Columbia Center on Sustainable Investment
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Event Highlights: Carbon Border Adjustments in the EU, the U.S., and Beyond

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Key Messages

- Climate change is a global environmental risk that all countries face. Collective action based on comparable domestic standards, market-based mechanisms, regulations, and financing is intended to lower global risks, and in turn, lower competitiveness and leakage issues. Border carbon adjustments (BCAs) are one of several policy solutions to minimize such risks.

- At present, domestic producers of carbon-intensive goods in the European Union (EU) must purchase allowances for each metric ton of carbon dioxide emitted. The EU's Carbon Border Adjustment Mechanism (CBAM) proposal would require that imported goods face charges and requirements similar to those that would be applied if the imported product was produced domestically.

- As more countries seek to adopt BCAs, policy makers must be aware that the design of the BCA is critical, as it inherently shapes the outcome. Priorities such as shielding domestic companies from international competitors, protecting the environment, or discouraging leakage will affect the long-term outcomes of a BCA.

- Particularly for carbon-competitive developing countries, whose operations are associated with lower emissions, it is important to have a comprehensive accounting system that accurately measures carbon emissions throughout the value chain so that these countries may verify their carbon competitiveness.

- The use of default factors and various carbon accounting methods to calculate the emission intensity of traded goods leads to significant miscalculations, which in turn can lead to importers overpaying for goods from abroad. An accurate, data-driven, and transparent carbon accounting methodology is necessary to properly implement an effective BCA.

- BCAs may face hurdles in general international law, international trade law, EU law, domestic law, and under the international climate change regime.

- A rising carbon price in Europe will certainly put pressure on industry throughout the continent, raising serious questions on how European manufacturers will remain competitive. CBAM will likely elicit a wide range of international responses from developing and developed countries, ranging from protest and retaliation to interest and coordination.

- BCAs are a novel measure in practice, and the difficulty lies in their compatibility with World Trade Organization (WTO) law, which generally depends on design features.

- Developments in international trade have the potential to be a game changer in global efforts to combat climate change. If market signals are strong enough, international agreements may catalyze great economic advantages and may successfully pressure reluctant countries into participating, thus accelerating a global shift towards a green economy.

Background

The European Union (EU)'s proposal to incorporate a Carbon Border Adjustment Mechanism (CBAM) into its Emissions Trading System (ETS) has led many to wonder: what are the economic, legal, and political implications of taxing imports based on the carbon intensity of their production processes?

Broadly, carbon border adjustments (interchangeably referred to as border carbon adjustments [BCAs]) would adjust the price of certain carbon-intensive goods to reflect the carbon output of their production processes. Carbon intensity refers to the emissions of carbon dioxide and other greenhouse gases throughout the production process of a product and per unit of production.

The EU CBAM proposal represents a significant advancement to the European carbon pricing system and has serious implications for the trade relationships between the EU and both the developing and developed world.

On November 19, 2021, the Columbia Center on Sustainable Investment (CCSI), the Sabin Center for Climate Change Law, Columbia Law School, and the International Institute for Sustainable Development (IISD) co-hosted an interactive expert panel on economic, legal, political, and technical aspects of carbon border adjustments. Watch the recording here.

The panel included contributors from a variety of expertise, who shed light on the many intersectional implications of BCAs, as well as the design of the mechanism itself, with a focus on the EU CBAM. The event was structured into two sections, with the first giving an overview of the motivation and economic implications of BCAs, as well as their structure and application. The second panel focused on the legal and political economy context of BCAs.

Ultimately, the panel highlighted the increasing importance of understanding and implementing BCAs, as they are likely to become an integral part of the global trading regime in the coming years. There is a great deal of emerging space for research and discussion among key stakeholders—including governments, climate change experts and activists, global trading organizations, the international community, and academia—about the wide-ranging impacts of BCAs.

Panel 1: Economic and Carbon Accounting Aspects

The first panel focused on the economic and carbon accounting aspects of BCAs and was moderated by Petros Mavroidis, Edwin B. Parker Professor of Foreign & Comparative Law, Columbia Law School.

