



# Trade and Environment Interactions: Governance Issues

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## SUMMARY AND QUESTIONS FOR DISCUSSION

Trade is being challenged on multiple grounds by public opinion and some leaders in the wake of the financial and economic crisis, despite the overall economic growth and poverty reduction benefits it has brought over recent decades. Perceived risk of negative environmental impacts from increased trade and competition from regions with lower environmental standards is one part of the picture. Trade may promote activities of jurisdictions in which insufficient pollution control is applied. It can also facilitate better environmental outcomes whenever a country imports a good that would have generated more environmental damage or resources if produced domestically. In addition, trade allows the diffusion of environmentally friendly technologies and a lowering of costs through broader markets.

The Paris Agreement on climate requires a decisive departure from current emission and policy trends to cut greenhouse gas emissions globally within a few decades. Signatory countries have pledged different emissions objectives in light of their common but differentiated responsibilities, but are united by global climate objectives. One significant Party, the United States, has decided to withdraw. Given this fragmentation, it seems timely to ask whether trade and trade rules could be better aligned to support needed climate efforts.

The international trade regime already recognises trade and environment interactions. The preamble to the Agreement Establishing the World Trade Organization refers explicitly to the world's resources in accordance with the objective of sustainable development. The trade regime enables trade-related measures to protect resources and the environment, but also ensures that the environment is not used as an excuse to introduce protectionist measures. The WTO's dispute settlement mechanism is playing an increasingly important role in arbitrating between environmental protection and trade. Regional trade agreements (RTAs) now routinely include environmental provisions.

The trade system may be able to do more to reinforce climate objectives. One challenge arising from the fragmentation of countries' action on climate is the concern about carbon leakage, whereby the emissions reduction efforts of some countries are partly offset as their efforts create a competitive advantage for companies subject to less stringent goals elsewhere. Empirical evidence shows limited carbon leakage at the current level of mitigation efforts, but many industries rely now on global value chains, allowing them to source different components of their products more efficiently. It is therefore conceivable that more expensive carbon-intensive activities could be outsourced. Some argue that this risk could be contained through trade or other measures undertaken by "clubs" of countries aligned on climate policy ambition. For example, groups of countries could decide to lower existing tariffs on climate-relevant goods and services, adopt common performance standards for key emitting activities, or define the types of emissions reductions they will trade and use to meet their Paris Agreement pledges.

Others think to solutions under the WTO for a better alignment of the trade and climate policy regimes, such as an authoritative interpretation of existing environmental exceptions to trade rules to provide for climate policy measures. Governments could affirm fossil fuel subsidies are actionable under WTO rules. They could consider whether it is legitimate to discriminate between products on the basis of processes or production methods, e.g. on the basis of embodied carbon, although global value chains may make this task technically difficult. They could also call a unilateral or plurilateral cease-fire on the use of trade remedies such as countervailing or anti-dumping measures when it comes to climate-relevant goods.

Climate-relevant provisions in RTAs could also be reinforced. Their effectiveness depends on adequate procedures for monitoring, reporting and review; most RTAs do not provide for such procedures, raising questions about the effectiveness of environmental provisions. Broader RTA articles and chapters

on issues such as investment and government procurement can also support or present inadvertent barriers to climate aims.

In this context, the Round Table on Sustainable Development at the OECD has invited a group of experts to address the following questions:

1. Why have trade rules (e.g. on subsidies) not been used to a larger extent to limit trade that benefits from environmentally harmful activities, and what could change this?
2. How can environment-related issues be taken up more effectively in trade agreements (multilaterally at the WTO or in plurilateral, regional and bilateral arrangements), with a view to improving environmental outcomes?
3. Is there a role for trade measures to support the ambition of climate objectives in a fragmented world? For example, what could be effective trade-related elements of a “club” of countries on climate mitigation?
4. What risks arise from relying on the international trading regime to improve environmental outcomes? How can these risks be mitigated?

## I. WHY A DISCUSSION ON TRADE AND ENVIRONMENT INTERACTIONS?

### Introduction: trade in question

1. Trade of products and services across domestic borders has contributed positively to economic growth and as such to the enhancement of well-being over recent decades. It has helped lift hundreds of millions of people out of poverty, with the share of the world's population living on less than USD 1.90 on a purchasing parity basis falling from 35% in 1990 to less than 11% in 2013 (World Bank, 2016; OECD, 2017a). A strong correlation has also been observed between the growth of income of poorest households and increased trade openness between 1998 and 2003 (IMF et al., 2017).

2. The merit of international trade is being questioned, however, especially in Western economies. Only a minority of citizens in OECD countries agree with the notion that trade provides access to cheaper consumer goods and services, even when they generally agree with the statement that “trade is good” (Stokes, 2017). The public discourse stresses the risks associated with trade: competition from regions with lower, if any, social protection; less protection of the environment; lower rather than higher wages (Stokes, 2017); job losses; and the undermining of law-making through investor-state disputes. Views differ widely from one country to another, with a more favourable perception in developing and emerging economies for which international trade brings economic opportunities and higher standards of living to parts of the population.

3. Trade is one element being reappraised by public opinion in a broader reaction to both globalisation and domestic economic and political systems in the wake of the economic crisis.<sup>1</sup> This backlash against globalisation, which also encompasses technology, finance and migration, is rooted in some well-identified negative impacts (OECD, 2017a, 2017b):

- Lower economic growth since 2008, meaning fewer resources to share across the population and to cover social, environmental and security needs.
- Growing inequality within many economies, driven by a surge in incomes at the top 1% of populations while the bottom 40% benefit little from economic growth.
- Less progressive and redistributive tax systems, with a growing share of revenues raised through higher value added tax rates (with regressive impacts on low-income households) and higher taxes on labour (affecting middle-income households).
- Rising unemployment and under-employment. In fact, job displacement in the manufacturing sector of OECD economies is the result of multiple factors, including consumer preference, technical progress and domestic outsourcing (i.e. reclassification of manufacturing jobs in services), as well as trade (OECD, 2017c).
- Often more acute disparity between low- and high-productivity regions – in some countries, the top 20%, measured by average GDP of workers, are three times as productive as the bottom 20%.

4. The perception of trade is also affected by the growing number of trade disputes and concerns that not all countries are playing fair on the international market. Between July 2013 and June 2016,

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<sup>1</sup> An anti-globalisation movement started much earlier, as witnessed in the 1999 Seattle protests.

members of the World Trade Organization (WTO) imposed 507 anti-dumping measures, 43 countervailing measures (usually increased duties to offset subsidies given to producers or exporters in the exporting country) and 36 safeguards (temporary restrictions of imports that may cause or threaten to cause serious injury to an industry) (WTO, 2017a).

5. Governments and international organisations that have been active in efforts to facilitate trade as a driver of economic development are now refocusing the trade and globalisation narrative towards the need for more inclusive growth, departing from the “growth first, redistribute later” argument (see, for instance, OECD 2017a, 2017c; IMF et al., 2017).

### Trade and environment interactions

6. Environmental concerns also come into play. A common theme is unfair competition from countries that are prepared to turn the disruption of their environment into a competitive advantage – including at the cost of significant local health effects (The Economist, 2017). There are of course marked differences in pollution and pollution control policies among global trade partners; also, a given externality (e.g. the effect of SO<sub>2</sub> on health) may have very different social costs across regions and justify different levels of control. The issue of potential competitiveness effects arises when it comes to cross-border and global environmental issues such as climate change. Whether diverging levels of environmental stringency grant a competitive advantage to jurisdictions with lower standards is a much debated analytical issue, addressed in Section II.

7. The interactions between trade and environment appear complex at first. Through boosts in growth, trade can lead to more resource use and pollution unless appropriate pollution control measures are adopted in trading jurisdictions. But trade can also build value chains that lead to a more efficient use of resources globally, depending again on domestic environmental policies.

