POLICY BRIEF

Addressing Trade Discrimination: A Framework to Enhance CBAM

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Trade and Investment

Abstract

The Carbon Border Adjustment Mechanism (CBAM) is a policy initiative by the EU aimed at reducing carbon leakage by imposing a carbon price on imported goods from countries with less stringent climate policies. As global efforts towards achieving net-zero emissions intensify, CBAM seeks to ensure a level playing field for EU industries while encouraging greener production practices worldwide. However, this policy has significant implications for international trade, particularly concerning World Trade Organization (WTO) regulations and trade equality, as well as how the collected CBAM revenue will be further utilised in emission reduction strategies for other exporting countries.

This policy brief examines the impact of CBAM on WTO policies, highlighting concerns related to trade discrimination and potential violations of global trade norms. According to the World Bank, CBAM could affect exports worth $16 billion annually from developing countries. The UN Conference on Trade and Development estimates that countries such as India, Brazil, South Africa, and Indonesia could face export losses of up to $5.6 billion per year due to increased tariffs on carbon-intensive goods. While CBAM aligns with environmental objectives, it raises questions about protectionism and its compliance with WTO principles of non-discriminatory trade.

Developing countries, which rely heavily on carbon-intensive exports, are particularly affected by CBAM. The financial burden of compliance, lack of technological advancements, and the risk of reduced market competitiveness pose significant challenges for these economies. For instance, India's iron and steel sector – a major export industry – could face additional tariffs, increasing costs by up to 20%, according to a study by the Global Trade Analysis Project. Similarly, African countries dependent on raw material exports may struggle to align with CBAM regulations, potentially reducing gross domestic product growth by 0.5% to 1% in affected regions.

Furthermore, the study explores the ongoing debate between CBAM and the G20 economies, many of which oppose the mechanism due to its disproportionate impact on emerging markets. Countries such as China, Russia, and Brazil argue that CBAM undermines the principle of common but differentiated responsibilities in climate action, creating economic disparities rather than fostering a unified approach to sustainability. According to a report by the International Energy Agency, CBAM could drive $25 billion annually in additional revenue for the EU, but at the expense of developing countries struggling with carbon transition policies.

The geopolitical implications of CBAM, potential trade conflicts, and alternative frameworks for ensuring equitable carbon pricing are also discussed. This research provides a comprehensive analysis of CBAM's role in shaping global trade policies, its economic consequences for developing countries, and the broader discourse between regulatory frameworks like the WTO and multilateral platforms like the G20. Understanding these dynamics is crucial for balancing climate goals with fair trade practices and ensuring an inclusive transition to a low-carbon economy.

Keywords: Carbon Border Adjustment Mechanism (CBAM), carbon leakage, World Trade Organization (WTO), G20

Diagnosis

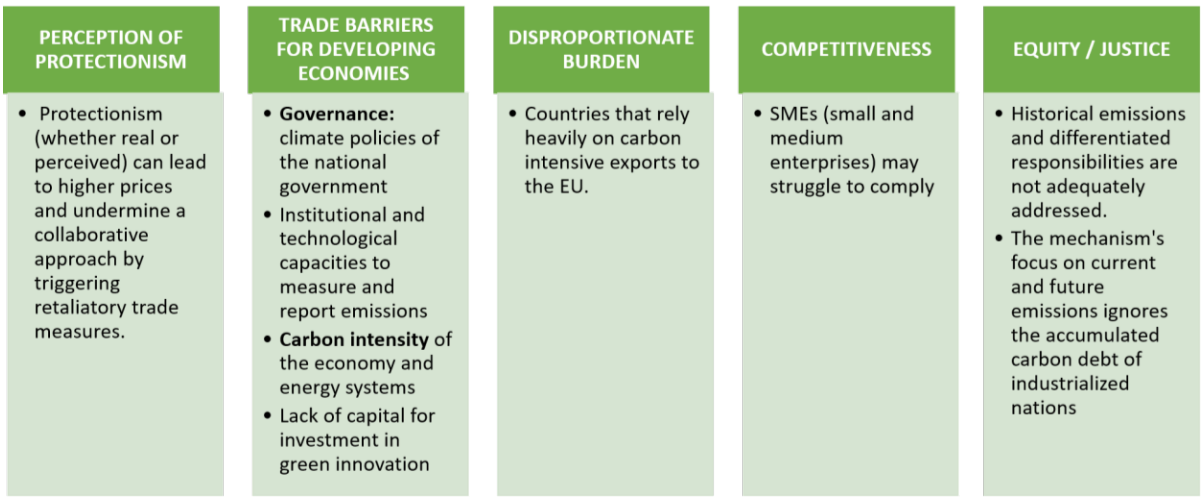
Climate change is a global challenge requiring international cooperation. As the EU strengthens its climate policies, the risk of "carbon leakage" arises, wherein EU-based companies relocate production to countries with lenient climate policies or high-carbon imports replace EU products.[1] The EU's Carbon Border Adjustment Mechanism (CBAM) addresses this by applying equivalent carbon pricing to imported carbon-intensive goods. It aims to protect EU industries and to promote cleaner global industries while complying with World Trade Organization (WTO) rules. CBAM enters full implementation in 2026, following the 2023–2025 phase, coinciding with the phase-out of free EU Emissions Trading System allowances.

