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The Trade Implications of the Paris COP21 Agreement

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Abstract

This paper asks what implications the agreement to address the challenges of climate change from the 21st Conference of the Parties (COP21) might have for trade and investment policy in Commonwealth member countries. Whilst trade and investment are not directly mentioned in the Agreement, there are important elements of the trade agenda that should be pursued to take advantage of the opportunities presented by the coming green transition, as well as to protect against the downsides of unilateral climate action. The paper also asks more broadly how Commonwealth governments might support a mutually reinforcing relationship between trade and environmental regimes.

JEL Classification: F18, F13, Q54, Q2

Keywords: COP21, climate change, Paris Agreement, trade and investment policy, Commonwealth

Contents

1. Introduction

In December 2015, the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) met at the 21st Conference of the Parties (COP21) and concluded an agreement to address the challenges of climate change at multilateral, regional and national levels. The resulting accord, known as the Paris Agreement (hereinafter the Agreement), charts a course for both mitigation of emissions and adaptation to the impacts of climate change after the end of the Kyoto Protocol's second commitment period in 2020.[1] The decision to adopt the Agreement also contains elements of a work plan to be implemented in the 2016–2020 period. Taken together, these results mark a historic and comprehensive accord to address climate change at global level.

In the wake of this outcome, it behoves policy-makers from across the spectrum of policy spheres to consider how those results will affect their own areas of interest. In that spirit, this paper asks what implications the Agreement might have for trade and investment policy in Commonwealth member countries. What opportunities for trade and investment are created by the results, and what concerns might be raised? It also asks more broadly how Commonwealth governments might support a mutually reinforcing relationship between trade and environmental regimes.

2. What are the trade and investment implications of the Paris outcome?

2.1. What was the Paris outcome?

The Agreement's objectives, as set out in Article 2, include strengthening the global response to climate change by, inter alia:

- limiting global average temperature increases to well below 2ºC above pre-industrial levels and striving to achieve a cap of 1.5ºC;
- increasing the ability to adapt to climate change; and
- making finance flows consistent with a pathway towards low greenhouse gas (GHG) emissions and climate-resilient development.

In service of those objectives, the Parties agreed to formulate commitments, framed as *nationally determined contributions* (NDCs), covering actions in a number of areas, including:

- **Mitigation:** Parties submitted plans for mitigation of greenhouse gas emissions in advance of the Paris meeting and committed to ratcheting up those commitments every five years. The aim is to reach zero net emissions by the second half of the century, with developed countries taking more ambitious actions.
- **Adaptation:** all Parties are to undertake planning and action on adapting to climate change, and there are to be continuous and enhanced international support for developing-country efforts in this regard.
- **Finance:** developed-country Parties are to provide financial resources to assist developing-country Parties in fulfilling their obligations under the UNFCCC, and agreed to seek to balance funding for mitigation and adaptation. The UNFCCC's Financial Mechanism and its Green Climate Fund (GCF) will serve the Agreement. The

1 The Paris Agreement is the annex to the document *Adoption of the Paris Agreement*, Decision 1/CP.21, FCCC/CP/2015/L.9, 12 December 2015.

Agreement reaffirms the Paris outcomes target of mobilising at least US$100 billion per year of finance by 2020.

- **Technology development and transfer:** the Agreement establishes a technology framework to guide the work of the UNFCCC's Technology Mechanism. Developing-country Parties are to receive support for strengthening technology development and transfer.
- **Capacity-building:** all Parties agreed to cooperate to enhance the ability of developing-country Parties to implement the Agreement.

A number of other elements of the Agreement are also important:

- Parties reaffirmed their commitment to the existing arrangements for market-based payments for reduced emissions from deforestation and forest degradation (REDD+).
- Parties established a mechanism to allow for the market-based international transfer of emissions credits, with the rules, modalities and procedures to be worked out by the first session of the Conference of the Parties.
- Parties confirmed the relevance of a previously established mechanism for addressing loss and damage, the Warsaw Mechanism.
- Parties established a Transparency Framework, under which there are requirements, inter alia, for regular reporting on progress towards fulfilling the commitments expressed in NDCs – with built-in flexibility for developing-country Parties – and for these submissions to be reviewed by technical experts.
- Parties agreed to a global stocktaking process, with the first global stocktake to take place in 2023 and subsequent processes to be undertaken every five years thereafter. The process will help to inform future iterations of the Parties' NDCs.

