

Climate Change: Trade and International Cooperation

ESCAP/WTO ARTNeT Capacity-Building Workshop
for Trade Research

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Main Topics

- Trade and climate change
- International cooperation
 - Kyoto
 - Copenhagen
- Looking for compatibility between trade and climate change regimes
- Architecture of agreements

Some Preliminaries: Trade, Output and Climate

- Trade is but one component of economic activity
- If environmental externality (carbon in this case) is properly priced, producers and households respond to resulting relative prices regardless of activity
- We should bear this in mind when we separate out trade as our analytical focus

Effects of Trade and Trade Liberalization on Climate

- *Scale effect*:
 - expanding trade under unemployment means increased (CO₂) output
 - Expanding trade under full employment translates into composition effect, with uncertain CO₂ effects
- *Composition effect*: resource allocation changes in many countries, uncertain outcome
- *Technique effect*: Positive if increased trade associated with improved technologies

More on the Technology Effects

- More open trade should allow more availability, lower cost of environment-friendly goods and services
- Transmission mechanisms for technology diffusion:
 - Imports of intermediate inputs not locally available
 - Communication fostering learning
 - Increased opportunities for technological adaptation
 - Reduced costs of future innovation/imitation

Trade, Income Growth and GHGs

- To the extent trade is linked to higher incomes, it contributes to higher demand for lower GHG emissions
- A non-linear relationship captured by the Kuznets inverted U-shaped curve
- But the relationship depends on accompanying emission reduction and adaptation policies

Trade and Transport

- Trade requires transport
 - Some 90 per cent of trade by volume is transported by sea
 - Some 90 percent of energy consumption in transport is oil products
 - Maritime transport accounts for about 4 per cent of global GHG emissions
- The fallacy of “food miles” and “consume local” campaigns: the relevance of product cycle carbon footprint analysis

International Cooperation

Kyoto Protocol

Antecedents

- 1992 Rio, establishment of UN Framework Convention on Climate Change
- Dec 1997: Kyoto Protocol adopted by the UNFCCC
- May 2002: ratified by the EU
- Non-ratifiers include United States and until Labour Government, Australia

Kyoto Protocol (cont.)

- Annex 1 and the rest, the former with GHG reduction commitments
 - Averaging across the countries we have:
 - A cut of 5% relative to the defined 1990 baseline, to be attained on average over 2008-2012, which implies
 - A cut of 10% relative to 2000, and
 - A cut of 20% relative to BAU in 2008-2012
 - Emissions credits are tradable
- “Common but differentiated responsibilities and respective capabilities”
- CDM and JI

Copenhagen Accord

- Core Copenhagen objective: to complete successor to Kyoto Protocol in 2012
- Two perceptions about Kyoto shortcomings that developed countries wanted to fix:
 - No explicit emerging economy engagement
 - No long-term emissions path commitments
- Developing country concerns/aspirations
 - Extension of Kyoto with same architecture
 - Ramped up Annex I country commitments
 - Financial support for mitigation and adaptation
 - Effective technology transfer
 - Special concern for vulnerable countries

Copenhagen Accord (2)

- Important features
 - Not a signed agreement (subsequent Danish initiative)
 - Recognition of need for deep emission cuts to meet 2^o target
 - Urgent financial cooperation on adaptation for LDCs, small island developing states and Africa
 - Annex I countries to submit 2020 targets by 31 January 2010, with clear measurement, reporting and verification (MRV), including on financial commitments

Copenhagen Accord (3)

- Non-Annex I countries to implement mitigation actions, including those to be reported by 31 January 2010, to be communicated on the basis of own MRV, with provisions for international consultations and analysis, respecting national sovereignty
- LDCs and small island developing countries may act voluntarily on basis of support, and subject to international MRV

Copenhagen Accord (4)

- Positive incentives for reducing emissions from deforestation and forest degradation (REDD+), including financial support
- Use of markets to enhance cost-effectiveness, but no mention of international competitiveness issues
- Funding of some \$30 billion to be available from 2010 to 2012, and \$100 per annum by 2020 from private and public sources

