

Development, trade and carbon reduction

Designing coexistence to promote development

Jodie Keane, James MacGregor, Sheila Page,
Leo Peskett and Vera Thorstensen

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and critical comment

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Leo Peskett and Vera Thorstensen**

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Executive summary

The impact of climate change will impose new costs on developing country exporters, especially if markets do not work correctly and international agreements are not well designed. If the costs of carbon emissions are priced correctly, then markets could ensure that emissions are reduced in the most efficient ways. Internationally agreed and administered rules are needed for both trade and climate change, as the actions of one country can damage the interests of others and because coordinated action can improve the outcomes for all. These papers explore three ways of helping developing countries and the international system deal with the new problems: aid to meet the additional costs, new markets in carbon reduction commitments, and reconciling the differences between the world trading system and the international conventions on climate change.

Any new rules may themselves impose additional costs. **Jodie Keane's** paper explores some of the adaptation and mitigation options for agricultural producers in low income countries. Measures such as Aid for Trade and climate change finance could work together to address some of the challenges they face. But she cautions that the experience of Aid for Trade shows that there are difficulties in reconciling any aid programme for an internationally agreed objective with country development programmes.

Leo Peskett looks at one of the most advanced proposals for a market-based approach, REDD, the mechanism to Reduce Emissions from Deforestation and Degradation. He examines some of the problems in designing and funding programmes to provide incentives for developing countries to conserve their forests, rather than using their products in trade. He notes the difficulties of ensuring that the carbon saving is correctly priced and that programmes to secure short-term carbon saving do not distort the incentives for investment in longer term projects.

That carbon be priced correctly is a condition for any market approach to work correctly. As **James MacGregor** argues, this should make exports from developing countries more competitive in international markets because their production methods are usually low-carbon. But he finds that some approaches to calculating 'carbon footprints' are too simplistic to give the right answers. There is a risk that inappropriate private standards will create a bias against developing country exports which would damage both development and the environment.

Vera Thorstensen emphasises that the trade and climate change regimes have been developed over the years in completely different contexts. The trade regime is now more than 60 years old. It is based on defining permissible policy measures and has binding rules and an effective dispute settlement mechanism. In contrast, the climate change regime is younger and has emphasised specifying targets, not instruments, without a clear legal framework. Now, with the impacts of climate change on the environment, the economy and international politics, pressure is mounting on governments at the national and multilateral level to use all tools, including trade policies, to slow climate change. She identifies the potential conflicts between mechanisms to deal with climate change, including international and national rules, standards for carbon content, and funding mechanisms, and the WTO's body of rules which restricts countries from taking measures with effects on trade or investment.

As Vera Thorstensen concludes, a new pragmatic approach is needed – one that includes the co-existence of different regimes. But this will not be enough. As both she and James MacGregor note, not all the controversies over trade and climate policies stem from differences on how best to reconcile the objectives of development and carbon reduction. Some use biases in carbon measurement or exceptions to the rules to protect the interests of existing producers in developed countries.

1. Trade in a carbon constrained world: aiding countries to adapt to climate change and the new global trade environment¹

Efforts to adapt to the physical effects of climate change include ‘climate proofing’ existing investments and methods of production. Mitigation efforts include diversifying into new products and services needed in a low carbon economy. But climate change responses also require changes in:

- What is produced
- How products and services are produced
- How they are traded

Climate change will impose new costs on developing country exporters, especially if international agreements are not stringent. But new rules may themselves impose additional costs. This chapter explores some of the adaptation and mitigation options for agricultural producers in low income countries, and how they are related. Aid for Trade provides lessons for climate change finance, but highlights the challenge of reconciling aid for international objectives with country development strategies.

1.1 Adapting to climate change

Some of the economies most dependent on agriculture face an estimated loss of more than 50% of their total agricultural output by 2080, and that is despite the stimulus to crops from more carbon dioxide in the atmosphere (Cline, 2007). Countries such as Malawi may need to adapt to a 20% reduction in agricultural export earnings as agricultural output falls as a result of climate change (Keane et al., 2009).

Box 1.1 shows that climate change may force some countries to diversify their export base away from a small range of agricultural goods. Even if ambitious climate change mitigation measures are adopted, global temperatures are likely to increase to at least 2⁰ C above pre-industrial levels by the end of this century, if not sooner (Anderson, 2009). Climate change adds a new motive for, and constraint on, export diversification; the likely physical effects must be considered in production and trade strategies.

Estimates of the likely costs of ‘climate proofing’ existing modes of production and investments include three distinct items:

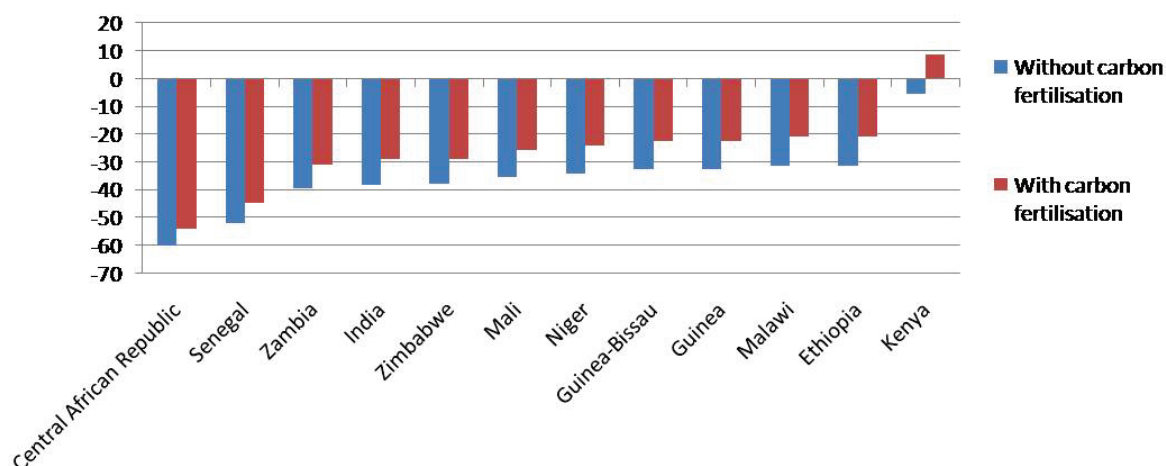
1. better extension services at the farm level;
2. the cost of additional global research (e.g. on new cultivars); and
3. extra capital investment at the farm level.

A number of ‘top down’ estimates calculate each cost item across developing countries (McCarl, 2007, Wheeler and Tiffin, 2009). If ‘bottom up’ estimates – such as those in National Adaptation Plans of Action (NAPAs) – were reconciled with those made ‘top down’, we would have a more accurate picture of adaptation costs. However, both would exclude the investments needed to get low income countries up to their production possibility frontier.

¹ Written by Jodie Keane, Trade Programme, International Economic Development Group, ODI.

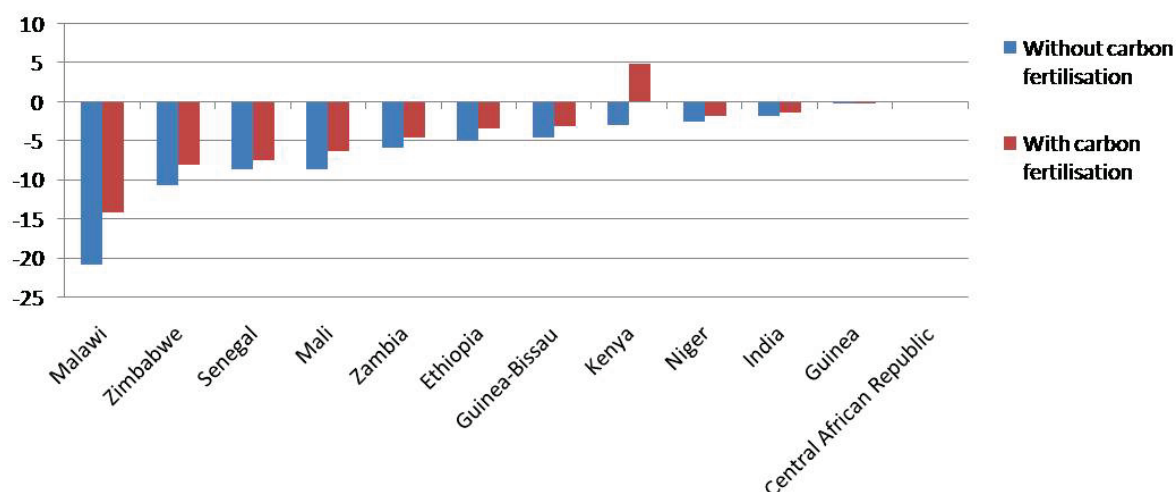
Box 1.1: The potential impact of climate change for agricultural producers in today's terms

Estimated impact of unmitigated climate change on agricultural output (% change)



Source: Adapted from Cline (2007); World Development Indicators for nearest year.

