

Chapter 2

Border measures

Key contents of the chapter:

- 1** Border measures can provide breathing space to infant green industries, promote industries with positive spillovers, level the playing field reflecting the negative externalities of competitors, and therefore reduce the environmental footprint of domestic industries while providing economic benefits.
 - 2** Main varieties of this policy tool include tariff increases, coordinated tariff reduction (e.g. for environmental goods), carbon equalisation measures, trade remedies (countervailing and antidumping duties), and export restrictions.
 - 3** Major illustrations to be considered in designing border measures include the APEC experience with environmental goods liberalisation, different forms of carbon equalization measures, and the trade remedies introduced by the US, the EU and China in connection with renewable energy equipment.
 - 4** A summary table placing the tools reviewed in this chapter within the overall methodology presented in Chapter 1 is provided at the end of the chapter.
-

1. Overview

Within the tool-box of trade-related measures that could promote green industry development, border measures such as tariffs are a key instrument. Tariffs are measures applied at the border to products imported from other countries. They usually take the form of a custom duty charged *ad valorem* (e.g. 10 per cent of the value of imported goods) but they may also be calculated on a different basis (e.g. per imported item or set of imported items). Tariffs are not the only measures that can be applied at the border on imported products. A variety of other measures, including duties, fees and taxes can be applied. One measure that has received much attention in the context of climate change is the adoption of carbon adjustment (or equalisation) measures at the border. Moreover, border measures can also be imposed on exported goods in the form of a variety of export restrictions, such as export duties. The interest of border measures for green industrial policy is two-fold.

Firstly, these measures can serve to **boost the competitiveness of certain producers or even entire sectors with benefits for the environment** (e.g. renewable energy equipment, more efficient products, organic agricultural products, etc.). One channel is the **protection of nascent domestic green industries** that are not yet capable of facing competition from foreign producers. Increasing the tariffs applied on certain competing products will raise their price in the domestic market and thereby make them less competitive as compared to products not subject to the tariff. This is a form of protectionism that is controversial because it rewards less efficient and less competitive producers and may lead both to rent-seeking behaviour and to trade retaliation by other States. Moreover, as other support schemes (see Chapter 3), protective tariff increases are difficult to phase out, as companies may take them as part of the playing field instead of becoming genuinely competitive as compared to foreign companies. A non-protectionist variant of this approach is to increase tariffs on certain goods because of their higher environmental footprint as compared to other similar but less harmful goods or, conversely, to decrease the tariff level on the latter to make them more competitive. In this case, the distinction is not between domestic and foreign products but between environmentally-friendly and less environmentally-friendly ones. A **coordinated increase in the tariffs on more environmentally-harmful products or a coordinated decrease in the tariffs on more environmentally-friendly products** can promote green industries across countries as compared to brown economy industries. It is, in fact, a multilateral or coordinated green industrial policy rather than a merely unilateral one. Another way in which border measures can boost the

competitiveness of green industries is by **correcting a competitive disadvantage** arising from lower environmental requirements abroad. A carbon

A coordinated increase in the tariffs on more environmentally-harmful products or a coordinated decrease in the tariffs on more environmentally-friendly products can promote green industries across countries.

equalization measure applied on imported products would thus reflect the lower costs of those products resulting from less demanding mitigation requirements in the country of origin. It is a cost-internalisation measure that levels the playing field between dirtier products and cleaner (domestic or foreign) ones and may also serve to prevent carbon leakage (relocation of polluting industries to permissive jurisdictions or 'pollution havens'). Similarly, certain trade remedies (e.g. countervailing duties, anti-dumping measures, and safe-

guards) can be used to reflect competitive distortions and level the playing field. Yet another way in which border measures and, specifically, export restrictions may benefit the environment and domestic industry is by **raising the cost of exporting products such as raw materials or other inputs** so as to reduce the environmental footprint of their production and to make them more cheaply available to domestic producers who use these inputs. In all these cases, the boost of competitiveness enjoyed by certain producers or sectors is intended to promote their development and thereby to move from a brown to an inclusive green economy, domestically and internationally. Their specific impact and their consistency with international agreements will depend on the design of the measure. Box 1 summarises the channels through which tariffs and other border measures can increase the competitiveness of green industries.

