doi:10.1017/aju.2022.32

SYMPOSIUM ON CARBON BORDER ADJUSTMENTS

HOW WTO-CONSISTENT TOOLS CAN ENSURE THE DECARBONIZATION OF EMISSION-INTENSIVE INDUSTRIAL SECTORS

Chiara Galiffa and Ignacio Garcia Bercero***

The European Union (EU) has been a frontrunner in curbing greenhouse gas emissions, having established in 2005 the Emission Trading System (ETS) and having adopted in July 2021 a proposal for a Carbon Border Adjustment Mechanism (CBAM). This essay explains how the design of the EU CBAM proposal complies with World Trade Organization (WTO) rules, in particular with the principle of non-discrimination. It then discusses how the EU can cooperate with other countries that share similar climate ambitions to decarbonize industrial sectors and achieve the aims of the Paris Agreement. The essay argues that autonomous measures and international cooperation initiatives can work as complementary tools to attain climate neutrality.

The EU Emission Trading System

Manmade greenhouse gas emissions have been the main cause of the increase in temperatures over the past 270 years.[1] In the EU alone, industrial processes and energy industries accounted for almost 37 percent of all greenhouse gas emissions in 2018.[2] Achieving the objectives of the Paris Agreement thus requires speeding up the decarbonization of carbon-intensive industrial sectors.

In 2005, the EU established the ETS, a "cap & trade" mechanism that increasingly limits the overall greenhouse gas emissions and allows producers in certain emission-intensive sectors to buy and trade pollution permits ("allowances") at prices determined by the market. As a result, the price of carbon in the EU has increased substantially over time.

However, there is a major concern that "carbon leakage" may jeopardize the effectiveness of carbon pricing systems like the EU ETS.[3] Carbon leakage occurs when companies move their production to countries with less stringent emission targets or when domestic production is replaced by more carbon intensive imports. This results in an increase in emissions globally, thus defeating the EU's and overall global efforts to fight climate

This essay solely represents the views of its authors and cannot in any circumstances be regarded as the official position of the Commission.

** Chiara Galiffa is Policy Assistant to the Director General of the Directorate General for Trade of the European Commission, Belgium.*

*** Ignacio Garcia Bercero is Director for Multilateral Affairs and Strategy at the Directorate General for Trade of the European Commission, Belgium.*

[1] Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis* (2021).

[2] Eurostat, *How Are Emissions of Greenhouse Gases in the EU Evolving*.

[3] *See, e.g.*, Intergovernmental Panel on Climate Change, *Climate Change 2007: Working Group III: Mitigation of Climate Change*; White House Press Release, Carbis Bay G7 Summit Communiqué (June 13, 2021).

change. The risk of carbon leakage is high when a country combines ambitious carbon pricing policies with low restrictions on cross-border trade.

The EU ETS has so far dealt with the threat of carbon leakage by granting free allowances to covered industries, thereby reducing the amount that carbon intensive industries have to pay under the ETS. Over time, this system has shown its limits. The effect of free allowances has been to keep the price of carbon too low, thus reducing the incentives for the industry to decarbonize. The evidence shows that in sectors where almost all allowances are auctioned (e.g., electricity), the decarbonization process has advanced faster.[4] The EU CBAM addresses the carbon leakage problem by progressively phasing out free allowances.[5]

The EU Carbon Border Adjustment Mechanism

The idea of the CBAM is not new. For over fifteen years, academics, activists, and some EU member states called for a CBAM, but any attempt to establish it failed. Various factors contributed more recently to a change of direction. The Commission led by President von der Leyen identified the fight against climate change as one of its main political priorities. In 2019, it adopted the "Green Deal" Communication,[6] proposing greenhouse gas reduction targets of at least 55 percent by 2030 compared to 1990 levels, and net zero emissions by 2050. In June 2021, the European Climate Law translated these targets into binding obligations.[7] On July 14, 2021, the Commission adopted a package of interlinked legislative proposals to make the EU's climate, energy, land use, transport, and taxation policies match the new targets. The CBAM proposal was part of this package, called "Fit for 55."[8]

The CBAM proposal establishes that importers in certain emission-intensive sectors (cement, electricity, iron and steel, fertilizers, and aluminum) are required to purchase CBAM certificates at weekly averages of ETS prices drawn from daily auctions, and at quantities reflecting the actual emission intensity of the imports, based on verifiable declarations made by importers to the EU authorities.[9] The methodology to determine the emission intensity of products is the same for all producers independent of their country of origin.[10] However, where the required data are unavailable, the authorities can rely on default values, looking first at the average emission intensity of the production in the third country. In the absence of credible third country values, the average of the most carbon intensive production in the EU will be used as a default.