Vaughan: How CBAs Fit into the Broader Discussion of Trade and Climate Change

Scott Vaughan, International Chief Advisor, China Council for International Cooperation on Environment and Development (CCICED), and Senior Fellow, IISD, kickstarted the panel by examining how CBAs fit into the broader discussion of trading tools used to protect against carbon-intensive processes and combat climate change.

Sharing his expertise in the political economy of trade and its relationship to climate change, Vaughan provided an overview of the global context and the problems that the EU CBAM proposal seeks to address.

Even before the conclusion of the North American Free Trade Agreement (NAFTA) and the creation of the World Trade Organization (WTO) in the 1990s, concerns about the competitiveness and leakage risks across borders of differing environmental regulations and standards have been central to the global trading ecosystem.

The competitive argument posits that carbon pricing mechanisms, environmental standards, carbon taxes, and stronger domestic regulations impose costs on certain domestic industries. Depending on how stringent these policy instruments are, the production costs in these countries will be higher than industries making the same goods in jurisdictions with either weak or unenforced environmental regulations.

"There are several outcomes," Vaughan explained. "One is that the [taxed] industry invests in productivity and maintains its market share. Second is that the industry is outpriced by cheaper imports and loses its market share. The third is that industry lobbies its government to weaken its environmental regulations so they can remain competitive in the global market (the race-to-the-bottom scenario), and finally that countries transfer their production to countries with weaker environmental standards (the leakage hypothesis)."

Citing data from the Organisation for Economic Co-operation and Development (OECD), Vaughan argued that while economy-wide competitiveness effects from environmental measures are generally low, for certain energy-intensive and hard-to-abate sectors, compliance costs for meeting environmental regulations can be 4–6% higher, as compared to business as usual. In plainer terms, risks around leakage and competitiveness persist.

What are some solutions to those risks? Vaughan argued that adopting a multilateral environment should be emphasized at the top of global priorities. States face similar global environmental risks including climate change. Collective action based on comparable domestic standards, market-based mechanisms, regulations, and financing is intended to lower global risks, and in turn, lower competitiveness and leakage issues. However, the Paris Agreement differs from most multilateral agreements: it is largely non-prescriptive both in the types of domestic actions that should be followed and in the level of stringency of those measures. Instead, the Paris Agreement is based on differing Nationally Determined Contributions (NDCs). Filling this gap in global environmental policy with a more uniform agreement would avoid the leakage and competitiveness issues affecting more committed states today.

Another proposal could be weakening "bad" imports, such as the recently announced joint EU–U.S. effort to curb imports of "dirty steel" from China. However, explicitly protecting against carbon-intensive imports is likely to be brought forward in disputes in the WTO.

The third option, which was recently pitched by the OECD and the WTO, would be a globally adopted carbon price. However, Vaughan questioned the proposal: "I've been skeptical of this, from a political economy perspective—is it even practical?" At this point, the first example of a global carbon tax was only recently introduced within the Glasgow Climate Pact, and it remains to be seen how effective this measure will be.

The final option, and currently the most promising one, are BCAs, to be discussed in greater detail by other expert panelists. This mechanism is currently being proposed not only the EU, but also Canada, and recently was brought into the public discourse in the United States.

Cosbey: Recent Developments in Unilateral BCA Initiatives – EU CBAM and Similar Ambitions in North America

Aaron Cosbey, Senior Associate, IISD, followed Scott Vaughan by discussing current proposals for BCAs and the need for international cooperation and trade agreements in implementing them.

The European Commission has proposed a CBAM that would come into force in 2023, with actual charges beginning to be applied in 2026. The United Kingdom is expected to follow suit, mimicking the EU regime to maintain seamless trade flows.

The EU's CBAM proposal would require that imported goods face charges and requirements similar to those that would be applied if the imported product was produced domestically. At present, domestic producers of carbon-intensive goods in the EU must purchase allowances for each metric ton of carbon dioxide emitted.

