

An aerial photograph of a dense river network, showing a complex web of waterways flowing through a landscape. The water is a deep blue-green color, and the surrounding land is a mix of dark green and brown, suggesting a natural, possibly forested, environment. The river network is highly branched and intricate, covering most of the visible area.

Next Steps for the EU's Carbon Border Adjustment Mechanism: Integration into Wider Climate Diplomacy

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KEY POINTS

- Energy-intensive, trade-exposed sectors are hard to decarbonize, limiting effective carbon pricing.
- The EU's move from free ETS allowances to a Carbon Border Adjustment Mechanism (CBAM) aims to prevent carbon leakage, avoid overcompensation, and encourage stronger carbon pricing abroad.
- CBAM raises concerns: EU exporters lose protection in low-carbon-price markets, and emerging economies cite Common But Differentiated Responsibilities (CBDR).
- Measuring embedded emissions and foreign carbon prices is complex, needing detailed data, aligned methodologies, and verification.
- Global cooperation—minimum carbon price floors, climate finance, Article 6 mechanisms—can create win-win outcomes.
- The G7 Climate Club can align metrics, prevent leakage, and support CBAM within broader climate diplomacy.

BACKGROUND

In 2022, carbon- and trade-exposed industries accounted for over 20% of global carbon-related greenhouse gas (GHG) emissions². Some of the most important of these industries are shipping, aviation, steel, and cement. They have also faced costly options for decarbonization, being notably difficult to electrify directly through increasingly competitive wind and solar power.

This presents a dilemma for national, regional, and global policymakers. It is costly to reduce energy- and process-related emissions in these industries, and such costs constitute a large part of overall production costs, leading to a significant rise in output prices. This, in turn, leads to a loss of market shares to competitors based in low-tax jurisdictions. Policymakers are naturally reluctant to introduce carbon price measures that will push jobs and production out of the region, with potentially only limited gains for the global climate because emissions are transferred rather than reduced.

This results in the limited usage of carbon pricing instruments for trade-exposed, high-emission industries. Indeed, on a global scale, implicit or explicit carbon pricing is today largely limited to road transportation, as well as other domestically oriented energy uses, such as heating and lighting³.

Until very recently, one of the few exceptions to this trend was the European Union (EU) and its Emissions Trading Scheme (ETS) system. Being in place now for more than two decades, it covers the most energy-intensive and power generation industries with a cap-and-trade system. The ETS emissions allowance has been in the range of €70–100 per ton over the last two years and is now having a real impact on incentivizing low-carbon technologies. The EU has now also begun to put in place a Carbon Border Adjustment Mechanism (CBAM) to compensate EU producers for the importing of products from jurisdictions with lower taxes on a selected, but also very important, number of industries covered by the ETS mechanisms. This note will NOT discuss in detail the transition from the transitional phase (2023–2025) or the implementation of the definitive system from 1 January 2026. Instead, it will focus on the underlying economics of the CBAM's functioning in the longer term.

The challenges in the implementation of the EU's CBAM suggest that the best option forward is to engage the EU's trading partners in a discussion on how to decarbonize these industries in a collaborative manner. This article will provide some reflections on this.

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² 2 See IEA (2023), annexes, table A.4A.

³ An overview of effective taxation of fossil fuels, including energy taxes and emission trading systems, is provided in OECD (2025a). The survey covers 79 countries, accounting for 82% of global energy-related emissions of greenhouse gases.

THE NEW EU CBAM AND THE PHASING OUT OF ETS-FREE ALLOWANCE

What is old and what is new?

The ETS covers emissions from power generation and the most important energy-intensive producers. The EU's CBAM does not include all the industries covered by the ETS, but certainly some of the most important ones: cement, iron/steel, aluminum, fertilizers, hydrogen, and electricity, together accounting for 50% of emissions in the EU⁴.

The ambition has been to impose a marginal incentive to reduce emissions for the firms in scope while also ensuring that the high production costs associated with the adoption of green (but more expensive) technologies do not lead to the flagging out of production and firms.

To achieve this objective, industries with exceptionally high energy intensities as well as high potential trade exposure have been allocated free allowances. The trick is that receiving allowances can be seen as a lump-sum transfer that does not, at the margin, reduce the incentive to invest in low-carbon technologies. In principle, a company that went completely green would still receive allowances, which could be sold to generate revenues that would compensate for the higher costs of green energy. The size of the allowance a company receives is determined by a benchmark for the relevant industry: How much energy use per unit of production is needed for a company with high-resource efficiency? The benchmark needs to be tightened as technology options widen and the cost of using them decreases⁵. If a company were to simply sell its allowances and stop producing, it would lose its right to allowances over time. The lump-sum payment can be seen both as a subsidy contingent on continued production within the EU while the system on the margin as has an incentive to reduce emissions.