CBAM serves multiple objectives:

- **Climate instrument –** Reduce carbon leakage by ensuring that imported goods face equivalent carbon costs.
- **Economic instrument –** Ensure that EU industries remain competitive while adhering to strict climate policies.
- **Diplomatic instrument –** Incentivise other countries to adopt carbon pricing mechanisms to avoid trade barriers.

[1] https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en#cbam

Figure 1. Issues related to CBAM



Source: Compiled by authors

The WTO's position on CBAM and trade concerns

While CBAM aims to comply with WTO rules, concerns about its compatibility remain, particularly regarding its potential classification as a trade barrier. Several developing countries view CBAM as a restrictive trade measure, leading to repeated challenges at the WTO. Core concerns revolve around economic inequality, compliance burdens, and potential trade distortions. The mechanism's uniform carbon pricing approach fails to account for historical emissions, developmental gaps, and economic disparities, further fuelling trade tensions.[2]

[2] https://tradeconcerns.wto.org/en/stcs/details?imsId=49&domainId=CMA

Table 1. WTO rules,[3] trade concerns, and the EU's position[4]

WTO Rules (GATT 1994)	Trade concerns	EU's Position
Article I Most Favoured Nation Treatment	Differentiated treatment, even if environmentally motivated, could be interpreted as unequal trade terms (historically and economically), thus conflicting with the MFN principle of non-discrimination in international trade.	CBAM does not violate Article I (MFN) since adjustments are based solely on environmental objectives under Article XX and adjusts for carbon prices already paid in the exporting country.
Article II Schedules of Concessions	Under **Article II**, CBAM could be seen as an additional import charge exceeding agreed tariff bindings, since it requires importers to buy carbon certificates.	CBAM functions as internal regulation, not a border tax
Article III National Treatment on Internal Taxation and Regulation	CBAM may raise concerns if imported products face higher costs than domestic goods still benefiting from free allowances.	CBAM applies only to emissions not covered by free allowances.

Source: Compiled by authors

The EU's justification for CBAM under the GATT Article XX health and environmental exceptions

Under Article XX(b) and (g) of the General Agreement on Tariffs and Trade (GATT) 1994, trade measures may be justified if they are essential to protecting human, animal, or plant life and health, while Article XX(g) allows for restrictions linked to conserving exhaustible natural resources, provided they are applied alongside similar domestic measures. For CBAM to qualify under these exceptions, it must be

[3] https://www.wto.org/english/docs_e/legal_e/gatt47_e.htm#art1

[4] https://www.europarl.europa.eu/cmsdata/210514/EXPO_BRI(2020)603502_EN.pdf

demonstrated as necessary to achieving its environmental objectives, particularly in preventing carbon leakage.