Estimated impact of unmitigated climate change on agricultural exports (% change)



Note: The Central African Republic and Guinea have been excluded from this analysis because of a lack of reported export data. Estimates calculated based on agricultural exports as a proportion of total agricultural output for the nearest year.

Source: Adapted from Cline (2007); UN Comtrade.

These costs would not reflect costs related to the new trade environment (as production systems are assumed to remain the same). This suggests a new role for existing trade facilitation measures. Aid for Trade aims to help developing countries design and implement trade policy effectively and to assist producers be competitive, given the policies, markets, products, and conditions they face now and in the future. That future now includes a global economy which is making the transition to become low carbon.

1.2 Mitigating global climate change through increasing trade

Climate change creates new opportunities as well as new costs. For example:

- Global mitigation opportunities in agricultural trade could create additional resources for the productive investments required to increase resilience to climate change.
- Expanding the scope of the Clean Development Mechanism (CDM) to include a *soil compliance market* for Least Developed Countries (LDCs) could enhance the role of new sources of climate change mitigation finance in promoting sound land management practices.

However, low income countries will need assistance to exploit these opportunities and meet new costs of trade. Barriers to tapping into new market opportunities such as the CDM go beyond finance, to include weak productive capacities and monitoring; these would also apply to carbon labelling initiatives. Without an internationally agreed carbon labelling scheme and competent national systems some products (and producers) may not be recognised as compliant. If carbon labelling becomes more prominent, developing countries should be involved in the standard setting and support should be given to national accreditation systems. As shown by Box 1.2, Kenya is a more carbon-efficient location for cut flowers than the Netherlands, even if the emissions associated with airfreight are included.

Box 1.2: Carbon efficiency in rose production – GHG emissions comparison

Supply chain section	Kenya	Netherlands
Production	300	36,900
Packaging	110	160
Transport to airport	18	0
Transport to distribution centre	5600	0
Transport to distribution centre from airport	5.9	50
Total	6,034	37,110

Source: Adapted from Edwards-Jones et al. (2008) with reference to Williams (2007).

Note: Emissions are shown as Global Warming Potential (GWP) expressed in kg of CO₂ equivalents using the IPCC (2001) conversion factors. GWP and CO₂ emissions from Kenya include the IPCC altitude factor.

1.3 Caution: can existing regimes meet new challenges?

Changes in the climate, and in related agreements, will affect the demand for and the supply of financing for trade capacity building. The absence of internationally agreed standards may also heighten the risk of environmental concerns being used as an excuse for protectionism, reducing the scope for countries to use trade as a tool for development.

As a recent review suggests (Keane et al., 2009), there is scope for Aid for Trade and new sources of climate change finance to work together to help meet some of the expected costs of climate change. Many donors programming Aid for Trade also provide mitigation and adaptation finance. But there is an urgent need for standardised checks to ensure compatibility. Coordination between institutions and programmes could reduce potential conflicts between competing demands and agendas.

The experience of Aid for Trade provides lessons for climate change funding. But it also offers warnings on the conditions for effectiveness, and the difficulties of reconciling any aid programme for an internationally agreed objective with country development programmes. Given current donor resource constraints, there is an urgent need to delineate the role of standalone financing mechanisms.

2. Carbon trading: what can forest carbon proposals tell us about opportunities in emerging trading schemes?²

Deforestation and degradation (DD) constitute 12 to 17% of global greenhouse gas emissions, with most arising from the exploitation of tropical forest resources in developing countries (van der Werf et al., 2009; IPCC, 2007). This has led to increasing interest in developing mechanisms to ‘reduce emissions from deforestation and forest degradation’ (REDD) under the UN Framework Convention on Climate Change (UNFCCC) as a strategy to tackle climate change. The scope of the debate has recently been expanded beyond DD emissions to include, in addition, such activities as supporting sustainable management of forests (which would include some carbon fluxes in and out of the forest, but little net change) and carbon stock enhancement through tree planting or natural regeneration (leading to the acronym ‘REDD+’ referred to throughout this article).

In most REDD+ systems, it is proposed that developed countries would pay developing countries for emissions reduced below a certain reference level, thus linking finance to performance. There are numerous options for how they could be designed, varying in terms of factors such as how reference levels are established, how finance is delivered, and definitions of what emissions sources to target. Much interest has focused on the potential of carbon trading for financing REDD+. Many developed countries see carbon markets as an opportunity to reduce emissions cost-effectively, whereas many developing countries see potential for economic benefits, particularly where carbon markets are linked to DD.

REDD+ is one of the few areas where progress was made in Copenhagen and the efforts put into designing and piloting REDD+ systems may offer useful insights for the development of mitigation activities in other sectors. This note looks at four insights from REDD+, focusing on market based approaches and the potential opportunities and risks for developing countries. These are that:

1. Any mechanism on the supply side to reduce DD emissions must be complemented by measures to address international demand for products that result in emissions.
2. The financing requirements for any scheme that has a major impact will be large and need to be thought through in designing the scheme.
3. In addition to the costs of reducing emissions through any scheme, developing countries will need additional financing to help them build the institutions to use any scheme.
4. Any carbon reduction scheme must be planned to avoid negative interactions with other mechanisms.

2.1 Any mechanism on the supply side to reduce DD emissions must be complemented by measures to address international demand for products that result in emissions

International trade is an important driver of deforestation (and therefore carbon emissions) through activities such as agricultural expansion, legal and illegal logging and mining (Zaks et al., 2009). However, the REDD+ debate has tended to focus more on developing instruments to address drivers of deforestation within tropical countries, rather than addressing international demand side drivers.

This situation is beginning to change. For example, recent policy proposals in the EU emphasise the connection of existing instruments to reducing emissions in the forest sector. These include policies such as the EU’s Forest Law Enforcement, Governance and Trade initiative (FLEGT) which controls the entry of timber to the EU from countries entering into bilateral FLEGT Voluntary Partnership Agreements

² Written by Leo Peskett, Climate Change, Environment and Forests Programme, ODI.

(VPA) with the EU. Current drafts of US climate legislation also note the importance of efforts and structures to combat illegal logging, though the options for how this would be achieved are currently unclear. If links were made to existing instruments on the demand side this could include policies such as the Lacey Act which makes it unlawful to import timber produced illegally in foreign countries. From the perspective of reducing climate change the association of REDD+ with such instruments is a positive step, if they can be shown to be effective. Whilst they are not generally thought to have trade implications (Brack, 2009), from the perspective of developing countries and international trade rules, they would need to be carefully evaluated if their use was to be expanded or new instruments created in the name of climate protection.

2.2 The financing requirements for any scheme that has a major impact will be large and need to be thought through in designing the scheme

REDD+ has large financing requirements. Recent studies have estimated that, in order to reduce global deforestation rates by 25%, the costs of REDD+ would be \$22 to 36 billion between now and 2015 (IWG-IFR 2009). There are increasing costs for higher reductions so in the longer term, greater levels of funding will be required in order to finance REDD+ through market mechanisms, with estimates ranging from \$17 to 33 billion per year for reductions in emissions of up to 50% by 2030 (Eliasch, 2008). Traditional international financing options for supporting activities in the sector - primarily Overseas Development Assistance (ODA), which is estimated at \$1.9 billion per year, with about \$700 million of this for forest conservation (Simula, 2008) - are far too low for supporting REDD+ at these scales. They also raise concerns about the diversion of ODA (for which pledges are already not being met) away from key poverty reduction objectives in areas such as health and sanitation.