The EU has, in principle, changed tack on how to deal with carbon leakage in the context of its ETS system. The system of free allowances to leakage-exposed industries was to be phased out. At the same time, imports of goods and services that are competing with ETS-covered industries will be subject to a

carbon border surcharge. The size of this surcharge depends on two components: the level of CO₂ emissions embedded in the goods and services imported and the level of carbon pricing imposed in the countries in which they were produced.

The EU's CBAM includes upstream emissions from electricity production in the production of cement and fertilizers but not for iron/steel, aluminum, or hydrogen. However, the latter exemption does not reflect optimal design choices but the interaction with EU state aid rules. These rules allow national governments to compensate downstream industrial consumers for the costs resulting from the ETS on the cost of producing power. Hence, it is logical not to include the embedded carbon content in the surcharge calculation, as EU domestic producers may, in fact, be fully compensated for their additional costs from higher electricity prices.

The European Commission has reviewed some of the key provisions of CBAM over the last year, with some proposals to adjust the rules. These will be discussed below.

THE EXCLUSION OF THE UPSTREAM CARBON CONTENT IN 2025

Pros and Cons of the Shift from Free Allowances to the CBAM

Before diving into the implementation challenges of the CBAM, here is a brief recap of the pros and cons of replacing free allowances to energy-intensive, trade-exposed sectors with a duty on imported products based on estimated carbon content and carbon tax in the country of export.

There are two main arguments *for* replacement. First, there is a risk of overcompensation. The free allowance model implicitly assumes that the rest of the world imposes zero carbon prices on the industries in its scope. As a consequence, it potentially overcompensates EU industries if and when they compete against industries located in other jurisdictions and exposed to similar levels of carbon

⁴ See TAXUD (2024).

⁵ There has been a substantial debate on how effective this system has been, but this is not the subject of this article.

pricing. Second, it provides no incentive for countries to adjust their carbon pricing principles to avoid surcharges when companies based in their countries export to the large EU market.

The arguments *against* the replacement fall into two main categories. *Within* the EU, it has been pointed out that it fails to compensate EU energy-intensive industries when they export to countries with low carbon taxes. They do not benefit from the duty on imports, and they no longer receive free allowances⁶. As a result of this critique, the EU Commission, in July 2025, suggested they would come up with proposals to compensate for this weakness of CBAM, focused on protecting the competitiveness of energy-intensive exporting industries⁷.

From trading partners *outside the EU*, two main arguments have been advanced against the shift. First, the CBAM has been said to contradict the burden-sharing principles embedded in global climate discussions, termed the principle of Common But Differentiated Responsibility (CBDR). The implied implication is that developing countries should face less stringent mitigation targets and hence also need lower carbon prices to achieve targets for emissions than advanced economies⁸. Such considerations are also reflected, for instance, in the International Energy Agency's yearly World Energy Outlook, which shows that the implied carbon prices for developing countries are systematically below the carbon prices in advanced economies (AEs)⁹. So, why should an exporter from a developing country face a surcharge when exporting to the EU?

Second, the new model has been interpreted as "telling" exporting countries what climate policies to adopt and pushing them to use carbon pricing rather than subsidies or other instruments to promote clean technologies.

THE ARGUMENT ABOUT CONFLICT WITH THE CBDR PRINCIPLE

The argument about conflict with the CBDR principle and the resulting loss of export opportunities and lower income generation in developing countries has,

in my perspective, four weaknesses.

First, differences in burden sharing, with higher mitigation targets for the rich countries responsible for a large share of historical emissions, do *not* necessarily translate into carbon pricing being (in all sectors) significantly higher in advanced economies compared to developing countries. This is implicitly recognized in the increased focus on the potential of using emissions trading to provide win-win solutions. Countries with high Marginal Abatement Costs (MACs) agree to swap a part of their national pledge commitments with countries that have lower MACs. With a high level of emissions trading, MACs will tend to converge for the countries joining such schemes, at the very least for the sectors they are covering. They will also lead to financial transfers from countries with high MACs to countries with low MACs. Formal analyses have shown that this could provide significant benefits globally by reducing overall mitigation costs. This can also boost opportunities for economic development in developing countries, as part of the wider climate finance agenda¹⁰. In conclusion, if you support the idea of carbon trading as articulated in Article 6 of the Paris Agreement, you will implicitly also acknowledge the logic behind some convergence of effective carbon pricing for the sectors covered by carbon trading.

