

CLIMATE CHANGE, ENERGY AND ENVIRONMENT

# BORDER CARBON ADJUSTMENTS & CLIMATE CLUBS

A Development Perspective

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The EU's Carbon Border Adjustment Mechanism must respect global trading rules, the Paris Climate Accord's principle of »differentiated responsibilities,« and assist with decarbonization efforts.



The G7's concept for increased multilateral climate policy coordination (»climate club«) focuses on cooperation. This has the potential to accommodate the concerns of the Global South from the beginning.



Trade policy can contribute to climate change mitigation. Additional measures beyond border carbon adjustments and climate clubs are called for, not least on account of transportation-related emissions.



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## 1. INTRODUCTION

Several urgent crises have recently pushed the looming climate catastrophe from the top of the political agenda: the COVID-19 pandemic, supply-chain issues, inflation, the war in Europe and the resulting shortage of exactly the kind of fossil energy sources, in particular natural gas, that are at the heart of anthropogenic global warming – but also at the heart of our economic growth model and way of life. In this context, the fiftieth anniversary of the report of the Club of Rome on »The Limits to Growth« is a stark reminder that rising temperatures and the ensuing catastrophes are indifferent to their place on the political agenda.<sup>1</sup> In the run-up of this year's climate conferences, there has to be a renewed push for climate protection policies. And given the commitment of industrial countries to respect »differentiated responsibilities,« climate justice has to be a major part of this push, in order to achieve a truly »just« transition for newly industrialized and developing countries, who have historically contributed relatively little to the global climate crisis. At the same time, most countries in the Global South are also currently pursuing the traditional resource-intensive models for economic growth or serve as suppliers of natural resources for industrial production in the Global North, or both, thereby exacerbating the global climate crisis.

One area that is located at the center of this dominant model for economic growth is trade policy, since trade has been one of the main drivers of growth and wealth worldwide. And still, trade policy and climate policy have for the most part been treated as two separate silos, one to be governed by the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO), the other to be governed by the United Nations Framework Convention on Climate Change (UNFCCC).<sup>2</sup> Clearly, these silos need to be integrated, but the political resistance is as great as it has been against linking trade and social standards – many governments, especially in the Global South, considered the proposal for a »social clause« to be nothing but »protectionism in disguise.«<sup>3</sup> At the height of this debate, an argument was developed that provided a rationale for exporting countries in the Global South to accept the linkage of trade and labor rights: The respect of basic workers' rights, such as the right to unionize and some limited min-

imum social standards, would in fact for the most part prevent countries of the Global South from competing against each other on the basis of low wages and social standards. Preventing this »race to the bottom« would allow them to escape the »low-wage labor trap« that the uncritical embrace of neoliberal trade policy had led them into. Alas, most of the Global South governments were not convinced that a social clause would in fact improve their competitiveness.<sup>4</sup>

The climate-related trade policies that are proposed today, »border carbon adjustment« (BCA) and »climate clubs« – again by industrialized countries – provide a similar rationale concerning improved competitiveness. In short, BCAs, which are most strongly promoted by the EU, envision foreign producers paying border tariffs for the carbon that is embodied in their products, and climate clubs, promoted primarily by Germany in the context of the G7, are avenues for increased climate policy coordination between trading partners. The competitiveness rationale goes as follows: As industries and markets move toward lower emissions and decarbonization, demand for climate-neutral products will rise. Thus, exporters everywhere are well advised to invest in the decarbonization of their production. By doing so, they will escape BCA penalties and may even become members of a climate club. Alas, once again most Global South governments (and many others) remain unconvinced and speak of »green protectionism.« They point to the »differentiated responsibilities« and capabilities that the governments of industrialized countries have accepted in the Paris Climate Accord. And thus, there are debates on the necessity and specific design of these instruments as well as on parallel measures to assist exporting countries in the Global South and beyond in their decarbonization efforts as part of the introduction of trade policy measures.

Even though there are considerable differences between the European Union (EU) member states, EU standards are today the benchmark for ecologically efficient production throughout the union. But while the EU and other industrialized countries may provide the state of the art in green technology and show the most climate ambition in terms of reducing emissions and moving to »green markets,« there is a certain amount of hypocrisy involved: The consequences of their past and present consumption – for which international trade and cross-border supply chains provide the basis – make their responsibility to accommodate the concerns of the Global South painfully obvious. They have profited from increased trade for a long time. At the same time, a disregard for anthropogenic climate change and an exclusive focus on economic growth and development is no longer possible. Two key questions arise. First, can trade policy contribute to mitigating climate change and curbing global emissions significantly by providing incentives for climate-neutral trade? Secondly, what effects do such trade policies have on countries outside of the EU, particularly those in the Global South, and what can be done to

1 Donella H. Meadows, *The limits to growth. A report for the Club of Rome's project on the predicament of mankind* (New York: Universe Books, 1972); Sandrine Dixson-Declève, Owen Gaffney, Jayati Ghosh, Jørgen Randers, Johan Rockström and Per Espen Stoknes, *Earth for all: a survival guide for humanity. A report to the Club of Rome, fifty years after The Limits of Growth (1972)* (Gabriola Island, British Columbia, Canada: New Society Publishers, 2022).

2 Interview with Joachim Monkelbaan, World Economic Forum, Sept. 2, 2022. Cf. Michael Jakob et al., »How trade policy can support the climate agenda. Ensure open markets for clean technologies and products,« *Science* 376, 1401 (2022) DOI: 10.1126/science.abo4207 (<https://www.science.org/doi/10.1126/science.abo4207>, last accessed Oct. 16, 2022).

3 See Christoph Scherrer and Thomas Greven, *Global Rules for Trade: Codes of Conduct, Social Labeling and Workers' Rights Clauses* (Münster: Westfälisches Dampfboot, 2021).

4 Ibid.

make sure that these policies do not undermine development and global justice efforts?

This report addresses some of the issues that arise in the context of the two proposed policies, BCAs – specifically, the EU proposal of a Carbon Border Adjustment Mechanism (CBAM) in chapter 3 – and climate clubs – specifically, the Group of Seven (G7) proposal for a climate coalition in chapter 4. First, however, it will take a brief look at the extent of the trade-related climate problem in chapter 2. The report concludes with a set of recommendations.

## 2. TRADE AND CLIMATE CHANGE

At the heart of anthropogenic climate change and rising global temperatures are greenhouse gas (GHG) emissions. These emissions are a consequence of the energy human beings use to produce goods and provide services. In turn, these goods and services are at the heart of our economic well-being. Combined with demographic growth and increased wealth due to rising productivity and constant innovation of products, increased energy consumption has led to ever-growing GHG emissions.

What role has trade played in these developments and what can trade policy do to mitigate climate change? Between the global financial crisis of 2008/09 and the supply-chain problems associated with the COVID-19 pandemic, growth in the volume of global trade has often exceeded global economic growth.<sup>5</sup> In fact, trade has long been considered a driver of economic growth and, as a consequence, of human welfare, so that trade liberalization has been largely considered beneficial. This is reflected in the rules of the GATT. While there are exceptions, these rules pose considerable obstacles to any restriction of trade, including for the purpose of climate change mitigation (see section 3.2, page 5). Still, because international trade and cross-border supply chains are such important factors for economic growth and the globally dominant model of economic development – simply put, for a way of life that generally expects all goods and services to be always available – the tides of public opinion have begun to turn against international trade. Concerns have long been expressed about the effect of international trade on wages and jobs. After all, comparative and competitive advantages are major reasons why trade occurs, and international competition may thus lead to plant closings and job loss. Voices concerned about climate change and growing global temperatures add their concerns to this political opposition: Could it be that more trade is not always good? Perhaps even the political counteraction – in the form of countervailing duties and other trade restrictions – that some fear will be a consequence of the introduction of measures such as the proposed EU CBAM, would not be detrimental to the cause of climate change mitigation and decarbonization, but beneficial.

<sup>5</sup> See <https://www.statista.com/statistics/1032199/global-growth-gdp-trade/>, last accessed Oct. 16, 2022.

For the moment – in the context of slower than usual trade growth because of supply-chain problems and the war in Ukraine – trade policy experts are staying the course and argue that trade policy, if designed properly, can be used to protect and incentivize decarbonization efforts. But the debate on instruments such as BCA and climate clubs generally starts from a very limited picture of the impact of trade on GHG emissions and climate change. The concern is mostly about »carbon leakage« and »carbon havens.« Carbon leakage occurs when production facilities »escape« regulatory restrictions on emissions, such as carbon pricing, and relocate elsewhere, i.e., to countries that serve as »carbon havens.« In the context of liberalized trade, these producers then pose a competitive threat to producers that are subject to the regulation. Hence, the idea behind BCA is to arrive at a level playing field. Empirical studies and estimates generally show a rather low level of such carbon leakage. Projections predict some increase as carbon prices rise, more emissions trading systems are established, and more industrial sectors and products are covered by them. This picture is limited, however, because trade-related emissions do not occur solely because of explicit »carbon leakage.« First, trade-related emissions – i.e., additional emissions due to international trade and cross-border supply chains – occur regardless of the motivation for the relocation of production, because of the transportation-related GHG emissions. In other words, if production facilities are relocated because of lower wages or taxes rather than lower carbon costs, the effect on emissions may be the same or worse – or indeed better, if the emissions related to production are so much lower that they outweigh the extra emissions related to transportation. In short, all trade flows matter in terms of GHG emissions, not just those due to explicit »carbon leakage.«<sup>6</sup>

Moreover, an additional key problem with instruments such as CBAM is that they do not factor in transportation-related emissions at all. For sea and air transport, there are separate international regimes – governed by the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO), respectively – which have so far failed to significantly reduce the level of trade-related

<sup>6</sup> See Richard Baron and Justine Garrett, »Trade and Environment Interactions: Governance Issues,« Background paper for the 35<sup>th</sup> Round Table on Sustainable Development (2017) (<http://www.oecd.org/sd-roundtable/papersandpublications/Trade%20and%20Environment%20Interactions%20FINAL.pdf>); last accessed Oct. 16, 2022); G. Garsous and T. Kozluk, »Foreign direct investment and the Pollution Haven Hypothesis: Evidence from listed firms,« Paris: OECD Economics Department Working Papers, Nr. 1379 (2017); J. Cherniwchan, B. R. Copeland and M. Scott Taylor, »Trade and the environment: New methods, measurements and results,« Washington, DC: National Bureau of Economic Research, Working Paper Nr. 2263 (2016); R. Aichele and G. Febermayr, »Kyoto and carbon leakage: An empirical analysis of the carbon content of bilateral trade,« Review of Economics and Statistics, Nr. 97 (2016): 104-115; T. Kozluk and C. Timiliotis, »Do environmental policies affect global value chains? A new perspective on the pollution haven hypothesis,« Paris: OECD Economics Department Working Papers, Nr. 1282 (2016); Kyle W. Knight and Juliet B. Schor, »Economic Growth and Climate Change: A Cross-National Analysis of Territorial and Consumption-Based Carbon Emissions in High-Income Countries,« Sustainability, Vol. 6 (2014): 3722-3731.

emissions.<sup>7</sup> Progress in terms of fuel efficiency is generally overwhelmed by increases in volume as a rebound effect.<sup>8</sup> Moreover, there are no such international regimes and organizations for transportation by road or train; however, transportation over land accounts for a large portion of trade-related emissions, in part because of the growth of cross-border supply and production chains, often internal to Multinational Corporations (MNCs).<sup>9</sup> In addition, emissions related to the necessary transportation-related packaging need to be considered.

In the following, the two proposed trade instruments – border carbon adjustment and climate clubs – are discussed in terms of their contribution to mitigating the effect of trade-related emissions, as well with regard to the potentially negative effects on the economies of third-country exporters, particularly from the Global South. In light of the limitations of trade policy – in terms of what part of trade-related GHG emissions it can even affect – it has to be recognized at the outset that ultimately more fundamental questions will have to be addressed, e. g., along the lines of the comprehensive debate on »degrowth« and the possibilities for non-growing economies.<sup>10</sup> In addition, there is a role for other instruments, such as incentives for decarbonization in preferential trade agreements, due diligence legislation to govern MNCs and regulatory solutions for the reduction of transportation-related emissions.

