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EU Carbon Border Adjustment Mechanism

Dominant Perspectives in India

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Executive summary

In May 2023, the European Union (EU) adopted the Carbon Border Adjustment Mechanism (CBAM), which places a carbon price on certain imports—aluminium, cement, electricity, fertilisers, iron and steel, and hydrogen—to prevent carbon leakage and create a level playing field for industries facing carbon costs under the EU Emissions Trading System (EU ETS). While the EU presents the CBAM as an important environmental measure that complements the EU ETS within its broader climate strategy to achieve net-zero emissions, its impact extends beyond Europe, influencing global trade patterns and international relations.

As a major trade partner of the EU, India has been critical of the CBAM, arguing that the mechanism imposes unilateral and protectionist trade barriers that undermine established international climate and trade norms. Several studies suggest that the EU CBAM could lead to negative trade impacts and welfare losses, particularly for low-income and lower-middle-income countries with high export dependency or significant trade exposure to the EU.

Most existing literature focuses on economic or trade dimensions, with limited integrated analysis of political, trade, and economic perspectives in the Indian context. This study seeks to address this knowledge gap by examining the nuances of the CBAM debate and consolidating dominant narratives among expert stakeholder groups. We undertake a codebook thematic analysis of semi-structured interviews with 16 key Indian stakeholders. Our findings highlight four dominant themes shaping India's CBAM discourse: (i) carbon pricing; (ii) monitoring, reporting, and verification (MRV); (iii) international trade and political implications; and (iv) fairness, equity, and trust.

To begin with carbon pricing, experts underscored the importance of developing a robust domestic compliance carbon market, such as India's newly introduced Carbon Credit Trading Scheme (CCTS), which can help establish an 'effectively paid carbon price' and thereby reduce the burden of the CBAM. They further encouraged India to seek fairer

adjustments by recognising existing implicit carbon costs through separate tax nomenclature or by introducing a new export tax on CBAM-covered goods to retain revenues domestically.

Indian industry concerns are dominated by measurement, reporting, and verification (MRV) challenges. Exporters, especially MSMEs, often lack the technical capacity and resources—both financial and human—to align with EU methodologies for calculating embedded emissions. Traceability-linked data gaps further add to the challenge. As a result, MSMEs risk losing competitiveness in international markets, either through added compliance costs or an inability to meet reporting requirements. A nationally unified and cohesive MRV ecosystem is therefore essential to support Indian exporters and help them remain competitive in global markets.

On trade and political dynamics, the CBAM is predominantly viewed as a non-tariff trade barrier that could restrict market access for developing economies. The border mechanism is expected to shift trade patterns and export strategies, with companies exploring alternate markets, focusing on the growing domestic demand, or positioning themselves as early entrants in clean markets. Concerning EU–India trade talks, experts emphasised the need for India to negotiate concessions such as phased timelines, revenue-sharing arrangements, or technology transfers.

Fairness, equity, and trust emerged as the final theme, revealing fundamental concerns around the CBAM. Experts stressed that the CBAM undermines the principle of Common But Differentiated Responsibilities (CBDR-RC) and functions more like a trade tool than an environmental measure. They argue that the border mechanism places a disproportionate burden on developing countries by imposing high carbon costs, without acknowledging disparities in historical emissions or accounting for the structural and regulatory capacities of developing countries. These concerns reinforce India's calls for climate finance, technology transfer, and meaningful concessions in negotiations with the EU.



Image: iStock

Innovating to reduce flaring technology can transform industrial emissions /carbon costs at the border: flaring emissions face a higher price under CBAM.

The study concludes that India's policy response must combine robust domestic reforms with international strategies. Domestically, this means building strong carbon pricing frameworks and a comprehensive

government-led MRV infrastructure. Internationally, India must strengthen its negotiation position, safeguard competitiveness, and leverage CBAM as an opportunity to accelerate industrial decarbonisation.

1. Introduction

In May 2023, the European Parliament and the Council of the European Union adopted Regulation 2023/956 as co-legislators, introducing the Carbon Border Adjustment Mechanism (CBAM). Designed to reduce emissions from carbon leakage, the mechanism imposes a carbon price on goods produced in energy-intensive sectors and imported into the EU. It currently applies to the import of certain goods and selected precursors from six sectors, including aluminium, cement, electricity, fertilisers, iron and steel, and hydrogen (Regulation (EU) 2023/956).

For many years, the EU has struggled with carbon leakage, which occurs when producers relocate carbon-intensive production to countries with weaker environmental regulations. This allows them to avoid costs linked to stringent carbon pricing or emissions standards in home markets (Mehling et al. 2019; Misch and Wingender 2024). This is a critical issue for the EU because it makes Europe less competitive in international markets, while domestic reductions in carbon emissions are partially offset by increases in emissions in other jurisdictions, thereby undermining

the environmental effectiveness of the EU's efforts (Bonnet and Baršauskaitė 2025). To address the trade competitiveness problem, the EU Emissions Trading System (EU ETS) had previously relied on the free allocation of emissions allowances or government subsidies for energy-intensive enterprises at risk of carbon leakage (Joltreau and Sommerfeld 2018; Pirlot 2024). However, as the EU gradually phases out free allowances, increases auctioning, and tightens the cap on emissions, risks of carbon leakage are expected to increase (Wildgrube et al. 2024). Against this backdrop, the CBAM was introduced to mirror and complement the EU ETS. It aims to level the playing field and encourage cleaner industrial production in non-EU countries by equalising carbon prices accrued between European and foreign markets (Regulation (EU) 2023/956; Lamy et al. 2024).

A study by the Organisation for Economic Co-operation and Development (OECD), which tracked carbon pricing policies in 140 countries between 2015 to 2021, found that 13 per cent of emissions reductions achieved in one country through carbon pricing were offset by increased emissions elsewhere through carbon leakage (Teusch et al. 2024). Similarly, an International Monetary Fund (IMF) study that examined 28 countries from 2005 to 2015 reported an average leakage rate of 25 per cent across 21 sectors covered in the analysis (Misch and Wingender 2024).

CBAM has sparked intense debate in affected countries, pushing them to rethink their emission reduction strategies.

At the same time, evidence substantiating carbon leakage remains arguable and insufficient (Branger et al. 2016; Healy et al. 2018; Naegele and Zaklan 2019; Nordström 2023). Likewise, the efficacy of border carbon adjustments as tools for reducing carbon leakage and global emissions is questionable (Li and Zhang 2012; Xinlu et al. 2024). According to OECD estimates, under a 'fit for 55' aligned policy landscape, the EU CBAM could reduce global emissions by only 0.54 per cent (Dechezleprêtre et al. 2025). Meanwhile, Asian Development Bank-led research projects that at a carbon price of EUR 100, global emissions would fall by 1.3 per cent (Asian Development Bank 2024).

Other modelling studies also conclude that the CBAM is unlikely to contribute to a significant reduction in

global emissions (Magacho et al. 2024; Zhong and Pei 2022; Chepeliev 2021; Kuik and Hofkes 2010; Lim et al. 2021; Perdana and Vielle 2022, 2023). Yet, on 1 October 2023, the EU CBAM officially entered its transitional phase. During this period, no CBAM levy was initially charged, but reporting of embedded emissions was required. From 1 January 2026, the CBAM will enter its definitive phase, requiring obligated entities to surrender CBAM certificates equivalent to the emissions imported into the EU jurisdiction (Regulation (EU) 2023/956).

While the CBAM is expected to accelerate global decarbonisation and increase international coordination on carbon pricing mechanisms, it has sparked considerable debate in affected countries, forcing them to revisit emissions reduction strategies in carbon-intensive industries (Van Schaik et al. 2022). International responses have varied, shaped largely by economic and policy contexts (Eicke et al. 2021; Overland and Sabyrbekov 2022). Several studies indicate that the EU CBAM will lead to adverse trade impacts and cause welfare losses in low-income countries with a high export dependence on the EU (Mattoo et al. 2013; Zachman and McWilliams 2020; Beaufils et al. 2023; Majumder et al. 2024).

Amongst countries in the Global South, the EU CBAM is widely perceived as undermining the principle of Common But Differentiated Responsibilities and Respective Capabilities (CBDR-RC), as articulated in the UN Framework Convention on Climate Change (UNFCCC, 1992, arts. 3 and 4; Corvino 2023; Dobson 2022). Critics argue that an international carbon pricing scheme compatible with the CBDR-RC principle would not require low-income, historically under-polluting countries to pay the same carbon price as high-income, historically over-polluting countries. They contend that such parity shifts the burden of enhanced climate action onto developing countries and undermines their right to development (Brandi 2021; Perdana and Vielle 2022; Van Schaik et al. 2022; Corvino 2023). These concerns also raise questions about CBAM's compatibility with international environmental law, with affected countries challenging the mechanism under international trade legislation (Mehling et al. 2019; Dobson 2022).

