

Lecture 3: Environmental policies: the Social Planner, the State, and Governments

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Objective of the lecture

What we have done so far: we introduced economists' approach to environmental issues (lecture 1) and saw how economists determine environmental targets (lecture 2).

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What we do this week: focus on one critical element between these two steps: the decision framework.

→ Raises important questions: who sets the targets? Who decides on specific policies? Does this entity always aim at maximizing aggregate welfare? If not, what can we do about that?

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Who decides: the social planner vs. the State

A common framework that economists use when thinking about environmental (as well as other) policies is the one of the social planner.

The social planner is a benevolent entity that has the power to allocate resources in the economy. The objective of the social planner is to maximize social welfare.

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In practice, there is no such thing as a social planner: **no entity has the power to implement and enforce policies everywhere to maximize social welfare.**

→ On top of defining environmental targets and policies, international pollution problems require to define the extent of cooperation between States.

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→ On top of defining environmental targets and policies, international pollution problems require to define the extent of cooperation between States.

Problem: by contrast with the social planner, **the State** has borders, and might discount (if not ignore) the welfare of individuals who do not live within these borders.

Who decides: the State vs. the government

For **problems that involve several States**, cooperation is necessary, as each State represents only a part of the global population.

For **problems that involve several generations**, an additional difficulty arises: in practice, **the State does not take decisions, governments do**.

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Governments are (at best) elected to reflect the preferences of current voters. But these preferences may not fully take into account the interest of future generations. Governments have often very short time horizons. Their decisions may also reflect strategic considerations and not always be meant to maximize voters' welfare.

- ◊ In general, institutions put constraints (e.g. through the Constitution) on the action of governments to avoid short-termism. But these constraints are not enough to avoid a significant bias w.r.t. environmental policies that generate costs in the present and benefits in the future.

Who decides: national vs. local jurisdictions

In many countries, decisions impacting environmental outcomes are not only taken at a central level, but also by **sub-national jurisdictions**.

This has both potential advantages and drawbacks:

- local jurisdictions may have more information about the costs and benefits of some environmental policies. Decentralizing the decision can lead to more efficient policies;
- but if the action of a local jurisdiction has consequences on other, cooperation is necessary.

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- but if the action of a local jurisdiction has consequences on other, cooperation is necessary.

→ Trade-off over the choice of the best entity to regulate environmental issues. In general, it is preferable to leave the regulation to the smallest entity that represents the interest of all affected parties: local problems are treated locally, national problems are treated nationally.

For international problems, this is obviously problematic given the lack of constraining power of the international community.

An example of city-level environmental policy



Fig. 1. Pro-diesel demonstration in Stuttgart, Germany, February 2019. photo © Lichtgut/Julian Rettig.

In October 2020, Stuttgart enacted a diesel ban: decided at the city level, the policy has generated important protests (Arning & Ziefler, 2020).

→ While urban households may benefit more from public transports and cleaner air, those commuting by car from outside the city may have more difficulties to substitute their transport mode. But to what extent was the welfare of these people taken into account in the city's decision?

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A key issue in environmental policies: the free-rider problem

The issues we have discussed above are all related to a famous problem in economics: the free-rider problem.

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There are many examples of such situation:

- a worker in a team may decide to do less efforts and let its colleagues complete most of the work;
- a cyclist in a peloton may decide to stay behind to minimize its efforts;
- a person may decide not to wear a face-mask or take a vaccine but benefit from other people making efforts to slow down the spread of a pandemic;
- a country may decide not to make efforts to reduce its own greenhouse gas emissions and still enjoy the mitigation efforts of the rest of the world;
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- etc.

→ Absent an effective monitoring of agents' cooperative behavior, this leads to an inefficient level of efforts. This typically arises in situations of imperfect information and/or incomplete control over agents behavior.

The problem of the commons

A closely related problem that is famous in natural resources economics is the so-called “**problem of the commons**”. It refers to the management of natural resources that are non-excludable:

TABLE 1—A TAXONOMY OF COMMON PROBLEMS IN THE NATURAL RESOURCE AND ENVIRONMENT REALM

	Excludable	Nonexcludable
Rival	<i>Pure private goods</i> Most nonrenewable natural resources (Fossil fuels & minerals) Some privatized renewable resources (Aquaculture)	<i>Renewable natural resources characterized by open access</i> (Ocean fishing) Some nonrenewable resources (Ogallala Aquifer)
Nonrival	<i>Club goods</i> (Water quality of municipal pond)	<i>Pure public goods</i> (Clean air, greenhouse gases and climate change)

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In Ostrom's words: “*The term “common-pool resource” refers to a natural or man-made resource system that is sufficiently large as to make it costly (but not impossible) to exclude potential beneficiaries from obtaining benefits from its use.*”

The problem of the commons

Paradox: over the last century, many non-renewable resources have experienced decreasing levels of scarcity, while many renewable resources have become more scarce, or even extinct.