Extending the coverage of carbon trading systems in the land use sector has been suggested as a promising option for raising new and additional finance. Carbon markets could provide up to \$7 billion finance for REDD+ by 2020 (Eliasch, 2008). This estimate uses assumptions based on country policy proposals surrounding:

- The global emissions target: the tighter the overall target, the greater the demand for forest credits.
- Complementarity limits (i.e. the number of international carbon offset credits allowed into emissions trading systems): the higher Annex I complementarity limits, the greater the demand for forest credits is likely to be.
- The supply of forest credits: this varies depending on the scope of emissions sources to be included in the mechanism (e.g. deforestation, DD, or DD+); how reference levels are established; whether accounting systems are established for projects at the sub-national level or programmes at the national level; and the extent to which countries have systems to engage in trading.
- The supply of credits from other sectors: the entry of relatively cheaper credits from other sectors would tend to crowd out forest credits.

Clearly, carbon markets could be a good first step for financing REDD+, but they are insufficient for providing funding at scale.

2.3 Developing countries will need additional financing to help them build the institutions to use any scheme

Carbon markets are unlikely to cover many of the costs that will enable countries to engage in carbon trading, including financial and legal institutions and essential monitoring, reporting and verification (MRV) systems at the national level. Existing experience from the Kyoto Protocol's Clean Development Mechanism (CDM) indicates that in countries with complex or unclear land tenure systems, high levels

of corruption and institutions with low capacity to deal with the complexities of carbon projects, investment risks are high, so any scheme will get sub-optimal investment. High upfront costs related to designing and registering projects have also hindered the development of CDM projects in many low income countries.

Monitoring, Reporting and Verification institutions at the national level are an important aspect of trading systems for REDD+. Standard methodologies have been developed which enable emissions measurement and reporting from the land use sector at different ‘tiers’ of accuracy (IPCC, 2006). However, there are large differences in the capacity of countries to implement MRV systems, because of lack of data and under resourced forest monitoring institutions. There are also challenges in scaling up MRV systems from projects to the national level (important for reducing in-country carbon leakage) whilst maintaining levels of accuracy at a level acceptable for carbon trading. Both of these factors are likely to reduce the ability of many LICs to benefit from carbon trading opportunities, at least in the next decade.

In addition to MRV standards for carbon emissions, a debate has emerged about the need for standards that minimise risks and enhance the benefits of REDD+ beyond carbon emissions. These include such risks as corruption linked to large financial flows; human rights abuses surrounding land disputes among communities, governments and the private sector; and negative biodiversity impacts of certain forest management practices. Previous experience in the forest sector gives reason to believe that such risks could exist under some REDD+ schemes. Under the UNFCCC REDD+ process, standards are discussed mainly in the context of ‘safeguards’ – references in the text that refer to the need to address issues such as governance (UNFCCC, 2009). Such references at the policy level are important (and are quite progressive in terms of multilateral environmental agreements) but it is questionable how effective they will be in REDD+ implementation. NGOs have called for stronger standards and guidelines for REDD+ schemes, but there is resistance from many developed and developing countries. The reasons include the precedent that standards or guidelines may set for existing legal systems and development processes (e.g. over rights to free, prior and informed consent) and concerns about accessing REDD+ systems due to the requirements and costs of REDD+ standards.

2.4 Any carbon reduction scheme must be planned to avoid negative interactions with other mechanisms

There is a possibility (as evidenced by some early REDD+ experiences) that the potential for short term profits will incentivise the design of REDD+ projects that produce short term economic gains, but which are not adequately designed to be maintained over the decadal timescales that are required for addressing climate change. Short term REDD+ projects would delay emissions - a useful start, but climate science indicates that emissions need to be cut in all sectors over the next 40 years in order to stabilise global temperatures. It is therefore questionable whether, without additional support, it can incentivise the more spatially and temporally integrated approaches to land use planning that are likely to be required in order to make the transition towards a low carbon land use sector. Integrated planning is important because of the threat of external drivers such as agricultural expansion and energy production on deforestation, and the long timescale of the carbon cycle in land use systems.

The combination of the large technical potential for REDD+ and low costs per carbon credit (estimated to be relatively low compared to other abatement options) could reduce carbon prices. There are therefore concerns that if future emissions caps are not stringent enough, this could ‘crowd out’ more expensive energy-based mitigation options, unless these are subsidised in other ways. This would delay the transition away from the use of fossil fuels, which is a fundamental requirement for addressing climate change. The concerns over what some critics call ‘flooding’³ have been heightened

³ A term that was first used in discussions over the rules for the Kyoto Protocol, surrounding the potential volume of land use based carbon credits, but which is now frequently used in debates about REDD+ financing (see e.g. Vrolijk and Niles, 2002).

by the uncertainties in supply of REDD+. There is large technical potential, but large uncertainties about the ability of countries to develop systems to provide REDD+. The options that have been proposed for reducing the risk of damaging incentives for long term investment include setting caps on the numbers of REDD+ credits that can be traded; establishing separate trading systems for REDD+ credits; and applying discount factors to credits. These might of course, reduce the ability of REDD+ to realise its full potential, and would be second best policies.

Including REDD+, and forestry carbon projects more broadly, in emissions trading schemes (ETS) introduces issues relating to linking different schemes, which in theory would increase the efficiency of emissions reductions and reduce carbon leakage. In addition to the few existing ETS operating at sub-national, national or regional scale (e.g. the regional EU ETS, which represents over 90% of currently traded emissions), major new schemes are under development. For example, the US Waxman-Markey Bill sets out proposals for a US domestic ETS which envisages a large role for international carbon emissions offsets. This is limited to two billion tonnes per year (around 30% of all US emissions reductions), around half of which could be derived internationally (Boucher, 2009). The Bill also includes provisions for a 5% 'set aside' to fund REDD+. Harmonisation of trading rules between schemes and forestry is emerging as a particularly challenging area. For example, the EU ETS does not allow trading of international forestry carbon credits and is unlikely to do so until at least 2020, because of concerns in the European Commission surrounding the permanence and leakage of emissions reductions from forests and the quality of monitoring and reporting, which is in contrast to the favourable view of forestry in the proposed US system. These differences would be likely to prevent the systems from being linked (Tuerk et al., 2009).

2.5 Realising opportunities in REDD+

Given the large reductions in global carbon emissions that are required in the next decade in order to stabilise global temperatures at a level two degrees celsius above the long-term average, and the significant contribution of emissions from the land use sector, REDD+ in some form, is an essential part of any feasible abatement strategy. Carbon markets clearly provide some potential for financing REDD+, but it is important from the perspective of climate change that if REDD+ approaches are integrated into future carbon markets, they are accompanied by stringent emissions targets and potentially the subsidisation of mitigation options that reduce fossil fuel use.

The extent to which carbon markets provide a new economic opportunity for low income countries is questionable, especially in the short term. Regardless of this, there is currently a lot of interest and high expectations surrounding the opportunities that REDD+ could offer, and considerable urgency to pilot and develop schemes. If these efforts mean that a considerable proportion of countries with tropical forests can provide REDD+, then including REDD+ credits in carbon markets might change the regional distribution of investment. Investments would move from middle income countries such as China and India, which currently benefit most from the CDM, towards countries with large tropical forest estates that are under threat from deforestation, including Brazil, Indonesia and many West African countries (Anger and Sathaye, 2008).

Amid the excitement about REDD+, there is a risk that the interest in short term economic gains distracts from the need to ensure that REDD+ strategies are effective over long timescales. There is also a risk that in market based REDD+ systems the focus on efficiency of emissions reductions will tend to target support to certain 'hotspots' that fit investment criteria (e.g. areas with high existing DD rates, which tends to target the 'culprits' rather than rewarding those who are already performing well; areas where land tenure is secure; larger land holdings that can exploit economies of scale etc.), without linking adequately to broader land use planning issues. It will be important to ensure that REDD+ is designed in such a way as to incentivise land use planning approaches that are temporally and spatially integrated and that situate it within the wider context of a low carbon land use sector.

3. Challenging free trade: Embodied carbon dioxide and the development agenda⁴

3.1 Introduction

Carbon dioxide footprinting has been promoted as a tool for European consumers to make sustainable consumption choices since 2007. But what is driving this promotion? Is this a search for efficient global allocation of carbon emissions or another greenwashed marketing gimmick? Are the lawyers sweetening another disguised trade barrier? And who is going to calculate these emissions using which methodologies?

Sustainable development requires a global balance between the environment and development agendas. It is not clear that better information on the embodied carbon dioxide associated with our purchases further sustainable development. My concern is not only with risks inherent in such a partial approach to such a critical dimension of global significance. But also, with both the science behind the perception of carbon-intensive imported produce and with the impact on the farms and in the garment factories of developing countries producing these goods.