India has been particularly critical of the CBAM, remonstrating that the mechanism imposes unilateral and protectionist trade barriers that undermine established international climate and trade norms (Van Schaik et al. 2022; IETA 2024; Hübner 2021).

Between 2020 and 2024, India formally raised concerns against carbon border adjustment mechanisms 29 times at the World Trade Organization (WTO) – second only to China and Russia (Bonnet and Baršauskaitė 2025).

The CBAM is of particular importance for India because of its implications for trade dynamics, political relations with the EU, and India's economic growth and transition pathways. As of 2023, the EU was India's largest trading partner, accounting for EUR 124 billion in goods trade. It is also India's second-largest export destination, accounting for nearly 17.5 per cent of total exports (European Commission n.d.). Early estimates suggest that the CBAM will pose a significant challenge for India, as it covers 777 tariff lines of Indian exports to the EU, largely metals (GTRI 2023). The tariff lines represent nearly 27 per cent of iron and steel and aluminium products, valued at USD 8.2 billion (GTRI 2023).

Given India's high trade volumes to the EU and expected exposure, the CBAM is projected to lead to export losses of USD 771 million, corresponding to a 0.72 per cent decline in output to the EU (Majumder et al. 2024). While the study observes a minimal decline in India's emission intensity (Majumder et al. 2024), the World Bank's CBAM vulnerability index indicates that India's steel industry is exposed to notable risks

from the CBAM, as measured by the share of product exports to the EU in global exports. However, it also notes that the broader economic impact of the CBAM is expected to remain limited, as India's exports to the EU, relative to its GDP, are relatively low (Kathuria et al. 2025). A systematic literature review of 97 CBAM-linked studies observed that most contemporaneous quantitative studies focus on estimating impacts or determining the mechanism's effectiveness (Zhong and Pei 2023).

While most studies undertake an economic or trade-based analysis of the potential impact of the EU CBAM, holistic analytical interpretations integrating broad areas of political, trade, and economic perspectives, particularly in the Indian context, remain sparse. This research was undertaken to address this knowledge gap. More recently, however, Das and Bandyopadhyay (2025) and Kathuria et al. (2025) have systematically captured qualitative perspectives by undertaking a mixed methods approach, which involves using interviews and surveys to collect primary data. Using separate, more targeted qualitative methods, we interviewed key stakeholders relevant to India's CBAM debate and applied thematic analysis to their responses to examine prevailing perceptions, identify potential risks and issues, and explore avenues for cooperation between the EU and India.

2. Methodology

2.1. Analytical approach

We use codebook thematic analysis (CTA) as our analytical approach. It is one of the three alternative approaches within thematic analysis (TA) developed by Virginia Braun and Victoria Clarke. First introduced in 2006 (Braun and Clarke 2006), TA applies a rigorous and systematic approach to capturing patterns in qualitative data. It is a method to identify, analyse, and interpret patterns of meaning within a dataset, called themes. It is a widely used form of analysis, especially in psychology and the social

sciences. Over time, TA has evolved into a cluster of different methods, sometimes with conflicting approaches, both in the manner the methodology is carried out and its underlying philosophy (Braun and Clarke 2020). These differences relate to epistemological assumptions that guide orientations to data, coding practices, and theme development. The three main versions based on varying approaches of TA are: (i) coding reliability; (ii) codebook; (iii) reflexive thematic analysis. These three versions differ philosophically in terms of their approach towards 'objectivity'.

The coding reliability approach seeks to minimise researcher subjectivity and ensure that the approach is ‘objective’ or ‘unbiased’ (Braun and Clarke 2019, 2020). It employs a codebook for the analytical process, but relies on multiple coders to ensure ‘accurate and ‘reliable coding’ (Braun and Clarke 2020; Bryne 2022). Inter-reliability between coders ensures accuracy and coding quality. Themes are typically developed early in the analytical process, with theory-based hypotheses formed before data collection and supported by coded evidence from the data.

The reflexive thematic analysis approach, by contrast, is rigorous and systematic, but not rigid, and aimed at allowing flexibility. It emphasises reflexivity, subjectivity, and creativity in the interpretive analysis of the data, rejecting notions of coding ‘accuracy’ or reliability as key quality indicators (Bryne 2022). Here, researcher subjectivity is understood as a resource rather than a potential threat to knowledge production (Braun and Clark 2019). Codes and themes interpreted by one researcher may not be reproduced by another (Bryne 2022). Codes represent the researcher’s interpretations of patterns of meaning across the dataset (Bryne 2022). The coding process is flexible and organic, without reliance on a coding framework (Bryne 2022), and themes are progressively uncovered and entirely undefined. The coding and theme development process is more inductive, one that goes beyond deduction or ‘finding the truth’ from data; instead, the final analysis here reflects deep and prolonged immersion in, analysis of, and reflection on the data (Braun and Clarke 2019).

The codebook approach, used in this study, employs a structured codebook to guide the coding process and conceptualises themes as ‘domain summaries’ (Bryne 2022). However, this approach is more closely aligned with reflexive thematic analysis because it does not emphasise objectivity and replicability in the same manner as coding reliability, despite using a structured codebook (Braun and Clarke 2019; Bryne 2022). This method does not prioritise different coders to apply codes in exactly the same way with high inter-coder agreement – as if coding were a

neutral, objective process. Instead, it acknowledges that coding is interpretive and shaped by the coder’s perspectives, context, and subjectivity (Bryne 2022). Consensus between coders and inter-rater reliability are therefore not usually regarded as quality measures (Braun and Clarke 2020).¹ Themes may be developed early in the process but can also be refined or newly created as analysis processes (Braun and Clarke 2020).² This approach can hence be understood to be a midpoint between coding reliability and the reflexive approach. Details related to the structured code book are presented in Annexure B, and the key theoretical assumptions behind this approach are discussed in Bryne (2022).

This paper employed a codebook approach, where the process of developing the codebook was carried out by the first author, followed by validation of the codes by the second author. Using the codebook and the notes created, the team collaboratively developed themes and subthemes through detailed discussions. This process ensured alignment in interpretations and strengthened the rigour of theme building.

2.2. Respondent selection

Drawing on the literature review and the methodology instruction, we selected 16 experts to participate in the study. We included experts who have been engaging with India’s CBAM debate through popular media, such as newspaper articles, or through dedicated expert-led panel discussions at various forums. Respondents included representatives from multiple industries and industry associations, academia, think tanks, and other relevant sectors, thereby integrating diverse perspectives from informed groups. The complete list of experts is provided in Annexure A. We aimed to capture the range of viewpoints shaping India’s CBAM discourse. Relying on multiple expert sources for data collection adds validity and enables triangulation, which reduces bias and enhances the reliability of inputs.

1. In this research, the coding process was primarily carried by the first author, and the codes were validated by the second author for additional rigour.
2. The codebook approach relies on the pre-determination of themes which takes an active role in shaping the coding process. When the research already has some theoretical concepts, research questions, policy concerns, or frameworks prior to the interview process, they may start the analysis with pre-determined themes. Learnings from the literature review or the guiding questions reflect the pre-determination/early development of themes.

2.3. Guiding questions

Four guiding questions were shared with the respondents before the interview process. Discussions during the interviews focused on these questions:

1. What is the dominant narrative around the EU CBAM? Do you view the CBAM as more of an opportunity or a risk?
2. How might carbon pricing mechanisms in Third countries align with the EU CBAM? If alignment is complex, what issues are likely to arise?
3. What will be the impact of the EU CBAM on Indian industries, and how equipped are they overall to conform to the Regulation?
4. What steps can the Government of India take in response to the CBAM? Do you see any areas of cooperation between the EU and India over the CBAM?

2.4. Interview process

Participant interviews were conducted in both online and in-person settings. The allocated duration for all interviews was between 35 minutes and 1 hour 15 minutes. The four guiding questions, shared with participants in advance, provided the framework for a semi-structured format that ensured consistency while allowing space for in-depth insights on policy issues.

All interviews were recorded and transcribed with participants' oral consent. Data remained confidential to the interviewers. Prior information on the interview format and consent procedures was recorded before the interviews were undertaken. Anonymity has been consistently maintained throughout the analytical inputs presented in the study. In addition, recognising the sensitivity of politically charged subjects such as the CBAM, participants retained the right to withdraw from the interview at any point, to skip questions, or to request access to collected data after the interview.