The assessment of necessity would consider whether less restrictive trade measures could achieve the same goal. To meet this standard, there must be a clear and legitimate connection between CBAM's implementation and its intended climate benefits. Crucially, CBAM should not serve as a disguised trade protection tool favouring domestic industries at the cost of global climate action. If trading partners perceive it as an economic barrier rather than a climate policy, it risks fuelling retaliatory trade measures, undermining international cooperation, and shifting the focus from climate action to economic competition. The EU should make significant efforts to support trading partners that are likely to be disadvantaged by CBAM, especially developing countries that are vulnerable to changing trade patterns. This could take place through EU efforts to secure technology transfers, capacity building and aid to facilitate green industrialisation in other parts of the world.[5]

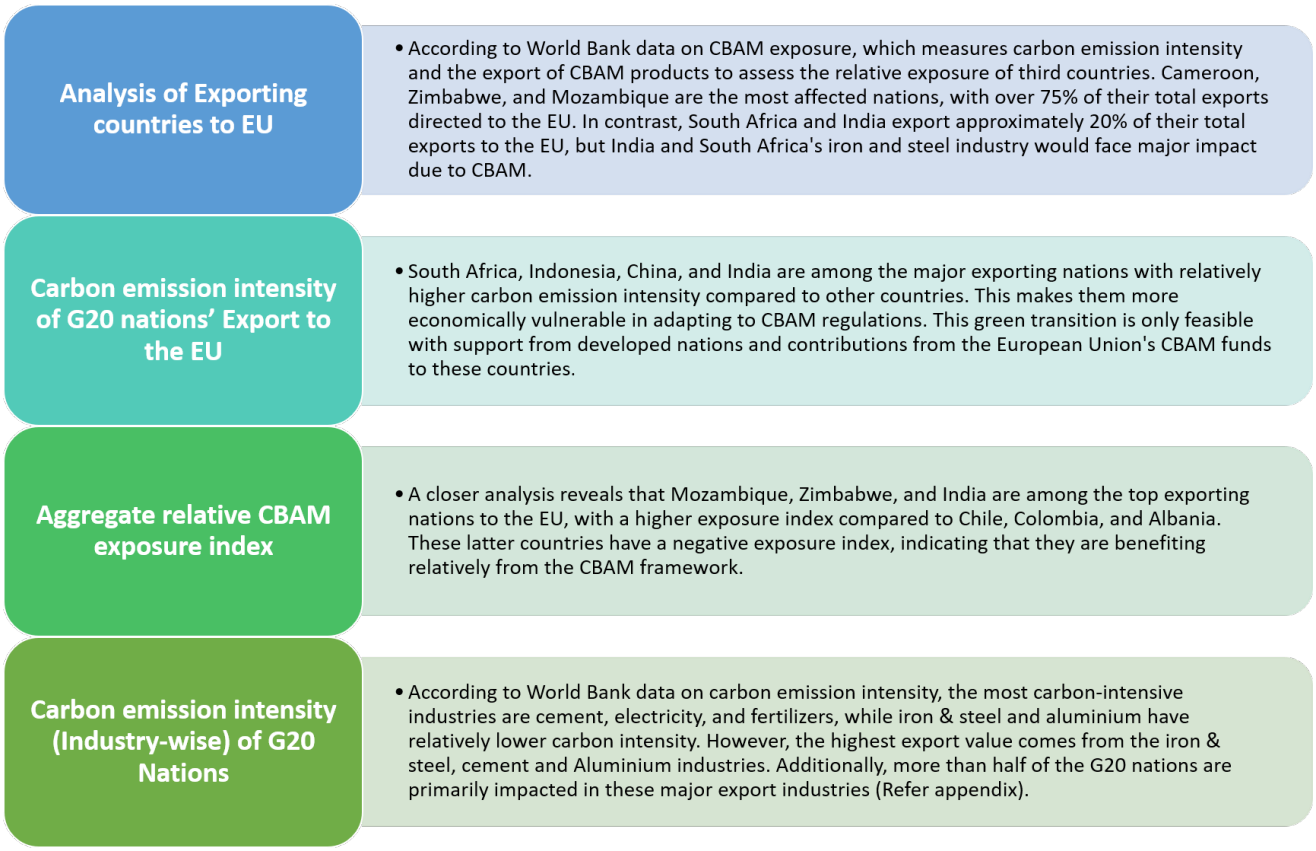
Managing productive vs counterproductive competition

Can a framework be developed to assess when CBAM leads to productive versus counterproductive outcomes? This paper proposes that the WTO establish a framework to evaluate the impacts of CBAM implementation: specifically, whether it genuinely adds value, mitigates carbon leakage, and promotes greener production to qualify for exemption under GATT Article XX(g). The WTO should also develop predictability factors and strengthen communications to prioritise stakeholder engagement.