2.2. How does the Paris outcome relate to trade?

The Agreement does not make direct reference to trade or investment policies. It does not compel Parties to take any specific measures related to mitigation or adaptation such as phasing out fossil fuels. Rather, it commits them to deriving their own individual nationally appropriate plans for achieving the overall objective of the Agreement and the UNFCCC.

The trade and investment policy implications of the Agreement, then, are indirect. One such set of implications is to be found in the nature of the transition that will be brought about by the successful implementation of the various NDCs: opportunities for new or expanded trade flows to fuel a global green economy. Another is inherent in what the agreement does *not* say: what sorts of unilateral actions are Parties free to take, given the lack of specific direction the Agreement provides to the Parties in terms of achieving their NDCs? Both of these sets of implications are examined below.

2.3. Opportunities for trade-related green growth

One calculation of the market for low-carbon and environmental goods and services in 2012 put the global total at €3.4 trillion (roughly $5.5 trillion in 2012), of which just under 80 per cent was directly climate-related (UK Department for Business Innovation and Skills 2013). Such calculations are methodologically problematic, but it can be argued that, were all the Parties to fulfil their NDCs, that figure would significantly increase. Certainly if the ambition of the NDCs is ramped up to match the scale of action needed as per the Agreement's 2°C objective, it will imply a transformation of the global economy on a scale unparalleled since the Industrial Revolution. This in turn will imply a massive increase in investment, trade and new technological development in fields such as energy, transportation, construction, waste management and agriculture.

A few examples can illustrate the scale and nature of the potential markets involved. In the area of energy, the International Energy Agency (IEA) has built scenarios for global energy demand and investment assuming that the global community is successful in its ambition to limit anthropogenic climate change. In the 2°C scenario, the IEA (2015, p. 64) estimates an average annual investment of more than $1 trillion per year between 2016 and 2050 *over and above the baseline scenario*.

This investment is envisioned to be both public and private, and would include:

- $19 trillion in the transport sector, primarily invested in electric vehicles and associated infrastructure;
- $11 trillion in the buildings sector, invested in retrofits of existing building stock and in more energy-efficient appliances such as boilers, hot-water heaters, air conditioners, lighting, etc.; and
- $14 trillion in the power sector, invested primarily in new generation technologies such as solar, wind, geothermal and other low-carbon generation technologies, as well as in energy storage technologies.[2]

In a similar vein, Bloomberg New Energy Finance (2015), focusing solely on generating capacity in the renewable energy sector, predicts investment of over $8 trillion over the next 25 years, or over $300 billion per year.

Other sectors in which significant investment will be needed include:

- **waste management** – investment in new containment technologies, landfill gas capture, waste diversion, recycling and processing technologies;
- **agriculture** – investment in new plant varieties adapted to changing climatic conditions, new low-input techniques, water-saving technologies, low-energy pumps, and low-impact aquaculture technologies;
- **manufacturing** – investment in energy-saving technologies for processing, lighting, heating and closed-loop cooling systems; and
- **water** – investments in cost-effective low-energy desalinisation and purification technologies.

This is a necessarily superficial picture of the types of change that will characterise the global economy in the coming years if the Parties manage to fulfil the NDCs they have submitted under the Agreement. The changes will be created primarily by national regulations and initiatives aimed at reducing GHG emissions and adapting to climate change, which will send the price signals to investors and producers that will drive the changes.

In a comprehensive costing exercise, the United Nations Environment Programme (UNEP) estimated in 2011 that overall greening of the economy (which of course includes objectives such as biodiversity preservation that are only indirectly related to climate change, but of which response to climate change is the major component) will require an annual investment in the range of $1 trillion to $2.6 trillion annually, *over and above* baseline projected investment (UNEP 2011).