3. Results: Key themes

As discussed in the methodology section, our results are derived using the codebook thematic analysis approach. Annexure B presents a snapshot of the codebook prepared after a thorough review of interviewee responses. From these codes, four themes emerged as the key findings based on the assessment of interviewee responses. This section discusses each theme along with the associated sub-themes.

3.1. Criticality of domestic carbon pricing

The first theme relates to the criticality of carbon pricing not only in the context of the CBAM, but also as a broader instrument for India's decarbonisation. Most respondents emphasised that India must develop robust carbon pricing instruments to drive the decarbonisation of high-emissions sectors.

Indian compliance market and crediting mechanism

Respondents noted that the Indian Carbon Market should not be motivated primarily by the need to reconcile with a CBAM. Instead, it should be leveraged to meet emissions intensity targets and to stimulate innovation in green technologies. This finding reflects the Government of India's position that, while the CBAM has influenced the design of India's recently unveiled *Carbon Credit Trading Scheme* (CCTS), the scheme ultimately seeks to contribute to India's long-term net-zero goal (Malik et al. 2023).

A well-functioning compliance mechanism could also help India adapt to the CBAM through its crediting provisions. Under the Regulation, EU importers may reduce their obligation to surrender CBAM certificates if an 'effectively paid carbon price' on embedded emissions is borne by exporters of CBAM goods in foreign jurisdictions (EU Regulation 2023/956).

Establishing a robust compliance market mechanism would therefore help meet eligibility for reduction under the CBAM and prevent double carbon pricing on carbon emissions.

Although crediting provisions exist, experts expressed concerns about the complexity and lack of clarity in the EU's communication on what qualifies as an 'effectively paid carbon price' (Lamy et al. 2024). Other studies also point to the ambiguity in crediting rules amid the diversity of existing carbon pricing systems (Marcu et al. 2023; Wildgrube et al. 2024). Given that the CBAM is designed to align closely with the EU ETS pricing framework, the scope for crediting is expected to remain narrow, likely limited to explicit and transparent carbon prices, such as those found in emissions trading systems or carbon taxes. As a result, the potential for adjustments under the crediting mechanism is significantly constrained.

Amendments to the CBAM under the European Commission's Omnibus package in February 2025 clarify that carbon prices paid in third countries will be explicitly recognised in supply chains. This means non-EU exporters who can prove that a carbon price was paid during production will be eligible for a corresponding deduction against the CBAM obligation. Additionally, from 2027, the Commission may provide predefined values for carbon taxes paid in non-EU jurisdictions to further reduce the financial burden on non-EU exporters from the CBAM (Amending Regulation (EU) 2023/956).

Considering the explicit communication in the amendments, it is likely that carbon credit certificates (CCCs) will be made eligible for reduction against CBAM certificates. Experts expect the adjustment to be minimal, given the significant price differences between EU allowances (EUAs) and Indian CCCs. This disparity raises concerns about equity, with doubts about whether crediting mechanisms will provide meaningful support for exporters in countries like India.

Developing domestic taxation measures

As measures to help developing countries cushion the blow against the CBAM, respondents also discussed domestic taxation measures for the Indian government, specifically highlighting two pathways: (i) a domestic carbon tax on CBAM export goods and (ii) the aggregation of implicit carbon costs.

As a first measure, the government could introduce a domestic carbon tax on goods covered under the CBAM, collected at the point of export. This would ensure that revenue from embedded emissions remains within the Indian jurisdiction, where retained revenues can be spent supporting abatement in high-emissions industries. India's Minister of Commerce and Industry, Piyush Goyal, has on multiple occasions expressed interest in developing such a domestic taxation mechanism, which could also provide rebates to industries based on their export activity to the EU (Law 2023a; Singh 2023; Business Standard 2024). The next step would be for the government to seek recognition of this deduction as valid under the CBAM, a recourse that has support among industrial stakeholders.

As a second measure, respondents identified that India presently lacks a system to accumulate and aggregate various forms of implicit carbon costs. These include the GST Compensation Cess (coal cess) and fuel excise duties, which could be converted into a carbon price equivalent to help lower the burden of CBAM levies (Gupta et al. 2024). A 'carbon tax' nomenclature would also need to be created in India to enable crediting-based adjustments.

While experts advocated for domestic carbon pricing, some categorically stressed that the development and operation of the Indian Carbon Market (ICM) will likely face considerable challenges. For instance, issues specific to the Perform, Trade, and Action (PAT) scheme, such as chronically low prices of Energy Saving Certificates (ESCs) and low-market liquidity issues, may resurface in the CCTS with CCCs. Thus, serious steps will be required to guide the market during its early stages of development to avoid similar issues that could undermine the stability of India's compliance market.

3.2. Measurement, reporting and verification (MRV)

Cognisant of the risk that third-country exporters may adopt less reliable and less accurate monitoring, reporting, and verification (MRV) systems – potentially resulting in carbon leakage – the EU integrated specific MRV rules into the CBAM. These were inspired by the Monitoring and Reporting Regulation (MR regulation, EU 2018/2066) and the Verification

Regulation (EU 2018/2067) (Gailhofer and Graichen 2023). Multiple industrial experts highlighted challenges around methodologies and MRV for calculating and certifying product-level emissions.

Measurement of embedded emissions

Industry respondents, in particular, emphasised that the emissions calculation methodologies required by the EU, and applied to third-country exporting countries, will remain a challenge for India. Although many producers already use internationally accepted standards, such as the GHG Protocol, ISO standards, or World Steel procedures, exporters to the EU must now comply with CBAM methodologies. This is expected to place additional financial and human resource burdens on Indian firms.

Emissions calculation methodologies required by the EU, and applied to third-country exporting countries, will remain a challenge for India.

Concerns were raised regarding the capacity and preparedness of Indian industries to adopt CBAM methodologies, since they lack the same capacity as the EU in product-level emissions calculation and reporting. Corroborating further, respondents noted that 2026 represents a 'very hard deadline' for the definitive period. They advised the government to develop emissions factor databases that industries can refer to when computing their emissions. They also suggested introducing regulatory measures to be applied at the product level, similar to the methodologies proposed by the EU. Admitting that additional reporting requirements will be challenging to meet in the short term, respondents also mentioned that this could provide interesting data points and opportunities in the longer run.

CBAM-linked MRV also presents distinct challenges for India. Industry respondents notably expressed concern over the limited capacity and technical expertise required for carrying out CBAM-linked MRV procedures. Experts highlighted that MRV in a standardised fashion is almost 'non-existent' in India. Thus, limited MRV architecture could risk market exclusion for India, as exports will increasingly need

to be certified in the future. This is likely to result in a scenario where the cleanest and most robust MRV goods will be exported first.

Traceability and classification of disputes

The measurement and verification of carbon content is a highly complicated exercise. The scale of challenges and rigour in carbon content calculation are vastly different for different forms of goods, particularly 'simple' and 'complex' products. Exporters of complex goods face particular challenges due to the limited carbon accounting infrastructure in India.

Tracing embedded emissions across multi-tiered supply chains is another primary concern under the CBAM framework because information about emissions from upstream precursor goods is required to be reported. The involvement of numerous intermediate producers creates complex supply chains that make it challenging to trace emissions across the chain, where exporters can practically face data gaps or information attainment challenges. For instance, in globalised and diverse supply chains, exporters may have to retrace their entire value chain across multiple geographies and jurisdictions, which presents a significant challenge. Experts observed that such robust traceability-based regulations will guide exporters to procure from upstream suppliers with transparent carbon accounting, rather than from the cheapest suppliers, thereby impacting the competitiveness of exporters.

Amendments to the CBAM under the EU Omnibus package have simplified reporting requirements for steel and aluminium exporters, as downstream processing emissions will no longer need to be calculated separately. Coverage of reporting is now limited to primary production of steel and aluminium materials rather than additional processing activities such as rolling or coating, which were previously covered in the pre-February 2025 version of the Regulation. Moreover, exporters that operate from non-EU countries without a carbon trading system similar to the EU ETS may report the 'mass allocation of precursor materials'. This means exporters will only need to report the quantity of initial materials used to make the steel or aluminium products, and corresponding emissions will be calculated using default values,³ thereby reducing the complexity of

3. Default values refer to standardised emission intensity figures used to estimate the embedded emissions of imported goods when specific data from the exporter is not available.

data collection and calculation (Amending Regulation (EU) 2023/956).

