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# **EUROPEAN UNION'S CARBON BORDER ADJUSTMENT MECHANISM: A PRIMER**

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## INTRODUCTION

The European Union's Carbon Border Adjustment Mechanism (EU CBAM) is the most advanced mechanism for imposing carbon costs on imports of certain goods, ensuring that imported products are subject to the same carbon pricing as domestic products under the European Union's Emissions Trading System (ETS). Under the EU CBAM, importers must purchase certificates that reflect the greenhouse gas (GHG) emissions embedded in the goods they wish to import into the EU. The price of the certificates will be calculated based on the weekly average auction price of the EU's ETS allowances. The ETS is a "cap and trade" system where companies buy and trade emission allowances, with a cap set on the total amount of GHG they are allowed to emit.

The EU CBAM was initially introduced in July 2021, with a final text being adopted in May 2023. The EU CBAM will be rolled out in a series of phases, starting with a transitional period that began in October 2023, gradually increasing its scope before going into full effect on January 1, 2026. Below is the EU CBAM's timeline, which outlines key dates and milestones in its implementation:

DATES	MILESTONES
October 1, 2023	Start of the CBAM transitional period.
January 31, 2024	Submission deadline for the first CBAM report, covering goods imported during the fourth quarter of 2023
July 31, 2024	End of the use of default values for emissions reporting.
January 1, 2025	End of acceptance of estimates for emissions reporting. Only the EU Method will be accepted
January 1, 2026	Start of the CBAM definitive period
By 2030	Full integration of all EU ETS products into CBAM. The mechanism will apply to all remaining sectors covered by the ETS.

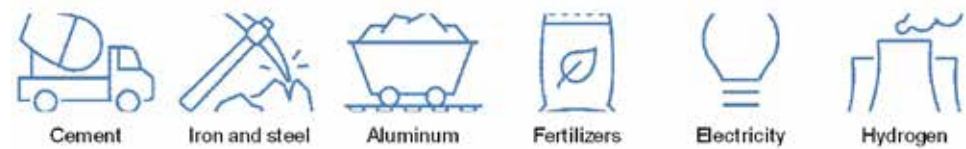
The stated goal of the EU CBAM is **to prevent carbon leakage**, which occurs when companies relocate production to countries outside the EU or switch to buying imports rather than producing in the EU to avoid paying the EU's domestic carbon price, frustrating efforts to reduce GHG emissions. The mechanism achieves this by imposing a levy on imports of certain carbon-intensive products, aligning the tax burden with that on equivalent products produced within the EU. The European Commission estimates that the annual revenues from the tax covering products inside and outside the EU will reach 9.1 billion euros by 2030<sup>1</sup>. Currently, the EU CBAM is the only mechanism of its kind, though interest is growing among other countries to adopt similar measures. In many ways, the EU CBAM serves as a test case, allowing nations to evaluate its effectiveness as a tool for combating climate change.

<sup>1</sup> Samuel Pleeck & Ian Mitchell. (Nov. 15, 2023) The EU's Carbon Border Tax: How Can Developing Countries Respond? Center for Global Development. <https://www.cgdev.org/blog/eus-carbon-border-tax-how-can-developing-countries-respond>

## OVERVIEW

### A. Scope of Products

The EU CBAM targets carbon-intensive goods that are at the most significant risk of carbon leakage:



It uses the EU Combined Nomenclature (CN) codes to detail and breakdown product coverage under the regulation. The EU CBAM categorizes products into “simple” and “complex” goods.

SIMPLE GOODS	COMPLEX GOODS
Products whose embedded emissions, under the CBAM reporting methodology, are based solely on the emissions generated during their own production. The materials used to produce these goods are considered to have zero embedded emissions, simplifying the calculation	Products that require the inclusion of emissions from precursor materials—raw materials that are themselves subject to CBAM regulation—used in their production. For example, in the cement sector, cement clinker is a key precursor material for Portland cement, and its embedded emissions must be factored into the total emissions of the final complex good.

On June 22, 2022, the European Parliament adopted amendments to the Commission’s proposal for the EU CBAM to include in its scope organic chemicals and plastics. However, these products were excluded from the final regulation, due to the challenges associated with the calculation of their carbon footprint. Refined products, such as oil and petroleum products were also considered, but were ultimately not covered within the initial scope of the CBAM. Further scope extensions to include additional products, such as chemicals and polymers, are to be determined by 2026, and the full inclusion of all EU ETS products is planned by 2030.

