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mitigation?





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Introduction

It is perceived by developed countries that if developing countries do not join a post 2012 climate regime, emissions intensive production units in developed countries may relocate to the developing nations (carbon leakage), which will undermine the global combat against climate change.

s countries struggle with the challenges of integrating economic interests with management of climate change, the link between trade and environmental issues have brought new dimensions to the ongoing reform process. Kyoto Protocol was signed in 2005 with an overall objective of reducing participating nations' greenhouse gas (GHG) emission by approximately 5.2 per cent of the 1990 levels. Consequent to this the countries that ratified the Kyoto Protocol implemented policies that would help them in achieving the stated target. But the cost implications of such interventions and the consequent competitiveness concerns of the industries operating in developed countries have led to proposals for tariff or border tax adjustments to offset adverse impacts arising from domestic policies. These are popularly known as carbon barriers that arise when countries impose restrictions on trade on account of the carbon embodied in imported goods. Ideally embodied carbon is the carbon emitted across the production chain of the product and may include mining/resource extraction of key inputs, transportation, production and distribution and disposal of the final product. Such measures are based on the argument that because developing country producers are able to utilize less costly but higher carbon emitting production methods for manufacturing such products, such commodities are hence cheaper and more competitive than similar products produced in developed countries.

At the same time it is perceived by developed countries that if developing countries do not join a post 2012 climate regime, emissions intensive production units in developed countries may relocate to the developing nations (carbon leakage), which will undermine the global combat against climate change. Such border adjustment measures are going to be felt by a larger number of industries in the developing countries who are not mandated by any GHG emission reduction. The border adjustment measures raise deep concerns among developing countries. Their access to developed country markets is a major component in their trade and development strategy. Hence these are likely to be seen as disguised protectionist measures.

Possible border
measuresThe discussion of the border carbon measures dates back to when Kyoto
Protocol came into force in 2005, wherein most of the developed countries
ratifying the protocol with United States (US), that was supposed to reduce
emission by 7 per cent, rejecting the proposal. As a result of this, there
was a discussion in the EU for imposition of possible border tax on goods

entering the EU from US. Although US did not ratify the Kyoto Protocol, later it felt the need for developing domestic measures for climate change mitigation that led to the development of two bills popularly known as the Waxman-Markey and Kerry-Lieberman two bills. The Waxman-Markey bill, most interestingly, proposed the implementation of border adjustments measures but on imports from developing countries that are not mandated to reduce GHG emission under the Kyoto Protocol. Currently, however, both the bills are off the table (ICTSD 2011).

Title IV (i.e, Transitioning to a Clean Energy Economy) of the Waxman-Markey bill contains three subtitles that are as follows:

- 1) Subtitle A—Ensuring Real Reductions in Industrial Emissions
- 2) Subtitle B-Green Jobs and Worker Transition

3) Subtitle C—Consumer Assistance

Subtitle A, further contains two subsections/subparts viz. (i) emission allowance rebate program, and (ii) promoting international reductions in industrial emissions. Emission allowance rebate programme indicates establishing a programme for domestic eligible industrial sectors that would allow the United States Environment Protection Agency (USEPA) to distribute emission allowances to those sectors and cover part of the costs that domestic industries have undertaken in order to implement technologies that have reduced emissions significantly. Sectors will be considered eligible if they meet a 5 per cent energy intensity threshold and a 15 per cent trade intensity threshold. Each sector will be rebated at 85% of sector average direct and indirect emissions cost. Rebates are planned to be phased out beginning in 2020, unless Presidential review determines that other countries have not yet taken substantial action and leakage concerns persist (Nanda 2010).

Subsection (ii) describes that in the absence of any internationally binding agreement in which all major greenhouse gas-emitting countries contribute equitably to the reduction of global greenhouse gas emissions, US importers would require to purchase and submit international reserve allowances as a condition for being able to import and sell in domestic market. In other words, it is aimed at raising trade barriers (in the form of the requirement to purchase and submit international reserve allowances as a condition for importation into the US) to products from other countries, especially developing countries that would compete with the goods produced in the US. This will become effective from January 2020. However, there would be exemptions if:

- purchase of the product is from a country that is "determined to meet" any of the greenhouse gas mitigation commitment-related criteria set out in Sec 767(c);
- 2) the product is produced in a least developed country as identified by the United Nations; and,
- 3) the product is produced in a foreign country responsible for less than 0.5 per cent of total greenhouse gas emissions and less than 5 per cent of US imports of covered goods with respect to the eligible industrial sector.