The CBAM will also take the form of purchased allowances, within a mechanism that looks like the ETS already enacted in the EU. In essence, it will apply the domestic regulations on carbon-intensive industries to foreign imports of similar goods. This accounts for all the emissions produced in the production of a good. If agreed to in the coming years, the mechanism will begin charging imports by 2026. Charges under this regime will ramp up gradually over ten years as free allowances under the ETS are ramped down.

BCAs are likely to be adopted by other key economies. In Canada, a formal consultation has begun, looking into what a BCA might look like at the Canadian border, and the United States has indicated that it will begin developing a program for border protection against high carbon goods.

Cosbey emphasized the integral symbiotic nature of BCAs with domestic policies aiming at curbing emissions. The BCA cannot stand alone; instead, it complements either a domestic carbon tax or a regulatory regime for emission trading programs and allowances. Fundamentally, BCAs apply domestic carbon pricing schemes to imported goods.

"It is not clear what a BCA could look like, absent the accompanying domestic policy [at federal level], in the United States," Cosbey said.

As more countries seek to adopt BCAs, policy makers must be aware that the design of the BCA is critical, as the design inherently shapes the outcome. Priorities such as shielding domestic companies from international competitors, protecting the environment, or discouraging leakage will affect the long-term outcomes of a BCA.

The increase in interest in the policies is fundamentally "wedded to domestic climate ambition." Referencing Vaughan, he cited tightening regulation and meaningful climate action as risks for carbon leakage.

Cosbey noted that "we're seeing more and more countries actually take meaningful climate action; we now have 81 countries with net-zero emissions pledges, covering almost 75% of global greenhouse gas emissions, and 32 countries have put those targets into law."

He concluded poignantly, by addressing future trajectories and interest in BCAs. "With that kind of increasing ambition and its trajectory," he argued, "we will increasingly see countries turning to mechanisms like BCAs to try to deal with the leakage and competitiveness issues that come along with … a world of uneven climate ambition."

Brenton: Measuring Greenhouse Gas Emissions and Local Implications of BCAs in Developing Countries

Paul Brenton, Lead Economist, Macroeconomics, Trade and Investment, World Bank, reiterated Cosbey's insight that the design and implementation of BCAs determines their real-world impact and stressed that developing countries' interests and realities must be reflected in the design process of such measures.

Brenton explained that, while studies show that macroeconomic impacts of BCAs are rather small, local impacts have the potential to be quite significant. For instance, a region that is economically dependent on a steel factory that uses coal as its main energy source (an energy source associated with high greenhouse gas emissions) would be heavily impacted by a BCA, whereas a region that features a factory powered by natural gas (associated with lower greenhouse gas emissions) would be less affected. Brenton reasoned that "it's important to look at BCAs in the context of the policy that they are implemented together with" to fully understand the scope of the impacts of BCAs. For example, the additional impact of the CBAM on trade flows will be small relative to the impact of achieving the NDC targets that the EU has set.

When it comes to the design of BCAs, Brenton recommends avoiding alternatives to a production-based emissions approach, where emissions are directly measured at the place of production. Alternatives such as default values or averages, while easier to implement, can lead to massive discrepancies in calculations.

"The carbon calculation for sugar exports from Malawi varied by 2,000% once you started using the default values mandated in the standards," he exemplified.

Particularly for carbon-competitive developing countries, whose operations are associated with lower emissions, it is important to have a comprehensive accounting system that accurately measures carbon emissions throughout the value chain so that these countries may verify their carbon competitiveness. Such a system, while more costly and arduous to implement, would facilitate countries and organizations to receive credit for lower carbon intensity in an international market that puts a price on carbon emissions.

"Reflecting the realities of production in developing countries is important, but reflecting the need to build those capacities to identify and verify carbon competitiveness is critical," according to Brenton. These efforts may be catalyzed by investors and downstream suppliers that worry about overpaying for goods that use default values to calculate carbon emissions.

