

## What (else) has been said about the lessons from the Montreal Protocol for climate change?

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The Montreal Protocol and climate negotiations:  
Lessons for technology transfer and financing toward COP15  
28 October 2008

<sup>1</sup> | The Montreal Protocol and climate negotiations. 28 October 2008

### Key sources

- **Scott Barrett**
- Environment and Statecraft - The Strategy of Environmental Treaty-Making, 2003. (Applying game theory to international environmental agreements).
- **Richard Benedick**
- The diplomacy of climate change - Lessons from the Montreal Ozone Protocol. Lead US negotiator

<sup>2</sup> | The Montreal Protocol and climate negotiations. 28 October 2008

## Overview

- Lessons *were* learned
- Strategic choice of treaty characteristics
- Choice of policy instruments and incentives
  - Trade measures
  - Financing, "Side payments"
- Costs and benefits
- Linkage between policy making and scientific and technical advice
- Lessons are still being learnt
- Emerging lessons?

3

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## Lessons *were* learned

**MP has served as a model in the design of the CC regime in many ways:**

- Framework convention plus protocol
- Targets and timetables
- Financial mechanism. Side payments to DCs through international fund.
- Basket of gases
- Link between policy making and scientific advice
- Review and amendment of treaty rules
- Implementation and compliance
- Strong leadership by a major country can be a significant force for mobilizing international consensus. MP: USA+ Climate change: EU tries its best

4

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## Strategic choice of treaty characteristics

### Broad vs. deep cooperation

- Benedick: Insisting on broad participation by setting high threshold for entry into force would weaken the protocol by holding the treaty hostage to countries which might extract concessions as the price for adherence.
- Montreal negotiators chose depth before breadth initially, then broadened, and the later success is one of. In general, "broad but shallow" is often to be preferred as more abatement options are mobilized and perceived "fairness" is higher.
- Subset of countries entering into agreement, setting the framework and incentives for others to participate.
- Sequential approach: MP incorporated trade measures from the outset with a narrow participation, then expanded participation to DC together with side payments. Is "narrow and deep" the only way to get "sticks" incorporated?

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## Strategic choice of treaty characteristics

### Flexibility, incremental approach

- Benedick: MP designed to be flexible, "to be reopened and adjusted as needed, on the basis of the periodically scheduled scientific, economic, environmental, and technological assessments.
- Adjustments without ratification.
- Argument in favour of incremental approach: Over time, costs fall and benefits increase compared with earlier expectations.
- Does risk-aversion of parties justify the approach of relatively modest but gradually strengthened targets? Or should this be addressed by e.g. safety valves?
- Barrett: Montreal created a foundation for building in greater and greater sacrifices by countries. The real problem with Kyoto is not that it starts off achieving little. The real problem is that it doesn't provide a structure for both broadening and deepening cooperation over time.
- **But global emissions need to peak in 10-15 years. Essential to influence investments now that lock-in emissions-intensive infrastructure. No time for a soft landing.**

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## Strategic choice of treaty characteristics

Challenge: Increase the strategy/policy space.

- **To deter free-riders and encourage participation+enforcement.**
  - Look for instruments other than reciprocity for deterring non-cooperation.
- **Carrots and sticks.** Barrett: Carrots must be coupled with the use of effective sticks. Sticks can only be applied where overall agreement is perceived as being fair.
- Side payments (inducement, compensating payment)
- Trade restrictions
- Moral suasion
- Linkage to other issues?

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## Strategic choice of treaty characteristics

- Fundamental problem: The main instrument available to deter non-participation is **to provide less of the public good**. But this damages the country itself. In CC = the road to "Mutually Assured Destruction".
- **Barrett: Linkages between the climate area and other issues.** Where trade restrictions cannot deter free-riding, countries will inevitable search for other punishments - trade sanctions (in unrelated products), withdrawal of assistance, exclusion from a collective security pact.

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## Strategic choice of treaty characteristics

Barrett: The means by which a treaty tries to change behavior is a strategic choice.

- **Quantitative limit on emissions**
- **Policy or measure such as technology standard, tax, subsidy for R&D, trade restriction.**
- Barrett: MARPOL treaty a model, which abandoned quantitative emission limits that could not be enforced and imposed a technology standard (segregated ballast tanks), which is theoretically less cost-effective but could work in the real world.

9

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## Choice of policy instruments: Technology

- **Push incentive** for R&D, which has **decreased** in developed countries committed to Kyoto. Cooperative provision of the knowledge obtained from basic research.
- Approach to financing of collaborative R&D could be based on:
  - Agreed total level.
  - Sharing of contribution based on agreed metrics
  - The contributions by other countries (increasing contributions by others as new countries accede).

10

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## Choice of policy instruments: Technology

- **Pull incentive.** In theory best done by **price incentive**. But alternative pull incentive can be created by mandating **standards**.
  - Where there are network effects, the number of others that use a technology influences demand.
  - Where there are switching costs, buyers may be reluctant to purchase a "risky" new technology
  - Where there are economies of scale, costs will be lower with technological specialization.
  - Setting of standards can create a tipping effect.

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## Choice of policy instruments: Trade measures

Trade restrictions can do two things:

1. **Penalize countries that free ride**
2. **Correct for loss in competitiveness/leakage hurting those that do cooperate.** (The threat to impose trade restrictions made credible by the real concern about leakage).
  - Barrett: Important part of incentive structure. Trade used both to encourage participation and to enforce compliance
  - Critical mass, tipping point: Benedick: "sufficient to increase the pressure on any potential large holdouts to join the treaty".
  - Benedick: "Trade restrictions were critical, since they constituted the only enforcement mechanism in the protocol."