[5] https://www.sieps.se/globalassets/publikationer/2024/2024_9epa.pdf

Analysis of export data to EU and World Bank's CBAM exposure index[6]

Figure 2. Descriptive analytics of CBAM exposure countries

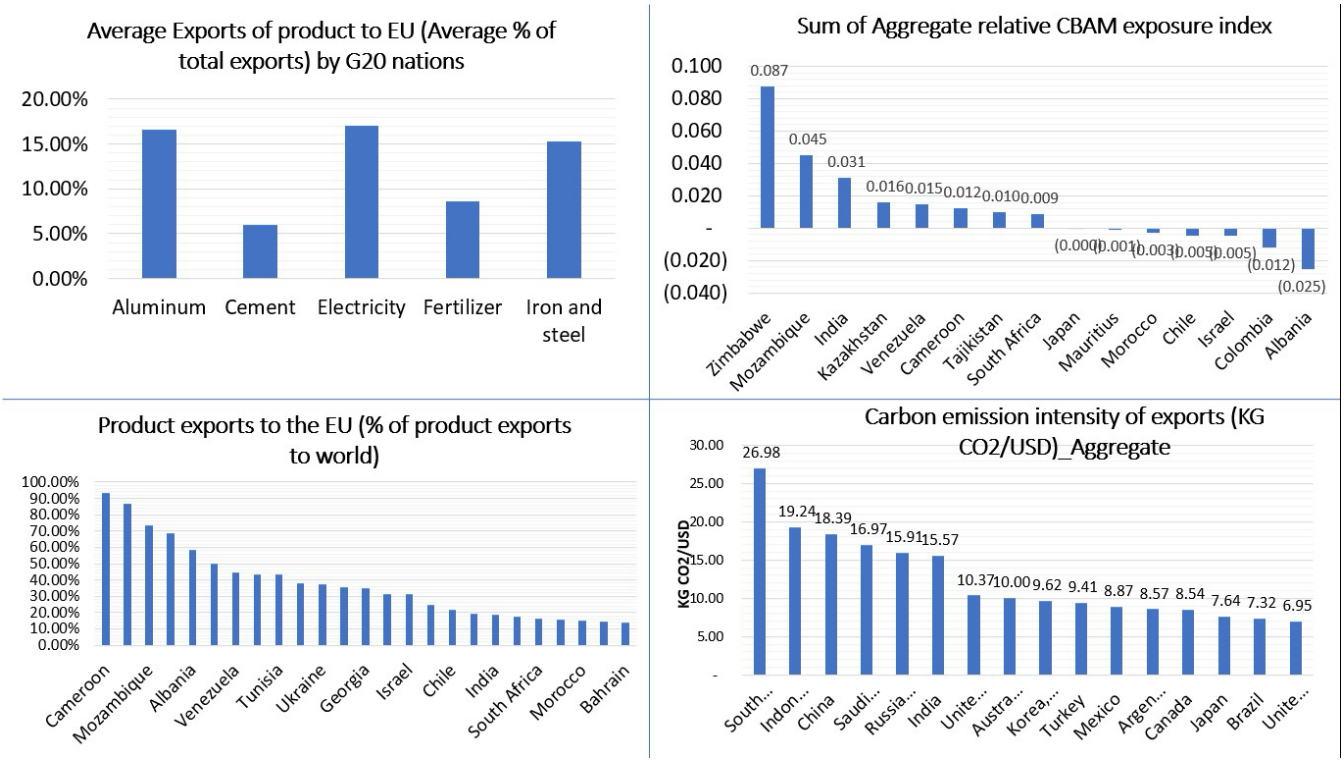


Source: Compiled by authors

Under the current CBAM implementation, developing countries face considerable financial and operational burdens, necessitating a comprehensive re-evaluation to ensure equitable outcomes.

