



BACKGROUND NOTE

40th Round Table on Sustainable Development

**Border Carbon Adjustments:
What shape in the post-COVID geopolitical
and economic landscape?**

20 October 2020
via videoconference

ACKNOWLEDGEMENTS

This background note was prepared by Sigita Strumskyte, Co-ordinator of the OECD Round Table on Sustainable Development, OECD Environment Directorate, under the overall guidance of Connie Hedegaard, Chair of the OECD Round Table on Sustainable Development. Amelia Smith provided valuable editorial and organisational support, along with Dimitra Xynou and Alina Manrique de Lara.

This note benefitted from consultations with OECD experts in the areas of climate change, trade and tax policies, notably Filippo D’Arcangelo, Assia Elguacem, David Haugh, Tomasz Kozluk, Andrew Prag, Jonas Teusch and Kurt Van Dender.

The 40th Round Table on Sustainable Development is financially supported by the European Climate Foundation. Their contribution is gratefully acknowledged.

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Background Note

The 39th Round Table on Sustainable Development (RTSD), held in February 2020, discussed the evolving landscape of climate and trade policies, with a particular focus on border carbon adjustments (BCAs), following proposals for such a mechanism in the European Green Deal. Since then, the COVID-19 crisis has triggered massive stimulus packages across the world, including major initiatives to green the economy. BCAs remain firmly on the table, including in the European Commission's economic recovery plan for Europe. This note has been prepared to support the 20 October 2020 RTSD discussion. It complements the February 2020 RTSD background paper (Prag, 2020^[1]) and updates the state of play by focusing on the design features of BCAs that matter most to ensure their political acceptability and co-operative nature. It also considers alternatives and complementary policies.

As countries continue to battle the COVID-19 pandemic, the climate crisis remains at the forefront of policy concerns. Many countries have increased their ambition to control CO₂ and other greenhouse gas (GHG) emissions and have committed to a green recovery, aiming to better align economic support and investment packages with climate and other environmental goals. Border carbon adjustments (BCAs) are receiving renewed attention as a possible policy tool to support these objectives.

BCAs support the effective implementation of a carbon price within a country or group of countries by limiting “carbon leakage” resulting from the relocation of carbon-intensive production to countries with lower carbon prices (Lamy, Pons and Leturcq, 2020^[2]); (Lehne and Sartor, 2020^[3])). They are justified by economic efficiency arguments, as they address an unpriced externality (carbon emissions). However, if implemented unilaterally or in a non-cooperative manner, BCAs can be perceived as “climate protectionism” and trigger trade protection measures from trading partners outside the BCA regime (Holmes, Reilly and Rollo, 2011^[4]); (Zachmann and McWilliams, 2020^[5])).

The need for, impact of and reaction to a BCA depends on the level of climate policy ambition among major trading partners. The more ambitious and aligned climate actions among major emitters and trading partners, the lesser the need for a BCA. Currently, though, climate ambitions vary among the major emitters, and at least one of them, Europe, is moving farther away from the others by raising its commitments.

Prior to COVID-19, the European Commission included a carbon border adjustment mechanism (CBAM) as part of the European Green Deal, which aims to achieve net zero emissions of

greenhouse gases by 2050 and decouple economic growth from resource use. A CBAM was also included in the Commission's economic recovery package for Europe.¹

Box 1: The European Commission's proposal for a Border Carbon Adjustment Mechanism

A carbon border adjustment mechanism (CBAM) was identified in the European Green Deal as a means to support Europe's transition towards a greener and more sustainable economy, and as a potential way to help repay Next Generation EU, the €750 billion stimulus package agreed to help EU member states recover from the economic consequences of the COVID-19 pandemic. The European Council has called on the Commission to put forward its CBAM proposal by the first semester of 2021.

The Commission's proposal will aim to ensure that import prices reflect their carbon content, and provide alternatives that could complement measures already in place under the EU's Emissions Trading System (ETS).