While the analysis is often cast in terms of investment required, the implications for trade are direct and straightforward. IEA's projected investment in the solar sector, for example, falls mainly into two categories: purchases by consumers of final products such as solar panels (whether at utility scale or at residential level), transformers and batteries; and investment in productive capacity to manufacture those final products. The first category involves massive increases in consumption of goods that are heavily traded globally. Global exports in 2014 of products under Harmonized System (HS) code 854140 (which is overwhelmingly made up of solar panels) stood at $54.5 billion, up from $7.2 billion in 2000.[3] The second category also involves goods that can potentially be internationally traded: manufacturing equipment for modules, wafers, transformers, etc. The point is that there are new and significant markets for exports that will provide powerful economic benefits for those economies that manage to capture portions of the market.

Some important caveats:

- The further into the future they extend, the more uncertain such estimates are. They depend on assumptions about technological development that may be wrong in ways that significantly affect the numbers (in either direction) and the sectors into

2 These numbers add up to more than the $40 trillion of expected incremental investment because the new investment in the power sector is expected to be accompanied by a decrease of roughly $5 trillion from the baseline case in investment in conventional technologies such as fossil fuels.

3 United Nations Conference on Trade and Development COMTRADE database.

which investment will flow. They are best taken as rough indicators of the magnitude of opportunity.

- Not all countries will gain from the trade opportunities created by the Agreement, and those that do will not gain equally. Even economically similar countries will have widely different comparative advantages, and Commonwealth member countries are extremely varied in terms of size, geography, history and level of economic development. Even those states with similar potential in a given sector may differ greatly in their capacity to support the private sector in exploiting that potential. This point is further developed in the recommendations below.
- The size of the potential markets will depend on the extent to which Parties' NDCs eventually reach the level of ambition set out in the Agreement. The aggregated total of the emissions reductions set out in Parties' NDCs, while ambitious and while subject to periodic ratcheting up, probably is not presently sufficient to achieve the 2°C target.[4]

2.4. The potential for unilateral policies that have an impact on trade

As noted above, the Agreement does not dictate what the Parties must do to fulfil the commitments inherent in their NDCs, the details of the implementing policies being left to sovereign discretion. This allows the Parties to focus on those areas of policy that best align with their individual national priorities.

That discretion, however, may allow scope for unilateral action that has important trade and investment implications. The Parties did not agree in Paris to forswear the use of some policy tools that are controversial among trading partners. Three types of tools in particular will be discussed here: border carbon adjustment, subsidies as green industrial policy, and carbon standards and labelling.

Border carbon adjustment

Border carbon adjustment (BCA) is a mechanism whereby the implementing party attempts to 'level the playing field' between its domestic producers facing carbon costs and those foreign producers that it judges are not facing similar costs. Applied to imports, it results in a charge on imported goods commensurate with the charge that the producer would have had to bear had the product been produced under domestic climate regulations – whether a carbon tax or a requirement to purchase offsets. Applied to exports, it rebates any climate-related charges imposed on goods that are destined for foreign markets where such charges are not imposed on their producers.

BCA is inherently controversial. Among other things, it involves the implementing party's unilateral judgment that the foreign party is not doing 'enough' to price carbon embedded in traded goods. It is not clear how the principle of common but differentiated responsibilities might be properly respected in the course of such a judgment.[5] In addition, the choice of methodology for assessing the carbon content of a given imported product is not straightforward (Cosbey et al. 2012). There is no consensus on the WTO legality of BCA; most analysts conclude that the detailed design of the mechanism would be determinative (Cosbey et al. 2012).

The design of the Agreement leaves the door open for BCA, for better or for worse. The Agreement does not involve consensus on the adequacy of each Parties' efforts in the same way that, for example, the Kyoto Protocol arguably did in its first commitment period; there was no negotiation process that focused on the level of ambition of the various NDCs. National efforts will be assessed against the objectives laid out in the NDCs, but the NDCs themselves will not be assessed by the UNFCCC for adequacy.[6] Therefore, no Party can rely on its membership in the Agreement and good-faith fulfilment of its NDCs to shield it from being judged to be 'inadequately' pricing carbon, and being subject to BCA as a result.

4 The assessments as of November 2015 pointed to a significant 'emissions gap'. See, for example, UNEP (2015).

5 The Paris Agreement (Article 2.2) affirms: 'This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.'

6 The emissions gap mentioned above (note 11) might give support to the argument that some (or all) Parties are not taking adequate action to achieve the objectives of the UNFCCC.