Finally, Brenton pointed out that it is critical to understand the full scope of carbon emissions that are scrutinized in a BCA. He asked, "where do you draw the system boundary? Where do you draw the line at which you stop measuring emissions related to production?" In this regard, Brenton highlighted the complications surrounding the calculation of emissions associated with land-use change, particularly in developing countries where the infrastructure to support such calculations is widely unavailable.

To conclude, Brenton noted that the EU CBAM will particularly impact countries that produce heavy metals, fertilizers, and fossil fuels, and emphasized that, with the spread of BCAs around the globe, they will become more comprehensive as international and domestic climate targets become more ambitious and binding. Thus, for countries to be able to fully participate in these mechanisms and play to their strengths, the time for capacity building is now. These issues are discussed in this recent report from the World Bank: "The Trade and Climate Change Nexus: The Urgency and Opportunities for Developing Countries."

Toledano: Why BCAs Need a Robust, Harmonized Carbon Accounting Framework

Perrine Toledano, Head of Mining and Energy, CCSI, underscored the importance of accurately tracking carbon emissions throughout value chains around the world. "The EU CBAM fundamentally involves tracking emitted carbon, and for CBAM to be efficient and transparent, ideally it would use one method to properly account for this," she explained.

Currently, corporations and governments can choose from over 100 carbon accounting methodologies, each delivering different results and reporting these in different ways. There are numerous problems associated with abundant accounting methodologies. Each method uses different default emissions factors; emissions boundaries are subjectively set; the encouragement or mandate to use primary data is nonexistent; and data across different methodologies is practically incomparable.

The Greenhouse Gas (GHG) Protocol, developed by the World Resources Institute (WRI) in 2003, defines three scopes of emissions: scope 1 (direct emissions), scope 2 (indirect emissions from purchased electricity and heat), and scope 3 (emissions resulting up and down the value chain).

Though the GHG Protocol is widely respected and used, Toledano criticized companies' reporting of the three scopes of emissions. She explained: "companies are nearly free to arrange the information within the three scopes. The information on scope 3 is particularly messy, with companies double counting, picking and choosing, and doing guess work."

In addition, Toledano emphasized that the various respected accounting frameworks, including Task Force on Climate-Related Financial Disclosures (TCFD), Global Reporting Initiative (GRI), and CDP, to name a few, rely on self-reporting from companies and do not prescribe any particular accounting methodology.

To highlight the shortcomings of current accounting methodologies, Toledano referenced a recent Boston Consulting Group (BCG) report indicating that 81% of the analyzed companies incorrectly reported their emissions and had an average error rate between 30 and 40%, which Toledano attributes to the use of inaccurate default emissions factors.

"If European importers do not want to overpay," Toledano said, "they will have to seek accuracy, or else their CBAM certificate will be imposed on the basis of European default factors. Possibly, this will motivate everyone to come up with more robust carbon accounting methods relying on robust data."

Toledano recalled that CCSI, RMI, the Payne Institute for Public Policy at the Colorado School of Mines, and the Secretariat of the United Nations Framework Convention on Climate Change (UN Climate Change) form the Coalition on Materials Emissions Transparency (COMET). COMET's goals are two-fold: first, to accurately measure emissions, and second, to make emissions data comparable and reliable. Practical outputs that COMET seeks include creating "translation tables" across the various methodologies, shifting the focus to product-level disclosure and the use of primary data, and establishing fixed emissions boundaries.

Panel 2: Legal and Political Aspects

The second panel focused on legal and political economy aspects of BCAs and was moderated by Aaron Cosbey, Senior Associate, IISD.

Mehling: CBAs in the Context of Trade Law, International Law and EU Law

Michael Mehling, Deputy Director, Center for Energy and Environmental Policy Research, Massachusetts Institute of Technology (MIT), asked how CBAs and the EU CBAM in particular might respond to legal tests and restrictions.

Going beyond international trade law, Mehling discussed general international law, the international climate change regime, and EU law.