Currently the Commission is undergoing a public consultation in order to collect reactions on a series of alternative measures from national and local administrations, civil society and the business world, especially from representatives of energy-intensive sectors. The debate includes a proposal for CBAM to become part of the EU budget's own resources. The Commission also aims to accelerate its own plans for carbon emission reductions; In September, European Commission President Ursula von der Leyen announced that the EU would raise its 2030 emissions reduction target to at least 55% compared to 1990 levels, up from 40% currently.

The EU proposal to levy carbon taxes on imports has received the endorsement of IMF President Kristalina Georgieva, who stressed that the top priority should be an agreement on a minimum carbon tax among major emitting countries. On the other hand, the governments of a number of G20 countries, including the United States, China and the Russian Federation, have expressed their opposition to this initiative and asked the WTO that the EU clarify its plans. The European Commission has repeatedly expressed its intentions to be transparent and compliant with WTO rules.

By contrast, South Korea's massive Green New Deal (July 2020), part of a nationwide strategy to boost employment and help the country overcome its economic crisis while addressing climate and environmental challenges, does not involve new commitments in terms of omissions nor a BCA proposal.²

China recently announced a new commitment to reducing emissions. Speaking at the UN General Assembly in late September 2020, President Xi Jinping announced that China aims to reach carbon neutrality before 2060 and to ensure that its greenhouse gas emissions peak in the next decade. President Xi committed to scaling up China's Intended Nationally Determined Contributions (INDCs) under the Paris Climate Agreement by adopting "more vigorous policies and measures", calling for a "green recovery" from the COVID-19 pandemic. Such a change in narrative from the world's

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0456&from=EN>.

² South Korea will commit approximately USD 61 billion over five years (2020-25) to boost renewable energy capacity to 42.7 GW by 2025 from 12.7 GW in 2019 and expand the green mobility fleet to 1.33 million electric and hydrogen-powered vehicles.

biggest emitter could open new opportunities for a co-operative solution on minimum carbon prices and BCAs.

As countries increase their climate ambition, they will continue to seek ways to limit carbon leakage or otherwise control the extent of emissions embodied in imports.

Economic impacts of BCAs and trading partner reactions in a COVID-19 context

Experience with BCAs is limited, especially as carbon prices remain relatively low globally, with less than 40% of emissions priced through taxes or emissions trading (OECD, 2019^[6]). In 2012, the EU attempted to extend its emissions trading system (EU ETS) to international aviation, but was forced to limit the scope to intra-EU flights following strong international and industry pressure. In the United States, California's cap-and-trade system has a BCA in place for electricity, but design changes due to pressure from covered firms have compromised its effectiveness (Prag, 2020^[1]).

Recent empirical literature has found little evidence of the effects of climate policies on carbon leakage and competitiveness, but this seems to be largely due to carbon prices being very low around the world in general. As climate policies become more ambitious, modelling exercises suggest significant effects in mitigating carbon leakage, which would increase the rationale for BCAs (Prag, 2020^[1]); (OECD, 2020 forthcoming^[7]).

The main downside risk of BCAs is their being perceived as a form of "climate protectionism" by trading partners, even if designed in line with WTO principles. Reactions will depend critically on various design aspects of the mechanism, as well as the extent to which a convincing case can be made for carbon leakage as the rationale. Other arguments for BCAs, such as protecting the competitiveness of domestic firms through a "level playing field" or promoting climate action in other countries, could justify protective measures from trading partners in a WTO context.

The extent of retaliation by countries outside a BCA is impossible to forecast, but should be carefully considered. Trade tensions were already escalating before COVID-19, with a growing number of trade barriers erected and new tariffs imposed among major trading nations. The pandemic has led to further protectionism as countries reconsider global supply chain dependencies in the aftermath of the initial scramble for essential medical goods and equipment. If BCAs lead to new trade barriers and uncertainty, the economic costs could be important.

In order to mitigate such risks, it would be essential to ensure WTO compatibility by addressing issues related to most-favoured nation obligations and those related to GATT's Article XX exceptions. The use of revenues from BCAs, and in particular the extent to which they are directed to helping developing countries adapt to low-carbon technologies, would also be a key factor in improving their acceptability internationally, but potentially at the expense of domestic support. As argued by Lehne and Sartor (2020^[3]), addressing these issues will require in-depth and transparent discussions among trading partners. The costs and benefits of BCAs will need to be clearly explained and compared against those of alternatives before reaching a decision on whether they are a necessary tool to support the low-carbon transition and align policies with global climate agreements.

