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"Border carbon adjustments: A real threat or a storm in a teacup?"

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Summary

So far, the only examples of existing nation-wide mandatory mitigation mechanisms are the emission trading schemes in the EEA countries and New Zealand. Prospects for nation-wide mitigating mechanisms in key countries like the U.S., Canada and Japan are highly uncertain. The preferred way of levelling the playing field to minimize the risk of carbon leakage[2] in all of the countries which have opted or planned for emission trading schemes is internal cost-reducing measures. The probability that the alternative, i.e. unilateral border carbon measures (BCAs)[3], will be introduced and enforced on a larger scale during the next few years is relatively low due to a host of administrative, economic, legal and political constraints and problems. If BCAs should be brought to the WTO as dispute cases, there is no reason why these could not be handled through the normal dispute settlement system. The risk that we will see an avalanche of BCA related disputes seems very small. Negotiations for new and "greener" rules in the WTO to obviate the need for litigation procedures appear both unnecessary and risky, if even possible.

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[2] Carbon leakage is here defined as the increase of carbon emissions which occur outside a country/region as a direct result of effected mitigation measures in this country/region.

[3] This paper only deals with price related BCAs which have been at the centre of the debate, such as border taxes and tariffs or inclusion of importers into emission trading schemes. Thus, non-price related measures like norms, standards and other forms of regulation are not discussed.

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Basic points of departure

This paper is based on the firm conviction that the climate threat is real and that there is strong scientific evidence that human activity is the dominant cause of the global warming that has occurred over the last half century[4]. For that reason it is urgent to reach a global agreement whereby all big emitters (in absolute terms) commit themselves to far-reaching and binding measures to reduce the emission of carbon dioxide in the atmosphere.

The 10 biggest emitters of carbon dioxide (in per cent of global emissions)

1.	China	22,3 %
2.	USA	19,1 %
3.	Russia	5,4 %
4.	India	4,9 %
5.	Japan	3,9 %
6.	Germany[5]	2,7 %
7.	Canada	1,9 %
8.	United Kingdom	1,7 %
9.	Iran	1,7 %
10.	Korea, Rep. of	1,7 %

Source: Climate Change Performance Index 2011[6]

However, such an agreement is very far away. For the foreseeable future, one has to assume that the ambitions and commitments will differ considerably between different countries/country groups depending on various political, economic and institutional factors. In certain developed countries there is considerable concern that this will lead to competitive distortions and carbon leakage. This has led to demands for measures to "level the playing field" through various types of BCAs.

Since the climate must be viewed as a *global public good*, the concern for carbon leakage in itself is perfectly legitimate although some of the remedies that have been considered to meet the problem could be questioned.

[4] The Royal Society (2010) and Stern (2010).
[5] The share for EU 27 is roughly 13-14 %.
[6] Germanwatch & Can Europe (2010).

1. Alternative ways of dealing with the risk of carbon leakage

There are roughly three ways[7] that governments can use to level the playing field between its own industries/installations subjected to mitigating measures and their competitors in other countries in order to avoid carbon leakage:

1. International agreements
2. Internal cost-reducing measures (free allocation of carbon credits, exemption of domestic carbon taxes or tax rebates, subsidies etc.)
3. Unilateral BCAs, either in the form of border tariffs/taxes or mandatory requirements for importers to hold emission allowances.

The best guarantee to arrive at a situation with no carbon leakage would, as already stated, be to reach a global binding agreement whereby the marginal cost for emitting carbon dioxide would be the same for the biggest emitters. This seems almost utopian for a variety of reasons – political, economic and institutional. The latest UNFCCC meetings in Copenhagen and Cancún certainly represent a step forward in the sense that most big emitters – both developed and developing economies – now have made concrete mitigation pledges. These are however quite insufficient to effectively bend the curve of ever increasing emissions of carbon dioxide and are, for most countries, non-binding with all kinds of conditions and reservations attached. As it now seems, this situation will not change when the Kyoto Protocol to the UN Convention expires in 2012.

Of course less comprehensive international deals could be struck among a group of like-minded countries – either by linking prospective emission trading schemes or through sector approaches. Even if such plurilateral arrangements might be more promising, they may take a long time to negotiate and become effective.

