

International Cooperation on BCAs: Issues and Options



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1. Introduction

Building on the successful track record and favorable reception of Phase I (2019-2020) and Phase II (2020-2021) of its project “Border Carbon Adjustments in the EU”, the European Roundtable on Climate Change and Sustainable Transition (ERCST) has extended its analysis of the evolving European Union Carbon Border Adjustment Mechanism (CBAM) into a third Phase, providing decision makers and stakeholders with a better understanding of critical issues and options as this file advances through the legislative process. Phase III of the ERCST project is intended to provide in-depth analysis of issues that have either been left unsolved or faced criticism in the initial legislative proposal.

The present report is the third in a series of four reports that together form the third phase of the “Carbon Border Adjustment in the EU” project; each of the reports provides in-depth analysis and reflection around identified issues. The first report¹ looked at the treatment of exports in the CBAM, whereas the second report² assessed the possibilities for, and implications of, including indirect (scope 2) emissions in the scope of the EU CBAM.

This paper, “International Cooperation on BCAs: Issues and Options”, is intended to provide stakeholders with an overview of how international cooperation can play a role in the context of CBAM and Border Carbon Adjustment (BCA) schemes more generally, what role BCAs can play in international cooperation, and how BCAs are affected by international cooperation.

The remainder of this report is structured as follow:

- The second section of the report looks at the context and rationale for international cooperation related to BCAs, and analyses the current appetite for international cooperation in different forms;
- The third section explores potential ways of international cooperation on BCAs, describing three degrees of cooperation of increasing intensity, from relatively low to high intensity of cooperation;
- The fourth section analyses the role that “climate clubs” could realistically play in international cooperation on BCAs, based on tracing the history of international cooperation on carbon pricing, as well as the preceding analysis of different degrees of cooperation; and,
- The last section brings together recommendations on both the content and the form of international cooperation on BCAs, and the EU CBAM in particular.

¹ Report “Treatment of Exports in the EU CBAM” (A. Marcu et al, 2022); available at: https://ercst.org/treatment_of_exports_in_the_eu_cbam/

² Report “Indirect Emissions in the EU CBAM” (A. Marcu et al, 2022); available at: https://ercst.org/treatment_of_exports_in_the_eu_cbam/

2. International Cooperation on BCAs: Context and Rationale

2.1. Context: proliferation of BCA Proposal and Debate

Border Carbon Adjustment (BCA), as a topic, has been the subject of debates and proposals in the last couple of years. Initially mainly treated as a marginal issue by academic and provocative panels, interest in BCAs amongst various stakeholders has grown over time. The common wisdom was that it could not be applied in practice, as any WTO-compatible version would either too complex or ineffective.

However, the EU has given the issue of BCAs a significant impulse. As it sought to implement the Paris Agreement (PA) and drive ambition beyond the Paris Agreement, the European Commission unveiled an ambitious set of policy initiatives with a reduction of 55% by 2030 as its centerpiece. The “European Green Deal” (EGD) of 2019 is aimed at making the EU reach carbon neutrality by 2050. Launched in July 2021, the package of proposed measures termed “Fit for 55” included the introduction of a Carbon Border Adjustment Mechanism (CBAM). In Spring 2022, the European Council reached a general approach, and the EU Parliament passed its own version, with the triologue process having started in July, 2022.

The main objective of the CBAM is to address the risk of carbon leakage caused by asymmetrical climate policies of non-EU countries, and to allow the EU to pursue a higher level of ambition with the EU ETS. It has many other potential objectives, some criticized for not being aligned with the letter or the spirit of the Paris Agreement, such as aiming to encourage partner countries to establish carbon pricing policies similar in form and ambition to those of the EU, in order to fight climate change.

Unsurprisingly, this initiative of the EU has provoked reactions around the globe. While internationally the discussion around BCAs has tended to focus on a conceptual understanding of BCAs, their advantages, and disadvantages, as well as their potential impacts at national and sectoral levels, countries outside the EU have shown a variety of reactions in response to this EU initiative, and the Commission proposal.

Their responses are broad and sometimes unexpected, and will likely evolve over time. Some are considering putting in place mechanisms such as domestic carbon prices in order to qualify for crediting from the EU CBAM³.

Other countries such as the UK, Canada, and the US are now examining the possibility of also putting in place BCAs systems. Like the EU, these jurisdictions have in place ambitious decarbonization strategies and plans, and are therefore looking to address the risk of carbon leakage while safeguarding the international competitiveness of their energy-intensive and trade-exposed (EITE) industries.