Key design and implementation features of BCAs to increase their political acceptability

BCA approaches include several possible tools, all with important design options that will influence their political acceptability, both domestically across affected sectors and internationally among

trading partners. The balance is likely to evolve as countries come to terms with the new economic and trade environment as they start to recover from the COVID-19 crisis.

The economic impact of BCAs depends ultimately on the actual carbon price implicit in the mechanism. Three critical design options will determine their effectiveness, in particular in relation to their international acceptability and possible retaliatory trade barriers introduced by countries to protect themselves from the impact of BCAs on their exporters.

(i) Geographical co-operation

The more countries that participate in a common BCA mechanism and the greater the share of global trade they account for, the lower the likelihood that it will foster trade protectionism on the part of non-participating countries. The concept of “carbon clubs” (Nordhaus, 2015^[8]) has often been invoked when discussing BCAs, in particular to refine the possible incentives for countries to participate.

For instance, Lehne and Sartor (2020^[3]) suggest that the EU should try to develop a coalition with other jurisdictions that have introduced or are seriously considering carbon pricing. Such countries face similar problems in terms of how to tackle carbon leakage and may be willing to reach a multilateral solution to this problem, allowing common approaches on anti-leakage measures to emerge.

Another consideration is whether a BCA would cover all non-participating countries equally or grant exemptions for some. Any such exemptions would be second-best from a climate goal perspective as opposed to pursuing leakage prevention calculated at the level of all individual producers, regardless of country or origin, based on their environmental performance. Exemptions for low-income countries would be consistent with the WTO’s development-related Enabling Clause, however, and would also limit the extent of carbon leakage, given these countries’ low share of global trade. To increase the chances of WTO compatibility, the criteria for exemption would in principal need to be based exclusively on development indicators, treating countries in similar conditions in the same way.³

Climate indicators could be used as an additional basis for exemptions, but their compatibility with GATT rules remains to be tested.⁴ Exemptions may also be temporary, allowing a phase-in period to mitigate the impact of BCAs on trading partners.

(ii) Technical design features: type of mechanism, sectoral coverage and product scope

A BCA can take the form of a tax, a customs duty or extension of an emissions trading scheme. While their impact in terms of controlling carbon leakage may be similar, these options have different implications for WTO compatibility. An ETS extension would likely bring the greatest challenges in a WTO context, but would be the easiest mechanism to introduce at the EU level.

³ In principle, climate indicators could not be considered as the basis for exemptions, as that would breach GATT Article I. While they could be potentially saved by recourse to GATT’s Article XX, if found to be environmentally motivated and elaborated so as to fulfil that Article’s requirements, the outcome of such a test would be uncertain.

⁴ Such exemptions may be consistent with GATT’s Article XX, but they risk being considered to breach GATT Article I.

A related issue is whether to apply the BCA to imports only or to both imports and exports. Offering a rebate on the carbon tax to exporters should not create WTO compatibility issues, but would reduce the net environmental benefit of BCAs.

BCAs may be applied to a few selected sectors, or generally across all sectors. Narrow sectoral coverage can improve WTO eligibility and simplify the calculation of product-related emissions, while still having great impact in reducing emissions if the sectors selected are those with high carbon content and highest risk of leakage. Cement, steel, and aluminium are recognised as sectors meeting these requirements (Böhringer, Carbone and Rutherford, 2012^[9]); Marcu, Mehling, and Cosbey 2020).

Another important design feature is the method for calculating embodied emissions. A useful framework is provided by the Greenhouse Gas Protocol, which distinguishes three main emission scopes: Scope 1 (direct emissions); Scope 2 (indirect emissions from purchased electricity, heat and steam); and Scope 3 (all other indirect emissions). Generally, Scope 3 is thought to present unsurmountable challenges to implementation because of its administrative complexity (Marcu, Mehling and Cosbey, 2020^[10]).