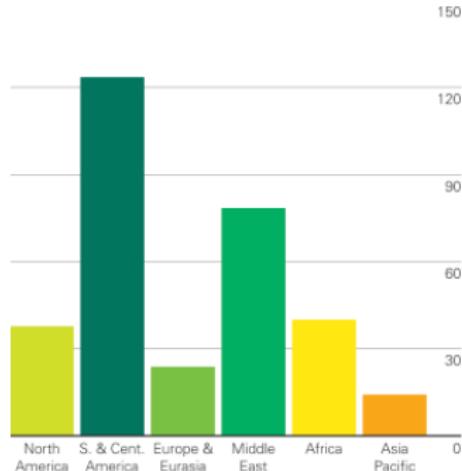
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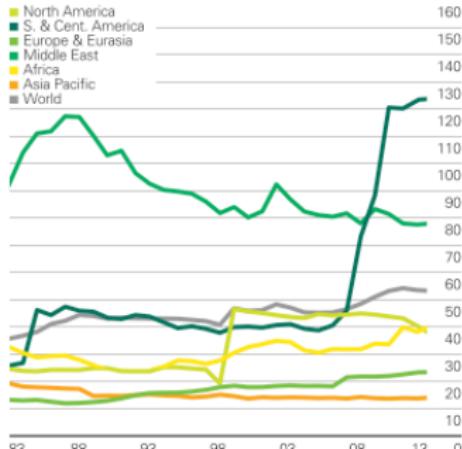
Oil reserves-to-production (R/P) ratios

Years

2013 by region

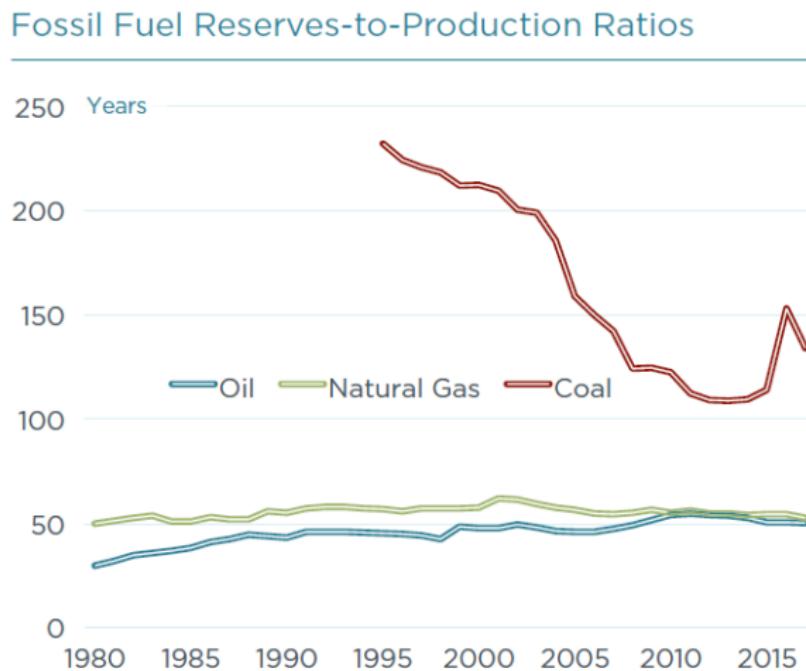


History



The problem of the commons

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EPIC analysis based on data from BP

The problem of the commons

→ Goods characterized by open-access tend to be over-exploited, while goods that are subject to well-defined property rights are more carefully managed.

Example: intensive fishing of Atlantic cod has led to the collapse of its biomass in the 90's (by above 95% of its maximum historical level).

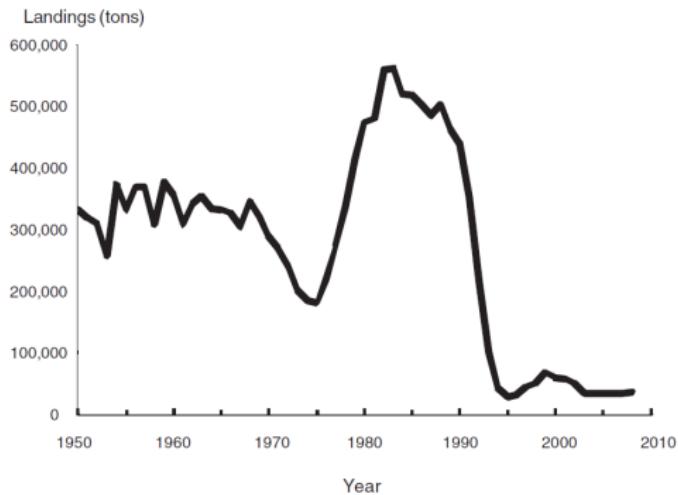


FIGURE 3. ANNUAL HARVEST OF ATLANTIC COD, 1950–2008

Source: United Nations Food and Agriculture Organization 2010.

The problem of the commons

The existence of commons raises critical challenges for governance:

- Hardin (1968): famous article titled “The tragedy of the commons”, where he explains how open-access to the commons may lead to their over-use and eventual collapse;
- Ostrom (1990): famous book *Governing the commons* where she discusses “successful and unsuccessful efforts to escape tragic outcomes”, including community-based solutions that have proven successful in managing certain common resources. She won the 2009 Nobel Prize in economics for this work.
 - ▶ Ostrom provides examples of common pool resources that have been successfully managed for centuries, such as grazing lands managed by villages in Switzerland, forests in Japan, irrigation systems in Spain, etc.

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 - ▶ Ostrom provides examples of common pool resources that have been successfully managed for centuries, such as grazing lands managed by villages in Switzerland, forests in Japan, irrigation systems in Spain, etc.
- Depending on the underlying problem, and what we may expect of agents behavior, certain forms of governance may be preferable to others to govern the commons. In certain cases, cooperation may naturally arise as a stable outcome. However, the larger the problem and the less excludable the resource, the more likely cooperation fails and the tragedy arises.

