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The Devilishly Hard Job of Defining an Environmental Good

Why is it so hard to encourage the spread of climate-friendly goods? A rapidly warming planet requires economic changes to reduce the levels of carbon released into the atmosphere. Decades of work and coordination has led to various commitments by governments participating in the United Nations Framework Convention on Climate Change (UNFCCC) to deliver lower emissions.

As the first *Policy Brief* in this trade and climate series has indicated, trade policies can clearly help or hinder efforts to achieve climate targets. Governments are increasingly adding environmental language to ongoing trade and economic arrangements in Asia.

Yet progress has been relatively slow. Early momentum, for example, in drafting a list of 54 environmental goods within the Asia Pacific Economic Cooperation (APEC) in 2012 was not followed up with similar outcomes in either the multilateral setting at the World Trade Organization (WTO) or with further progress in APEC by adding additional goods to the original list. Trade barriers that may impede the flows of environmental services have not been addressed.

What explains this apparent paradox of accelerating focus on taking steps to tackle climate change with limited forward progress in crafting trade policies that are responsive to climate-friendly objectives?

Define an Environmental Good

There are, as this *Policy Brief* series will explore, a wide range of obstacles and challenges. But one that is worth considering in greater detail is the devilishly difficult task of defining environmental goods (EGs). A review of past approaches can provide important insights into the challenges ahead in redesigning trade regimes that can better deliver climate-friendly economic outcomes.

Climate-supportive goods and technologies are not new. But the spread of such technologies and products appears to be more limited than might otherwise be expected and, certainly, more limited than a warming planet needs. Policymakers in search of answers zeroed in on challenges in moving environmentally-friendly products across borders. They were able to identify one specific issue: potentially high levels of tariffs applied to certain goods at the borders. These tariffs were acting as a brake, impeding the flow of goods and driving up costs.

Hence, one early and sensible idea was to consider how to reduce tariffs on environmentally friendly goods. If tariffs are leading to lower utilization of climate-friendly products, the reduction or elimination of tariffs on these products should lead to their greater use.

Of course, governments are always free to reduce tariffs unilaterally, without the need for any complex negotiations with counterparties. In fact, one key question for climate-change advocates is



why governments would ever put up tariff barriers (or be slow to remove existing barriers) that impede the flow of important products across borders, especially in circumstances where there is no domestic production of the good nor any viable plan to create such products in the near term. The climate imperatives of reducing carbon footprints and moving to a more sustainable use of energy-efficient products should have outweighed the drag effects of domestic protectionist sentiments.

This is not the place to debate the wisdom (or lack of it) in some governments. Instead, it is simply important to note that officials have the ability to unilaterally make policy decisions to support climate outcomes. Existing trade rules simply require that such actions not make others worse off as a result.

In practice, many governments are deeply reluctant to act unilaterally. One important reason is that they prefer to hold commitments as a “bargaining chip” for use in negotiations. This is true even for tiny tariffs of two or three percent, as an example, that likely cost more to collect than they can generate in revenue.

It can also be seen as easier to push through potentially unpopular policy decisions if these are offset by potential benefits found elsewhere. A negotiated outcome with one or more other governments can provide such win-win outcome potential.

Classification Challenges

To get such an effort underway to reduce tariffs on climate-friendly goods can seem daunting. Part of the difficulty in defining environmental goods for trade purposes is that the customs classification scheme, the Harmonized System (HS) of tariff nomenclature that divides products and is used at customs borders to determine tariff treatment, does not have a ready-made division, chapter or section that covers such products. A new list or classification system needed to be created from scratch.

In 1999, the OECD released a list of what it called “environmental goods” for research and statistical purposes.¹ The goal was to help better measure the scope of an “environmental industry,” rather than launch discussions about how to manage trade in these types of products.

The OECD list was quite broad, given the intended purpose of the exercise. By contrast, when government officials sat down to discuss how to better encourage trade in environmental goods within APEC, they quickly ran into difficulties that have continued to stymie efforts to craft climate-friendly trade policies.

While APEC is a non-binding organization, the intended purpose of the negotiations was to have signatories agree to reduce tariffs on listed products to less than five percent within three years. Hence, there were going to be “real world” consequences to inclusion/exclusion from APEC’s list of environmental goods (EGs). Items on the list would have tariffs reduced or eliminated while those not included would not.