In general, we find that for many food products carbon counting procedures should amplify the comparative advantage of developing countries – particularly during the European winter months. This advantage could be strengthened further if other sustainable development criteria such as poverty alleviation are folded into the calculus.

Yet there remains concern that carbon efficiency is not at the vanguard of moves towards carbon footprinting. This is exemplified by products exported from smallholders in Africa to relatively rich consumers in Europe being vilified as the epitome of unsustainable consumption; from garments to food products. Yet, this perceived unsustainability is grounded solely in a too partial environmental calculus. In reality, the media have created a monster out of a relatively small part of the sustainable development story.

Food products are some of the first ‘guinea pigs’ for consumer-facing carbon footprinting efforts. These efforts build on the experience of supply chains in using private standards, which stringently regulate food safety. In the UK public policy development alongside private-sector action by supermarkets, is at the vanguard of a wave of carbon footprinting which is expected to cover all products in all sectors during the coming years. So far only 30 products have been footprinted, but with a little wizardry through generic data transfer, this could be rolled out quickly.

3.2 Food trade and carbon

One concern that lies at the heart of this issue is what are we trying to do for development and for carbon concerns? And what might this look like? How would we recognise good practice and penalise poor practice?

Complete carbon emissions-based food pricing would favour many developing nations – crops grown under the sun with limited chemical inputs tend to have lower emissions. But the methodology currently used to estimate emissions – Life Cycle Analysis (LCA) – tends to favour easy measurement

⁴ Written by James MacGregor, International Institute for Environment and Development.

and favour local production by examining product-based emissions without fully incorporating systemic emissions.

It is clear that due to the vast complexity of carbon dioxide valuation across all products and services, there will continue to be dispute around the estimation of costs and incorporation of these into markets. Indeed, the complexity of the estimation is exemplified when contrasting transport systems. The embedded carbon of aviation as opposed to trains is that whilst trains have a very low carbon cost in moving the train, they have a very high carbon cost in maintaining infrastructure. For aviation this is reversed. Since it is much easier to do LCA for vehicle movements rather than complete systems, aviation has probably been painted as being more polluting than it actually is (or trains less).

Examination of the food miles issue gives a further insight into the complexity of the issues around emissions, food and livelihoods – see Box 3.1. Other emissions blindspots persist too, such as: consumers driving, storing and cooking.

Box 3.1: Why ‘food miles’ needs recalculation

The food miles issue provides the following dilemmas at the supermarket till. It specifically shows how carbon concerns can be misinterpreted: But the question remains: are airfreighted Kenyan green beans the epitome of (un)sustainable consumption? Here are some of the headline arguments:

Air freight accounts for over 90% of Fresh Fruit and Vegetable exports from Africa to UK
Imports compete with and displace UK-produced low-distance-to-market crops
We need to balance our diets
Less than one-thousandth of our UK carbon emissions come from airfreighted food
Over one million livelihoods are supported in part by this trade
Embedded carbon needs to be considered alongside embedded livelihoods, labour, water, quality, vitamins, etc.

In sum, knee jerk reactions to food miles can cost the planet dearly. It has been suggested by many organisations, donors, African governments and researchers that we should buy more from developing countries, but at the right time of the year. One proposal: *in season, buy local; out-of-season, buy development-friendly*

Source: Chi, K, et al., (2009).

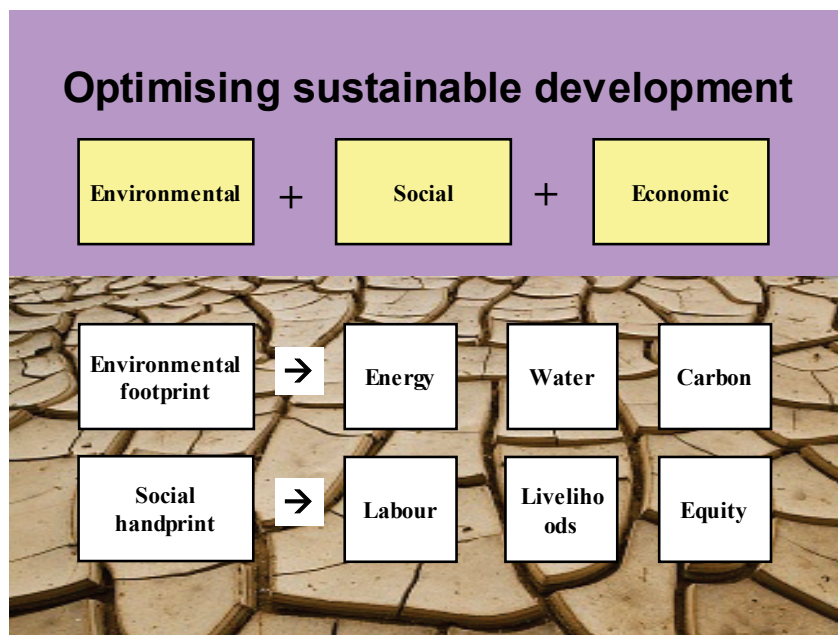
While it is not surprising that the food system - critical for our survival - accounts for a significant slice of anthropogenic carbon dioxide emissions, it is surprising that total emissions from food production and transport account for only 18%.

Trade is important to livelihoods and economic growth in developing countries. The Fresh Produce Exporters Association of Kenya estimates that over four million livelihoods in Kenya are supported by food trade. And a study by IIED in 2006 revealed that imports of fresh fruit and vegetables from sub-Saharan Africa accounted for a maximum of 0.1% of per capita carbon emissions in the UK and supported over one million livelihoods.

It is clear that carbon policies need to incorporate sustainable development concerns. The actual message to consumers over imported food should be that by not buying, they will reduce their carbon emissions by one-thousandth while pushing over one million rural Africans towards the poverty line. Partial information will produce partial, and in this case, unsupportable outcomes.

Figure 3.1 shows some of the elements of a sustainable development equation. Any calculation would involve many more elements and trade-offs between these.

Figure 3.1: Elements of a sustainable development equation



3.3 The importance of standards in food trade

Carbon footprints are the latest in a long line of private voluntary standards. Standards have become a foundation stone for entry to the international trade in food connecting developing and developed nations since food safety issues first became a consumer concern in the early 1990s (see Figure 3.3). As such there is already a process for carbon emissions-based standards to fit into. This involves using indicators and demonstrating compliance. From the supply chain's viewpoint, the process is ideally based on 'easier the better' principles. This draws our attention to a conflict between implementing carbon footprinting technology and the original objectives of the process.

Figure 3.2: Selection of labels used to convey carbon emissions messages at point-of-sale

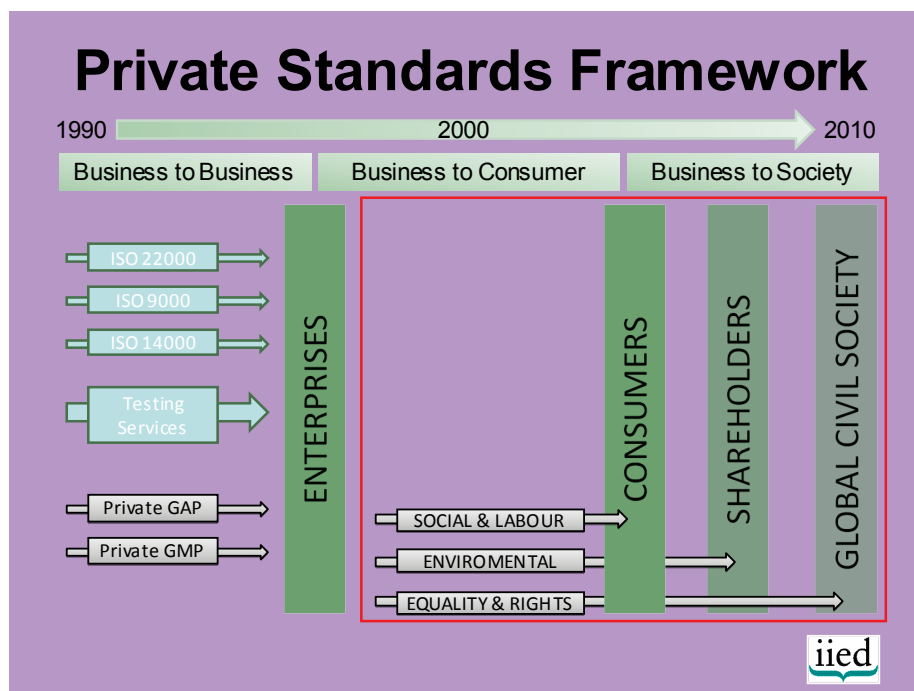


Example: Carbon Trust

Launched in 2007, with the symbol expected to appear on retail sales with value £1.4bn. Products include some that are in the UK general consumer basket of highest selling product categories, bought by the majority of UK households: milk, potatoes, coffee, washing powder. For instance, Tesco plans to put the label on milk (30 million pints per week).