The principle of burden would benefit from being concentrated on who pays for the costs associated with the green transition and less about in which countries reductions are taking place. The flip side to this argument is that carbon pricing principles—dealing with carbon leakage, burden sharing, and climate finance—are highly interlinked issues.

Second, the principle of burden sharing cannot automatically be translated into acceptance of policy-driven industrial leakage in the context of the Paris Agreement. Policy-driven leakage mean scenarios in which carbon pricing is a major factor in deciding in which countries energy-intensive production takes place, as opposed to locating energy-intensive industries in countries offering a competitive advantage, such as access to low-cost renewable energy sources. International trade law, in principle, accepts that countries with higher standards enforced by, in this case, carbon prices can implement trade measures that prevent such

⁶ This critique is also highlighted in the European Commission (2024), the so-called Draghi Report

⁷ EU Commission (2025a)

⁸ See for instance Center for European Reform (2023). At the World-Trade-Organization (WTO) level, a group of African countries lodged a concern that some "unilateral measures" were inconsistent with the principle of CBDR (WTO 2023a) Principles guiding the development and implementation of trade-related environmental measures).

⁹ See for example IEA (2023), annexes, Table B2.

¹⁰ IETA (2023) analyzes the potential of Article 6 of the Paris Agreement, which opens up emission trading to reach the mitigation targets required to deliver on the net-zero emissions (NZE) ambition by 2050. The paper discusses variations of how trading can be constructed, including parameters that would tilt financial flows toward countries with low per capita income.

standards from being undermined by imports from countries with lower standards. However, such measures must be implemented by objective and non-discriminatory means. CBAM is not per se conflicting with the Paris Agreement; it is all about design and implementation¹¹.

To illustrate the implications of this argument, it can be instructive to test the underlying logic of the many studies that have concluded that CBAM reduces exports to the EU¹².

First, what is the baseline, what is the counterfactual? With the ETS, EU implemented a system that—all other things being equal—would boost the ability of non-EU producers to export to the EU and compete with EU producers in third markets: it introduced a carbon price for production of goods covered by the ETS in a situation where such system was largely absent in other countries. This is the policy-driven industrial leakage discussed above. To reduce this risk it at the same provided free allowances on the basis discussed above. The desired effects of the two steps: a carbon price in combination with the free allowance was to neutralise the effect on trade, not reduce imports from third countries. Second, what the EU is doing with the CBAM is to replace an internal subsidy—free allowances—to compensate for the risk of industrial carbon leakage with an external “subsidy,” namely a border tax. It is not clear why this transition should lead to lower exports to the EU.

Second, the longer-term effect of the ETS combined with either a CBAM or benchmark-based free allowances could be to *increase, not reduce*, exports from emerging markets and developing countries (EMDCs) that have access to renewable energy resources at lower costs than EU firms. In other words, phasing out gas and coal in energy-intensive manufacturing is more costly for EU than it is for many EMDCs. Over time, this will make these countries more cost-effective locations for energy-intensive industries¹³. As discussed below, such transition scenarios and options to use trade in energy related products could be facilitated by partnerships agreements that include elements such

as financial and technology transfers to EMDC.

Third, the ultimate costs (“incidence”) generated by carbon pricing on imports and the domestic production of products and services from ETS-covered sectors are borne by the consumers of such products, wherever they are located. In other words, when the EU imposes an import duty on products to be consumed in Europe, it is European consumers who are paying, not the producers in the exporting countries. Over time, this additional cost burden for EU consumers—households and firms—can be reduced if and when manufacturing of these goods is shifted to countries that have access to low-cost energy resources.

Fourth, the EU's move away from free allowances and toward an import-focused CBAM could be said to narrowly protect the aim of providing economic incentives to reduce emissions within its own borders, without simply moving emissions to countries from which they import goods. This is based on the generally accepted “polluter pays” principle¹⁴. Such safeguards can also be necessary to maintain support in the EU for ambitious climate targets and commitments to provide climate finance to developing countries.

THE SECOND ARGUMENT ABOUT EU IMPOSING ITS OWN POLICY APPROACH

The second argument about the EU imposing its own policy approach to decarbonization on trading partners has much more merit. India again provides an illustration of this. The producers of steel in India are subjected to two major types of regulation with the aim of decarbonizing the industry. The PAT scheme aims to support energy efficiency, while CCTS is a carbon pricing scheme with features equivalent to the EU's ETS. It should be straightforward to accept that the carbon price created by the Indian CCTS should be included in the assessment of the carbon price paid in India in the context of the EU's CBAM¹⁵.

¹¹ A study by the WTO (2022), in a chapter on carbon pricing from a global perspective, spells out two different concepts: (1) advanced economies accepting more ambitious targets for emission reductions in line with the Common But Differentiated Responsibilities (CBDR) principle, and (2) the role of border carbon adjustments (BCAs) being to ensure that companies from different regions selling in the same market face equivalent carbon prices.