8. Stepping back, the interplay of trade and environment has several distinct dimensions.<sup>2</sup>

- **The effects of changes in trade volumes on the environment.** Growth in trade has direct impacts on the environment, e.g. through increased production (with effects depending on domestic environmental policies), but also through possible reliance on more efficient, potentially cleaner production options.<sup>3</sup> Indirectly, trade affects the environment through international transport. CO<sub>2</sub> emissions from international maritime transport (known as marine bunkers) grew 69% between 1990 and 2014, reaching 626 MtCO<sub>2</sub>, on par with energy-related emissions of countries such as Canada or Germany (IEA, 2016). Projections from the International Transport Forum find that greenhouse gas emissions from maritime transport may grow by another 240% by 2050 under a business-as-usual scenario (ITF, 2017). The net effect of increased production (with positive or negative impacts on the environment depending on production methods among trading partners) and international transport emissions has not been analysed to date.

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<sup>2</sup> The authors are grateful to Ronald Steenblik for suggesting this categorisation. To be complete, it should also include the narrower effects of environmental changes on trade: new trade routes through the Arctic as a result of climate change, the effects of extreme weather on trade routes, etc. (see OECD, 2016a, for an analysis of these effects on a regional basis).

<sup>3</sup> See Steenblik (1995) for an illustration of this point in the case of coal imports. Even assuming a one-to-one substitution of domestic coal by imported coal in Western Europe, greenhouse gas emissions would be lower – also taking into account the additional emissions from maritime transport – because of differences in inputs required to extract the coal, the higher sulphur content of European coal (requiring more energy and materials for scrubbing), and higher methane emissions from European underground mines.

- **The effects of trade rules on the exercise of environmental policy**, e.g. trade rules could allow legal challenges to certain regulations, such as those that favour or seek to protect domestic industries. Restrictions on trade in goods and services can also impede the diffusion of pollution-control and low-carbon technologies or increase their cost, which explains the efforts of some WTO Members to reach the Environmental Goods Agreement addressed below.
- **The effects of environmental policy on trade**. Differing domestic environmental regulations can increase cost for producers, *de facto* restricting access to multiple markets and consumers. Environmental policy could also have knock-on effects on trade volumes: the Paris Agreement's objective of stabilising global temperature increase to well below 2°C would lead to much lower consumption and trade of fossil fuels globally. Looking at another aspect in this dimension, there is empirical evidence that differing stringency in environmental regulations affects country specialisation (Sauvage, 2014). On a more political level, disagreements on global environmental efforts are also affecting international trade discussions, as observed in the EU-US debate on the Transatlantic Trade and Investment Partnership (Mauldin, 2017).

9. How then have governments sought to manage the interactions between trade and environment at the international, regional and domestic levels? Can and how may governments ensure that trade and environment regimes are mutually supportive, to effectively decouple trade from environmental damage, ensure that trade is as beneficial to the environment as possible and help preserve the important contribution that liberalised trade can make to prosperity and inclusive growth? How can trade settings be optimised to support the environment?

10. The rest of this paper addresses elements of these questions from the perspective of climate policy. Section II discusses the effects of trade on GHG emissions. Section III provides a quick overview of how the trade regime has addressed broader environmental considerations so far. Finally, Section IV presents options for better alignment of the trade regime with climate mitigation in particular.

## II. CLIMATE ACTION AND GLOBAL VALUE CHAINS

### From domestic policies to global carbon footprints

11. International trade can positively or negatively affect local and global environments. Trade can make countries' lack of adequate environmental policies more apparent and pressing, whenever trade supports the growth of polluting activities and the relocation of pollution. But it can also help to abate pollution through access to foreign pollution control technologies or imports that would be more damaging to the environment if produced domestically.

12. It seems natural, from a policy-maker's perspective, to address environmental problems where they occur, with targeted environmental policies. Depending on the severity of the environmental risk associated with different pollutants, traditional instruments in the environment policy tool-kit include absolute limits on emissions in specific regions or from specific plants; bans on the use of toxic products; mandatory use of pollution-control equipment; and economic instruments (taxes, tradeable permits).



Voluntary instruments such as standards are also meant to influence the environmental footprint of a range of products, and are increasingly visible in trade.

13. In the case of climate change, “getting prices right” to direct operational and investment decisions away from greenhouse gas-intensive activities is essential but not yet a reality. The latest OECD survey of specific energy taxes, carbon taxes and emissions trading systems applying to fossil fuel use revealed that only 7% of CO<sub>2</sub> emissions from OECD and other G20 countries were taxed above EUR 50/tCO<sub>2</sub>, while 60% were not taxed at all (OECD, 2016b).

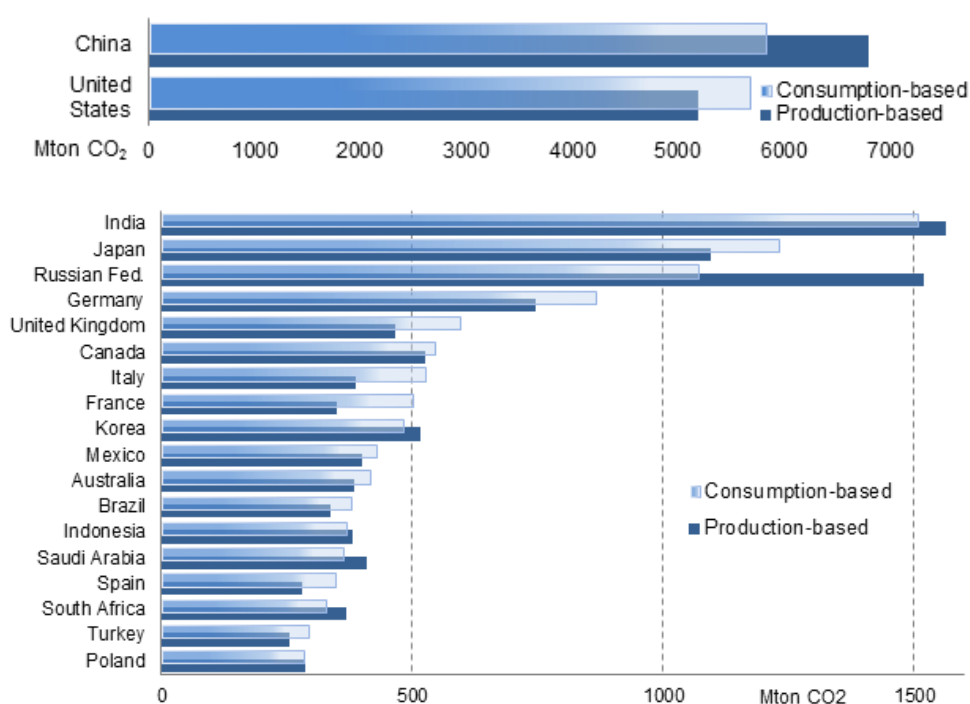
14. Furthermore, CO<sub>2</sub> emissions from fossil fuel use in industry mostly do not face specific pricing mechanisms (the EU ETS being one exception, albeit with low allowance prices and free allowances for much of emissions from industry), while industrial products, including energy-intensive ones like steel or chemicals, are widely traded. This combination of low carbon-equivalent taxes and international trade has made it difficult for countries to increase carbon prices unilaterally (see carbon leakage discussion below). Fossil fuel subsidies also encourage the consumption and production of fossil fuels, even if reforms have been initiated to lower their level in some countries (see OECD, 2017d). The overall picture is clearly that, at least on greenhouse gases, policies do not yet match the environmental ambition of the Paris Agreement. Beyond emissions from international maritime and air-borne freight (largely unconstrained, until the International Civil Aviation Organization took measures to offset growth in emissions), it is legitimate to ask what effect trade has on emissions through reliance on foreign products with higher or lower associated emissions than domestic ones.