In general standards amplify existing inequalities in supply chains. PVS have limitations – from cost and from logistics and calculation viewpoints. Many have argued that PVS have significant downsides – being costly, excluding smaller producers, and not incorporating less tangible costs and benefits, such as livelihoods, environmental integrity, food security and opportunities. In developing countries these less tangible elements are important. In addition, PVS are not static – they are continually evolving.

Figure 3.3: How standards have evolved for food since 1990



Developing countries remain keen at macro and micro levels to comply with standards for more exacting market opportunities. The reasons for this desire for compliance with PVS for export horticulture include better trade opportunities and enhanced demand coupled with potential efficiency gains through higher quality, stronger secure stable supply chains, greater multipliers and a macro-level contribution to food security.

3.4 Silver lining for developing country agriculture

As consumers we all want to be assured that we make best use of the information and take the best possible decisions. Labels have proved an efficient way to disseminate information at point-of-sale. However, labels that misrepresent or confuse can have a negative impact on consumer confidence in the product and the retailer. Carbon labels come with many caveats over the calculation and need to be reconsidered to include other sustainable development criteria if these are to become truly useful.

The twin elements of climate change and development priorities around food cause us to re-focus on rural areas of developing countries, and provide the foundations for a positive upgrading of agriculture in low income countries if our metrics are constructed in a full and logical way.

From a carbon dioxide perspective, agricultural production in developing countries can be more efficient, emit less carbon, and support higher incomes and sustainable development than production in developed nations. Agricultural trade with developing countries has the added embedded value of providing a link into providing finance directly into relatively poor rural areas and being at the vanguard of many developing country trade opportunities. Yet current carbon measures are piecemeal, trade distorting and limiting. The example of 'food miles' provides a glimpse of how environmental information can be distorted in ways that limit sustainable development opportunities.

Increasing trade is carbon mitigating and sustainable development optimising. We stop short of advocating for unfettered free trade as a mitigation tool. Rather trade needs to be 'informed trade', informed about sustainable development and informed about carbon usage. Operationally this means finding efficient ways of pricing carbon in ways that promote efficient use and carbon saving. We also need to incorporate sustainable development into our comparative advantage metric.

4. Trade and climate change regimes: a course for co-existence⁵

Trade and climate change regimes have been developed over the years in completely different contexts. The trade regime was developed by the GATT starting in 1947 and has a well know body of rules and a very effective dispute settlement mechanism. The Climate Change regime is more recent and has been developed since the 1992 Rio Conference. Now, with the impacts of climate change on the environment, the economy and international politics, pressure is mounting on governments at the national and multilateral level to act on the sources of climate change – gas emissions. Some countries, worried about the costs of these changes to their own competitiveness, are deciding to use trade as a leverage to impose climate measures on the main polluters. There are also potential conflicts between national rules to deal with climate change and restrictions on national measures with effects on trade under the WTO.

The objective of this presentation is to analyse the two regimes, look for the possible conflicts and seek for a space of co-existence.

4.1 International treaties

The basis for the analysis of the two regimes is the treaties negotiated at the multilateral level.

1. For climate change – the UNFCCC – United Nations Framework Convention on Climate Change (1992), the Kyoto Protocol (1997) and a possible new Protocol to be negotiated.
2. For trade – GATT – the General Agreement on Tariffs and Trade (1947), the Marrakesh Declaration Establishing the World Trade Organization (1994) and the possible outcome of a new round of trade negotiation, the Doha Round.

4.2 Objectives of the two regimes

The objectives of the two regimes are quite different.

1. For climate change: the stabilisation of GHG concentrations at a specific level to prevent anthropogenic interference with climate system. Negotiations take place to specify the specific targets and obligations of different countries.
2. For trade: secure terms of access to international markets, specified for each country. Negotiations take place to liberalise access and to govern the relationship between trade rules and national laws.

4.3 Principles

Among the main principles established:

1. For climate:
 - (i) Protection of the climate system on the basis of equity
 - (ii) But in accordance with common but differentiated responsibilities and respective capabilities.
 - (iii) Measures to combat climate change, including unilateral ones, should not constitute means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.

⁵ Written by Vera Thorstensen, Economic Advisor, Mission of Brazil to the WTO.

Countries are classified in different annexes:

- Developed Parties: Annex I Parties (broader category) – Shall adopt national policies on mitigation of climate change by limiting emissions of GHG, and
- Annex II Parties (richest) – Shall provide new and additional financial resources to meet full costs incurred by developing parties in complying with obligations to inform national inventories of emissions and steps taken.
- Developing Parties: no mandatory commitments.

2. For trade:

- (i) MFN – Most Favoured Nation meaning non-discrimination among nations.
- (ii) NT and NDT – National treatment with non-discriminatory treatment between imported goods and domestic goods.
- (iii) Transparency - all trade legislation must be notified to the WTO.
- (iv) SDT – Special and Differential Treatment to developing countries – all main agreements contain clauses with special treatment for developing countries.
- (v) It is important to know that for trade developing countries are self-defined.

4.4 Commitments

The commitments of the treaties include:

1. For climate:

- (i) To develop, update and publish national inventories of emissions of GHG by sources and of removals of GHG by sinks.
- (ii) To formulate, implement, publish and update national or regional programmes with measures to mitigate climate change by emission and by sources and sinks.
- (iii) To cooperate in the adaptation of climate change impacts (for example on coastal zones, water resources, agriculture).
- (iv) To promote and cooperate in the development, diffusion and transfer of technology of practices and processes that control, reduce, or prevent emissions of GHG.

2. For trade in both goods and services:

- i) To use only tariffs as trade instrument, binding them in schedules as upper limits for agricultural and non-agricultural goods.
- ii) Not to use volume quotas for non-agricultural goods.
- iii) In agriculture, to limit export subsidies and domestic support and to increase market access.
- iv) To accept rules on the valuation of goods, import licensing, origin of goods, sanitary and phytosanitary measures, and technical barriers to trade.
- v) To accept rules on types and applicability of remedies against unfair trade: antidumping; against subsidies: countervailing duties; and against surges of imports: safeguards.
- vi) To accept rules against offering investment incentives conditioned to the use of export performance or the use of domestic products.
- vii) To accept rules governing national laws for the protection of Intellectual Property rights.
- viii) To accept rules for what can be included in bilateral or regional agreements which would otherwise conflict with MFN.

4.5 Instruments

The principal instruments established in the treaties:

1. For climate:
 - (i) Targets for reduction of emissions for Annex I Parties (developed countries) with reduction of 5% of emissions based on 1990, and in the period 2008 to 2012.
 - (ii) Flexibilities
 - Emission Trading Mechanism – among Annex I Parties – that allows the financial trading of emission reduction units (ERUs).
 - Joint Implementation Mechanism – among Annex I Parties – that allows investments on reduction projects among developed countries.
 - Clean Development Mechanism – from Annex II to Non-Annex I Parties – that allows investments in reduction projects from developed countries to developing ones.
2. For trade:
 - (i) Goods
 - Tariffs, and under some conditions, tariff-quotas, valuation, import license, rules of origin and trade defence measures such as antidumping, countervailing measures, and safeguards.
 - Sanitary and Phytosanitary measures to protect human, animal or plant life or health (SPS) based on scientific principles, subject to rules to ensure that SPS measures do not arbitrarily or unjustifiably discriminate between members.
 - Technical regulations and standards (TBT) including packing, marking and labelling requirements and procedures for assessment of conformity provided they are not more trade restrictive than necessary to fulfill legitimate objectives. When relevant international standards exist members shall use them.
 - (ii) Services

Members negotiate market access through schedules of commitments by sector and by four modes: transborder services, consumption of services abroad, commercial presence and natural presence, specifying what is liberalised and any exceptions from MFN Treatment.
 - (iii) Intellectual Property Rights

Members must provide effective protection for IPRs, while ensuring that measures do not become barriers to legitimate trade and protection for other members no less favorable than the one accorded to nationals.