In the short and medium-term, this leaves only two options for governments to deal with the risk of carbon leakage, namely internal cost-reducing measures or unilateral adjustments at the border, i.e. BCAs.

2. Internal cost-reducing measures preferred instrument

The choice of adjustments to level the carbon playing field is partly dependent upon the method chosen for achieving mitigation in the first place.

[7] Houser et al (2008).

Among economists and other scholars there is a continuous discussion whether cap-and-trade schemes or carbon dioxide taxes are the optimal instruments to accomplish mitigation actions on a broader scale[8]. In practical politics, the issue seems to have been settled. Emission trading schemes (cap-and-trade) are the preferred tool since the tax weapon in most constituencies is considered as extremely sensitive. The probability that any of the developed countries will introduce broadly based carbon taxes as the main instrument for mitigating climate change is very small.

The first large-scale carbon cap-and-trade scheme was launched in 2005 by the *European Union* (EU) with its Emissions Trading System, EU ETS. The method used for compensating the most energy and trade intensive industries for the increased costs of the mitigation policy measures is to hand out the emission rights for free. During the third phase of the ETS (2013-2020), this will progressively give way to auctioning of the allowances. Though, the most trade intensive sectors and those facing high additional costs for carbon will be given the allowances for free up to 2020.

In 2008, the EU ETS was extended to the EFTA countries *Iceland, Liechtenstein* and *Norway.* Thus, the whole European Economic Area (EEA) is covered. Negotiations will start early this year to include the remaining EFTA-country *Switzerland,* which presently applies an emissions trading scheme of its own as a voluntary alternative to a domestic fuel tax. Emission permits are issued free of charge.

Cap-and trade has also been the preferred method for nation-wide mitigation in the *United States* (U.S.), at least if one shall judge from the legislative bills which have been presented in the Congress. According to the American Clean Energy and Security Act, which by a slim majority was passed in the House of Representatives in the summer of 2009, the main method to level the playing field was to distribute the overwhelming part (85 %) of the emission rights for free. In the absence of a sufficiently strong international climate agreement, importers would have been included in the proposed emission trading scheme but not until 2020 at the earliest and even then at the discretion of the President[9].

However, this is history. Due to the extremely polarized political situation in the U.S., the Senate majority leader Harry Reid in July 2010 announced that the efforts of the Democrats to pass an ambitious climate and energy bill in the Senate would be discontinued. The prospects for any federal climate legislation to pass both houses in the Congress seem therefore remote or almost non-existent, at least for the next couple of years.

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[8] See i.a. Kurtzman (2009).
[9] Cline (2010) and Werksman (2009).

Canada will obviously not do anything on the nation-wide level until the U.S moves.[10]

In *Australia*, an ambitious climate bill with cap-and-trade has been rejected twice by the parliament. The Prime Minister Julia Gillard announced on February 24 2011 that her (minority) government will propose to introduce a fixed carbon price from July, 1, 2012. According to the two-stage plan, a transition to an emissions trading scheme will follow around 2015-2017. The hope is to reach a majority for the proposal in the parliament and pass legislation in 2011.

New Zealand's emissions trading scheme (NZ ETS) came into place in 2008. In 2015, all sectors and all greenhouse gases will be included. However, for emissions-intensive industries and agriculture there is no "cap" as there will not be a limit on the number of emission units that may be allocated.

At the end of 2010, the government in *Japan* decided to drop its plan to launch a mandatory nation-wide emission trading scheme in 2013 in face of strong opposition from the business community.[11]

South Korea expects emissions trading to start in 2013 at the earliest. Details have yet to be finalized but the government would allocate more than 90% of carbon allowances for free while auctioning the rest. The proportion of auctioned credits would increase over time. The bill has yet to pass the National Assembly.

In September 2010, *Taiwan's* Premier urged the island's Environmental Protection Agency to draw up plans for a cap-and-trade system. The transition to such a scheme is intended to be done incrementally to help local business get used to the idea. In the first stage, businesses will be encouraged to commit to a voluntary nationwide cap-and-trade market and a "relative cap" on the nation's emissions would be set.

Thus, so far, nation-wide mandatory mitigation programs exist only in the EEA countries and New Zealand. The situation in key developed countries like the U.S., Canada and Japan is, at best, uncertain.