Experts have argued that while targeting a limited number of sectors may improve administrative feasibility, it can lead to unintended consequences.<sup>2</sup> For example, firms might substitute materials not covered by the EU CBAM, such as using wood or glass in place of cement and steel, or move production outside the EU to avoid the costs associated with more expensive EU inputs. This could lead to “downstream carbon leakage,” where products like cars or planes, made with cheaper materials abroad are imported back into the EU without being subject to the CBAM, undermining the policy’s effectiveness. Expanding the EU CBAM to include these downstream products could address this issue but would significantly increase the complexity of calculating embodied carbon.<sup>3</sup>

2 Stefan Ambec. (Aug. 2024). Plugging Carbon Leaks with the European Union’s New Policy. Kleinman Center for Energy Policy. <https://kleinmanenergy.upenn.edu/wp-content/uploads/2024/08/KCEP-Digest-66-Plugging-Carbon-Leaks-with-the-European-Unions-New-Policy-1.pdf>

3 *Id.*

## B. Scope of Emissions

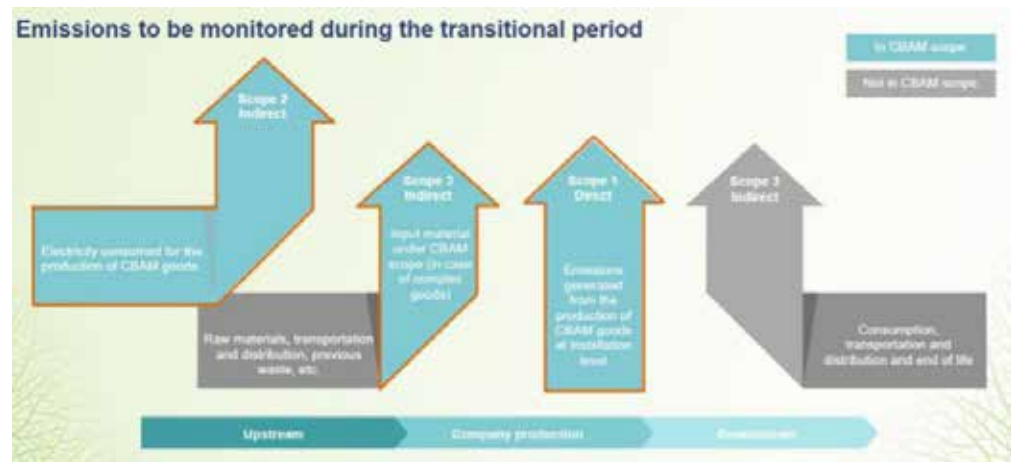
The EU CBAM determines that the GHG emissions subject to its regulations are **carbon dioxide**, and, where relevant, **nitrous oxide** and **perfluorocarbons**. Annex I of Regulation (EU) 2023/956 outlines which gases apply to specific goods. For instance, only carbon dioxide is measured for cement, electricity, iron, steel, and hydrogen, while nitrous oxide is also measured for certain fertilizers, and perfluorocarbons for aluminum. This breakdown of specific gases is based on those predominantly produced during the manufacturing process of each product. The selection of gases was based on the ability to measure, report, and verify their emissions with a high level of accuracy.

**Methane is not included in the EU CBAM** because its emissions are difficult to measure accurately. Unlike the covered GHGs, methane emissions are harder to quantify due to their intermittent and highly variable nature. Methane is primarily released during the production, transport, and storage stages (upstream and midstream), where emissions can fluctuate significantly in magnitude and duration. This makes it challenging to estimate with precision, especially compared to carbon dioxide, which is easier to track since its emissions mainly occur during combustion, where fuel consumption and emission coefficients are well understood. However, this exclusion presents a problem, as some manufacturing processes, such as those of fertilizers, do release methane as a byproduct. Methane is a potent GHG, with a global warming potential approximately 84-86 times greater than carbon dioxide over a 20-year period. Despite being short-lived in the atmosphere, methane plays a major role in accelerating climate change. Its exclusion from the CBAM undermines the full effectiveness of the policy in curbing all key GHG emissions.

During the transitional period, importers are required to report the following emissions:

- **Embedded direct emissions** of the imported goods, usually referred to as Scope 1 emissions, which encompass the GHG emissions generated during the production processes of CBAM goods, which include emissions from the production of heating and cooling, regardless of where this heating and cooling occurs. This implies that even if the heating and cooling are produced outside the primary production facilities, their associated emissions are still counted as direct emissions for the purposes of the EU CBAM.
- **Embedded indirect emissions** of the imported goods, usually referred to as Scope 2 emissions, which refer to the GHG emissions linked to the generation of electricity consumed during the production of CBAM goods.
- **Embedded direct and indirect emissions of certain relevant precursors.** This is a way for the EU CBAM to measure upstream emissions, thus capturing a limited amount of Scope 3 emissions. The precursors which must be accounted for and declared by importers are clearly outlined in Annex III of the implementing regulation. For example, in the case of cement, the listed relevant precursors include cement clinker and calcined clay, if used in the process. This approach aims to prevent “reshuffling,” where trade patterns might shift to circumvent the obligations imposed by the EU CBAM.