4.6 Dispute Settlement Mechanisms

Mechanisms for the settlement of dispute are completely different in nature:

1. For climate – parties agree to seek a settlement through negotiations or other peaceful means, and when non-possible, a submission to the International Court of Justice. Other mechanisms are included: arbitration and conciliation commissions, with recommendation awards, and compliance mechanism.
2. For trade – parties agreed to submit disputes to the DSB – Dispute Settlement Body with strict rules for the formation of panels and review of the legal basis by the Appellate Body. The DSB makes mandatory rulings to bring inconsistent measures into compliance with the WTO agreements. Non-compliances are penalised with retaliation (increase of tariffs or removal of benefits in other trade areas e.g. services, IP).

4.7 General exceptions to the WTO principles and commitments which could cover climate change commitments

All WTO agreements have a clause permitting measures necessary to protect human, animal or plant life or health or relating to the conservation of exhaustible natural resources, subject to the requirements that such measures: are not applied in an arbitrary or unjustifiable way, that they do not discriminate between countries, and that they are not a disguised restriction on international trade. For goods this is in Art XX of GATT; for services in Art. XIV of GATS. For intellectual property, Art. 8 of the agreement on intellectual property allows members to adopt measures necessary to protect public health and nutrition and promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of TRIPs.

4.8 Possible conflicts between climate and trade regimes

Comparison of the two regimes can identify some possible conflicts:

1. The Emission Trading Mechanism among Developed Countries. This climate instrument is creating a financial market of ERUs (emission reduction units) that is being regulated by national authorities. This financial market is possibly included in the schedules of financial services commitments of WTO members and, if so, subject to the rules on MFN and NDT of GATS. Any discrimination among countries could create conflict between the regimes.
2. The Joint Implementation Mechanism among Developing Countries. This instrument includes investment measures in the areas of agriculture and forests and also non-agricultural goods. It can involve subsidies and therefore can conflict with the WTO rules on subsidies and on investment incentives.
3. The Clean Development Mechanism between Developed and Developing countries. This climate instrument also includes investment and subsidies measures that can conflict with WTO rules on subsidies and investment incentives.
4. Agriculture mitigation measures (energy saving, feed for animals, manures storage) and adaptation measures (control of pests and diseases) can include subsidies. These instruments can conflict with WTO rules limiting domestic support (the 'amber box' in the Agreement on Agriculture) and with rules on which subsidies are permitted without limit (the 'green box'). Under the agreements proposed in the Doha Round, they could conflict with the commitments of Overall Trade Distortive Subsidies (OTDS) and the new 'green box' rules.

The control on new pests and diseases could conflict with SPS rules. New rules on labelling related to climate could conflict with TBT labelling rules.

4.9 Possible conflicts between national policy instruments on climate and WTO rules

Some national policies on climate change being proposed by the US and the EU have a high potential of conflict with WTO rules.

1. 1 – Price and market mechanisms: measures to set a price on the carbon content of energy or CO₂ emission include taxes on carbon or a cap and trade mechanism through emission allowances. These mechanisms affect the competitiveness of enterprises and can cause carbon leakage, that is, the migration of enterprises toward less restricted countries. This impact creates political pressure for the imposition of border adjustment measures on imported goods or services.

The imposition of a carbon tax or a cap and trade mechanism on imported goods or services directly affects trade and could conflict with two WTO principles: MFN (non-discrimination among nations) and NDT (non-discrimination between imported and domestic goods).

Such measures would raise practical as well as legal questions. Any tax applied to domestic and imported goods cannot discriminate between them if they are 'like' goods; it must be based on the determining which products are 'like' products and which are 'unlike'.

- how to apply likeness to inputs (energy) rather than final products;
 - how to apply the non-discrimination concept to methods of production, not simply products;
 - how to calculate product specific emissions;
 - how to allow for the fluctuation of carbon prices;
 - how to create a criterion to differentiate 'clean' and 'dirty' products, possibly requiring the use of rules of origin or a specific certification system; and
 - how to develop a comparison method based on the best available technology.
2. Financial mechanisms or funding programs are mechanisms to support specific activities such as an increase in the use of renewable energy or to develop energy efficient goods, new technologies on energy, or a carbon sequestration technology. These mechanisms can be targeted at consumers or producers. They can include: fiscal measures, price support measures or investment support measures, and will affect costs and prices of goods and services.

All these measures can conflict with WTO rules on subsidies or investment incentives.

3. Technical requirements can be intended to promote the use of green goods or technologies including: level of emission, energy consumption in products or production methods. These instruments can involve regulations, public and private standards, labelling, conformity assessments, or prohibition of imports.

All these instruments can conflict with WTO rules on technical barriers to trade and sanitary and phytosanitary measures.

4. Resolving the conflicts based on the WTO exceptions (GATT Art. XX and GATS Art XIV) – If any climate measure conflicts with trade rules, a minimum requirement would be that it not be applied in an arbitrary manner, that there not be unjustifiable discrimination between countries, and that it be applied for environmental purposes, not on competitiveness grounds.

4.10 Conclusion

This comparison between the climate regime and the trade regime clearly shows that climate instruments can affect trade activities and can easily conflict with WTO rules.

To avoid a crash of regimes some solutions are being discussed:

- a new trade related climate change agreement, on a horizontal basis, including green goods, services and IPRs
- the creation of new green exceptions in all trade agreements (including in SDT)
- a new plurilateral agreement on trade and climate change, only for the interested parties, inside the WTO or outside it

Until and unless such agreement is reached, the only possible solution to conflicts is dialogue between regimes until a settlement can be chosen.

If members cannot find an agreed solution, then the imposition of climate instruments on trade activities will force actors to find a solution in the dispute settlement mechanism of the WTO. Instead of the parties negotiating a solution, the seven members of the Appellate Body will solve the issue for them.

The present crisis of the multilateral regimes is consolidating a picture of incapacity to negotiate common solutions for common problems. A new pragmatic approach is needed – one that includes the co-existence of different regimes.

5. Conclusion: moving the trade and climate change regimes and negotiations forward – lessons and questions⁶

5.1 Too little is known or agreed about measuring carbon use or legislating on it

There remain major practical obstacles to agreement on carbon reduction. Market based mechanisms such as the internalisation of carbon prices through cost increases or rewarding countries which reduce deforestation are intended to drive through changes in resource allocations within an economy. The carbon accounting frameworks and methodology established as part of the Kyoto protocol are being used within developed countries as the basis on which to assess compliance. But the need to make carbon price signals work across international borders, not just within them, brings in trade in goods. Questions remain as to the appropriate methodology and indicators to account for embedded carbon traded in goods: how are the processes by which goods are produced accounted for? How do you know if a T-shirt has been produced using fossil fuel, clean energy sources, or ‘best available technology’?

Once a methodology has been agreed, who has the authority to verify this? Without clarity on this, it is impossible to move towards defining what products are ‘like’ or ‘different’, and therefore to agreeing that climate or trade rules can make distinctions among them. Without standardised procedures, methods and agreement on verification, the governance of trade may become increasingly murky. Not only would this create uncertainty but it could also increase costs for business as penalties are levied on non-compliant goods or those deemed to be gaining ‘unfair’ competitive advantage. There are different views and different legal provisions, as noted in Peskett’s paper, about how far carbon reductions through mechanisms like reducing deforestation should be treated as equivalent to those from reducing energy usage. There are risks that incorrectly costing and pricing measures, some with short-term and some with long-term effects, will distort investment away from necessary changes. Clearer information is therefore needed on the costs and returns (in terms of carbon emission reduction) of different approaches, and this should feed into their design.

There is much discussion, particularly in the context of possible national legislation in the US and Europe, of the potential problem of ‘carbon leakage’: that activities made impossible or uneconomical by carbon reduction laws in one country might move to a country with weaker regulations, and then export back to the legislating country. Such a response might reduce the effectiveness at a global scale of the carbon reduction efforts of any individual country. But some studies suggest that the actual potential for such ‘leakage’ may be small, especially if there is a multilateral agreement including the major emitters. In spite of the limited and contradictory evidence, there is a risk that fears of uncertain effects will lead countries to take action to control or tax imports, motivated by national protectionism as well as concern for the environment. This would reduce the efficiency with which market based instruments designed to internalise carbon prices function, by creating disincentives for production to locate where it is most carbon efficient, based on comparative advantage: increased trade in certified low carbon products is a climate change mitigation strategy.