¹² The adverse impacts on exports of CBAM-covered products from EMDCs to the EU have been the main focus of several studies. Das and Bandyopadhyay (2025) and Criel et al. (2025) estimate the impact on the Indian steel industry. CESP (2025) focuses on the impact on India but also recaps effects on exports to the EU from other regions and countries, such as Africa, Ukraine, and Turkey. PCC (2023) estimates the impact on exports from South Africa.

¹³ As an example, it has been estimated that African continent due to its abundant and low cost access could be the source of half the global exports of green hydrogen related products, replacing oil and gas as the global energy commodities (Irena (2025)). For India, this could be a major driver of export growth of green steel, fertilizer, and aviation fuels (see for example, ORF and IECC 2026) while India is also estimated to be a net exporter of green hydrogen in the IRENA study. By definition this also implies that energy intensive industries located in these country would benefit from lower cost of energy as they do not have to pay the transport costs associated with shipping green energy over long distances.

¹⁴ This view is also put forward in WTO (2022), which states that WTO rules do not prevent members from combining carbon pricing measures with trade-related measures to prevent carbon leakage, provided they are non-discriminatory and transparent.

¹⁵ The two programs are described, for example, in Das and Bandyopadhyay (2025). The study also concludes that the cost impact on the PAT is likely to be disregarded in the context of calculating an Indian carbon price, while the CCTS should be included, as also suggested by India in its negotiations with the EU.

This is also the conclusion that the EU and India agreed to in the autumn of 2025 in the context of a wider agreement on deepening relations between the two countries and confirmed in the draft agreement now ready for ratification¹⁶. As PAT does not operate with an explicit carbon price, it will be difficult but not necessarily impossible to include the resulting cost in the calculation of the carbon price facing Indian producers .

A possible way forward to find sustainable win-win solutions for countries with different starting points and competitive advantages is discussed at the end of this note. Before delving into this discussion, the section below provides a brief overview of the challenges related to the implementation of the CBAM, which have direct ramifications for designing international agreements on addressing carbon leakage.

CBMA IMPLEMENTATION CHALLENGES

The two-step process involved in the CBAM raises two interconnected implementation issues:

- Step 1: How do we calculate the embodied emissions in the imported products covered by the CBAM?
- Step 2: How do we calculate the carbon price paid in the country from which the product has been imported?

To provide some intuitive context for the challenges ahead, I will focus on steel for two reasons. Firstly, the steel industry is one of the largest emitters of greenhouse gases (GHGs), accounting for 7% of global emissions, 6% in the EU, and well over 10% of emissions for the industries covered by the EU's Emissions Trading System (ETS)¹⁷. It is also clearly an industry in which carbon leakage could be a significant issue. Secondly, driven by these two substantive issues, steel, together with cement, has been chosen as a priority area for the work program by the Climate Club. This initiative has been supported at the G7 level to encourage international cooperation in speeding up the decarbonization of energy-intensive industries¹⁸.

Step 1 - Calculating the Embedded Emissions

This involves, first and foremost, a decision on what part of the value chain to include and how to measure the carbon content from this part. Is it just the product crossing the border? Or is it the entire facility in which it is produced? Or is it the company that owns the facility? Or does it even include the entire value chain in the country or countries in which the product is produced?

For the CBAM instrument to be non-discriminatory, upstream carbon content in any electricity input should be excluded, as discussed above, at least until the CBAM is subject to the changes already mentioned.

The method for accounting for carbon intensity in steel within the EU system does not necessarily align with those of other countries that have border adjustment mechanisms. For instance, methodologies for measuring carbon intensity in identical steel plants have yielded vastly different results in the Californian and EU border adjustment mechanisms. Specifically, the methodology used in the United States (US) indicated a much higher carbon intensity for the same steel technology compared to the method used in the ETS¹⁹.

Moreover, different steel production technologies lead to significant differences in emissions per unit of steel produced. A key challenge is that the actual emissions from a given installation cannot be directly measured by counting the carbon content of the inputs, as is possible for a power producer (where only the quality of the coal or gas used needs to be known). Instead, emissions largely depend on detailed choices between multiple technologies and how they are combined²⁰.

Hence, granularity in measuring the carbon content is important in the context of creating just border adjustment schemes.