Copenhagen Concerns and Challenges

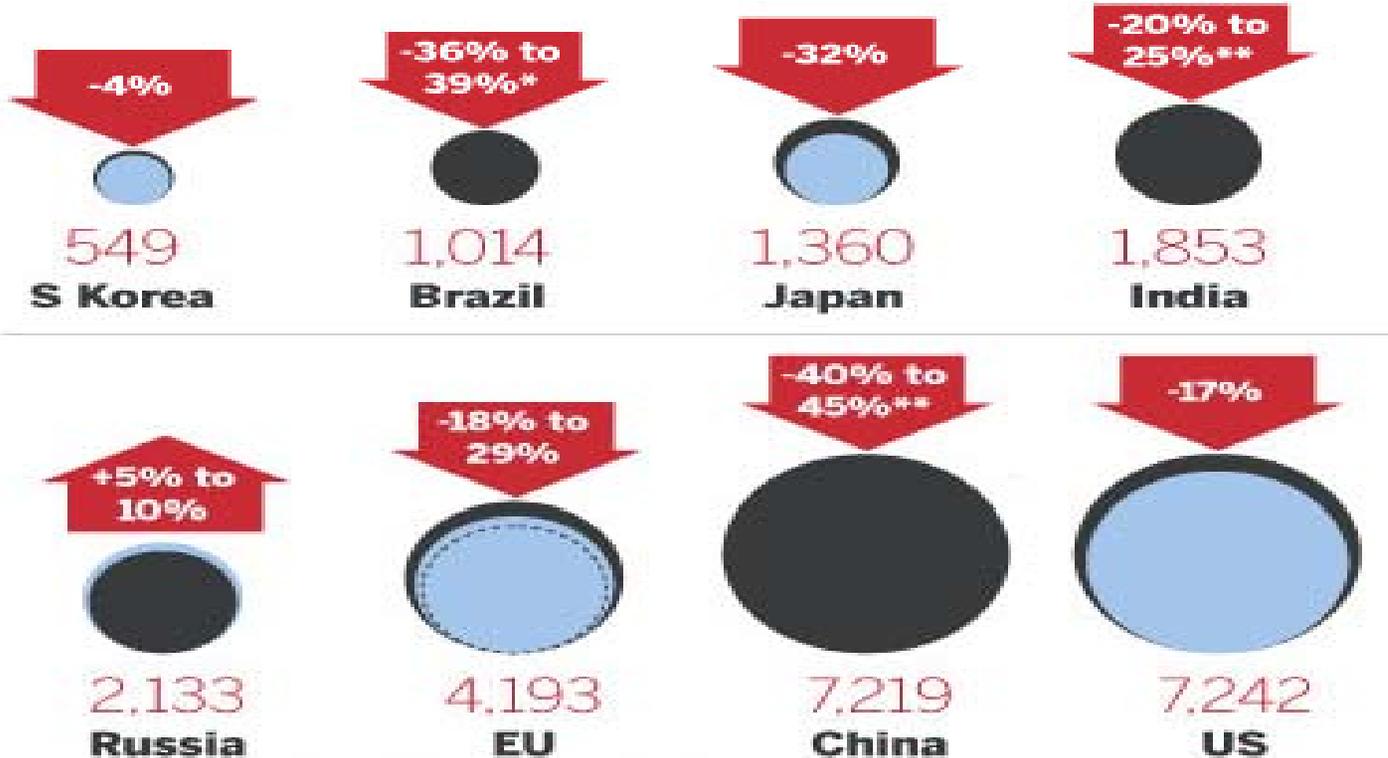
- Will commitments become binding, and for whom?
- Will 2050 targets be clarified?
- How will emerging economies ('Basic' Group) participate?
- What will the role of the UN be?
- Will Kyoto give way to weakened international cooperation, or will future COPs progress?
- Next COP: Mexico Nov. 2010 – opportunity?

Post-Copenhagen Pledges on Carbon Emissions

The burning question addressed

Government pledges on reducing carbon emissions
(million tonnes of CO₂ equivalent, relative to 2020 levels)

■ Existing carbon emissions ■ Pledged change between now and 2020



* Brazil pledge 36% to 39% lower than projected 2020 levels

** China and India intensity pledge to reduce CO₂ per unit of GDP by 2020

Source: UNFCCC

National Emission Targets (pre-Copenhagen)

Country	Commitment	Comment
EU	20% < 1990 by 2020 or 30% < 1990 by 2020	If int. agreement
Japan	25% < 1990 by 2020	
US	20% < 2005 by 2020 (or 7% below 1990)	
Australia	25% < 2000 by 2020 or 5-15% < 2000	If no int. agreement
Canada	6% < 1990 by 2020 or 20% < 2000 by 2020	Above Kyoto target
Russia	25% < 1990 by 2020	
NZ	10-20% < 1990 by 2020	
Norway	30-40% < 1990 by 2020	
Switzerland	20-30% < 1990 by 2020	
Ukraine	20% < 1990 by 2020	
All rich countries	16-22% < 1990 by 2020	
Needed (IPCC)	25-40% < 1990 by 2020	Or catastrophe

Searching for Compatibility between Trade Policy and Climate Change Regimes

Challenges in Trade Arising from Climate Change Policy

- Where does trade fit policy in?
- Shared perceptions of necessary actions
- Who should do what?
 - Historical overhang
 - “Climate justice” in terms of future actions
 - Distributional fairness in terms of dealing with Δ consequences

Trade and Investment Considerations

Competitiveness considerations arise in the absence of harmonized (or at least agreed) policies at the international level.