Box 1: Boosting green industries through border measures

- Protection of domestic nascent green industries by increasing the tariffs on competing foreign products (controversial but ingrained in the WTO system)
- Promotion of green industries by reflecting their positive externalities through tariff reductions (coordinated green industrial policy)
- Promotion of green industries by reflecting the negative externalities of dirtier competing products through border measures (e.g. tariff increase, carbon equalization measures and trade remedies – countervailing duties, anti-dumping, safeguards)
- Reduction of the environmental footprint of certain industries (e.g. raw materials or extractives) through an increase in the costs of exporting their products (through export restrictions) which also makes the use of these inputs cheaper for domestic producers as compared to foreign producers.

Secondly, **international trade rules leave significant space** for countries to resort to tariff adjustments and border measures, if these are appropriately designed. The consistency of a measure with international trade rules can only be assessed on a case-by-case basis but, as discussed in section 2 of this chapter, policy action in this context can be designed in a way that is consistent with the World Trade Organization (**WTO**) agreements as well as with other trade agreements. As with other green industrial policy tools, their combined economic, environmental and social effects have to be evaluated on a case-by-case basis by policy makers.

In the next sections, we discuss the spectrum of border measures that can be used for green industrial policy as well as their legal implications (section 2) and then provide some representative illustrations of the main varieties of this tool (section 3). Section 4 summarises the chapter and places this tool within the methodology presented in Chapter 1.

2. The tool-box

2.1. Spectrum of measures used in practice

The main varieties of border measures that can be part of a green industrial policy strategy include unilateral tariff increases to protect one industry (2.2), coordinated tariff reductions to promote green industries across many countries (2.3), carbon equalization measures (2.4), countervailing and anti-dumping duties to level the playing field (2.5), and export duties to reduce the environmental footprint of certain industries (2.6). Although several options can be used for one specific purpose (e.g. levelling the playing field) and often the terminology referring to these instruments varies, the distinction used in this chapter reflects both policy practice and international trade rules. In what follows, these options are discussed with reference to their **main components, their operation, and their potential legal implications**. Specific and representative examples are provided in section 3. The objective of the presentation is to show the menu of options that can be used as part of a green industrial policy strategy and to explain their implications in practical terms. As noted in Chapter 1, the discussion is not intended as a policy-prescriptive exercise but only as a policy-relevant analysis of the main varieties of relevant border measures.

2.2. Tariff schedules and their adjustment

States normally require the payment of a custom duty for the importation of a good. Such duties are financial charges calculated for certain categories of products as a percentage of their monetary value (*ad valorem*) or on some other basis (per item, number of items, weight, volume, etc.). For members of the WTO, these appear in the member's tariffs list. Categories of products are defined by the Harmonized Commodity Description and Coding System (**HS**) and the commitments of WTO members regarding tariffs are set in each member's Schedule of Concessions. Schedules typically define maximum levels of tariffs, known as 'bound tariffs' (e.g. 10 per cent *ad valorem*) for a certain category of goods and, often, the 'actual tariff' level is set below that maximum (e.g. 5 per cent *ad valorem*) thus leaving some space for the adjustment of the tariff. Within this maximum, a member can thus increase the tariff applicable to certain categories of goods to provide some protection to domestic producers of similar goods. Such an increase will apply in principle to the goods of all trading partners (most-favoured-nation clause) although preferential treatment may be granted to developing countries and no tariff will apply to trading partners within a regional integration block.