Additionally, experts noted that the classification⁴ of complex goods under the CBAM is a highly complex issue that could cause confusion and potentially give rise to disputes. For instance, flat steel products under Chapter 72 of the *Customs Tariff Act*⁵ will require a CBAM declaration, whereas kitchen equipment made from the same raw material and embedded emissions, not covered under Chapter 72, will be exempt. This can lead to a dispute.⁶ As one respondent explained, “Classifications disputes don’t arise if a product in classification A and classification B attracts the same rate of customs duty. But when you have a CBAM obligation on one, and no CBAM obligation on the other, then classification disputes are bound to arise”. Complex goods with multi-tiered supply chains pose an even greater challenge, since products may not fall within a single category. The European Commission’s DG TAXUD is considering expanding the scope of CBAM to include downstream products, aiming to mitigate the risk of carbon leakage from upstream CBAM goods (Smith 2024; Yermolenko 2024). The European Steel and Metals Action Plan has also emphasised the need to expand CBAM coverage to certain steel- and aluminium-intensive downstream products, and announced an EU Commission proposal to be adopted by the end of 2025 (EU Commission DG TAXUD 2025). Experts cautioned, however, that any extended inclusion of HS codes under the CBAM would worsen traceability and classification challenges for exporters in developing countries.

Exposure of micro, small, and medium enterprises

Based on the responses, we observe that the maximum number of references made while performing the coding procedure were relevant to CBAM’s impact on Indian micro, small, and medium enterprises (MSMEs). Respondents unequivocally

concurred that the CBAM will disproportionately impact MSMEs because they lack the capacity and resources to comply with its requirements.

Industry respondents submitting CBAM reports every quarter unanimously voiced that large corporate players are considerably better positioned to conform to CBAM’s reporting requirements than smaller players, particularly MSMEs. Product-level emissions measurement and MRV compliance were identified as key challenges that will increase costs for MSMEs and affect their competitiveness. Whether in the form of added compliance costs or their inability to meet reporting requirements, MSMEs risk losing competitiveness in international markets or being excluded from export markets.

Moreover, experts also warned that as the CBAM expands horizontally (across different sectors), vertically (to downstream products), and across jurisdictions through border carbon adjustments (BCAs), MSMEs may struggle even more. Many lack both the awareness and sophistication to navigate multiple complex regulations simultaneously.

Thus, to reduce the intensity of emissions in production, MSMEs require support to transition to low-carbon technologies. However, due to their limited resources, such opportunities remain scarce. To this end, respondents requested that the government provide substantial fiscal and regulatory support to help them access low-carbon technologies.⁷

Concerns related to data-sharing

Experts even raised security and privacy concerns about CBAM’s detailed data reporting requirements. The Government of India has similarly expressed reservations against the EU’s data collection practices, criticising them for breaching competitiveness principles (Law 2023b).

4. Classification refers to the categorisation of complex goods based on their carbon content.

5. The Harmonised System (HS) is a global product classification system used in international trade. The CBAM Implementation Regulation (Commission Implementing Regulation (EU) 2023/1173) provides a list of HS codes to inform and identify which products will be covered under the CBAM. The EU selects products with HS codes that are high-carbon products.

6. As one of the respondents explained, “Classification disputes don’t arise if a product in classification A and classification B attracts the same rate of customs duty. But when you have a CBAM obligation on one, and no CBAM obligation on the other, then classification disputes are bound to arise”.

7. To articulate this point quoting a response: “Of course, the MSME sector requires assistance. And just like India and the larger businesses have been asking for technology transfers and financial assistance from the West, I think that same line of argument would hold true in terms of technology transfer, financial assistance inside the country as well, right?”.



Image: iStock

For exporting industries, this will mean disclosing critical information on the installation's production methods, emissions volumes, carbon intensity, and supply chain structures of exported goods. Many exporting businesses often wish to withhold such sensitive data to maintain competitive positions in the global market. This includes EU importers, who are customers or buyers. Moreover, respondents also highlighted that CBAM methodologies demand complex and copious volumes of granular data, which may be inaccessible to both the government and industries. This includes data involving geo-located emissions profiling, for experts further questioned the rationale behind the EU demanding unit-level information on installation longitude, latitude, and UN/LOCODE.

Building on the comprehensiveness of data appropriated by the EU, experts cautioned that it could make India's position very precarious in international trade and climate negotiations. With access to unit-level, third-party verified data from thousands of installations with hundreds of data points, this data mine can be leveraged for purposes outside its stated goal, such as market analysis or economic and trade negotiations. Thus, respondents recommend that

India negotiate for all national data submitted to the European Commission to be shared with national authorities and seek guarantees from the European Commission against their use of non-regulatory purposes.

3.3. The Carbon Border Pricing Mechanism in the international trade and political landscape

International trade implications

Interview discussions on CBAM frequently centred on the climate–trade nexus. Many experts elicited how international trade patterns are becoming increasingly protectionist due to the integration of environmental and sustainability-linked standards and regulations. While these measures are not designed to reduce trade or welfare, regulatory differences make compliance processes complex, often resulting in restricted market access (Disdier and Fugazza

2019). Typically, developing and least-developed countries tend to bear the brunt of these restrictive or distortionary effects (UNCTAD 2013; Guo 2024; Zhao 2024). For instance, USD 37 billion worth of Indian exports are impacted by sustainability-driven non-tariff trade measures imposed by the EU (Prabhakar et al. 2024).

For these reasons, India has historically sought to isolate trade and environment discussions in multilateral negotiations. To this end, several experts have questioned the capacity of the WTO to effectively resolve CBAM-related disputes, as many developing countries, including India, have considered challenging the CBAM at the WTO (Ministry of Commerce and Industry 2024; Suneja 2024). Wary of trade and environmental regulations being passed unchallenged, many stressed that challenging the CBAM at the WTO would be critical for asserting India's diplomatic position and avoiding a precedent that arbitrarily links trade and environmental policy. At the same time, others viewed the WTO as a platform to clear challenges and explore solutions.

As the CBAM enters its definitive period, it is expected to cause trade distortions and trigger a realignment of global supply chains. Discussions focused on the basket of imports entering the EU and other regulated markets based on embedded carbon content in trade items. Producers able to maintain competitiveness by achieving low production costs and low carbon content will be best equipped to navigate the changing international trade landscape.

Experts highlighted that for these producers the CBAM could create opportunities to leverage market share for exporters in the EU and other regulated markets. Simultaneously, producers with carbon-intensive products will switch to unregulated or less-regulated markets to maintain export profitability margins. Industrial respondents confirmed that such market switching is already part of exporting companies' strategies. As a result, the CBAM can create separate supply chains based on the degree of environmental regulation in exporting markets where one is cleaner, and the other more carbon-intensive. Some experts

also anticipate that restricted market access could be partly offset by growing domestic demand, considering India's high growth rate.

Another key challenge identified by industrial respondents is that the CBAM is compelling companies to renegotiate contracts due to traceability obligations. Since reporting emissions of upstream precursor goods is necessary, companies exporting to the EU, based in different geographies, are evaluating contracts based on the ability of sourcing companies to provide the necessary information or the carbon content of sourced precursor goods. One of the respondents said, "Even for my traditional Asian markets where I am exporting, because of the reporting requirement, my contracts are being renegotiated because they are saying that eventually somebody sitting in Philippines (for instance) takes my products and then sends it to the EU".

International cooperation and negotiations

Given CBAM's far-reaching implications for trade, climate action, and broader political and economic relations between the EU and affected countries, it is vital that countries find pathways for cooperation to address key differences and challenges. All respondents urged the Government of India to negotiate with the EU and seek concessions.

While seeking exemptions, waivers, or indefinite deferments will be difficult, India can seek concessions towards a phased approach to CBAM implementation. This would cater to India's development needs and allow time for industries to build adequate preparedness to meet the CBAM obligations. While this was advocated by many experts, some acknowledged the difficulty in seeking concessions from the EU considering the uniform nature of the CBAM. A few experts even demanded blanket exemptions for Indian MSMEs. Across these positions, the common argument was that India's regulatory capacity and industry decarbonisation circumstances warrant more lenient timelines to be able to prepare appropriately.

Beyond concessions and timelines, respondents posited and discussed various alternate routes to cooperation. For instance, many pressed for India to mobilise technology transfer and technical support agreements with the EU to facilitate the uptake of green technologies in India. Bridging the technology

The comprehensiveness of data being gathered by the EU from Indian exporters may significantly weaken India's position under CBAM.

gap and enabling Indian industries to align with EU standards in production methods, emissions data collection, and MRV processes would help Indian industries develop the capacity and preparedness to absorb the impacts of the CBAM and maintain exporter competitiveness in EU markets.