US importers would require to purchase and submit international reserve allowances as a condition for being able to import and sell in domestic market. The Kerry-Lieberman bill also establishes a number of mechanisms to address cost impacts to consumers and businesses and to support clean energy technologies. Beginning in 2013 and annually through 2029, emission allowances will be provided in order to compensate for increases in cost of energy. This allowance value is provided to all consumers (residential, commercial, and industrial) through local distribution companies for electricity and natural gas, and through states for home heating oil.¹

2.2 European Union European Commission issued a communication in May 2010, in which it mentioned about reviewing different tools to address carbon leakage and competitiveness concerns. The communication had identified border carbon measures, although it cited the potential stumbling blocks to implement the same. The details of the possible mechanism are yet to be worked, but this too has raised concerns among many countries (ICTSD 2011).

2.3 Carbon standards In developed countries product standards like 'carbon labelling' are and labelling increasingly being introduced by companies and non-governmental organization as a mechanism for mitigating climate change. The carbon footprint of a product is the carbon emissions across the supply chain for a unit of a particular product. Currently there is no internationally agreed methodology for calculating the carbon footprint of a product. Carbon labelling can act an instrument in enabling consumers, particularly in developed countries, to exercise their purchasing preferences. However, the benefits of carbon labelling are uncertain as they are highly dependent on the preferences of consumer perceptions, reliability of information, and also the willingness to buy such products. Developing countries have raised concerns of such measure as it is likely to have an impact on exports from **Carbon labelling are** low-income countries.

> Carbon labelling schemes have been introduced in many developed countries. In the United Kingdom, the Carbon Trust introduced a carbon reduction label in partnership with several companies. In France, voluntary carbon labels have been introduced in supermarket chains. The aim is to label around 3,000 products. These schemes have been supported by the French Environment and Energy Agency, though they do not require audits by it. In Switzerland, the top supermarket chain, Migros introduced the Climatop carbon label on several of its products. This label guarantees that the product is 20 per cent more carbon efficient than its counterparts within the same product category.

> In the US, Carbon Fund, an independent non-profit carbon offset provider, developed the Certified Carbon Free label, which indicates if carbon footprint of the product has been calculated, and if the carbon is being offset. They also monitor if the norms are followed. So far, only a small number of products carry the label. Climate Conservancy, an

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¹ http://www.pewclimate.org/federal/analysis/congress/111/summary-americanpower-act-kerry-lieberman, accessed on 8th November, 2011

offshoot of the Stanford University, developed the Climate Conscious label that provides carbon rating (gold, silver, and bronze) based on the carbon intensity of the product. In Canada, Carbon Counted, a non-profit organization, developed an online application, Carbon Connect which enables companies to calculate carbon footprints of products.

Carbon labelling schemes or carbon footprint methodologies are also being developed in Germany (Product Carbon Footprint pilot labelling scheme), Sweden (Climate Marking), and the European Union (commissioned a carbon footprint measurement toolkit). In Japan, 30 companies have participated in a pilot scheme supported and coordinated by the Ministry of Economy, Trade and Industry (METI) (Nanda 2010).

2.4 Food miles
There are already some private initiatives in developed countries where consumption of goods that have been transported from a distant place through the concept of "food miles" are discouraged. Through this, consumers are informed about the distance a particular item has covered to reach the ultimate point of selling (e.g., retail store). Consumers are typically discouraged, through campaigns, to not buy products that have come from far off places. Apparently the initiative may be justified with regard to restricting trade in order to reduce avoidable transportation. However, it is possible for a product to remain less carbon intensive even after it has been airlifted from Africa to a store in Europe compared to similar products grown in the neighbourhood if carbon intensities of the production processes are very different.

Growing popularity of the concept of food miles, however, raises important concerns not only on its impact on food exporters and trade, but also on its reliability on reducing the impact on climate change. Food miles indicate only a part of the carbon emitted in the life cycle of a product. It indicates carbon emitted in the process of transportation only, ignoring the carbon emitted in other phases in the life cycle of the product. Empirical evidence indicates that 'food miles' is an unreliable and often misleading indicator of carbon emissions in the food supply chain. For example, a study conducted by Cranfield University found that cut roses grown in Kenya for the British market, based on a life cycle analysis considering more than 500 inputs, are 5.8 times more carbon efficient compared to Dutch greenhouse flowers even after accounting for emission caused by air freight (Appleton 2009).