### 3. BORDER CARBON ADJUSTMENT (BCA): PRINCIPLES AND MAJOR CONTROVERSIES

BCA is a policy tool to address core problems of global climate mitigation efforts related to international trade. When individual countries or entities like the EU take unilateral action against climate change, such as the establishment of a carbon pricing system, they impose costs on domestic firms that do not apply to foreign competitors. These cost differences can discourage and constrain climate change mitigation efforts, first, because firms that bear the

costs of these measures may lose global market share and, secondly, through »carbon leakage,« i. e., the relocation of production to jurisdictions that do not impose these costs (»carbon havens«).<sup>11</sup>

BCA is designed to solve these problems by »leveling the playing field.« This means that foreign producers pay for the carbon that is embodied in their products, either through compensating tariffs imposed on imports or through the purchase of domestic carbon emission permits. BCA concepts may also include mechanisms to compensate domestic exporters who face competition in global markets from producers that do not have to pay for climate mitigation measures such as a carbon price.

According to Cosbey, there is a third objective in addition to preventing the problem of carbon leakage and maintaining the competitiveness of domestic industry – namely, providing incentives to foreign producers and political entities to impose similar climate policies, thereby speeding up global decarbonization efforts.<sup>12</sup> The three objectives are interrelated (e. g., if there is success with the third objective, the problem underlying the first objective may be diminished) but there are also trade-offs and risks. For example, if the focus is on the second objective (protecting domestic firms), retaliatory tariffs may be established instead of more effective climate policies. The question is thus: How can BCA be designed to maximize the positive contribution to global decarbonization efforts and minimize, or at least mitigate, additional trade barriers for developing countries?

#### 3.1 BCA Design Issues

In light of these risks and trade-offs, it is no surprise that no BCA regime has as yet been put into place. Its design, compatibility with WTO rules and implementation, as well as possible diplomatic and trade repercussions are quite complex matters. Cosbey et al. argued that research has »to warn policymakers considering BCA about just how difficult it is to get it right.«<sup>13</sup> The fundamental questions of a BCA policy design are as follows:

<sup>7</sup> Richard Baron and Justine Garrett, op. cit. FN 6; ICTSD, »International Transport, Climate Change and Trade – What are the options for regulating emissions from aviation and shipping and what will be their impact on trade?« Geneva: International Centre for Trade and Sustainable Development, Background Paper (2010).

<sup>8</sup> Zhu Liu, Steven J. Davis, Kuishuang Feng, Klaus Hubacek, Sai Liang, Laura Diaz Anadon, Bin Chen, Jingru Liu, Jinyue Yan und Dabo Guan, »Targeted Opportunities to Address the Climate – trade Dilemma in China,« *Nature Climate Change*, Vol. 6 (2015): 201–206; Xuemei Jiang and Dabo Guan, »The global CO<sub>2</sub> emissions growth after international crisis and the role of international trade,« *Energy Policy*, Vol. 109 (2017): 734–746; Ben Lilliston, *The Climate Cost of Free Trade: How TPP and trade deals undermine the Paris climate agreement*, (Minneapolis, MN: Institute for Agriculture and Trade Policy, 2016).

<sup>9</sup> Anca D. Cristea et al., »Trade and the greenhouse gas emissions from international freight transport,« *Journal of Environmental Economics and Management*, Vol. 65 (2013): 153–173.

<sup>10</sup> See Giorgos Kallis, Susan Paulson, Giacomo D’Alisa and Federico Demaria, *The case for degrowth* (Cambridge, UK and Medford, MA: Polity Press, 2020).

<sup>11</sup> OECD, *Climate Policy Leadership in an Interconnected World, What Role for Border Carbon Adjustments?* (2020): (<http://www.indiaenvironmentportal.org.in/files/file/climate%20leadership%20policy.pdf>); last accessed Oct. 16, 2022); cf. Sofia Persson, *Practical Aspects of Border Carbon Adjustment Measures*, National Board of Trade, Sweden (2010) (<https://www.files.ethz.ch/isn/138391/person-ictsd-practical-aspects-of-border-carbon-adjustment-measures.pdf>); last accessed Oct. 16, 2022).

<sup>12</sup> Aaron Cosbey, »It ain’t easy: The complexities of creating a regime for border carbon adjustment,« *Entwined* (2012) ([https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2163203](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2163203)); last accessed Oct. 16, 2022). For more details on the three objectives, see M. Condon and A. Ignaciuk, *Border Carbon Adjustment and International Trade: A Literature Review*, OECD Trade and Environment Working Papers, 2013/06, OECD Publishing.

<sup>13</sup> See Aaron Cosbey, Susanne Droege, Carolin Fischer and Clayton Munnings, *Developing Guidance for Implementing Border Carbon Adjustments: Lessons, Cautions, and Research Needs from the Literature Review of Environmental Economics and Policy*, volume 13, issue 1 (2019) (<https://www.journals.uchicago.edu/doi/full/10.1093/reep/rey020>); last accessed Oct. 16, 2022).

- Which sectors or which products will be covered?
- Which kind of GHG emissions will be covered? In the relevant literature, three levels of »scope« are distinguished: Scope 1 includes direct emissions of the immediate production process; scope 2 includes indirect emissions that occur in the production process, involving electricity, steam, heating and cooling consumed by the reporting firm (»energy use« – depending on the product, this may be where most of the GHG emissions occur!); scope 3 includes all other indirect emissions that occur in a firm’s value chain (»inputs«).
- Will the BCA only cover imports or also include a mechanism for exports?
- Will carbon prices and other regulations in third-country jurisdictions be taken into account and, if so, how?
- How will the carbon content embodied in imports be measured for production in different jurisdictions (carbon accounting)?
- How will embodied GHG emissions be priced (the »adjustment«)?
- Will importers have to buy permits or will carbon cost be internalized through tariffs?
- Who will report, collect, control and verify the carbon accounting?
- How will the revenue from the adjustment be used?

Even the question of proper carbon accounting, which seems to be the most technical and administrative of these issues, includes highly political aspects. Technical issues involve the methods for measuring in the various scopes and the availability of robust data in different regions around the world as well as the question of whether GHG emissions in one sector have already been accounted for in another. Political questions include the level of trust in the quality of the relevant data, the responsibility of paying for carbon accounting, and the decision on whether exact measures at the level of products apply or whether average data (firm or country level) is used – which may seem technical but it concerns the question of whether or not the BCA addresses so-called resource shuffling.<sup>14</sup>

Resource shuffling occurs when, as a reaction to a BCA, exports are redirected to avoid the BCA (or to minimize the costs resulting from a BCA). Provided an exporting country has a variety of production facilities with different levels of emissions, products from the facility with the lowest level of emissions will be directed toward the BCA. Products with higher levels of emissions will be consumed locally or exported elsewhere. This redirection of trade flows may result in an unchanged overall level of GHG emissions. Thus, the BCA would fail to achieve its objective of creating incentives for lower emissions. The incentive for resource

shuffling can be reduced by determining the level of carbon emissions at an average national level, but this method raises questions of WTO compatibility.

### 3.2 Compatibility: World Trade Organization (WTO) and United Nations Framework Convention on Climate Change (UNFCCC)

Because of the explicit recognition of »the objective of sustainable development,« and of »the importance and legitimacy of environmental protection as a goal of national and international policy« in the WTO Agreement (and also because of WTO dispute settlements, e. g., in the Shrimp and Turtle case), tools like BCA appear to be generally admissible, provided they effectively reduce emissions or carbon leakage, or both.<sup>15</sup> However, as they are inherently unilateral trade policies, BCAs still face the possibility of challenges of affected trading partners under the rules and regulation of the GATT, regardless of the exact design. In addition, the Principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR&RC) of the Paris Climate Accord under the auspices of the UNFCCC may be affected.

In terms of the GATT, a BCA has to respect GATT’s main principle of non-discrimination, the most-favored-nation clause (MFN, Art. I): Rules have to apply to all member countries of the GATT equally, with the exception of Least Developed Countries (pursuant to GATT’s enabling clause), or in case of waivers (i. e., for free trade areas or common markets, such as the EU). Thus, legal challenges may follow if the embodied carbon content of imported »like« products – i. e., products that have the same features than domestically produced goods – is not determined on a product-by-product basis but on the basis of national or industry averages (e. g., to prevent »resource shuffling«). Moreover, depending on the exact design and the regulatory context (carbon tax or emissions trading system), a BCA may be considered a border tax adjustment or a domestic regulation. In either case, a BCA may be permissible under GATT rules, provided the principle of »national treatment« (Art. III) is respected, which applies to imported »like« products. In short, imported »like« products must not receive less favorable treatment – in terms of tariffs or regulation – than domestic products.

In addition, the »general exceptions« clause of GATT (Art. XX) may generally permit less favorable treatment of carbon-intensive foreign products in order to protect the health of the population. Specifically, it may permit general or sector-specific exemptions for countries with comparable emissions regimes, provided the discrimination follows solely from climate concerns (in terms of BCA design, such exemptions would require measures against transshipments, i. e., shipment of goods from non-exempt countries to ex-

<sup>14</sup> Cf. CRU International Limited, Assessing the drivers and scale of potential resource shuffling under a CBAM (2020) ([https://www.bmwk.de/Redaktion/DE/Downloads/A/assessing-drivers-and-scale-of-pot-resource-shuffling-under-CBAM.pdf?\\_\\_blob=publication-file&v=4](https://www.bmwk.de/Redaktion/DE/Downloads/A/assessing-drivers-and-scale-of-pot-resource-shuffling-under-CBAM.pdf?__blob=publication-file&v=4); last accessed Oct. 16, 2022).

<sup>15</sup> Geraldo Vidigal and Ingo Venzke, »Of False Conflicts and Real Challenges: Trade Agreements, Climate Clubs, and Border Adjustments,« AJIL Unbound, 116 (2022): 202-207.

empt countries for re-export). However, the so-called *chapeau* of Art. XX demands, *inter alia*, that the least trade-restrictive measure of protection is chosen – a reflection of the anachronistic overarching philosophy of the global trading regime: more trade is always desirable. This obviously invites challenges to a BCA, especially if its design includes protections for domestic exporters.<sup>16</sup>

Governments of exporting countries in the Global South, as well as development experts and agencies, point out that BCAs appear to shift part of the costs of climate change mitigation from developed, industrialized countries to countries that did not themselves opt for such ambitious climate policies («green protectionism»).<sup>17</sup> Broadly speaking, these countries are less developed and their lower climate ambition may be based on their legitimate interest to (first) improve the standard of living of their population, to lift them out of extreme poverty, to build infrastructure to fulfill basic human needs, etc. In terms of global equity, BCAs may thus be in violation of the spirit – if not the letter – of the UNFCCC Paris Agreement’s Principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR&RC). This principle helped to ensure the support of nearly all states for this milestone of international climate diplomacy in 2015, including emerging market economies and least developed countries. It accounts for the structural and historical differences in GHG emissions as well as for the wide differences in both ability and vulnerability to climate change across the globe. CBDR&RC aims to ensure that the advanced economies with their higher adaptive capability, their lower vulnerability to climate change, and their overall responsibility for historic emissions would have to contribute more to facing the challenge of climate change mitigation than others.