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[10] In both Canada and U.S. there is some development at the regional and state level. Currently there are three regional climate initiatives encompassing a total number of 23 U.S. states and four Canadian provinces (Cline 2010). Recently California voted for a cap-and-trade scheme, thus building the second largest carbon market in the world (next to the EU ETS).

[11] Japan has in place a voluntary emission trading scheme as well as a mandatory cap-and-trade scheme for Tokyo.

The question has been raised whether the system of free allowances would constitute an actionable subsidy within the meaning of the WTO Agreement on Subsidies and Countervailing Measures and thus risk being challenged in the WTO. Suffice it here to note that so far no challenge of this kind has yet occurred despite the fact that the EU ETS has been in effect since 2005. One explanation could be that the lack of an effective carbon price during the first phase of the ETS reduced the space for windfall profits.

Another reason could be that there simply is no country willing or prepared to challenge these measures. Judging from past history in WTO, relatively few members have been active in raising complaints against other members' subsidies. U.S. alone accounts for roughly 50 percent of all cases. It would seem a bit odd if the U.S. challenged the system of free allowances in other countries when the same type of "subsidy" has been a central element in the climate bills which have been presented in the U.S. Congress and, moreover, appears less offensive and therefore politically more acceptable for any U.S. administration.

So, even if there are rules in the WTO which put limits to how subsidies can be devised and applied, internal cost-reducing measures of the kind applied in the EU ETS and in other existing and prospective cap-and-trade-schemes would probably be tacitly accepted.

3. BCAs at the centre of the debate – but will they ever be used?

Mainly as a consequence of choosing emission trading schemes as the main method for mitigation purposes, the only type of BCA which has been considered is including importers in the schemes through a mandatory requirement for importers to buy emission allowances. For the moment it does not seem that any country is likely to use border tax adjustments (BTAs) to level the playing field between domestic carbon emitting industries or installations and their foreign competitors, at least not as a general instrument.

Of course it is not by chance that the EU and other countries considering introducing cap-and-trade schemes[12] have opted or are opting for internal adjustment measures instead of various types of unilateral adjustments at the border as the method for leveling the carbon playing field. BCAs en-

[12] For example, the Australian Department of Climate Change in 2008 made the assessment that it would be very difficult to implement transparent, simple and verifiable, as well as effective border adjustments for imported goods. The department further acknowledged that border adjustments could be used for protectionist reasons and that this could be very costly for a small open economy like Australia's.

tail, irrespective of whether they would be in the form of including importers in emission trading schemes or border taxes, a host of administrative, economic, legal as well as political constraints and problems[13].

So, what are the prospects/risks for extending emission trading to importers? As for the EU ETS, the European Commission has in a supporting document accompanying its communication in May 2010[14] stated that the method of distributing emission allowances for free, together with the offsets provided by the Clean Development Mechanism, will continue and that BCAs should be seen as an "option of last resort".

In the communication itself[15] the Commission notes i.a. that "it could be hard to implement a system which sought to define in detail the carbon content of each individual category of goods, but such precision might be required". This is a probably a gross understatement. It would be almost impossible to calculate in a fair and objective way the carbon content embedded in imported goods. The emissions of carbon could differ from company to company and even within the same company. In addition, one is here faced with a moving target where production processes and technology continually change.

According to the Commission, "the system could at best only be envisaged for a limited number of standardized commodities, such as steel or cement. Secondly, for each category of goods an average EU carbon content would have to be defined. This could become an administrative burden, and require agreement on such an average, likely to be a difficult and protracted process. Thirdly, it would seem challenging to verify the performance of individual installations in third countries without a highly sophisticated monitoring and reporting system in place at installation level".

The Commission also points out that including imports into the EU ETS could be potentially circumvented by EU imports being delivered by the "cleanest" third country producers, while keeping "dirtier" production for their own domestic use. This could according to one scholar eventually lead to a "dual world economy with a clean economy around developed countries and some emerging countries and a dirty economy in the rest of the world"[16]. The risks of such a development of course increase if big players like the U.S., China and India effectively stay out of any internationally agreed mitigation efforts.

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[13] Cosbey (2008), Houser et al. (2008), Hufbauer et al. (2009), Messerlin (2010) and National Board of Trade (2009).
[14] European Commission (2010b).
[15] European Commission (2010a).
[16] Messerlin (2010).

