POLI 150: Climate Change, International Cooperation, and Conflict

Daniel Gustafson

22 April 2020

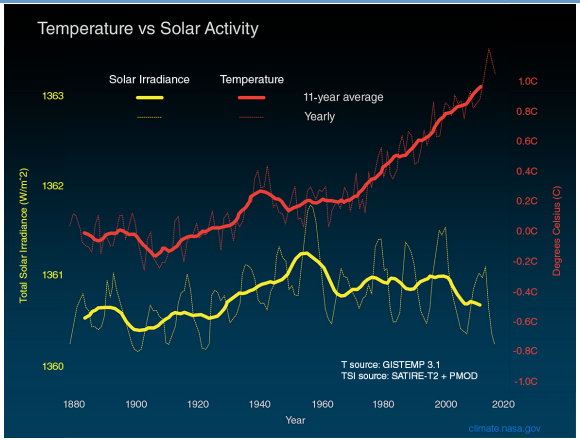
Today's Class

- International Cooperation over Climate Change
- Solving the Collective Action Problem
- Climate & Conflict

Puzzles of International Climate Cooperation

- What explains patterns of cooperation over climate change?
- Which actors suffer the costs of climate change?
- How does climate change affect conflict?

Rising Temperatures



International Cooperation

- Governments have made strides in combatting climate change
- **United Nations Framework Convention on Climate Change (UNFCCC) (1992)**: provides structure for efforts on climate change
- **Kyoto Protocol (1997)**: established specific targets for reducing greenhouse gas emissions
- **Paris Agreement (2016)**: commitments from 197 countries to reduce emissions

Obstacles to Cooperation

- Despite these agreements, cooperation over climate policy has stalled or failed to make enough of an impact
- Individual actors might have interests in improving the environment, but individual action has little effect
- This phenomenon relating to global cooperation over the environment is often likened to the **Tragedy of the Commons**

Tragedy of the Commons

Tragedy of the Commons

- If a resource is open to all without limit, no one individual has an incentive to conserve
- Others would use the resource in the meantime
- The resource degrades over time
- Examples: fisheries, forests, atmosphere
- No single individual's change solves the problem

Types of Goods

- Goods differ on two axes: rivalry & excludability
- Excludable: members can be selectively allowed to use a good
- Rivalrous: consumption by one actors reduces the amount for others
- Goods vary along these dimensions, and we can broadly group them into categories

Types of Goods

	EXCLUDABLE	NONEXCLUDABLE
RIVAL	Private goods	Common-pool resources
NONRIVAL	Club goods	Public goods

Climate and Collective Action

- Most environmental benefits are public goods or common-pool resources
- Common-pool resources fall victim to the tragedy of the commons
- Public goods are subject to collective action problems
- Actors have incentives to free-ride off the contribution of others, so the public good is undersupplied

Collective Action Problems' Factors

- **Size**: more members, harder CAP (acid rain vs. atmosphere)
- **Complexity**: more complex, harder CAP ("dirty-dozen" chemicals)
- **Iteration & linkage**: interacting repeatedly can solve CAP
- **Bundling**: tying private gains to public goods (advantages of forests)
- **Intensity** Disparity: more affected party is likely to bear costs

Taxation as a Solution

- Economists suggest taxing carbon emissions
- Makes the cost of using carbon fuels reflect the costs to society for continued usage
- Problem? Extremely unpopular with industries and consumers!

‘Property Rights’ as a Solution

- An alternative solution focuses on rights to emit
- Some places like Europe or California use a cap-and-trade system
- Firms are allotted a set level of emissions, and can buy and sell “credits” if they fall below or above the thresholds
- Creates an incentive to develop green technologies