In the UK, the House of Common’s Environmental Audit Committee (EAC) launched an inquiry into carbon border adjustment mechanisms to explore how such a mechanism could potentially help meet the national environmental objectives and to obtain a better understanding of BCAs and their wider impacts, risks, and opportunities. This inquiry fed into recommendations to the UK Government: in the first quarter of 2022, the EAC recommended that work on implementing a UK BCA start as soon as possible for a roll

³ Korsunskaya, D., & Marrow, A. (2021, September 23). *Russia considering own carbon tax as EU prepares one - Vedomosti*. <https://www.nasdaq.com/articles/russia-considering-own-carbon-tax-as-eu-prepares-one-vedomosti-2021-09-23>.

out by the end of the decade. A month later, the UK Government confirmed in a written statement to the Parliament that it would consult on implementing a CBAM or product standards to mitigate carbon leakage, not to commit the Government in any course of action, but to better understand the options on the table.⁴

Canada is exploring the potential of a border carbon adjustment. To this end, a Consultation on BCAs was launched from Summer 2021 to the beginning of 2022. This consultation was based on the discussion document ‘Exploring Carbon Adjustments for Canada’⁵, framing BCAs in the Canadian and international context. The consultation primarily sought feedback on three perspectives⁶ with regard to the potential implementation of BCAs: policy/environmental outcomes, economic pressure, and international engagement and trade relations. At this time, the Government of Canada has not yet communicated any responses to received inputs.

In the US, discussions on BCAs date back over a decade to proposals to include an “International Reserve Allowance Program” in federal climate legislation, imposing compliance obligations on importers of specified products under a federal emissions trading system. While efforts to pass federal climate legislation failed at the time, BCAs continued to feature in the U.S. climate policy debate, for instance finding mention in the House of Representatives’ Green New Deal Resolution (H.Res. 109) passed in early 2019, and in President Biden’s Climate Plan as part of his election campaign. In 2021, Congressional Democrats proposed the inclusion of a ‘Carbon Polluter Import Fee’ in the Budget Resolution for Fiscal Year 2022, and two bills introduced in the 117th Congress have proposed adopting a BCA even in the absence of a domestic carbon price.

In 2021, a legislative proposal titled the “Fair, Affordable, Innovative, and Resilient Transition and Competition Act” (S.2378) outlined a BCA that would cover imports of steel, aluminum, cement, and iron, applying an implicit carbon price borne by U.S. producers (the “domestic environmental cost incurred”). Foreign countries that have achieved a comparable level of climate policy effort and Least Developed Countries (LDCs) would be exempted. The second bill, the Clean Competition Act (S. 4355) proposed in 2022, would implement a BCA from 2024 covering primary goods from all energy-intensive industries covered by the U.S. Greenhouse Gas Reporting Program,⁷ and impose a carbon intensity charge on emissions above a sectoral average. Neither bill is likely to pass Congress before the end of the current legislative period, at which point they would have to be newly introduced.

If the interest around BCAs has been driven by the EU CBAM initiative, it is also clearly a consequence of increasing climate ambition around the world. As more and more countries take action to implement the Paris Agreement objectives, BCAs are more widely considered. The increasing interest in BCAs may well result in the implementation of a patchwork of BCA approaches. In this context an international

⁴ United Kingdom, 2022. “Update on Carbon Leakage Mitigations. Statement Made on 16 May 2022.” 16 May 2022. <https://questions-statements.parliament.uk/written-statements/detail/2022-05-16/hcws26>

⁵ <https://www.canada.ca/en/department-finance/programs/consultations/2021/border-carbon-adjustments/exploring-border-carbon-adjustments-canada.html>

⁶ [Consultation on Border Carbon Adjustments - Canada.ca](https://www.canada.ca/en/department-finance/programs/consultations/2021/border-carbon-adjustments/consultation-on-border-carbon-adjustments-canada.html)

⁷ From 2024, that Includes: fossil fuels, refined petroleum products, petrochemicals, fertilizers, hydrogen, adipic acid, cement, iron and steel, aluminum, glass, pulp and paper, and ethanol). From 2026: expanded to finished goods containing more than 500lbs covered primary goods (threshold reduced to 100lbs in 2028). Goods imported from LDCs are excluded.

cooperative approach could help minimize the potential adverse impacts which may result from the emergence of different BCAs policies and tools.

Finally, to close the discussion around BCAs and the CBAM, countries have so far by and large sought to enter dialogue and maybe adapt to the incoming EU CBAM, albeit not without voicing some criticism in different fora, including in the framework of the WTO and UNFCCC. Also, some countries have started to look at alternatives and complements to a BCA, especially as they see potential risks to international trade or a CBAM may not fit in the approach that the national government may wish to adopt. Examples are Germany, which during its presidency of the G7 secured adoption of the G7 Statement on Climate Club, and the EU and the U.S., which, with their Joint Statement on Trade in Steel and Aluminum, set out ways to address leakage and industrial competitiveness without necessarily featuring a national BCA. These efforts are mentioned again in Section 4 below.

2.2. Interest in international cooperation

The problem that BCAs are designed to address – asymmetric climate policy ambition, leading to competitive pressures and the risk of carbon leakage – could, by definition, benefit from international cooperation.