<sup>16</sup> See Andrei Marcu, Michael Mehling, Aaron Cosbey and Alexandra Maratou, «ERCST Guide to the EU CBAM, ERCST Border Carbon Adjustments in the EU» (2021) (<https://ercst.org/ercst-guide-to-the-eu-cbam/>; last accessed Oct. 16, 2022); Andrei Marcu, Michael Mehling, Aaron Cosbey, Alexandra Maratou and Anita Vollmer, «Treatment of Exports in the EU CBAM, ERCST Border Carbon Adjustments in the EU - Part II» (2022) ([https://ercst.org/treatment\\_of\\_exports\\_in\\_the\\_eu\\_cbam/](https://ercst.org/treatment_of_exports_in_the_eu_cbam/); last accessed Oct. 16, 2022); Werner Raza, Bernhard Tröster, Verena Madner, Stefan Mayr and Birgit Hollaus, «Analyse und Beurteilung des Vorschlags der Europäischen Kommission für einen CO<sub>2</sub>-Grenzausgleichsmechanismus (Carbon Border Adjustment Mechanism) der EU,« IMK Study No. 80 (2022) ([https://www.boeckler.de/de/faust-detail.htm?sync\\_id=HBS-008323](https://www.boeckler.de/de/faust-detail.htm?sync_id=HBS-008323); last accessed Oct. 16, 2022). The WTO is deadlocked when it comes to proposals to clarify the «likeness» of products (i.e., what aspects of the production process can be addressed) and the general exceptions of GATT-Art. XX (in order to move beyond case-by-case dispute settlement). Also deadlocked are discussions concerning a «peace clause» or «ceasefire» that would give more space to trade-related climate policy measures by agreement not to challenge them for a specified time. See Joachim Monkelbaan, «Interactions between Trade and Climate Governance, Exploring the Potential of Climate Clubs,« The Global Challenges Foundation (2021) (<https://globalchallenges.org/wp-content/uploads/2021/06/Interactions-Between-Trade-and-Climate-Governance-2021-06-15.pdf>; last accessed Oct. 16, 2022), for an overview of possible WTO agreements to allow more climate ambition.

<sup>17</sup> Arvind P. Ravikumar, «Carbon Border Taxes Are Unjust,« MIT Technology Review (July 27, 2020) (<https://www.technologyreview.com/2020/07/27/1005641/carbon-border-taxes-eu-climate-change-opinion/>; last accessed Oct. 16, 2022).

While the exact effect of a BCA on third countries depends on the specific design of the BCA, and especially on its scope, CBDR&RC concerns (and related domestic politics) may lead to legal challenges regarding WTO and UNFCCC compatibility, as well as retaliation via tariffs (countervailing duties) and non-tariff barriers. Even if no full-scale trade ensues, such a scenario would certainly undermine the objectives of BCA policy concerning climate change mitigation. Countries contemplating a BCA are thus well advised to consider CBDR&RC concerns in their design and, furthermore, to contemplate parallel measures to assist third countries in their climate change mitigation efforts. A well-designed BCA is one that does not violate WTO rules and ensures that it «does not undermine [its] stated objectives – either by covertly exempting politically influential industries or by engendering retaliatory measures from countries demanding their withdrawal.»<sup>18</sup> In other words, if a BCA minimizes trade barriers for developing countries and provides assistance for their decarbonization efforts, it can help solve the collective action problem of combatting the climate crisis.

### 3.3 EU Proposal: Carbon Border Adjustment Mechanism (CBAM)

In December 2020, EU leaders agreed on the more ambitious target of reducing emissions by 55 per cent by 2030 compared to 1990 levels (Fit for 55). Consequently, the already significant upward movement of the carbon dioxide (CO<sub>2</sub>) price in the EU Emissions Trading System (EU ETS) continued. At the beginning of 2020, the CO<sub>2</sub> price was 39 euros per tonne. It rose almost continuously to a record high of 98.49 euros per tonne right before the Russian invasion of Ukraine. Despite the current economic turbulence, it has remained at a remarkably high level. Moreover, the fourth phase of the ETS (2021–2030) permanently establishes higher prices.<sup>19</sup>

Rising carbon prices and increased climate ambition in the context of the EU’s Fit for 55 agenda increase the urgent need for the EU to address the issues of carbon leakage and competitiveness concerns.<sup>20</sup> Consequently, in July 2021, the European Commission (EC) proposed to modify the ETS. Specifically, free allowances will be phased out for all participating sectors of the ETS in order to increase the incentive for EU firms to invest in decarbonization. Instead, a CBAM will address the risk of carbon leakage and protect the competitiveness of EU firms. According to Meyer, it is «the first major (supra)national effort to use trade tools to

<sup>18</sup> Geraldo Vidigal and Ingo Venzke, *op. cit.* FN 15.

<sup>19</sup> K. Bruninx and M. Ovaere, «COVID-19, Green Deal and recovery plan permanently change emissions and prices in EU ETS Phase IV,« Nature Communications 13, Article number: 1165 (2022) (<https://www.nature.com/articles/s41467-022-28398-2>; last accessed Nov. 9, 2022).

<sup>20</sup> AFEP, «Trade & Climate Change: Quantitative Assessment of the Best Policy Tools to Achieve Climate Neutrality and Competitiveness» (2021) (<https://afep.com/wp-content/uploads/2021/01/Trade-and-Climate-Change-Quantitative-Assessment-of-the-Best-Policy-Tools.pdf>; last accessed Oct. 16, 2022).



bolster a decarbonization agenda.«<sup>21</sup> Other efforts at »leveling the playing field« and bolstering the climate agenda through trade policy will likely follow, e.g., in the United Kingdom (UK), Canada, and in the United States.<sup>22</sup> In comparison to the »mostly protectionist US proposals – from a country without a carbon price – the EU shows climate

ambition.«<sup>23</sup> »In practice,« however, »the CBAM is a fee charged for emissions embodied in products imported to the EU.«<sup>24</sup> The only countries that are fully exempted are Norway, Switzerland, Iceland and Liechtenstein, i.e., non-EU countries that either participate in the ETS or have a system linked to the EU's ETS.

Table 1

**The EU Carbon Border Adjustment Mechanism (CBAM): what's at stake for the trilogue?**

Topic	European Commission's Proposal	Council's General Approach	European Parliament's Report
Scope	<ul style="list-style-type: none"> <li>Aluminium, cement, electricity, fertilisers, and iron and steel</li> </ul>	<ul style="list-style-type: none"> <li>Expand the scope to aluminous cement, other articles of iron and steel (CN 7326), and a number of additional aluminium products such as aluminium structures, reservoirs and cans (CN 7610, 7611 0000, 7612, 7613 00 00, 7614, 7616)</li> </ul>	<ul style="list-style-type: none"> <li>Expand the scope to aluminous cement and additional sectors: organic chemicals, hydrogen, anhydrous ammonia, ammonia in aqueous solution and polymers, including plastics and articles thereof</li> <li>By 1 January 2030 CBAM shall apply to all EU ETS sectors</li> </ul>
	<ul style="list-style-type: none"> <li>Direct emissions</li> <li>Commission's report by 2025 on potential extension of the scope to indirect emissions</li> </ul>	<ul style="list-style-type: none"> <li>Direct emissions</li> <li>Commission's report by 2025 on potential extension of the scope to indirect emissions</li> </ul>	<ul style="list-style-type: none"> <li>Direct and indirect emissions</li> </ul>
Transitional period	2023 - 2025	2023 - 2025	2023 - 2026
CBAM authority	Member State competent authorities	Member State competent authorities	Single EU-wide CBAM authority
Co-existence with the EU ETS	Commission's proposal on the revised EU ETS: <ul style="list-style-type: none"> <li>Gradual phase-out of free emission allowances for CBAM sectors between 2026-2035, by 10 % each year</li> </ul>	Council's General Approach on the revised EU ETS: <ul style="list-style-type: none"> <li>Gradual phase-out of free emission allowances for CBAM sectors between 2026 and 2035: 95% in 2026, 90% in 2027, 85% in 2028, 77.5% in 2029, 70% in 2030, 60% in 2031, 50% in 2032, 35% in 2033, 20% in 2034, and 0% in 2035</li> </ul>	<ul style="list-style-type: none"> <li>Gradual phase-out of free emission allowances for CBAM sectors between 2026 and 2032: 100% in 2026, 93% in 2027, 84% in 2028, 69% in 2029, 50% in 2030, 25% in 2031, and 0% in 2032</li> </ul>
Export adjustment	n/a	<ul style="list-style-type: none"> <li>Commission's report by 2025 on the impact of the CBAM on carbon leakage, including in relation to exports</li> </ul>	<ul style="list-style-type: none"> <li>Commission report by 2025 on WTO-compatibility</li> <li>Free emission allowances for CBAM products destined for export to third countries without carbon pricing mechanisms similar to the EU ETS</li> </ul>
Penalties	<ul style="list-style-type: none"> <li>EUR 100 per missing CBAM certificate</li> <li>Member States may impose administrative and criminal penalties</li> </ul>	<ul style="list-style-type: none"> <li>EUR 100 per missing CBAM certificate</li> <li>More severe penalties for importing without authorisation: 3 to 5 times the regular penalty</li> <li>Revocation of authorisation in case of serious or repeated infringement</li> </ul>	<ul style="list-style-type: none"> <li>3 times the average price of a CBAM certificate in the previous year per missing certificate</li> <li>Member States shall impose administrative or criminal penalties</li> <li>Suspension of CBAM account in case of repeated offences</li> </ul>

Source: Van Bael & Bellis, News Alert, July 12, 2022. [https://www.vbb.com/media/Insights\\_News/VBB\\_Client\\_Alert\\_-\\_EU\\_Carbon\\_Border\\_Adjustment\\_Mechanism\\_\(CBAM\).pdf](https://www.vbb.com/media/Insights_News/VBB_Client_Alert_-_EU_Carbon_Border_Adjustment_Mechanism_(CBAM).pdf)

<sup>21</sup> Timothy Meyer, »Taxing, Regulating, and Trading Carbon: An Introduction to the Symposium,« AJIL Unbound, Volume 116 (2022): 191–195.

<sup>22</sup> Michael Mehling, Harro van Asselt, Susanne Droege and Kasturi Das, »The Form and Substance of International Cooperation on Border Carbon Adjustments,« AJIL Unbound, Volume 116 (2022): 213–218.

<sup>23</sup> Interview with Aaron Cosby, Small World Sustainability Consulting, July 27, 2022.

<sup>24</sup> Heli Simola, »CBAM! - Assessing potential costs of the EU carbon border adjustment mechanism for emerging economies,« BOFIT Policy Brief (2021) (<https://www.econstor.eu/handle/10419/251711>); last accessed Oct. 16, 2022).

The EC's initial draft envisaged introducing the CBAM first for selected products of certain CO<sub>2</sub>-intensive industries: cement, iron and steel, aluminum, fertilizers and electricity generation.<sup>25</sup> On 22 June 2022, the European Parliament (EP) adopted a package of carbon legislation. The package includes the revision of the ETS, the CBAM and the Social Climate Fund. Still, the final details of the CBAM are still under negotiation in the trilogue between the EC, the EP and the EU Council. The EP is the most ambitious actor, wanting to, inter alia, increase the scope to include more sectors and products as well as indirect emissions stemming from electricity consumption in the process of production (called »scope 2«).<sup>26</sup>

Still, the likely basic structure of the CBAM framework is known (cf. table 1 for an overview of the three different CBAM proposals). The focus will be on raw materials and basic products »since for these, in contrast to processed products, the estimation of the emissions they contain is easier to implement. [Moreover,] emission intensity in production is particularly high for raw products.«<sup>27</sup> The CBAM will be phased in as the free emission allowances will be phased out. The exact time frame is still under negotiation.