However, designing a system that allows for this granularity is challenging. The CBAM will allow companies that want to export into the EU to use actual emissions factors rather than the default values. In practice, this will require the direct use of company-based reporting for calculating what are, in fact, custom duties. It requires the calculation of standard default values for a substantial number of

¹⁶ European Commission (2025b)

¹⁷ Korea Europe Review (2023)

¹⁸ Climate Club (2023). A guideline from 2025 provided a set of "voluntary and non-binding principles to guide policy design on action to address carbon leakage" and, as importantly, "to promote efforts towards greater international cooperation" (Climate Club, 2025).

¹⁹ Meagan Reid (2022)

²⁰ This complexity is demonstrated in several studies, such as Pandit et al. (2020) and Korea Europe Review (2023). A Climate Club report from 2025 also concludes that "differences in methodologies, emission scopes of the data, and the reliance on primary versus secondary data lead to discrepancies in country level carbon intensity values" that are "pronounced at the installation level" (Climate Club, 2025b, "Carbon intensity metrics in the steel and cement sectors of Climate Club members").

different steel production modes. This requires robust systems for developing the methods and verification standards that will have to be provided by actors outside the EU jurisdiction. Company based reporting may in particular prove challenging for smaller producers for whom establishing such system can be costly while resorting to the use of default values may lead to estimated carbon content well above actual levels.

Step two – How to Calculate the Carbon Price Paid

This is, arguably, the easier task. The carbon price should be the monetary amount that is paid under a carbon emissions reduction scheme. The effective value per unit of production will depend on the scope and methodology discussed above. Importantly, the larger the difference in the carbon price paid, the more important it will be to apply similar calculation methods for equivalent products treated under the ETS.

Yet, as discussed earlier regarding India, the EU's trading partners may well use other instruments to encourage decarbonization. Should these instruments be completely discarded or converted (at least partly) into carbon price equivalents?

POSSIBLE WAYS FORWARD

Some Principles

The analysis above suggests that the implementation of the CBAM poses challenges in multiple dimensions. Some are technical and related to the measurement of emissions in the target industries for the CBAM. Others relate to how to set carbon prices and how these two challenges interact.

Solving these challenges is ultimately linked to broader questions about the evolution of global mitigation policies in the coming years. A credible and robust strategy should, arguably, be based on the key principles for the implementation of mitigation policies globally. To address the risk of carbon leakage, I suggest the following two elements should be considered:

- The CBDR should be recognized, but also the principle that policy-driven leakage resulting from significant dispersion in carbon pricing in tradable activities should be avoided.
- Delivering on the Paris Agreement will require serious mitigation efforts by all countries, including by EMDCs, which account for an increasing share of emissions, given their higher population growth and the rise in per capita emissions as they grow richer.

If these two principles are accepted, dealing with carbon leakage and making CBAM implementable will become much easier.

First, delivering on global mitigation targets will require minimum carbon prices across all regions to create sufficient incentives for deploying low-carbon technologies. This could resemble a system where advanced economies (AEs) maintain significantly higher carbon prices in non-tradable sectors, while AEs and emerging markets and developing countries (EMDCs) align their carbon prices in the smaller, trade-exposed sectors covered by CBAM-like initiatives. Logically, this would necessitate a shift in decarbonization policies, placing greater emphasis on carbon pricing and reducing reliance on instruments such as mandatory standards or efficiency requirements—both of which, as previously discussed, are more challenging to design and implement in an international context²¹. On a global scale, this could foster convergence in carbon prices for energy-intensive and trade-exposed industries. Conversely, carbon prices could vary significantly for sectors shielded from international competition, with comprehensive national carbon taxes being substantially higher, on average, in developed countries with ambitious near-term abatement targets.

Second, the revenue from such carbon pricing can also be seen as an important revenue source for EMDCs in helping their domestic industries to decarbonize as well as in delivering on wider national Sustainable Development Goal (SDG) objectives (such as education and health). Indeed, many of the objections to the CBAM are related not only to its impact on trade but also to the fact that the revenues collected will be distributed to stakeholders in the EU²². The most obvious solution to this is for EMDC

²¹ This point is made explicitly in a number of studies referred to earlier that focus on the implications of the CBAM for India. The conversion is not argued simply from the perspective of getting more credits vis-à-vis the EU CBAM, but also from a purely national effectiveness and efficiency perspective.

²² The linkage between perceived unfairness of the CBAM and the allocation of revenues raised by it is consistently highlighted in many studies estimating the adverse impact on exports from EMDC countries (see, for example, PCC, 2023; Das and Bandyopadhyay, 2025; and CEEW, 2025).

countries to stop this potential traffic by introducing domestic taxes on trade-intensive industries, eventually with an additional fee collected for goods exported²³. Taking this principle further, global revenues from taxing emissions from sectors such as aviation or shipping could be allocated mostly or wholly to EMDCs based on objective factors, such as their exposure to losses from climate change and their gross domestic product (GDP) per capita.