There is no immediate prospect that BCA will be used, however. It has been proposed a number of times and has consistently been rejected in the legislative or regulatory process. There are no pending proposals to use it. However, as Parties implement increasingly forceful Agreement commitments, they will inevitably consider the competitiveness and leakage impacts of their policies, and BCA will undoubtedly be considered as one option for addressing them.

Subsidies as green industrial policy

A different sort of unilateral measure is subsidisation of green firms or sectors, used as a tool of industrial policy. Subsidies – in the form of grants of land or cash, low-interest loans, tax preferences, price floors or premiums, mandatory purchase regimes or other support – may be used to address market failures that prevent the growth of infant industries in the new markets discussed above. They may also be used, as they are in the case of renewable energy technologies, to level the playing field vis-à-vis competing conventional goods, which are not taxed for their full environmental damage, and which on the contrary are often subsidised.

From an environmental perspective, subsidies of this sort may be beneficial. As noted above, they may help firms in a new and dynamic sector to overcome significant market failures and reach a point of global competitiveness.

However, they may also present a problem for those countries hoping to gain market share in the low-carbon economy that the Agreement should usher in. They may be used to prolong the life of firms that are not and never will be competitive, providing unwelcome competition to others struggling to enter the market. They may be offered with local-content requirements attached as a condition, which forecloses foreign opportunities for trade and investment with the implementing country.[7] For countries with poorly resourced treasuries foreign subsidies may simply be unmatchable, even if they are 'properly' employed in every sense. The contest for market share in the emerging sectors is definitely tilted towards larger economies, both because of their superior ability to support infant industries and because they provide supported firms with a larger domestic market for their products.

The new markets that will result from the Agreement are likely to spawn more and fiercer competition in the form of such support. At present, the most heavily supported sector is renewable energy, but in future sectors such as automobile manufacturing are destined to become a target for support. The IEA estimates for investment in the transport sector are dominated by investment in electric vehicles and associated infrastructure, and heavily weighted to a post-2035 period when those technologies are predicted to become part of the mainstream. From an environmental perspective, subsidies in this sector are probable, and already exist in many countries; the internal combustion engine will have to be replaced if the Agreement targets are to be met. From an economic perspective, knowledge- and employment-intensive manufacturing, such as in the automobile sector, has traditionally been a target for heavy government support in pursuit of the significant spin-off benefits to the economy as a whole. Furthermore, while growth in the renewable energy markets has been significant, the global market for automobiles is an order of magnitude larger.

Product carbon footprint labelling

Another type of measure that may emerge more strongly as the Agreement is followed up is the use of labelling to regulate traded goods on the basis of their embodied carbon. Embodied carbon is the amount of carbon emitted across some specified portion of the life cycle of a product – typically from production to disposal, or from production to the point of final sale. A tonne of steel, for example, 'embodies' all the carbon emitted by generating the energy used in the smelting process, as well as the carbon equivalent of any gases released during the process. An expanded scope of analysis might also include the carbon emitted in transporting the steel to market, or in the extraction process. The CO_2 equivalent emissions released over the product's life cycle are often called the *product carbon footprint* (PCF).

7 Such subsidies are prohibited under the WTO's Subsidies and Countervailing Measures Agreement, and possibly under the Agreement on Trade-Related Investment Measures, and have been the subject of two high-profile cases in recent years: *Canada – Renewables* (DS412) and *India – Solar Cells* (DS456).

Goods bearing ecolabels such as PCF labels were at one time a niche market, but in recent years and among selected commodities they are becoming decidedly mainstream, assuming a growing segment of global markets. Potts et al. (2014) surveyed 16 global voluntary sustainability standards across 10 major commodities and estimated a global traded value of $31.6 billion in 2012. The global market share of standards-compliant products for some of these commodities was as high as 40 per cent. To be clear, these labels deal with more than just climate-change issues, but carbon-based criteria are central to many of the schemes, including, for example, Rainforest Alliance and UTZ certification.