Importers will have to purchase certificates for the embodied carbon content of goods. Prices will be based on the ETS (at weekly averages of ETS prices, drawn from daily auctions), expenditures for CO<sub>2</sub> permits elsewhere can be subtracted. All the relevant data will have to be certified, meaning that CBAM will involve a considerable administrative burden for importers – and hence for third-country exporters who will have to supply the data. Depending on their ability to supply robust and reliable data, importers (and consequently exporting firms) will have different options for reporting their carbon emissions, either through accredited verifiers or based on default EU values, which would reflect the average emission intensity of the 10 per cent of installations with the worst performance for the type of goods in question (giving preference

to actual carbon declaration and combining it with residual default values based on European production site average emissions).<sup>28</sup>

The treatment of EU exporters under the CBAM (»export adjustment mechanism«) is still unclear: Will they continue to receive free allowances or a rebate of the carbon price in order to be able to compete in foreign markets that lack carbon pricing systems? Also, the WTO compatibility of the EU's CBAM cannot be fully evaluated as yet. In general, the objective of reducing carbon emissions and carbon leakage seems permissible; however, the additional objective of supporting a »competitive [green] transition« for EU businesses in the context of the new industrial strategy supporting the EU Green Deal seems more problematic (i. e., »green« industrial policy aimed at protecting domestic firms against foreign competitors).<sup>29</sup>

Also, certain specific elements of the CBAM proposals point to possible conflicts:<sup>30</sup>

- a possible conflict with GATT's MFN principle: Previous expenditures in the context of carbon pricing systems will be deducted (avoiding »double protection« of EU firms), but the costs of other kinds of climate regulation or ambition (such as the recently passed US climate legislation) may not be. The problem is the correct calculation of equivalence (which is also a fundamental problem of climate clubs that are not based on carbon pricing systems), especially given the fact that EU-based firms also incur regulation-based costs. Galiffa and Bercero from the EC argue that decarbonizing in response to regulations would result in a reduced CBAM price, and hence CBAM does not unjustifiably discriminate.<sup>31</sup>
- a possible violation of GATT's national treatment principle: Third country exporters may incur a higher administrative burden in order to determine relevant data concerning embodied carbon content than EU-based firms in the context of the ETS.

<sup>25</sup> See [https://ec.europa.eu/taxation\\_customs/green-taxation-0/carbon-border-adjustment-mechanism\\_en](https://ec.europa.eu/taxation_customs/green-taxation-0/carbon-border-adjustment-mechanism_en), last accessed Oct. 16, 2022; Andrei Marcu, Michael Mehling, Aaron Cosbey and Alexandra Maratou, »Indirect Emissions in the EU CBAM – ERCST Presentation« (2022) (<https://ercst.org/indirect-emissions-in-the-eu-cbam-ercst-presentation/>; last accessed Oct. 16, 2022).

<sup>26</sup> European Parliament, Draft Report on the proposal for a regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism (2021) ([https://www.europarl.europa.eu/doceo/document/ENVI-PR-697670\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/ENVI-PR-697670_EN.pdf), last accessed Oct. 16, 2022; cf. <https://borderlex.net/2022/05/17/cbam-european-parliament-lead-committee-votes-to-expand-product-scope/>, last accessed Oct. 16, 2022); Oliver Sartor, Aaron Cosbey and Aylin Shawkat, »Getting the Transition to CBAM Right: Finding pragmatic solutions to key implementation questions,« Agora (January 2022) (<https://www.agora-energiawende.de/en/publications/getting-the-transition-to-cbam-right/>; last accessed Oct. 16, 2022).

<sup>27</sup> Werner Raza, Bernhard Tröster, Verena Madner, Stefan Mayr and Birgit Hollaus, op. cit. FN 16 (own translation).

<sup>28</sup> Some industry voices seem to prefer non-specific pricing; see Heiner von Lüpke, Karsten Neuhoﬀ and Catherine Marchewitz, »Klimaclubs oder Klimapartnerschaften? Wie eine eﬀektive Klimakooperation mit Drittstaaten gelingen kann,« Policy Brief, vol. 179, DIW (2022) ([https://www.diw.de/documents/publikationen/73/diw\\_01.c.841465.de/diwkompakt\\_2022-179.pdf](https://www.diw.de/documents/publikationen/73/diw_01.c.841465.de/diwkompakt_2022-179.pdf); last accessed Oct. 16, 2022).

<sup>29</sup> Iñaria Espá, »Reconciling the Climate/Industrial Interplay of CBAMs: What Role for the WTO?« AJIL Unbound, 116 (2022): 208–212 (<https://www.cambridge.org/core/journals/american-journal-of-international-law/article/reconciling-the-climateindustrial-interplay-of-cbams-what-role-for-the-wto/EB37ACEB52795AB32FD08-DA28B2161C9>; last accessed Oct. 16, 2022).

<sup>30</sup> Werner Raza, Bernhard Tröster, Verena Madner, Stefan Mayr and Birgit Hollaus, op. cit. FN 16.

<sup>31</sup> Chiara Galiffa and Ignacio Garcia Bercero, »How WTO-Consistent Tools can Ensure the Decarbonization of Emission-Intensive Industrial Sectors,« AJIL Unbound, 116 (2022): 196–201 (<https://www.cambridge.org/core/journals/american-journal-of-international-law/article/how-wtoconsistent-tools-can-ensure-the-decarbonization-of-emission-intensive-industrial-sectors/1E07C72A2CFADF7F0F0F69D5CD-C7B13E>; last accessed Oct. 16, 2022).

- a possible conflict regarding the general exceptions clause of GATT Art. XX: Climate change mitigation measures can definitely be justified as necessary for the protection of the public and the effectiveness of the BCA tool regarding the prevention of carbon leakage can be demonstrated, even if the initial scope of CBAM sectors is small. However, because there has not been a decision regarding the treatment of EU exporters, for the moment the question remains of whether the burden is equally distributed and does not primarily affect foreign producers. Moreover, there is the increasingly anachronistic issue of a preference for less trade-restrictive measures.

### 3.4 Potential effects of CBAM on third-country exporters

The countries affected by the EU's CBAM are on different developmental trajectories and at different technological levels in terms of production and ecological efficiency. They include the US, Canada and the UK, as well as emerging economies, middle income countries, developing countries and least developed countries (LDCs). These countries are pursuing different policies regarding the reduction of carbon emissions, and it is therefore a simplification to consider them broadly as »carbon havens.« At the same time, blanket criticism of »green protectionism« regarding CBAM, e. g., by the BASIC countries (Brazil, South Africa, India and China), is equally simplistic, because a degree of protection of EU firms is called for to meet the EU's decarbonization objectives (»fair competition«).<sup>32</sup> In the context of asymmetrical trade relations and a high dependency on exports of natural resources on the part of certain countries, CBAM is a »necessary condition« for achieving the transformation of industrialized countries.<sup>33</sup> Moreover, some may argue that, given the limited effect internal action has on the global climate, »the EU is able to rock the boat while it still represents a sizable share of the global economy.«<sup>34</sup> In other words, the EU needs to leverage its (shrinking) political and economic power to affect climate policy and decarbonization efforts elsewhere. Joachim Monkelbaan of the World Economic Forum argues that many countries are ready to engage in conversations about how to avoid CBAM levies by increasing their climate ambition and investing in »carbon competitiveness.«<sup>35</sup> Such cooperation could even be

»framed as promoting the implementation of parties' nationally determined contributions under the Paris Agreement.«<sup>36</sup> Still, in light of the principle of CBDR&RC, and in light of the fact that developed countries still have not delivered on the climate finance commitment of 100 billion US dollars per year, the key question is one of international equity concerning countries of the Global South: »Will the CBAM ensure that producers in lower income and climate vulnerable countries are not disadvantaged?«<sup>37</sup>

The premise of CBAM that the industrialized countries that participate in the ETS and all third countries have to pay the same carbon price represents a fundamental fairness issue. Not accepting the premise would amount to rejecting CBAM altogether, regardless of other design features. At issue here is the difference of perception when it comes to EU standards as benchmarks. While it is true that current EU emissions standards are more stringent than almost anywhere else, consumption patterns – historical and current! – clearly show the »differentiated responsibilities« highlighted in the Paris Agreement. Simply put, from a Global South perspective, the EU cannot serve as an example to follow as long as there is no change in the way of life. Why then not focus on consumption, one may ask? Taxing or regulating consumption-related carbon emissions in industrialized countries would have consequences for imports, without any trade discrimination.<sup>38</sup>

Regardless of these fundamental objections, the EU will implement CBAM with the same carbon price for domestic and foreign firms (in the selected sectors). Variable carbon prices for different classes of countries would pose considerable, if not insurmountable, technical problems. In addition, the EU aims to incentivize decarbonization efforts in third countries. In general, the costs third-country exporters incur through CBAM will increase if the ETS price of carbon rises and if the scope of CBAM is expanded to include additional sectors, products and emission types. These costs can be reduced, or even completely avoided, through decarbonization efforts (carbon pricing in their domestic markets and reducing the GHG emissions of production processes) but these come at a cost as well, at least in the short term.<sup>39</sup> In the long term, decarbonization efforts will increase third-country exporters' competitiveness in markets with carbon prices and contribute to fulfilling their own commit-

<sup>32</sup> Interview with Susanne Dröge, SWP, Aug. 8, 2022. Cf. Susanne Dröge and Maria Panezi, »How to Design Border Carbon Adjustments,« in Michael Jakob (ed.), *Handbook on Trade Policy and Climate Change* (Cheltenham, UK Northampton, MA: Edward Elgar, 2022), pp. 163-179. Consider, for example, the possible adverse incentives due to the method of CBAM pricing: third-country producers may continue or even increase emissions-intensive production, weighing its economic benefits against the difference between default value-CBAM costs and CBAM costs based on specific embedded emissions (which may be lower because of decarbonization efforts, but to which the costs of carbon accounting and certification would have to be added).

<sup>33</sup> Interview with Aylin Shawkat, Agora, Aug. 4, 2022.

<sup>34</sup> Interview with Joachim Monkelbaan, World Economic Forum, Sept. 2, 2022.

<sup>35</sup> Interview with Joachim Monkelbaan, World Economic Forum, Sept. 2, 2022. »Carbon competitiveness« would allow countries to avoid the costs related to CBAM and to meet increasing demand for green products.

<sup>36</sup> Michael Mehling, Andrei Marcu and Aaron Cosbey, »Border Carbon Adjustments in the EU: Sectoral Deep Dive, ERCST Border Carbon Adjustments in the EU« (2021a) ([https://ercst.org/wp-content/uploads/2021/03/20210317-CBAM-II\\_Report-I-Sectors.pdf](https://ercst.org/wp-content/uploads/2021/03/20210317-CBAM-II_Report-I-Sectors.pdf); last accessed Oct. 16, 2022); Michael Mehling, Andrei Marcu and Aaron Cosbey, »CBAM for the EU: A Policy Proposal, ERCST Border Carbon Adjustments in the EU« (2021b) (<https://ercst.org/border-carbon-adjustments-in-the-eu-a-policy-proposal/>; last accessed Oct. 16, 2022).

<sup>37</sup> Tim Gore, »The proposal for a Carbon Border Adjustment Mechanism fails the ambition and equity tests,« Böll Foundation (2021) (<https://eu.boell.org/en/2021/09/13/proposal-carbon-border-adjustment-mechanism-fails-ambition-and-equity-tests>, last accessed Oct. 16, 2022; cf. <https://www.climatechangenews.com/2020/10/20/oxfam-rich-countries-not-delivering-100bn-climate-finance-promise/>; last accessed Oct. 16, 2022).

<sup>38</sup> Interview with Uri Dadush, Breughel, Aug. 30, 2022.

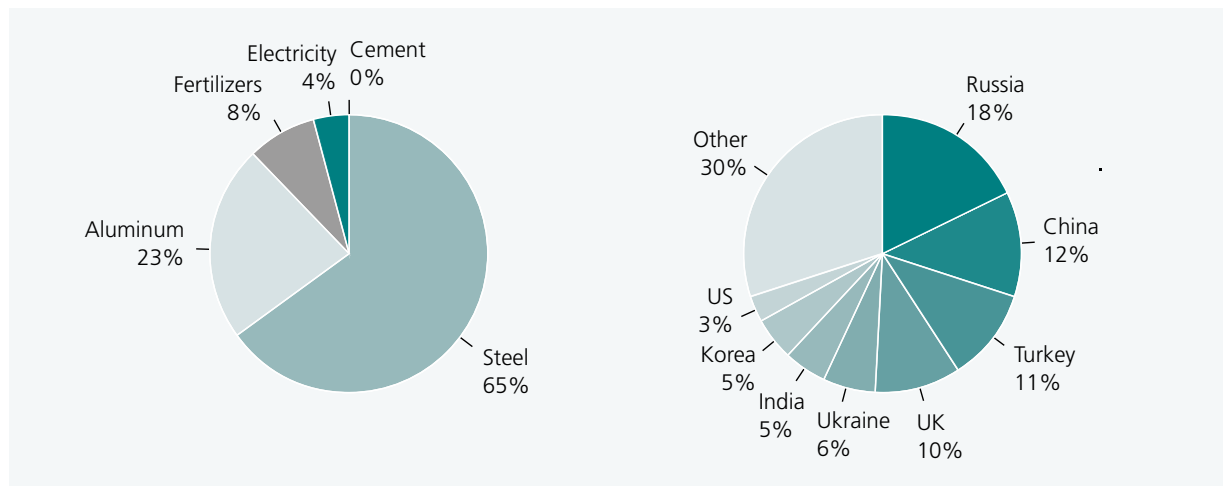
<sup>39</sup> E.g., China's national ETS in the power sector, launched in July 2021.

ments under the Paris Climate Accord. The phase-in of CBAM will give producers, regulators and importers time to develop best practices.