Such an approach, which would be consistent with international trade rules under certain conditions (Article II of the General Agreement on Tariffs and Trade of 1994 or **GATT**), could boost infant green industries and retain jobs in such industries. A tariff could be introduced to protect a sector where domestic small and medium enterprises may have a latent comparative advantage. Such sector would be identified during phase 3 of the methodology introduced in Chapter 1 (prioritisation of intervention areas and goal-setting). Tariff protection could, for example, be offered for a limited period of time and progressively phased out as the domestic industry becomes more competitive (or if the presumed latent advantage fails to materialise). But the net effects are difficult to assess and, depending on the industry and the timeframe, the implications of protecting less efficient and competitive producers may entail a greater environmental footprint. To illustrate this point, Box 2 discusses the example of tariffs on the fuel ethanol and highlights the extent to which the effects of such a measure are fact-dependent. Moreover, there may be trade-offs between domestic industries as, for example, certain domestic industries may prefer to acquire foreign (but cheaper and better) goods rather than domestic (more expensive and less efficient) ones. Furthermore, the social ('inclusiveness') and environmental ('green') implications of such policies may not necessarily be aligned, as the efforts of trade unions to obtain greater protection for workers in less competitive industries may come at the price of a higher environmental footprint from more harmful/less efficient production processes or, conversely, the lack of protection from foreign green goods may lead to job losses and inequality (Chapter 7 discusses policies to address this issue). In addition, although lawful under certain conditions, a protective tariff increase may lead other countries to apply similar measures. Various countries might therefore choose to increase their tariffs to protect their 'young' green industries or even their brown economy. Policy makers should keep in mind that the integration of green industries into global value chains means that the same product often passes many borders, sometimes multiple times. Thus, the effects of even moderate tariff increases may be multiplied. A moderate increase in tariff levels by one country, which is followed by others, could therefore lead to significant cost and price increases for the relevant goods.

Box 2: Fuel Ethanol Tariff

Ethanol tariffs are a type of border measure used by governments to encourage domestic ethanol production. However, existing research has found that removing the ethanol tariff increases social surplus and decreases greenhouse gas (GHG) emissions. This is due to the replacement of corn ethanol with lower GHG-intensive sugarcane ethanol. In a 2011 study, Crago & Madhu showed that, where the domestic industry also produces cellulosic ethanol, the effect of removing the tariff is ambiguous, depending on which biofuel market the tariff is protecting, which again depends on the relative cost and supply elasticity of the different types of ethanol. If the tariff protects corn ethanol, its removal increases welfare and reduces GHG emissions, a finding in line with existing research. However, if the tariff protects the cellulose ethanol market, which is the case if the price for cellulosic ethanol is low enough to be competitive, removing the tariff may increase emissions. Policy makers should therefore review what type of domestic biofuel the ethanol tariff protects and evaluate how this affects different policy objectives to be achieved through bioenergy deployment.

Source: Crago & Khanna (2011)

In practice, the protection of national green industries has been a factor in the efforts of some States to oppose the adoption of an environmental goods agreement that would reduce or eliminate tariffs on a range of green goods, as discussed next and in section 3.1.

2.3. Coordinated tariffs reduction

If **green industrial policy is approached at the level of several countries**, which seek to promote the transition to greener production capacity by acting together, then a potentially useful step may be to decrease (rather than to increase) the tariffs imposed on green products. Such a coordinated approach, which has been used regionally (by the members of the Asia-Pacific Economic Cooperation forum or APEC) and is currently being negotiated at a global level, boosts the competitiveness of green industries in several States as a whole as compared to brown economy industries. It can furthermore boost a country's industrial competitiveness by reducing the cost of inputs for production processes of green goods that form part of regional value chains.

This tool has essentially **three components**: (a) the identification of the list of goods (and potentially services) that will benefit from the preferential regime (the list retained in the APEC context contains 54 HS sub-headings); (b) the tariff structure (itself consisting of the specific categories of goods, the applicable tariff commitments, and the rules defining the origin of the products that enjoy beneficial treatment), and (c) the implementation approach (which involves matters of legal form, e.g. a multilateral, plurilateral, regional or bilateral agreement or some other form of coordination, and timing, e.g. progressive introduction of the scheme to give domestic industries some time for adjustment). It requires a careful

assessment of the strengths and weaknesses of the industries in each participating State because, depending on how competitive different green industries may be in a country, reducing tariffs on green goods may have adverse impacts on less competitive industries, especially in the short-term.

The socio-economic implications of a coordinated tariff reduction must be carefully assessed and managed. There are a range of tools that can be used to assess, in an integrated manner, the impact of such a policy. In Chapter 1, we reviewed several tools focusing on the environmental implications of policies. Chapter 7 further discusses the tools to assess (through models) and manage (through structural adjustment policies) the impact that opening to trade may have on employment in less competitive industries. The practical opportunities and challenges that may arise from the implementation of this policy can be illustrated by the APEC experience. Given their complexity, a full case study is devoted to it later in this chapter (see section 3.1 below).