There are two concerns about the current situation with regard to PCF labels. First, the various methodologies for calculating embodied carbon are arguably not reliable enough to use as a basis for labels that will have significant trade and market impacts (Bolwig and Gibbon 2009). There is no single agreed method for calculating a product's embedded carbon, and the differing assumptions used in terms of the scope and boundary of the life cycle assessment can yield dramatically different results for the same goods. Furthermore, data availability, reliability and compatibility are critical problems; gathering reliable data at producer level for agricultural products is particularly difficult. As a result, the variety of PCF labelling schemes used by different private retailers are a concern.

The concern is best typified by a type of label that was briefly popular: food miles labels. These were food labels that calculated embodied carbon in only a limited portion of the life cycle: transport to market. The result was to penalise foreign producers on the basis of distance to market, and in particular to penalise air-freighted out-of-season food imports. The schemes were poorly conceived. For one thing, carbon from transport is only a small percentage of total embedded carbon; for a UK consumer, Kenyan air-freighted cut flowers actually have a lower carbon footprint than Dutch cut flowers (Williams 2007; see also Brenton et al. 2008). For another thing, they ignored social aspects, trading often illusory environmental gains against development gains for poor developing-country producers that had contributed little to climate change in the first place (Müller 2007). These arguments, consumer confusion and methodological difficulty have more or less buried the idea of food miles labels. However, the enduring lesson is that ill-conceived methodologies may have unfair impacts, particularly on developing-country producers.[8] This concern is most acute in the context of private sector labels, which are the least developed in terms of regulatory control or coordination.

The second concern about PCF labelling is that, like all ecolabelling schemes, it has the potential to work against poverty alleviation. Ecolabels (like other quality-standard systems) will tend to work against smaller producers, for at least two reasons (International Trade Centre 2013; KPMG 2012).First, the fixed costs of certification and the inevitable restructuring of management systems are more easily borne by producers with larger revenues over which to spread those costs. Second, buyers tend to prefer larger producers, and will buy from them in preference to smaller producers. This is because when the buyer is tasked with ensuring the sustainability of the supply chain it is much simpler to do so with a smaller number of large producers.

Both of these problems manifest themselves only to the extent that producers are disadvantaged by *not* certifying under PCF labelling schemes. This would certainly be the case if such labels were mandatory government-led efforts. It might be the case to a lesser extent if the labels achieved such market share as to become *de facto* mandatory. With regard to the first of these concerns, there are currently no mandatory PCF labels. The report that followed France's environmental labelling pilot scheme (Ernst & Young n.d.) recommended a broader scheme that would start as voluntary and would eventually become mandatory, but that recommendation has not been followed.

8 There have been a number of attempts to lay down the principles and elements of 'good' voluntary sustainability standards (VSS) and associated labelling schemes. One example is the ISEAL Alliance (www.isealalliance.org), a coalition of standard-setters devoted to identifying and spreading best practice among practitioners. Another is the UN Forum on Sustainability Standards (https://unfss.org/), which has a mandate to help make VSS a driver of, and prevent it being an obstacle to, sustainable development in developing countries.

In a similar vein, the EU's pilot phase of environmental product footprinting (which finishes at the end of 2016) could *hypothetically* conclude with recommendations to make the scheme permanent and mandatory, but the Staff Working Document accompanying the Commission report on the scheme found that a mandatory regime would not rate highly in terms of its social or economic impacts (European Commission 2013). Further, it found that the mandatory option was strongly opposed by stakeholders. Given that assessment, as well as the significant administrative and legal difficulties involved in implementing a mandatory regime,[9] the final recommendation in the Staff Working Document was to apply the environmental footprints on a voluntary basis. It is therefore unlikely – but of course still possible – that a mandatory regime would be the recommended option at the end of the pilot phase.

The second concern may be more salient. That is, labels may gain enough market penetration to become *de facto* mandatory. This will probably happen in the context of sustainable cocoa, for example, within the next ten years (Cosbey 2015). In addition, where the labels in question are propounded by private retailers, they may be voluntary in the sense that they are not mandated by governments, but they are ultimately conditions of sale. Where the retailers in question control a large share of the market, these voluntary labels have mandatory characteristics (Arcuri 2013). While private retailers' carbon-based labels have receded in popularity since a surge almost a decade ago (e.g. food miles labels have disappeared and retailers such as Walmart and Tesco have quietly backed off from their ambitious plans for comprehensive PCF labelling), there are still some private sector labels with major market influence. For example, in 2011 B&Q, the world's fourth-largest do-it-yourself retail chain, attained 100 per cent sourcing of Forest Stewardship Council-certified wood for all wood and wooden products. In a similar vein, the number of GLOBAL G.A.P.-certified producers increased from 18,000 in 2004 to over 140,000 at the time of writing.[10] Neither of these, however, is directly carbon-related.