Several studies have attempted to determine the effect of CBAM on third-country exporters with more emission-intensive production. Estimates from a study of »five emerging economies (China, India, Russia, Turkey and

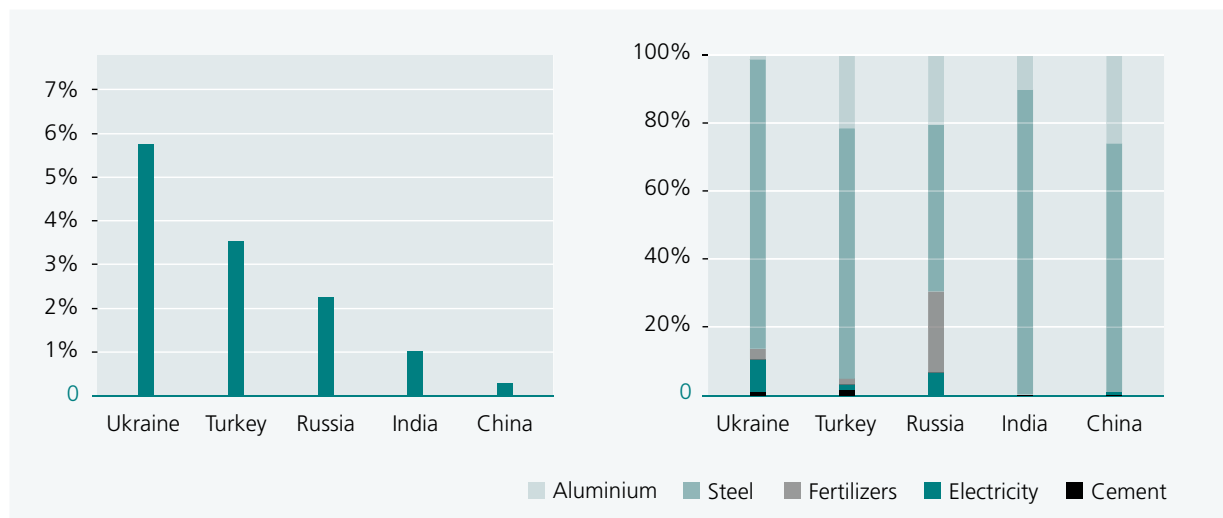
Ukraine) that account for the largest shares of EU imports in products covered by the CBAM proposal ... suggest that the costs arising from the CBAM for imports from selected emerging economies would be limited, but not necessarily insignificant« (cf. figures 1 and 2). The authors point out that »EU producers face similar cost increases as imported products as the share of free ETS allowances gradually declines.«<sup>40</sup>

Figure 1  
**EU CBAM imports in 2019. Panel A) by product; Panel B) by country.**



Source: Eurostat (cited from: Heli Simola, »CBAM! – Assessing potential costs of the EU carbon border adjustment mechanism for emerging economies,« BOFIT Policy Brief (2021), fig. 3).

Figure 2  
**Panel A) The share of CBAM exports to the EU relative to total goods exports in 2019.**  
**Panel B) Structure of CBAM exports to the EU in 2019 by country.**



Source: World Bank WITS (cited from: Heli Simola, »CBAM! – Assessing potential costs of the EU carbon border adjustment mechanism for emerging economies,« BOFIT Policy Brief (2021), fig. 4).

<sup>40</sup> Heli Simola, op. cit. FN 24; cf. Cristopher Kardish, Moasheng Duan, Yujie Tao, Lina Li and Mary Hellmich, »The EU carbon border adjustment mechanism (CBAM) and China: unpacking options on policy design, potential responses, and possible impacts,« Berlin: adelphi (2021) ([https://www.adelphi.de/en/system/files/mediathek/bilder/20210610%20PolicyPaperCBAM%20China\\_Final.pdf](https://www.adelphi.de/en/system/files/mediathek/bilder/20210610%20PolicyPaperCBAM%20China_Final.pdf); last accessed Oct. 16, 2022).

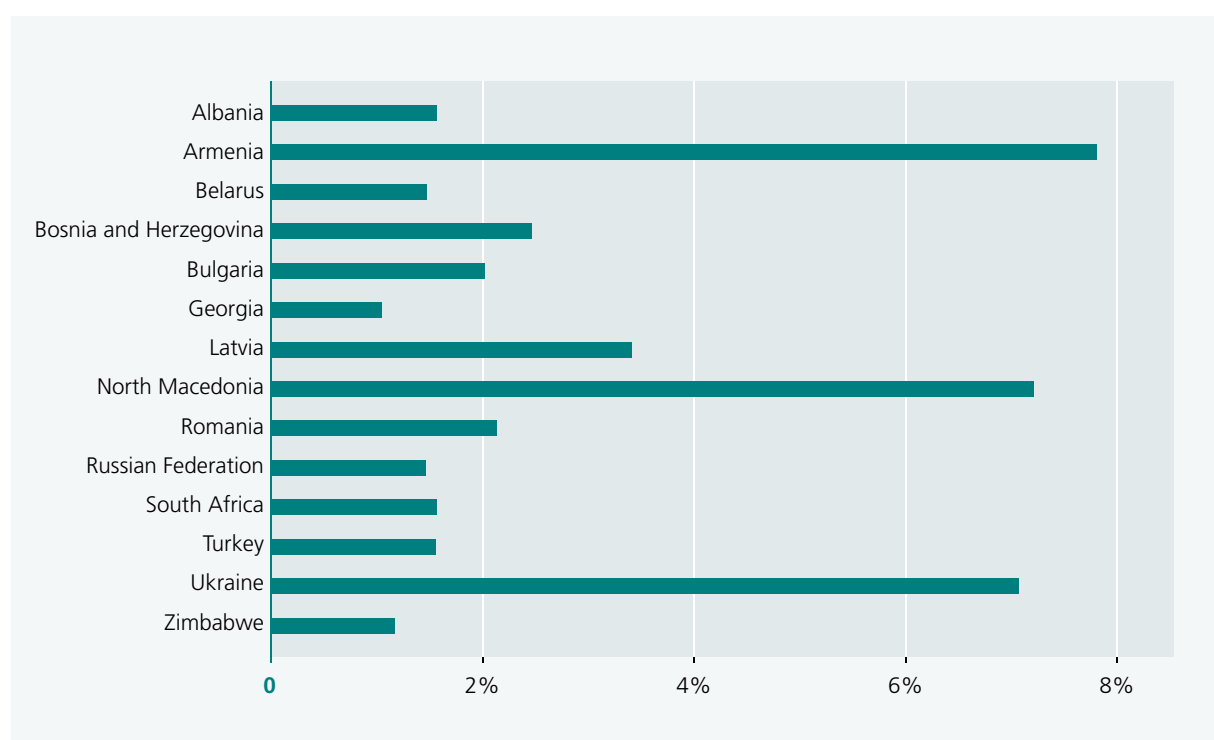
As a consequence of the Russian invasion of Ukraine, these figures from 2019 do not reflect the current situation, since Ukraine's steel exports have most likely suffered from the war (as a result of damage to production facilities and of a change in priorities to support a war economy) and Russian exports have been affected by sanctions. Thus, there is fundamental uncertainty regarding the EU's economic relations with the region. Moreover, tensions with China have markedly increased in the context of the Ukraine war and supply chain issues following the COVID-19 pandemic. There also is a debate about decreasing the dependency on economic relations with China, including imports from China (among the keywords are »near-sourcing,« »ethical sourcing,« »friend-sourcing« and »de-globalization«). In the light of these tensions with systemic rivals, the vocal criticism regarding CBAM that has been voiced in Russia and China may be disregarded to some extent. At the same time, EU allies such as the United States have also been vocal in their opposition to CBAM (despite having domestic

debates about BCA proposals with much more clearly protectionist objectives).<sup>41</sup> In an attempt to appease the US, the idea of a G7 climate club has been advanced (see below, chapter 4). As a precursor to such a climate club, the Global Arrangement on Sustainable Steel and Aluminium has been initiated between the US and the EU.<sup>42</sup> Some observers consider the agreement on »sustainable steel« to be a protectionist measure because it highlights a segment of the industry where the US outperforms Chinese steel production in terms of emissions.<sup>43</sup> Challenges to CBAM, as well as trade retaliation, from the US remain possible depending on who will lead the next administration.<sup>44</sup>

Moreover, CBDR&RC concerns remain regarding the relative importance of exports for the many third-country economies that are not strategic rivals. Since there is a lack of empirical studies and uncertainties remain concerning the ultimate design of CBAM, this report refrains from a fundamental analysis of the trade flows of the countries

Figure 3

### Share of steel and iron exports to ETS countries in total exports from emergine and developing countries



Source: Own calculations (UNCTAD Data 2019, <https://wits.worldbank.org>)

<sup>41</sup> See <https://www.politico.com/news/2022/02/24/congress-is-eyeing-a-bipartisan-climate-trade-policy-thanks-to-trump-00009490>; last accessed Oct. 16, 2022.

<sup>42</sup> European Commission, Joint EU-US Statement on a Global Arrangement on Sustainable Steel and Aluminium (2021) ([https://ec.europa.eu/commission/presscorner/detail/en/IP\\_21\\_5724](https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5724); last accessed Oct. 16, 2022).

<sup>43</sup> Interview with Aylin Shawkat, Agora, Aug. 4, 2022.

<sup>44</sup> Interview with Uri Dadush, Breughel, Aug. 30, 2022.

concerned. Limited empirical research was conducted for the product sector of steel and iron, where it is clear exactly which goods are affected by CBAM (whereas in the case of fertilizers, e.g., there is a wide range of products with some uncertainty as to which subclasses of products would ultimately be affected by CBAM). Figure 3 shows that steel and iron exports to ETS countries as a share of their total exports are relatively low, especially for countries from the Global South.

Of particular concern are LDCs. One aspect that may »asymmetrically affect the competitiveness of products from the least developed economies,« is the disproportionate administrative burden of CBAM, e.g., regarding carbon accounting.<sup>45</sup> Simply put, these compliance costs matter more for poorer countries. The EU could probably exempt LDCs from CBAM completely – this is permitted by the »enabling clause« of GATT and favored by development policy experts<sup>46</sup> – but has decided not to, since such an exemption would not be in tune with its decarbonization agenda. A blanket exemption »will encourage [LDCs] to increase their level of emissions and run counter to the overarching objective of the CBAM.«<sup>47</sup> Moreover, an exemption may undermine any public health reasoning for CBAM under GATT's Art. II general exceptions clause.