Getting to the final set of 54 EG products, released in 2012, was not an easy process. Understanding why it was so hard highlights the difficulties that are likely to affect a range of policy responses ahead.

There are some products that have obvious environmental connections and limited alternative purposes, such as wind turbines. Adding wind turbines to a list of presumptive EG products was fairly straightforward.

However, after a handful of goods, the decision process gets much messier. To see why, consider a wooden chair. In general, a chair made of wood is likely to be more environmentally sustainable than one made of plastic resins on a steel frame. We might suggest that wood chairs be added to a list of EGs.

Except that not all wooden chairs are the same. And now we are quickly headed down a rabbit hole of EG classification issues. If we define categories



too broadly, we could quickly have a list of potential EGs that spanned nearly every single good. If we said that every good was an EG, we are right back to where we started. We have also thrown open trade lanes for *all* goods to flow between members at zero duties or tariffs at less than five percent. It is necessary to narrow the criteria in some way.

There are two basic approaches to classification—by having criteria that must be met for inclusion on the list or by having criteria that exclude products from a list.

Start with the inclusion approach. There are two basic elements that might be fruitful for consideration: 1) products that are supportive of good environmental outcomes (like wind turbines or pollution control devices such as catalytic converters for automobiles) and 2) products that are themselves environmentally friendly. The former are often called Goods for Environmental Management (GEM) while the latter are called Environmentally Preferable Products (EPPs).

A wooden chair could fit into the second EPP criteria. However, EPP products are environmentally preferable compared to some other product. In other words, EPP requires an answer to the question, “EPP relative to what product or good?”

For instance, there are wooden chairs that are made from sawdust, glues, and laminates as well as wooden chairs that are made using hand tools from trees that were felled during a storm put together with wooden dowels alone. The first chair may not make our inclusion criteria because it does not exhibit the same environmentally-friendly manufacturing process as the second chair. In technical terms, this is called the Process and Production Methods (PPMs). Again, if we fail to take into account PPMs, we might create overly broad criteria, leaving all “wooden” chairs in our potential EG list.

Even the criteria of goods for environmental outcomes could be problematic. What makes a

“good environmental outcome”? Measured against what? Are we focused on low emissions? Or reducing water usage? Or improving wastewater management? Improving biodiversity? All of the above? Some of the above?

What about goods that have multiple potential purposes? A wind turbine might seem a straightforward addition to an EG list, but turbines can do a lot of different things. Clearly, there are some turbines that could support GEM outcomes while others might be used for, as an example, moving fossil fuels. This requires a fine level of detail about the product and potential dual-use outcomes. It also calls for potentially tough decisions about exclusion criteria, even for goods that might seem obvious candidates for EG lists.

Candidate products for EPP inclusion have to grapple with PPMs at many different levels. A wooden chair could meet the criteria as wood is more sustainable than not-wood chairs. But the method of harvesting wood or processes for turning wood into chairs is also important. A chair that is recyclable at the end of its lifecycle might appear to fit an EPP criteria, even if the harvesting and production methods are less climate-friendly than others.

One solution to this challenge is to say that products that “do no harm” should be included and those that cause environmental harm or damage should be excluded. But it is hard to imagine a product that causes zero damage or which never, ever causes harm. Even taking a downed tree from the forest to make a chair may harm animals that might have otherwise built nests in the remains of the tree.

In short, what initially seems like a good idea—to provide better benefits for environmental goods than for non-environmental goods—quickly devolves into a complicated set of arguments about which products meet or fail to meet which criteria. When there are direct economic consequences attached to these decisions (and



not just academic or abstract outcomes), the process of picking products is more fraught.

The tension is particularly acute when considering energy transition products. For example, many of the elements needed for battery storage come with significant environmental impacts at the mining or refining stages. Given the importance of moving towards lower carbon energy, this is not just a theoretical distinction but a critical set of decisions.

Getting to Yes is Not Easy

The original APEC negotiations that landed on 54 listed EG products took some time.² General talks to reduce trade barriers were first mooted at a meeting in Japan in 1995.³ By 1997, members had started to exchange potential lists which included a range of items under an environmental goods category.