Ostrom's 8 principles for managing the commons

Table 3.1. *Design principles illustrated by long-enduring CPR institutions*

- | | |
|---|--|
| 1. | Clearly defined boundaries
Individuals or households who have rights to withdraw resource units from the CPR must be clearly defined, as must the boundaries of the CPR itself. |
| 2. | Congruence between appropriation and provision rules and local conditions
Appropriation rules restricting time, place, technology, and/or quantity of resource units are related to local conditions and to provision rules requiring labor, material, and/or money. |
| 3. | Collective-choice arrangements
Most individuals affected by the operational rules can participate in modifying the operational rules. |
| 4. | Monitoring
Monitors, who actively audit CPR conditions and appropriator behavior, are accountable to the appropriators or are the appropriators. |
| 5. | Graduated sanctions
Appropriators who violate operational rules are likely to be assessed graduated sanctions (depending on the seriousness and context of the offense) by other appropriators, by officials accountable to these appropriators, or by both. |
| 6. | Conflict-resolution mechanisms
Appropriators and their officials have rapid access to low-cost local arenas to resolve conflicts among appropriators or between appropriators and officials. |
| 7. | Minimal recognition of rights to organize
The rights of appropriators to devise their own institutions are not challenged by external governmental authorities. |
| <i>For CPRs that are parts of larger systems:</i> | |
| 8. | Nested enterprises
Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises. |

Source: Ostrom (1990)

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Two distinct issues: imperfect information and lack of power

While in theory environmental problems could be addressed by implementing appropriate policies, in practice these policies may be difficult to enforce. This may arise in two situations:

- when the authority in charge of controlling agents' behavior has imperfect information about agents' behavior;
 - ▶ Problems related to imperfect information are very common in environmental regulation and may arise at all scales (i.e. for a country, a firm, a plant, an individual, etc.).
- when no authority has a perfect control over polluting agents' behavior.
 - ▶ Problems related to the capacity of enforcing policies are more specific to the international community, although it may also arise at a lower level if opposing pressure groups are strong enough.

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 - ▶ Problems related to the capacity of enforcing policies are more specific to the international community, although it may also arise at a lower level if opposing pressure groups are strong enough.

→ **in the presence of imperfect information**, specific incentive schemes may help inducing socially efficient decisions. The solutions will depend on the problem considered.

→ **in the absence of constraining power** to implement policies, options are more limited, although different strategies may still be used to induce cooperation.

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The top-down approach: what is it?

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Just like certain communities succeed at managing their commons, international environmental summits aim at creating a platform for discussions from which an agreement on how to manage the global environment could emerge. This is because when negotiating, **in theory countries understand that cooperation is necessary** to move from the bad equilibrium the world is currently in, to a better equilibrium.

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One of the great benefits of this strategy is the harmonization of mitigation efforts: fixing homogeneous rules (and possibly side payments for redistribution) should lead to an efficient allocation of efforts across countries.

The top-down approach: example from Montreal

The Montreal protocol is an example of **successful international environmental agreement** following a top-down approach. Barrett (2005): “one of the most successful international agreements ever negotiated.”

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What is it about?:

- in the 1970's, growing scientific concerns over ozone depletion (both the reduction of the size of the ozone layer, and the ozone hole over the Antarctic region);
- dramatic consequences as the ozone layer protects ecosystems from the exposure to ultraviolet light;
- Barrett (2005): “Had further ozone depletion not been prevented and put on a course for reversal, hundreds of thousands of people may have died from exposure to harmful UV radiation.”;
- the main cause of ozone depletion was the production and use of particular chemical substances, such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) used (among other things) as refrigerants;

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- the main cause of ozone depletion was the production and use of particular chemical substances, such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) used (among other things) as refrigerants;

The treaty negotiated in 1987 lead to the ban of hundreds of these substances. Since, “the atmospheric concentration of ozone-depleting compounds peaked in 1994 and is now declining.” (Barrett, 2005), and the ozone layer is expected to progressively return to its natural level in the following decades.