LDCs are not among the EU's main importers for the products currently envisaged by CBAM. For example, LDCs account for less than 0.1 per cent of imports into the EU for iron and steel, fertilizers and cement. At the same time, the relative importance of these exports can be significant for the LDCs in question if they have a relatively high export dependence on the EU and relatively high carbon intensities of production.<sup>48</sup> Further research on CBAM effects on third-country economies is warranted concerning countries that are particularly vulnerable to CBAM because of their particular trade diversification, carbon intensity, energy and climate policies, and institutional capacity for monitoring, reporting and verification.<sup>49</sup>

Among LDCs, it is estimated that Mozambique will be greatly affected, both in the short term and in the long term because of its dependence on coal-based South African electricity (emissions).<sup>50</sup> Aluminum makes up over a fifth of its exports, 87 percent of which is destined for the EU (making up 7.7 per cent of the EU's imports of aluminum, making it an exception to otherwise low shares of LDC exports of EU imports). Cameroon and Ghana may also be particularly affected in this sector. For Zimbabwe, iron and steel comprise 13 percent of exports, 25 percent of which is sold to the EU. Zambia may also be heavily affected in this sector. Algeria and Egypt as well as Trinidad and Tobago have a high share of fertilizer exports.<sup>51</sup> It should be noted, however, that many of these export sectors in LDCs are dominated by MNCs based in industrialized countries. This warrants further exploration in terms of possible burden-sharing between LDC and other third-country governments and private actors and concerning parallel regulatory policies such as due diligence legislation in the EU.

In a case study on Morocco – which will be significantly affected by CBAM in the electricity sector – Berahab and Dadush highlight two main issues and call for Morocco to join the opposition to CBAM: First, actors in the Global South feel great uncertainty about the consequences of CBAM for their direct trade interests, mainly because of the complexity of the policy. Secondly, they voice concerns that CBAM undermines the multilateral foundations of the climate and development policies of these countries, namely the WTO rules and the Paris Agreement. At the same time, the authors recognize that CBAM represents »a wake-up call for Morocco, as it is for many other nations, that the time is ripe for a more concerted and comprehensive decarbonization effort. Even if the CBAM is not implemented in its proposed form, it is likely the harbinger of tighter carbon regulations, standards and taxes that could take various forms.«<sup>52</sup>

<sup>45</sup> Geraldo Vidigal and Ingo Venzke, op. cit. FN 15.

<sup>46</sup> Interview with Clara Brandi, IDOS, Sep. 2, 2022; cf. Clara Brandi, »Priorities for a Development-Friendly EU Carbon Border Adjustment Mechanism,« DIE (2021) ([https://www.idos-research.de/uploads/media/BP\\_20.2021.pdf](https://www.idos-research.de/uploads/media/BP_20.2021.pdf); last accessed Oct. 16, 2022).

<sup>47</sup> Geraldo Vidigal and Ingo Venzke, op. cit. FN 15. In addition, exemptions for low and middle-income countries would discourage investments in green technology; see Chiara Galiffa and Ignacio Garcia Berceo, op. cit. FN 32.

<sup>48</sup> Institute for European Environmental Policy (IEEP), What can Least Developed Countries and other climate vulnerable countries expect from the EU Carbon Border Adjustment Mechanism (CBAM)? (2021) (<https://ieep.eu/publications/what-can-climate-vulnerable-countries-expect-from-the-cbam>, last accessed Oct. 16, 2022); Laima Eicke, Silvia Weko, Maria Aperi and Adala Marian, Adala, »Pulling up the carbon ladder? Decarbonization, dependence, and third-country risks from the European carbon border adjustment mechanism,« Energy Research and Social Science, 80 (2021): 102-240 ([https://publications.iass-potsdam.de/rest/items/item\\_6001199\\_7/component/file\\_6001200/content](https://publications.iass-potsdam.de/rest/items/item_6001199_7/component/file_6001200/content), last accessed Oct. 16, 2022).

<sup>49</sup> Ibid.

<sup>50</sup> Interview with Aaron Cosbey, Small World Sustainability Consulting, July 27, 2022; interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>51</sup> IEEP, op. cit. FN 49.

<sup>52</sup> Rim Berahab and Uri Dadush, »What will be the effect of the EU's Carbon Border Tax on Morocco, and how should Morocco react?« Policy Center for the New South (October 2021) (<https://www.policycenter.ma/sites/default/files/2021-10/PP-21-21-RIM-DADUSH-.pdf>; last accessed Oct. 16, 2022); see also Rim Berahab, »Is the EU's Carbon Border Adjustment Mechanism a Threat for Developing Countries?« Policy Center for the New South (January 13, 2022) (<https://www.policycenter.ma/opinion/eus-carbon-border-adjustment-mechanism-threat-developing-countries>; last accessed Oct. 16, 2022).

### 3.5 Policy Options

CBAM is likely to affect third-country interests, including in the Global South. This can give rise to a sense of injustice that may shake the confidence in the fundamental institutions of trade and climate and thus lead to adverse effects, namely trade retaliation in the form of countervailing duties and legal challenges. This danger can be ameliorated if countries in the Global North, and the EU in particular, work to fulfill financial pledges made in the context of the UN Millennium Development Goals (MDGs) – 0.7 per cent of GDP for sustainable development – and at the Paris Climate Conference in 2015, where industrialized countries committed to providing 100 billion US dollars annually for climate protection in developing and emerging countries until 2020 – a goal that has yet to be achieved. Its target date was pushed to 2023 at the 2021 climate conference in Glasgow. A goal for climate finance post-2025 has yet to be established and will be part of the discussion during the climate conference in Egypt in November 2022.

At the same time, the EU can also use CBAM design and parallel measures to support third-country decarbonization efforts for this purpose. In terms of CBAM design, two issues are crucial: export adjustment and carbon pricing. While the extent of export-related carbon leakage is empirically unclear, export adjustment will be politically necessary to sustain business support. However, the EU is well advised to find a way to make any export adjustment mechanism fully WTO-compatible, in order not to invite legal challenges. The business sector prefers continued free allowances, but full compensation (either through free allowances or rebates) or »double protection« (e.g., not subtracting remaining free allowances from rebates) would signal that the EU privileges industrial policy objectives – whether they are purely protectionist or in support of decarbonization of EU firms is a secondary consideration – and that may provide the basis for a legal challenge under GATT and result in countervailing duties.<sup>53</sup>

In terms of carbon pricing, the EU could still decide to consider »de minimis« exceptions to exempt small installations, but it seems as though CBAM will affect products priced 150 euros and higher.<sup>54</sup> In terms of using average prices to combat »resource shuffling,« while the concern is well founded (at least when scope 2 emissions are included, due to the high level of electricity production in emissions-intensive coal power plants),<sup>55</sup> CBAM design should favor product-specific pricing of embodied carbon emissions over industry or country averages (or EU baseline data), because ultimately this mechanism privileges the objective of

actual emission reductions of individual third-country exporters – the alternative would simply be unfair to clean(er) producers and also violate WTO rules on non-discrimination of »like products.«<sup>56</sup> Full protection against carbon leakage is not possible.<sup>57</sup> Since resource shuffling may occur as a matter of MNC policy (MNCs may attempt to avoid paying a CBAM price for their past investment and sourcing decisions), parallel measures such as due diligence legislation are called for.

Both of these design options run counter to the preferences of many EU-based exporters, who favor a CBAM with average prices for embodied emissions and full rebates for exporters. As EU businesses are major constituents of effective decarbonization efforts, compromises will likely be made in order not to lose their support.

In terms of using CBAM revenue for parallel measures to support third-country decarbonization efforts, some argue that »not redistributing the proceeds of CBAM to exporting countries creates an incentive for these countries to actually set up a carbon pricing system themselves, instead of losing revenue to the EU.«<sup>58</sup> Legally, all revenue will have to go into the EU's general fund and thus cannot be earmarked for any such purpose.<sup>59</sup> However, it makes sense for political and ecological reasons to invest part of the CBAM proceeds (or, technically, a designated part of the EU budget)<sup>60</sup> in order to ease some of the administrative burden of CBAM for third-country exporter (e.g., by improving and standardizing carbon accounting methods) and to fund decarbonization projects outside of the EU.<sup>61</sup> In terms of CBAM revenue, it is projected that 2.1 billion euros will be collected at the border. This would almost double the current annual climate finance contribution of the EC.<sup>62</sup>

»Recycling carbon pricing revenues to address equity concerns is a tried and tested EU method, at least internally.«<sup>63</sup> Since CBAM runs the risk of institutional overload in addressing issues of competitiveness, EU »green« industrial policy and development issues related to decarbonization, it may ultimately be advantageous that CBAM revenues cannot be earmarked and that parallel measures will have

<sup>53</sup> Interview with Susanne Dröge, SWP, Aug. 8, 2022. For »net-zero compensation,« technical issues include the fluctuating price of carbon. Interview with Aylin Shawkat, Agora, Aug. 4, 2022. Cf. Andrei Marcu, Michael Mehling, Aaron Cosbey, Alexandra Maratou and Anita Vollmer, op. cit. FN 16.

<sup>54</sup> Interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>55</sup> Russia has already announced that it would simply shift electricity supply for the production of exports to the EU to the »greener« power plants. Interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>56</sup> Addressing resource shuffling could conceivably be justified as a measure to reduce overall emissions. But for the WTO, equal treatment of »like products« (regardless of overall production conditions in the respective country) matters more. Interview with Aaron Cosbey, Small World Sustainability Consulting, July 27, 2022.

<sup>57</sup> Interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>58</sup> See Geraldo Vidigal and Ingo Venzke, op. cit. FN 15.

<sup>59</sup> See [https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_21\\_3661](https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_3661), last accessed Oct. 16, 2022.

<sup>60</sup> As the EU budget is the result of long-term political compromises, it may be difficult to find the necessary support for financial assistance, especially in light of other challenges such as the Ukraine war. Interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>61</sup> Interview with Clara Brandi, IDOS, Sept. 2, 2022.

<sup>62</sup> CBAM »is projected to generate €9.1bn per year by 2030, with the rest accruing to Member States from the gradual phasing-out of free allowances to EU producers.« See Tim Gore, op. cit. FN 38.

<sup>63</sup> E.g., through the Modernization Fund and the Social Climate Fund.

to be funded (and administered) separately. Moreover, any development assistance beyond directly CBAM-related administrative costs is likely to result in controversies regarding conditionalities and accountability, demanding diplomatic and development policy expertise not available to trade policy experts.<sup>64</sup>

Some commentators therefore argue that assistance should be targeted to help exporters meet the administrative certification requirements of CBAM, »to fit the instrument to the problem,« as even clean(er) producers will have to bear these costs.<sup>65</sup> They disagree over how much of a burden CBAM constitutes for third-country exporters. Does it create serious difficulties, in part because of the fluctuating price of carbon?<sup>66</sup> Or is it nothing more than an additional line in the customs form, to be completed with easily available data?<sup>67</sup> Moreover, while CBAM itself would remain as an incentive to decarbonize, this assistance would not further the decarbonization agenda. Assistance must amount to more than compensation for administrative burdens and costs; however, the objective must be transformation as part of the »green industrial revolution« for all countries involved.<sup>68</sup>

The proposal of the EP's Committee on Development specifically supports LDCs' decarbonization efforts; as has been shown, however, the administrative and financial burden generated by CBAM will also affect other developing countries including Lower-Middle Income Countries.<sup>69</sup> Many countries would certainly welcome additional assistance in decarbonizing their production facilities, modernizing their supply chains and decarbonizing their energy sector – in fact, they forcefully demand such assistance, since it is an integral part of the Paris Climate Accord and CBDR&RC. In addition to general increases of climate finance contributions, parallel measures may include support for specific decarbonization projects.