[4] *See* Eur. Comm'n, Impact Assessment Report Accompanying the Proposal for a Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism, SDW(2021) 643 final, Sec. 2.2.1, pp. 9–10 (July 14, 2021).

[5] Eur. Comm'n, Proposal for a Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism, COM(2021) 564 final (July 14, 2021) [hereinafter CBAM Proposal].

[6] Eur. Comm'n, The European Green Deal, COM(2019) 640 final.

[7] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 Establishing the Framework for Achieving Climate Neutrality and Amending Regulations (EC) No. 401/2009 and (EU) 2018/1999 ("European Climate Law"), OJ L 243, p. 1 (July 9, 2021).

[8] Eur. Comm'n Press Release, European Green Deal: Commission Proposes Transformation of EU Economy and Society to Meet Climate Ambitions (July 14, 2021).

[9] This essay is based on the Commission proposal that is currently under consideration by the co-legislators, i.e., the European Parliament and the Council of the EU. The European Parliament's Environment Committee has proposed to extend the CBAM to other sectors, notably chemicals, and to cover from the start indirect emissions. Negotiations between the Council and the European Parliament will start in the autumn of 2022.

[10] CBAM Proposal, *supra* note 5, Annex III.

https://doi.org/10.1017/aju.2022.32 Published online by Cambridge University Press

The CBAM is conceived to progressively replace the system of free allowances under the EU ETS for the sectors to which the CBAM applies.[11] This is to be carried out gradually over a phasing out period whose trajectory is established in the proposal for the revision of the EU ETS (also part of the Fit for 55 package).[12] Free allowances in the selected sectors will be phased out from 2026 to 2036 with regular 10 percent decreases year-on-year, while the CBAM will be phased in accordingly.

The CBAM is an incremental measure. It initially applies to some of the most emission intensive sectors and to direct emissions (emissions from production processes on which producers have direct control), but it may in the future extend down the line to additional sectors, products, and emission types.

Designing a WTO-Compatible CBAM

The CBAM is conceived as part of a toolbox of measures that aim to achieve the EU's climate targets. It completes the regulatory framework of the ETS by applying to imports equivalent and non-discriminatory conditions to those applied to domestic production. To achieve this, the CBAM replicates the main features of the ETS (design, structure, operation, data collection, and procedures), but with necessary adaptations due to the CBAM's application to products rather than producers. Where differences exist, the design seeks to ensure no less favorable treatment of imports as part of the objective of fighting climate change.

President von der Leyen stressed from the outset that the CBAM needs to be WTO-compatible. The critical element is compliance with the WTO principle of non-discrimination as embodied in Articles I and III of the General Agreement on Tariffs and Trade (GATT), as well as in the *chapeau* to the general exception of Article XX of the GATT. Thus, under the CBAM proposal, the criteria established to measure the emission intensity of imports are designed to guarantee that all importers, regardless of the country of origin, are subject to objective calculation methodologies comparable to those of the ETS. Indeed, importers are required to declare actual emissions just as producers under the EU ETS buy allowances based on actual emissions per installation.

The CBAM proposal also ensures that imports are not subject to a double carbon price, by providing for mechanisms to take into account carbon charges that are paid in the country of origin. It does so in two ways. First, countries that apply the EU ETS or have their own carbon pricing system linked to the EU ETS are exempted from the CBAM.[13] This is justified because their products are subject to the same level of carbon pricing applied in the EU. Second, imports subject to a carbon price in the country of production benefit from a reduction of the CBAM corresponding to the carbon price paid in the third country (provided this has not been subject to export rebates). The EU can negotiate agreements with third countries to facilitate the recognition of their carbon pricing systems and the reductions accorded to their exporters.[14]

In this respect, a question that often arises is why the CBAM proposal does not allow reductions for importers that are subject to climate regulatory frameworks in their countries of production (e.g., the United States has not yet adopted a federal carbon pricing mechanism). In reality, this question reveals a misunderstanding of how the EU CBAM works. By taking actual emissions into account, the EU CBAM does implicitly recognize the impact of third countries' regulatory frameworks on imports. Indeed, to comply with such frameworks, producers in third

[11] *Id.*, Rec. 11; Art. 1(3).