2.4. Carbon equalization measures

A State may adopt a measure to **re-establish a level playing field** between domestic producers that are subject to certain charges and foreign producers that are not. Such measures can apply both to imports (thus subjecting the foreign products to similar or the same charges) and to exports (thus relieving domestic products exported to other countries of taxes paid domestically in the country of origin). The key principle is that of destination: the tax base applied to the commercialization of a good should be that of the country of consumption. Originally used to compensate for differences in taxation across countries, such border adjustment measures are particularly relevant for climate change policy because they can be used to reflect the lower production costs of carbon intensive goods in countries with less demanding laws. Thus, a border adjustment measure would re-establish a level playing field by imposing on imports the same burden that applies to domestic products. It would also prevent carbon leakage by discouraging relocation of carbon-intensive industries to countries with less demanding laws. Such industries would face carbon equalization when exporting back to the markets of the countries from which they delocalised.

A State considering the introduction of a carbon equalization measure must assess a number of highly technical legal issues to ensure its **consistency with international trade rules**. As a general matter, such measures will be consistent with WTO rules (Articles II:2(a) and III:2 of the GATT) if:

- They do not amount to discriminatory treatment between domestic and foreign like products (i.e. the measure must not go beyond equalizing or offsetting the advantage enjoyed by the foreign product);

- They seek to equalize the burden arising for domestic products from certain specific climate policies (particularly financial charges on products, e.g. indirect taxes on a ton of cement or a litre/gallon of fuel). Justifying other types of policies (e.g. direct taxes on producers, regulation, or inclusion in a cap-and-trade system) is more difficult under the terms of the GATT;
- They are applied either at the border (as duties on imports) or at the commercialization level (internal taxes applied both to domestic and foreign products); and
- In cases where the measure would be in breach of basic trade disciplines, it could be designed to be justified under some of the general exception clauses (Article XX of the GATT).

The legality of carbon equalization measures is further discussed in section 3.2 below. A State considering the adoption of such a measure to level the playing field between its domestic industry and foreign carbon-intensive products produced under lower environmental standards must keep in mind that the specific design of the measure is particularly important.

2.5. Trade remedies (countervailing and antidumping duties)

Another tool to **level the playing field** is the use of so-called ‘trade remedies’, particularly the adoption of countervailing duties or antidumping duties. These measures consist, essentially, of increasing the price of goods imported from abroad by imposing duties on them. The purpose of such duties is to eliminate the unfair advantage arising from a subsidy given by a State to its exporters or to neutralise the attempts of foreign producers to sell very cheaply (at a price lower than in their home market) abroad to capture foreign markets. These measures may be unilaterally adopted by a WTO member under certain conditions (defined in Article VI of the GATT, the Anti-Dumping Agreement, and Articles 10 to 23 of the Agreement on Subsidies and Countervailing Duties or **SCM**).

For both countervailing and antidumping duties, the **process** unfolds as follows:

- A petition from a domestic industry is filed with the relevant authorities of the State or an *ex officio* investigation is initiated by them;
- The case is decided according to the relevant procedure established by the State;
- This procedure is intended to assess whether the conditions are met for the adoption of *countervailing duties* (three conditions: (i) imports of subsidized goods, (ii) material ‘injury’ or threat thereof to the domestic industry producing ‘like products’, (iii) causality between subsidized imports and the

injury) or *antidumping duties* (three conditions: (i) existence of ‘dumping’, namely if the ‘export price’ of a product is lower than the ‘normal price’ of that product in the domestic market of the producer, (ii) material ‘injury’ or threat thereof to the domestic industry producing ‘like products’, (iii) causality between the dumping and the injury); and

- The adoption of countervailing or antidumping duties to offset the anticompetitive effects of subsidization or dumping.

The adoption of countervailing and antidumping duties is a **frequent and widespread phenomenon**. In the context of green industrial policy, several States and groups, including the United States, the EU, China and India, have adopted such measures to protect their green industries from foreign producers, particularly in the renewable energy sector (i.e. solar but also bio-

fuels and wind), which is particularly important from both an environmental and a strategic perspective. It must be emphasised, however, that trade remedies are reactive measures rather than pro-active policies because they respond to anti-competitive practices abroad. They provide a faster (and unilateral) alternative to multilateral dispute settlement before the WTO Dispute Settlement Body, which takes more time and does not provide retrospective damages (i.e. does not address the damage suffered by the complainant’s industry while the dispute settlement process unfolds).