15. Certain environmental pressures cannot be solved solely within national borders and require solutions at both the global and national levels. Through the internationalisation of value chains and trade, a product’s environmental footprint may be dispersed over multiple jurisdictions. As a result, a country’s environmental footprint partly depends on how its trading partners regulate the environmental impacts of exported products. This is best illustrated by the notion of “embodied” carbon, i.e. CO<sub>2</sub> emissions associated with the production of traded products. Box 1 gives an idea of countries’ carbon footprints based on the carbon embodied in their traded products.

### Box 1. Traded emissions: calculating emissions based on production and consumption

Using input-output tables from the OECD Trade in Value Added (TiVA) database and IEA data, it is possible to compare countries' CO<sub>2</sub> emissions based on both their production and consumption. UNFCCC greenhouse gas inventories – and Paris Agreement pledges – are based on emissions from domestic production and activities. A country with higher consumption- than production-based emissions triggers additional emissions through its imports. Its trade partners therefore emit more emissions overall than from their own consumption.

**Production-based and consumption-based CO<sub>2</sub> emissions for selected countries**



Source : OECD, [www.oecd.org/sti/inputoutput/co2](http://www.oecd.org/sti/inputoutput/co2), and OECD/IEA/ITF/NEA (2015).

16. In general, when measured on the basis of consumption, OECD countries have larger CO<sub>2</sub> footprints than for their production-based emissions – the official metric of a country's emissions under the UN Framework Convention on Climate Change. China and Russia, as exporters of products based on carbon-intensive processes, are in the opposite situation. This alone does not automatically imply that emissions would be lower in the absence of international trade. There can be cases of specific products where imports carry less embodied carbon than domestic production would; the importing country's carbon footprint is larger than its domestic emissions, even in these cases.<sup>4</sup>

17. Trade should not be cast as a climate villain just because it extends environmental footprints across borders. It also facilitates access to environmental goods and pollution-control technologies. Certainly, limiting trade as a means to reduce CO<sub>2</sub> emissions would prove excessively costly, much more

<sup>4</sup> See also IPCC, AR5, Chapter 14, Figure 14.9 for a different representation covering all world regions. [http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc\\_wg3\\_ar5\\_chapter14.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter14.pdf).

so than applying proper CO<sub>2</sub> mitigation options in countries. Fontagné and Fouré (2017) simulated the effect of a tariff on global trade to stabilise trade volumes at current levels until 2030; the tariff reaches 17% by that year. The effect would be a modest 3.5% reduction in global CO<sub>2</sub> emissions compared with business as usual, entailing a GDP loss of 1.8% in 2030. By contrast, a “Paris” scenario (a 27% reduction in emissions from baseline) implemented through domestic carbon prices would impose only a 1.2% loss of GDP in 2030.<sup>5</sup>

18. The picture of trade and climate interactions is also likely to evolve as new technical solutions are brought forward to decarbonise activities like heavy industry. These solutions may come from more circularity, including the re-use of materials, which prevents the extraction and transformation of virgin materials (Circle Economy and Ecofys, 2016; Wyns and Axelson, 2016). The use of scrap steel and aluminium to produce new steel and aluminium products with a much lower energy-CO<sub>2</sub> intensity is an good example.

19. Trade may have an important role to play in the creation of value chains in circular solutions. Even if circularity is not yet part of the global trade picture, it is interesting to see that many imports into an economy are often re-exported as transformed products. In OECD countries, trade data measured in value added show that 38.6% of imports of chemicals and non-metallic mineral products were re-exported; in basic metals and fabricated metal products the share is 50.5% (OECD, 2016c). Any trade-related measure should be taken with consideration for the already observed growing internationalisation of value chains and future evolutions that circular solutions may trigger and benefit from.

20. The next section discusses one particular way that trade could increase environmental damage, with the displacement of production to regions with lower levels of environmental performance.

### **Pollution havens and carbon leakage: the evidence base**

21. Recent analyses converge on separating the effects of trade on the environment into three categories: scale (more – or less – emissions occur as activity increases or decreases); composition (within an economy the relative weight of different industries, each with a different emissions intensity, evolves, leading to changes in emissions); and technique (lowering of a specific industry’s emission intensity).

22. Much analytical work has been done on the risk of creating pollution havens, as trade liberalisation may allow substituting potentially dirty and cheaper imports for domestic production. Certain countries would gain a comparative advantage from their less stringent environmental regulations on trade-intensive activities. Firm-level data are increasingly used to test various pollution haven hypotheses, whereas earlier work relied on industry-level observations. This new development allows a better understanding of phenomena driving lower emissions in regulated jurisdictions. Are firms responsive to regulation? Are dirty firms dropping out? Or are firms outsourcing to other firms?

23. The effects of environmental policy on trade flows were measured to identify whether environmental stringency led to lower exports and increased imports in targeted industries. Empirical studies do not systematically confirm this hypothesis, sometimes rejecting and other times confirming that environmental regulation is an important factor of comparative advantage and the determination of changes in trade flows (Cherniwchan, Copeland, Taylor, 2016). Recent studies focus on whether changes in trade flows are actually causing a displacement of emissions (the pollution haven hypothesis) – in other words, an activity moving to another jurisdiction to take advantage of lower environmental standards. A firm may have lowered its emissions through technological improvement and not through a loss of market share to a foreign “dirtier” competitor. A reduction in emissions from a change in the composition of activity may be

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<sup>5</sup> See also Bureau, Fontagné, and Schubert, 2017.

a sign of an outsourcing of pollution overseas; changes in imports should be observed concomitantly to confirm this hypothesis.

24. Aichele and Febermayr (2015) empirically confirmed the pollution haven hypothesis in the case of the Kyoto Protocol under the UN Framework Convention on Climate Change. Looking at the evolution of the carbon content of trade between countries with a commitment under the Protocol and non-committed countries, they find that “sectoral carbon imports of a committed country from an uncommitted exporter are about 8% higher than if the country has no commitments. The carbon intensity of those imports is about 3% higher”. They conclude with the need to have all countries taking on commitment to avoid carbon leakage (Aichele and Febermayr, 2015).

25. Recent OECD work on the reaction of listed companies to domestic energy price variations shows a statistically significant positive impact of higher prices on these companies’ outward stock of foreign direct investment (FDI), though small in magnitude.<sup>6</sup> The effect is found to be insignificant in manufacturing sectors that are less dependent on energy. Overall, this supports the pollution haven hypothesis, stressing however that the effect on activity via FDI is likely to be small (Garsous and Kozluk, 2017). The question is whether a clearer, credible climate policy signal, in the context of a more comprehensive Paris Agreement, would trigger the same FDI reaction from these companies. There is indeed evidence that tighter domestic environmental regulations leads to a comparative advantage for cleaner industries, while “dirty” industries experienced a comparative disadvantage (Kozluk and Timiliotis, 2016). Then again, this explains only a small share of measured trade flows.

26. Firmer evidence is needed on the likely effects of environmental policy on trade, especially at a time when much more ambitious climate policies must be introduced, at different rates in different jurisdictions, to achieve the long-term goal of the Paris Agreement. The need to increase ambition has triggered debate in the trade and climate policy communities on whether the trade regime could play a more facilitative role in supporting environmental objectives. We come back to this issue in Section IV.<sup>7</sup>

### III. ENVIRONMENTAL ISSUES AND TRADE RULES

#### The World Trade Organization tool-kit

27. The international trade regime under the World Trade Organization (WTO) already recognises trade and environment interactions. The preamble to the 1995 Marrakesh Agreement Establishing the WTO acknowledges the need for the “optimal use of the world’s resources in accordance with the

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<sup>6</sup> In the manufacturing sectors of nine OECD countries, “on average, a 10% increase in energy prices is associated with an increase of 0.4 to 0.7 percentage point in firms’ international-to-total-assets ratio, whose average is 14%” (Garsous and Kozluk, 2017).

