

## Trade and Climate Changes: The Challenges Ahead

Jaime DE MELO  
Nicole A. MATHYS

➔ JAIME DE MELO is Professor at the University of Geneva since 1993 and Senior Fellow at Ferdi since 2011. His research focuses on links between regionalism and multilateralism, trade policies and migratory policies, trade and environment.

➔ NICOLE A. MATHYS is responsible for research program “Energy-Economy-Society” ([www.ewg-bfe.ch](http://www.ewg-bfe.ch)) at the Swiss Federal Office of Energy, Berne. She is also researcher and lecturer at the University of Neuchâtel.

For a long time, trade and the environment have been odd bedfellows as environmentalists have claimed that the interests of the trade community have trumped their concerns. In recognition of this, the launch of the Doha Round explicitly recognized fears that the gains from growth and globalization could be undermined by their environmental side-effects. First, globalization-induced increases in trade can magnify cross-border pollution. Second, improvements in technology make it increasingly easy to intensify the exploitation of natural resources, potentially exacerbating the depletion of natural capital.



..../. .... As a consequence of globalization, decisions at the national level have a growing impact on other countries. This changing landscape motivated the creation of the Global Task Force on Public Goods in 2003 and many policy publications that have addressed the need to expand the provision of the global commons. Areas that are frequently mentioned include biodiversity and ecosystems, water resources, fisheries and now, mitigating climate change, the 'ultimate' Global Public Good. But the sheer magnitude of the climate problem justifies fears that trade and climate change objectives may be on a collision course (see Brainard and Sorkin (2009) and Hufbauer and Kim (2010)).

Four aspects that complicate the design of appropriate trade policies to deal with mitigation and its consequences need to be addressed. First, any serious attempt at mitigation will require a higher price, perhaps around \$100 per metric ton of CO<sub>2</sub>e. (Currently the price in the over-the-counter market in the ETS is around \$20 per metric ton.) This will result in huge rents whose contestability will lead to much resource waste that should be addressed in the architecture of the next climate agreements. Second, all forms of energy generation require irreversible investments in capital equipment. Very forward-looking decisions under uncertainty require a relatively predictable price of carbon, the predictability being enhanced by a multilateral framework outlining the contours of the path ahead, a requirement that cannot be achieved by unilateral action. (The life of an investment project is above 50 years for electricity generators and up to 60 to 100 years for residential buildings.) Third, measuring the emission of GHGs in manufacturing and in agriculture is difficult, complicating the measurement of leakage. Furthermore, the carbon-content of energy is not visible in a product, complicating the application of border measures to counter any leakage towards non-signatories. Fourth, as mentioned above, since the damages from GHGs are truly global, it is extremely difficult to

achieve the necessary collective action (benefits are shared by all while costs are only borne by participants). In a recent paper (de Melo and Mathys (2010)), we review the challenges ahead and identify some sticking points.

### ► Architecture: Broad then deep.

It is agreed that the current Kyoto Protocol (KP) with its "deep and shallow" architecture) has been ineffective because of lack of enforcement and a low participation. This calls for a new architecture, taking inspiration from the hugely successful Montreal Protocol (MP) which was "broad, then deep", having been tightened through seven rounds of extensions (see Barrett (2010)). Broad participation for post-Kyoto is necessary, if only because any successful climate change regime will have to address burden-sharing to take into account that since around 1990 (when global warming became a widespread public concern), high-income countries have been responsible for a larger share of the current stock of emissions. However, the fast-growing Asian economies are catching up rapidly and are geared to overtake the rich countries in terms of contribution to the stock of CO<sub>2</sub> since 1990 in less than a decade (Wheeler and Ummel (2008)). Taking into account intra- and inter-generational equity will also require wide participation to converge either towards "per capita comparability" or "carbon price equivalency".

We argue that for political-economy reasons, it is unlikely that a "top-down" approach such as a cap-and-trade with an agreement subject to sanctions for deviation will be agreed upon in spite of its superiority on economic grounds. This is because countries are reluctant to acquiesce to subsidiarity on tax matters. Indeed, when the EU took the lead in pushing for climate change policies in the early 1990s, the Commission was unsuccessful when it pushed for a carbon tax to help countries converge to-

wards a common price of energy.

The difficulty of moving in this direction was evident by the lack of progress at the Tianjin meeting of delegates of October 5-9 held in preparation for COP-16 to take place in Cancun in late November this year. The US and other rich countries failed to obtain from China and developing countries an agreement to the monitoring of their efforts at cutting GHGs emissions. At the same time China and developing countries accused the US of using the transparency issue to avoid its own responsibilities to cut emissions and provide financing for the poor. As a result, it is unlikely that any broadly supported binding agreement based on some convergence towards equal entitlements on a per capita basis (some argue that it should be in terms of access to energy needs rather than emissions) will occur before the KP expires in 2012.

### ► Why an open trading system is important for successful climate policies.

If participation and compliance were the missing elements in the KP and trade was integral in achieving both compliance and participation under the MP, what potential role is there for trade policy for post-Kyoto? Trade could come into play through four channels.