Recent evolution of the ozone layer

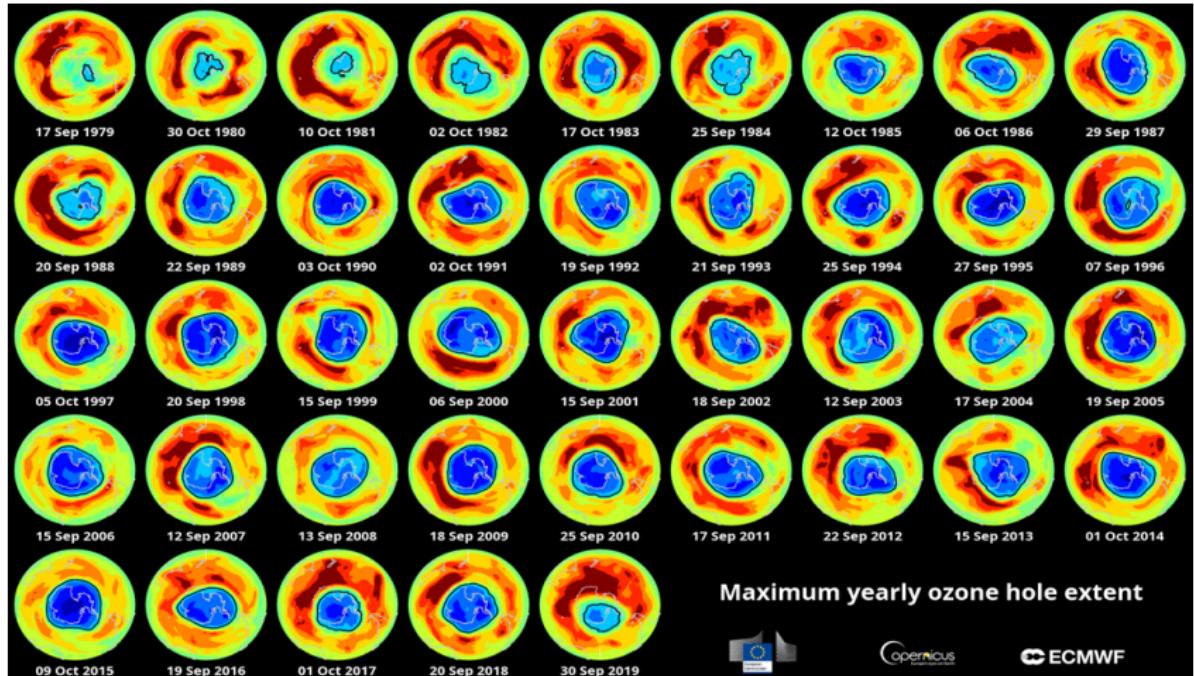


Figure: Yearly evolution of the ozone layer (source: European Environment Agency)

The top-down approach: example from Montreal

The Montreal protocol has followed a top-down approach: countries agreed together on a specific target to attain, on some general rules to be applied, and on some specific measures to enforce cooperation:

- because rich countries raised important concerns over the problem, poorer countries obtained to receive side payments in exchange of their cooperation;
- to reinforce cooperation, countries also decided to implement trade sanctions on non-cooperative countries;
- in the end, 175 countries signed, i.e. all countries except some outliers that represent very small shares of total emissions and that are characterized by weak institutions (Barrett (2005): “None can be described as a free rider.”).

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Question: could the example of the Montreal protocol be applied to international climate agreements?

The top-down approach to climate treaties

The Montreal protocol is a successful example of countries agreeing together on the management of their commons. Even without a powerful international institution taking decisions, countries have realized that it was in their best interest to cooperate → this has led to a (so far relatively*) stable equilibrium from which no country has an incentive to deviate.

* *in 2019 it has been reported that some industrials in eastern China have been emitting CFCs illegally (Rigby et al, 2019).*

Question: why haven't we managed to reach such an agreement for the global climate?

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Question: why haven't we managed to reach such an agreement for the global climate? → Although both are typical public good problems, the underlying characteristics of these problems are quite different:

- **benefits of mitigation:** in the case of ozone depletion, all countries had a clear interest in solving the problem: in all parts of the world, ozone depletion was a big threat to human health / in the case of climate change, damages are much more heterogeneous and some countries may actually expect to benefit from higher temperatures;
- **costs of mitigation:** in the case of ozone depletion, the substances banned could be replaced by relatively close substitutes / in the case of climate change, mitigation costs are expected to be much higher: substituting fossil fuels or reducing energy consumption on a large scale entail both large costs.

The top-down approach: example from Kyoto

The Kyoto Protocol (1997) was perhaps the main attempt to reach a top-down international agreement on climate change:

- a key characteristic of the Kyoto Protocol is the distinction made between developed ("Annex I") and developing countries, with only the former being subject to binding commitments to reduce their emissions. This builds on the principle of "common but differentiated responsibility and respective capabilities";
- for the 37 countries in Annex I, the treaty fixes targets that together amount to a reduction in greenhouse gas emissions of about 5% between 1990 and the period 2008-2012 (first commitment period);
- these targets could be attained by either reducing domestic emissions, or financing projects to reduce emissions abroad (specific market mechanisms were created to bring more flexibility);
- while Canada opted out of the treaty, the United States signed it but did not ratify it;
- an updated treaty with a new commitment period was supposed to emerge from the Doha Amendment but only 34 countries have agreed for further binding commitments on their emissions.

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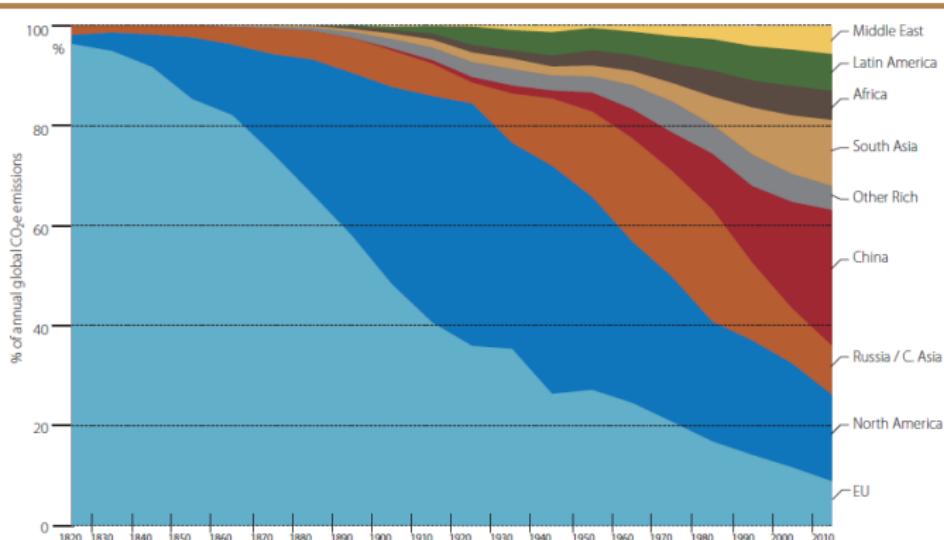
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→ In the end, low level of ambition and non-binding treaty for most countries.