[12] Eur. Comm'n, Proposal for a Directive of the European Parliament and of the Council Amending Directive 2003/87/EC Establishing a System for Greenhouse Gas Emission Allowance Trading Within the Union, Decision (EU) 2015/1814 Concerning the Establishment and Operation of a Market Stability Reserve for the Union Greenhouse Gas Emission Trading Scheme and Regulation (EU) 2015/757, COM(2021) 551 final, Rec. 30 (July 14, 2021).

[13] CBAM Proposal, *supra* note 5, Annex I.

[14] *Id.* Art. 9.

https://doi.org/10.1017/aju.2022.32 Published online by Cambridge University Press

countries are required to improve the emission performance of their production, resulting in them being able to declare lower actual emissions when they export to the EU and incur a lower CBAM charge. The CBAM, therefore, in no way discriminates against countries that have not introduced a carbon-pricing scheme, but rather aims to ensure that all domestic and foreign producers are subject to an equivalent carbon price.

The articulation of the CBAM and the ETS also ensures that at no point in time will the gradual replacing of the free allowances by the CBAM result in more favorable treatment of EU production vis-à-vis imports.[15] While the details of such phasing out/phasing in are yet to be determined through an implementing act,[16] the proposal provides that the CBAM will only start collecting revenues in 2026, when the phasing out of free allowances will start kicking in and following an initial transitional period (2023–2025) during which the authorities will only collect data.

The CBAM's gradual application is also important for three other reasons: it gives the EU's administrative machinery time to ensure smooth implementation; it gives the EU's trading partners time to adapt to the new system and possibly engage in forms of climate cooperation with the EU; and it gives producers and regulators time to develop best practices if CBAM is later extended to other sectors.

Toward a Climate Coalition for Decarbonization of Emission Intensive Industrial Sectors

While the CBAM aims to ensure the climate integrity of EU action, the effective decarbonization of carbon intensive industrial sectors cannot be achieved by EU efforts alone. The EU-proposed CBAM has opened an international discussion on how to reinforce international cooperative efforts to achieve decarbonization. In that context, there is growing interest in the concept of a "carbon club," which was first proposed by William Nordhaus in 2015.[17] In the context of the G7, discussions are currently ongoing on what is described as an open and cooperative international climate club.[18] As a contribution to that discussion, we outline some of the issues that may need to be considered in establishing a framework for cooperation to decarbonize industrial sectors.

It does not appear realistic to expect an agreement under which countries set a common carbon price and agree on uniform instruments to achieve decarbonization and respond to carbon leakage. A "climate coalition" is therefore likely to be looser than the Nordhaus concept of a "carbon club" and should therefore complement rather than replace actions taken by individual countries (e.g., the CBAM). Any such club or coalition should remain open and any trade measures implemented by participants should be consistent with WTO obligations. This is essential to ensure the legitimacy of actions taken by participants in the coalition and avoid tit-for-tat dynamics.

We suggest the following elements could be part of international discussions on the establishment of a climate coalition:

- *Agreement on common decarbonization targets.* Available evidence indicates that achieving the objectives of the Paris Agreement will require limiting temperature increases to 1.5 degrees and reaching climate neutrality by 2050 at the latest. These global objectives need to be combined with a specific target to achieve net zero emissions in industrial sectors and electricity generation by 2050 as well as intermediate targets in support of this goal. Sector-specific targets are essential since decarbonization of highly traded sectors can only be achieved if demand for carbon intensive products is substantially reduced and there are

[15] *Id.*, Rec. 11.

[16] *Id.* Art. 31.

[17] William Nordhaus, *Climate Clubs: Overcoming Free Riding in International Economic Policy*, 105 Am. Econ. Rev. 1339 (2015).

[18] Eur. Council Press Release, G7 Leaders' Statement of 24 February 2022 (Feb. 24, 2022).

https://doi.org/10.1017/aju.2022.32 Published online by Cambridge University Press

sufficient incentives to invest in decarbonization technologies. While the means to achieve these targets could be determined by individual participants, it would be essential to set up an effective monitoring mechanism to verify that targets are properly implemented. An important question is whether a compliance procedure should also be introduced.