The European Commission has provided an image that exemplifies the emissions that must be monitored during the transitional period in the cement sector:



Source: European Union, *The Carbon Border Adjustment Mechanism eLearning module: CBAM in the cement sector*. [https://customs-taxation.learning.europa.eu/pluginfile.php/28239/mod\\_resource/content/4/Course%20Takeaways.pdf](https://customs-taxation.learning.europa.eu/pluginfile.php/28239/mod_resource/content/4/Course%20Takeaways.pdf)

Starting January 1, 2026, importers of iron, steel, aluminum, and hydrogen, will only have to report direct emissions, while importers of cement and fertilizers will still have to declare both direct and indirect emissions. However, before the conclusion of the 3-year transitional period, the EU Commission is mandated to submit a report to the European Parliament and the Council reassessing aspects of the CBAM.<sup>4</sup> This report will assess the possibility of expanding the scope of the regulation to cover embedded emissions from transport (Scope 3) and potentially include goods further down the value chain. This evaluation could lead to a broader application of the CBAM in the future, addressing additional emissions sources and industries.

While Scope 3 emissions are not yet fully covered under the EU CBAM, they are prevalent in other EU regulations. For instance, the EU's Corporate Sustainability Reporting Directive (CSRD) mandates the reporting of Scope 3 emissions, with submissions due in 2025. As the European Commission reevaluates the scope of the CBAM at the end of the transitional period, the successes or challenges faced with the CSRD may influence whether Scope 3 emissions are incorporated into the CBAM in the future.

### C. Filing Reports

To participate in the CBAM, importers must apply to become authorized CBAM declarants through the national competent authority (NCA) in the EU member state where they are established. The process involves reaching out to the designated NCA to gain access to the CBAM Transitional Registry, which may require a new CBAM-specific account or can utilize existing customs system accounts. The NCAs will oversee compliance with CBAM regulations, ensuring that the quality of CBAM quarterly reports meets established standards, and may engage in dialogue with reporting declarants to address any issues. From 2025 onwards, the NCA will also grant the status of "authorized CBAM declarant" to applicants who meet the necessary requirements.

4 Ruggiero, A. (2021, December 16). A brief explanation of the CBAM proposal. Carbon Market Watch. <https://carbonmarketwatch.org/2021/12/16/a-brief-explanation-of-the-cbam-proposal/>

Once established as a CBAM declarant, importers are required to submit detailed annual reports on the carbon emissions associated with their imported goods by the end of May for the preceding calendar year. The reports must include a comprehensive range of information, such as the total quantity of goods imported, specific emissions data, and identification details of both the declarant and importer. In the definitive stage of CBAM, all reports will require verification by accredited bodies to ensure the accuracy and integrity of the submitted data.

Importers must provide exhaustive installation and emissions information, such as:

- The economic activities conducted at the production facilities
- The physical address of each installation
- Geographic coordinates such as latitude and longitude
- The total number of goods imported
- The commodity codes, harmonized system sub-heading codes, and combined nomenclature codes for each product
- Total emissions associated with the imported goods, which should be broken down into goods emissions per unit of product, as well as total, direct, and indirect emissions, including the type of measurement unit for emissions used, and specifying the sources of the emission factors used for these calculations
- Supporting documentation to validate their emissions calculations.
- Data on installation emissions, which encompass both total emissions and specific direct and indirect emissions attributed to each facility.
- Carbon price due, reflecting the financial implications associated with the carbon emissions reported.

This extensive reporting process has come under significant criticism for its complexity and the substantial challenges it poses for businesses. The International Chamber of Commerce (ICC), in an open letter to the European Commission's Director-General for Taxation and Customs Union, has highlighted the severe compliance issues faced by companies during the first reporting period of CBAM's transitional phase.<sup>5</sup> The ICC stresses that the implementation process must be streamlined to avoid creating unnecessary obstacles for global commerce, which could exacerbate trade tensions and hinder cooperative efforts toward achieving net-zero emissions.

The ICC's letter emphasizes several key areas of concern, beginning with the difficulties companies face in accessing the decentralized CBAM reporting platform, which varies widely across EU Member States. Technical issues, such as validation errors in commodity codes, have further complicated the reporting process. Companies also struggle with the platform's lack of availability in multiple EU languages, and confusion surrounding the submission of reports by declarants on behalf of certifying signatories. These complexities, along with the platform's technical problems, have made compliance particularly burdensome for businesses.