The history of international of cooperation is instructive. International cooperation to achieve Nationally Determined Contributions (NDC) and the global goals under the Paris Agreement is critical and finds expression in Article 6 of the Paris Agreement and other elements.

Cooperation can take many forms either under the “market cooperation” umbrella, or through non-market approaches: Article 6, including its Article 6.8 on non-market approaches. Countries agreed to the implementing rules for three instruments that help Parties cooperate to meet their intended emissions reductions and adaptation goals as captured in their NDC⁸.

The approach that was first, and still continues to some degree to be examined, is that of a global carbon price that addresses competitive pressures and the risk of leakage in the context of international strong decarbonization ambitions.

However, creating an international linked carbon market resulting in a global carbon price, has proved to be an elusive solution. Efforts in that direction are still on-going, but the final objectives are seen as challenging to achieve.

There are almost no international links between emissions trading systems, and given current geopolitical realities, any prospect that the U.S., the EU and China might negotiate a global carbon market is not something that EITE industries can rely on in the near future. In that sense, the failures of international cooperation on carbon pricing are what has given rise to policymakers exploring BCAs as a more possible solution.

⁸ <https://unfccc.int/process-and-meetings/the-paris-agreement/the-glasgow-climate-pact/cop26-outcomes-market-mechanisms-and-non-market-approaches-article-6>

However, the feasibility of BCAs themselves could depend to some degree on international cooperation. For one, national BCAs have been seen as a controversial tool.⁹ The UNFCCC principle of common but differentiated responsibilities and respective capabilities (CBDR-RC) recognizes that not all Parties to the UNFCCC can respond in the same capacity to climate change, requiring developed countries to take the lead in mitigation efforts.

A BCA may limit market access for high-carbon foreign producers, who may be located in developing countries. At the same time, it is difficult to imagine developed countries pursuing their efforts (leading, in line with their responsibilities under the principle of CBDR-RC) if those efforts simply result in leakage¹⁰ and *de facto* deindustrialization.

Countries have also raised concerns about discriminatory BCA systems,¹¹ leading to predictions of potential legal challenges under the WTO. Additionally, EU institutions are under pressure to include in the CBAM elements that could make a WTO challenge more likely to succeed. This is specifically the case for export rebates, without which the CBAM is seen as insufficient by influential EU stakeholders.¹² Another aspect is that of indirect emissions, whose inclusion would increase the risk of arbitrariness as well as broaden the scope for resource shuffling and other avoidance tactics.¹³

This has already fed, and may increasingly feed, into the UNFCCC discussions under Art 4.15 of the Paris Agreement, a provision that addresses response measures to climate change, including attempts to force other Parties to the Paris Agreement to buy into a top-down approach to carbon pricing both in terms of level and approach. This can be seen as running against the spirit and letter of the Paris Agreement and the NDCs as its founding blocks.

International cooperation on BCAs could thus offer an opportunity to agree, share views, and coordinate on best practices to collaboratively preempt and maybe mitigate potential challenges under the UNFCCC and WTO.

⁹ Quick, Reinhard, 2020. 'Carbon Border Adjustment: A dissenting view on its alleged GATT-compatibility'. *Zeitschrift für Europarechtliche Studien* 23 (4): 549–96. <https://doi.org/10.5771/1435-439X-2020-4-549>

¹⁰ <https://www.iisd.org/articles/carbon-border-adjustment-global-cooperation>

¹¹ BASIC, 2021. 'Joint Statement Issued at the Conclusion of the 30th BASIC Ministerial Meeting on Climate Change Hosted by India on 8th April 2021'. <https://www.gov.za/speeches/joint-statement-issued-conclusion-30th-basic-ministerial-meeting-climate-change-hosted>

¹² For details, see A. Marcu et al., 2022, "Treatment of Exports in the EU CBAM", available at: https://ercst.org/treatment_of_exports_in_the_eu_cbam

¹³ For details, see A. Marcu et al., 2022, "Indirect Emissions in the EU CBAM", https://ercst.org/treatment_of_exports_in_the_eu_cbam

3. Three Degrees of Cooperation on BCAs

There are many ways in which we could conceive the role of BCAs in international cooperation for climate action. What follows is a description of three types of roles, in progressive degrees of cooperative intensity:

- Agreement on principles and best practice in the elaboration and implementation of BCAs/CBAM
- Harmonization of relevant standards and methodologies
- Common application of BCAs, in club fashion

3.1. Agreement on principles and best practice¹⁴

Countries could agree on the principles and best practices to be employed in the elaboration and implementation of BCA/CBAM. This would not involve agreeing to have identical regimes; BCAs are mostly seen as an accompaniment to national carbon pricing regimes, and their final shape is dictated by national specifics that differ in every country. Agreement at the level of principle and best practice would allow for such differences in the final shape of the national regimes, while ensuring alignment in some of the critical regime characteristics.