- Carbon leakage through investment and output decisions
- Production costs affecting competition through trade both in home markets and third markets
- Use of trade policy to “level the playing field”
- Environmental versus industrial policy?

Issues relating to WTO rules and climate change

- Liberalization of climate-friendly goods and services
- Subsidy rules
- Standards and Labeling
- Border tax adjustments
- Intellectual property rights
- The architecture of agreements

Trade Liberalization and Environmental Goods

- Doha Round negotiations for greater market opening on environmental goods and services
- Four proposals currently under negotiation:
 - a list approach (lower tariffs on environment-friendly goods);
 - a project approach (lower tariffs on goods imported by environment-related entities;
 - a request/offer approach;
 - A sectoral agreement for zero tariffs on about 40 products

Examples of Possible Environment-Friendly Goods

- Towers and lattice masts (renewable energy plants)
- Reservoirs, tanks, vats (waste water management)
- Vapour-generating boilers (hazardous waste)
- Hydraulic turbines, water wheels (renewable energy)
- Gas turbine engines (renewable energy)
- Distilling or rectifying plant (hazardous waste)
- Heat exchange units (heat and energy management)
- Refrigerating-freezing equipment (renewable energy)
- Prisms and mirrors (renewable energy plant)

Trade Liberalization and Environmental Services

- Environmental services (including services relating to sewage, sanitation, refuse and solid waste disposal, waste water management, soil remediation and clean-up, environmental laboratory services, advisory services and other services related to pollution abatement) subject to GATS negotiations
- Apparent willingness to expand sectoral coverage and the modal scope of commitments in order to reduce or eliminate restrictions in Doha Round

Subsidies

- Subsidy rules:
 - Production subsidies permitted but actionable
 - Export subsidies prohibited on manufactures but negotiated in agriculture
 - No subsidy rules in services – only affected potentially by national treatment restrictions if so scheduled
- Note previous Article 8 of Agreement on Subsidies and Countervailing Measures in relation to non-actionable subsidies
- Countervailability
- Are free emission permits a subsidy?

Standards and labeling

- Provision of information
- Standards
 - Mandatory or voluntary
 - Harmonization, mutual recognition, minimum standards
 - The production and process method (PPM) issue
- Definition of an international standard
- Labeling, information and market segmentation

Climate Change Policy and Competitiveness: Leakage

- In the absence of uniform carbon emission policies internationally, the more stringent a national policy
 - The greater the potential for carbon leakage (emission reductions in one country offset by increases in another)
 - The greater the likely effect on competitiveness and the clamour for countervailing policy action
 - But what action?

Border tax adjustments to “level” trade playing field

- Indirect taxes generally eligible for adjustments
- Direct taxes generally ineligible
- For a border charge to be a tax adjustment and not a customs duty it must be equivalent to a tax on a “like” domestic product – that is, equivalent to a tax imposed domestically (Art. II.2(a)).

Border tax adjustments (2)

- Are BTAs permitted for carbon/energy taxes?
- Art.II.2(a) allows charges on imported like products and on articles from which an imported products has been produced in whole or in part...
- Does the latter refer only to physically incorporated inputs into the final product (e.g. excluding adjustments on energy or used in the production of goods, other than on the fuels themselves)?

Border tax adjustments (3)

- Article II.2(a) also says that internal taxes and equivalent charges on imported products must be consistent with Art. III.2 which says BTAs are only allowed on imported products in respect of taxes “applied, directly or indirectly, to like domestic products” (i.e. indirect taxes)
- So, what is the meaning of the words “directly and indirectly” in relation to BTAs on taxes on CO₂ emissions.....