In addition to technical and procedural hurdles, the ICC underscores the significant administrative burden created by the CBAM, especially for small businesses and low-volume transactions. The requirement to report even minimal-value imports, such as screws and bolts, places a disproportionate burden on smaller enterprises, raising compliance costs without a corresponding environmental benefit. Data collection across global supply chains has also proven to be a major challenge, with many suppliers outside the EU hesitant to provide sensi-

5 International Chamber of Commerce. (2024, April 29). Open letter on the Carbon Border Adjustment Mechanism (CBAM). ICC. <https://iccwbo.org/news-publications/statement-letters/open-letter-on-the-carbon-border-adjustment-mechanism-cbam/>

tive information due to concerns about data privacy and confidentiality. Given these issues, the ICC is calling for a constructive dialogue with the European Commission to address these challenges, while stressing the need for a more balanced approach to ensure that the EU CBAM does not inadvertently stifle international trade or competitiveness.

#### D. Emissions Calculations

Until December 31, 2024, declarants have some flexibility in the methods they can use to calculate emissions, but from January 1, 2025 onward, only the **official EU method** will be accepted. The official EU method requires declarants to use activity data combined with specific emission factors or to continuously measure GHG concentrations and flue gas flows at the production site. During the transitional phase, alternative methodologies may be used, provided they deliver emissions data with comparable accuracy and coverage. These alternatives include using data from a carbon pricing scheme applicable at the production site, a compulsory emissions monitoring scheme, or third-party verified emissions data from accredited sources. Any non-compliance may result in penalties ranging from EUR 10 to EUR 50 per tonne of unreported emissions.

Prior to July 31, 2024, **default values** could be used to estimate emissions when precise data was unavailable. Default values are standardized emissions-intensity figures calculated by the EU's Joint Research Centre and published by the European Commission. However, the use of these values has become more restricted. Since July 31, 2024, default values can only be applied to complex goods if they account for less than 20% of the product's total embedded emissions. For instance, if actual data from third-country suppliers is not available, declarants must either obtain it or rely on estimated values for no more than 20% of the embedded emissions in complex goods.

Indirect emissions are calculated by multiplying the total electricity used by a relevant emission factor. The emission factor may either be based on the average emissions from the electricity grid in the country where production occurred or reflect the actual emissions associated with specific electricity sources. During the transitional phase, default emission factors, based on a five-year average provided by the International Energy Agency (IEA), are available in the CBAM Transitional Registry for each country. These factors are regularly updated to reflect regional variations in electricity generation and consumption.

By 2026, these more flexible reporting rules will be phased out, and declarants will be required to provide fully verified data for all emissions. This shift reflects the move toward stricter compliance rules, although practical implementation may pose challenges.

The current methodology requires a vast amount of detailed information from various stages of production, placing a significant burden on importers. The complexity and cost associated with gathering this information are exacerbated by the fact that importers are often reliant on data provided by suppliers, over which they have limited or no control. Compounding this, the EU's decision to phase out default values forces reporters to rely entirely on precise data from manufacturers or upstream suppliers, meaning that importers will face financial penalties if they fail to provide accurate emissions data—even if they have no control over the transparency or quality of that data.

The penalties for incorrect CBAM reporting are also particularly concerning. They escalate based on the duration and severity of inaccuracies, putting tremendous pressure on importers to ensure accurate data.<sup>6</sup> Additionally, CBAM

6 Buysing Damsté, C., Banks, J., & Prepisci, J. (2024, February 27). The EU Carbon Border Adjustment Mechanism (CBAM): Implications for supply chains. PwC. <https://www.pwc.com/gx/en/services/tax/esg-tax/cbam-supply-chain-imperatives.html>

pricing is directly tied to the embedded emissions of goods, so inaccuracies in emissions reporting can lead to substantial financial miscalculations. For example, a steel importer who overestimates the emissions associated with a shipment may end up surrendering more CBAM certificates than necessary.<sup>7</sup> This can significantly raise costs and artificially inflate the price of steel in the EU market, potentially distorting demand for steel products.<sup>8</sup> Higher costs could ultimately affect the competitiveness of both the importer and the supplier, creating ripple effects throughout the supply chain. On the flip side, underestimating emissions might expose the importer to severe penalties, creating financial risks that are difficult to manage in a complex international trade environment.

#### E. Paying Fees

The EU CBAM is designed to align the carbon pricing of imported goods with the EU's ETS. Beginning on January 1, 2026, importers of goods from certain sectors will be required to purchase and surrender **CBAM certificates**, reflecting the embedded carbon emissions in their imported products. The price of these certificates will be directly linked to the average closing prices of ETS allowances on the common auction platform, calculated weekly. This ensures that the cost of carbon embedded in imported goods matches the price paid by EU-based producers under the ETS.