Part of the value of such cooperation would be in helping counter vested interests at the national level that might push for design elements that inherently favor domestic producers. Agreement of this kind might also temper the international opposition to a unilateral BCA, both by giving it a multilateral character and, more importantly, by ensuring that it respects commonly agreed rules of fair play. As well, explicitly or implicitly, such agreement would amount to a significant outcome: acceptance of BCA as imposed by other jurisdictions (provided they abided by the agreed principles and best practice).

The list below is a non-exhaustive illustration of the types of agreed principles and best practices that such international cooperation might achieve:

Principles

- **Primacy of leakage protection:** BCA should seek to prevent leakage. This is an environmental objective, and is distinct from objectives such as preserving competitiveness, punishing other countries for weak climate policies, raising revenues, or forcing others to adopt policies that similar to those adopted by the country imposing a BCA. BCA should not be a way to impose changes in NDCs and impose top-down approaches.
- **Destination principle:** BCA can be seen as an adapted embodiment of the destination principle of taxation, which dictates that goods should be taxed in the jurisdiction in which they are consumed, and which leaves it to the implementing country to set tax rates, and rebate those taxes at the point of export.

¹⁴ This section draws from Cosbey (2021).

- **Revenue sharing:** A significant portion of the revenue from a BCA should be rebated to exporting firms or countries to help address the inevitable impacts of the regime.
- **No double protection:** BCA charges on foreign goods should be adjusted downward to account for any domestic measures that shield covered sectors from a full carbon price.
- **Credit for equivalence:** BCA should focus on granting credit for explicit carbon prices already borne by foreign goods in the country of export, taking account of any modification of the effective carbon price by protective measures such as free allocation. However, crediting other approaches need to be explored and not rejected as a matter of principle as this issue needs to be considered in the context of the Paris Agreement.
- **Openness:** There should be meaningful and timely consultation on draft regulations with affected trading partners, and full transparency of the regime's implementation and operation.

Best practice:

- **Coverage:** BCA should only cover goods that are subject to domestic carbon pricing.
- **Use of actual data:** The first option for determining GHG-intensity of imports should be actual data, rather than default assumptions.
- **Exemptions:** There should be no national exemptions from BCA coverage based on national policies (that is, based on the importing country's judgement of the adequacy of the exporter's climate ambition).
- **International standards for data:** There should be a single agreed international standard (with sector-specific adaptations) for calculating GHG intensity of products.
- **Mechanisms for appeal:** There should be independent mechanisms to appeal any decisions or judgments taken under the BCA regime with respect to foreign producers or goods.

Challenges:

While it is hard to argue against the potential value of international agreement on principles and best practice, the hard question is how it could be achieved. No single institution has an obvious jurisdiction to host such negotiations, though the WTO and the UNFCCC could both lay claim to it were they so inclined. To date, neither institution has seen fit to convene a process that some members/Parties would see as highly controversial.

Timing is also an issue. Any conceivable process of agreement would probably be concluded, or even started, *after* the entry into force of the EU's CBAM. This would make the EU wary of participating in a process that might ultimately arrive at guidance that differed from the EU practice. Yet it is inconceivable that any such process not include the EU, as the pioneer in this space.

3.2. Harmonization of relevant standards and methodologies

Another type of international cooperation on BCAs, slightly more involved in terms of integrated action, would see countries that are implementing such regimes agree to use common standards or accounting

regimes. Easily the most important of these would be the standard to which firms need to report the greenhouse gas (GHG) intensity of their products, but there are others, for example a standard methodology for quantifying the effective carbon price paid in countries of export.

While there are several internationally recognized standards for reporting GHG intensity of activities at the installation or organization level, such as the [GHG Protocol](#) and [ISO 14064-1](#), the available standards for product-level GHG accounting – such as [ISO 14067](#) – are not so widely accepted or well developed. The EU has contracted with a consultant to recommend how it should conduct the product-level GHG accounting that will be necessary under its proposed CBAM. Its choices will be influential; the EU will be creating a significant global first mandatory reporting regime for GHGs embedded in many of the goods covered by the CBAM.

The worst-case scenario would see other countries also institute BCAs, each with their own different reporting methodologies and requirements. This would be a throttle on global commerce in the covered goods, making producers maintain different accounting procedures and certify to different standards for each export market with a BCA. Smaller producers would be disproportionately harmed. Harmonization, conversely, could allow producers to use one accounting system and certify once, reducing transaction costs. Similarly, countries with BCAs could use common regimes to accredit verifiers to those standards, and could recognize accredited verifiers from each other's jurisdictions. Doing so would help keep down the costs of certification.