Referring to specific technologies, many experts expressed immense potential in harnessing green hydrogen to spearhead India's industrial decarbonisation. Respondents argued that New Delhi must seek external support to develop a green hydrogen ecosystem. Exploring collaboration, ventures, and partnership opportunities with the EU on advanced green hydrogen technologies must be a top priority while considering technology transfer agreements. Beyond technical and technology-linked considerations, many respondents also emphasised the need to appeal for enhanced financial assistance to support India's industrial decarbonisation objectives, linking these discussions to broader climate finance commitments.

In parallel, to channel increased financial support, many respondents alluded to a widely discussed revenue-sharing model, which earmarks proceeds from the CBAM in the EU General Budget to developing and emerging economies. This was seen as a way to restore trust and cushion the impact of the CBAM on countries with high levels of exposure and vulnerability to it (Lamy et al. 2024; Marcu et al. 2024). In keeping with the principle of CBDR-RC, re-routed climate finance must be 'new and additional' – beyond current international climate finance commitments – and provided in amounts at least equal to the burden placed by the CBAM on affected countries (Corvino 2023). However, scepticism remained about whether such revenue-recycling instruments, if implemented, would extend to countries such as India, given that they are likely to only apply to least-developed countries with considerable exposure to the CBAM.

Another proposed pathway for negotiations involved the ongoing EU–India Free Trade Agreement (FTA). While experts consistently considered CBAM negotiations in association with FTA talks, their views offered contrasting positions. While some argued that India should keep CBAM discussions outside FTA negotiations, others pressed that CBAM-linked trade and economic challenges must be addressed during FTA negotiations. Respondents holding the former set of views fear that the CBAM can derail progress on the FTA deal, whereas most of the responses advancing

the latter course of action insist that EU–India FTA negotiations can be leveraged to force concessions. The nature of concessions may differ since they can be directly linked to the CBAM Regulation, or separate trade or climate finance-linked concessions could be explored.

For instance, as a form of retaliatory trade measure, one of the respondents proposed suspending equivalent tariff lines under the EU–India FTA, commensurate to the trade losses suffered by exports goods under the CBAM. The rationale behind such a trade recourse assumes a confrontational approach, echoed also by multiple experts. In discussing other forms of trade retaliation, some experts converged on the idea of India potentially adopting trade measures constituting either (i) historic emissions or (ii) per capita emissions. The CBAM only incorporates current gross emissions, without considering the large disparities in historical and per capita emissions between global North and South countries. This will involve scientifically derived methodologies to compute and integrate formulas and emissions estimates into operational trade mechanisms. It is widely discussed that the CBAM could provoke trade apprehension and risk retaliation from trade partners (Bellora and Fontagné 2020).

3.4. Fairness, equity, and trust

Equity and climate justice emerged as the final themes to emerge from the TA. All respondents unanimously expressed concern that the CBAM undermines well-established international climate norms, ensuring climate justice and equity. Experts widely criticised the CBAM for eroding trust by undermining the principle of CBDR-RC, reaffirmed in the Paris Agreement.

Fairness and equity

CBAM's one-size-fits-all approach, which imposes an equal carbon cost across all countries irrespective of the producing country's economic condition, historical emissions, or resource capacities, exerts a disproportionate burden on developing countries. Experts questioned the fairness of the mechanism, arguing that emerging economies such as India and many others, which are increasingly adopting carbon pricing mechanisms, are forced to submit to a much higher carbon price benchmarked against the EU

ETS, regardless of the adjustment prescriptions under the crediting mechanism. Several noted that even the EU ETS took many years to mature, and similar consideration should be extended to non-EU countries before forcing their production methods to meet a much higher carbon price.

Although the CBAM experts argued that the mechanism achieves the opposite when differences in starting points are considered. Industries in the EU receive a considerable advantage in terms of greater access to government subsidies, credit availability, and access to advanced green technologies, which allow industries to adopt less carbon-intensive methods at a lower cost. India, on the other hand, lacks similar resources, leading to an uneven starting point. Especially in the backdrop of Europe being a richer economy, retaining higher historical and per capita emissions, this creates an unfair playing field, as Indian industries are expected to meet the same environmental standards without receiving similar financial or technological support.

Erosion of trust

Some experts have underlined how the CBAM behaves less like a climate policy mechanism and acts more like a trade tool designed to protect domestic EU industries from countries without comparable carbon pricing mechanisms. Many shared scepticism about the EU's true intent, suggesting the CBAM's restrictions and trade barriers stand to advantage EU positions in global trade and favour domestic production. One respondent summed up this view, "It (CBAM) is a tool to preserve the competitive edge of the European economy plain and simple", indicating a lack of trust in EU mechanisms towards their true intent. Many experts suggested that the core motivations behind the CBAM are to safeguard EU industrial competitiveness.

Similarly, industrial respondents also raised concerns around privacy, the sharing of integral data, and the EU's control over international standard-setting

procedures, which reflect a rapid erosion of trust. For instance, the lack of transparency and accountability regarding the use of reported data even prompted some respondents to call for reciprocal data-sharing obligations from the EU. A sense of mistrust and concern also emerges concerning the EU's engagement in international standard-setting, where environmental protocols and norms are designed to meet EU-specific standards. For example, some respondents referred to the EU as a 'super-regulator' while explaining how the arbitrary extension of CBAM methodologies discounts globally accepted methodologies that similarly calculate embedded emissions.

This lack of harmonisation and mutual recognition creates a difficult regulatory environment, forcing experts to raise objections against CBAM's extended regulatory reach into developing-country policy landscapes. As one respondent shared, "All sovereign countries are entitled to take their own measures, but they are not entitled under international law, under the UNFCCC, to impose their measures on some other country." This highlights concerns regarding the EU's potential to extend its influence over the sovereign economic, industrial, and climate policies of developing nations, which experts have pointed out is an overreach.

Conversations surrounding the role of scrap in the CBAM debate also raised concerns about equity and mistrust of EU regulations. While the use of scrap can contribute to low-carbon production of steel, its access, especially for non-EU countries, is increasingly posing a big challenge as jurisdictions limit the trade of scrap. Stricter rules on the export of scrap to non-EU countries from the EU Waste Shipment Regulation (WSR) pose structural limitations on procuring scrap, disadvantaging countries such as India, which are net importers of scrap, thereby increasing the CBAM liability (Sen 2024). Experts argued that the EU WSR and CBAM work in tandem to support EU climate goals but do so at the expense of developing nations, further undermining international principles of equitable climate responsibility.

Scepticism remained about whether revenue-recycling instruments, if implemented, would extend to countries such as India.

Fairness and equity in global climate action, particularly in relation to international climate finance, were also widely discussed. Many respondents reiterated the failure of climate negotiations to channel the necessary climate finance to developing countries. Respondents concurred that there is an urgent need to bridge this gap.

To this end, many recommendations emphasised the inherent obligation of developed countries to support and facilitate a transition in developing countries. For instance, calls for EU–India cooperation on technology transfers and technical assistance were rooted in the principle of CBDR, recognising that developed countries possess greater financial and technological capabilities, as well as greater responsibility due to historic emissions. Similarly, respondents also

encouraged the adoption of recycling instruments for CBAM revenues to support the adoption of low-carbon production methods. Crucially, these measures need to be additional to, and not substitutes for, existing commitments. Fulfilment of commitments on climate finance and promoting a sense of fairness is critical in ensuring trust and cooperation between states (Corvino 2023).

4. Discussion

The results reveal four key areas that merit a deeper discussion: carbon pricing mechanisms, MRV, international trade and political dynamics, and equity and climate justice. This section synthesises these findings in the Indian context, discussing their implications and identifying relevant domestic and foreign policy choices.

Criticality of domestic compliance market

Beginning with carbon pricing, there is a clear need for India to develop a robust compliance-based carbon market. An explicit carbon pricing system is essential to incentivise emissions reduction, and clear domestic carbon pricing could ideally also qualify for adjustment against CBAM certificates. India's CCTS is a step in this direction, establishing both compliance and offset markets (ICAP n.d.). It is critical that the carbon price discovered through India's CCTS is accepted within the EU as a price well aligned with the CBAM. If this carbon price is not recognised due to variation in India's CCTS design as compared to EU-ETS, it will be a challenge for India's industry and policy makers.