The system will operate similarly to the ETS in that importers will need to purchase CBAM certificates based on the emissions intensity of their imports. The price of the certificates will be determined by the weekly average auction price of EU ETS allowances, expressed in euros per tonne of CO<sub>2</sub> equivalents.

During the transitional period, reporting declarants are required to disclose the effective carbon price paid in the country of origin where the goods were produced. This reporting becomes crucial in the definitive period, as it allows importers to avoid double paying for carbon emissions. If a carbon price has already been paid in the country of origin—whether in the form of taxes, levies, or emission allowances—the CBAM Regulation allows for a **reduction in the number of CBAM certificates** that must be surrendered. The reduction corresponds to the actual carbon price paid, avoiding redundant carbon costs for the same emissions.

The concept of “carbon price” under the CBAM is broad. It includes any monetary amount paid in a third country for emissions under a carbon reduction scheme, whether it's through taxes, levies, fees, or an emissions trading system. However, only the carbon price that has been effectively paid in the country of origin will count toward this reduction. If the foreign producer benefits from rebates or compensations, these will be considered when calculating the actual price paid.

By the end of the transitional period in 2025, the European Commission will issue an implementing act detailing the method for calculating the carbon price effectively paid in the country of origin. This mechanism will provide clearer rules for importers seeking to claim a reduction in their CBAM obligations. Furthermore, if a precursor used in the production of a CBAM good originates from the EU, the carbon price already paid within the EU can also be accounted for in the CBAM report.

7 *id.*

8 *Id.*

## F. Key Stages of the EU CBAM Process

The graph below summarizes the main stages of the EU CBAM process:



## MOST CONTROVERSIAL ASPECTS

### A. Impact On Development

While the EU CBAM has the potential to be a landmark climate policy, it is not without controversy. At COP27 in 2022, Brazil, South Africa, India and China voiced their opposition to the EU CBAM, labelling it a “unilateral measure and discriminatory practice,” arguing it distorts markets and deepens the trust deficit between developed and developing countries.<sup>9</sup>

The regulation offers no exemptions or special provisions for least developed countries (LDCs). The European Commission has merely stated that it will conduct a study by the end of the transitional period in 2025 to assess the impact of the EU CBAM on developing countries and LDCs.<sup>10</sup> While this study will evaluate the effects of the technical assistance provided, the lack of immediate exemptions or support for these countries is still concerning. Although the EU has made efforts to engage with developing countries by publishing a guiding document in multiple languages—including Arabic, Chinese, French, Hindi, Korean, Spanish, Turkish, and Ukrainian—and by offering some technical support and webinars, the scope of these initiatives remains limited.<sup>11</sup>

Moreover, the CBAM Regulation does not earmark any future revenues generated by the mechanism to finance green transitions in developing countries. Initially, the European Parliament proposed allocating these revenues to support sustainable development efforts in LDCs and developing nations.<sup>12</sup> However, this proposal did not receive the necessary backing from member states and was ultimately excluded from the final text of the legislation.<sup>13</sup> This lack of exemptions and support given to developing countries has led to concerns about the market access that developing countries may have in the EU and the overall costs associated with complying with the CBAM, given the stringent requirements and lack of resources.

9 Weko, S. (2022, December 5). The future for global trade in a changing climate. Chatham House. <https://www.chathamhouse.org/2022/12/future-global-trade-changing-climate>.

10 European Commission. *CBAM and developing countries/LDCs*. [https://taxation-customs.ec.europa.eu/document/download/7abe56cc-4af0-490d-90e1-0a0825aabe37\\_en?filename=CBAM%20and%20developing%20countries.pdf](https://taxation-customs.ec.europa.eu/document/download/7abe56cc-4af0-490d-90e1-0a0825aabe37_en?filename=CBAM%20and%20developing%20countries.pdf)

11 *Id.*

12 European Parliament. (2022, June 22). *Amendments adopted by the European Parliament on the proposal for a regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism (COM(2021)0564 – C9-0328/2021 – 2021/0214(COD))*. [https://www.europarl.europa.eu/doceo/document/TA-9-2022-0248\\_EN.html](https://www.europarl.europa.eu/doceo/document/TA-9-2022-0248_EN.html)

13 Pleeck, S., & Mitchell, I. (2023, November 15). The EU's carbon border tax: How can developing countries respond? *Center for Global Development*. <https://www.cgdev.org/blog/eus-carbon-border-tax-how-can-developing-countries-respond>

## 1. Market Access

One significant concern is that developing-country producers with limited capacity to meet EU CBAM standards may lose market share in the EU to EU producers or producers based in countries with more stringent standards and better access to carbon reduction technologies. The EU CBAM aims to create a level playing field for EU industries by imposing carbon costs on imports from countries with less stringent climate regulations and more carbon-intensive production. However, for many developing countries, this presents immediate challenges in maintaining their trade positions. Lacking the resources and technical capacity to upgrade their industries to meet carbon requirements, these countries risk falling behind those with already stricter regulations and enhanced access to advanced carbon reduction technologies as their goods may be priced out of the market due to the cost of certificates importers are required to buy. This situation undermines the competitiveness of goods from developing countries, threatening longstanding trade relationships.

