Trade and Climate Change

Issues for South Asia

Nitya Nanda

The Energy & Resources Institute (TERI)

Regional Conference on

Road to Bali: South Asian Priorities for the Ninth WTO Ministerial

Colombo, July 2-3, 2013

teri

Trade and climate change –emerging issues

- Developed countries' apprehension: Emission intensive production units in developed countries may relocate to developing countries (**carbon leakage**) => undermine global objective of climate change mitigation in post Kyoto regime.
- Growing concerns of the industries in developed countries in the changing **competitive environment** due to various domestic CC policies – R&D Inv./Higher compliance cost -> ^Price
- **Elimination of price advantage** and induce developing countries to adopt more rigorous climate policies

Measures

- Proposals for various BTA measures to offset any adverse impacts arising from domestic policies in developed countries
- Use of other voluntary trade restrictive measures that are sensitive and controversial (labelling)

Legality etc.

- Compatibility of carbon barriers under UNFCCC and WTO is questionable
- Voluntary measures taken by some sectors are already acting as carbon barriers – for e.g. food chains; action needed to address these barriers

teri

Select literature review

Impact in developed countries (carbon leakage)	Impact on developing countries (BTA)	Suggested policies
Pew Climate paper : Not likely to impact US competitiveness under CAP and trade system **World Bank (2010):** No evidence the energy intensive industries' competitiveness is affected in the presence of carbon taxes. **Manders et.al. (2008):** Modest carbon leakage **Aldy & and Pizer (2008):** leakage found **Adkins et.al (2011):** moderate to high leakage **Babiker et.al. (2005):** substantial leakage **Fischer and Fox (2009):** Substantial leakage	**Manders and Veenendaal (2008):** may entail a welfare loss for the rest of the world (developing countries) **Hubler (2009):** Exports decline in the range of 8-20% (china+middle+low inc countries) **ICTSD (2010):** India export decline in EU 24%, China 7%, Indonesia 17%. **Richard D. Morgenstern (2007):** Potential impact on developing countries **Goldar and Bhalla (2011),;** Observed impacts, **Matoo et. al (2009):** developing vs. developed carbon intensity and differential impact	**Cosbey (2007): A**reas and policies where action could enhance the contributions of international trade and investment to climate change mitigation options **Brewer (2008):** improved international institutional arrangements **Vicente Paolo Yu (2009) :** developed countries refrain from adopting border adjustment measures, pushing for trade liberalization of climate-friendly products **Webel and Peters (2009)**: tech sharing, agreements

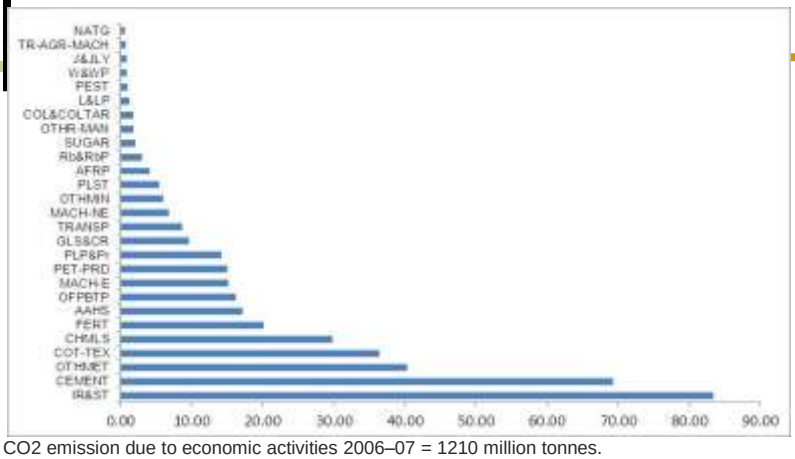
Climate Change and South Asia

- **Vulnerable due to geographical and socio-economic conditions**
- **Likely to impact macroeconomic and trade performance as well as livelihood and living standards of people**
- **Studies show even a marginal increase in temperature can have substantial impact on production of major crops**
- **Increased precipitation may further aggravate the problem**
- **Even in Himalayan regions there may be landslide and related loss of life property and deterioration of land quality**
- **Agricultural goods or products based on agricultural goods are substantial in export basket of most countries in the region**

Impact of BTA

A Case Study of Indian Exports to US and Germany

Estimated sectoral emission (million tonnes)



- Total CO2 emission due to economic activities 2006–07 = 1210 million tonnes.
- MoEF emissions inventory with the reference year 2007 estimated in 2010 total CO2 emission as 1221.76 Mt or 1.22 Gt (GoI, 2010)
- Electricity is the largest emitter = 591 million tonnes, followed by IR&ST, cement, metallic prd..