Common but differentiated responsibility – Countries aggregate emissions

FIGURE 2A. SHARE IN GLOBAL CO₂e EMISSIONS SINCE 1820

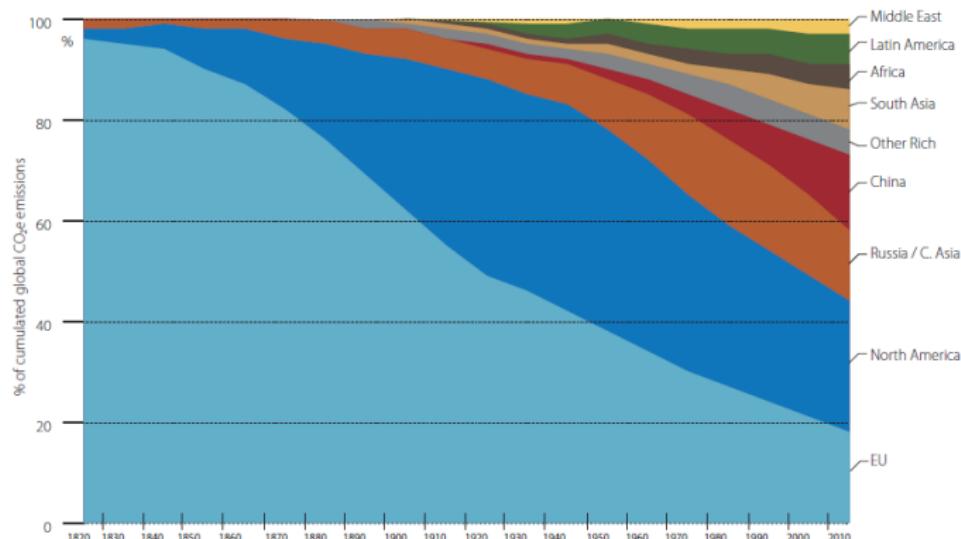


Source: authors' estimates based on CAIT (WRI, 2015), CDIAC (Boden et al., 2015), Maddison (Maddison, 2013). Key: in 2010, 9% of global CO₂e emissions are emitted in Western Europe. Note: data is smoothed via 5-year centred moving averages. The composition of each region in this graph may slightly vary from the rest of the study, see Boden et al. (2015) for details.

Source: Chancel & Piketty (2015)

Common but differentiated responsibility – Countries cumulative emissions

FIGURE 2B. SHARE IN CUMULATED GLOBAL CO₂e EMISSIONS SINCE 1820

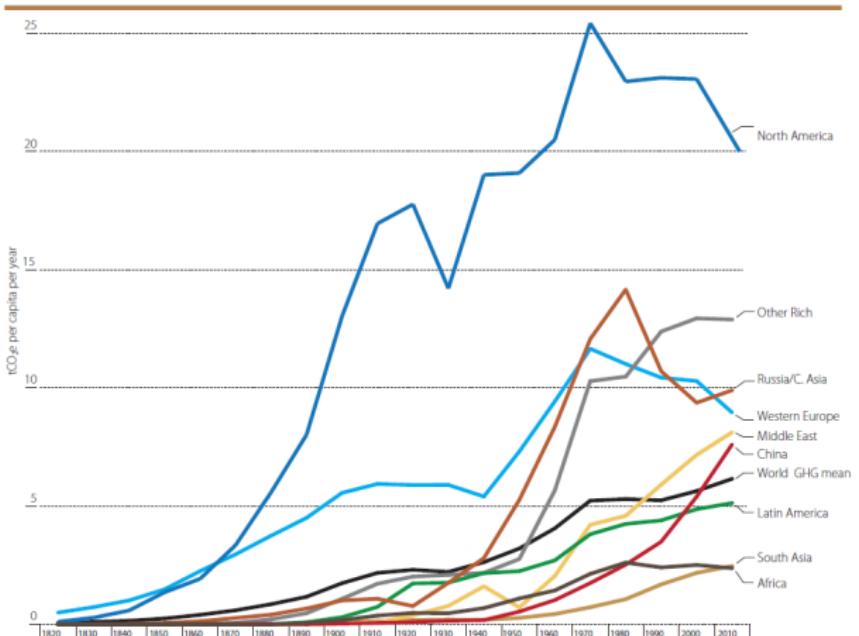


Source: authors' estimates based on CAIT (WRI, 2015), CDIAC (Boden et al., 2015), Maddison (Maddison, 2013). Key: In 2010, 12% of cumulated global CO₂e emissions, since the Industrial revolutions, were emitted in China. Note: data is smoothed via 5-year centred moving averages. Composition of each regions in this graph may slightly vary from the rest of the study, see Boden et al. (2015) for details.

Source: Chancel & Piketty (2015)

Common but differentiated responsibility – Countries emissions per capita

FIGURE 4. PER CAPITA CO₂e EMISSIONS PER WORLD REGION



Source: Authors' estimates based on CAIT (WRI, 2015), CDIAC (Boden et al., 2015), Maddison (Maddison, 2013). Key: in 2012, the North American per capita CO₂e emission average is 20.5tCO₂e.

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The bottom-up approach: what is it?