<sup>7</sup> On a more analytical level, the review of the literature shows new, more precise methods to provide empirical evidence that should guide better policy-making (i.e. the analysis of plant-level data). In time, these methods may be able to also consider the positive links between international value chains and environmental outcomes – e.g. the contribution of imports to lowering the emissions intensity of plants, a possibility as a circular-economy value chain develops.

objective of sustainable development” in the pursuit of trade and economic goals.<sup>8</sup> The WTO’s Committee on Trade and Environment (CTE) provides a dedicated framework to address the links between trade and environment at the institutional level. The CTE has discussed a number of issues as part of the Doha Development Agenda to help ensure complementarity between trade and environmental policies, including the relationship between WTO rules and multilateral environmental agreements (MEAs) and the elimination of barriers to trade in environmental goods and services. Fisheries subsidies are also being discussed as part of the Doha Round.<sup>9</sup>

28. Specific WTO rules allow members to adopt trade-related measures for the protection of the environment, including the General Agreement on Tariffs and Trade (GATT). The GATT promotes liberalisation of trade in goods and requires members to treat imported goods no worse than “like” domestic goods (the national treatment principle, Article III) and abstain from discriminating between like goods on the basis of country origin (most-favoured-nation principle, Article I). GATT Article XX sets out two general exceptions to the Agreement’s obligations based on environmental grounds: nothing in the GATT should be construed to prevent adoption or enforcement of measures necessary to protect human, animal or plant life or health (paragraph *b*), or relating to the conservation of exhaustible natural resources, provided such measures are effected in conjunction with restrictions on domestic production or consumption (paragraph *g*). For a measure to fall under Article XX, it must not be applied in a manner constituting a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade.<sup>10</sup> The intention is to avoid the misuse of environmental measures for protectionist ends.

29. Other agreements in the international trade regime address trade and environmental obligations. For example, the natural resources exception in paragraph *b* of GATT Article XX is replicated in the General Agreement on Trade in Services (GATS), subject to the same conditions specified above. The GATS does not contain a provision equivalent to paragraph *g*. Negotiation of the classification of environmental services for the purposes of the GATS (i.e. services to be liberalised) is ongoing (Droege et al., 2016). Specialised agreements under the WTO framework, such as the Agreement on Technical Barriers to Trade, also recognise the right of members to implement environmental protection measures.

30. The WTO system is underpinned by a robust dispute resolution mechanism which covers all agreements under the WTO umbrella and plays a crucial role in addressing the linkages between environmental protection and trade in the WTO regime. This system is the most developed of any treaty regime; it has managed over 500 disputes since the WTO was established in 1995, including disputes involving environment-related measures (Droege et al., 2016). The cases confirm that governments can adopt measures to address environmental concerns without going against the non-discrimination requirements of international trade rules – provided such measures comply with the conditions of Article XX (i.e. not discriminatory between countries or a disguised restriction on international trade).

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<sup>8</sup> “*Recognizing* that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world’s resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development [...]” *Agreement Establishing the World Trade Organization*. [www.wto.org/english/docs\\_e/legal\\_e/04-wto\\_e.htm](http://www.wto.org/english/docs_e/legal_e/04-wto_e.htm).

<sup>9</sup> [www.wto.org/english/tratop\\_e/rulesneg\\_e/fish\\_e/fish\\_e.htm](http://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_e.htm).

<sup>10</sup> [www.wto.org/english/docs\\_e/legal\\_e/gatt47\\_e.pdf](http://www.wto.org/english/docs_e/legal_e/gatt47_e.pdf).

31. For example, in affirming the right of the French government to impose an import ban on asbestos in the 2001 *European Communities – Measures Affecting Asbestos and Asbestos Containing Products* case, the Panel and Appellate Body confirmed the right of members to implement trade measures to protect human health, consistent with the general exception in Article XX(b). In the 1998 *United States – Import Prohibition of Certain Shrimp and Shrimp Products* dispute (known as “Shrimp-Turtle”), the Appellate Body confirmed that WTO members “can and should” adopt effective measures to protect the environment, including animal or plant life and health, endangered species and exhaustible resources. Four Asian countries brought the claim against the US following a ban on the importation of certain prawns and prawn products motivated by the protection of sea turtles. In the end the complainants won, but not on the grounds that action to protect the environment is not allowed.<sup>11</sup>

32. More recent cases involving environmental measures relate to renewable energy policies, including based on the use of local content requirements (LCRs), subsidies and countervailing duties. An example of a case centred on LCRs is *Canada – Certain Measures Affecting the Renewable Energy Generation Sector*, brought by Japan and the EU against a feed-in-tariff programme in Ontario. The Appellate Body found that the programme violated the national treatment principle under the GATT and required Canada to adjust its programmes accordingly (Droege et al., 2016). The proliferation of such cases leads Wu and Salzman (2014) to affirm that “WTO litigation is no longer about environmentally contingent market access policies, but, rather, green industrial policies”. They caution that, increasingly, conflicts over green policies intended to spur on renewable energy development and deployment “raise the stakes for a trade war”, with trade remedy laws in particular representing a “worrisome implication ... for both environmental protection and trade liberalization”. The issue of trade remedies is discussed in further detail in Section IV.

33. Plurilateral agreements represent a further option to clarify interactions between trade and environmental policy under the WTO framework. Such agreements enable sets of WTO members to advance in developing common rules absent consensus across all members. The Environmental Goods Agreement (EGA), which is still under negotiation on behalf of 46 WTO members following a stall in negotiations since December 2016,<sup>12</sup> is an example. If concluded, the EGA will eliminate tariffs on environment-related products such as those related to “generating clean and renewable energy; improving energy and resource efficiency; reducing air, water and soil pollution; managing solid and hazardous waste; noise abatement; and monitoring environmental quality”.<sup>13</sup> While stand-alone plurilateral agreements are possible under the WTO framework, the EGA is intended to offer tariff concessions to all WTO members on a most-favoured-nation (MFN) basis.

### **Environmental provisions in regional trade agreements**

34. Under WTO rules, bilateral and regional trade agreements may grant preferential tariffs between members. Governments are increasingly expanding the scope of such agreements to address specific policy areas, including the environment. This trend is significant, not least because of the increasing importance of bilateral and regional agreements in international trade as governments seek to move trade liberalisation beyond progress made at the multilateral level. It demonstrates a potential for trade agreements to include

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<sup>11</sup> The US had “discriminated between WTO members. It provided countries in the western hemisphere — mainly in the Caribbean — technical and financial assistance and longer transition periods for their fishermen to start using turtle-excluder devices. It did not give the same advantages, however, to the four Asian countries (India, Malaysia, Pakistan and Thailand) that filed the complaint with the WTO” (WTO, 2017b) [www.wto.org/english/tratop\\_e/envir\\_e/edis00\\_e.htm](http://www.wto.org/english/tratop_e/envir_e/edis00_e.htm), [www.wto.org/english/tratop\\_e/envir\\_e/edis08\\_e.htm](http://www.wto.org/english/tratop_e/envir_e/edis08_e.htm).

<sup>12</sup> <http://www.ictsd.org/bridges-news/bridges/news/ministerial-talks-to-clinch-environmental-goods-agreement-hit-stumbling>.

<sup>13</sup> [www.wto.org/english/tratop\\_e/envir\\_e/ega\\_e.htm](http://www.wto.org/english/tratop_e/envir_e/ega_e.htm).

environmental provisions to support environmental outcomes. Governments may also use environmental provisions to help address potential competitiveness concerns cases in which the environmental policies of trading partners are perceived to be less stringent. More than 270 RTAs were in force by May 2016; over 115 RTAs containing environmental provisions have entered into force since 2007 (OECD, 2017e).