A recent study[17] sheds further light on the practical difficulties which would arise in administering BCAs. As an example, the study shows that a country which intends to apply such measures has to put in place a system for border controls. Several reasons could increase the costs for border authorities, such as if: "manual intervention is required to clear consignments at the border crossing, electronic submissions are not possible, large resources have to be devoted to prevent evasions, the BCA covers a large range of products, and if many companies are given individual treatment".

One other aspect which would have to be considered is how the available emission rights should be shared between the domestic producers/installations and importers. According to one of the climate bills which were considered by the U.S. House of Representatives, the emission rights would have been divided into two separate "pools". In such case, one question would be whether the importers pool would apply to imports from all countries or only from those countries which according to the implementing country have made "comparable" or "equitable" efforts in terms of mitigation.

In this context it is worth reminding of one of the criteria which the Appellate Body in the WTO has developed in previous disputes. Applied to BCAs, the criterion in question is if the implementing country takes account of local conditions in foreign countries or if it essentially requires that foreign countries have to adopt its own policies. An adjoining issue is whether the implementing country has considered whether a foreign country already imposes emission cuts or otherwise addresses climate change. In addition, due consideration has to be taken to the practical implications of the principle of "special and differential treatment" in the WTO and that protection of the climate under the UNFCCC must be pursued "on the basis of equity and in accordance with (the parties) common but differentiated responsibilities and respective capabilities".[18] In all these respects, the scope for arbitrary judgments is certainly not negligible.

All the big emitters (except Russia and Iran) which have signed the UNFCCC and the Kyoto Protocol are also members of the WTO and thus bound by its rules and provisions. One can safely assume that each WTO member intending to introduce unilateral BCAs is fully aware that such measures will be rigorously scrutinized by other members with the entailing risk that these will legally challenge the measures within the WTO dispute settlement system and also retaliate with similar or other types of countermeasures. It is an open question how willing for example the EU

[17] Persson (2010).
[18] ICTSD (2009), page 12; UNFCCC, Article 3:1.

or, in some distant future, eventually also the U.S. would be to introduce measures which run the risk of backfiring.

4. Litigation or negotiation?

Some scholars[19] have suggested that negotiations – either within or outside the WTO – should be initiated to agree on a set of guidelines or principles to define what kind of trade related measures which could be considered legitimate in the context of climate policy in order to avoid a collision between the world trading rules in the WTO and national measures to confront climate change. Other observers[20] have expressed fears that the Appellate Body will be forced to render judgments on climate disputes before WTO members can agree on such guidelines.

Some of these ideas and fears reappear in a discussion paper which has recently been prepared by an ad hoc working group on trade and climate change for the World Economic Forum (WEF)[21]. There are many parts of the WEF-paper which I fully support and sympathize with. Below I will therefore concentrate on those conclusions and observations (in italics) which have a bearing on this paper and where I disagree.

4.1 Overload of the dispute settlement system?

If there is no early conclusion of an effective and comprehensive global treaty on climate change, national efforts to confront climate change are likely to proliferate…[22].

It is not self-evident that national (i.e. unilateral) efforts will proliferate due to lack of a global treaty. One reason for the lack of multilateral action is lack of universal agreement on the problem; this is likely to mean that some (many) countries will do nothing at the national or international level.

The danger… is that enactment of border measures could lead as well to highly contentious litigation in the WTO that – whatever its outcome – could undermine the strength and the sustainability of the multilateral trading system.

This is pure speculation. One might as well imagine situations where the introduction of BCAs would be challenged and found to be in conflict with one or several key WTO-provisions. In such cases, it would seem

[19] Hufbauer et al (2009), Hufbauer & Kim (2010) and Werksman (2009).
[20] Blustein (2010), page 11 and 281. The same fears were expressed by the former Chairman of the AB, James Bacchus, at a climate conference in Geneva in June 2010.
[21] WEF (2010).
[22] WEF (2010), page 9.

that clear and authoritative judgments by the Appellate Body would strengthen rather than weaken the multilateral trading system, i.e. by forming a precedent and so prevent future abuses.