"Under general international law, you could imagine that a BCA would be challenged because it does often implicitly, sometimes explicitly, try to influence policy choices in other jurisdictions. And of course, the [carbon] calculation is very much based on physical processes that take place in foreign territory. So, you could imagine some countries challenging [the BCA] as an extraterritorial measure that violates the principles of non-intervention in the internal affairs of other states."

In regard to the international climate change regime—which includes the United Nations Framework Convention on Climate Change and the Paris Agreement—Mehling outlined that the regime takes a decentralized approach to promoting the adherence to science-based targets. The Paris Agreement, in particular, by delegating to the parties the establishment of NDCs in line with the principle of common but differentiated responsibilities and respective capabilities, decentralizes the leadership on tangible climate action. Thus, according to Mehling, the parties to the

Paris Agreement could challenge a BCA, claiming that it is "a measure in violation of the decentralized spirit of the Paris Agreement."

However, Mehling also highlighted the counterargument to such a challenge, referring to Paris Agreement Articles 2.1 and 4.1, which discuss strengthening the global response to climate change and achieving a balance of carbon sources and sinks. If one were to convincingly argue that a BCA encourages ambition on a domestic level and that it helps address leakage, then one might successfully parry the claim that it is inconsistent with the Paris Agreement's "decentralized spirit."

Under EU law, any fiscal measure to be passed in the European Parliament would require an absolute majority from all EU member states. However, in the CBAM proposal, the legal basis is Article 192, paragraph 1, which relies on a qualified majority rather than unanimity. According to Mehling, CBAM proponents designed it as a complement to existing regulatory measures precisely in order to circumvent the legal constraints that accompany fiscal measures.

Most of the tension surrounding BCAs has been in the realm of international trade law. "There is a provision in Article II, paragraph 2a [of the WTO GATT]," Mehling explained, "that allows parties to impose additional charges as long as those are equivalent to an internal tax applied to domestic products."

Even if a BCA was introduced and extra charges were placed on imported products to account for their carbon footprint, certain rules would still need to be prioritized, such as national treatment and most-favored-nation treatment. "[The importing country] must not treat products coming from foreign importers any worse or less favorable than domestically produced products, and it must not discriminate between products from different members from the WTO," Mehling clarified.

For this reason, it is crucial that the carbon intensity of each imported product is calculated accurately to guarantee that there are no miscalculations that may lead to treating foreign products less favorably.

Dröge: Expected Impacts of the EU CBAM on Emissions, Leakage, and Trade Relations

Susanne Dröge, Senior Fellow, German Institute for International and Security Affairs (SWP), shed light on the specific effects of CBAM, based upon the specific formulation of the EU's proposal. Moving beyond theory, she pointed out that the practical question that needs to be asked is "will the CBAM really bring down leakage?"

At present, the anti-leakage measure used by the EU is the free allowance allocation tool. Auctioning is the default allocation method of the EU ETS—the European cap-and-trade system. Free allocation is part of the EU ETS legislation and provides free emissions allowances to the domestic industrial manufacturers under to a certain extent, while they have to purchase additional permits from auctions or in the secondary market.

Sectors at high risk for leakage are "freely allocated" most, if not all, of the allowances they need, in order to avoid pressuring these industries to relocate outside the EU. The free allocation tool was drafted with several phases, starting from 2005 and phasing out by 2035.

The EU CBAM represents an initiative to replace the free allocation tool. According to Dröge, the EU CBAM proposal impact assessment also evaluates how much leakage reduction the CBAM options can deliver.

The fundamental problem with comparing relative to this system is that, owing to the free allocation system, there is no measurable leakage observed from the EU. Leakage would likely only be notable if tighter regulation was imposed on the most carbon-intensive sectors on top of carbon pricing.

The EU ETS will be extended to new sectors (buildings, transport, shipping) and the CBAM is part of an overall package to deliver the EU's climate targets under the Green Deal. As the new climate target for 2030 (minus 55 percent compared to 1990 levels) tremendously lowers the caps on industrial emissions, it will substantially increase the risk of leakage due to the increasing CO2-price. Leakage will be driven by imports to the EU and by losses in exports to third countries. As the EU CBAM addresses imports only, it is more difficult to assess the effectiveness of the EU CBAM.