Challenges:

Harmonization of standards is seldom simple, in part because each country is differently situated. To take one example: how should a BCA regime account for GHGs embedded in recycled steel as an input to steelmaking? The answer might be different in China, where steelmaking uses little recycled steel, and the US, where it is used by most producers. Typically, harmonization is also difficult because it involves some parties—regulators, companies—having to change entrenched systems, though early action may prevent this from being a significant barrier in the case of BCAs. Having the EU out ahead on such standards will complicate matters if it is done unilaterally, but it could also be a driver that ultimately forces others to coalesce around the EU standard as an accepted benchmark.

3.3. Common application of BCAs

Some have suggested that BCAs could form an important element of climate clubs.¹⁵ Discussed in greater depth in the next section, climate clubs are coalitions of countries operating in coordinated and ambitious fashion to address climate change. In the context of this paper, international cooperation would consist of a group of countries adopting and applying a common BCA as one element of the club.

In such a configuration, BCA could serve several purposes. It could provide a punitive common barrier to goods from non-club members, as an incentive to have them join the club. The flip side is that it would

¹⁵ Bierbrauer, F., Felbermayr, G., Ockenfels, A., Schmidt, K. M., & Südekum, J. (2021). A CO₂-Border Adjustment Mechanism as a Building Block of a Climate Club. *Kiel Policy Brief*, 151. <https://www.ifw-kiel.de/publications/kiel-policy-brief/2021/a-co2-border-adjustment-mechanism-as-a-building-block-of-a-climate-club-16065/>

protect the club members from leakage as they pursue the ambition that is the club's main objective. In other words, it could serve as a stick against non-members and a carrot for members.

Challenges:

As noted above, BCA is a reflection of the underlying carbon pricing mechanism that it accompanies. To have a common BCA, countries would need to have common carbon pricing policies. While such an end state may be a good notional goal, it may be unrealistic in the timelines dictated by the climate crisis – that is, in the next decade.¹⁶

There are currently 35 countries with carbon pricing in place, but they differ in many aspects, starting from their final outcome, price range: anywhere from less than a dollar to over a hundred dollars.¹⁷

Unlike those countries with a carbon tax, the EU could not commit to a particular carbon price as the price of EUAs is determined by supply and demand. Most national carbon pricing regimes differ in terms of sectors covered, gases covered, offsets available, mechanisms like free allocation and tax holidays to blunt competitiveness and leakage risks, and even the fundamental units of accounting: total emissions or emissions intensity.

Moreover, those many differences are all rooted in the unique circumstances of each country – their economic structure, their history and politics, their public opinion. In each country with carbon pricing, the regime is the product of a hard-fought effort that involved compromises to garner agreement from competing domestic political and economic factions. It is hard to imagine that these regimes could be easily or quickly revised and harmonized in the service of an international collaboration, however urgently necessary.

If the pricing regimes are not harmonized, it means that the BCAs accompanying them cannot be common in any meaningful sense. Even if club members agreed on design elements of carbon pricing, they would also have to agree on a specific common price. Otherwise, there would be risk of leakage within the club.

¹⁶ Shawcat, A., Cosbey, A., & Sartor, O. (2022). *International climate cooperation for energy-intensive industry: A (realistic) proposal*. Agora Industry. <https://www.agora-energie.wende.de/en/publications/international-climate-cooperation-for-energy-intensive-industry/>

¹⁷ World Bank. (n.d.). *Carbon Pricing Dashboard*. https://carbonpricingdashboard.worldbank.org/map_data

4. Climate Clubs: A Viable Option for BCA Cooperation?

4.1. Climate Clubs: An Ambiguous Concept

Already introduced in the previous section, the notion of “climate clubs” has seen a surge in interest as a potential vehicle for climate cooperation. Conceptually, climate clubs are rooted in economic club theory, which formally assesses the conditions and implications of cooperation around an excludable, but non-rivalrous “club good” by limiting access to that good – and hence the benefits arising therefrom – to club members, while restricting access for non-members or members who fail to meet the conditions of club membership.¹⁸ Much of the early literature on club theory focused on the optimal size of clubs in different contexts, such as telecommunication networks, customs unions or military alliances, by identifying the point at which marginal congestion cost exceeds the marginal benefits from additional membership.¹⁹

Discussion of clubs in the context of climate change first emerged over a decade ago in response to what some see as the limitations of multilateral climate cooperation, notably the difficulties in securing the entry into force of the Kyoto Protocol after U.S. withdrawal and the disappointing outcome of the climate negotiations in Copenhagen, which were meant to secure a robust basis for international climate cooperation beyond 2012.

Acknowledging the difficulties of securing universal agreement to robust commitments among almost 200 sovereign states, several proposals at the time envisioned cooperation on a smaller scale as a pragmatic way to overcome the obstacles encountered at the multilateral level.²⁰ While they may be pragmatic, they also run a very real risk of undermining and unravelling the hard-won UNFCCC from Rio '92 and now the Paris Agreement. A limited club will run contrary to the principles of these agreements – you can't have a cake and eat it too.