The adoption of countervailing and antidumping duties is frequent and widespread. In the context of green industrial policy, several States and groups, including the United States, the EU, China and India, have adopted such measures.

It should be further noted that trade remedies may be subject to abuse, for example when the duties imposed on foreign products more than offset the unfair advantage or, in other words, when rather than levelling the playing field they distort it in favour of domestic producers. Moreover, the use of trade remedies in one State may lead other States to do the same. Some commentators have pointed to the trade restrictive effects resulting from the application of excessively high and punitive duties in the clean energy sector in recent years (UNCTAD (2014)). To illustrate this tool, section 3.3 of this chapter discusses specific examples of measures adopted in a green industrial policy context and their repercussions.

2.6. Export duties

So far, the options discussed have focused on measures imposed on imported goods. Green industrial policy can also be pursued through the adoption of a variety of measures on goods exported from a country. Such instruments offer an avenue to **offset the increasing pressure from tariff reduction** arising from accession to the WTO or from bilateral/regional trade liberalisation, including specifically in the green sector. Domestic green industries in the downstream sectors (manufacturing) facing more foreign competition can thus be promoted by making some of the inputs from the upstream sectors (raw materials) that they use cheaper. This approach can be part of a green industrial policy strategy if it aims not only to protect domestic industries but also to genuinely protect the environment from the pollution generated by the overproduction of certain raw materials.

The main example is provided by **China**, which has imposed export restrictions (a combination of duties on exports and quantitative restrictions) on certain raw materials (e.g. bauxite to produce aluminium or fluorspar used to obtain hydrogen fluoride) and rare earths (e.g. lanthanum used in electric car batteries). These measures pursue several objectives. One of them is the **reduction of the high environmental footprint of producing such materials**. In other countries, such materials are imported from China rather than locally produced precisely because their production is very polluting. Another objective is to promote productivity and growth in different ways, such as by boosting the competitiveness of domestic industries that use these raw materials as an input, creating an incentive for foreign producers who rely on these materials to relocate to China to reduce their exposure to supply restrictions, and generating tax income from domestic industries that can be used to offset the environmental effects of mining such materials. Although the environmental footprint of these extractive industries could be reduced by measures that are less trade restrictive (e.g. the regulation of production), such an alternative approach may not allow China to target all these objectives at the same time. Thus, the rationale underlying the use of export restrictions is a combination of environmental and economic benefits.

Box 3: The *China – Raw Materials* and *China – Rare Earths* rulings

In 2009, China announced the reduction of exports of rare earths and adopted three types of export restrictions: (i) export duties, (ii) an export quota, and (iii) trading rights restricting the enterprises authorised to export rare earths. This led the US, joined by several other States, to bring a claim against China before the WTO (*China - Rare Earths*). In its defence, China argued that the measures were justified by environmental reasons under GATT Article XX (b) and (g), respectively. In its prior ruling in *China - Raw Materials*, the WTO Appellate Body had found that China could not rely on the general exception clause of Article XX of the GATT to justify a violation of paragraph 11.3 of its Protocol of Accession to the WTO (which bans export duties). In *China - Rare Earths*, the Appellate Body confirmed this finding relating to 'export duties'. As for the 'export quota' and 'trading rights', although Article XX could be invoked, its conditions were not met. While China argued for its right to regulate for environmental purposes, the Appellate Body ruled that China could have relied on other non-discriminatory measures to do so, thereby concluding that the export restrictions imposed by China were unlawful.

Source: Wagner (2014)

As with other instruments, specific design matters greatly for export restrictions to be consistent with international trade law. Box 3 discusses two cases brought before the WTO Dispute Settlement Body to challenge China's export restrictions on raw materials and rare earths. In both cases, China was found to have violated its **international trade obligations**, but because of specific commitments incorporated in the Protocol through which it acceded to the WTO, which specifically limited China's ability to set export duties and trading rights (which must be distinguished from export quotas, which are generally banned). Export restrictions are less frequently used than other border measures or support schemes (see Chapter 3) for green industrial policy, but their ability to offset some of the pressure arising from tariff reduction may be significant, particularly if trade in environmental goods is increasingly liberalised. In order to ensure that these measures yield environmental and socio-economic benefits, export restrictions must be carefully assessed on a case-by-case basis and in the light of other available – and less trade restrictive – options. The tools that can be used to conduct such assessment have been mentioned in Chapter 1.