"A rising carbon price will definitely raise the pressure on industry," Dröge said. It poses serious questions on how European manufacturers will remain competitive.

To avoid a wave of outsourcing, "it matters a lot whether or not this partial mechanism, which only covers imports—not exports—and only direct emissions will really help." If successful, the EU CBAM could stop the replacement of domestically produced goods in these sectors by more carbon-intensive imports. This would signal a key advancement in regulating and decarbonizing these high-emitting industries.

For the time being, the EU's impact assessment estimates that the CBAM design being proposed will reduce EU emissions by an estimated 1% by 2030 and global emissions in the sectors by 0.4%.

In terms of the impact on trade relations, Dröge reckons that we can expect a full spectrum of reactions. During the conception of the plan, the BASIC group of Brazil, South Africa, India and China had already indicated its interest to retaliate against what they perceive as European protectionism. However, it seems that upon the release of the proposal, these threats of trade conflict have somewhat diminished.

Commenting on this shift, Dröge indicated that the majority of the products that will be charged in the system would not come from the BASIC group, but rather from the Russian Federation.

Though Russia's reaction can be described as less than friendly, there is room for optimism. Many Russian exporters have already indicated a desire to cooperate with the system. Russia itself has begun exploring the idea of carbon pricing, to absorb the revenues domestically instead of sending them west to the EU.

In closer neighbors, Ukraine and Turkey, the reaction is mixed, though they show early signs of interest in coordinating with the EU on the proposal. Mozambique, a heavy exporter of aluminum to the EU, is also a key partner to watch in the upcoming global discussion on the CBAM.

While uncertainty persists, Dröge concluded on a positive note. "More than expected, the overall reactions by countries were positive and cooperative. There was a lot of interest especially by those with an ETS in place, such as Korea, or other countries planning for carbon prices."

BCA Measures and the WTO: Will the EU CBAM Breach International Trade Rules?

Kateryna Holzer, Senior Researcher, Center of Climate Change, Energy and Environmental Law (CCEEL), University of Eastern Finland, opened her remarks by saying that WTO law does not prohibit BCAs. The sense of urgency of climate change should be enough for a BCA to be enacted in good faith to address it.

WTO law should not discourage countries from enacting a BCA. For Holzer, "even if a country lost a case at the WTO, it would not lose on the entirety of the measure." Tackling climate change is recognized to be crucial.

She warned that, even if enacting BCAs is considered necessary, countries should not turn a blind eye on consistency issues of BCAs with international trade law. Enacting BCAs in breach of trade rules could lead to retaliation,

potentially escalating to trade wars that could harm trade relations and relationships, in turn endangering economic growth and putting sustainable development at risk.

BCAs are a novel measure in practice, and the difficulty lies in their compatibility with WTO law, which are "outdated, vague and too rigid." BCAs also lack support of WTO case law.

Generally, Holzer explained that the compatibility of a BCA with WTO law mainly depends on its design features. If the BCA qualifies as an indirect tax and does not discriminate against imports, it should generally be compliant with WTO law. Other flaws in a BCA should not be considered as problematic with regards to Article XX—the provision on exceptions in the WTO General Agreement on Tariffs and Trade (GATT).

Holzer makes a clear distinction between general carbon taxes and BCAs based on emissions trading schemes, arguing that emission trading schemes are more complex. If emission allowances are traded, they have a market value, and therefore Holzer explained that "they can't be considered to be taxes." Non-tradable emission allowances in the form of importers certificates as foreseen under the EU CBAM acquire more features of a tax but the uncertainty about their qualification as a tax vs. a regulation remains.

Emission allowances rebates on exports, currently demanded by the European industry, could create a perverse incentive for domestic industries to produce carbon-intensive products for export instead of reducing emissions. In this instance, the EU CBAM would create a new source of leakage instead of preventing it.