These parallel measures to support international climate action would strengthen the CBAM's underlying carbon leakage narrative – providing a possible shield against legal challenges – and help politically to ameliorate legitimate CBDR&RC concerns.<sup>70</sup> At the same time, they may end up

compromising EU industrial stakeholders' support. Thus, the EU has to carefully balance expenditures stemming from CBAM revenue. The business sector may be skeptical concerning ideas to promote green technology transfer, as concerns about intellectual property have impeded discussions about the facilitation of (green) technology transfer.<sup>71</sup> Obstacles remain in the Global South as well, especially as regards production capacity.<sup>72</sup>

There are likely to be negotiations concerning the impact of CBAM and possible compensation, but they will probably focus on China and other major exporting countries rather than on LDCs such as Mozambique.<sup>73</sup> The question is thus whether the EU can offer anything that will allay the concerns of potential serious challengers of CBAM under GATT rules, such as China or India.<sup>74</sup>

## 4. CLIMATE CLUBS

William Nordhaus, winner of the 2018 Nobel Prize for economics, developed his concept of a »carbon club« as a combination of a carbon pricing system with a system of trade protection of club members against free riding – e. g., »carbon leakage« – in order to ensure members' »club goods« of lower emissions in the context of a liberal trading regime.<sup>75</sup> The EU's CBAM project conforms to Nordhaus' original concept, since it combines a carbon price via the EU Emissions Trading System (EU ETS) with a system of protection (CBAM). Moreover, by way of general exemptions, the club's multilateral cooperation across industrial sectors extends beyond the members of the EU to include countries in the European Economic Area (Norway, Iceland and Liechtenstein) that apply the EU ETS, as well as Switzerland, which fully links its ETS to that of the EU.<sup>76</sup> At the same time, while there are plans to increase the coverage to include the electricity used in the production of the selected goods (»scope 2« emissions), the EU ETS/CBAM »club« currently has a rather limited scope.

The EU could expand this »carbon club« by increasing the range of industries and products covered, and open it to other countries (by way of further general exemptions).<sup>77</sup> However, it has rejected proposals to include countries that do not engage in carbon pricing, because the calculation of equivalencies in terms of other regulatory policies poses serious technical and political problems (see below). Con-

<sup>64</sup> Still, funding decarbonization projects via the Global Climate Fund and other organizations is likely to be more onerous than direct EU funding. Interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>65</sup> Interview with Aaron Cosbey, Small World Sustainability Consulting, July 27, 2022.

<sup>66</sup> Interview with Jan Steckel, Mercator Research Institute, July 17, 2022.

<sup>67</sup> Interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>68</sup> Interview with Aylin Shawkat, Agora, Aug. 4, 2022.

<sup>69</sup> European Parliament, Opinion of the Committee on Development for the Committee on the Environment, Public Health and Food Safety on the proposal for a regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism (2021b) ([https://www.europarl.europa.eu/doceo/document/DEVE-AD-704681\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/DEVE-AD-704681_EN.pdf); last accessed Oct. 16, 2022; cf. <https://www.climatechangenews.com/2021/07/12/eu-must-use-carbon-border-tax-support-just-transition-around-world/>; last accessed Oct. 16, 2022).

<sup>70</sup> Ilaria Espa, op. cit. FN 30.

<sup>71</sup> Interview with Aylin Shawkat, Agora, Aug. 4, 2022. Agora is conducting a project on »green intellectual property banks.«

<sup>72</sup> Interview with Joachim Monkelbaan, World Economic Forum, Sept. 2, 2022.

<sup>73</sup> Interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>74</sup> Interview with Uri Dadush, Brueghel, Aug. 30, 2022.

<sup>75</sup> William Nordhaus, »Climate Clubs: Overcoming Free-riding in International Climate Policy,« *The American Economic Review*, 105 (4) (2015): 1339-1370.

<sup>76</sup> Geraldo Vidigal and Ingo Venzke, op. cit. FN 15.

<sup>77</sup> The EU may »conclude agreements with third countries with a view to take account of carbon pricing mechanisms in these countries.« Cited in Michael Mehling, Andrei Marcu and Aaron Cosbey, op. cit. FN 37.



sequently, countries like the United States – with (at times) similar climate ambition but without any prospect of introducing a carbon price – have voiced opposition to the CBAM, which may very well affect them. This opposition – coupled with the realization that a comprehensive »carbon club« is not politically feasible, because even at the level of the G7, »club members will, in principle, have different levels of climate ambition«<sup>78</sup> and be subject to adverse domestic political developments (most obviously in case of the 2024 US presidential election)<sup>79</sup> – has prompted Germany to propose a more inclusive climate club at the level of the G7.<sup>80</sup> Its differentiated concept can best be described as a proposal for increased international »climate cooperation.« There are already several examples of more limited club-like arrangements (or proposals for such arrangements), most prominently:

- bilateral initiatives such as the Switzerland-Peru agreement on carbon offsetting concluded in October 2020 under Article 6 of the Paris Agreement;
- negotiations on an Agreement on Climate Change, Trade and Sustainability by Costa Rica, Fiji, Iceland, New Zealand, Norway and Switzerland;
- the pursuit of environmental and climate objectives in free trade agreements and investment treaties such as the Comprehensive Agreement on Investment between the EU and China (December 2020); and
- the ministerial declaration on fossil fuel subsidies issued by a group of fifteen WTO members, reflecting a willingness to cooperate regarding a reform of inefficient fossil fuel subsidies.<sup>81</sup>

Politically, the most interesting proposal is the US-EU Global Arrangement on Steel and Aluminum (announced on October 31, 2021, and to be launched by 2024), committing participants to »restrict market access for non-participants that do not meet standards for low-carbon intensity.«<sup>82</sup> This arrangement can be considered a carbon-based climate club that – albeit considerably limited in scope – runs counter to the concern that no such club could work between the EU and the US. The agreement shows that political will is called for when it comes to overcoming conceptual obstacles to policy cooperation. Unfortunately, in this case the

political will that brought about the agreement had little to do with climate ambition and more with ulterior political motives. The EU had an interest in placating the US with regard to American opposition to CBAM, and in terms of eliminating the so-called national security steel tariffs introduced by the Trump administration. The Biden administration removed the tariffs immediately. However, its interests amount to »green protectionism,« since the aim of the agreement is to decarbonize steel and aluminum specifically in sectors where the US easily meets the agreed-upon standards (»secondary steel«) but its main competitor, China, does not.<sup>83</sup>

#### 4.1 The G7 Proposal: Three Pillars of Policy Coordination

In much of the current political debate, the concept of »clubs« is used in a much broader sense than in Nordhaus's original idea. The focus is less on excludable »club goods« and penalties for non-members than on multilateral policy coordination (of a less than universal nature).<sup>84</sup> Several ideal types of such broader clubs can be distinguished: »normative clubs, under which like-minded members commit to achieving certain climate policy goals; bargaining clubs to enable more efficient negotiations of objectives, targets and policies among major powers; and transformational clubs, which set legally binding rules for members and offer incentives for participation and compliance in the form of club goods and sanctioning.«<sup>85</sup>

The three pillars of the »climate club« proposal currently under discussion at the G7 are a combination of these ideal types, but it actually lacks the elements of a true »carbon club« – German chancellor Olaf Scholz even spoke of an »inclusive club« (in effect, the conceptual opposite of a club), signaling an openness to include non-G7 countries. Thus, a more appropriate label for the current proposal would be »climate policy coordination« or a »climate coalition,« combining joint efforts with offers of decarbonization assistance for non-members, such as newly industrialized and especially developing countries.<sup>86</sup>

The first pillar concerns agreement on joint climate action. Again, ideally this would mean a common carbon price or an emissions trading system, or both – which would then have to be protected against carbon leakage through some form of border BCA such as the EU's CBAM. In the case of several members of the G7, such as the US and Japan, however, there is either no prospect of them establishing a carbon price or they envision a carbon price that would be too low. Any joint trade protection therefore runs into the challenge of having to define equivalencies in terms of climate action, in order to avoid border adjustments between

<sup>78</sup> Interview with Aylin Shawkat, Agora, Aug. 4, 2022.

<sup>79</sup> Some commentators argue that a multilateral, multisectoral »carbon club« could be perceived as competition for the UNFCCC regime and may prompt trade retaliation. See Heiner von Lüpke, Karsten Neuhoff and Catherine Marchewitz, op. cit. FN 29.

<sup>80</sup> Initially, Germany's Finance Ministry had proposed a Nordhaus-style »carbon club,« i. e., with a carbon price and border carbon adjustment measures. It was supposed to be open to any country meeting the requirements, and included cooperative elements. See Heiner von Lüpke, Karsten Neuhoff and Catherine Marchewitz, op. cit. FN 29; Michael Mehling, Harro van Asselt, Susanne Droege and Kasturi Das, op. cit. FN 22.

<sup>81</sup> See Makane Moise Mbengue and Elena Cima: »'Clubbing in the Club': Could Climate-Related Trade Arrangements Set the Pace for Future Climate Cooperation?« AJIL Unbound, 116 (2022): 219-224; Timothy Meyer, op. cit. FN 21; Michael Mehling, Harro van Asselt, Susanne Droege and Kasturi Das, op. cit. FN 22.

<sup>82</sup> See <https://www.commerce.gov/news/fact-sheets/2021/10/steel-and-aluminum-us-eu-joint-statement>, last accessed Oct. 16, 2022.

<sup>83</sup> Ibid.; Interview with Aylin Shawkat, Agora, Aug. 4, 2022; interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>84</sup> Michael Mehling, Harro van Asselt, Susanne Droege and Kasturi Das, op. cit. FN 22.

<sup>85</sup> Ibid.

<sup>86</sup> Chiara Galiffa and Ignacio Garcia Berceiro, op. cit. FN 32.

club members (which would render the club meaningless).<sup>87</sup> Simply put, since carbon leakage may occur between club members, they may consider protective trade measures against each other.<sup>88</sup> In that case, WTO compatibility is important to ensure the cohesion of the club. This may mean that requiring the use of essentially the same policy as, for example, that of the EU ETS, may be unjustifiable if the WTO holds that non-monetary regulatory disincentives concerning emissions, as in the US, can be considered »comparable in effectiveness.«<sup>89</sup> However, most experts agree that the intricacies of calculating such equivalency between the EU's ETS and other countries' individual regulatory climate policies pose insurmountable technical challenges, inter alia, because countries with a carbon price generally have additional forms of climate regulation as well.<sup>90</sup> Invariably, the technical challenges will be accompanied by political disputes about how various policies should be assessed – a case being the recently passed US Inflation Reduction Act of 2022 which has been billed as a serious example of climate ambition by the Biden administration but largely consists of »green« subsidies that may be construed as unfair trade policy.

Because of the skepticism concerning the technical and political feasibility of true club-like arrangements – which would run into the same kind of »green protectionism« concerns as the EU's CBAM proposal – much of the focus of the debate has been on the cooperative and assistance policies of the second and third pillars. This has the potential to shift the focus of the debate away from »trade protection« and to accommodate the concerns of the Global South from the beginning.<sup>91</sup>

The second pillar envisions cooperative efforts, inter alia, regarding shared environmental standards and decarbonization targets, joint methodologies for measuring carbon and other embedded emissions, rules for »green« public procurement policies, and the development of green »lead markets« – increasing consumer demand for »green products« and thereby benefiting club members' industries.<sup>92</sup>

The third pillar involves club members' support for decarbonization and other transitional policies of non-club members, for example, in the Global South, through ca-

capacity building and technology transfer.<sup>93</sup> Many open questions remain: How will these cooperative efforts be linked with the other pillars? Specifically, will they be political »side payments« to appease concerns regarding protective trade measures of the first pillar? Would such cooperative measures to facilitate a »just transition« not work better in the context of bilateral or sectoral (industry-based) agreements such as the FACT (Forest, Agriculture and Commodity Trade) Dialogue, the Net-Zero Steel Initiative (NZSI) of the Mission Possible Partnership, or the Leadership Group for Industry Transition (LeadIT)?<sup>94</sup> How will intellectual property concerns be dealt with in order to facilitate green technology transfer?<sup>95</sup>

## 4.2 Development Perspectives

The general concern about the formation of climate clubs is that, as multilateral but not universal endeavors, they may undermine the cohesion of the UNFCCC and multilateral climate accords.<sup>96</sup> At the same time, to be effective in terms of increasing climate ambition, they would need clear – i. e., at least somewhat restrictive – membership conditions and membership would need to provide clear benefits (i. e., penalties for non-members).<sup>97</sup> These conditions would, however, not exclude the possibility of expansion, for example to the G20.