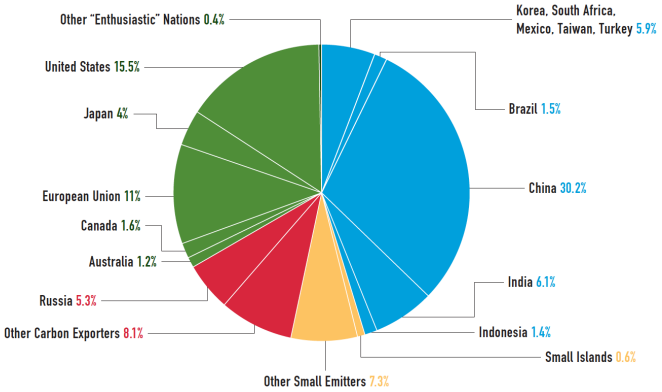
Firms and Industries

- Firms and industries have interests in opposing environmental policies that restrict them
- Increased environmental constraints would force them to expend more (e.g. treating waste)
- Green energy increases competition for traditional energy industries
- Consumers also benefit from lax policies, as prices are lower

Bottom-Up Pressure

- There are more individuals that would benefit from a green environment than a degraded environment
- Why don't we see more green policies? Firms' interests are better organized, and they're better able to press the government for lax policies
- Very similar to protectionist industries' influence over trade policy
- This is changing as sources of energy change, but there is a great amount of heterogeneity within and across countries

International Variation in Emission



Developed vs. Developing Countries

- Historically, developed countries have been most egregious polluters
- Most states increase their pollution as they develop until they hit a threshold and become interested in controlling pollution
- In the future, increases in emission will come from developing countries
- Globally, there are incentives to enact environmentalist policies; nationally, there may not be

Effects of Climate Change

- Climate change is affecting a number of factors important to the international community
- Settlement patterns in coastal areas, resources available for trade, etc.
- Conventional wisdom is that climate change will affect conflict
- Eleven retired U.S. generals and admirals claimed that it was a "threat multiplier" in 2008

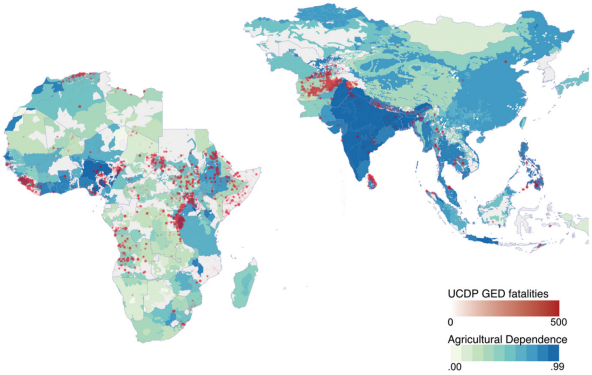
Climate Change & Conflict

- Most of these insights are drawn from cases in which parties fight over specific resources
- In the aggregate, we don't see a strong positive relationship between conflict and climate change
- Some studies find conflict to be more likely during good periods, when there is something to fight over
- Problem: most research does not take into account important socio-political differences

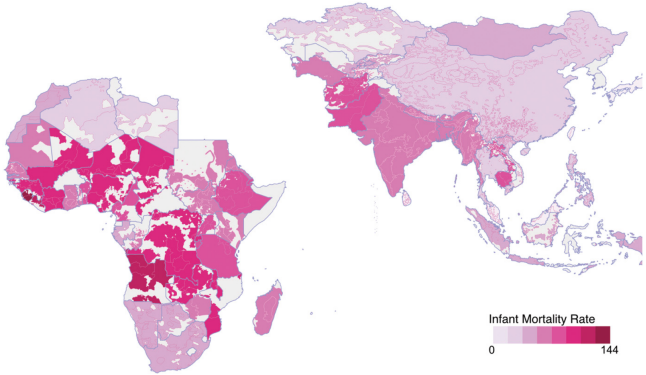
Droughts & Ethnic Conflict

- von Uexkull et al. argue that researchers need to pay more attention to the context in which climate changes occur and conflict may or may not break out
- They examine how ethnic groups maybe differentially affected by droughts based upon several factors
- Agricultural dependence, development (IMR), and political exclusion

Agricultural Dependence Across Sample



IMR Across Sample



Droughts & Ethnic Conflict

- Authors find that agricultural dependence is the most important conditioning factor
- Largest takeaway: these factors stack; in less-developed areas with high agricultural dependence, droughts are devastating
- Highlights the importance of considering *conditionality* when exploring effects of variables

Violent Protest in Zimbabwe

(a) Maize Crop: 05/31/2019

(b) Protest in Harare: 08/21/2019

Predicted Probability of Escalation