India's key (top 10) exports to the USA and Germany (2006-2007)

USA

SECTOR	EXPORTS (Rs. Lakhs)	SHARE IN TOTAL EXPORTS (%)
J&JLY	2161741	25.46
COT-TEX	2158155	25.42
MACH-E&MACH-NE	811423	9.56
CHMLS	810819	9.55
IR&ST	674668	7.95
OTHR-MAN	297981	3.51
AAHS	286654	3.38
TRANSP	251449	2.96
OTHMET	176056	2.07
OTHMIN	171153	2.02

Germany

SECTOR	EXPORTS (Rs. Lakhs)	SHARE IN TOTAL EXPORTS (%)
COT-TEX	658945	34.50
CHMLS	331043	17.33
IR&ST	177532	9.29
MACH-E	125717	6.58
L&LP	102775	5.38
TRANSP	84027	4.40
J&JLY	73460	3.85
OTHR-MAN	64711	3.39
AAHS	49299	2.58
OTHMET	46492	2.43

Main Findings

USA

- **Scenario1 = 2.34%, Scenario 2 = 3.5%**
- **Largest % decline** in cement and related products of 53% and 68% for scenario 1 and 2.
- Maximum decline in export revenue for **IR&ST** Rs. 7292 million and Rs. 10939 million for scenario 1 and 2.
- FERT (39% and 59%), PLP&Pr (12% and 19%) and glass and ceramic (10% and 15%).
- Second highest decline in revenue for **COT-TEX** Rs. 6210 million and Rs. 9315 million
- Other potentially impacted sectors are chemicals, metallic products rubber and plastic.

Germany

- **Scenario1 = 2.7%, Scenario 2 = 3.9%**
- **Largest % decline** in cement 32% and 47% for scenario 1 and 2.
- Maximum decline in export revenue for **COT-TEX** Rs. 1684 million and Rs. 2526 million for scenario 1 and 2.
- FERT (19% and 29%) and glass and ceramic (18% and 29%).
- Second highest decline in revenue for **IR&ST** Rs. 1417 million and Rs. 2125 million
- Other potentially impacted sectors are chemicals, metallic products rubber and sugar.

Impact on Exports – US as case study

	Total Exports (Rs Lakhs)	Share of exports in total	Percent decline under scenario € 20/ton	Percent decline under scenario € 30/ton
CEMENT	1540.73	0.02%	53.38	68.03
FERT	126.89	0.00%	39.48	59.23
PLP&Pr	29147.26	0.34%	12.69	19.04
IR&ST	674667.68	7.95%	10.81	16.21
GLS&CR	24792.31	0.29%	10.16	15.24
PLST	77888.89	0.92%	4.75	7.12
SUGAR	1013.33	0.01%	3.73	5.60
Rb&RbP	105032.69	1.24%	3.39	5.08
COT-TEX	2158154.98	25.42%	2.88	4.32
W&WP	11789.02	0.14%	2.86	4.29
OTHMET	176056.02	2.07%	2.62	3.92
OTHMIN	171153.35	2.02%	2.55	3.83
TRANSP	251448.9	2.96%	1.94	2.91
MACH-E	811423.19	9.56%	1.70	2.54
OFPBTP	70252.98	0.83%	1.53	2.29
CHMLS	810818.64	9.55%	1.48	2.23
OTHR-MAN	297980.78	3.51%	1.01	1.51
AAHS	286654.08	3.38%	0.74	1.11
L&LP	97939.03	1.15%	0.68	1.02
AFRP	136079.59	1.60%	0.20	0.29
J&JLY	2161740.57	25.46%	0.08	0.12
Others	134724.02	1.59%	0.00	0.00
TOTAL	8490424.9	100%	2.34	3.50

Based on 2006-2007

Impact on Exports – Germany as case study

	Total Exports (Rs Lakhs)	Share of exports in total	Percent decline scenario € 20/ton	Percent decline scenario 2 € 30/ton
CEMENT	20743	1.09%	31.06	46.59
FERT	10	0.00%	19.78	29.68
GLS&CR	6869	0.36%	18.84	28.26
IR&ST	177532	9.29%	7.98	11.97
SUGAR	1445	0.08%	5.42	8.13
OFPBTP	44472	2.33%	3.31	4.96
Rb&RbP	29587	1.55%	2.97	4.46
COT-TEX	658945	34.50%	2.56	3.83
OTHMET	46492	2.43%	1.63	2.44
CHMLS	331043	17.33%	1.57	2.35
W&WP	4005	0.21%	1.45	2.17
TRANSP	84027	4.40%	0.70	1.05
MACH-E	125717	6.58%	0.65	0.97
AFRP	24601	1.29%	0.44	0.66
AAHS	49299	2.58%	0.38	0.58
J&JLY	73460	3.85%	0.26	0.39
PLST	25541	1.34%	0.25	0.38
L&LP	102775	5.38%	0.21	0.32
OTHR-MAN	64711	3.39%	0.13	0.19
PLP&Pr	2624	0.14%	0.13	0.19
OTHMIN	8860	0.46%	0.08	0.12

Trade reduces emissions?