Assessing the value of implicit carbon taxes

Domestic taxation measures also hold considerable merit, as they could help lower the burden of CBAM costs. However, India faces a key question: How

can it design a carbon pricing architecture that serves national development objectives while meeting international compliance requirements, without compromising industrial competitiveness? Policymakers will need to assess the impact of taxation on domestic industries and consider supporting measures, such as the repartition of collected revenue, especially when the need to adopt carbon pricing measures beyond CCTS is becoming increasingly evident. Moreover, seeking eligibility for this type of domestic tax for reduction against CBAM certificates is a separate consideration entirely, as the EU may or may not accept such an arrangement.

A related insight from interviews concerned the development of a separate carbon tax nomenclature in India to consolidate existing implicit carbon costs paid by producers in the form of coal cess and fuel excise duties. While incorporating these levies into a carbon-equivalent framework could be promising, some experts argued they lack the essential characteristics of a carbon price. Such costs are typically applied on an *ad valorem* basis (Marcu et al. 2023). Their eligibility for a reduction against CBAM certificates remains an open question, requiring urgent clarity.

Capacity building on data collection, reporting, and regulatory preparedness

Indian industries face significant implementation gaps between their current technical capacities and CBAM's reporting requirements. This challenge is particularly acute for MSMEs. Existing governance

structures and the regulatory landscape of MRV in India are insufficient to prepare Indian industries for the environmental standards and reporting requirements prescribed in the CBAM and other non-tariff trade measures. While simplifications introduced in the EU's Omnibus package provide some respite for non-EU exporters,⁸ they do not reduce the urgency of developing a robust domestic MRV ecosystem. Such a system must support low-carbon transitions and equip industries for compliance in a landscape where other jurisdictions are also adopting BCAs⁹ and where the EU CBAM is expected to extend its scope.¹⁰

A nationally unified and cohesive MRV ecosystem needs to be set up – and at an accelerated pace.

At the heart of India's environmental governance gap is a lack of pre-emptive policymaking. To keep pace with rapidly evolving environmental regulations, India should consider establishing separate departments or laboratories tasked with evaluating impacts and developing strategic policy responses to help Indian exporters remain competitive in global markets. Their contributions must drive extensive consultations and feedback mechanisms encompassing legal, technical, and economic perspectives to guide internal policy and help develop a comprehensive government-led MRV infrastructure. Participation and involvement of industry will be critical here, with more frequent and structured dialogues needed to address the implementation gap.

Incentives for innovation

Interviewees also emphasised the need for increased funding and incentives, particularly in hard-to-abate sectors, to accelerate innovation and promote the adoption of low-carbon technologies. For India to pursue domestic decarbonisation, policies must provide clear financial benefits and ensure that transitions to low-carbon technologies are economically viable. While carbon markets may offer promising incentives, the investment

supporting architecture needs to ramp up support in the form of de-risking investments in clean energy projects, offering wider and enhanced production-linked incentive (PLI) schemes linked to industrial decarbonisation, or increasing research and development (R&D). Such incentive-based policies can be specially extended to MSMEs, who are disproportionately vulnerable to the CBAM. Thus, a balanced mix of regulatory measures and financial incentives will be necessary to drive economy-wide decarbonisation and navigate CBAM-related challenges.

Understanding and managing climate–trade linkages

Beyond industrial perspectives, the results reveal significant implications of the CBAM for international trade. An expert noted that climate and trade are becoming inextricably intertwined through environmental and sustainability-linked regulations that create regulatory hurdles and restrict market access. The EU CBAM is a reflection of this evolving trend. In practice, it is expected to cause trade distortions and realign supply chains, thereby affecting India's trade competitiveness.

To navigate these challenges, policymakers must focus on enhancing the regulatory preparedness of exporting firms. Since tracing embedded emissions for reporting purposes is a challenge, government intervention will be necessary to provide oversight, extend capacity-building efforts, and support compliance. At the same time, the changing landscape could create notable opportunities, as exporting firms may pivot towards alternate markets, meet growing domestic demand, or gain first-mover advantages in clean markets. Das and Bandyopadhyay (2025) similarly find that large steel producers are increasingly pursuing de-risking strategies by redirecting higher-carbon steel to domestic or alternative export markets while

8. Specific to the use of default values in reporting, experts highlighted that the limited ability to utilise them adds considerable reporting burden since data gaps are prevalent, and the use of default value emissions factors helps fill these data gaps. Prior to simplification, only up to 20 per cent of the total embedded emissions in complex goods were eligible to be reported using default values. Following the amendments, default values will now be based on the average emissions intensity of the 10 highest-emitting countries for which reliable data is available.

9. The UK CBAM is expected to begin by 2027; Norway is preparing to introduce a CBAM from 2027; many other countries including Canada, Australia, Taiwan, and few others are considering and developing plans to adopt border carbon adjustment mechanisms.

10. The European Commission is required to conduct a thorough review of the CBAM at the end of the transitional period. This assessment is expected to specifically examine the potential addition of new sectors or extension of covered goods in a sector.

reserving lower-carbon varieties for the EU to maintain competitiveness.

Further, ongoing FTA negotiations and the EU–India Trade and Technology Council can present potential avenues for India to negotiate concessions, such as a phased implementation or category exemptions, allowing Indian industries more time to adapt. By coupling CBAM discussions with trade negotiations, India may better position itself to achieve both climate-aligned trade agreements and reduce the detrimental trade and economic impact of the CBAM in India. While the interviews for this study predated the announcement of the latest *India–UK Comprehensive Economic and Trade Agreement (CETA)*, we observe from the agreement that India has secured a diplomatic understanding (via a note verbale) affirming its right to take countermeasures—such as suspending concessions—if the CBAM undermines its export interests (ET Bureau 2025). This precedent suggests that India could adopt similar counterbalancing mechanisms in the EU–India FTA discussions.

To navigate challenges, policymakers must focus on enhancing the regulatory preparedness of exporting firms.

Sharing revenues from the EU’s CBAM to support green industrialisation in CBAM-affected countries also emerges as an important area where the EU and India can cooperate. Revenue-sharing arrangements could help cushion the CBAM’s impact on affected countries while building legitimacy and reducing geopolitical friction between the EU and non-EU states. However, the EU’s most recent proposal risks aggravating tension around revenue-sharing models: the EU Commission has recently proposed that heavy industries exporting CBAM goods abroad should receive compensation for exports funded by the bloc’s carbon border tax (Hancock 2025; Dev 2025). While this measure aims to level the playing field for EU exporters against foreign competitors, it

undermines international buy-in and has attracted criticism in countries affected by CBAM. In this framing, the CBAM can be interpreted more as a tool shielding EU competitiveness rather than promoting global decarbonisation, particularly given the missed opportunity to share revenues internationally.

Fairness, equity, and trust

Moving to the final theme, the findings consistently show that the CBAM has provoked considerable debate over equity in climate governance. Experts argued that the border mechanism overlooks structural differences in carbon intensity across regions, disregarding India’s developmental needs and historically low emissions. Experts argued that penalising carbon-intensive production in non-EU countries effectively shifts the burden of carbon costs onto these countries. If the EU accounted for emissions on a consumption basis, factoring in imported goods, it would reflect a more accurate picture of the EU’s carbon footprint. This further highlights a fundamental inconsistency in how emissions are accounted for and where responsibility is assigned, since the CBAM focuses exclusively on physical emissions while disregarding the interconnected nature of emissions in global trade.

For India and other developing countries, the gradual erosion of trust in international cooperation, compounded by the failure to meet global climate finance expectations and inequitable carbon pricing, deepens and intensifies an approach to international negotiations, wherein affected countries argue for greater climate justice and equitable transition frameworks in global climate negotiations. All angles to cooperation, from capacity building to technology transfer or international financial support, must be grounded in an acknowledgment of the disparities in historical emissions and technological and economic resources between developed and developing nations. The final point that emerges is that India and other developing countries must negotiate a fairer distribution of climate responsibilities.

5. Conclusion

This study examines prevailing perspectives among key stakeholders in India on the implementation of the EU's CBAM and its anticipated impact on the Indian economy. Employing a codebook thematic analysis approach, we identified four dominant themes from stakeholder interviews: carbon pricing mechanisms; MRV; international trade and political dynamics; and fairness, equity, and trust. These themes provide the basis for outlining relevant policy choices available to India in response to or to offset the impact of CBAM.

The experts engaged for this study highlighted the importance of India's CCTS. Stakeholders considered its compliance mechanism an important carbon pricing instrument for incentivising emissions reduction and enabling potential adjustments against CBAM certificates. For this, it is critical that the carbon price discovered through India's CCTS compliance is formally accepted within the EU CBAM process. Based on the cost burden associated with the CBAM, the study also emphasises the need to articulate the value of the implicit carbon tax in India's economic system, which

could potentially be combined with the explicit carbon price to reduce the cost obligation for industries.