3. Case-studies

3.1. Coordinated green industrial policies: the APEC's experience³

To boost trade in environmental goods among their group of trading partners, in November 2011 the 21 leaders of the Asia-Pacific Economic Cooperation (APEC) pledged to voluntarily reduce tariffs for a list of selected environmental goods to 5 per cent or less by the end of 2015. In 2012, APEC States subsequently endorsed the “APEC List of Environment Goods”. Trade negotiations are usually conducted on the basis of the Harmonized Commodity Description and Coding System (HS). However, these are only harmonised internationally up to the six-digit subheading level, which is much broader than environmental goods categories. The APEC agreement lists 54 product categories (that is 54 HS subheadings). To accurately define environmental goods, the APEC list further specifies environmental goods within the HS subheading as so-called called “ex-outs”, which are identified taking into account additional product specifications. Implementation of tariff reductions takes place at the level of tariff lines (TLs) in national tariff schedules. National TLs are not harmonised on an international level and are therefore not part of the negotiations. Countries may thus choose different approaches to implementing tariff reductions depending on the structure of their national tariff schedules.

While the APEC deal only requires implementation of tariff lines (TLs) in line with the specified ex-out descriptions, countries may adopt a Harmonised System (HS) codes approach covering all national TLs that fall into a given HS category, as chosen by Brunei Darussalam and Chile. Most APEC economies however adopted an approach whereby, for each of the 54 HS subheadings and ex-outs, they identified the corresponding TLs in their national tariff schedules. Implementation plans mark these TLs with a “yes”, whereas action is required for a TL with an above-5 per cent most-favoured-nation-applied tariff rate. A challenge for implementation is that most TL descriptions in national tariff structures are still (much) broader than the specified ex-outs defined in the agreement. This will generally lead to a higher volume of trade being liberalized than the agreement calls for. One option to get around this, which is transparent but costly, is to create new TLs that describe ex-outs more accurately, as Mexico has done. Tariff reductions may also be implemented for parts of existing TLs, corresponding to ex-outs, as seen as part of the APEC experience with Korea and China.

3

This section is based on Voseenaar, *Reducing Import Tariffs for Environmental Goods: The APEC Experience* (ICTSD, 2016).

Within the three-year implementation period from 2012 to 2015, most APEC members reduced their above-5 per cent most-favoured-nation-applied tariffs for goods covered by the agreement in a reasonably specific and environmentally credible manner. The APEC experience indicates that tariff-cutting pledges for environmental goods involving a larger group of WTO members can be successful. This may also be attributable to the voluntary and non-binding nature of agreement, as well as to an ambitious yet realistic target of cutting tariffs to 5 per cent or less, rather than aiming at total tariff elimination.

3.2. WTO consistency of carbon equalization measures⁴

This section discusses key WTO provisions that apply to border carbon equalization measures, notably (a) border tax adjustment (BTA) measures, and (b) border-trade adjustment measures linked to emissions trading schemes. As already noted in section 2, to be found consistent with WTO provisions, a policy measure must be in accordance with the WTO principles of non-discrimination between ‘like products’, i.e. the most-favoured-nation (MFN) obligation under GATT Article I:1 and national treatment, Art. III. A border tax adjustment measure will most likely be considered a taxation measure under GATT Article III:2, while a border adjustment measure linked to an emissions trading scheme is more likely to be considered as a law, regulation or requirement under GATT Article III:4. In order to be found consistent with GATT Article III, the exact amount of a border charge or tax becomes particularly relevant. A border tax adjustment measure may be consistent with Article III:2 if it is equivalent to the additional charge imposed on domestic products (as compared to the conditions prevailing in the foreign country producing competing products). Furthermore, in order to be in line with GATT Article III:4 and Articles 2.1 and 2.2 of the Agreement on Technical Barriers to Trade, the regulation must not be more trade restrictive than necessary to reach the required objectives.