There is little experience of how effectively countries, particularly developing countries, can oversee the application of any international mechanisms. This is an important area from the perspective of REDD, where different forms of institutions are being discussed to oversee verification systems. In the absence of confidence in national institutions weaker, ‘proxy’ based, performance measures are attracting a lot of attention, because of the fear that countries cannot meet monitoring, reporting and verification requirements.

⁶ Written by Sheila Page, with inputs from Jodie Keane, IEDG, ODI. This section is based partly on a discussion of the papers by Keane, Peskett, MacGregor, and Thorstensen at a meeting organised as part of the ICTSD Geneva Trade and Development Symposium at the time of the WTO Ministerial meeting in December 2009 and partly on discussions at ODI following the UNFCCC Conference of the Parties in Copenhagen. We are grateful to Doaa Abdel Motaal, WTO, who commented on the papers and to all who participated in the two discussions.

5.2 Informal coordination mechanisms may no longer be enough

Some argue that because there have not been any irreconcilable conflicts between the WTO and existing rules to protect the environment, whether international conventions or national laws, there is no immediate need for formal coordination. The WTO exceptions (as described in Thorstensen's paper) have allowed some national actions and restricted those that discriminated unnecessarily against imports or between countries, and no country has challenged actions taken by another in accordance with the international conventions, e.g. the Montreal Protocol on Substances that Deplete the Ozone Layer and the Convention on International Trade in Endangered Species (CITES). Even where there is only a treaty without its own enforcement mechanisms, actions under treaties have not been challenged using trade rules because the WTO gives formal recognition to other treaties. A conflict only arises if there is discrimination against countries which have not signed a convention. Even if there is only clear international acceptance of an objective, without a treaty, as there has been in some cases of trade sanctions for political reasons, there has been reluctance to use the WTO dispute mechanisms.

There are also institutional reasons in the WTO for not expecting challenges. The implementation of the CDM raises questions as to how national treatment might be contravened if there are special provisions for traded services. Carbon reduction is a service, a financial transaction; as such it should be regulated in accordance with the services rules, and would be subject to the WTO dispute mechanism. The services rules, however, are less precise on what subsidies are permitted, so that there are fewer disputes. But if carbon trading or some of the activities under REDD seem more like trade in goods, then they could come under those rules.

The failure at Copenhagen pushed any multilateral agreement further into the future and even the strongest proposals for border measures normally exempt other countries with equivalent rules and LDCs, further limiting their potential to lead to disputes.

But there are two arguments for acting now. The first is that the proposals for border measures, the issues on subsidies and discrimination identified in Thorstensen's paper and those on labeling in MacGregor's, and the prospect of more rigorous national or international action on carbon emissions all suggest that the potential for conflict will increase. WTO members should be ensuring that their national legislation does not contravene international agreements to which they are already signatories. In practice larger players are already debating implementing legislation, which would be discriminating such as the Kerry-Boxer and Waxman Markey bills in the US.⁷

Much of the focus of the Doha trade negotiations has been on reducing and restricting subsidies; there would be strong reluctance to accepting any climate change initiatives which introduced new categories of permitted subsidies. The agreements on Trade Related Intellectual Property (TRIPS) and Investment (TRIMS) are also relevant because there are proposals for special treatment of patents on carbon-related processes and concerns about special provisions for encouraging investment in e.g. REDD projects. At present, there is no equivalent for climate change conventions of the WTO dispute settlement system for trade, so relying on existing mechanisms requires all environmental rules and motives to be 'translated' into trade effects and WTO principles. The combination of creative interpretation of GATT rules designed in 1947 for other purposes and self-restraint by countries in the face of conventions with wide support may come under increasing strain.

The second is that trade and climate change negotiations both appear to be delaying making decisions and asking the other to go first. On the WTO side, some argue that issues such as whether products can be differentiated according to the carbon used in their production can only be discussed once there is a global climate change agreement. Environmental aspects should be dealt with in an environmental forum. But from a climate change angle, the problem is that as the details of different approaches to

⁷ A recent ruling by the European Parliament on the EUs Emissions Trading Scheme (ETS) found it to be discriminatory but justified given the novelty of the scheme (Miles, 2009).

solving climate change are hammered out, the role of issues like trade is becoming more apparent and stalling the process of agreement. The different rules of different developed countries on how some schemes are implemented raises issues of harmonisation of technical standards. There may also be market access considerations in carbon trade. These include reconciling preferential treatment for credits from LDCs with WTO rules on special access. Some hope to use the WTO 'toolbox' to leverage progress on climate change, for example in the area of trade in carbon capture and storage technology (Environmental Goods and Services are scheduled for special treatment in the Doha Round trade negotiations) and trade barriers to influence the functioning of the CDM.

Another issue on timing is whether the main challenges between the two regimes will play out in the introduction of domestic climate change measures within countries, regardless of international frameworks. This could make the need to move towards formal co-existence at the international level more urgent. The WTO and climate change negotiations both appear hesitant to enter into major issues that relate to both. The 'wait and see attitude' to both negotiations is not encouraging.

The different approaches make even agreeing a framework for coordination difficult. The two regimes speak different languages, and are based on different types of objectives, principles and commitments. The WTO is about rules and regulations, with the principles, e.g. MFN and national treatment, intended to ensure equitable procedures, not to specify outcomes. The UNFCCC is about targets, with an eclectic approach to the mechanisms to reach these. There is also the distrust of trade hinted at in Peskett's and MacGregor's papers: trade itself uses carbon so it is suspect, even if both trade theory and the evidence on carbon usage suggest that the savings from more efficient production will outweigh any transport usage.

5.3 A coordinated trade and climate change system must maintain the principle of differentiation treatment for developing countries

Ad hoc coordination of trade and climate change policies risks a trade-off between ensuring effectiveness and upholding principles of development. Both the WTO and the UNFCCC have provisions for differentiation, as discussed by Thorstensen. One reason for the breakdown of the Copenhagen conference was that developing countries were unwilling to abandon the principles of differential obligations enshrined in the Kyoto protocol. The intention of some developed countries to move away from Kyoto seemed to contravene not only the principles of the UNFCCC framework, but also those of the WTO. In the WTO, in contrast, the Doha Round negotiations have introduced new provisions for Least Developed Countries, on trade access, investment, and intellectual property, and a greater recognition of the central role of the larger developing countries.

There have also been national actions to weaken the special provisions for developing countries. Access to the EU market for trade in certified emissions reductions (CERs) supplied by developing countries has been made contingent on such countries signing a new international agreement on climate change.⁸ In trade however, the EU gives preferences under the Generalised System of Preferences to all developing countries (including duty free access to all Least Developed Countries), although there is an additional tier, GSP +, conditional on signing certain international conventions.

For both trade and climate change, aid should ensure that costs of adjustment are covered, without diverting aid from development objectives.

⁸ The EU's Emissions Trading Scheme Directive of January 2008 made it clear that "additional use of CERs and Emission Reduction Units (ERUs) should be provided for once there is an *international* agreement on climate change [post 2012], from parties which have concluded that agreement" (EC 2008:17–18).

The ‘carrot’ to get developing countries to adopt emissions reductions targets is the climate change finance (including the income from selling CERs) which is likely to follow.⁹ Typically, MEAs, such as the Kyoto Protocol provide financial and technical support for compliance. Three financial instruments were created under the UNFCCC framework to support adaptation in developing countries.¹⁰ The Aid for Trade initiative, adopted by the WTO, was designed to assist members in adjusting to changes in the trade rules, as well as in negotiating these changes. There is a need to ensure coherence between the trade and climate change financial instruments as both are designed to assist countries to participate in international systems and to develop in a way that takes account of trade and climate changes. Such coordination is required not only to ensure costs of adjustment are covered, but also to avoid donors’ double or triple counting financial flows as aid for trade, funding for climate change, and assistance to development.