[6] https://www.oecd.org/content/dam/oecd/en/data/insights/statistical-releases/2025/2/International-trade-statistics-Q4-2024.pdf

Figure 3. EU exports, CBAM exposure, and carbon intensity analysis



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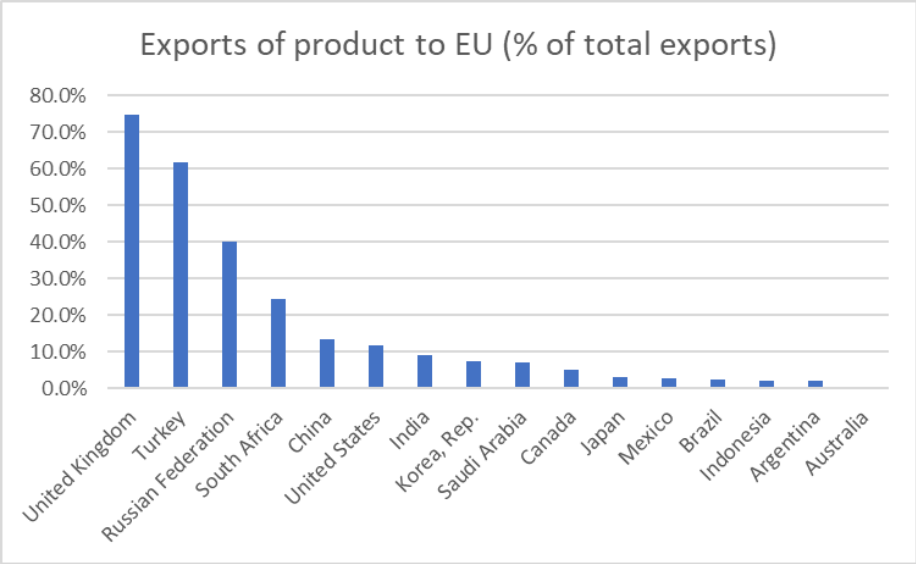
Impact of CBAM on the G20

The G20 is the international forum bringing together the 20 largest and fastest-growing economies. Its members account for more than 80% of the world's gross domestic product (GDP), 75% of global trade, and 60% of the population of the planet.[7] G20 countries, particularly the developing ones, play a crucial role in sustaining global trade and maintaining stable supply chains that keep the world economy on track. Countries such as China, India, Japan, and South Korea are significant net exporters of steel products to EU member states. With the introduction of the EU's CBAM, it is essential to closely examine how this mechanism will affect these key economies within the G20 framework.

[7] https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/stronger-europe-world/eu-g20_en

Economic impact of CBAM on G20 countries: Over 36% of G20 countries' total exports in sectors covered under CBAM are directed toward European markets, highlighting the critical importance of these trade flows for the economic stability of low- and middle-income countries. For major exporters such as China, India, Russia, South Africa, and Turkey, more than 10% of their total exports are destined for the EU. The additional compliance costs and potential market access barriers introduced by the mechanism could negatively affect industrial output, employment, and the overall competitiveness of these economies in global value chains. For instance, a $100/tCO2e carbon levy could lead to a total decline of 2.3% in the trade of duty-exposed products among G20 economies. The largest declines in exports are projected for South Africa (-0.9%), India (-0.6%), and Russia (-0.5%). China would face the largest absolute export loss, estimated at $11 billion, while India's iron and steel exports could drop by about $4.2 billion.[8]

Figure 4. Share of exports to the EU (% of total exports)



Source: Compiled by authors

[8] https://t20ind.org/research/devising-a-response-to-carbon-border-adjustment-mechanisms-for-g20-countries/#_ftn1

The G20 as a collective power to negotiate with and put pressure on the EU: The G20 serves as a collective platform with significant influence, enabling its members to engage with the EU on a more balanced and equitable basis during negotiations. Individually, low- and middle-income countries often face challenges in asserting their interests effectively, lacking the leverage to negotiate on equal terms with the EU. By acting collectively, the G20 can play a pivotal role in advocating for fair treatment and pushing the EU towards more inclusive dialogue. Without globally coordinated standards, the implementation of CBAM risks triggering trade tensions and policy fragmentation. Therefore, G20 cooperation is essential to align climate policies, promote mutual understanding, and ensure that vulnerable economies receive the support they need during the transition. G20 firms, especially micro, small, and medium enterprises and those in unorganised sectors, face a significant technical and compliance burden due to CBAM's requirement for robust monitoring, reporting, and verification systems. Implementing these systems entails high administrative costs and complex data management, which many exporters are ill-equipped to handle. This raises the risk of supply chain disruptions, shipment delays, or even export rejections due to inaccurate or incomplete emissions reporting.