Negotiations proceeded on a “request-offer” basis by which member economies exchanged items for a final list. Members were focused on product categories that could be handled by customs officials and covered by tariffs. This focus helped to limit the potential product lists, as PPMs were not included as criteria. There were also several categories of possible products, like chemicals and medical equipment, which were being discussed in other settings and thus not included in APEC’s EG list.

It is significant that the final APEC deliverable was a list of products to be covered by tariff reductions, rather than a definition or classification of environmental goods. This has meant that products included on the list were covered and anything not clearly indicated on the list were excluded. There was no mechanism for expanding the list, absent additional negotiations.

At the same time APEC economies were grappling with the creation of an agreement for environmental goods, members of the World Trade Organization (WTO) were also in search of a solution to obstacles to trade in environmental goods and services. A commitment to do so was

contained within the Ministerial Declaration that launched the Doha Development Agenda in 2001. The specific language committed members to “the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services.”⁴

This commitment morphed into a separate track of negotiations in 2014, when 46 WTO members agreed to start talks in an Environmental Goods Agreement (EGA). After 18 rounds of talks, however, momentum collapsed in late 2016.⁵ As with the APEC process, it was hard to get members to agree on the appropriate scope.⁶

One product encapsulates the difficulties in getting agreement on EGs: the bicycle. Bicycles are not included on APEC’s original list. They were added to the discussion in the WTO’s EGA and encountered fierce arguments both for and against inclusion.⁷ Clearly, a bicycle as an alternative transportation method supports environmental objectives (with an added bonus of improved health). However, bicycles can also be seen as a potential “slippery slope,” as the inclusion of bicycles might lead others to make similar arguments for skateboards or even running shoes. In addition, in the WTO context, some members had ongoing disputes over valuation of bicycles and even anti-dumping duties imposed on the product at the time of the negotiations.

Stalled Discussions

Despite significant efforts over many rounds of negotiations, the EGA talks at the WTO have remained stalled. There have been various calls for a resumption of discussions, although these are unlikely to bear fruit in the near term.

With the WTO stuck, APEC members have been discussing the possibility of resuming talks within APEC. A scoping study on possible expansion of the EG list was commissioned in 2021, to coincide with the 10th anniversary of the original agreement.⁸ Technology has expanded considerably since 2012, with a wider range of climate-friendly goods that could be reviewed.



In both APEC and in the WTO, members had promised to consider not just environmental goods, but also environmental services. Services talks have not really begun at all and, thus far, members have not agreed to commence new goods negotiations.

Negotiations, if they were to get underway, may remain largely focused on tariffs rather than the myriad non-tariff obstacles to encouraging greater use of trade in environmental goods and services. While tariffs matter, they are potentially less of a problem than the rapidly expanding use of “green” subsidies, licensing and quota requirements, or export tax rebates.

Bilateral Initiatives

As the first *Policy Brief* in this series suggested, increasingly the action on trade and climate is moving to the plurilateral and bilateral arenas. For example, Singapore and Australia have just agreed to a new list of covered goods in their Green Economy Agreement.⁹ Some included goods are similar to the APEC list but the new list also goes significantly beyond to include such items as plants for use in the restoration and recovery of landscapes; a variety of minerals and chemicals; bamboo flooring; and even bicycles (plus tires, bicycle lights, and wheels).

The two countries have also worked hard to produce something closer to a set of definitions in addition to a specific list of covered products. The criteria used in the list includes:

The EGL consists of environmental goods which will inter alia, contribute to and enable the:

- a) *reduction, mitigation and remediation of the pollution of the air, waterways and the land;*
- b) *protection of natural resources and biodiversity;*
- c) *mitigation of greenhouse gas emissions such as through a transition to the use of renewable and sustainable energy sources and technologies;*
- d) *efficient and sustainable use and production, reuse or recycling of resources;*

- e) *reduction in the negative effects on human health and the environment;*
- f) *effective identification, measurement, accounting and monitoring of the environment in support of its protection and remediation; and*
- g) *sustainability and resilience of food systems, including agricultural practices.*

Both sides also agreed that (a) products with a high recycled content and (b) remanufactured and refurbished products can be considered environmental goods as they contribute to the covered environmental objectives.¹⁰

It may be that a ground-up approach, perhaps modelled on the agreement struck between Australia and Singapore, will ultimately yield better results. Certainly, governments may see fewer risks and more opportunities in developing bilateral or regional commitments than to tackle challenges in bigger groupings with more diverse desired outcomes. It may be worth noting that something similar has been taking place in digital trade, where officials have been struggling to finish a large plurilateral negotiation in the WTO while simultaneously some members have managed to craft smaller agreements covering similar digital trade topics.