... WTO jurists should not be asked how to discern the legal line between the competing claims of trade and climate change with the all too scant guidance they have been given thus far by the members of the WTO. They should not be expected to clarify existing WTO obligations based on a few terse words of treaty text illuminated only by decades-old rulings of GATT working parties that certainly did not foresee a global environmental challenge of the magnitude of climate change.

Nor does the world have time to await judgments in disputes between trade and climate change on a case-by-case basis. The political sensitivity on this issue in every part of the world is such that leaving WTO jurists to judge such disputes on a case-by-case basis may result in a perilous political overload of the WTO dispute settlement system[23].

As already has been described above, there is as yet no sign that any country or country group in the near future is contemplating introducing unilateral BCAs on a broader scale. As the mitigation efforts become stronger and more comprehensive, the possibility that unilateral BCAs will be introduced (in all probability firstly within the EU ETS) and give rise to legal disputes should of course not be excluded. The question, though, is whether these will become so numerous and serious that they may result in a "perilous political overload" of the dispute settlement system. In any case, the risk that we in the near future will see an avalanche of disputes related to BCAs seems very small.

From a more general point of view, it is not self-evident that unilateral BCAs will create problems in relation to the WTO-rules. This will depend on whether such measures create substantial negative effects for the trade of other countries and, above all, if these countries find it worthwhile and consistent with their interests to notify other countries´ measures to the WTO and start litigation proceedings there. Countries, which for various reasons do not themselves apply ambitious or progressive climate policies, may want to avoid the exposure and negative publicity which might occur by raising an issue in the WTO, however well-founded such a move might be.

Even in the highly improbable scenario that new climate rules were negotiated and agreed upon, there is an obvious risk that such rules could become a blunt and incomplete guide for the WTO members. Every case is unique which means that judgements on whether a trade related measure is consistent with the WTO-rules or not have to be made on the basis of

[23] WEF (2010), page 12.

the special circumstances in each individual case. To try to anticipate all conceivable situations with trade policy implications that may arise as a result of different countries ambitions to reduce the emission of carbon dioxide is probably impossible.

To give an illustrative example:
The WTO rules give certain leeway for taking climate related safeguard measures, especially the general exception in article XX of the GATT. However, a WTO-member wanting to introduce a measure to protect "exhaustible natural resources" (for example the climate) must at the same time apply it in a manner which would not "constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade". Exactly the same words have been inserted in the UNFCCC (article 3:5) concerning the efforts of its members to mitigate the climate changes.

It goes without saying that concepts like "arbitrary or unjustifiable discrimination" and "disguised restriction on international trade" cannot give an exact guidance as to whether a climate measure of a WTO member would be approved by a WTO-panel or eventually also the Appellate Body. This has to be decided on a case by case basis and will to a large extent depend on how different measures are devised and implemented in practice.

The *need to minimize the likelihood of divisive WTO disputes*[24] is of course a goal one could sympathize with from a general point of view. But, at the same time, all disputes are "divisive". Otherwise there would be no disputes. Furthermore, it is not all that clear that eventual disputes in the intersection between climate and trade automatically would be more divisive or contentious than other kinds of disputes in the WTO, either in the past or in the future.

4.2 Negotiations – when, on what and with whom?

In the working group's strong view, the members of the WTO should begin immediately to negotiate agreements to resolve the issues likely to arise from the enactment of national measures on climate change rather than leave those issues for eventual resolution in WTO dispute settlement[25].

This is another example of a *non sequitur* as it effectively says: if an international agreement is impossible, we should try to negotiate international agreements. If all conflicts which could arise due to climate trade related actions could be solved by negotiated settlements, so much the

[24] WEF (2010), box on page 6.
[25] WEF (2010), page 12.

better. This perspective, however, seems to overlook the political realities:

For certain countries/country groups (foremost the EU and the U.S.), BCAs is in option which has to be considered in order to get enough political support for tough climate legislation, irrespective of whether such measures eventually will be used or not. Some of the more influential developing countries, on the other hand, seem to have a different point of departure: unilateral BCAs should be forbidden outright even where such actions could be deemed to be in line with the rules and provisions in the WTO. This became evident before and during the COP15-meeting in Copenhagen, where the BASIC[26] countries put forward suggestions to that effect[27].

The WEF-paper sends unclear signals as to the timing of the proposed negotiations in relation to the ongoing Doha Round. The Working group gives *first and foremost* priority to a conclusion of the round. At the same time, the issue of trade and climate change should be addressed *without delay*.

