy local where possible
- Eat less meat
- Invest in alternative energy
- Vote green
- Recycle and reuse more