Ultimately, the methodological difficulties in calculating embedded carbon, as well as the controversial disruption of trade that results, may limit the extent to which PCF labelling will be widely employed. However, there is no guarantee of this; retailers face consumer demands to do something about climate change, and they may well respond with these sorts of standards and labels.

3. What are the policy implications for Commonwealth countries?

This section will first discuss how Commonwealth members might respond to the dynamics described above, at national, regional/Commonwealth and multilateral levels. It will then consider more broadly what might be done to make the trade and environmental regimes mutually supporting in light of the Paris outcomes.

3.1. Making the most of the Paris outcomes

Commonwealth countries have a number of policies and measures available to them in responding to the opportunities and concerns presented by the Paris outcomes. The list that follows describes some of these. First, though,

9 The legal difficulties mentioned here include the need to comply with obligations under the WTO's Agreement on Technical Barriers to Trade. Mandatory standards must meet a number of requirements that are not necessary for private or voluntary standards. Among other things, they must be not more trade-restrictive than necessary to achieve their legitimate aims, and they must be based on international standards where those exist.

10 Current figures taken from http://www.globalgap.org/uk_en/what-we-do/. Historical figures from Beghin et al. (2015).

an important caveat: the Commonwealth countries have elements of a common heritage and share important values and principles. That said, they are a highly diverse group. In responding to the opportunities and concerns presented by the Paris outcomes, each country will need to assess for itself what makes sense, given its unique priorities and capacities. No one-size-fits-all recommendations are possible or appropriate.

National assessment and green industrial policy

The new export opportunities in green markets will be important drivers for those economies that manage to secure shares of those markets. A number of Commonwealth countries are already manoeuvring to take advantage of the opportunities. In most countries, such initiatives should be preceded by a national assessment of the broad areas of potential comparative advantage. Evidence confirms the intuitive expectation that almost all frontier green innovation takes place in high-income countries (Dutz and Sharma 2012), but that powerful emerging economies such as India are also capable of creating the conditions for the growth of champions in the green-technology space (KPMG 2015).

At the same time, there are also important ways in which low-income and small-market Commonwealth countries can take advantage of the green transformation, including through support for 'base-of-pyramid' innovation and catch-up innovation (Dutz and Sharma 2012). The former is innovation that meets the needs of poor consumers. It can be formal or informal, and is often co-created with the consumers themselves, building on traditional knowledge (Prahalad and Mashelkar 2010). The latter is innovation that adapts existing technologies for local uses, making those technologies more widely available (Dutz and Sharma 2012).

Support for these types of low-income and small-market country innovation involve, inter alia, facilitating access to technology, in which open trade and investment policies have important roles to play; and stimulating technology absorption and development by domestic firms through science and innovation policies.[11]

Attract climate-specific investment

There are two vehicles of note through which Commonwealth countries, and in particular developing-country members, might attract climate-specific finance. One is the new market mechanisms that will be set up as a result of the Agreement. Under the Kyoto Protocol, the Clean Development Mechanism (CDM) proved to be an important mechanism for delivering investment to developing countries in areas that mitigated climate change.[12] Chapter 6 of the Agreement provides for a market mechanism that will be further elaborated by the Parties in subsequent meetings (Commonwealth Secretariat, 2016). Commonwealth countries should closely monitor this area of negotiations and take the necessary steps to ensure that they are able to benefit from the final result.

In the same vein, Chapter 5 of the Agreement affirms the existing arrangements for finance for REDD+. This source of funding is actually a number of different sources, with funds flowing from various donors through the World Bank and other agents to countries that take action to reduce emissions from their forestry sectors.