An initiative to now start broad-scale negotiations on trade and climate change in the WTO would in my opinion effectively kill the Doha Round. This does not prevent including specific climate-related issues – like reintroducing the exemption on environmental subsidies – in a final deal in order to balance eventual commitments of phasing out fishing and other climate unfriendly subsidies.

In more concrete terms and irrespective of the outcome of the Doha Round, the working group outlines four specific alternative actions for the WTO members to consider immediately[28], without expressing a preference for any of these choices:

They could "green" the GATT and other WTO agreements by rewriting long-standing WTO rules to take climate change and other environmental considerations more fully into account. Agreeing on such a revision of existing WTO rules would require a consensus of all WTO members.

This sounds ominous. Firstly, it is not clear what is meant by the expression *long-standing WTO-rules*. To the extent that it includes the basic rules in GATT Articles I, III and XX, the world trading community indeed has reason to be worried. At least to my knowledge there is nothing in these articles that would stand in the way for effective climate mitigat-

[26] Brazil, South Africa, India and China.
[27] Barrett (2010) and Werksman et al. (2009).
[28] WEF (2010), page 12.

ing measures. On the contrary, these rules should be regarded as an insurance against arbitrariness and discriminatory treatment, something which seems especially vital in the field of climate change with its character of a "global public good". The idea of *rewriting* these rules should clearly not be considered to be an option, either in the short or long term.

A more basic question is whether there is any need to create a *green space*[29] in the WTO at all. Earlier research[30] would rather suggest that there already is ample scope for climate related measures without necessary coming into conflict with various agreements and provisions in the WTO. In addition, the dividing line between what is considered *green* or not is pretty blurred.

Or a "coalition of the willing" forming a subset of WTO members could commit to a set of rules on climate change that would be binding solely on them and would be enforceable in WTO dispute settlement. Ideally, such a coalition would include developed and developing countries alike. Other members could agree to these new rules later if they chose. This could take the form of a plurilateral agreement under current WTO rules. A consensus of all WTO members would be required to add it formally to the WTO treaty.

In view of the slow pace of the UNFCCC negotiations, there is certainly more to be said for bottom up approaches where minor country groups or coalitions could go forward and step by step cooperate around and even agree on certain measures to stem global warming. Quite another thing is to extend such cooperation by agreeing on new rules in the WTO. Generally speaking, the scope for striking "plurilaterals" in the WTO would seem to be very limited today, not least due to the experiences in the Doha Round concerning the treatment of the Singapore issues[31].

However, the big problem with the idea of "plurilaterals" is that some countries which ideally should be covered by such arrangements might not want or even be able to join (U.S., China, India..?). Judging from the present situation, a plurilateral with only the European countries and New Zealand as signatories would not be very effective.

Or WTO members could approve a "waiver" to WTO obligations for certain specified actions to deal with the threat of climate change. This would require approval of at least three-fourths of WTO members.
The "waiver" instrument has during the history of GATT/WTO mostly been used to enable more developed countries to give preferences to certain developing countries in violation of Article I of the GATT. It would

[29] WEF (2010), box on page 6.
[30] National Board of Trade (2004).
[31] Kleen (2008).

seem utterly inappropriate and unlikely to use this instrument to make it possible for any member to detract from its obligations in the WTO by introducing climate related trade measures.

Or WTO members could approve a "peace clause" to the WTO treaty that would prohibit any challenges to WTO dispute settlement to certain national actions taken to address climate change while the world continues to work towards conclusion of a global climate treaty. This could be done by adoption of a decision by WTO members interpreting the WTO treaty, which would require the support of three-fourths of the members.

This proposal also lacks realism. Why should for instance the BASIC countries go along with a "peace clause" which would make it impossible to challenge unilateral climate related border measures which seriously could hurt their exports?

Concluding remarks

The main purpose of this paper has been to play down some of the fears that have been expressed in the debate and the literature that we will envisage a situation where some countries (primarily the U.S. and the EU) would introduce BCAs on a broader scale and thereby trigger trade disputes – and even trade wars – with other countries. As has been described in this paper, if such actions become a reality, they will most probably be very few and in the near future next to zero. If they sometime in the future would be brought to the WTO, the present dispute settlement system should be sufficient to handle such cases. The risk for a "train wreck" or "collision" between trade and climate change seems minimal, at least as far as BCAs are concerned.