- *Agreement on product coverage and common methodologies to measure embedded emissions.* The CBAM proposal initially applies to a limited number of sectors that are highly exposed to the risk of carbon leakage, with the possibility of extending this list in the future. Ideally, a climate coalition could have the same sectoral coverage, although it may be easier to develop an agreement in certain sectors first (e.g., the EU and the United States are discussing an arrangement to tackle both decarbonization and overcapacities in the steel and aluminum sector).[19] A key element of any agreement would be to design common methodologies to measure embedded emissions. In view of the importance of electricity consumption for decarbonization efforts, such methodologies should include both direct and indirect emissions (i.e., those generated by the consumption of electricity in production processes).
- *Agreement to coordinate policies in response to carbon leakage.* While carbon pricing is generally considered the most cost-effective means to reduce emissions,[20] there may be political obstacles to the adoption of an explicit carbon price in some countries. Moreover, there will be different levels and designs of carbon pricing schemes. It is therefore not reasonable or desirable to expect all participants to agree on common trade measures in relation to non-participants, or for countries without a common carbon pricing to exclude each other from the application of measures taken to combat carbon leakage. A more realistic objective could be to agree on common principles relating to different types of instruments that may be used to combat carbon leakage, including price-based measures, regulatory actions, procurement preferences, and different forms of WTO-compatible subsidies. The aim would be to reduce the scope for trade conflicts and reassure non-participants that any action will be adopted in accordance with WTO obligations. At the same time, participants could agree on trade facilitation tools that reduce the costs for companies to comply with import requirements. The EU CBAM already envisages the possibility to conclude international agreements to facilitate the recognition of third country pricing schemes. This and other trade facilitation tools could be discussed among participants.
- *Support for the decarbonization of industry in low- and lower-middle-income countries.* Low- and lower-middle-income countries make a limited contribution to climate change, while being seriously exposed to its consequences. While they may not be expected to contribute in the same manner to the fight against climate change as developed economies, exemptions from the application of border measures would discourage investment in green technologies. A better approach would be for participants to take specific commitments to support decarbonization efforts in low- and lower-middle-income countries and to facilitate compliance through technical assistance with trade-related measures to address carbon leakage.
- *Institutional arrangements.* While discussions on the concept of a climate club are likely to start in the G7, it is still early days to determine the legal nature of any such arrangement, who the initial participants should be, and the role of different international organizations. Two important considerations would be to retain flexibility in the design and ensure openness to participation by new members. Moreover, there is a need to envisage an enhanced role for multilateral institutions, such as the Organization for Economic Co-operation and Development, the UN Framework Convention on Climate Change, and the WTO. A recent initiative by a number of countries including EU member states, the United States,

[19] Eur. Comm'n Press Release, Joint EU-U.S. Statement on a Global Arrangement on Sustainable Steel and Aluminium (Oct. 31, 2021).

[20] *See, e.g.*, Alan Krupnick & Ian Parry, *What Is the Best Policy Instrument for Reducing CO2 Emissions?*, *in* Fiscal Policy to Mitigate Climate Change: A Guide for Policymakers (Ruud A. de Mooij, Ian W.H. Parry & Michael Keen eds., 2012).

https://doi.org/10.1017/aju.2022.32 Published online by Cambridge University Press

and China has suggested that the WTO could provide a forum for deliberation on climate measures with a trade impact.[21] Another proposal is to establish a comparability forum in the WTO, whose objective would be to ensure transparency and dialogue on the trade impact of climate-related measures.[22] In addition, the WTO could make a positive contribution to climate neutrality by promoting the liberalization of climate related goods and services and developing rules on subsidies that take into account their negative or positive environmental impacts.

Conclusion

The EU has been particularly mindful in ensuring that its proposal for a border carbon mechanism is non-discriminatory and consistent with its WTO commitments. This guarantees legitimacy of the measure and can pave the way to international cooperation through an open coalition of countries committed to ambitious targets to decarbonize trade intensive industrial sectors. Such international cooperation is critical to respond to the challenge of climate change. Key components of an open carbon club could include joint targets to decarbonize industrial sectors, common methodologies to measure embedded emissions, coordination of measures to respond to carbon leakage, and support for decarbonization efforts in low- and lower- middle-income countries.

[21] Ministerial Statement on Trade and Environmental Sustainability, WTO Doc. WTO/MIN(21)6 (Dec. 14, 2021).

[22] *Domestic and International Aspects of the EU CBAM: Two Sides of the Same Coin*, Europe Jacques Delors (Feb. 2022).

https://doi.org/10.1017/aju.2022.32 Published online by Cambridge University Press