Integrating debt sustainability and mobilising finance with climate policy under CBAM

Under South Africa's G20 presidency, high-level deliverables advocate for ensuring debt sustainability for low-income countries along with mobilising finance for a just energy transition.[9] This approach enables low-income countries to undertake a just and effective transition with support from developed countries,

[9] https://g20.org/high-level-deliverables/

including through the proposed Carbon Leakage Fund (see Recommendations) under the EU's CBAM.

Ensuring debt sustainability for low-income countries is essential as the global economy adapts to new climate policies. The introduction of CBAM poses additional financial burdens on these economies, potentially reducing export income and straining their ability to service existing debts. For low-income countries already facing high capital costs for green technologies and limited access to affordable finance, this could exacerbate debt vulnerabilities and restrict fiscal space for development priorities. To address these challenges, it is critical to rethink the international financial architecture to ensure fair access to capital for green investments, particularly for countries facing higher costs of decarbonisation. Increase global climate finance and technical assistance to help these countries meet new trade and environmental standards without undermining their debt sustainability. By integrating debt sustainability measures with climate policy, the international community can help ensure that low-income countries are not disproportionately disadvantaged and can remain active, resilient participants in global trade and supply chains.

Recommendations

To address the legitimate concerns surrounding CBAM's impact on international trade and developing economies, and to avoid triggering retaliatory measures that would undermine both the climate and economic objectives of CBAM, this paper recommends three key interventions:

- Use the Carbon Leakage Funding Programme (CLFP) to allocate a portion of CBAM revenues to affected countries to support decarbonisation and compliance, along with integrating debt sustainability and mobilising finance for just transition.

- Establish a formal assessment mechanism to regularly review the impacts of CBAM and iterate on implementation.
- Introduce a differentiated carbon accounting system and sliding scale pricing.

The Carbon Leakage Funding Programme

CBAM "own resource" will generate about €1.5 billion (2018 prices) per year as of 2028. The statistical-based own resource on company profits would provide revenues of about €16 billion (2018 prices) per year as of 2024.[10] Under current assumptions, this package is expected to deliver collectively on average €36 billion (2018 prices) per year as of 2028. The EU budget receives 75% of the total CBAM revenue, while 25% goes to member states, with no formal allocation for supporting affected trading partners.[11]

The EU provides substantial support for developing countries' sustainability efforts through initiatives like the Global Gateway, the EU–Africa global gateway investment package.[12] However, there is currently no direct link between CBAM revenues and assistance to affected countries.

We propose the establishing of a dedicated complementary funding programme that allocates a portion of CBAM revenue to affected trading partners. The CLFP would help exporting countries not only in the green transition but also to protect the economy in the short and long term. The CLFP can help these exporting

[10] https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_3329
[11] The EU mentioned in its notification that CBAM revenues are not explicitly allocated to funding the green transition in developing countries and Least Developed Countries. (https://taxation-customs.ec.europa.eu/document/download/7abe56cc-4af0-490d-90e1-0a0825aabe37_en?filename=CBAM%20and%20developing%20countries.pdf)
[12] Programmes under this framework, such as the Africa-EU Green Energy Initiative and Just Energy Transition Partnerships with countries like India, South Africa, Indonesia, Vietnam, and Senegal, aim to decarbonise energy systems and lower emissions in industrial production. By doing so, they help reduce the embedded carbon footprint of exported goods.

countries to nudge the climate policy and acts as an economical regulatory sandbox to assist in creating a green economy.

We propose that the CLFP should receive 35% of total CBAM revenue, with the remaining 40% going to the EU budget and 25% to member states. This allocation would generate about €525 million annually by 2028 for the CLFP (based on the EU's €1.5 billion CBAM revenue estimate in 2018 prices).

The CLFP would operate as a dedicated green transition fund with transparent governance. Funds would be distributed according to the framework outlined below.

Recommended framework for the CLFP distribution

Based on the different evidence-based frameworks[13] for climate financing, we recommended the following methodology of vertical and horizontal assessment to distribute CBAM revenue among exporting countries to the EU for their technological advancement and to achieve the green production target.