At the same time, policymakers must focus on enhancing the regulatory preparedness of exporting firms. Tracing embedded emissions for reporting remains a significant challenge, particularly for MSMEs, underscoring the need for government support in compliance oversight and capacity building.

Our analysis also points to the need for a comprehensive approach to international cooperation. capacity building, technology transfer, and global financial support that must be grounded in a recognition of disparities in historical emissions and technological and economic resources between developed and developing nations. To this end, our assessment concludes that considerable efforts will be required in both the domestic landscape and the international negotiations arena to navigate CBAM-linked challenges without compromising India's climate and development goals.

Annexure

Annexure A: List of interview participants

Table A1: List of interview participants

No.	Name	Organisation/ Company	Position	Stakeholder	Interview format
1.	Aditya Raghwa	–	–	Industry Association	Online
2.	Dr Amit Garg	Indian Institute of Management, Ahmedabad (IIMA)	Professor	Academia	Online

No.	Name	Organisation/ Company	Position	Stakeholder	Interview format
3.	Dr Amrita Goldar, Poulommi Bhattacharya, and Kumar Abhishek	Indian Council for Research on International Economic Relations (ICRIER)	Senior Fellow Fellow Visiting Fellow	Think tank	Physical
4.	Anil Bhardwaj	Federation of Indian Micro and Small & Medium Enterprises (FISME)	Secretary-General	Industry Association	Physical
5.	Aparajita Agarwal	TATA Steel	Senior Manager – Regulatory Affairs	Industry	Physical
6.	Dr Aparna Sawhney	Jawaharlal Nehru University (JNU)	Professor	Academia	Physical
7.	Arun Victor and Ribhu Deo	EKI Energy Services Ltd.	Assistant Vice President Lead – Operations and Business Development	Listed company	Online
8.	Atul Sharma	Sarvada Legal	Founder	Law firm	Physical
9.	Dr Badri Narayanan	Infinite Sum Modeling LLC	Fellow (NitiAayog)	Think tank	Online
10.	Dr Biswajit Dhar	–	–	Think tank	Physical
11.	Hemant Mallya	Council on Energy, Environment and Water (CEEW)	Fellow	Think tank	Physical
12.	Hisham Mundol	Environment Defence Fund (EDF)	Director, India	Nonprofit	Physical
13.	Prachi Priya	Hindalco Industries Ltd	Vice President – Public Policy Research, Advocacy & ESG Strategy	Industry	Online
14.	R. R. Rashmi	The Energy and Resources Institute (TERI)	Distinguished Fellow	Think tank	Physical
15.	Swaroop Banerjee	JSW Group	Vice President – Sustainability	Industry	Online

Source: Authors' compilation

Note: The study included interviews with 16 expert stakeholders, of whom two requested to be identified in an independent capacity. One industry expert from a steel and aluminum production company opted to remain anonymous.

Annexure B: Snapshot of codebook

Table A2: Snapshot of codebook

Codes	No. of participants	No. of references
Article 6	6	6
Autonomous bodies or labs	5	9
Carbon leakage	7	9
Carbon price	4	9
CBAM – trade tool or tariff	9	15
CBAM – a risk	13	28
CBAM – an opportunity	11	23
CBAM impact on the EU	7	12
CBAM industrial preparedness	10	16
Climate clubs	7	13
Climate–trade nexus	5	13
Creating incentives	8	11
Crediting mechanism	10	15
Data requirement or privacy concerns	11	21
Deferment or concession	7	16
Developing a carbon pricing mechanism	13	33
Domestic carbon tax	14	30
Dominant perspectives	11	31
Economic exposure	12	22
Encouraging climate action in third countries	3	7
Equity and CBDR	12	46
EU dependence on imports	2	2
EU needs to do more	7	7
EU safeguarding their industrial competitiveness	6	12
Expanding scope and issues with the scope of CBAM	5	13
Exports	2	2
Extending sovereignty	3	4
FTA	10	19
Global carbon market	1	1

Codes	No. of participants	No. of references
Global trade implications	5	8
Government shortcomings	3	15
Government could or should do	13	54
Government–industry dialogue	5	9
Green hydrogen	4	8
Green investments or green financing	8	16
Growth vs environmental action trade-off	3	3
India high carbon intensity goods	11	18
Indian carbon market	8	20
India's international positioning	7	11
Industrial decarbonisation	8	15
Industries conforming to CBAM	8	50
International climate finance	6	10
International cooperation	16	47
International voice and engagement	11	27
Methodologies	9	18
MRV	4	54
MSME exposure	13	96
New taxing solutions	7	14
Not sure	2	3
Other BCAs	5	5
Protectionist or discriminatory	7	12
Realignment of global supply chains	12	25
Retaliatory trade measure	7	20
Revenue recycling	7	9
Scrap	3	10
Standard setting	5	9
Technology transfers	11	24
Traceability and classification	3	12
Unequal carbon price	6	9
VCM	2	4
WTO	11	16

Source: Authors' compilation

References

- Amending Regulation (EU) 2023/956. 2025. "Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EU) 2023/956 as Regards Simplifying and Strengthening the Carbon Border Adjustment Mechanism." European Commission. www.commission.europa.eu/document/download/606b4811-9842-40be-993e179fc8ea657c_en?filename=COM_2025_87_1_EN_ACT_part1_v5.pdf.
- Asian Development Bank. 2024. "Asian Economic Integration Report 2024." Asian Development Bank. <https://www.adb.org/publications/eu-carbon-border-adjustment-mechanism>.
- Beaufils, Timoth  , Hauke Ward, Michael Jakob, and Leonie Wenz. 2023. "Assessing Different European Carbon Border Adjustment Mechanism Implementations and Their Impact on Trade Partners." *Communications Earth & Environment* 4 (1): 1–9. <https://doi.org/10.1038/s43247-023-00788-4>.
- Bonnet, Antoine and Ieva Bar  sauskait  . 2025. "The State of BCA's 2025." International Institute for Sustainable Development. www.iisd.org/publications/report/state-of-bcas-2025.
- Brandi, Clara. 2021. "Priorities for a Development-Friendly EU Carbon Border Adjustment (CBAM)." Deutsches Institut f  r Entwicklungspolitik (DIE) Briefing Paper No. 20/2021. <https://doi.org/10.23661/bp20.2021>.
- Branger, Fr  d  ric, Philippe Quirion, and Julien Chevallier. 2016. "Carbon Leakage and Competitiveness of Cement and Steel Industries Under the EU ETS: Much Ado About Nothing." *The Energy Journal (Cambridge, Mass)* 37 (3): 109–35. <https://doi.org/10.5547/01956574.37.3.fbra>.
- Braun, Virginia, and Victoria Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101. <https://doi.org/10.1191/1478088706qp063oa>.
- . 2019. "Reflecting on Reflexive Thematic Analysis." *Qualitative Research in Sport, Exercise and Health* 11 (4): 589–97. <https://doi.org/10.1080/2159676X.2019.1628806>.
- . 2020. "One Size Fits All? What Counts as Quality Practice in (Reflexive) Thematic Analysis?" *Qualitative Research in Psychology* 18 (3): 328–52. <https://doi.org/10.1080/14780887.2020.1769238>.
- Business Standard. 2024. "Will Consider EU Suggestion; Come Up With Whatever Good for Industry: Goyal." *Business Standard*, July 30. https://www.business-standard.com/economy/news/will-consider-eu-suggestion-come-up-with-whatever-good-for-industry-goyal-124073000506_1.html.
- Bryne, David. 2022. "A Worked Example of Braun and Clarke's Approach to Reflexive Thematic Analysis" *Quality & Quantity* 56 (3): 1391–1412. <https://doi.org/10.1007/s11135-021-01182-y>.
- Chepeliev, Maksym. 2021. "Possible Implications of the European Carbon Border Adjustment Mechanism for Ukraine and Other EU Trading Partners." *Energy Research Letters, Asia-Pacific Applied Economics Association* 2 (1): <https://doi.org/10.46557/001c.21527>.
- Corvino, Fausto. 2023. "The Compound Injustice of the EU Carbon Border Adjustment Mechanism (CBAM)." *Ethics, Policy & Environment* 28 (1): 26–45. <https://doi.org/10.1080/21550085.2023.2272237>.
- Das, Kasturi, and Kaushik Ranjan Bandyopadhyay. 2025. "Impact of Carbon Border Adjustment Mechanism (CBAM) on Steel Decarbonization in India: A Multi-Stakeholder Perspective on Ambition vs Equity." *International Environmental Agreements: Politics, Law and Economics* 25 (2): 195–229. <https://doi.org/10.1007/s10784-025-09662-4>.
- Dechezlepr  tre, A. et al. 2025. "Carbon Border Adjustments: The Potential Effects of the EU CBAM Along the Supply Chain." OECD Science, Technology and Industry Working Papers, No. 2025/02. Paris: OECD Publishing. <https://doi.org/10.1787/e8c3d060-en>.