Third, allowing AEs to use low-cost mitigation options in EMDCs can lead to substantial win-win solutions for all consumers. This implies emission trading in the context of Article 6 in the Paris Agreement and combines marginally higher carbon prices in EMDCs with marginally lower carbon prices in AEs. Such carbon trading mechanisms could even focus on the CBAM-covered industries²⁴. The higher the minimum levels of carbon pricing across the globe, the lower the potential distortions from differences in carbon pricing in exposed industries and those exposed to the risk of leakage. This will tend to reduce problems linked to value chain discussions of what to factor in as upstream activities when calculating the effective carbon prices for CBAM-covered products.

Fourth, and directly relevant for the implementation of the CBAM, a system with stronger and verifiable pledges to reduce emissions globally will also require more uniform methods for calculating process-related emissions from different technologies. Such systems will also be crucial for enabling and supporting emission trading in the Article 6 context, as well as in voluntary markets.

PRACTICAL STEPS FOR THE CLIMATE CLUB

In adopting its CBAM, the EU has been very transparent about the implementation challenges and the need for international cooperation. Ultimately, the CBAM can be seen as a tool to bring the relevant global trading partners to the negotiating table to reach a viable long-term solution. The EU legislation specifically refers to the G7-supported Climate Club and its aim to address the hard-to-decarbonize

sectors at the core of the CBAM.

The following steps could be seen as the near-term priorities for the Climate Club as well as the EU in its discussion with trading partners:

- Accepting that company-based methods for calculating emission intensity and carbon prices will take center stage, with default calculations being only a backstop option.
- Defining the methodologies to be used for measuring energy- and process-related emissions for a sufficiently wide range of steel-producing technologies at the company level. Sufficient actions to stop policy-driven leakage should be the target, not reaching for perfection²⁵.
- Fully aligning these methodologies with how to calculate emissions in relation to the national pledges, which are an integral part of the Paris Agreement targets. This will, for instance, include a mutual understanding of how carbon capture and storage is to be factored into embodied emissions. This may, ultimately, also lead to changes in the way emission factors are calculated in existing carbon pricing systems, including the EU's ETS.
- Clarifying the process of verification for company-based reporting by certified third parties.

Designing workable systems will require collaboration with civil society and, notably, with industry representatives. A priori, the steel industry and cement industry should be interested in joining such cooperation. It is a globally integrated industry, with many of the largest players and production facilities in multiple jurisdictions. The two industries, as well as the wider society, have a long-term interest in stable regimes. This will allow them to base decisions on where to invest and where to produce on the underlying economics of the costs of production and the importance of distance to customers, as opposed to investing based on differences in effective levels of carbon pricing and regulatory attempts to mitigate this that are likely to be of a non-stable nature. Moreover, they can use just one method instead of multiple ones to deal with exports as well as imports for a given plant or location.

²³ This idea is for example discussed in CEEW, 2025

²⁴ From a social policy perspective, it may also be less challenging to introduce higher carbon taxes on these industries, as the percentage increase in the downstream consumer prices of goods using, for example, steel as an input is orders of magnitude less than introducing higher taxes on fossil fuels for heating purposes.

²⁵ The need for and value of cooperative approaches to measuring carbon intensity targets are stressed in numerous studies, for example, OECD (2024), "Summary Report of the Strategic Dialogues on Causes of and Relevance of Spillovers from Mitigation Policies."

INTEGRATION INTO THE WIDER CLIMATE POLICY FRAMEWORK

In a continuation of such practical steps, it might also be natural to assess the potential of the industries covered by the CBAM in supporting efforts for effective carbon trading on a global scale. In the “old” Kyoto-based agreements, there were discussions on sector-based clean development mechanisms. The time may have come to revive this concept but ensure that from the start it is based on sound economics and an internationally agreed framework for measuring emissions. This could, for instance, take place with participating countries accepting binding and ambitious national pledges that also include the decarbonization of the sectors in the scope of the CBAM.

More broadly, the CBAM discussion could be based on a holistic approach, where the broader agenda of climate finance and carbon pricing are being considered as part of the Climate Club elements. This would improve the probability that different interests can be aligned and that the multitude of stakeholders in different countries could ultimately see the merits of the goals of decarbonisation and the role that international cooperation can play²⁶. Recent EU-India trade agreement is a potential example of how such cooperation could look like²⁷. It explicitly includes cooperation on the implementation of the measures such as CBAM, with the EU also committing to providing technical financial instruments to support the decarbonisation of India’s steel and aluminum industries. A similar approach has been proposed for the Africa-EU cooperation, and the African Union-European Union summit joint summit declaration from late 2025 also confirms the principle of having an open dialogue on the CBAM with a clear link to assistance with respect to decarbonization of energy-intensive industries in Africa²⁸. Such assistance could naturally be linked to efforts by EMDC countries to exploit substantial growth potential which in many countries require more favourable investment climate that will ultimately also reduce the high costs of capital that is holding back investments, not the least in green energy²⁹.