If a measure is found to be inconsistent with the GATT, it may be justified under the exceptions set out in Article XX, notably Article XX letters (b) and (g). Article XX gives particular relevance to a State’s rationale for adopting a border equalization measure. Article XX (b) covers measures that are ‘necessary’ to protect human, animal and plant life, while letter (g) refers to measures that ‘relate to the conservation of exhaustible natural resources’. A State must establish whether a measure (i) falls into one of the exceptions

4 This section is based on F. Sindico, ‘National measures and WTO consistency: border measures and other instruments to prevent carbon leakage and level the carbon playing field’, in C. Carlarne, R. Tarasofsky, and K. Gray (eds.), *The Oxford Handbook of International Climate Change Law* (Oxford University Press, 2016), pp. 313-332, and S. Charnovitz, *Border tax equalization* (Draft Paper Prepared for the Conference on Challenges September 29, 2014).

under Article XX and (ii) whether the measure has the requisite ‘degree of connection or relationship between the measure under appraisal and the state interest or policy sought to be promoted or realized’⁵. Measures aimed at addressing carbon leakage will likely fall under the policy objectives of Article XX letters (b) and (g), respectively. A national measure aimed at promoting energy security may be covered if the link between the measure and climate change mitigation can be demonstrated. If the measure is found to contribute less to mitigating climate change and more to protecting local industry, it may be more difficult to justify under Article XX exceptions.

Measures also need to be consistent with the ‘chapeau’ of Article XX, stating that a measure may not to be ‘applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade’. Measures that covertly attempt to assist domestic producers may be interpreted as disguised restrictions on international trade as set out on the chapeau. Also, whether a measure constitutes an arbitrary or unjustifiable discrimination will depend on how the measure is applied (although this has been debated, see Bartels (2015)). As noted by the WTO Appellate Body, this ‘can be most often discerned from the design, the architecture, and the revealing structure of am measure’⁶.

3.3. The use of trade remedies in solar, biofuels and wind sectors⁷

Trade remedies are implemented by national authorities, without prior consent from the WTO. If they are consistent with WTO law, they will not be overturned in a subsequent WTO dispute settlement process. WTO rules allow for duties to be imposed at the border for goods that are deemed to be ‘dumped’ (i.e. sold too cheaply) and cause injuries to producers of competing products in the importing country. WTO law also allows States to adopt countervailing duties to offset the effect of subsidies given by another State to its exporters, if such subsidies cause injury to the industry of the importing country. Such trade remedy measures may remain in place for a maximum of five years unless extended by an expiry review.

Members of the WTO report a rising number of anti-dumping duties and countervailing measures initiated in the area of renewable energy over the past years, especially for solar technology. The EU, China and the US are still the main users of trade remedies in the clean energy markets. Australia has

5 Appellate Body Report, US—Gasoline, p. 18.

6 Appellate Body Reports, Japan-Alcohol Beverages II, p.29, EC-Seal Products, para 5.303.

7 This section is based on Kampel, *Options for Disciplining the Use of Trade Remedies in Clean Energy Technologies* (ICTSD, 2017).

also become a major user of trade remedies in recent years, together with Canada, India and Peru. It is estimated that for the period 2008 to 2012, trade remedies affected some US\$32 billion worth of trade in Clean Energy Technologies (CETs). In the clean energy sector, 45 trade remedy cases have been reported to the WTO for the period of 2006 to 2015, of these 17 countervailing measures and 28 anti-dumping initiations. Almost half of these cases related to solar technology (21 cases), while 15 related to biofuels, and 9 targeted wind energy. On average, the duty imposed was 26.6 per cent,⁸ but this number hides significant fluctuation. For example, Peru introduced a 26 per cent anti-dumping duty and a 22 per cent countervailing duty against the US on biodiesel, totalling an overall duty of 48 per cent. Another example is the 58.5 per cent antidumping duty imposed by the United States against Vietnam on utility scale wind towers in 2012.

Some studies have pointed to the trade restrictive effects of the application of excessively high and punitive trade remedy duties in the clean energy sector in recent years (UNCTAD (2014)). This has also triggered momentum for retaliatory patterns of use of these measures in the clean energy technology space. This occurred, for example, in the case of the US countervailing duties targeting China between 2007 and 2012. China challenged several such duties and took the case to the WTO. In 2014, the WTO Appellate Body found US duties inconsistent with WTO law. China then, in 2016, went back to the WTO to request consultations concerning the failure of the US to implement recommendations and rulings. The dispute is still on-going.