35. The environmental provisions included in RTAs take a range of forms and vary in terms of the breadth of environmental issues covered and enforcement mechanisms envisaged (OECD, 2017f; Monteiro, 2016). Some are limited in scope, confined to the preamble or reiterating environmental provisions already included in multilateral trade agreements such as the GATT. Other RTAs include more substantive provisions, including in dedicated chapters or accompanying side agreements. Around two-thirds of RTAs that have entered into force since 2007 include substantive environmental provisions (OECD, 2017e).

36. Previous work tracking the integration of environmental provisions in RTAs has identified several broad categories of substantive provisions (OECD, 2017f; Monteiro, 2016). Examples include those that:

- are intended to maintain or reinforce environmental laws, to ensure high standards of environmental protection and a level playing field for trade, such as commitments to improve levels and enforcement of environmental policy and avoid derogating from environmental law for trade advantage;
- recognise environmental exceptions, “enabling the parties to derogate from the general trade obligations under the RTA in order to address environmental objectives” (Monteiro, 2016);
- promote environmental co-operation between parties, including in some cases by establishing dedicated mechanisms to drive implementation;
- affirm that non-discriminatory environmental laws cannot be considered as indirect expropriation;
- address specific environment-related issues such as energy efficiency or renewable energy;
- commit to the liberalisation of environmental services;
- establish procedures for dispute resolution, for example through consultation or arbitration between the parties, important to ensure implementation and enforcement of environmental provisions contained in RTAs;
- clarify the legal precedence of multilateral environment agreements in case of inconsistency.

37. The 1994 North American Free Trade Agreement (NAFTA) was the first RTA to include detailed, binding environmental provisions, underpinned by the accompanying North American Agreement on Environment Cooperation and the Commission for Environmental Cooperation. It has since served as a reference point for substantive provisions in RTAs involving the United States and other countries. The Canada-EU Comprehensive Economic and Trade Agreement (CETA), approved by the European Parliament on 15 February 2017 and awaiting approval of EU national parliaments to enter into effect, provides a recent example of an RTA incorporating substantive environmental provisions.<sup>14</sup> A dedicated chapter on trade and the environment commits the EU and Canada to seek high levels of environmental

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<sup>14</sup> See Chapter 24, CETA, available at <http://ec.europa.eu/trade/policy/in-focus/ceta/ceta-chapter-by-chapter/>.

protection and continued improvement of environmental laws and policies. It requires each party to enforce existing laws and avoid weakening or waiving existing obligations to increase trade, and reaffirms their commitment to effectively implement obligations under multilateral environment agreements. The chapter recognises the importance of conservation and the sustainable management of forests, fisheries and aquaculture, and commits the EU and Canada to co-operate on trade-related environmental issues of mutual interest such as climate change and trade and investment in environmental goods and services. A separate chapter reaffirms the parties' commitment to promoting international trade in a way that contributes to sustainable development.

38. The Trans Pacific Partnership (TPP), not yet in force, provides a further example. The TPP addresses a number of "behind-the-border" regulatory issues that intersect with trade, including the environment, and goes beyond previous WTO or RTA provisions in this area. Of particular note are its proposed fisheries provisions, in particular a groundbreaking prohibition of subsidies that contribute to overfishing (i.e. subsidies that negatively affect overfished stocks, or provided to a vessel listed by a state or relevant organisation for illegal, unreported or unregulated fishing). Broad commitments to promote sustainable fisheries management are also notable. The TPP proposes that parties endeavour to address any potential non-tariff barriers to trade in environmental goods or services. In addition, proposed market access provisions eliminate tariffs on environmentally-beneficial products and technologies such as solar panels, wind turbines, wastewater treatment products, air pollution control mechanisms and air and water quality monitors. TPP provisions represent the most far-reaching substantive environmental provisions yet proposed in an RTA. While its future is still unclear, the agreement illustrates the potential for RTAs to raise the environmental ambition of parties and potentially open the door to addressing non-tariff barriers.

#### **IV. HOW COULD TRADE RULES REINFORCE CLIMATE OBJECTIVES?**

39. The threshold question when considering how trade rules could most effectively advance environmental objectives is *why* governments might consider enhancing the focus of trade policy settings to do so. Measures to address perceived negative environmental impacts can help reduce opposition to trade to the extent environmental concerns play a role in stirring negative sentiment (Section I).

40. The reference to sustainable development and the need to protect and preserve the environment as a parallel objective in the preamble to the WTO's founding agreement demonstrates intent by governments for the international trade regime to take environmental considerations into account. The broad international consensus in the COP21 Paris Agreement and on Agenda 2030's Sustainable Development Goals supports the view that trade policy settings should consider public well-being in addition to the aim of promoting economic growth. Because environmental challenges like climate change are systemic and cut across policy domains, beyond traditional environmental policy mandates, they require economy-wide action. This includes in the area of trade (OECD/IEA/ITF/NEA, 2015). Governments have already taken steps to address environmental considerations in trade policy, as set out in Section III; the question is how trade, and the trade regime, could enhance its contribution to environmental improvements.

41. Accordingly, this section looks at the potential for governments to more effectively gear trade policy settings to support environmental goals, including in the context of the WTO and RTAs. Given the United States' recent decision to withdraw from the UNFCCC Paris Agreement, and the legitimate differences in the pace of the low-carbon transition across different countries, particularly with respect to



developing countries, it considers how “clubs” of countries gathered around a common environmental policy or ambition may harness trade-related measures as part of their policy packages. The issue of rising greenhouse gas emissions from international transport is not addressed in detail; while these emissions can be a legitimate concern of Parties under the UNFCCC, they are under the jurisdiction of ICAO and IMO, and outside the remit of the WTO (Box 2).

### **Box 2. Reducing greenhouse gas emissions from international transport**

Emissions from international bunker fuels are not included in the scope of countries’ greenhouse gas inventories under the UNFCCC. The Kyoto Protocol encourages Parties listed in Annex I to pursue limitations of emissions from aviation and marine bunker fuels through the International Civil Aviation Organization and the International Maritime Organization, two specialised UN agencies. The two organizations have considered measures to curb greenhouse gases for some time.

IMO adopted legally binding energy-efficiency measures for the whole industry. Mandatory energy efficiency standards for new ships, and mandatory operational measures to reduce emissions from existing ships, entered into force in 2013. By 2025 all new ships built will be 30% more energy efficient than those built in 2014. Although a step in the right direction, this policy is therefore not an absolute constraint on maritime freight greenhouse gas emissions.

Following the Paris Agreement, ICAO established its Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), originating in a 2010 aspirational goal of carbon-neutral growth from 2020 onwards. A market-based measure, it is meant to be implemented in three phases, with a targeted 90% coverage of international aviation emissions in its third phase (2027-2035). Roughly speaking, airline operators are meant to buy carbon offsets to cover growth in their emissions. As such the system should not lead absolute reductions from current levels. The anticipated price of offsets (typically lower than EUR 10/tCO<sub>2</sub>) are also unlikely to prompt great technical or operational improvements.

The EU had attempted to include intercontinental flights from and to Europe in its emissions trading system from 2012 onwards. This was met by great resistance from the US, China, India and Russia and eventually dropped, an illustration of how difficult unilateral action may be when seen as negatively affecting competitiveness. In fact, the proposed measure was to ensure that foreign airlines operating in Europe would not gain an automatic competitive gain upon introduction of the international aviation sector in the ETS.

Bureau et al. (2017) argues that in order to be acceptable and effective, measures undertaken to limit emissions from international bunker fuels should: be backed by economic analysis to dispel concerns about commercial impacts; be linked to a reference carbon price, a clearer indicator of effort than energy efficiency goals (which may or may not depart from business as usual); and a smart recycling of revenues to facilitate adoption. Revenues could, for instance, be redistributed to companies on the basis traffic, a direct encouragement for each airline to lower its emissions more than its competitors.

The overall picture on transport emissions associated with international trade is that in spite of recent efforts, objectives are not yet aligned with the Paris Agreement climate objective (an early peak followed by a rapid decline in global emissions towards net-zero emissions in the second half of the century).