Table 2. Criteria for CBAM allocation and weighting

Allocation criteria	Explanation	Weighting[14]
Carbon Emissions	Average embedded emission export of affected country in CBAM covered sectors	High weighting (Negative correlation)
Domestic Carbon Tax/Market mechanism	Existence of affected country's own carbon pricing mechanisms	Low-medium weightage (Positive correlation)
World bank's CBAM Exposure Index[15]	Countries which have more negative exposure due to CBAM	Medium-High weightage (Positive correlation)

Source: Compiled by authors

[13] https://unfccc.int/sites/default/files/resource/PILL-HAMMERSLEY-Climate-loss-and-damage-fund.pdf

[14] Negative correlation means CLFP revenue distribution proportions are low with high emission export product, while positive correlation means high proportion of CLFP distribution to these countries as per their exposure and domestic carbon market performance.

[15] https://www.worldbank.org/en/data/interactive/2023/06/15/relative-cbam-exposure-index#4

Review mechanism and iterative development

Establish a WTO–EU joint committee to monitor and evaluate the impacts of CBAM on EU trade partners. This committee will assess a range of economic and environmental metrics, including:

- environmental efficacy: eg, carbon leakage rates, trends in global emissions; and
- economic impacts: eg, GDP growth rates, export volumes.

The committee should conduct biannual reviews to assess CBAM's progress in achieving its stated objectives and to make informed adjustments to CLFP allocations and the broader CBAM implementation.

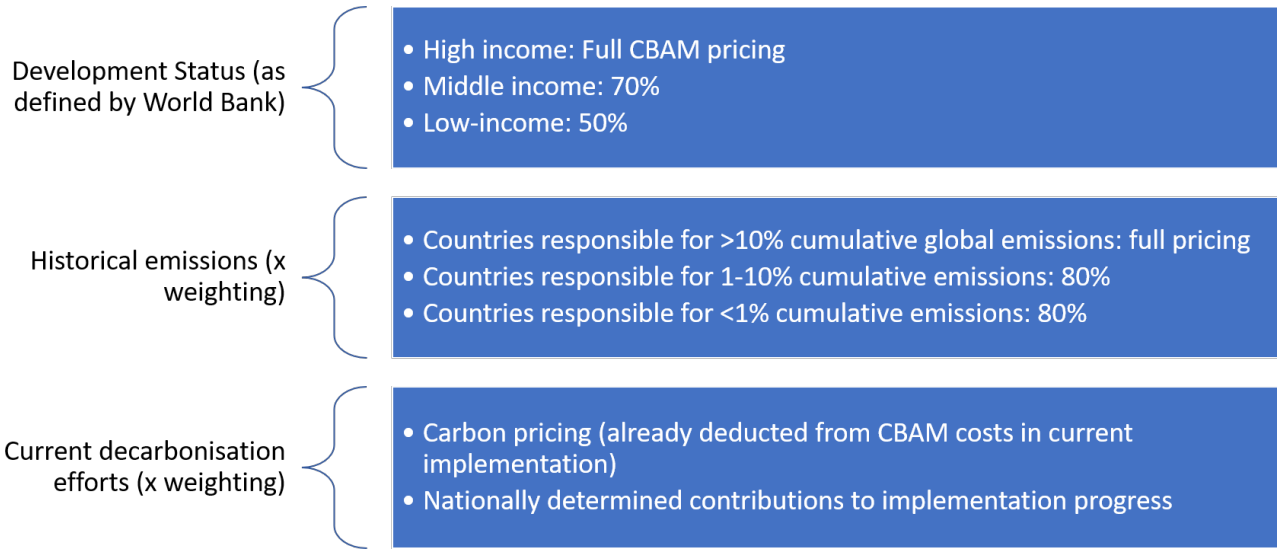
Differentiated carbon accounting system

To address concerns related to historical emissions and economic capacity, the EU should consider integrating a differentiated carbon accounting system within CBAM.

Sliding scale pricing

The EU should implement a sliding scale for CBAM pricing based on developmental status as defined by the World Bank, historical emissions and current decarbonisation status in line with the UN Framework Convention on Climate Change's proposed goals.