First, an open trading system with high trade volumes is essential. This includes Intellectual Property Rights (IPRs) that recognize that technology transfers will have to be encouraged at the same time that incentives for R&D are maintained. This is because much technology development and transfer takes place through trade.

Second, it will be necessary to separate where abatement takes place from who bears the costs of abatement. Marginal costs of abatement differ widely with many 'no-regrets' energy-saving opportunities in developing countries. Under those circumstances, a global

carbon credit trading system (CCTS) building on an improved Clean Development Mechanism (CDM) introduced under the KP will be key even in the absence of a binding agreement. This is so, both on efficiency grounds and as a way to transfer resources to the poorer countries by bypassing the budgetary allocation process which requires a politically-determined budgetary allocation of revenues which in turn is subject to intense lobbying activities. Implementing the CDM involves not only trade in credits but also trade via technology transfer.

Third, trade sanctions could enter as a participation mechanism, although how the sanctions' role would be rendered effective is difficult to assess. It is likely to be more promising if the new architecture leans towards a system of treaties. Countries participate in an international treaty mostly to influence the participation of others and of non-signatories, rather than to tie their hands. Members of an international agreement can establish trade sanctions for non-participants who do not comply, as in the case of the MP, although to be successful, it requires a high degree of participation, thereby obviating the need to use trade sanctions. This has the advantage that new principles could be drawn up for a climate change treaty rather than relying on the current complicated rules governing the use of border adjustment measures to address competitiveness effects. For example, only a handful of high emitters of CO<sub>2</sub> would be covered under the new set of rules. Building such an agreement might be easiest with few participants, but this would come at a cost since a substantial amount of trade might then take place among non-participants making it costly (and hence not credible) for participants to apply the agreed-upon sanctions.

Fourth comes in the is the issue of 'leakage' and the pressure for border measures. We argue that competitiveness effects may not be as important as some might believe. Nonetheless, the pressure for countervailing action against countries (like the US) that in effect subsidize their

industries via cheap energy by not correcting the externality due to CO<sub>2</sub> emissions has started and will intensify. It is hard to imagine that this pressure, that has already surfaced under the mild cuts of the KP, will not be concretized in the successors to the KP, and trade wars are a real possibility as the parties involved are major players in international trade (EU, US, China).

### ► **Climate Policies at the WTO: A stalemate and Conflicts Lurching on the Horizon**

Under the 2001 Doha Ministerial Declaration, WTO members have been asked to negotiate on the reduction, or, as appropriate, elimination of tariff and non-tariff barriers (NTBs) on environmental goods and services (EGS) to create a triple win situation, for trade, the environment, and for development. Successful negotiation would decrease the cost of environmental technologies, increase their use, and stimulate innovation and technology transfer. Even though liberalization in these particular product categories should be 'win-win', WTO members have been unable to agree on which goods should be liberalized. Developing countries argued that a number of products on the list are of export interest primarily to industrialized countries. Also problematic is the issue of dual use as many product categories proposed also include products that have non-environmental uses. Accompanying this stalemate in the negotiations is a lack of evidence on the effects of liberalization of EGS.

But the thorniest issue for the functioning of the World Trade System is how the conflicts from different carbon policies will be resolved. Would trade intervention, justified by differences in climate policy, be allowed under WTO law? So far, this is uncharted territory in spite of several environmental cases that have been settled by the dispute settlement process. The answer depends crucially on the specific design and

implementation of the intervention. Generally, two types of trade measures could be imposed on imports to complement mitigation policies. Restrictions could be with respect to "locally emitted" greenhouse gases or with respect to "foreign emitted" gases. In the first category, emissions take place when the imported goods are "consumed". Emission standards on cars would for instance fall in this group. Pauwelyn (2007) states that if such measures do not discriminate between imports and local products, they generally should be accepted under WTO law.

If, however, trade restrictions address greenhouse gases of imports that are emitted in the exporting country (i.e. embodied emissions in imported products), compliance with WTO law is more controversial. An example would be imported aluminum produced with high CO<sub>2</sub>-emitting Söderberg technology. Consider then the application of a border tax adjustment (BTA) on imported aluminum. Could it be defended under international trade law? Yes, if it were possible to convince the WTO panel that the imposed leakage provisions are only an extension of domestic climate policy applied on an equal footing to imports.

Dealing with the pressure for border adjustments will be an integral part of the negotiations on climate change for years to come. Given the large disparities in the price of energy across countries (in the EU-25 after many efforts to move towards a convergence in the price of energy, the ratio of energy prices is still 1 to 5), it is hard to see how the pressures on the World Trading System will subside even if peak oil and climate change were to lead to 'peak globalization' and to less trade as argued by some (e.g. Curtis (2009)).

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### **Contact**

[www.ferdi.fr](http://www.ferdi.fr)

contact@ferdi.fr

+33 (0)4 73 17 75 30