After Kyoto, repeated failures to implement stringent and binding climate agreements (e.g. Copenhagen, 2009).

For the next big round of negotiations planned in 2015 in Paris, radical change of approach: instead of a top-down strategy, bottom-up approach, called "**pledge-and-review**".

→ Under this approach, countries independently submit Nationally Determined Contributions (NDCs), i.e. countries each choose their own targets of emission reductions.

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Example of pledges:

- **European Union:** reducing economy-wide GHG emissions by at least 40% below their 1990 level by 2030;
- **Japan:** decreasing economy-wide GHG emissions by at least 26% below their 2013 level by 2030;
- **Ethiopia:** a maximum of 145MtCO₂eq in 2030, including land use, land-use change and forestry (LULUCF) activities.

Why would country voluntarily reduce their emissions?



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Keohane and Victor (2016) cite five reasons why countries would take mitigation measures absent any international constraint:

- ① altruistic motives: contributing to a global public good;
- ② to obtain co-benefits: climate change mitigation policies may also contribute to *local* public goods, such as a reduction in local air pollution;
- ③ generate economic benefits by increasing competitiveness w.r.t. new technologies (such as renewable energies, batteries, or more energy efficient machines);
- ④ bargaining for side payments, which may be important for low-income countries;
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→ depending on the countries, some of these motives may be stronger than others. As they mostly correct for other market failures (e.g. low investment in clean technologies, existence of other local pollution problems) they do not compensate for the climate externality (which would require to deal with the free-rider problem), but they still create a starting point for negotiations.

The bottom-up approach: pros and cons

On the one hand:

- it ensures a larger participation: “the emission targets under Kyoto were binding for only 37 countries, while nearly every country in the world contributes to the Paris Agreement” (Harstad, 2019);
- it also gives less power to countries with low willingness to contribute and that would otherwise bargain by threatening not to sign the global treaty;
- it provides a platform for a global dialogue over the best way to manage the commons, in a possibly more constructive way than a top-down agreement.

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On the other hand:

- it does not resolve the free-rider problem since it is completely up to each country to decide on its own contribution;
- it creates a two-stage process where certain *governments* commit to a given pledge, whose realization greatly depends on (rapidly changing) domestic policies. As such, actual policies are hardly predictable and global cooperation is very unstable;
- economically, it is also a very inefficient way to allocate efforts across countries: emissions are not abated where abatement costs are the cheapest;
- the lack of constraints on the structure of the pledges incentivize very vague pledges that can hardly be assessed and compared.

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Heterogeneity and race to the bottom

Now, some regions of the world want to further accelerate the process of de-carbonization. With the European Green Deal, Europe has set the objective to become climate Neutral by 2050.



Figure: Ursula Von der Leyen presenting the European Green Deal

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Figure: Ursula Von der Leyen presenting the European Green Deal

Problem: these policies are costly. In particular, negative impact on competitiveness of domestic firms. How to avoid both economic losses and carbon leakages? By lowering their environmental standards, countries may attract foreign industries → clear risk of a **race to the bottom** in environmental regulation.

Climate clubs – Nordhaus (2015)

Problem: countries need to consent to joining international agreements, participation is always voluntary. But there are strong incentives for free-riding.

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Potential solution: in the past, successful international agreements in trade, finance, military, often took the form of “club” mechanisms, i.e. “voluntary groups deriving mutual benefits from sharing the costs of producing an activity that has public-good characteristics” (Nordhaus, 2015). A club is successful when it meets the following conditions:

- there exists a public good that can be shared;
- the agreement is beneficial for each member;
- non-members can be excluded or penalized at low cost for members;
- the membership is stable, i.e. no one wants to leave.

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Question: how to apply this “club” strategy to the global climate? → **Use trade policy as an incentive for joining!**

Nordhaus' climate club:

- it is an agreement by participating countries to undertake a certain amount of efforts to reduce greenhouse gas emissions (e.g., an implicit carbon price of \$50/tCO₂);
- participating countries are free to choose their preferred mechanism (e.g. carbon taxation, cap-and-trade program, etc.) to satisfy this goal;
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Outcome: Nordhaus performs a simulation exercise from his simplified model, dividing the world in 15 regions. → Suggests that a high participation could be induced by a relatively low tariff, as long as the international target carbon price is not too high.