A Devilish Problem that Needs Solutions

The efforts of some Asian governments to take action are a bright spark on an otherwise dispiriting path for anyone keen to see the world reduce the amount of greenhouse gases in the environment. It is clearly not possible to continue with “business as usual” and expect any sort of different outcomes. Yet grappling with economic changes that are required to meet climate targets means that trade officials also need to reconsider past practices.

At the start of the journey to free up greater trade flows in environmentally friendly goods, it may have seemed like governments had the luxury of time to sort out some difficult details. If



negotiations took years, or even decades, it was not such a problem. And getting decisions right was seen as a better outcome than getting stuff done quickly, but in ways that could turn out to be problematic.

However, a rapidly changing global climate seems to put paid to the idea that governments can continue to faff about over classifications and definitions forever. At some point, it is necessary to seriously confront the difficult trade-offs that are required to change global responses. It is certainly not easy to decide what constitutes an environmental good and what does not. The risk of getting it wrong means that costs will be borne by the wrong parties.

¹<https://www.oecd.org/environment/envtrade/35837840.pdf>

² To see the complete list as approved in 2012, see https://www.apec.org/meeting-papers/leaders-declarations/2012/2012_aelm/2012_aelm_annexc

³ For a nice summary of the early process of creating both the OECD and APEC lists, see Steenblik, R. (2005), "Environmental Goods: A Comparison of the APEC and OECD Lists", OECD Trade and Environment Working Papers, No. 2005/04, OECD Publishing, Paris, <https://doi.org/10.1787/274615168441>. The EU has developed classifications for statistical purposes as well. See, for example, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Environmental_goods_and_services_sector_\(EGSS\)](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Environmental_goods_and_services_sector_(EGSS))

⁴ "Ministerial Declaration," adopted November 14, 2001, Ministerial Conference, Fourth Session, Doha, Qatar, November 9–14, 2001, World Trade Organization, WT/MIN(01)/DEC/I, 20 November 2001, paragraph 31(iii).

⁵ For a negotiating history of the EGA, see Global Affairs Canada, <https://www.international.gc.ca/trade-agreements-accords-commerciaux/topics-domaines/env/plurilateral.aspx?lang=eng>

⁶ A good review of the history and prospects can be found by James Bacchus and Inu Manik, CATO, June 2021, at: <https://www.cato.org/sites/cato.org/files/2021-06/free-trade-bulletin-80.pdf> Bacchus and Manik also identified problems of green protectionism and the ability of an eventual agreement to adjust or not (dynamic versus static commitments).

⁷ The author of this *Policy Brief* used to run a trade simulation around bicycles for Asian trade officials. Even in a simulation exercise, the topic of whether bicycles should

As the climate continues to warm and governments are increasingly at risk of missing their greenhouse gas emission targets, it looks like time will not support endless discussions on the "ideal" lists of goods for inclusion or exclusion or for further talks about the overall wisdom of working on environmental services rules.

These are not easy decisions but that does not mean that they can simply be put into a "too hard" bucket and ignored. It is time for the trade community to roll up sleeves and get stuck into figuring out how to navigate trade-related challenges that are impeding the spread of climate-supportive goods, services and investments and better facilitate solutions for the future.

be on a hypothetical list led some participants to vigorously protest, others to depart in high anger, and often ended with some participants in tears!

⁸ https://www.apec.org/docs/default-source/publications/2021/12/scoping-study-on-new-and-emerging-environmental-goods/221_mag_scoping-study-on-new-and-emerging-environmental-goods.pdf

⁹ For details, see the annex of goods available at: <https://www.dfat.gov.au/countries-and-regions/singapore-australia-green-economy-agreement-annexes/annex-b-11-environmental-goods>

¹⁰ This is another area where apparent common sense can conflict with existing trade rules. Obstacles to the greater use of recycled and remanufactured items will be explored in greater depth in a future ATC *Policy Brief*.

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