A possible outcome of such a discussion would be to

agree on a minimum carbon price applying to emissions from a given (group) of industries. That minimum price could well be below the price of EU allowances in the ETS system. The EU might then in an effort to promote such a movement abstain from imposing an additional fee when importing products from these industries. This would at the margin imply more carbon leakage unless EU took steps to counteract this with internal subsidies. Such an agreement should be forward looking with a forward trajectory of minimum carbon prices that provides a strong anchor for incentives to decarbonize the targeted industries.

It is also essential that any discussion of alternatives to the CBAM clearly outlines the objectives and the international climate framework in which it is supposed to function. A few observations in this regard are outlined below.

As already noted, moving from free allowances towards the CBAM will imply that energy-intensive exports from EU-based operators will no longer receive compensation when they export to countries with lower effective carbon prices. Hence, the only way to solve this problem would be either to go back to the old system or to encourage other countries to also use carbon pricing for the relevant sectors, which would impose equivalent costs on competitors.

Similarly, the CBAM does not protect against the import of products from countries that have decarbonised through subsidies instead of carbon pricing of emissions. Indeed, the levy is calculated as the estimated embedded carbon content multiplied by the difference in carbon pricing in the relevant jurisdictions. In other words, if the full implementation of the US Inflation Reduction Act (IRA) had been allowed to take place, it would have allowed US producers to outcompete EU-based steel producers in Europe as well as in the US. The CBAM would offer no protection against that.

However, could we not simply agree on internationally binding standards for shades of green as a replacement for the use of carbon pricing in these industries? The argument for this solution could be that there is no appetite—for instance, in the US—to use carbon pricing. The IRA was a case in point, and

²⁶ A working paper from the Peterson Institute for International Economics (2022) came to the same conclusion, while also providing simulation-based results on the benefits of such “club”-based cooperation.

²⁷ The draft Chapter 16 is titled “Draft and Sustainable Development” and contains a number of provisions to cooperate in this area, including cooperation on the efforts of IMO to address emissions from ships engaged in international trade. Annex 14-A on “Carbon Border Adjustment” measures describes the instruments of cooperation, including financial support and technical assistance. In a recent blog post, reference is made to the commitment to provide €500 million of financial support from EU to the decarbonization of Steel and Aluminium (Gopalika Arora, 2026, “EU-India: Clean Energy and CBAM in the “Mother of all deals”).

²⁸ See, for example, a proposal from the CEO of the Senegal-based advisory firm Africatlyst (2025), “Africa and Europe Must Turn Tensions over Carbon Pricing into Climate Opportunity,” and the joint declaration after the November 2025 Summit (African Union and European Union, 2025, “Joint Declaration 7th African Union–European Union Summit”).

²⁹ Irena (2025) provides a very strong illustrations of this, showing that with equal costs of capital on a global level – lowering the costs of capital in EMDC to AE standard – exports of green energy commodities from the African continent will grow even more than in scenarios where the high divergence of cost of capital is maintained.

and the unwinding of the subsidies by the current administration is not to be followed by carbon pricing. As argued above, setting regulatory standards for different product standards is difficult in the first instance. It is even more difficult to set such standards across industries and over time in a cost-effective manner. To make such a proposal reasonably efficient, policymakers would need to estimate how much it costs to achieve a given green standard for products like steel, cement, and shipping, and regularly update these estimates.

The whole purpose of a carbon price is that market participants are given the same incentive to decarbonize, and products are then decarbonized with the same marginal costs of abatement. If steel is less costly to decarbonize with a given carbon price than cement, the decarbonization of steel will take place at a quicker pace, which is also cost-effective.

It is also worth asking whether resistance to the use of carbon taxes for these industries stems from their costliness, which depresses sales and profits on existing assets. If that is the case, I do not see any argument for why political resistance would be any less for a standard intended to have the same effect—forcing companies to adopt green and more expensive technologies. I would particularly question whether the international community would find it easier to agree on binding standards for defining green versus non-green products of all kinds over the coming decades, given the complexity of defining such standards in the first place. What the world needs least of all are binary, and more or less arbitrary, classifications determining whether a product or process is green or not³⁰. In contrast, carbon pricing by definition provides a gradual incentive for decarbonization with a proportional link between carbon prices paid and carbon emitted throughout the value chain.