Many such proposals have applied the label of “clubs” far more loosely than its definition in formal club theory and included any form of minilateral cooperation between a subset of large emitters or politically and economically influential jurisdictions to address one or more facets of climate change, including sectoral arrangements, carbon markets, technology transfer, climate finance, emissions transparency, and so on.

A recent typology of approaches to climate cooperation with less than universal membership distinguishes between types of clubs based on the objectives they pursue, the mechanisms they deploy, and the form they are vested in: normative clubs based on a shared commitment to certain climate policy objectives; bargaining clubs designed to facilitate more effective targets, measures and rules; and transformational

¹⁸ Buchanan, J.M. 1965. “An Economic Theory of Clubs”, *Economica*, New Series, Vol. 32, No. 125, pp. 1–14

¹⁹ Cornes, R., & Sandler, T. 1996. *The Theory of Externalities, Public Goods, and Club Goods* (2nd ed.). Cambridge: Cambridge University Press, at 347-356

²⁰ See, e.g., Weischer, L., Morgan, J. and Patel, M. 2012. “Climate Clubs: Can Small Groups of Countries make a Big Difference in Addressing Climate Change?” *Review of European Community and International Environmental Law*, Vol. 21, No. 3, pp. 177-192. <https://doi.org/10.1111/reel.12007>

clubs with “legally binding membership rules, tangible club benefits and sanctioning mechanisms that seek to change the incentive structure of a select group of members.”²¹

It is the last type of club, the “transformational club”, which comes closest to the formal notion of a club centered around an excludable club good as defined in economic club theory. Perhaps the most prominent articulation of this type of club comes from William Nordhaus, who has argued that sanctions against non-participants in the form of trade penalties are necessary to induce a stable coalition with high levels of abatement.²²

The joint deployment of a BCA by a coalition of like-minded countries to condition market access for imports from non-club members – the third and most intense degree of cooperation on BCAs described in the preceding section – would fit this understanding of a club. As will be shown below, however, the evolution of political discussions and relevant arrangements implies lacking support for such a transformational climate club involving BCAs. As argued in the concluding section, this diagnosis justifies recommendations about the most efficient allocation of political resources during times of multiple competing crises.

4.2. From Concept to Implementation? Lessons from the Carbon Pricing Cooperation

The evolution of climate cooperation around carbon pricing over the last two decades offers instructive insights into the prospects for a transformational climate club involving common application of a BCA. Underpinned by a growing body of economic literature suggesting its primacy as a cost-effective tool to manage climate change, the idea of a uniform global carbon price has served as an aspirational beacon for country negotiators and countless recommendations issued by influential bodies such as the Organisation for Economic Co-Operation and Development (OECD), the International Monetary Fund (IMF), and the World Bank.

A provision to enable international emissions trading between Parties to the Kyoto Protocol, inserted primarily due to insistence of a U.S. delegation that was driven by concern about the economic cost of mitigation measures and encouraging results under its domestic market-based system for air pollutant emissions, experienced limited uptake, however, mostly due to the politically rather than economically motivated decisions taken by public governments.²³

Instead, the decade following the entry into force of the Kyoto Protocol and leading to adoption of the Paris Agreement saw a gradual proliferation of carbon pricing systems at the national and subnational level, following very different designs and implementation trajectories to reflect vastly different socioeconomic and political realities. During this period, the vision of a global carbon price gave way to alternative roadmaps for carbon pricing cooperation, such as an integration from the bottom up through bi- and eventually multilateral linkage of emissions trading systems.

²¹ Falkner, R., Nasiritousi, N. and Reischl, G. 2022. “Climate clubs: politically feasible and desirable?” *Climate Policy*, Vol. 22, No. 4, pp. 480-487, <https://doi.org/10.1080/14693062.2021.1967717>

²² Nordhaus, W.D. 2015. “Climate Clubs: Overcoming Free-Riding in International Climate Policy”, *American Economic Review*, Vol. 105, No. 5, 1339-1370

²³ Shishlov, I., Morel, R., and Bellassen, V. 2016. “Compliance of the Parties to the Kyoto Protocol in the First Commitment Period”. *Climate Policy*, Vol. 16, No. 6, pp. 768–82. <https://doi.org/10.1080/14693062.2016.1164658>

As late as 2010, for instance, the European Commission issued a communication describing the goal of linked emissions trading across all major OECD economies by 2015, and an expansion to emerging economies such as China, India and Brazil by 2020.²⁴ In practice, however, only few such links were successfully negotiated, with only two currently in place between emissions trading systems in the EU and Switzerland, while on the other side of the Atlantic between California and Québec.