- Technology transfer through energy efficient goods and services?
  - WTO agenda on liberalisation of environmental goods and services
- Potential is quite low as the products seem to be inelastic
- Long lists of environmental goods and services
  - Only a few have implications for climate change and problem of multiple use
  - No agreed definition
  - Even so called World Bank list is ad hoc
- Domestic policy more important than trade liberalisation

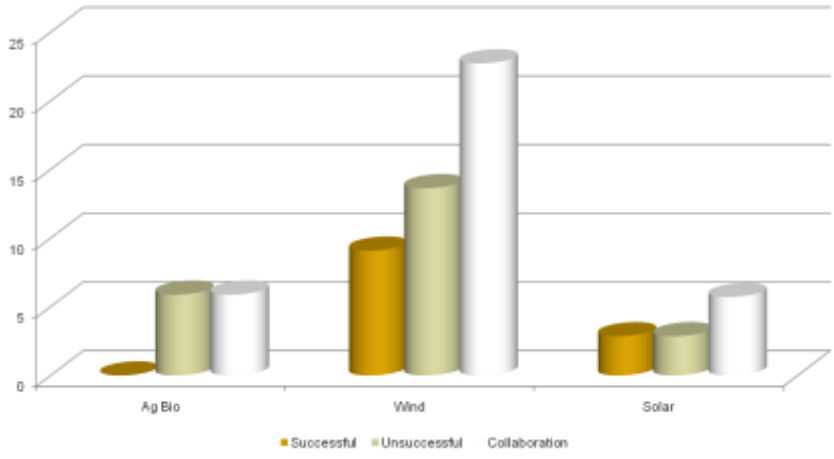
Border Tax Adjustment

- WTO is not clear but may not be too encouraging
- PPP (Process and production method) may be difficult - may not be fair as it may be producer specific – can you have different rates for different producers?
- UNFCCC also not in favour
- Legitimacy of BTA due to stalemate at UNFCCC?
- American Clean Energy Security Act (Waxman-Markey Bill)
- Only India China
- Non energy-intensive but trade intensive goods also
- Can there be trade war? Developing countries operate at far below their bound tariff rates!!

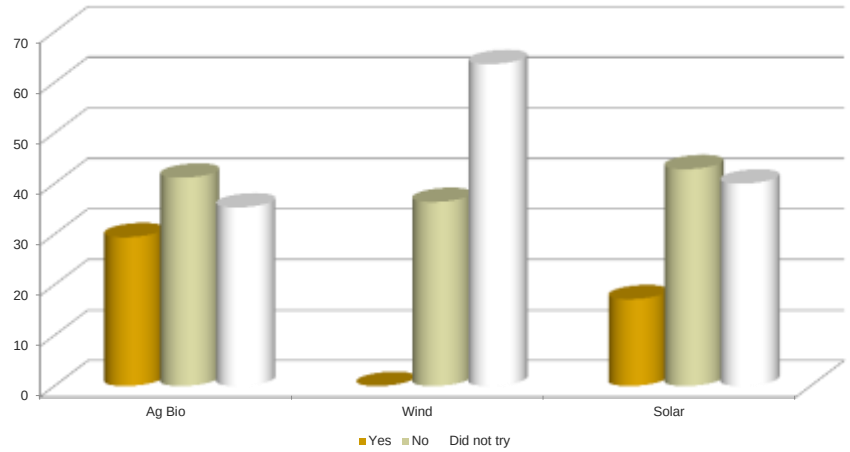
IPR and Technology transfer

- Significant emission reduction can be achieved in developing countries by using existing technologies
- Technology transfer through trade is a slow process and relying on it can be costly as we are racing against time
- Technology diffusion is not sufficient even in the developed world
- The root problem is that these technologies are too costly for developing countries
- No WTO discussion on IPR/technology
- Can compulsory licensing help?
- TRIPS-plus obligations

Technology Collaboration
(Ag Bio = 17; Wind 22; Solar 35)



Technology Denial
(Ag Bio = 17; Wind 22; Solar 35)



Non-tariff Climate Barriers

- EU talks about mandatory labelling – may not be WTO compatible
- Voluntary/private standards/labelling proliferating –consumers giving importance
- Some eco-labels already include emission factor
- Labour standards – de jure no ban, but de facto…
- Governments and NGOs have been supporting various eco labelling programs, which cover thousands of products in more than 20 countries
- Efforts to standardize environmental labelling schemes at the international levels
- Exports from developing countries to developed countries get considerably affected by the eco-labelling in the EU and the US