Thus, while food miles may have some immediate appeal among consumers, the concept results in less informed consumption choices and does not reflect the carbon emissions embodied in many products. It also ignores the role of international trade in facilitating economic development, in particular in global poverty eradication.

Based on our learning of the above measures, the question that immediately arises is whether such carbon measures are compatible with the existing provision of WTO and the UNFCCC. For a measure to be legal under the WTO, there are specific criteria. There must be "national treatment" for all products where in local product is subjected to the same charges

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WTO and UNFCCC compatibility

3.1 WTO compatibility

Many argue that since the climate related charges to be imposed are based on processes and production methods (that is, on how much emissions were generated by the production), and not on the physical characteristics of the product, this is not compatible with the rules or spirit of the WTO. as the imported product. Also products that are like one another should be treated the same way. An imported good that has the same physical characteristics as the local good should be treated equally. In considering import taxes or charges, it is the physical characteristics of the imported product that need to considered, and not the processes and production methods (PPMs) that are used in making the product. Many argue that since the climate related charges to be imposed are based on processes and production methods (that is, on how much emissions were generated by the production), and not on the physical characteristics of the product, this is not compatible with the rules or spirit of the WTO (Khor 2009). It is also advocated that if policies considered are not explained by the above criteria, then Article XX of the GATT agreement can be taken in account that allows for an exemption on environmental grounds, provided certain conditions are met. The general approach under WTO rules has been to acknowledge that some degree of trade restriction may be allowed to achieve certain policy objectives as long as certain conditions are respected. The Appellate Body, in the Shrimp-Turtle case has opened the door to the possibility of trade measures based on PPMs. In this case the Appellate Body upheld the import ban on shrimps under Article XX of GATT if the fishermen did not use turtle excluder device and thereby killed turtles unnecessarily (Box 1).

The Shrimp-Turtle Case

In the famous Shrimp-Turtle case, the US government, by virtue of its enabling legislation (Sec. 609 of US Endangered Species Act) imposed a ban on the import of shrimps that were harvested without using Turtle Excluder Devices (TED) because this way of trawling killed endangered species of sea turtles unnecessarily. The affected parties regarded the action as a unilateral measure restricting the entry of their products into the domestic market of the USA, contrary to the GATT rules. India, Pakistan, Malaysia, and Thailand lodged complaints at the WTO in early 1997, claiming that Section 609 violated a number of WTO rules.

On 6 April 1998, a dispute settlement panel ruled against the shrimp embargo, arguing that it represented the kind of unilateral measure that 'insofar as [it] could jeopardize the multilateral trading system, could not be covered by Article XX.' GATT Article XX allows WTO-inconsistent measures to be taken for environmental and health reasons.

However, the Appellate Body reversed the stand of the Panel. In its report, the Appellate Body made clear that under WTO rules, countries have the right to take trade action to protect the environment (in particular, human, animal or plant life and health) and endangered species and exhaustible resources). It also said measures to protect sea turtles would be legitimate under GATT Article XX which deals with various exceptions to the WTO's trade rules, provided certain criteria such as non-discrimination were met.

The US lost the case, not because it sought to protect the environment but because it discriminated between WTO members. It provided countries in the western hemisphere — mainly in the Caribbean — technical and financial assistance and longer transition periods for their fishermen to start using turtle-excluder devices. It did not give the same advantages, however, to the four Asian countries (India, Malaysia, Pakistan, and Thailand) that filed the complaint with the WTO.

Source: http://www.wto.org/english/tratop_e/envir_e/edis08_e.htm

Recently the members of the WTO's Committee on Trade and Environment (CTE) discussed a proposal on border measures in Singapore. The submission, tabled by Singapore, stresses that the multilateral trading system and environmental protection are both important and that they should be mutually supportive in order to promote sustainable development. According to Singapore's submission, if there is to be text on trade in a future global agreement on climate change, members should ensure that it is consistent with their rights and obligations in both the UNFCCC and the WTO. Singapore is requesting that the WTO Secretariat prepare a compilation of existing studies on the role that Border Tax Adjustments (BTAs) BTAs can play in addressing competitiveness and leakage concerns, such measures can be applied in a WTO-consistent manner. It is also looking to develop a set of multilaterally agreed guidelines to pre-empt the abuse of BTAs.²

3.2 UNFCCC compatibility

Measures taken to combat climate change by developed countries, including unilateral ones, should not create an arbitrary or unjustifiable discrimination or a disguised restriction on international trade.