Border tax adjustments (4)

- Pursuant to Arts. II.2(a) and III.2, are BTAs permissible only on environmental taxes on inputs physically incorporated into the final product when final product is imported. Some say yes.
- Other say that the word “indirectly” in Art.III means BTAs can be used on taxes charged during the production process (i.e applied indirectly to products). This would include taxes on fuels used in production process or on CO₂ emissions arising in production

Border tax adjustments (5)

- A major, practical policy issue is how the “tax equivalent” should be calculated (especially on inputs) and by whom?
- As with remissions or refunds on indirect taxes on exports (see below), stringent information requirements include technical production coefficients (including possibly indirect inputs in some cases) and all relevant prices

Border Measures in Proposed US Legislation

- Carbon-intensive sectors to receive free allowances and rebates to lessen leakage (phase-out 2025 onwards)
- Report in 2017 on effectiveness of rebates to prevent leakage and desirability of an “international reserve allowance” (IRA - effectively an import tax) on imports of certain goods
- If US has not entered an international CΔ agreement by 2018, IRA may be established unless President determines that it is not in the national interest and Congress concurs

Border Measures in Proposed US Legislation (2)

- If IRA established, EPA would create a pool of IRAs for sale at same price at which domestic allowances offered for sale (adjusted for free allowances and rebates)
- Exemptions from IRA:
 - Country has US-equivalent CΔ policy
 - Parties to sectoral agreements
 - Energy or carbon intensity equivalent to US
 - Least-developed country
 - Responsible for < 0.5% global emissions and < 5% of imports of covered goods

Article XX

- Closed list of public policy overrides
- Conditions attached to their use:
 - No more trade restrictive than necessary
 - Non-discriminatory
 - In comparable circumstances
- Interpretative tendencies:
 - Softening of trade focus
 - Developmental considerations

Border tax adjustments on exports (1)

- Export BTAs not subject to anti-dumping or countervailing duties, and not considered either prohibited or actionable subsidies
- Thus, indirect taxes borne by a like product when destined for domestic consumption may be remitted or refunded
- Interpreted by some to allow BTAs on taxes levied in respect of production processes, including energy and carbon taxes (refs. to “tax occulte” and “prior stage cumulative indirect taxes” in Illustrative List)

Border tax adjustments on exports (2)

- Consider the effects of BTAs on exports on domestic emission policy
- Emission standards may be higher in the domestic setting to compensate for exemptions on exports
- This would have the effect of augmenting pressure for BTAs on imports

Other WTO-Related Issues

- Are traded permits a good, a service or a “licence”, and are they covered by the WTO?
- Can exports from countries without climate change policies be charged a countervailing or antidumping duty to neutralize a “hidden” subsidy or counter environmental “dumping”?
- Could a prohibition or tax on imports be imposed under the general exception provision of Article XX(g) to conserve a natural resource?

Intellectual property rights

- Need for dissemination of clean technology, rights of access, for abatement and adaptation
- The role of IPRs as guarantor of R&D
- IPR as a possible barrier to technology transfer
- Alternative ways of funding R&D

Intellectual property rights: Some government proposals (1)

- Existing IP regime flexibilities to develop climate-friendly technology, facilitate diffusion and transfer
- Technology buy-outs for LDCs and developing countries
- Establish patent sharing or public domain technologies
- Exclusion from patentability for technologies needed for abatement and adaptation

Intellectual property rights: Some government proposals (2)

- Shorter patent terms for climate friendly technology
- No provisions in any IP agreement that limit or prevent measures to address adaptation or abatement, especially regarding the development, transfer of, or access to technologies
- Revocation of all existing patents in developing countries on climate change technologies

The Architecture of Agreements

Architectural design for cooperation: trade and climate compared

Contrasts across several dimensions:

- Uncertainty
- Time frame
- Distributional implications
- Scale of the problem
- Extent of willingness to deploy efficient policy intervention

Key features of international agreements

Challenges of rational collective action to avoid the otherwise dominant strategy of free-riding

- Issues include:
 - Degree of uniformity of rights and obligations
 - Level of detail in an agreement
 - Level of formal commitment
 - Enforceability and dispute settlement

Universal agreement or piecemeal approach?

- Overarching global structure versus national and regional approaches
- Bottom-up or top-down?
- Adaptation may be different from abatement along these dimensions
- The role of sector approaches

Inclusiveness and varying degrees of obligation

- Number of negotiating parties in a procedural context
- Limiting the number of negotiating parties
- Varying levels of commitment (S&D, graduation)
- Scope for trade-offs and transfers

Some Sources

Inter-governmental Panel on Climate Change Reports (UNFCCC);

Stern Report (UK Government);

Llewellyn (Lehman Brothers);

R. K. Eastwood (Sussex University)

UNEP/WTO, Trade and Climate Change, 2009;

Low and Murina, Managing Cooperation on Climate Change: What Can We Learn from the WTO? (JITED)