One of the main conclusions in the WEF-paper is that WTO members immediately should begin to negotiate agreements to resolve the issues likely to arise from the enactment of national measures to confront climate warming. It would indeed be ironic if countries, which up to now have shown their inability/unwillingness to reach a binding global climate agreement within the UN and thereby effectively stem the palpable and scientifically well established effects of climate warming, would devote their energies to negotiations to meet threats which might never materialize.

Bibliography

Barrett, Scott (2010), *Climate change and international trade (2010): Lessons on their linkage from international environmental agreements,* Background paper presented at the Conference Climate change, trade and competitiveness: Issues for the WTO, June 16-18, 2010. The Graduate Institute, Geneva.

Blustein, Paul (2009), *Misadventures of the most favored nations.* Public Affairs, New York.

Cline, William R. (2010), *US climate change policy: Implementing Copenhagen and beyond,* Paper prepared for the joint Bruegel-PIIE Conference on The transatlantic relationship in an era of growing economic multipolarity, Washington, October 8, 2010. Peterson Institute for International Economics, Washington D.C.

Cosbey, Aaron (2008), "Border carbon adjustment" in Cosbey, Aaron ed., *Trade and climate change: Issues in* Perspective. IISD, Geneva.

European Commission (2010a), *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (May 26, 2010), SEC (2010) 650.* European Commission, Brussels.

European Commission (2010b), *Commission staff working document accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (May 26, 2010), SEC (2010) 650.* European Commission, Brussels.

Germanwatch & Can Europe (2010), *Climate change performance index 2011.* Berlin and Brussels.

Houser, Trevor et al. (2008), *Leveling the carbon playing field – international competition and US climate policy design.* Peterson Institute for International Economics & World Resources Institute, Washington D.C.

Hufbauer, Gary, Clyde & Jisun Kim (2010), *Climate change and trade: Searching for ways to avoid a train wreck,* Background paper presented at the Conference Climate change, trade and competitiveness: Issues for the WTO, June 16-18, 2010. The Graduate Institute, Geneva.

Hufbauer, Gary Clyde et al. (2009), *Global warming and the world trading system.* Peterson Institute for International Economics, Washington D.C.

ICTSD (2009), *Competitiveness and climate policies: Is there a case for restrictive unilateral trade measures?* Information Note No. 16, December 2009. International Centre for Trade and Sustainable Development, Geneva.

Kleen, Peter (2008), *So alike and yet so different: A comparison of the Uruguay Round and the Doha Round.* European Centre for International Political Economy (ECIPE), Brussels.

Kurtzman, Joel (2009), "The Low-carbon diet, how the market can curb climate change", *Foreign Affairs,* Volume 88, No. 5, September/October 2009, pp. 114-122.

Messerlin, Patrick A. (2010), *Climate change and trade policy; from mutual destruction to mutual support,* Working paper, April 2010. SciencesPo/GEM, Paris.

National Board of Trade (2009), *Climate measures and trade – legal and economic aspects of border carbon adjustment,* 2009:2. National Board of Trade, Stockholm.

National Board of Trade (2004), *Climate and trade rules – harmony or conflict,* Second Edition. National Board of Trade, Stockholm.

Persson, Sofia (2010), *Practical aspects of border carbon adjustment measures- using a trade facilitation perspective to assess trade costs,* ICTSD Global Platform on Climate Change, Trade Policies and Sustainable Energy, Issue Paper No 13. International Centre for Trade and Sustainable Development, Geneva & National Board of Trade, Stockholm.

Stern, Nicholas (2010), "Climate: What you need to know", *New York Review of Books*, June 24. New York.

The Royal Society (2010), *Climate change: a summary of the science.* The Royal Society, London.

Werksman, Jacob et al. (2009), *Trade measures and climate change policy: Searching for common ground on an uneven playing field,* WRI Working paper. World Resources Institute, Washington D.C.

World Economic Forum (2010), *From collision to vision: Climate change and world trade",* Ad hoc working group on trade and climate change. Discussion Paper. World Economic Forum, November 2010, Geneva.