> Developing country perspectives

The UNFCCC aimed to stabilize GHG emissions at a level that would prevent dangerous anthropogenic interference with the climate system in a given time frame. Article 3 of the UNFCCC lays down the principles that were to guide parties to the convention to achieve this objective. Article 3.1 states that the parties should protect the climate system in accordance with their common but differentiated responsibilities. This is the key principle of the UNFCCC which recognizes that developed countries should take the lead in combating climate change given the historical nature of emissions. In fact, this principle is what provides the bases for Annex 1 countries binding their emissions while developing countries retain the flexibility not to do so. Further, article 3.5 mentions that the 'Parties' should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country (UNFCCC 1992). In other words, measures taken to combat climate change by developed countries, including unilateral ones, should not create an arbitrary or unjustifiable discrimination or a disguised restriction on international trade.

The compatibility of border adjustment measures with the UNFCCC relates to the principles that underline it and hence such measures have to be seen in conjunction with the above mentioned articles. Most unilateral measures that are proposed do not take into account the question of differentiated responsibilities between developing and developed countries. In any case it is doubtful if such measure would amount to subversion of the principle of 'common but differentiated responsibility' as developing countries would be forced to share burden of climate change mitigation in the name of avoiding carbon leakage and protecting competitiveness.

The developing country perspective is based on the fact that economic and social development and poverty alleviation are the overriding priorities of the developing countries and that international trade constitutes an important means of achieving these goals. The developing countries are unlikely to

² http://www.eco-business.com/news/climate-change-takes-centre-stage-at-wtoenvironment-committee/

adopt any policies or implement any regime that shifts the focus to some other objective (e.g., climate change mitigation) or threatens its trading system. Despite this sustainable development is one of the prime policy objectives of the developing countries to which its other goals correspond. This is because many of the developing countries are now being affected by climate change.

Based on the historical country specific carbon emissions suggest that developed countries have historically been more responsible for the carbon emissions. The developed countries industrialized early and have been emitting GHG since long and are mainly responsible for the present day environmental degradation. The developing countries then argue that climate change mitigation should be initiated and headed by the developed world and that no such commitments must be imposed on the developing countries. This issue is justified under Article 3 of the UNFCCC which suggests that climate should be protected for the benefit of the present and the future generations on the basis of equity and in accordance with 'common yet differentiated responsibilities and respective capabilities'. Further, according to Article 3.5 the 'Parties' should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing countries.

This principle should form the basis of the burden sharing agreement between the developed and developing countries.³ The developing countries are therefore of the view that it is the responsibility of the developed nations to incur climate mitigation costs. Martin Khor in one of his articles justifies the developing countries viewpoint by suggesting that climate change proposal be a global agreement with considerations of equity and historical burden sharing of responsibilities and rights towards meeting the environmental imperative and based on the understanding of the developing countries' development needs. He further concludes in his article that Annex I countries' share of emissions was 183% above their fair proportional share whereas Non–Annex I countries showed under use of 63% below their fair share.⁴

Using the same methodology, he also identifies countries like US, UK, Australia and Japan as carbon debtors and developing countries like India, China, Brazil, Bolivia, etc., as carbon creditors.⁵ The developed countries

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³ Irresistible forces and immovable objects: a debate on contemporary climate change, Shyam Saran

⁴ The figures have been compiled by Martin Khor by looking at the CO₂ emissions from 1850-2008. He calculates the fair share of this total for Annex I and Non-annex I countries based on the proportion of each to their average share of the world proportion in this period was calculated as well as the actual emissions for the same period and group of countries. The difference between fair share and the actual emissions provides the estimate of carbon debt or surplus and therefore the percentage over use and under use cumulative emissions over the proportional share.

⁵ Carbon debt to the amount by which a country's cumulative emissions exceeded what its cumulative fair share of emissions (based on population) should have been for the same 1850-2008, carbon credit refers to the amount by which cumulative emissions are less than the cumulative fair share for the same period.

are therefore historically responsible for the carbon emissions according to this study and in accordance with Article 3.1 and other relevant articles should take lead in climate change mitigation.

The developing countries are therefore not compelled by the UNFCCC guidelines to put any emission caps but may voluntarily put in place national targets for themselves. Furthermore the developed countries are also required to help the developing countries in climate change mitigation through transfer of technology as well as finance. Article 4.7 states, 'The extent to which developing countries' country-parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country-parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country-parties.