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## Choice of policy instruments: Trade measures

- MP: Served their purpose: **The stick remained in the pocket**. When sanctions are tough and credible, they are likely not be invoked
- Montreal implemented trade restrictions in ODS themselves, but not embedded ODS use in products made using the substances.
- Two areas of possible collision with WTO rules:
  - 1) Discriminating between parties to the GATT/WTO, "most favoured nation" principle.
  - 2) Restricting trade in "like products" based on the way they are manufactured.
- **But: *Standards* may perform a similar function to trade restrictions, ensuring a shrinking market for the old technology. Trade restrictions based on standards are legal when designed with care.**

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## Choice of policy instruments: Trade measures

- Trade in climate negotiations
  - Some Annex I countries (USA/EU) are considering unilateral trade measures (border tax adjustments) as more or less explicit bargaining chip (Benedick: US also threatened with trade restrictions during MP negotiations). But no institutional and procedural framework for setting criteria, monitoring etc
  - A1 countries responsibility to move first not implemented. On this background trade restrictions would be perceived as unfair, unless perhaps if complemented by strong Annex I country action and funding to support developing countries

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## Choice of policy instruments: Financing, "Side payments"

- Offering side payments is a strategic choice. Can be in money, in kind, in technology.
- Side payments instrumental in sustaining cooperation and essential in supporting a fair outcome.
- Funding of incremental costs
  - MP vs. CC: Difference in scale. Climate change costs much higher, perhaps USD 200 bn. by 2030
  - Carbon market does not pay incremental costs but market price.
  - **Why is the incremental cost approach a success story in MP and discredited in CC regime?**
- MP: Technology targets and technology transfer to DC financed as transfers rather than through trading system.
- **Design of side payments important. Focus on making the most of it in terms of creating incentives for abatement.**

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## Choice of policy instruments

- **What made *the* difference in MP?**
  - Developed country unilateral action?
  - A uniquely effective institutional setup with the TEAP?
  - Two main instruments: Trade provisions + Funding = carrot and stick.
  - Barrett: "It is probable that each instrument was rendered more effective by the existence of the other." **Trade focuses on access to international markets. The Fund addresses the domestic market in DCs**, in particular important for large countries like India and China. **The Fund also made the MP more fair and thus gave the trade measures more legitimacy.**

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## Costs and benefits

### Costs and benefits matter

- Ozone: Stronger (perceived) benefit-cost case for ozone action in the short to medium term, including for unilateral action, e.g. USA 65:1 B/C ratio. Unilateral action in late 70s. US, Belgium, Canada, Norway, Sweden.
  - Barrett: **"The benefit-cost relationship would have commended substantial abatement by the industrialized countries even in the absence of an agreement. The truly great achievement is that it built even more cooperation on this edifice."**
- Costs fell and benefits increased compared with earlier expectations: Innovative capacity of the private sector systematically underestimated. Also due to asymmetric information.

17

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## Linkage between policy making and scientific and technical advice

- Hermann E. Ott - TEAP as possible model
  - Enormously successful
  - Participants - not management
  - Hands-on approach to problems
  - Choice of members that were well-connected and part of larger Networks
  - Introduction into UNFCCC failed - TEAPs too successful
  - Requires a manager as able as Stephen Andersen (the personality factor)
  - Successful introduction of TEAP concept in CC context will require:
    - Must provide technical advice to the Parties
    - Participation by industry
    - Must have backing of EU and funding

18

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## Linkage between policy making and scientific and technical advice

- Expert panels "too successful" under MP?
- Oberthür: "Parties that have not liked the climate change regime acquire just the same degree of effectiveness (because of potential negative implications of specific rules for them) have worked hard and with some success to prevent the transfer of some of the features of the Montreal Protocol"
- Romina Picolotti, Argentina's Environment Minister: CC Financial Mechanism must be able to develop its own expertise and experience with technologies. Technical committees to develop lists of incremental costs on a sectoral basis to promote efficiency, prioritization and cost-effectiveness.

19

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## Lessons are still being learnt

Romina Picolotti, Argentina's Environment Minister:

- **Equal representation** developed-developing countries
- Assurance by donors to meet "**all agreed incremental costs**".
- **Country focal points, country programmes, networks and other institutional strengthening financed by Financial Mechanism**
- **Preparation of country programmes to set both short- and long-term goals** based on country specific assessment of regulatory, institutional, technological and financial capacity.
- Establishment of **appropriate regulations and policies through FM assistance**, including financial incentives.
- **Assured periodical replenishment of the FM with financial needs assessed every three years by independent technical experts.**
- **Annual update to parties based on assessment of technology and economics of alternative technologies. By independent experts with regional representation and placed before the parties without prior editing.**
- **Financial Mechanism must be able to develop its own expertise and experience with technologies needed to address specific sources and sectors.**

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20

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## Lessons

- **At first glance, the CC framework appears similar to MP, but the devil is in the detail:**
  - **Structuring of incentives.** Balancing carrots and sticks to make participation the preferred option. Requires that the overall agreement is fair.
  - **Delivery mechanisms and supporting institutions.** E.g. TEAP, Fund secretariat with expertise. High-quality country programs.
  - **The will of participants to make large-scale efforts** based on their (perhaps implicit) cost-benefit calculations
  - **The incremental cost approach - a success story in MP and discredited in CC regime.** CC: Not clearly linked to country programs, national targets and strategies; ad-hoc project-based; not backed by strong TEAP and other institutional support; NA I dissatisfaction with governance.
- **Without trade "sticks", it is essential to make the most of the carrots,** extract maximum benefits and commitments in return for "side payments". "Goals + Funding". Huge cost-effective potential that mainly requires coordination and removal of barriers.
- **Need to look for non-trade "sticks" to deter free-riding through linkages to other areas?**