Participation in climate clubs – Simulations for 15 regions

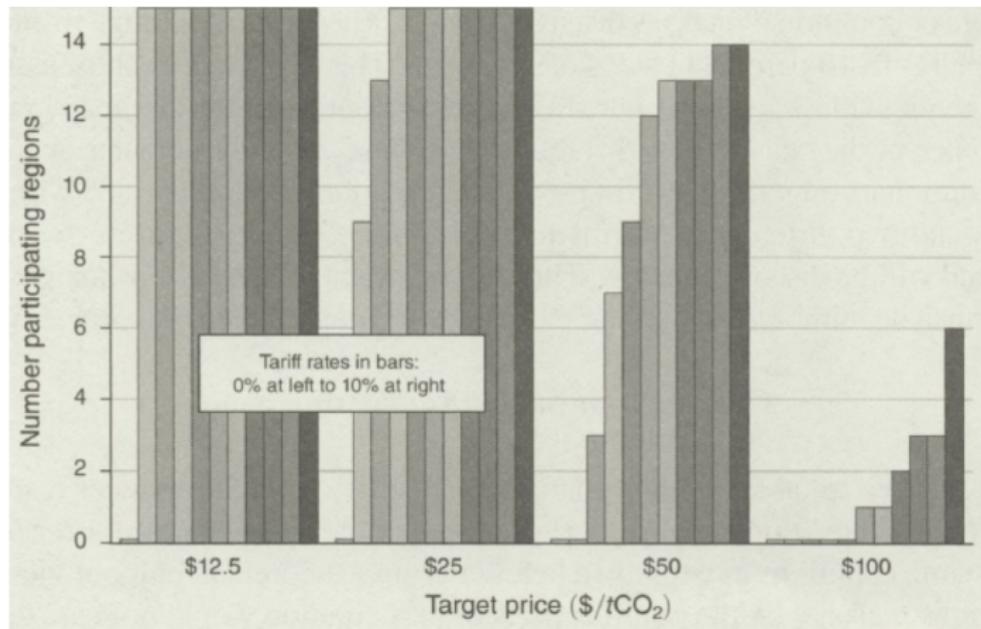


FIGURE 3. NUMBER OF PARTICIPATING REGIONS BY INTERNATIONAL TARGET CARBON PRICE AND TARIFF RATE

Are carbon border adjustment mechanisms feasible?

Question: since there is heterogeneity in the willingness to pay for the climate, differentiated trade tariffs are needed to harmonize the costs from contributing to the global public good, and avoid a race to the bottom. But are these trade penalties actually feasible?

Border adjustment tax (BAT): it is a mechanism to tax goods based on where they are consumed instead of where they are produced. If a country taxes carbon and implements a BAT, it imposes a tax on goods imported from non-carbon-taxing countries, and exempts the tax for exported goods produced domestically.

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Problem with WTO rules: requires equal treatment of similar products and no discrimination between domestic and foreign producers. Imposing different import taxes to similar products based on their origin is therefore prohibited.

Can we do anything about it?

The interpretation of WTO rules is tricky and big debates are coming ahead. The challenge is that to make BAT accepted, the WTO would have to consider that two similar products made of inputs with different levels of carbon footprints are different goods. Is that possible?

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- many people have argued that is it (e.g. Jennifer Hillman, former WTO appellate officer: "*I believe the answer is yes (...) The key is to structure any accompanying border measure as a straightforward extension of the domestic climate policy to imports. If so designed, there should be few questions about the measure's consistency with the WTO rules.*")
- in the past, the WTO has already upheld the principle that environmental concerns outweigh trade interests when the U.S. decided to prohibit the importation of shrimps caught in "turtle unfriendly" nets;
- in 2012, EU attempt to include to the EU-ETS carbon emissions from all flights leaving from or landing within the European Economic Area failed against strong international opposition. The policy had to be restricted to intra-EU flights.

For more on the topic, see also Cosbey et al (2019).

The European BAT

Although many national and regional carbon markets exist around the world, no jurisdiction has yet implemented a carbon BAT. In June 2021, foreseeing future increases in the ETS price, such a mechanism was proposed by the European Commission:

- initially, should only apply to a limited number of carbon-intensive products;
- foreign suppliers would pay a fee, and be allowed to claim a rebate for any carbon price paid in the country of production;

What are its prospects?

- On paper, respects the principle of non-discrimination between suppliers;
- however, what about countries that implemented climate policies without pricing instruments? Can they claim a rebate?
- If poor countries would face the same environmental tariff, is it still compatible with the principle of differentiated responsibility for tackling climate change? Does it conflict with the Paris agreement?

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The case of large trans-national actors

A common feature of many environmental problems is their diffuse source. **Example:** all human beings contribute *to some extent* to climate change. Hence the importance of governance.

Still, some environmental (and other important social) issues have at their source a **small number of critical actors** responsible for a large part of the problem.

The case of large trans-national actors

A common feature of many environmental problems is their diffuse source. **Example:** all human beings contribute *to some extent* to climate change. Hence the importance of governance.

Still, some environmental (and other important social) issues have at their source a **small number of critical actors** responsible for a large part of the problem.

→ While dealing with a smaller number of actors to solve a given problem should make regulation easier, it is not necessarily the case when these actors are:

- powerful, and can pressure regulators;
- trans-national, and can relocate to escape regulation.

These actors are typically multi-national firms that may cause harm through – and avoid regulation with respect to – greenhouse gas emissions, water pollution, deforestation, working conditions, child labor, etc.

The case for private politics

In face of these powerful and mobile actors, public regulation may fail or evolve too slowly. In such situations, some citizens may decide to intervene *privately*.

According to Baron (2003):

- “The term **politics** refers to individual and collective action in situations in which people attempt to further their interests by imposing their will on others.”
- “The term **private** means that the parties do not rely on the law or public order; i.e., on lawmaking or law enforcement, although both may be available.”
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→ Typically, private politics characterizes NGOs campaigns against multi-national companies responsible for a certain social harm.

Michael Brune, executive director of the Rainforest Action Network (RAN): “Companies were more responsive to public opinion than certain legislatures were. We felt we could create more democracy in the marketplace than in the government.” (from Baron & Diermeier, 2007).

Private politics as strategic competition

Private politics may take several forms, one being the strategic competition between an activist and a (set of) firm(s) responsible for a given social harm. In this framework:

- firms seek to make profits by selling their products to consumers;
- an activist tries to catch the attention of the consumers and raise public concern for this harm;
- to do so, the activist may target the activity of a specific firm and harm its reputation;
- a reputation loss may be costly for the firm because it lowers its long-term profits, and potentially increases the likelihood of public regulation (higher demand from citizens, and lower bargaining power for the firm);
- to protect its reputation, the firm is induced to change its behavior and reduce the harm it causes;
- the previous holds both for targeted firms, and other firms trying to avoid being the next target.