Summary table

High-level vision setting and stakeholder consultation	UNIDO Practitioner’s Guide for Strategic Green Industrial Policy – Phase 1
Stock-taking	<p>Gathering information of socio-economic, environmental and existing policies to define a baseline, particularly as regards the following enabling conditions for trade-related green industrial policies:</p> <ul style="list-style-type: none"> • Appropriate resource endowment and political/social conditions • Public investment and access to credit • Adequate infrastructure • Domestic legal and regulatory framework • Integration into international agreements
Prioritising intervention areas and goal-setting	<p>Identifying policy rationales to be acted upon and sustainability goals to be reached. Policy rationales may include:</p> <ul style="list-style-type: none"> • Protection of infant industries with latent comparative advantages • Promotion of green industries with positive spillovers • Levelling the playing field by reflecting the negative externalities of competitors • Reducing the environmental footprint of domestic industries while reaping industrial policy benefits
Selecting the tools	<p>Matching selected policy rationales with policy options. Policy options within the broad category of border measures may include:</p> <ul style="list-style-type: none"> • Unilateral tariff increase within the maximum level set by the schedule of concessions • Coordinated tariff reductions for green goods and services • Carbon equalization measures • Trade remedies (countervailing and antidumping duties) • Export restrictions
Design and assessment	<p>Specific design of policy option. Selection within each variety of the tool of specific design features</p> <ul style="list-style-type: none"> • Specific market protected by a unilateral tariff followed by a phase-out • List, tariff structure, and implementation form of concerted tariff reductions • Removal of distortive subsidies or additional burdens to exports or introduction of a financial charges on products that only offset the advantage of foreign products • Efficient procedures for countervailing and antidumping duties that may provide a faster shield than multilateral procedures before the WTO. • Duties on exports, licensing requirements for exporters, or quantitative restrictions <p>Assessment of consistency and impact:</p> <ul style="list-style-type: none"> • Legal assessment • Integrated socio-economic and environmental impact assessment
Implementation	UNIDO Practitioner’s Guide for Strategic Green Industrial Policy – Phase 6

Resources

NB: all links last visited on 15 September 2017

- Bartels, L. and C. Häberli, 'Binding tariff preferences for developing countries under Article II GATT' (2010) 13 *Journal of International Economic Law* 969.
- Bartels, L., 'The Chapeau of the General Exceptions in the WTO GATT and GATS Agreements: A Reconstruction' (2015) 109 *American Journal of International Law* 95.
- Charnovitz, S. *Border tax equalization* (Draft Paper Prepared for the Conference on Challenges September 29, 2014).
- Crago, C. and M. Khanna, Which biofuel market does the ethanol tariff protect? Implications for social welfare and GHG emissions (Selected Paper prepared for presentation at the Agricultural & Applied Economics Association's 2011 AAEA & NAREA Joint Annual Meeting).
- Kampel, K., *Options for Disciplining the Use of Trade Remedies in Clean Energy Technologies* (ICTSD, 2017).
- Matsushita, M., 'Export controls of natural resources and the WTO/GATT disciplines' (2011) 6 *Asian Journal of WTO and International Health Law* 281.
- Pauwelyn, J., 'Rien ne va plus? Distinguishing domestic regulation from market access in GATT and GATS' (2005) 4 *World Trade Review* 131.
- Rovetta, D., J. Sud., and E. Vermulst, 'WTO dispute settlement with respect to custom matters' (2009) 4 *Global Trade and Customs Journal* 99.
- Sindico, F., 'National measures and WTO consistency: border measures and other instruments to prevent carbon leakage and level the carbon playing field', in C. Carlarne et al (eds.), *The Oxford Handbook of International Climate Change Law* (Oxford University Press, 2016), pp. 313-332.
- UNCTAD, *Trade Remedies: Targeting the Renewable Energy Sector* (2014).
- Voseenaar, R., *Reducing Import Tariffs for Environmental Goods: The APEC Experience* (ICTSD, 2016).
- Voseenaar, R., *The APEC List of Environmental Goods. An Analysis of the Outcome and Expected Impact* (ICTSD, 2017).
- Wagner, 'WTO Law and the Right to Regulate: China – Rare Earths' (2014) 18 *ASIL Insights*.
- Zhang Weiwei, 'Tracing GATT-Minus Provisions on Export Restrictions in Regional Trade Agreements' (2016) 11 *Global Trade and Customs Journal* 122.