5.4 The evolution of trade institutions may offer lessons for the climate regime

In international relations, as within countries, it is the weak which most need rules to restrain the powerful, but it is the risk of dangers to themselves which can lead the powerful to accept rules. In trade, it was the demonstration of the risks of protection wars in the 1930s and a belief that a more regulated system would promote investment and growth which led to the foundation of the GATT in 1947. Developing countries were able to rely on the stable market access which it ensured to expand their exports and then to use its rules to improve their access. As trade increased, new types of rules were required: on domestic measures which affected trade (e.g. subsidies and sanitary and phytosanitary regulations and technical standards) and on trade measures not (fully) foreseen when the organisation was founded (e.g. new rules on actions taken against ‘dumped’ or subsidised goods). As the original principles of GATT (MFN and national treatment) were about the ways in which countries can affect each other, there was a clear progression of identifying new types of effect and dealing with them using new international rules. And to complete the regime, an effective system for adjudicating and then enforcing disputes was necessary, and was introduced in 1994. The acceptance of the enforcement regime depends on the fact that the system of rules itself is accepted as legitimately created, i.e. not merely the targets of the trading system, but its processes are legitimate.

The needs for certainty, for rules which are accepted as based on agreed principles, and for effective ways of enforcing them apply equally to climate change. Developing countries may support an international carbon accounting methodology and labelling scheme for trade products to avoid the imposition by developed countries of other dubious methodologies. There are risks in using private sector driven carbon labelling standards; they may be incomplete (as discussed by MacGregor) or used for protectionist reasons. The weak need international standards, and even the more powerful countries want to reduce the risk of climate change. All countries risk damage from the actions of others, so international agreement is as necessary as it is in trade, although the MFN and national treatment rules may not seem as essential.

The shorter history of climate change concerns and conventions means that it is not surprising that the system of rules is incomplete and that dispute mechanisms are less developed (the WTO system took almost half a century to reach its present state). But the greater dependence on national actions and the weakness of the international organisation mean that there will be more obstacles to the emergence of a strong international system. Discussions on institutions are arguably relatively advanced under REDD, but they are also beginning to run up against the realities of the wider mitigation debate which is still grappling with the form of such institutions

⁹ Mostly mitigation finance and to a lesser extent adaptation finance.

¹⁰ 1. The Least Developed Countries fund; 2. The Special Climate Change fund; and 3. The Adaptation fund. The Global Environmental Facility (GEF) manages those funds which are operational.

Climate monitoring will need updating; targets will need to be verified and updated; performance against commitments will need to be checked; funds promised will need to be monitored. The more fully developed the system becomes the more it will need a World Environmental Organisation equivalent to the WTO, not a small secretariat (as GATT was in its origins) and periodic conferences of the parties.

The principle of respect for agreed rules means that climate change interventions must either respect the existing principles of other international organisations, including the WTO, or explicitly reject and amend them. Given the difficulties of reaching agreements at all the stages of the development of the trading system, the climate regime is unlikely to be able to make major changes to the principles and may want to build on some of the approaches such as using existing international technical agreements, where possible, for setting standards. There are still many disagreements on issues such as SPS standards in the WTO, but there is an institution and there are agreed mechanisms for testing definitions and standards.

5.5 Trade negotiations offer lessons and warnings

The Copenhagen conference coincided almost exactly with the tenth anniversary of the disastrous WTO Ministerial Conference in Seattle. The difficulties of the WTO in starting, and then in reaching any conclusion to, the current trade negotiations do not at first sight suggest that trade negotiations have lessons for climate change, but the WTO did learn from Seattle, and its current procedures and, even more important, its acceptance that it had to change do offer guidance. In both Seattle and Copenhagen, the developing countries were criticised for obstructing agreement, but the two most important lessons that the WTO learned were, on process, that for a small, arbitrarily chosen, group of countries to try to reach an agreement and then present it as a *fait accompli* to the rest would not be accepted (and bringing in ministers or heads of government may make compromise less likely) and, on substance, that if the major countries, now including developing countries, do not agree no procedure will produce an agreement.

The reasons identified for the failure at Copenhagen correspond to both the procedural and the substantive reasons for failure at Seattle: on process, that there was no procedure to combine the negotiations of the formal UNFCCC process with the presence of heads of government, who held meetings set up according to their own or the host government's preferences; on substance, that the differences between the solutions acceptable to the US and to China had not been resolved. The objections by African and Latin American negotiators to the 'Green Room' at Seattle were echoed by those of the negotiators at Copenhagen to the last minute proposals from the US, China, India, Brazil and South Africa, and they refused to do more than 'take note' of these. Even the almost incredible failures of organisation (difficulty in accessing the conference hall; lack of information about meetings) which inevitably made all negotiators less able and less willing to find compromises were similar.

To reach agreement among large and small countries, over a range of questions, with different interests and different groupings of countries around each of the issues, cannot be made easy. But the WTO has found ways of reducing the procedural problems, although the difficulty of dealing with ministerial presence remains; recent breakdowns have been for real reasons of substance.

The WTO now has procedures for negotiations by issue between ministerials, and country groupings have their own meetings around particular interests. This recognises that it is necessary to limit the number of issues left to a one week meeting (in the past, the fact that UNFCCC Conferences have been two weeks has been seen as an advantage, but this is now not enough). At Seattle, one problem was that there were no regular meetings to discuss the four issues identified as core and poor facilities for country groupings to meet and prepare positions. Once the Doha negotiations started, subsequent ministerials had adequate space and organisational facilities (although not time) for both.

At Seattle, a 'Green Room' of selected countries emerged, but without any procedural announcement or justification for its composition. In subsequent ministerials, the members and the meetings were announced and, although there is still no formal procedure for choosing members, conventions have developed which are always observed: the major trading countries, including, as a matter of course, China, India, and Brazil; representatives of the (also informal) groupings e.g. Least Developed Countries and the G20 of larger developing countries; and *ad hoc* representatives of any group with an interest in a particular issue under discussion. Again without formal rules, procedures have emerged for all countries to be members of groups to which at least one of the Green Room members reports back, and the WTO Director General also reports back. This has not produced an agreement, but it has clarified where the disagreements lie.

Three WTO ministerials after Seattle were held in member states (Qatar, Mexico, and Hong Kong): although all provided the necessary organisation, the most recent was in Geneva, and this is expected to remain the norm. Even if the host government is not a representative of one of the major players (as in Seattle and Copenhagen) and so not inevitably suspected of bias, it will be less experienced than the WTO secretariat.

The problem that the WTO has not solved is how to avoid ministers making the outcome less likely (although it has prevented heads of government from doing so: it has never invited a head of government to do more than make a formal opening statement¹¹). At WTO ministerials, each minister makes a formal statement of objectives, and as these are written for publication and prepared prior to the meeting, they not only express positions strongly, they do not reflect any negotiations as they happen. Ministers are also of course present in the general meetings on negotiations by issue, and this makes moving unofficially towards trade-offs more difficult. There is the additional technical problem that in most countries (developed as well as developing) the minister responsible for trade or for climate change is also responsible for other subjects, and is rarely the country's expert on the topics. Given more time, ministers could consult in private with their experts and with other delegations, but the combination of time pressure and grandstanding makes any compromise difficult.

After Copenhagen, some have proposed that it would be better to abandon the UN procedures (or relegate these to minor decisions), and leave the negotiations to a smaller group, a group of two in the most extreme proposals. In the WTO, as well, there has been discussion of so-called 'critical mass' approaches. Such a solution would not solve either the procedural problems (of ministers needing to take political positions and unable to know all the details of a complex agreement) or the substantive ones (that the US and China do not agree on the solution to climate change and that the US, EU, Brazil, India and China do not agree on agriculture, non-agricultural goods, services...).

5.6 Implications for the future

The trade regime is more developed than that for climate change, but many of the arguments and issues which led to the need to strengthen trade rules and institutions will apply also to climate change. For the foreseeable future inconsistencies or conflicts between trade and climate change regimes will need to depend on the principles, rules, and procedures of the trading system. But there are genuine fears of leaving climate change related issues to traditional WTO dispute settlement mechanisms. Past experience suggests rulings can create more confusion than resolution and the costs involved deter developing countries from defending their interests. This provides an additional motive for strengthening the climate change regime, to provide a realistic counterpart. The problems faced by the trading system offer some lessons, and some warnings, for the climate change regime. The threat to both is that if they fail to deal with the new issues facing them, inconsistent and self-interested national actions will weaken both. This would damage the weakest countries most.

¹¹ Seattle showed that even that can be risky, with President Clinton raising an exceptionally controversial issue (labour conditions for trade concessions), although it was not part of the negotiating agenda.

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