*Source* : IMO, 2016; ICAO, 2017; Bureau et al., 2017.

42. There may be negative reactions associated with looking to the international trade regime to achieve environmental ends. Some may fear that this increased reliance will burden the negotiation and ratification of otherwise growth-improving trade agreements,<sup>15</sup> or that it will spark a proliferation of causes

<sup>15</sup> The recent Court of Justice of the European Union decision regarding the proposed EU-Singapore FTA demonstrates the challenges that can arise from including “new disciplines” in trade agreements in multi-jurisdictional governance regimes. The proposed FTA covers issues such as intellectual property protection, investment, public procurement and competition in addition to environmental matters. The Court held that the EU did not have sufficient competence to act alone because certain proposed provisions related to shared

for the trade system to address (Bacchus, 2016). As trade measures may involve differentiated groups of countries, including substantive environmental provisions may run afoul of the WTO's special and differential treatment provisions or the UNFCCC's principle of common but differentiated responsibilities. These aspects, speculative as they are at the moment, are not further addressed in this paper.

### **In what ways could WTO settings better support environmental outcomes?**

43. There are immediately apparent ways that the WTO system could reinforce environmental objectives, such as by concluding the negotiation of the Environmental Goods Agreement on the liberalisation of trade in environmental goods or advancing other plurilateral agreements on environmental matters. Commentators have proposed numerous further options, many with a view to optimising WTO settings to support climate policy action. This focus reflects a perceived need for the trade system to do more to support the implementation of the Paris Agreement, and a perception that the Agreement's entry into force has the potential to create friction with WTO trade obligations as governments accelerate climate policy measures consistent with nationally determined contributions (NDCs).

#### ***An explicit recognition of climate-related measures under the WTO***

44. Droege et al. (2016) point to an increasing number of WTO disputes related to renewable energy policies and potential "systemic conflict" of national climate policies with the WTO principle of non-discrimination. On this basis, they propose a range of legal and institutional approaches to enhance trade policy support for climate action. Acknowledging likely political challenges, they raise the idea of an authoritative interpretation of Article XX of the GATT and the equivalent GATS article to explicitly provide for climate change measures within Article XX's exceptions. Such an interpretation could be symbolic, reiterating principles already settled in WTO jurisprudence, or go further to address more controversial issues such as taking into account the carbon impact of processes and production methods of imported and exported goods (this issue is addressed below).

45. A plurilateral agreement on trade and climate could set rules on issues such as market mechanisms (as per Article 6 of the Paris Agreement on co-operative approaches), services and non-tariff barriers (Box 3). In addition, climate expertise could be included in the WTO's dispute settlement mechanism and collaboration enhanced between relevant WTO and UNFCCC bodies. Bacchus (2016) goes further, proposing, *inter alia*, a moratorium on challenges to climate measures with possible trade impacts in the WTO dispute settlement system, and a recognition by WTO Members that "climate measures taken pursuant to a climate agreement" fall under the Article XX exception and that there is no territorial limitation (or, more narrowly, for measures taken for climate reasons relating to the amount of carbon used in making traded products).

### **Box 3. A plurilateral agreement on trade and climate?**

Hufbauer et al. propose a plurilateral trade and climate code to deal with a range of aspects on the climate-and-trade interface. They propose that this code could be adopted as a plurilateral agreement under Annex 4 of the WTO Agreement (similar to, for example, the Government Procurement Agreement and which would allow for the enforcement of the agreement through the WTO's dispute settlement mechanism). Similarly, the ICTSD has suggested a "Sustainable Energy Trade Agreement" covering not only the liberalisation of climate-friendly goods and services, but also non-tariff barriers such as technical standards. A plurilateral agreement would not create rights or obligations for other WTO members, but its inclusion in Annex 4 would require consensus. The benefits of such an agreement would normally accrue to all WTO members to the extent that it covered subjects within the scope of the MFN obligations of WTO agreements. Thus, on the one hand, the negotiation of an agreement "inside" the WTO system is easier due to the lower number of parties, but on the other hand, its approval as an additional Annex 4 agreement would require the agreement of all WTO members.

Such a plurilateral agreement under the WTO does not necessarily bring about more complexity. The limited-membership arrangement would be open to participation by further WTO members and could thus expand its membership over time. The EGA negotiations – limited to traded goods – demonstrate that plurilateral agreements are a way forward to promote common interests among groups of WTO members. Plurilateral climate-and-trade cooperation could also take place outside the WTO regime. However, this option would exacerbate the fragmentation of the trade regime.

Source : extract from Droege et al., 2016.

### ***Using the trade system to challenge fossil fuel subsidies***

46. The topic of fossil fuel subsidies raises some interesting issues in the WTO context. The first relates to the notion of "like products". In principle, a country exporting coal could challenge another for applying a tax to imported but not domestic coal. However, a country exporting photovoltaic panels, alleging discrimination on grounds that a coal subsidy makes PV-based electricity non-competitive, could not engage in a dispute because coal and PV panels are not "like products".<sup>16</sup> Yet both products generate electricity, and one element considered in the determination of "likeness" is the end-use of the product (Bacchus, 2016). The question is what kinds of suppliers could claim injury if there were a broader interpretation of "like products".

47. The second issue relates to the absence of challenges on fossil fuel subsidies under the WTO more generally (recognising that other processes have been put in place to discuss the removal of inefficient fossil fuel subsidies). The WTO legal tool-kit does allow challenges to subsidies and the introduction of countervailing duties (see trade remedies discussion below). Given the impact of these subsidies on GHG emissions, competition and trade, WTO members could mandate their disclosure and affirm that they are actionable under WTO rules. Countries seem reluctant to take this route so far, and have engaged in other fora such as the G20 economies, which committed to phase out and rationalise inefficient fossil fuel subsidies over the medium term while providing targeted support for the poorest households (G20, 2009).

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<sup>16</sup> "Like products" are products that are under the same code of the World Customs Organization harmonized system nomenclature.

*Processes or production methods: is the door open for border carbon adjustments?*

48. Another question of interest to reinforce climate policy through trade-related measures is whether it is legitimate to discriminate between products on the basis of the processes or production methods (PPMs) used for their elaboration. According to Bacchus (2016), the distinction of “like products” has never been made “on the basis of how products are made or on the basis of what goes into making them” (see earlier reference to the Shrimp-Turtle case). Yet several countries have introduced measures that *do* distinguish products based on their PPMs, such as “biofuel sustainability standards” or fuel-quality standards (Moisé and Steenblik, 2011). The European Union’s Fuel-Quality Directive, for example, introduces “a mandatory reduction target of 6% by 2020 for the life-cycle greenhouse gas emissions of fuels used in the EU by road vehicles and non-road mobile machinery” (European Parliament, 2012). Concerns about these measures have been raised by WTO members in the Committee on Technical Barriers to Trade, but raising questions about the transparency of the measures’ impact assessments, not the fact that the measures relied on PPM-based criteria (WTO, 2013).

49. This does not imply that countries would readily accept to have their products assessed against their embodied carbon, possibly leading to taxes or restricted market access if their products exceeded a GHG-intensity threshold. This issue has been prevalent in climate and trade policy circles since the inception of the Kyoto Protocol, on grounds of carbon leakage risks. Several options for so-called border carbon adjustments (BCAs) have been proposed, both in EU and US policy contexts (OECD, 2014).

50. Cosby et al. (2012) provide guidance on how BCAs may be applied, noting that they should be compared with alternative measures in terms of effectiveness – an issue discussed in Box 4. They recommend implementing BCAs only when carbon pricing instruments are used, and to limit them to carbon-intensive and trade-exposed commodities, with limited ability to pass on the cost of carbon to market prices. In light of the complexity in tracking the carbon content of commodities that may have gone through several transformations and complex value chains, they also recommend limiting the measurement of greenhouse gases to direct emissions and those related to electricity and heat generation offsite.<sup>17</sup> Importers would need to follow certified measurement protocols to measure their embodied CO<sub>2</sub>, or otherwise rely on benchmarks (Cosby et al., 2012). Some authors have proposed to use best practice, i.e. the lowest known level of CO<sub>2</sub> emissions for each targeted product as benchmarks to avoid unnecessary challenges (Godard, 2007).