Proliferation of Carbon Standards

- In 2007, the Carbon Trust and DEFRA commissioned the BSI to develop a comprehensive carbon footprint methodology - Publicly Available Specification (PAS 2050), was launched in October 2008
- The Carbon Trust introduced a carbon reduction label, based on PAS 2050 in partnership with several companies.
- There is no internationally agreed methodology for calculating the carbon footprint
- France - voluntary carbon labels have been introduced in supermarket chains, Casino for its several own-brand products - supported by the French Environment and Energy Agency,
- Switzerland - supermarket chain, Migros has introduced the Climatop carbon label on several own-brand products - product is 20 per cent more carbon efficient
- US - Carbon Fund, an independent non-profit carbon offset provider - Certified Carbon Free label; Climate Conservancy (Stanford University) - Climate Conscious label (gold, silver and bronze)
- Similar initiatives in Japan, Canada, Sweden, Germany, EU

Food Miles

- A range of environmental and community groups (eg. WWF, Soil Association) support the food miles concept
- Two major UK retailers (Tesco, and Marks and Spencer) now place plane stickers on fresh produce
- Soil Association attempt to include carbon standards it its organic standards
- A group in San Francisco ('locavores') - encourage people to eat food grown or harvested within a 100 mile radius of their home
- Role of trade in poverty eradication/ethical issues - workers and their dependants
- Cranfield University study - cut roses grown in Kenya for UK (500 inputs) are 5.8 times (6.4 times excluding air freight) more carbon efficient compared to Dutch greenhouse flowers. Similar for green beans and strawberries grown in Kenya compared to grown in UK
- Study of emissions in the UK and NZ food supply chains for four food products — lamb, dairy, apples and onions - substantially more energy efficient, and less carbon intensive except onion
- Countries like Australia, NZ oppose food miles but support carbon labelling

Labelling Difficulties

- A complex methodology - cost of data collection and calculation of the carbon footprint and cost of the verification process
- Simpler methodology - less reliable and may contain loopholes and relatively more emission-intensive products can pass as low carbon products
- Can be done only up to factory/farm gate
- Carbon standards will require estimation of carbon footprint of all suppliers - many small producers - no fixed suppliers - source supplies from the market without any knowledge of the original suppliers
- A matter of concern is the administrative costs - It is very likely that for most products coming from developing countries will have lower emissions. Yet they will have difficulties as the costs of compliance would be very high particularly for the small producers

Carbon Standards – Legal Issues

- Standard setting and labeling activities come under the TBT agreement irrespective of whether they are mandatory and voluntary, though the applicable provisions are different.
- TBT agreement covers standards by central government bodies, local government bodies as well as non-governmental bodies
- No consensus on non-product related processes and production methods and private labeling schemes
- If the PPM is detectable and embodied in the product itself then it may come under the agreement
- In the US Shrimp Turtle case, the import ban was examined under Articles XI and XX of GATT - No TBT experience
- Should activities of the Soil Association, Bio Suisse, Tesco, Marks and Spencer be considered to be standardizing or simply marketing or strategic issues?
- Should private organization dealing with labeling schemes be considered as non-governmental bodies?

Implications for South Asia

- Share of energy-intensive goods in total exports is not very high, particularly in case of exports to OECD countries
- Non-tariff barriers can be the real concern – certification costs to be high, even if emissions could be low
- Pre-emptive move? Can they have carbon tax? There is substantial tax burden on some energy commodities!! Can they be considered as equivalence of efforts?

South Asian Agenda at Bali

India proposed the inclusion of the following paragraph in the negotiating text for the Copenhagen conference:

"Developed country Parties shall not resort to any form of unilateral measures including countervailing border measures, against goods and services imported from developing countries on grounds of protection and stabilization of climate. Such unilateral measures would violate the principles and provisions of the Convention, including, in particular, those related to the principle of common but differentiated responsibilities (Article 3, Paragraph 1); trade and climate change (Article 3 paragraph 5); and the relationship between mitigation actions of developing countries and provision of financial resources and technology by developed country Parties (Article 4, Paragraphs 3 and 7)."

Similarly, China proposed the following paragraph:

"Recalling Article 3, paragraph 1 and 5, and Article 4, paragraph 3 and 7 of the Convention, developed country Parties shall not resort to any form of unilateral measures including countervailing border measures, against goods and services imported from developing countries on grounds of protection and stabilization of climate."

Source: FCCC/AWGLCA/2009/INF. F.1/Add.1 dated 17 September 2009


Thank You
teri