Figure 5. Proposed sliding scale for CBAM pricing



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Conclusion

The aim of CBAM is to foster a global trading system that rewards rather than penalises climate ambition. The proposals set out in this paper aim to enhance the CBAM by:

- **Improving WTO compatibility:** Strengthening compliance with Article XX exceptions through additional measures to promote global decarbonisation.
- **Reducing trade tensions:** The CLFP would provide financial support proportional to CBAM exposure, mitigating economic impacts and reducing incentives for retaliatory measures.
- **Accelerating global decarbonisation:** By channelling about €525 million annually to green technology investments in affected countries, the CLFP

could reduce carbon intensity in targeted sectors by 15% to 20% by 2030, based on similar technology transfer programmes.

- **Integrating debt sustainability and mobilising finance with climate policy under CBAM:** It is crucial to ensure a fair and inclusive global transition. Over 60% of low-income countries are at high risk of debt distress and rely on carbon-intensive exports for revenue, and CBAM could further strain their fiscal capacity. Mobilising targeted climate finance, concessional funding, and CBAM-linked revenues can help these countries decarbonise without jeopardising development goals or economic stability.

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Appendices

1. Carbon emission intensity industry-wise (list of G20 countries)

Country	Carbon emission intensity of exports (kg/$) _ Aluminium	Carbon emission intensity of exports (kg/$) _Cement	Carbon emission intensity of exports (kg/$) _Electricity	Carbon emission intensity of exports (kg/$) _Fertiliser	Carbon emission intensity of exports (kg/$) _Iron and steel	Carbon emission intensity of exports (kg/$) _Aggregate
South Africa	0.32	8.61	15.68	1.46	0.91	26.98
Indonesia	0.69	7.25	10.24	0.62	0.44	19.24
China	0.28	8.15	8.27	1.18	0.52	18.39
Saudi Arabia	0.79	8.92	5.19	1.72	0.34	16.97
Russian Federation	0.13	8.81	4.56	1.80	0.61	15.91
India	0.33	7.09	4.74	1.39	2.01	15.57
US	0.08	5.37	4.72	0.40	0.20	10.77
Australia	0.35	4.52	4.41	0.55	0.17	10.00
Republic of Korea	0.04	4.91	4.02	0.47	0.18	9.62
Turkey	0.08	4.85	3.57	0.64	0.27	9.41
Mexico	0.05	4.57	3.27	0.61	0.37	8.87
Argentina	0.22	3.15	3.53	0.70	0.97	8.57
Canada	0.11	5.74	1.76	0.55	0.38	8.54
Japan	0.06	4.70	2.30	0.45	0.13	7.64
Brazil	0.67	4.92	1.11	0.25	0.37	7.32
UK	0.02	4.74	1.81	0.26	0.12	6.95
Total	4.23	96.28	79.17	13.04	8.01	200.74

2. Major exports of G20 countries to EU (industry-wise): Exports of products to EU (% of total exports)

Country	Exports of product to EU (% of total exports) _Aluminium	Exports of product to EU (% of total exports) _Cement	Exports of product to EU (% of total exports) _Electricity	Exports of product to EU (% of total exports) _Fertiliser	Exports of product to EU (% of total exports) _Iron and steel

South Africa	24.40%	0.16%	0.00%	0.48%	16.31%
Indonesia	1.99%	0.00%	0.00%	0.02%	8.11%
China	13.20%	1.08%	0.00%	1.07%	8.76%
Saudi Arabia	7.03%	3.65%	0.00%	0.08%	1.59%
Russian Federation	40.05%	0.15%	73.06%	23.05%	29.23%
India	9.08%	0.61%	0.00%	1.12%	23.55%
US	11.70%	1.33%	0.00%	2.84%	11.54%
Australia	0.16%	2.80%	0.00%	0.31%	5.47%
Republic of Korea	7.22%	0.00%	0.00%	0.01%	10.66%
Turkey	61.56%	11.10%	100.00%	34.44%	43.24%
Mexico	2.52%	0.28%	0.00%	4.06%	1.81%
Argentina	1.89%	0.15%	0.00%	0.01%	2.58%
Canada	5.13%	0.01%	0.00%	0.52%	1.52%
Japan	2.93%	1.68%	0.00%	2.08%	1.92%
Brazil	2.50%	0.06%	0.00%	0.17%	12.32%
UK	74.68%	72.12%	100.00%	67.60%	66.42%

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