51. Neuhoff et al. (2016) recently explored a more comprehensive approach to carbon-intensive materials, aiming at reinforcing the price signal of the EU emissions trading system through a full auction of emission allowances combined with a charge on imported materials similar to the charge on domestic ones. The authors argue that this option would be on the “good side of the WTO law, because [...] the same charge is employed irrespective of the production process employed” (Neuhoff et al., 2016).

52. Bacchus (2016) specifically suggests a limited extension to the notion of “like products”, enabling differentiation between products on the basis of carbon use and emissions in processes and production through a joint WTO-UNFCCC initiative to agree a “common international standard” for calculating carbon used in making products and a waiver for certain trade restrictive climate policies based on embodied carbon. The ISO has developed a standard for the quantification of carbon footprint of products (ISO, 2013). Different countries’ positions on the Paris Agreement may make a joint UNFCCC-WTO agreement on this issue very difficult, however.

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<sup>17</sup> Such a simplification may well affect the effectiveness of BCA measures.

#### **Box 4. Could border carbon adjustments effectively reduce leakage? Yes, but...**

Burniaux, Château and Duval (2010) modelled the economic and environmental implications of a group of countries introducing border carbon adjustments. BCAs are computed to include both direct and indirect (electricity-related) emissions associated with traded products. The emissions reduction scenarios project a 20% reduction from 2005 levels by 2020, and 50% by 2050 (for the EU alone, or Annex I countries).

Two main conclusions stand out. First, BCAs can reduce carbon leakage for small coalitions of acting countries such as the EU, because in this case leakage (while typically small) mainly occurs through international trade competitiveness losses rather than through declines in world fossil fuel prices. However, the need for and effectiveness of adjustments decline rapidly with the size of the coalition, as BCAs address a smaller share of an ever smaller rate of leakage. Second, the economic effects of BCAs are small. They have negligible welfare effects both worldwide and for countries that impose them. This is not wholly unexpected, given that their effects are theoretically ambiguous.

More strikingly, BCAs do not necessarily curb the output losses incurred by the domestic energy-intensive industries (EIs) they are intended to support in the first place. This is in part because in industrialised countries, EIs make important use of carbon-intensive intermediate inputs produced by EIs in other geographical areas. Another, deeper explanation is that EIs are ultimately more adversely affected by carbon pricing itself – which is needed to achieve a cost-effective reduction in emissions – and the associated contraction in market size, than by any international competitiveness losses and the associated reduction in market share.

Source : Burniaux, Chateau and Duval, 2010.

#### ***Trade remedies: a case for unilateral or plurilateral disarmament***

53. Wu and Salzman (2014) put forward the case for a reconsideration of trade remedy laws in the context of increasing litigation over government support for environmentally-friendly technologies and industries. The WTO's Agreement on Subsidies and Countervailing Measures (SCM Agreement) specifies the circumstances in which subsidies are permissible under the WTO, opening up two avenues to contest "actionable subsidies" (i.e. those not outright prohibited by the SCM Agreement): 1) enforcement of prohibited subsidies through the WTO dispute settlement system; and 2) the unilateral use of "countervailing measures" to offset injury to domestic industry from subsidised imports. Unilateral action is also open to WTO members where export prices are so low as to be considered "dumped" onto the marketplace.

54. Wu and Salzman (2014) consider the "environmental fallout" from rulings against environmental measures under the WTO dispute mechanism system as minimal, highlighting that "the environmental element is not at the core of the policy deemed illegal" in the classic case and that governments tend to retain the environmental benefit of policies in the face of negative rulings. Conversely, they find domestic trade remedy cases concerning, citing multiple examples of unilateral action or proposed action by governments.<sup>18</sup> Recent trade-defence measures taken against environmental goods by the EU include measures against solar-PV technologies, bicycles and biofuels.<sup>19</sup> The United States is threatening to impose emergency "safeguard" tariffs on solar cells and modules imported from China.<sup>20</sup>

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<sup>18</sup> US tariffs on Chinese solar panels; Chinese tariffs against US and South Korean exports of polysilicon (a material used in solar cells); EU investigation of potential dumping of Chinese solar panels; Indian investigation of alleged dumping of American, Chinese, Malaysian and Taiwanese solar panels; US tariffs on Chinese and Vietnamese wind turbines.

<sup>19</sup> <http://trade.ec.europa.eu/tdi/notices.cfm>.

<sup>20</sup> [www.reuters.com/article/us-usa-solar-wto-idUSKBN18P1JL](http://www.reuters.com/article/us-usa-solar-wto-idUSKBN18P1JL).

55. Two features of trade remedy cases give rise to concern. Because trade remedies are imposed unilaterally, the absence of a neutral adjudicator at the multilateral level and potential for perception of political bias mean increased risk of “tit-for-tat” trade disputes. Moreover, countervailing duty and dumping cases are brought against the products of specific companies rather than governments. The options available to companies to react to negative rulings (i.e. an increase in tariff), such as paying the higher duties or ceasing to export to the country, are unlikely to be beneficial for the country imposing the remedy, as it will increase the domestic price of the targeted product and reduce consumer choice.

56. The authors suggest multiple solutions. WTO members could call a unilateral or plurilateral cease-fire on the use of trade remedies in cases concerning environmental goods, effectively granting exclusive jurisdiction to the WTO dispute settlement system.<sup>21</sup> They could agree to cap the number of trade remedy measures imposed at any one time, effectively enabling them to retain some flexibility while reducing the number of measures in place. Finally, they could agree on maximum penalties to be imposed, or agree to make tariffs time-bound.

## **How far can regional trade agreements promote environmental performance?**

### ***Strengthening environmental provisions***

57. The effectiveness of environmental provisions in RTAs hinges on their practical implementation. In addition to direct ex-post monitoring and review, potential means of monitoring implementation include dialogue between parties; dispute resolution procedures and public access to environmental information; participation in environmental decision making; and administrative or judicial proceedings on environmental matters. Information on progress in implementation is available for some RTAs, through, for example, published records of meetings of parties or ex-post reviews, but the number of RTAs providing such information is limited; only 15 of 100 RTAs reviewed recently by the OECD (2017f). The effectiveness of implementation of environmental provisions for the vast majority of RTAs is therefore unknown.

58. The United States includes commitments on implementation and enforcement in all trade agreements, with the same treatment as commercial provisions on dispute settlement and sanctions. The EU has also taken steps towards this benchmark. Adequate procedures for monitoring, reporting and review are vital to ensuring the full potential contribution of RTAs to the pursuit of environmental objectives and countries should be encouraged to strengthen these processes. Including clear provisions on monitoring and reporting in RTAs and follow up of identified shortcoming in implementation are relevant.

59. Determining the impact of environmental provisions in RTAs as distinct from other factors is challenging. Beyond the limited number of ex-post assessments of environmental provisions mentioned here, literature on their effectiveness is scant. Further work is needed to determine and ensure adequate data on relevant indicators and on the different ways RTAs can influence domestic environmental policies.

60. With respect to climate change, RTA partners could take as a starting point a preliminary impact assessment of GHG implications of the agreement, then monitor trade and estimate related emissions, including with other countries, as an RTA enters into force. Parties may agree, for instance, to ensure the carbon neutrality of an agreement if it is seen to lead to an increase in freight-related emissions (Bureau

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<sup>21</sup> The Australia-New Zealand Closer Economic Relations Trade Agreement is an example of an agreement in which the parties commit to refrain from using trade remedies (safeguard or anti-dumping measures) across the board (i.e. as relates to environmental goods and beyond).  
<http://dfat.gov.au/trade/agreements/anzcerta/pages/australia-new-zealand-closer-economic-relations-trade-agreement.aspx>.

and Jardi, 2017). Parties could then decide on options to remedy the observed increase, including to act jointly in favour of action under ICAO and IMO.