These countries face a significant risk of losing market access due to their inability to remain competitive on price, further worsening existing economic challenges. For struggling industries or new entrants from developing countries, the cost of certificates could act as a barrier, potentially cutting off access to the European market altogether. For example, estimates from the European Commission indicate that African countries' exports to the EU could fall by as much as €2.1 billion by 2030 due to EU CBAM.<sup>14</sup> Additionally, a report by the African Climate Foundation and the LSE Firoz Lalji Institute predicts a reduction in African exports to the EU by 5.7%, with significant impacts on sectors like aluminum, iron and steel, and cement.<sup>15</sup>

### Cost of Compliance

The administrative and compliance costs associated with CBAM are also a critical issue for developing countries. The process of monitoring, reporting, and verifying carbon emissions is both costly and complex, requiring resources that many developing nations may not have. A 2021 study by the Institute for Advanced Sustainability Studies identified statistical capacity as a critical factor in assessing the vulnerability of countries affected by CBAM.<sup>16</sup> Even if the emissions associated with their export production are relatively low, the responsibilities for monitoring and reporting carbon emissions can impose substantial costs on firms in these countries, leading them to incur higher prices than necessary.<sup>17</sup> In contrast, countries with robust statistical and monitoring systems face fewer challenges in compliance.<sup>18</sup> Therefore, the implementation of CBAM is likely to exacerbate existing inequalities, placing developing countries at a disadvantage in the global market while undermining their economic stability and growth prospects.

While the EU CBAM does provide a reduced carbon price for those countries that already have a domestic carbon price of their own, this is of little benefit to many developing countries that have a much smaller capacity to implement these carbon pricing systems. A Center for Global Development study revealed that only one out of eighty low- and lower-middle income countries have cur-

14 Gilder, A., & Rumble, O. (2024, April 23). The impact of the CBAM on African economies and the role of the AfCFTA. SAIIA Policy Briefing No. 290. The South African Institute of International Affairs. <https://saiia.org.za/research/the-impact-of-the-cbam-on-african-economies-and-the-role-of-the-afcfta/>

15 *Id.*

16 Sinan Ülgen. (May 9, 2023). A Political Economy Perspective on the EU's Carbon Border Tax. Carnegie Europe. <https://carnegieendowment.org/research/2023/05/a-political-economy-perspective-on-the-eus-carbon-border-tax?lang=en&center=europe>

17 *Id.*

18 *Id.*

rently implemented a carbon price.<sup>19</sup> One of the main concerns of developing countries is the potential rise in energy costs, which could have serious implications for access to technologies critical to economic development.<sup>20</sup> Additionally, developing countries may be reluctant to pursue unilateral action and implement a carbon price domestically without broader global coordination, since this could make their industries less competitive on the global market, particularly in the absence of comprehensive international policies like adjusted carbon tariffs on imports or rebates on exports.<sup>21</sup>

Moreover, the economic impact of the EU CBAM on developing countries extends beyond trade. A UNCTAD report suggests that even if LDCs were exempted from the CBAM, the net effect of these policies on them would still be negative.<sup>22</sup> This highlights how CBAM could widen the economic divide between developed and developing countries, with the latter facing more severe reductions in both GDP and welfare, deepening existing inequalities in global trade. The mechanism's long-term impact could therefore entrench the marginalization of developing countries in global markets, limiting their ability to participate meaningfully in the global green transition.

### 3. Impact to climate

The European Green Deal, of which the EU CBAM is a key component, encompasses a set of policy initiatives aimed at reducing the EU's GHG emissions by at least 55% by 2030 and achieving carbon neutrality. While the intent of the EU CBAM is to prevent carbon leakage and thereby reduce global emissions, skepticism remains regarding its potential impact. An analysis by UNCTAD indicates that while the EU CBAM could help prevent carbon leakage, its direct contribution to combating climate change is limited—it would lead to only a 0.1% drop in global CO<sub>2</sub> emissions.<sup>23</sup> Major factors contributing to this low figure include the limited range of products covered by the EU CBAM, its unilateral nature, and the carbon price used.