An example of private politics

In its seminal paper, Baron (2003) takes the example of Nike and the working conditions in its factories in South-East Asia.



Figure: Easily identifiable brand, easier target

An example of private politics

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→ With technological change and the rapid development of social networks, these strategies have become less and less costly for activist groups. **Example:** Carol Browner, former head of the US Environmental Protection Agency (EPA): “Environmental groups have become truly sophisticated in using the Web to move information to millions of people literally overnight, and to attack companies on a global scale.” (from Baron, 2003).

Private politics and indirect campaigns

The case of Nike is a typical example of a very big, powerful, and international company whose activity is difficult to regulate, but for which reputation matters a lot. → Ideal target for private politics. But what about companies producing intermediate goods?

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In some cases, activists manage to attain a company by targeting other elements of its value chain. Example: RAN wanted to target timber companies logging in old growth forests. How to?

- they first chose to target the logging company Boise Cascade. To do so:
 - ▶ they started by running a campaign against Kinko (former Fedex), which dropped a contract with Boise Cascade;
 - ▶ then, they went for Home Depot, and later for Lowe, that all stopped buying from Boise Cascade;
- because of the large impact on its market shares, Boise Cascade stopped logging in old growth forests;
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Other example from Baron & Diermeier (2007): “the radical animal rights group (Stop Huntingdon Animal Cruelty) that in its campaign (...) not only targeted Huntingdon's bank, insurance broker, and auditor but even local taxi companies.”

Governments can also be the target



Private politics and welfare

When public governance is too weak or too slow, private politics offer additional tools for regulation. The spirit of the approach is close to the **Coasian solution to externalities**: when transactions costs are sufficiently low, bargaining between parties may help restore efficiency.

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- efficiency is not optimality: even if bargaining happens, the outcome critically depends on the bargaining power of the different parties;
- NGOs are not social planners, they do not (only) seek to maximize social welfare but also pursue private objectives, such as their financing;
 - ▶ these two points may lead activists to rather target *soft* companies such as Starbucks than *hard players* such as ExxonMobil.
- running a campaign is costly, hence citizens have an incentive to free-ride;
- weak private politics may substitute for more ambitious public regulation;
- regulation does not rely on a stable set of rules, but on a (quickly moving) public opinion;
- absent a strong enforcement, the “good behavior” of a firm is imperfectly observed and corporate social responsibility measures can hide green-washing;
- etc.

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→ Although there is a clear case for private politics, it does not provide tools to solve the free-rider problem, and therefore can only bring a *partial* solution to *some* environmental problems.

An example of greenwashing

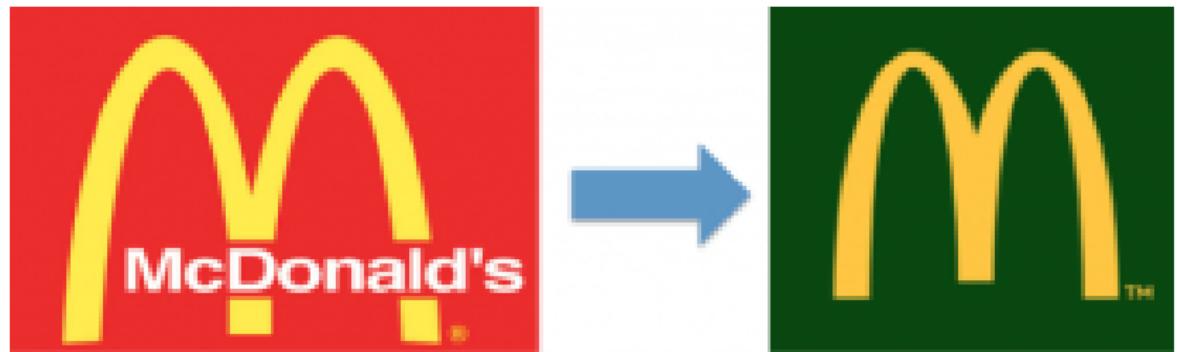


Figure: Same brand, same products, different strategy

An example of greenwashing



Cayenne E-Hybrid

340 kW/462 PS
Power combined (kW)/Power combined (PS)

5,0 s
Acceleration 0 - 100 km/h with Sport Chrono Package

253 km/h
Top speed

Figure: From Porsche's website: "The mix of sustainability and driving dynamics brings a smile to any sports car enthusiast."

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Conclusions

- Environmental economists seek for solutions to environmental problems affecting society. These solutions very often imply to **design, implement and enforce a given policy** imposing certain constraints on polluting behaviors. This **requires effective governance**.
- The main **objective of governance is to overcome the free-rider problem**, by forcing or incentivizing agents to adopt a behavior consistent with social objectives.
- For relatively **local environmental problems**, this governance can in some cases emerge as a natural social outcome, or be **ensured by a jurisdiction**.
- For **international problem**, this governance can also emerge when the benefits of cooperation are large relative to the costs. In the case of **climate change, over-coming the free rider problem is a critical issue that has not yet been solved**.
- **Partial solutions exist**, and they usually **involve changing the nature of the problem** to change the structure of incentives (by making it a trade-related club good, by stressing local co-benefits, or by focusing only on a limited number of actors) but **to date none has proved sufficiently satisfactory** to effectively address the problem.