Political considerations, often unrelated to carbon pricing and climate change, have routinely burdened such linking negotiations, and the often significant differences in system design, for instance on the stringency of the emissions cap, flexibility options such as recognition of offset credits, and inclusion of price and supply management systems, have proven to be substantial obstacles to system integration, yet they are inherent consequences of the aforementioned variations in political and socioeconomic contexts.²⁵

Recognizing the steep political obstacles to broad alignment of carbon pricing systems, another alternative path towards greater cooperation across carbon pricing systems emerged in the years prior to adoption of the Paris Agreement, that of Networked Carbon Markets (NCM) endorsed, among others, by the World Bank. Instead of seeking alignment of policies, this conceptual proposal would have accommodated and indeed embraced system differences by creating a rating process to infer the mitigation value of different policy approaches, thereby rendering these comparable and any resulting units fungible, although potentially at a discount.²⁶

Again, however, the prospect of third parties rating the robustness of climate policies deterred participation and undermined political support for this conceptual proposal. A similar fate is likely to befall the more recent proposal by the IMF to introduce a system of harmonized minimum carbon prices with price levels staggered to reflect different levels of economic development.²⁷

The inclusion of Article 6 in the Paris Agreement extends and affirms this decentralized approach to carbon pricing cooperation. Rather than creating a top-down carbon pricing mechanism at the international level,

²⁴ European Commission, *International climate policy post-Copenhagen: Acting now to reinvigorate global action on climate change*, COM(2010)86 final, <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0086:FIN:EN:PDF>, pp. 11-12: “An international carbon market should be built by linking compatible domestic cap-and-trade systems. The goal is to develop an OECD-wide market by 2015 and an even broader market by 2020.”

²⁵ Evans, S. and Wu, A.Z. 2021. “What drives cooperation in carbon markets? Lessons from decision-makers in the Australia-EU ETS linking negotiations.” *Climate Policy*, Vol. 21, No. 8, pp. 1086-1098, <https://doi.org/10.1080/14693062.2021.1953436>; Dellatte, J. and Rudolph, S. 2022. “Understanding barriers to linking heterogeneous emissions trading schemes: evidence from and lessons for Northeast Asia”, *Environmental Politics*, <https://doi.org/10.1080/09644016.2022.2061776> (online first)

²⁶ Marcu, A. 2017. *Views on Mitigation Value and its Application*. Geneva: International Centre for Trade and Sustainable Development (ICTSD), https://ercst.org/wp-content/uploads/2018/12/ercst-ictsd_mitigation_value_0.pdf

²⁷ Parry, I.W.H., Black, S. and Roaf, J. 2021. *Proposal for an International Carbon Price Floor Among Large Emitters*. Staff Climate Note No 2021/001. Washington, DC: International Monetary Fund. <https://www.imf.org/en/Publications/staff-climate-notes/Issues/2021/06/15/Proposal-for-an-International-Carbon-Price-Floor-Among-Large-Emitters-460468>

it provides a loose framework for cooperation involving international transfers of mitigation outcomes, largely limiting itself to a definition of accounting modalities and enabling procedures and infrastructure.²⁸

If cooperation on carbon pricing to date offers a cautionary tale, the earliest efforts to seek cooperation around BCAs suggest a similarly sobering trajectory. Already in 2021, for instance, the UK was rumored to be seeking discussion of BCAs in the G7 meetings it presided over that year, yet the political sensitivities of the topic even among this politically and economically fairly aligned subset of countries presumably forestalled inclusion on the formal G7 agenda.

While still serving as finance minister in the previous administration, Germany's Olaf Scholz championed a document within the Federal Government in 2021 outlining building blocks of a "cooperative and open climate club", which expressly mentioned the possibility of "a joint carbon border adjustment mechanism."²⁹ Once elevated to the Chancellery, he touted this proposal as a signature issue of his administration during the German G7 presidency in 2022. Again, however, the G7 Statement on Climate Clubs released in June 2022 fails to mention BCAs, reflecting the barriers to consensus on this divisive issue even among like-minded countries.³⁰

The EU-US Joint Statement on Trade in Steel and Aluminium calls for negotiation of open global arrangements over a two-year period that aim to address *inter alia* the carbon intensity of both sectors, yet remains vague on the tools to achieve this goal. While it lists the restriction of market access for non-participants that do not meet standards for low-carbon intensity among the actions to be taken, it (purposely ?) avoids the term of BCA. Its most concrete action is an agreement to form a technical working group to confer, among other things, on methodologies for calculating steel and aluminium carbon-intensity and share relevant data.³¹

Far from pointing towards imminent adoption of common or harmonized BCAs, thus, the tentative efforts so far to cooperate on the use of trade-related measures for industrial decarbonization and to avert leakage point in a similar direction as past cooperation on carbon pricing: towards, at most, a heterogeneous and fragmented landscape of divergent policies, in which the political support for cooperation is largely limited to exploration of common principles and objectives as well as methodologies, reflecting the first and second degrees of BCA cooperation described in the previous section. This, in turn, has implications for the most expedient deployment of scarce political capital when seeking to advance international cooperation on BCAs, as outlined in the following conclusions.