#### Insufficient Scope

Critics argue that the climate impact of the EU CBAM may be limited, as it currently applies only to imports into the EU and covers just six sectors.<sup>24</sup> While these sectors are highly carbon-intensive and include many individual products, they represent only 7.8% of the EU's total imports. Moreover, only 31% of these products come from outside of the EU.<sup>25</sup>

While there is progress being made with these products, there are major gaps in their coverage. For example, oil and petroleum products, despite being highly carbon-intensive, are excluded from the EU CBAM. The scope could be

19 Ian Mitchell & Beata Cichocka. (2024, Sept. 24). Transforming EU Climate Leadership Through CBAM Reform. Center for Global Development. <https://www.cgdev.org/publication/transforming-eu-climate-leadership-through-cbam-reform>

20 Advani, A., Prinz, D., Smurra, A., & Warwick, R. (2021, November 4). What is the case for carbon taxes in developing countries? Centre for Tax Analysis in Developing Countries. <https://www.taxdev.org/news-events/what-case-carbon-taxes-developing-countries>

21 *Id.*

22 United Nations Conference on Trade and Development. (2022). The low-carbon transition and its daunting implications for structural transformation: The least developed countries report 2022. [https://unctad.org/system/files/official-document/ldc2022\\_en.pdf](https://unctad.org/system/files/official-document/ldc2022_en.pdf)

23 UNCTAD. (2021, July 14). EU should consider trade impacts of new climate change mechanism. UNCTAD. <https://unctad.org/news/eu-should-consider-trade-impacts-new-climate-change-mechanism>

24 David Stanway. (Feb. 25, 2024). EU Carbon Border Tax Will Do Little to Cut Emissions, ADB Study Says. Reuters. <https://www.reuters.com/sustainability/eu-carbon-border-tax-will-do-little-cut-emissions-says-adb-study-2024-02-26/#:~:text=CBAM%20could%20raise%20around%2014,manufacturing%2C%20Foster%2DMcGregor%20said>

25 Manuela Kiehl. (Oct. 27, 2023) The EU's CBAM Needs More Bite to Change the Trajectory of Emissions. Oxford Economics. <https://www.oxfordeconomics.com/resource/the-eus-cbam-needs-more-bite-to-change-the-trajectory-of-emissions/>

expanded in 2026, and while this could raise compliance costs, including more carbon-intensive goods would likely have a greater climate impact.

### **Lack of Global Coordination**

Experts argue that the unilateral implementation of the CBAM by the EU may not suffice to achieve substantial emissions reductions.<sup>26</sup> The EU has not coordinated with any other country on harmonizing its carbon accounting system and instead has decided to move forward alone. While this demonstrates that the EU wants to be a leader in this space, climate action of this type cannot happen alone. The CBAM's effectiveness in significantly curbing emissions depends on the participation of other major economies in adopting similar measures or developing their own frameworks.<sup>27</sup> A lack of harmonization of accounting methods only furthers the coordination gap between countries and leaves importers struggling to determine what rules and data they need. Without broader global collaboration, the EU CBAM risks inciting trade tensions and creating additional trade reshufflings.<sup>28</sup>

While the EU's unilateral implementation limits incentives for broader adoption of carbon pricing mechanisms—seen as one of its potential spillover benefits—there is significant potential for a positive ripple effect if more countries adopt similar mechanisms. Experts suggest that if countries like Thailand, Brazil, and India, which are currently exploring domestic carbon pricing, also implement border adjustments, this could create encourage other countries to follow suit.<sup>29</sup> Coordinated action on carbon pricing and CBAMs would not only amplify their effectiveness but also streamline compliance and reduce administrative costs for participating countries, potentially prompting even reluctant governments to adopt similar measures and strengthening global emissions reduction efforts.

### **Low Carbon Price**

Studies have shown that the carbon prices set by the EU CBAM, which align with the EU's ETS, are insufficient to drive the deep decarbonization needed to meet the EU's ambitious climate targets.<sup>30</sup> This is due, in part, to the fact that the ETS carbon price, which the EU CBAM matches, is low itself. According to estimates, in order to reach net zero targets, the CBAM carbon price would need to increase from the current price of around \$90 per tonne to around \$600-700 per tonne.<sup>31</sup> Although the CBAM has the potential to facilitate emissions reductions, current carbon prices would have to increase significantly to achieve meaningful global cuts.