The concerns regarding the first pillar of the G7 »climate club« proposal mirror those regarding the EU's CBAM proposal, especially if the climate club ultimately includes some form of trade protection of club members. Developmental concerns regarding the second pillar depend on the trade effects of joint standards and procurement policies. Challenges are certainly possible if such policies are considered to be illegal subsidies or discriminatory in the context of GATT rules. In terms of the above-mentioned third pillar of cooperative measures, the demand for decarbonization assistance, technology transfer, etc., certainly exists.<sup>98</sup> If policies such as assistance for decarbonization are introduced as an effort to allay concerns about trade protection, the demand for them will very likely increase, based on the same arguments proposed in the CBAM debate: If the Paris principle of »differentiated responsibilities« is taken serious-

<sup>87</sup> Michael Mehling, Harro van Asselt, Susanne Droëge and Kasturi Das, op. cit. FN 22.

<sup>88</sup> Interview with Aylin Shawkat, Agora, Aug. 4, 2022.

<sup>89</sup> Geraldo Vidigal and Ingo Venzke, op. cit. FN 15; Chiara Galiffa and Ignacio García Bercero, op. cit. FN 32.

<sup>90</sup> Interview with Jan Steckel, Mercator Research Institute, July 17, 2022; interview with Aylin Shawkat, Agora, Aug. 4, 2022; interview with Susanne Dröge, SWP, Aug. 8, 2022. The OECD is developing a methodology for determining equivalency between various policies, which is »an interesting intellectual exercise« but will likely not have practical applications (ibid.).

<sup>91</sup> Interview with Clara Brandi, IDOS, Sep. 2, 2022; interview with Jan Steckel, Mercator Research Institute, July 17, 2022.

<sup>92</sup> Chiara Galiffa and Ignacio García Bercero, op. cit. FN 32; Joachim Monkelbaan, op. cit. FN 16; interview with Aylin Shawkat, Agora, Aug. 4, 2022; interview with Jan Steckel, Mercator Research Institute, July 17, 2022; interview with Susanne Dröge, SWP, Aug. 8, 2022.

<sup>93</sup> Chiara Galiffa and Ignacio García Bercero, op. cit. FN 32. An example for such cooperation is the Just Energy Transition Partnership (JETP) between Germany, the UK, the US and France to decarbonize South Africa's electricity production. Other JETPs are envisioned in the G7 communiqué for India, Indonesia and Senegal. Interview with Aylin Shawkat, Agora, Aug. 4, 2022. However, there is already controversy concerning the size of the actual financial commitment and the willingness of South Africa to accept conditions and accountability measures. »It is difficult to develop criteria and to target the support.« Interview with Aaron Cosbey, Small World Sustainability Consulting, July 27, 2022.

<sup>94</sup> Lüpke, Heiner von; Karsten Neuhoff, Catherine Marchewitz (2022), op. cit. FN 29; interview with Susanne Dröge, SWP, Aug. 8, 2022; interview with Jan Steckel, Mercator Research Institute, July 17, 2022.

<sup>95</sup> Interview with Aylin Shawkat, Agora, Aug. 4, 2022.

<sup>96</sup> Interview with Clara Brandi, IDOS, Sep. 2, 2022.

<sup>97</sup> Joachim Monkelbaan, op. cit. FN 16.

<sup>98</sup> Interview with Uri Dadush, Breughel, Aug. 30, 2022.

ly, it applies to any trade protection in the context of climate clubs as well as to CBAM. As discussed above, however, a full-fledged »carbon club« at the level of the G7 is very unlikely at this point, as are measures of trade protection at the level of a climate club. But since the EU has an interest in placating US concerns regarding CBAM, some form of climate policy coordination at the level of the G7 or beyond is politically likely.<sup>99</sup>

## 5. CONCLUSION AND RECOMMENDATIONS

Border carbon adjustment (BCA) is a policy tool to address core problems of global climate mitigation efforts related to international trade. When individual countries or entities like the EU take unilateral action to combat climate change, such as establishing a carbon pricing system, they impose costs on domestic firms that do not apply to foreign competitors. BCA is designed to solve these problems by »leveling the playing field.« This means that foreign producers pay for the carbon that is embodied in their products. The EU proposal for a Carbon Border Adjustment Mechanism (CBAM), which is still under negotiation, targets selected products of certain CO<sub>2</sub>-intensive industries: cement, iron and steel, aluminum, fertilizers and electricity generation. CBAM will impose costs on exporters from the Global South that may be quite significant for countries with a relatively high export dependence on the EU and relatively high carbon intensities of production. Consequently, opposition to »green protectionism« has arisen in the Global South, highlighting problems of compatibility with global trading rules and the violation of the spirit of the Paris Climate Accord, specifically the principle of »differentiated responsibilities.« In order to maximize CBAM's positive contribution to global decarbonization efforts and to minimize, or at least mitigate, additional trade barriers for developing countries, CBAM must be designed to respect global trading rules, specifically concerning the treatment of EU exporters, and concerning the product-specific rather than country-average pricing of the embodied carbon emissions of imports, thereby rewarding actual emissions reductions of individual third-country exporters. In order to avoid legal challenges and retaliatory trade measures, the EU is also well advised to employ CBAM revenue to mitigate third-country exporters' administrative compliance costs and to provide assistance for decarbonization efforts in the Global South, including meeting already existing climate financial commitments. Beyond the incentives for decarbonization provided by CBAM's levies on embodied carbon, these parallel measures would increase Global South exporters' competitiveness in markets with carbon pricing systems and contribute to their own commitments under the Paris Climate Accord.

While a true »carbon club« – beyond the EU's combination of a carbon pricing system with the protective measures of

CBAM, which can be considered to be such a club – is currently not politically feasible, the G7 member states are discussing three pillars of a »climate club« proposal that can best be described as a concept for increased multilateral climate policy coordination. Consequently, the discussion has focused on lead markets, incentives, cooperative policies and decarbonization assistance. This has the potential to shift the focus of the debate away from trade protection, the »necessary evil« for a true »club,« and thus to accommodate the concerns of the Global South from the beginning. Specifically, legal challenges to joint standards and procurement policies are certainly possible if such policies are considered to be illegal subsidies or discriminatory violations of global trading rules.

Trade policy can contribute to climate change mitigation and it is high time that the separate »silos« of climate and trade policy be integrated. Yet the specific measures under discussion here – border carbon adjustments and climate clubs – are designed in rather narrow terms. The CBAM proposal focuses on a select number of industries. While it will in all likelihood be expanded to include the emissions connected with the electricity used in the production, it must be recognized that all trade flows matter in terms of GHG emissions, not least because of the emissions related to the transport of traded goods. Additional measures to further incentivize decarbonization efforts in global trade are called for, and great care must be taken in the specific design of border carbon adjustments and climate clubs.

Specifically,

- EU and G7 policymakers must make sure that border carbon adjustments are designed to be in conformity with global trading rules and respect the principle of »common but differentiated responsibilities.« Legal challenges under GATT may be unavoidable, but policymakers should not provoke them or count on WTO waivers. Increasing financial assistance for decarbonization and ecological transformation is crucial, as is overcoming intellectual property rights concerns in the context of green technology transfer. Further incentives for decarbonization may be included in trade agreements. Perhaps most importantly, the recognition of the role of Global North consumption patterns and MNCs (e. g., for carbon leakage and resource shuffling) must lead to increased efforts to reduce transportation-related emissions and enforce corporate due diligence. A change of perspective is required: More trade may not always be good.
- Global South policymakers will probably have to accept that border carbon adjustments will become a reality in one way or another, since trade protection for producers operating in the context of an emissions trading system is a »necessary evil« in the process of emissions reduction in the Global North. This does not preclude challenges regarding WTO conformity, but these challenges should be well founded and address design flaws. Moreover, in the long run, decarbonization efforts will pay off in terms of competitiveness in markets that

<sup>99</sup> Interview with Susanne Dröge, SWP, Aug. 8, 2022.

value low emissions. Thus, financial and technical assistance should indeed focus on industrial decarbonization and contribute to an ecological transformation («green industrial policy»).

- NGOs should note that Global South policymakers are at a distinct disadvantage when it comes to legal and technical expertise in trade and climate policy matters, especially concerning the linkage of these policy arenas. Experts are few and far between – and blanket expressions of resistance against »green protectionism« and demands for (preferably unconditional) financial assistance do not facilitate technical and legal negotiations. In order to level the playing field and empower Global South policymakers, NGOs must increase their capacity-building efforts in terms of increasing partners' expertise in trade and climate matters.

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## INTERVIEWS

**Clara Brandi**, IDOS, Sep. 2, 2022

**Aaron Cosbey**, Small World Sustainability Consulting, July 27, 2022

**Uri Dadush**, Breughel, Aug. 30, 2022

**Susanne Dröge**, SWP, Aug. 8, 2022

**Joachim Monkelbaan**, World Economic Forum, Sept. 2, 2022

**Aylin Shawkat**, Agora, Aug. 4, 2022

**Jan Steckel**, Mercator Research Institute, July 17, 2022

## LIST OF ABBREVIATIONS

<b>BCA</b>	border carbon adjustment
<b>BASIC</b>	Brazil, South Africa, India and China
<b>CBAM</b>	carbon border adjustment mechanism
<b>CBDR&amp;RC</b>	Principle of Common but Differentiated Responsibilities and Respective Capabilities (Paris Climate Accord)
<b>EC</b>	European Commission
<b>EP</b>	European Parliament
<b>EU</b>	European Union
<b>EU ETS</b>	EU Emissions Trading System
<b>GATT</b>	General Agreement on Tariffs and Trade
<b>G7</b>	Group of Seven
<b>GHG</b>	greenhouse gas
<b>ICAO</b>	International Civil Aviation Organization
<b>IMO</b>	International Maritime Organization
<b>JETP</b>	Just Energy Transition Partnership
<b>LDCs</b>	least developed countries
<b>LeadIT</b>	Leadership Group for Industry Transition
<b>MDGs</b>	UN Millennium Development Goals
<b>MNC</b>	multinational corporations
<b>NZSI</b>	Net-Zero Steel Initiative
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>WTO</b>	World Trade Organization





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## GLOBAL AND EUROPEAN POLICIES

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# BORDER CARBON ADJUSTMENTS AND CLIMATE CLUBS

## A Development Perspective



Border carbon adjustment (BCA) addresses the trade-related problems facing global climate mitigation efforts. When countries take unilateral action to combat climate change, such as establishing a carbon pricing system, they impose costs on domestic firms that do not apply to foreign competitors. BCA is designed to »level the playing field.« Foreign producers pay for the carbon that is embodied in their products. The EU proposal for a Carbon Border Adjustment Mechanism (CBAM), still under negotiation, targets selected products of CO<sub>2</sub>-intensive industries. The proposed CBAM would impose significant costs on certain exporters from the Global South. The opposition to this initiative highlights problems of compatibility with global trading rules and the fact that it would violate the Paris Climate Accord's principle of



»differentiated responsibilities.« The CBAM must be designed to respect global trading rules, specifically concerning the treatment of EU exporters and the product-specific pricing of embodied carbon emissions of imports. In order to avoid legal challenges and retaliatory trade measures, the EU is well advised to employ CBAM revenue to mitigate third-country exporters' administrative costs and to support decarbonization efforts, including meeting already existing climate financial commitments. These parallel measures would increase the competitiveness of exporters from the Global South in markets with carbon pricing systems.

The G7 states are discussing a proposed »climate club« that can best be described as a concept for increased



multilateral climate policy coordination. The discussion has focused on lead markets, incentives, cooperative policies and decarbonization assistance. This has the potential to accommodate Global South concerns from the beginning. Legal challenges to joint standards and procurement policies are certainly possible if such policies constitute illegal subsidies or discriminatory violations of global trading rules.

Trade policy can contribute to climate change mitigation. Yet BCA and climate clubs are rather narrowly designed measures. All trade flows matter in terms of CO<sub>2</sub> emissions, not least because of the emissions related to the transportation of traded goods. Additional measures are called for.

Further information on the topic can be found here:

[www.fes.de/en/shaping-a-just-world/climate-change-energy-and-environment](http://www.fes.de/en/shaping-a-just-world/climate-change-energy-and-environment)