²⁸ Marcu, A.C., et al. 2020. *Decoding Article 6 of the Paris Agreement: Version II*. Manila: Asian Development Bank, <https://www.adb.org/sites/default/files/publication/664051/article6-paris-agreement-v2.pdf>

²⁹ German Ministry of Finance et al., 2021. *Steps towards an alliance for climate, competitiveness and industry – building blocks of a cooperative and open climate club*, August 2021, https://www.bundesfinanzministerium.de/Content/EN/Downloads/Climate-Action/key-issues-paper-international-climate-club.pdf?__blob=publicationFile&v=4

³⁰ Group of 7, 2022. *G7 Statement on Climate Club*, 28 June 2022, <https://www.g7germany.de/resource/blob/974430/2057926/2a7cd9f10213a481924492942dd660a1/2022-06-28-g7-climate-club-data.pdf>

³¹ European Union and United States, 2021. *Steel & Aluminium. EU-US Joint Statement*, 31 October 2021, https://trade.ec.europa.eu/doclib/docs/2021/october/tradoc_159890.pdf

5. Conclusions and Recommendations

It is fundamentally important for the EU, as it pursues the laudable climate ambition embodied in the *Fit for 55* package, to find the most effective and appropriate tools to address potential carbon leakage. The rich discussion on the subject of climate clubs or alliances reflects that urgency, and reflects a desire to explore how international cooperation might serve to enable climate ambition.

There are many conceivable roles for BCA within that sort of international cooperation. The most ambitious of those involves BCA within a club architecture, invoked as a common border measure that serves as both a club good benefiting members and a stick to punish non-members.

The critical faults with this scenario are actually contained in its original rationale. The BCA club proposition starts from the failure to achieve the ideal solution: global carbon pricing that would eliminate concerns about competitiveness and leakage in the face of ambitious climate policy. But we have spent decades pursuing linked emissions trading systems and harmonized carbon pricing with very little to show for it, other than reinforcement of the old lesson: the economically optimal is not necessarily politically achievable.

But those same political obstacles are in large part what would prevent a common BCA as part of a climate club. As a salient example, the June 2022 G7 statement on a climate club³² benefited from a remarkable alignment of circumstances in favour of agreement on BCAs as part of such a club. The idea was first proposed by Olaf Scholz as German Finance Minister, who then became Chancellor, just as Germany held the Presidency of the G7—a small group of climate-ambitious developed countries. Despite all that, it was impossible to get more by way of consensus than agreement on the value of “counter[ing] leakage at the international level.”

The problem is that any such club would need to agree on a condition of membership, some sort of harmonization of ambition that the CBAM could protect in a common manner, such as a common carbon price. That commonality, in the face of grossly different national circumstances and national climate policies, is where all previous attempts have failed. Even clubs proposing explicit differentiation of ambition are challenged to define exactly how that differentiation would be operationalized, what would constitute “adequate” ambition—a task no more straightforward than agreement on a common price.

The lessons of history argue that we need to search for international cooperation and agreement that can encompass a heterogeneity and fragmentation of policy approaches and ambition. In the context of BCA, we should strive first for high-level agreement on the principles and best practices that should guide the national-level elaboration and implementation of different BCA-type regimes.

Convergence and standards and methodologies, starting with accounting protocols for carbon embodied in traded goods, similarly brings countries together in a collaborative effort that can accommodate different national approaches, but built on the same foundations. Those common foundations would help make the final results more effective instruments of environmental protection and reduce their

³² <https://www.g7germany.de/resource/blob/974430/2057926/2a7cd9f10213a481924492942dd660a1/2022-06-28-g7-climate-club-data.pdf?download=1>.

impacts on trading partners. Presumably that would also mean less international political push-back against BCA.

Some elements of that sort of cooperation are already ongoing. The Industrial Deep Decarbonization Initiative, convened by UNIDO under the Clean Energy Ministerial, is pushing for common approaches to public procurement of low-carbon steel and cement.³³ And there are a number of non-governmental initiatives to define accounting methodologies for goods, steel in particular.³⁴ These sorts of collaborative efforts, whether or not in the context of something we all agree to call a club, are a pragmatic way forward for BCA in international cooperation.

³³ See <https://www.cleanenergyministerial.org/initiatives-campaigns/industrial-deep-decarbonisation-initiative/> and <https://www.unido.org/IDDI>.

³⁴ See, for example, RMI's Steel Emissions Reporting Guidance: https://rmi.org/knowning-the-emissions-of-your-steel-supply-chain/?utm_medium=email&utm_source=spark&utm_content=spark&utm_campaign=2022_09_08&utm_term=button.