### ***“Greening” non-environmental provisions with environmental impact***

61. Other RTA provisions not directly on the topic of the environment, such as those dealing with market access, investment and government procurement can influence environmental objectives, either positively or negatively. How broader RTA chapters and articles may support environmental objectives – either actively, or by not inadvertently presenting a barrier – remains an open question. The OECD Workshop on Greening Regional Trade Agreements, held in June 2016, examined how to achieve better coherence between environmental and other provisions of RTAs and how to integrate environmental objectives into trade agreements as a whole. A number of priority areas for further investigation were subsequently identified based on the prevalence of relevant provisions in RTAs: market access, subsidies and investment (OECD, 2017g).

62. To take investment as an example of how broader RTA provisions may affect environmental aims, states are finding it increasingly difficult to balance the objectives of promoting foreign investment and regulating environmentally harmful activities (OECD, 2016c). Where environmental provisions related to investment are included in RTAs, investor-state disputes can occur if environmental regulations are perceived by investors to conflict with the right to non-discriminatory treatment (e.g. national and MFN treatment, compensation for indirect expropriation). Environment-related investor-state dispute settlements (ISDS) have increased since 2000, consistent with greater prevalence of environmental provisions in RTAs. These cases illustrate the potential tensions between environmental protection and investor rights, and the value of clear and specific language on environmental protection in RTAs.<sup>22</sup>

63. The workshop on greening RTAs identified ways that investor rights may be secured while protecting the environment. Exclusion clauses could clarify that legitimate and non-discriminatory environmental measures of general application do not constitute indirect expropriation. Environment-related investor obligations such as environmental impact assessment could be made a pre-condition to access ISDS (OECD, 2017g).

64. A recent report on how the application of the EU-Canada CETA may best support the parties’ obligations under the Paris Agreement, which came into effect post-negotiation of CETA’s terms, addresses this issue (Bureau and Jardi, 2017). It recommends that all climate measures relevant to reaching the Paris Agreement’s objectives and parties’ NDCs be excluded from the jurisdiction of the CETA’s investor-state dispute resolution mechanism (the Investment Court System, or ICS). It also recommends a more general consideration of the treatment of the environmental domain in the ICS and how to ensure that its decisions take into account possible impacts on greenhouse gas emissions.

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<sup>22</sup> An example of a currently active case is Lone Pine Resources Inc. v. Government of Canada, brought by a US oil and gas resources development company under NAFTA’s ISDS mechanism. Lone Pine claims violation of Canada’s minimum treatment and expropriation commitments based on revocation of certain exploration licences following enactment by the Quebec government of legislation limiting shale gas exploration activities (<https://icsid.worldbank.org/en/Pages/cases/casedetail.aspx?CaseNo=UNCT/15/2>). In a 2014 case brought under the Central America, the Dominican Republic and the United States of America FTA (CAFTA) ISDS mechanism, a US company that owned an exploitation concession for mining in the Dominican Republic brought a claim against the government, including for breaches of the national treatment, minimum standards of treatment and expropriation CAFTA provisions, following its refusal to grant an environmental permit. The case was decided in favour of the Dominican Republic based on a procedural issue. (Corona Materials, LLC v. Dominican Republic, [www.italaw.com/sites/default/files/case-documents/italaw7314.pdf](http://www.italaw.com/sites/default/files/case-documents/italaw7314.pdf)).

65. In terms of investment provisions to actively place greater priority on environmental considerations, specific environmental performance requirements related to investment could be included in RTAs to help promote diffusion of environmental goods and services.

### **Enhancing the contribution of trade to climate action through “clubs”**

66. The WTO provides a sound governance framework for the development of trade as an instrument of economic prosperity based on fair competition. WTO members have repeatedly stated that WTO rules are not meant to stand in the way of environmental protection, and there are good reasons why the trade regime might actively support climate action, as noted above. Some WTO members are making efforts to develop plurilateral agreements that actually seek to improve the facilitative role that trade can play in environmental performance, such as the ongoing negotiations to forge an Environmental Goods Agreement.

67. In this section, we focus on the efforts to mitigate climate change as part of the Paris Agreement, essentially for two reasons:

- The Paris Agreement requires a significant departure from current policy trends to cut greenhouse gas emissions across the global economy within a few decades. Policies should increase in stringency as a result, with ambiguous and contrasted effects through trade.
- Parties to the Paris Agreement have pledged different emission objectives in light of their common but differentiated responsibilities. Furthermore, one significant Party, the United States, has decided to withdraw. Both factors suggest interest in exploring how the trade regime might facilitate increased efforts to reduce emissions by a group of countries beyond the already-existing WTO framework.

68. One should not automatically assume that trade frictions will arise – at least not any more than they have so far – with a number of challenges on renewable energy policies including local content requirements, for instance (see Wu and Salzman, 2014). Climate-policy analysts nonetheless raise the question of the trade impacts of increased efforts to reduce emissions by a group of countries – e.g. carbon leakage and risks of investor-state disputes, to name two potentially prominent issues. This paints a rather defensive picture, however. Another legitimate question for countries looking for means to support their collective ambition may be: “Can the trade regime help us, within and beyond current WTO practice?”

69. One option envisaged in the literature is for a sub-group of WTO Members to engage in a plurilateral agreement or a foreign trade agreement permissible under the WTO treaty (with due consideration for core WTO principles of non-discrimination). The idea of clubs is more common in climate policy circles. Several trade-related measures (and possible challenges) are envisioned:

- Countries interested in encouraging GHG mitigation actions through the diffusion of new technologies may decide as a group to lower existing tariffs on the related goods and services. Many jurisdictions still apply tariffs on “green” technologies while applying very low or no tariffs on imports of fossil fuels.
- The treatment of emission reductions transferred across jurisdictions. Droege et al. (2016) note the lack of clarity on the nature of these instruments and related services; this may (or may not?) hamper the development of carbon market activities. Maybe more prevalent is the possibility that certain “clubs” decide against opening their carbon markets to certain



countries' emission reductions on grounds of environmental integrity. Such situations have happened in the context of the Kyoto Protocol, but did not lead to WTO challenges.<sup>23</sup>

- The increasing ambition required under the Paris Agreement, and the higher price applied to greenhouse gas emissions – where taxes or emissions trading systems are in operation – is another reason why trade measures are contemplated in a club context. Again, the issue here is the types of measures that club members could implement to ensure that their efforts to reduce emissions are not undermined by carbon leakage. (See the above discussion about border carbon adjustments.)

70. These points raise some technical questions. For instance, border carbon adjustment, as it relates to emissions outside the jurisdiction imposing the measure, asks whether climate and other environmental measures can fall under GATT Article XX or GATS Article XIV exceptions for environmental harm caused outside territorial jurisdictions. Some propose that WTO Members could “affirm that trade benefits or sanctions afforded by members of the club will be in compliance with WTO obligations, to the extent other relevant WTO obligations are fulfilled” (Bacchus, 2016).

71. BCAs are of course not the only option. A club of countries that are implementing domestic emission trading systems may also agree on rules for free allowances to exposed industries, and other accompanying measures (public procurement for low-carbon innovation, a minimum GHG performance standard for certain materials, etc.) As these are not trade measures strictly speaking, a plurilateral approach under WTO may neither be necessary, nor the best option to pursue these activities.

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<sup>23</sup> The European Union voted a ban on the use of certified emission reductions related to projects in the area of industrial greenhouse gas destructions (HFC-23 and N<sub>2</sub>O) on doubts about the environmental integrity of these reductions (European Commission, 2011).

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