Holzer believes that by 2035 most of the countries to which the EU exports will also have carbon prices. These carbon prices might even converge to a global carbon price. Although Holzer recognized that her outlook is optimistic, she argued that moving toward a global carbon price would help the issue of competitiveness for exporters decrease or even disappear.

In the short term, however, Holzer said that the more realistic solution to the problem of "export rebates could be to provide them only for the most efficient producers in the EU," based on the benchmarks that already exist for free emission allowances. "There would be less incentive to produce carbon-intensive products for export." She concluded by noting that, while it is uncertain whether those rebates would alleviate some of the competitors' concerns, they could be part of the solution.

Howse: BCAs are Just One of Many Tools States Should Experiment with to Tackle the Climate Emergency

Robert Howse, Lloyd C. Nelson Professor of International Law, New York University (NYU) School of Law, positioned his remarks with a stark reminder that "what leads us to being here today is that based on the best available science we're hurtling towards planetary catastrophe." The real question, he argued, is "whether it may be already too late, based upon the technologies we have, and the coordination challenges required, to prevent that catastrophe from occurring within a few short decades."

With respect to trialing new policies, such as BCAs, Howse cautions against being overly concerned with or dissuaded by the intricate details of law or procedure. He said: "I don't think any reasonable person should overinterpret [the applicable] norms under the possibility of providing total planetary meltdown."

Instead, he argued that the best approach is to try everything and see "what sticks." Ultimately, the long and bureaucratic timeline of trade disputes tends to be significantly larger than the remaining time to make a dent in climate change. The goal, Howse said, is to keep exploring new instruments until we observe a large enough market signal that could shift the paradigm away from carbon-intensive technology.

Howse imagines an alternative to BCAs called a "climate club." Citing the work of economist William Nordhaus, Howse envisions forming a group of countries that agree on standards on carbon emissions intensity in order to achieve a green economy. The ability to participate fully in the economy could only be offered to additional countries if they were willing to accept these policies.

Howse turned to the example of the EU–U.S. bilateral trade negotiations on steel and aluminum. While the climate club vision was once an idealized thought experiment, Howse argued that with respect to the carbon-intensive steel and aluminum industries, the EU and the United States have already collaborated and developed a framework that applies a range of climate-safe policies to the sectors. When countries do not accept the invitation to join these frameworks, they are met with very limited market access.

The key to this development was that it used existing legal instruments in the EU and the United States. The biggest obstacle to ambitious climate policy in the United States is the polarization in Congress. However, when an existing trade issue has already reached the executive branch's desk, it is within presidential authority to make changes. Given the context of the existing trade dispute on steel that took place during the Trump presidency, it was legally possible for the Biden Administration to bypass the problem of inaction due to lack of congressional approval.

With regards to the EU–U.S. steel and aluminum climate club, then, the bigger question is who will join. Howse remains uncertain whether China will prefer to remain an outsider, with every trade instrument weaponized against it, or whether the economic power would choose to "get on the bandwagon. The upside is that, if Xi Jinping decides he wants to remain proactive, he can create whatever economic signals as needed to impose the sacrifices necessary to move China towards a green economy."

Will the developments in international trade be a game changer? According to Howse, it depends. If the market signals are strong enough, history shows that great economic advancements can be catalyzed by international agreement. If the transatlantic steel and aluminum negotiations are successful in sending those market signals to China to pressure participation, it may well be the tool that initiates the global shift towards a green economy.

CCSI & International Economic Governance for Climate Change Mitigation and Adaptation

Co-hosting the expert panel on BCAs held in November 2021 is part of CCSI's work to understand the underlying issues and design policies to improve international economic governance for climate change mitigation and adaptation, in line with achieving Sustainable Development Goals (SDGs) and the objectives of the Paris Agreement.

Our portfolio includes our research work as a founding member of the Coalition on Materials Emissions Transparency (COMET), our conference and study on corporate net-zero pledges, our policy recommendations on integrating climate considerations in mining contracts and approval processes for agricultural investment, and our analysis on the need to move away from climate-blind investment treaties.

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