In broader terms, is the resistance to carbon pricing for these industries a reflection of a weak commitment to the Paris Agreement and its associated costs? Or does it follow more principled arguments against using economic incentives to drive the green transformation? If you share the view that the Paris Agreement is a goal to be pursued and you believe in the efficacy of carbon pricing, it is positive

to note recent signals from actors and countries on the African continent that do not see the CBAM mechanism as a problem. It is a mechanism consistent with a longer-term strategy to decarbonize their own energy-intensive industries³¹.

In this context, it will be important to engage with the global fora that are reviewing the use of environmental subsidies in the context of their potentially distorting effects on trade³². If carbon pricing becomes more important in driving decarbonization, the need for classical production subsidies for renewable energy will be reduced. Ideally, this could contribute to a global trade system in which relatively modest carbon pricing is the main driver of investments in mature mitigation technologies. It could then be supplemented with targeted legal and government support for derisking the investments required to decarbonize energy-intensive manufacturing and long-distance transport. This would create a package where carbon pricing drives the deployment of mature and relatively low-cost mitigation technologies, while targeted innovation policies reduce the costs of not-yet-mature technologies. These are the industries where the costs of decarbonization are orders of magnitude higher and which are also highly trade-intensive.

The Climate Club and potentially also the G20 could help produce the blueprints for how such packages could look. Preferably, these should be integrated into the World Trade Organization (WTO) framework as the ultimate goal. Such an approach could achieve multiple objectives. Firm and credible commitments from countries and regions, accounting for a substantial part of the industries covered, will reduce policy uncertainty and hence also capital costs for greening the industries³³.

CONCLUSION

This closes the loop of this article's argument. The EU stands at a critical juncture for the implementation of the CBAM. There are substantial gains from engaging in intensive climate diplomacy with key trading partners and developing countries to find solutions

³⁰ The EU's problems in providing a meaningful approach to establishing a taxonomy for green investment products offers a sobering reminder of this. It has led to the development of a nearly 300-page guide to what is green or not-so-green. A critical discussion of this is contained in Berg, Frost, Naess-Schmidt, and Tokley (2025).

³¹ At a workshop in Morocco in February 2026, a ministry of finance official from Morocco characterized the CBAM both as constraint and a lever: a near-term competitive challenge for some export-oriented sectors but also providing economic opportunities. In the case of Morocco, for example, this is based on abundant potential for green energy (Workshop between EU and Morocco authorities titled: "CBAM in Morocco: A strategic Workshop to Move from the Transitional Phase to Operationalism").

³² David Kleiman (2023) provides a perspective on the challenges and discusses various options for the next steps, linking them to various international discussions taking place (G20, WTO, etc).

³³ The case for international coordination to drive decarbonization of energy-intensive industries is made by IEA (2025a) in a study focusing on steel and cement. One of the gains will be to reduce uncertainty and hence also the cost of capital for an industry that is extremely capital-intensive and whose assets are built to work for many decades.

that are viable in the long term. The dialogue should be broad and not focus on the narrow technicalities of the carbon border adjustment mechanism but be linked to logically adjacent themes such as climate financing, economic development, and the plentiful opportunities to reduce the costs of the green transformation through trade. If this leads to some delay in implementing the next steps, that may be a price worth paying.

The WTO is currently in a weak position to act as gatekeeper with legal enforcement mechanisms but could and should be involved in developing technical solutions that can be used by the coalition of countries that see benefits from a rules-based approach to the geopolitical challenges of the green transformation.

The top-level conclusion from this paper can be summarized into two recommendations:

- The EU and its trading partners will benefit from moving discussions of CBAM into a wider economic and climate policy partnership approach to create identifiable win-win solutions.
- The subject is also a good opportunity to create a new dynamic in framing the trade policy framework that could and should support the green transformation, drawing on the technical expertise of, inter alia, the WTO to help define workable rules that coalitions of partners can put in place.

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Helge Sigurd Næss-Schmidt is an applied economist with over 35 years of experience. He has worked for the EU Commission, in the OECD's Economics departments, as head of division at the Danish Ministry of Finance, and as partner and co-owner of Copenhagen Economics (CE), a European consultancy specializing in regulatory economics and competition. His key areas of work are the green transformation of the global energy system, the role of financial markets, macroeconomic policy, and public finance.

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The Global Solutions Initiative (GSI) works towards a global economic system that benefits people and planet. Rooted in research, GSI brings together policy, academia, civil society, and the private sector to generate insights for better global governance. Founded in 2017, the Berlin-based independent, non-profit organization annually convenes the Global Solutions Summit, which serves as a steppingstone to the G20 and G7 Summits. GSI is led by Christian Kastrop.

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