The other vehicle of interest is the UNFCCC's GCF, which the Parties confirmed was to serve the Agreement and which is part of the UNFCCC Financial Mechanism. The GCF is the vehicle the Parties will use to channel the financing ($100 billion of private and public money by 2020) that was committed before the advent of the Agreement. The Fund currently has $10 billion in committed funding available. In an innovative arrangement, financing is available not only to states (and public bodies such as environment or development ministries and development banks), but also to the private sector.[13] Also worth noting is the intention to roughly balance investment between mitigation and adaptation, with at least half of

11 For in-depth guidance on green industrial policy, see World Bank (2012); Lütkenhorst et al. (2014); Rodrik (2014); Cosbey (2013).

12 The Protocol's first commitment period (2008–2012) delivered 2.2 Gt of emission reductions, at prices ranging from $5 to $30 per tonne, equating to billions of dollars of revenue for the project proponents, and just under $30 million for the UNFCCC's Adaptation Fund. The real strength of the CDM, however, was the flow of actual North–South investment it enabled, which was an order of magnitude greater than the flow of CDM revenues.

13 Private sector accredited entities to date include mostly investment funds with a social mandate and a project development/funding approach.

the funds for adaptation going to those countries that are most vulnerable to the impacts of climate change: least-developed countries, small island states and African states. The explicit focus is sustainable development.

On the mitigation side, funds will flow to projects and programmes in four categories:

- energy generation and access
- transportation
- forests and land use
- buildings, cities, industries and appliances.

On the adaptation side, the target areas are:

- health, food and water security
- livelihoods of people and communities
- infrastructure and the built environment
- ecosystems and ecosystem services.

To receive funds, countries must first create designated national authorities (DNAs); a country's DNA will be its primary interface with the GCF and the body that ensures that GCF funding in-country aligns with national priorities. The next step is for public, private and non-governmental institutions to seek status as accredited entities; institutions are required to meet a threshold that ensures adequate capacity to manage funds and capacity to ensure positive environmental, social and economic outcomes. Accredited entities then bring projects or programmes to the GCF to request support. The GCF considers projects against a publicly available investment framework, working closely with DNAs, and seeking to have an impact on one or more of the eight areas listed above. The GCF's support can be in the form of loans, loan guarantees, equity financing or outright grants.

How is the GCF opportunity related to trade policy? It has always been recognised that creating resilience involves economic diversification in some economies, particularly in countries that are over-dependent on exports that are exposed to climate risks (e.g. hydrocarbons, agricultural commodities in areas of climate-related water stress). For those Commonwealth members able to make the case to the GCF, there may be opportunities to help finance efforts to diversify, particularly into green economic activity. In addition, and linked to this rationale, countries could make the case for investments to protect trade-related infrastructure from the impacts of climate change – to protect ports from storm surges, for example. These sorts of investments would fall under the theme 'infrastructure and built environment'. However, the case could also be made that they provide livelihood benefits to all those who depend on the trade flows involved.

Commonwealth members would be well advised to begin the process of preparing to receive and manage GCF funding. The GCF has an ongoing programme of support and capacity-building to help countries, particularly least developed countries, achieve what they call 'readiness'. Key stakeholders, including those bodies that are candidates for becoming accredited entities, should be involved in the process.

Standards

There are a number of steps that Commonwealth members might take with respect to climate-related standards and labels:

- Any efforts to harmonise sustainability standards and their associated methodologies will make it easier for exporters to access the markets in question. A plethora of differing standards and methodologies raises costs for exporters and frustrates trade flows, as do standards that are inappropriately formulated. Ultimately, this stymies the international flow of climate-friendly goods. This is the reasoning behind the EU's pilot exercise in harmonised product environmental footprinting, and behind such exercises as the Collaborative Labelling and Appliance Standards Program (CLASP), which seeks to help governments implement appliance standards and labelling.[14]
- Developed-country members of the Commonwealth might coordinate capacity-building assistance for those less developed states whose producers struggle to meet sustainability standards. Evidence from the cocoa and palm oil sectors shows that, with dedicated capacity-building efforts, it is possible to overcome, or at least mitigate, the anti-small-producer bias of sustainability standards (Cosbey 2015).

14 See http://www.clasp.ngo/.

- High mandatory domestic product standards are one way to stimulate domestic demand for green goods. Used in combination with other policies, such standards can be a tool to help develop domestic capacity to produce such goods.