A product-specific approach to estimating the actual carbon emissions embodied in each imported product covered by a BCA scheme is generally considered excessively complex and costly, at least for products other than raw materials.

A sector-based (benchmark) approach would assign a default value for carbon intensity based on sectoral characteristics observed in the domestic industry. While easier to implement, it would not differentiate between products or producers and thus would not provide incentives to achieve “best-in-class” emission reductions among producers within a certain product category. Hence, a hybrid approach may be considered that combines features of both a product-specific and a sector-based approach (Marcu, Mehling and Cosbey, 2020^[10]).

(iii) Use of revenues

The revenues collected from BCAs can be used for different purposes. To ensure consistency with the mechanism’s goals and reduce the risk of adverse reactions from trading partners, earmarking such funds to support the low-carbon transition would seem appropriate. Choices would need to be made about the type of support and beneficiaries, including whether to allocate the funds domestically or internationally. While some funds could be used to finance climate efforts domestically in the post-Covid-19 context, there is a strong case for directing a large share of the revenues to climate action in developing countries (e.g. carbon certification and auditing), especially those who would be most affected by BCAs.

Funds could be allocated to firms affected by a BCA, or placed in a general climate fund. The first option could be administratively complex and raise allegations of special subsidies; in general, providing compensation to directly affected firms is controversial and could be considered illegal by the WTO.

A number of global funds focused on developing countries, such as the UNFCCC’s Green Climate Fund and Adaptation Fund or the Special Climate Change Fund, could serve as beneficiaries of a BCA. Targeting the financing to countries most affected by the BCA would increase its acceptability by confirming its environmental objectives and reducing its negative impacts on revenues of trading partners. It would align its workings with the UNFCCC’s principle of Common but Differentiated

Responsibility and Respective Capabilities (CBDR-RC), reducing the risk of a successful appeal to the GATT's Article XX exceptions) (Marcu, Mehling and Cosbey, 2020_[10]); (Prag, 2020_[11]).

Hence, establishing a special BCA climate change fund could be in order, even if it meant using existing entities such as the Green Climate Fund to reach specific countries. The establishment of such a fund would further buttress the environmental credentials of the BCA. Lamy, Pons and Leturcq (2020_[2]) propose using BCA revenues for both domestic and overseas development purposes: funding the operation of an independent European agency to assess the carbon content of imported products, and creation of an energy transition fund for least developed countries.

Alternatives to BCAs

Ultimately, any BCA will be the product of a series of compromises among the potentially feuding objectives of feasibility, effectiveness, legality, and political acceptability. This includes careful assessment of BCAs against the various alternatives available for achieving the same ends.

International sectoral agreements by governments or economic actors to control emissions from a specific sector in a co-ordinated manner, such as for international aviation, are one such alternative.⁵ The cement industry has also developed its own sectoral commitment to sustainability, the Cement Sustainability Initiative.⁶ This initiative, transferred to the Global Cement and Concrete Association (GCCA) in 2019, continues to undertake climate action efforts under its Sustainability Charter, but does not include binding commitments or any sanctioning mechanisms.

In principle, sectoral agreements may be a relevant alternative to BCAs in terms of mitigating emissions and addressing leakage in carbon-intensive sectors, but the emissions reductions agreed often fall short of urgent climate goals. Those agreed in the aviation and shipping sectors are far from what is required to meet the objectives of the Paris Agreement. Furthermore, BCAs bring larger gains where abatement costs are lower.

A potential sectoral agreement "with teeth" which closely resembles a BCA is a Cooperative Sectoral Tariff Reduction (CSTR) approach. Rather than imposing a carbon tax on imports, a CSTR would reduce the tariff rate for the cleanest products in each sector, thereby creating a virtuous competition between firms aiming to "win" this benefit by lowering their emissions. This would increase scrutiny of reporting and verification by individual companies in sectors covered by the CSTR. By definition, it would also be a co-operative plurilateral arrangement, as it would require countries to jointly commit to tariff reductions as long as emissions are addressed (Banks and Fitzgerald, 2020_[11]).