The developing countries feel that border adjustment measures would easily invite retaliatory measures, thereby would hamper the long term cooperation of nations in fighting climate change. There are other concerns as well for the developing countries as regards the implementation of BTAs. Such measures would also limit the access of developing country goods in developed country markets. There is also a concern that BTA can induce 'reverse leakage' wherein carbon intensive production and therefore investments start getting diverted to the countries using carbon efficient production methods. If the developing countries do not introduce a cap, they end up paying for the carbon taxes. However, then the price and producer cost of producing in both the countries would be same, with the developed countries (countries who have adopted carbon mitigation policies) producing with greener technologies, thereby attracting and diverting investments to their own countries. Moreover, the developing countries feel that the BTA's are being implemented by the developed countries to confer protection to their domestic industries. The developing countries therefore feel that through implementation of BTA's, the developed countries are trying to force the developing countries to put in place a cap and trade (carbon pricing mechanism) mechanism thereby transferring the burden of their own responsibilities onto the developing counterparts.

Finally, many producers in developing countries may be taking voluntary initiatives in reducing carbon footprint not only through technological interventions but also by adopting various internationally standardized production processes. However, the proposed border adjustments measures do not have provisions to take such initiatives under consideration and hence there will be little incentives among the existing producers and exporters to continue with such initiatives and deter others from taking such initiatives.

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Border levelling as a source of carbon finance

Carbon export tax may not be sustainable in the long run, unless developing country parties agree to coordinate over its implementation.

A key objective of Copenhagen deal was raising and increasing climate finance to the tune of US\$100 billion per year by 2020. However, after the credit crunch and the recent fiscal challenge being experienced by many OECD nations it will be very difficult to raise international finance from sources that have clear national identity and are presently under the control of finance ministries. The Cancun Summit further concluded on the establishment of a Green Climate Fund under the guidance of the Conference of Parties. In this context, a number of recent documents mention about Border Tax Adjustments (BTAs) as a source for climate fund (UN, 2010). It is being suggested that Border Levelling can act as tool for innovative financing, as well as a source of revenue for climate financing. However, this would raise PPM issues in the WTO and determining the carbon content embedded in products is a tedious task as countries do not submit their detailed carbon inventories on a regular basis. The burden of such tax will fall on the producer and consumer, depending upon the elasticity of demand. Basically the products in which developing countries' trade are generally highly elastic in nature, and hence it is more likely that the producers would end up paying more. However, even if the consumer pays the tax, it does not mean that producers will not be affected or that it will be WTO compatible because producers will lose export revenue. Other issues can be the identification of the country that would implement the tax (importing or the exporting country) and whether there would be generation of sufficient revenue. BTA itself may discourage such exports and hence revenue might not increase to any significant extent. Since developing countries are becoming more carbon efficient over time, the changing carbon intensity in developing countries is likely to affect the revenues from border levelling as well. Finally, the revenues would also be affected by the fluctuations in exchange rates.

Finally carbon export tax may not be sustainable in the long run, unless developing country parties agree to coordinate over its implementation. Adoption of export tax unilaterally would put developing countries at a disadvantageous position if other countries fail to implement it.

The way forward As climate change is getting larger attention, the developing countries are at the same time getting engaged at the global level. They are trying to understand the potential impacts and the relevant action. Moreover, since developing countries are relatively more vulnerable, they have significant interest in mitigation efforts made by the global community as a whole. They need to develop technical, institutional and human capabilities to face the increasing challenge of adaptation and mitigation. Trade measures such as BTAs are likely to be discriminatory and unlikely to serve any useful purpose. Also, if the objective of border measures is indeed to reduce GHG emissions, then there are better ways to achieve this than by imposing undue restrictions on trade. In fact, the key to resolving the problem of climate change and increasing GHG emissions could be dissemination of technology required for climate change adaptation and mitigation. Dissemination and transfer of technology at a faster pace than what is currently happening now is what is required in order to make the world adopt cleaner technology that reduces emissions.

Developing countries should also contribute to the global efforts of climate change mitigation as much as they can. But this should be in accordance with a multilateral framework that adheres to the principles of common but differential responsibilities and considers the development needs and priorities. Unilateral measures to impose certain conditions on developing countries are unlikely to make any positive contribution to global efforts to mitigate climate changes that are urgently needed.

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