3.2. Making the trade and climate regimes mutually supportive

Both the trade and climate regimes have repeatedly affirmed the desirability of mutual support for trade and environmental objectives. The WTO members made this clear in the Doha Ministerial Declaration:

> *We strongly reaffirm our commitment to the objective of sustainable development, as stated in the Preamble to the Marrakesh Agreement. We are convinced that the aims of upholding and safeguarding an open and non-discriminatory multilateral trading system, and acting for the protection of the environment and the promotion of sustainable development can and must be mutually supportive.*[15]

In the UNFCCC, the Parties agreed that:

> *The Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change. Measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.*[16]

All that said, the question remains what practical steps can be taken to effect the mutual support that both regimes desire. Possibilities include:

- Anything that increases the flow of green goods and services internationally will have beneficial impacts from both an environmental and a trade perspective. One policy discussed above was harmonisation of sustainability standards, or at least of methodologies. Another is liberalisation of green goods and services. The latter, however, is easier said than done; it has languished with the rest of the Doha results in the WTO context, and is proving difficult to effect at plurilateral level among like-minded countries. Asia-Pacific Economic Cooperation (APEC) managed to conclude an agreement of this sort, cutting tariffs on a slim list of 54 goods to 5 per cent as of 2015. The real prize in this respect is non-tariff barriers, as well as services. It is hoped that the current plurilateral efforts to negotiate an Environmental Goods Agreement will eventually lead to such broader commitments.
- Green industrial policy, however, will often deliberately impede the flow of goods to shelter infant industries. If the policy is well implemented, this can pay economic, social and environmental dividends in the long run. If it is not, then it actually represents a setback from the perspective of both trade and the environment; more is spent to get a lesser environmental result. It is important, then, to use trade-distorting tools of green industrial policy judiciously, and as part of a suite of other less distorting tools aimed at achieving the same effect.[17] Trade-distorting tools include local-content requirements, tariff protection and export-linked subsidies. Some states have agreed to forswear the use of these tools, with the results described as concrete action on mutual supportiveness.[18]
- States (or standard-setting bodies) that implement climate-related standards should implement in parallel programmes of capacity-building to assist exporters to meet those standards. This notion was discussed in the previous section.
- BCA and similar tools are a response to uneven carbon pricing across jurisdictions. The most direct way to forestall such tools

15 Preamble to the Doha Ministerial Declaration, 6th recital.

16 Article 3.5 of the UNFCCC.

17 See World Bank (2012); Lütkenhorst et al. (2014); Rodrik (2014); Cosbey (2013)

18 This was an element of APEC's effort on liberalisation of environmental goods. It was also explicitly written into the recent EU–Singapore Free Trade Agreement: Chapter 7, 'Non-tariff barriers to trade and investment in renewable energy generation', prohibits the Parties from using local-content requirements or joint-venture requirements that might affect the other Party's products, service suppliers, investors or investments.

would be a broadly implemented regime of carbon taxation. If all goods were priced to internalise environmental costs, then trade flows would be environmentally neutral and there would be no rationale for restricting trade on environmental grounds. There are enormous difficulties in arriving at such a scenario, of course. It at least needs to be noted, however, that it would greatly reduce almost all trade and environmental tensions.

- The WTO's current law is now over 20 years old. A host of new issues have risen to prominence since the conclusion of the Uruguay Round, including the need to address environmental subsidies (e.g. renewable energy subsidies), perverse subsidies (such as fossil fuel subsidies), energy trade, sustainability standards and green industrial policy tools. However, in the absence of an active forum in which to discuss them, such issues will remain lacunae in the global economic architecture. Finding a way to progress the Doha Round, or ways to work around the slow progress in that setting, would allow room to advance in areas that would strengthen the mutual supportiveness between the trade and environmental regimes.

4. Conclusion

While trade and investment are not directly mentioned in the Agreement, there are important elements of the trade agenda that should be pursued to take advantage of the opportunities presented by the coming green transition, as well as to protect against the downsides of unilateral climate action. Each Commonwealth member will need to determine what efforts are most appropriate to its unique priorities and capacity. Ideally, however, there would be consensus within the Commonwealth on the broad outlines of a trade agenda that complements and supports the Agreement, while delivering positive trade and investment outcomes.

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