A key challenge of a CSTR would be ensuring effective monitoring and verification of emissions along global value chains. Many global value chains include hundreds of inputs from many countries, some of which are themselves the product of other value chains. The costs of trying to compile data on associated emissions for specific businesses, were it feasible, could outweigh the benefits. Furthermore, given the long-term decline in tariffs, there may be limited scope to control carbon leakage via a CSTR.

⁵ Studies on global sectoral agreements include (Dröge, 2010_[19]) and (Baron and Garrett, 2017_[20]).

⁶ See: the Cement Sustainability Initiative (CSI), <https://www.wbcsd.org/Sector-Projects/Cement-Sustainability-Initiative/Cement-Sustainability-Initiative-CSI>.

A new generation of plurilateral or bilateral trade agreements could also help safeguard domestic climate ambition without recourse to BCAs. Regional Trade Agreements have increasingly included environmental and climate change provisions, but so far have not been very effective in reducing GHG emissions. Even recent free trade agreements such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), EU-Singapore, EU-Canada and Korea-Australia have only contained consultation, co-operation and “best endeavour” clauses with respect to climate policy actions. For example, the EU-Singapore Free Trade Agreement calls on the parties to take “proper account” of the need to reduce GHG emissions when designing subsidy systems (EIU, 2019^[12]).

New, more specific climate-trade agreements could carry more promise.⁷ The Agreement for Climate Change, Trade and Sustainability (ACCTS), negotiated by a group of small, trade-dependent countries (Costa Rica, Fiji, Iceland, New Zealand and Norway), is an early example focusing on fossil fuel subsidies, product certification and reducing tariffs on environmental goods. However, such agreements, while promising, can take several years to implement and start delivering results, especially when aimed at a large set of countries. The slow progress in the WTO Environment Goods Agreement negotiations, launched in 2014, is a case at hand.

It is also possible to link carbon markets across borders and continents among countries with similar carbon markets and ETS systems, in particular with comparable carbon price levels. Two examples of such integrated systems are the California-Quebec carbon market and the one between the EU and Switzerland.

Carbon leakage can also be addressed through domestic, unilateral policies, such as excise taxes on the consumption of carbon-intensive products. Such consumption taxes are used in vehicle registration – France’s bonus/malus vehicle incentive system, for example⁸ – and have been shown to encourage the uptake of cleaner cars as consumers shift to less polluting vehicles to avoid the tax and benefit from subsidies to cleaner vehicles. However, recent evidence shows that the social costs of such schemes in some countries have been higher than the benefits (Teusch and Braathen, 2019^[13]).

Finally, it should not be forgotten that many countries, including those considering BCAs, have subsidies in place for sectors such as agriculture, energy, and industry that – in addition to distorting markets and trade – can be harmful to the environment, thus undermining efforts to implement a BCA or carbon price. Efforts to reduce such subsidies have been limited (OECD/IEA, 2019^[14]). The OECD estimates that production and consumption support for fossil fuels actually increased 10% in 44 OECD and G20 economies in 2019, ending a five-year downward trend.⁹ Removing such government support would contribute to global solutions for curbing carbon emissions while generating public funds for other, more productive, purposes, including supporting cleaner fuels and technologies, and ensuring that international trade takes place on a level playing field. This would produce win-wins for both trade and the environment and should therefore be part of any country’s or economic region’s climate action.

⁷ See also (Lamy, Pons and Leturcq, 2020^[2]).

⁸ See (D’Haultfœuille, Givord and Boutin, 2014^[18]).

⁹ <https://www.oecd.org/fossil-fuels/data/>.

Questions for discussion:

Against this background, participants in the 40th Roundtable on Sustainable Development are invited to consider and discuss the following questions:

- In the current geopolitical and economic context, what are the prospects for BCAs and possible complementary and alternative environmental measures to foster increased ambition on climate globally by limiting carbon leakage?
- What specific design features (sectors, countries, scope) would best achieve the goals of BCAs while ensuring their acceptability and avoiding their being perceived as an extra-territorial fiscal or competitiveness measure?
- What are the possible uses for BCA revenues and how could they help achieve environmental goals while addressing the possible challenges to the agreement and implementation of BCAs?

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