Additionally, the EU CBAM is unlikely to change production techniques significantly, leading to a continued rise in carbon-intensive production, especially throughout Asia.<sup>32</sup> Disparities in access to green finance will likely determine the success of the EU CBAM, with countries that have better access to financ-

26 He, X., Zhai, F., & Ma, J. (2022, March). The global impact of a carbon border adjustment mechanism: A quantitative assessment. Task Force on Climate, Development and the IMF. <https://www.bu.edu/gdp/2022/03/11/the-global-impact-of-a-carbon-border-adjustment-mechanism-a-quantitative-assessment/>

27 *Id.*

28 *Id.*

29 Clausen, K., Elkerbout, M., Nehrkorn, K., & Wolfram, C. (2024, October 10). *How carbon border adjustments might drive global climate policy momentum*. Resources for the Future. <https://www.rff.org/publications/reports/how-carbon-border-adjustments-might-drive-global-climate-policy-momentum/>

30 Kiehl, M. (2023, October 27). The EU's CBAM needs more bite to change the trajectory of emissions. Oxford Economics. <https://www.oxfordeconomics.com/resource/the-eus-cbam-needs-more-bite-to-change-the-trajectory-of-emissions/>

31 *Id.*

32 See *supra* note 26.

ing being able to transition their production processes more swiftly.<sup>33</sup> The European Central Bank also recognizes that the emissions reductions sought by the EU are unlikely to be achieved through carbon pricing alone.<sup>34</sup> The OECD estimates, based on 2021 data, that carbon taxation in EU countries is too low and “too fragmented” to meet the EU’s net-zero targets.<sup>35</sup>

## POSITIVE SPILLOVER EFFECTS

Some studies suggest that the EU CBAM has brought the climate agenda to the forefront of policy debates in certain countries more than would have been possible prior to its introduction. For instance, in Ukraine—one of the top five countries most impacted by the EU CBAM<sup>36</sup>—the mechanism has faced opposition from powerful business groups who argue that it is protectionist. Despite this, climate policy has gained increased prominence in the country’s political agenda.<sup>37</sup> While Ukraine and its businesses have yet to develop ambitious climate policies, the mechanism shows potential to catalyze actions that might not have otherwise occurred.<sup>38</sup> Additionally, CBAMs generate revenue for governments, making them a more attractive policy tool with less potential to strain public finances compared to subsidies.

Other experts argue that the EU CBAM is generating global spillover effects by encouraging governments to consider adopting carbon pricing measures.<sup>39</sup> By crediting imports for carbon prices already paid, the EU CBAM incentivizes countries to implement carbon pricing systems of their own so that the carbon cost is incurred domestically rather than abroad. This has led to a global conversation about coordinated climate policies, with countries like China considering expanding their ETSs to cover sectors like steel and aluminum. As CBAM levies rise, these incentives become stronger, particularly for nations heavily reliant on carbon-intensive industries.<sup>40</sup>

These experts have also found that the EU CBAM is spurring interest in decarbonization by encouraging industries to adopt cleaner production methods or relocate energy-intensive production near clean energy sources to minimize tariffs.<sup>41</sup> Evidence of this interest is reflected in the rising global media coverage of terms related to clean energy and green steel, which has surged from 4,000 mentions in 2016 to nearly 30,000 by 2024, particularly following the EU Commission’s initial CBAM announcement.<sup>42</sup> For instance, Indian manufacturers are making substantial investments in clean technologies, such as small modular nuclear reactors, to remain competitive in a decarbonizing global economy.

33 See *supra* note 18.

34 Claus Brand et. al. (2023). The Macroeconomic Implications of the Transition to a Low-Carbon Economy. European Central Bank. [https://www.ecb.europa.eu/press/economic-bulletin/articles/2023/html/ecb.ebart202305\\_01~a6ff071a65.en.html#toc4](https://www.ecb.europa.eu/press/economic-bulletin/articles/2023/html/ecb.ebart202305_01~a6ff071a65.en.html#toc4)

35 *Id.*

36 See *supra* note 18.

37 Holovko, I., Marian, A., & Apergi, M. *The role of the EU CBAM in raising climate policy ambition in trade partners: The case of Ukraine*. Institute for Advanced Sustainability Studies (IASS). [https://publications.iass-potsdam.de/rest/items/item\\_6001279\\_5/component/file\\_6001289/content](https://publications.iass-potsdam.de/rest/items/item_6001279_5/component/file_6001289/content)

38 *Id.*

39 Clausen, K., Elkerbout, M., Nehrkorn, K., & Wolfram, C. (2024, October 10). *How carbon border adjustments might drive global climate policy momentum*. Resources for the Future. <https://www.rff.org/publications/reports/how-carbon-border-adjustments-might-drive-global-climate-policy-momentum/>

40 *Id.*

41 *Id.*

42 *Id.*

## CONCLUSION

The EU CBAM is a tool with the potential to contribute to climate action. Its design warrants careful study, and its developments should be closely monitored to better comprehend the effectiveness of all such mechanisms in reducing emissions and driving change, all while supporting development.