Dev, Trishant. 2025. "EU Unveils Plans to Compensate Domestic Exporters with CBAM revenues – Here's What It Means." *Down to Earth*, July 21. <https://www.downtoearth.org.in/climate-change/eu-unveils-plans-to-compensate-domestic-exporters-with-cbam-revenues-heres-what-it-means>.

Disdier, Anne-Célia, and Marco Fugazza. 2022. *A Practical Guide to the Economic Analysis of Non-Tariff Measures*. Vol. 3. New York: United Nations. <https://www.un-ilibrary.org/content/books/9789210041997>

Dobson, Natalie L. 2022. "(Re)Framing Responsibility? Assessing the Division of Burdens under the EU Carbon Border Adjustment Mechanism." *Utrecht Law Review* 18 (2): 162–79. <https://doi.org/10.36633/ulr.808>.

Eicke, Laima, Silvia Weko, Maria Apergi, and Adela Marian. 2021. "Pulling up the Carbon Ladder? Decarbonization, Dependence, and Third-Country Risks from the European Carbon Border Adjustment Mechanism." *Energy Research & Social Science* 80: 102240. <https://doi.org/10.1016/j.erss.2021.102240>.

European Union. n.d. "India: EU Trade Relations with India. Facts, Figures and Latest Developments." European Union. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/india_en.

European Commission DG TAXUD. 2025. "CBAM: Public Consultation on the Extension of CBAM to Downstream Products." European Commission Taxation and Customs Union. https://taxation-customs.ec.europa.eu/news/cbam-public-consultation-extension-cbam-downstream-products-2025-07-02_en.

Gailhofer, Peter, and Verena Graichen. 2023. "Monitoring, Reporting and Verification in a Carbon Border Adjustment Mechanism." German Environment Agency. <https://www.umweltbundesamt.de/en/publikationen/monitoring-reporting-verification-in-a-carbon>.

GTRI. 2023. "The Carbon Border Adjustment Mechanism: EU's Climate Trojan Horse to Obstruct Imports." Global Trade Research Initiative. <https://gtri.co.in/gtriFlagshipRep3.pdf>.

Gupta, Anandita, Radhika Pandey, and Sanhita Sapatnekar. 2024. "Potential Implications of the EU's Carbon Border Adjustment Mechanism." National Institute of Public Finance and Policy Working

Papers No. 24/408. https://nipfp.org.in/media/medialibrary/2024/03/WP_408_2024.pdf.

Hancock, Alice. 2025. "EU to Exempt Heavy Industry from Carbon Tax on Exports." *Financial Times*, July 2. <https://www.ft.com/content/47ada854-9a94-4528-b916-f9926cf4ec42?utm>.

Healy, Sean, Katja Schumacher, and Wolfgang Eichhammer. 2018. "Analysis of Carbon Leakage under Phase III of the EU Emissions Trading System: Trading Patterns in the Cement and Aluminium Sectors." *Energies* 11 (5): 1231. <https://doi.org/10.3390/en11051231>.

Hübner, Christian. 2021. "Perception of the Planned EU Carbon Border Adjustment Mechanism in Asia Pacific – An Expert Survey." *Konrad Adenauer Stiftung*, November 8. <https://www.kas.de/en/web/recap/single-title/-/content/perception-of-the-planned-eu-carbon-border-adjustment-mechanism-in-asia-pacific-an-expert-survey>.

ICAP. n.d. "Indian Carbon Credit Trading Scheme." International Carbon Action Partnership. April 2025 <https://icapcarbonaction.com/en/ets/indian-carbon-credit-trading-scheme>.

IETA. 2024. International Reactions to the EU Carbon Border Adjustment Mechanism. International Emissions Trading Association. www.ieta.b-cdn.net/wp-content/uploads/2024/04/IETA_INTL-REACTION-TO-CBAM-REPORT.pdf.

Joltreau, Eugénie, and Katrin Sommerfeld. 2018. "Why Does Emissions Trading under the EU Emissions Trading System (ETS) not Affect Firms' Competitiveness? Empirical Findings from the Literature." *Climate Policy* 19 (4): 4534–4571. <https://doi.org/10.1080/14693062.2018.1502145>.

Kathuria, Rajat, Neha Gupta, and Navya Kumar. 2025. "India's Carbon Border Adjustment Mechanism (CBAM) Challenge: Strategic Response and Policy Options." Centre for Social and Economic Progress. <https://csep.org/working-paper/indias-carbon-border-adjustment-mechanism-cbam-challenge-strategic-response-and-policy-options/>.

Kuik, Onno, and Marjan Hofkes. 2010. "Border Adjustment for European Emissions Trading: Competitiveness and Carbon Leakage." *Energy Policy* 38 (4): 1741–1748. <https://doi.org/10.1016/j.enpol.2009.11.048>.

Lamy, Pascal, Geneviève Pons, Colette van der Ven, and Cláudia Azevedo. 2024. "Turning the EU's Carbon Border Adjustment Mechanism into a Green Development Tool." Europe Jacques Delors. <https://www.europejacquesdelors.eu/publications/eu-cbam-a-green-development-tool>.

Law, Abhishek. 2023a. "CBAM Discussions: India Mulls Carbon Tax Repatriation from EU." *BusinessLine*, September 13. <https://www.thehindubusinessline.com/economy/cbam-discussions-india-mulls-carbon-tax-repatriation-from-eu/article67280519.ece>.

———. 2023b. "Indian Authorities Raise Concerns over Exporters' Data Collection by EU through CBAM." *BusinessLine*, August 24. <https://www.thehindubusinessline.com/companies/indian-authorities-raise-concerns-over-exporters-data-collection-by-eu-through-cbam/article67230405.ece>.

Li, Aijun, and Aizhen Zhang. 2012. "Will Carbon Motivated Border Tax Adjustments Function as a Threat?" *Energy Policy* 47: 81–90. <https://doi.org/10.1016/j.enpol.2012.04.023>.

Lim, Byeongho, Kyoungseo Hong, Jooyoung Yoon, Jeong-In Chang, and Inkyo Cheong. 2021. "Pitfalls of the EU's Carbon Border Adjustment Mechanism." *Energies* 14 (21): 7303. <https://doi.org/10.3390/en14217303>.

Magacho, Guilherme, Etienne Espagne, and Antoine Godin. 2024. "Impacts of the CBAM on EU Trade Partners: Consequences for Developing Countries." *Climate Policy* 24 (2): 243–259. <https://doi.org/10.1080/014693062.2023.2200758>.

Majumder, Piyali, Somya Mathur, and Sanjib Pohit. 2024. "Impact of the European Union's Carbon Border Adjustment Mechanism – Evidence from India and Other Selected Trading Partners of EU." *Green and Low-Carbon Economy* 3 (3). <https://doi.org/10.47852/bonviewglce42022065>.

Malik, Aman, Vaibhav Chaturvedi, Medhavi Sandhani, Pallavi Das, Chetna Arora, Nishtha Singh, Ryna Yiyun Cui, Gokul Iyer, and Alicia Zhao. 2024. "Implications of an Emission Trading Scheme for India's Net-Zero Strategy: A Modelling-Based Assessment." *Environmental Research Letters* 19 (8): 084043. <https://doi.org/10.1088/1748-9326/ad64ec>.

Marcu, Andrei, Michael Mehling, Aaron Cosbey, and

Sara Svensson. 2023. "Methods for Crediting Carbon Prices under the CBAM." European Roundtable on Climate Change and Sustainable Transition. <https://ercst.org/crediting-carbon-prices-under-the-cbam/>.

Marcu, Andrei, Aaron Cosbey, Michael Mehling, Alexandra Maratou, and Sara Svensson. 2024. "The Use of CBAM Revenues." European Roundtable on Climate Change and Sustainable Transition. <https://ercst.org/the-use-of-cbam-revenues/>.

Mattoo, Aditya, Arvind Subramanian, Dominique Mensbrugghe, and Jianwu He. 2013. "Trade Effects of Alternative Carbon Border-Tax Schemes." *Review of World Economics* 149 (3): 587–609. <https://doi.org/10.1007/s10290-013-0159-0>.

Mehling, Michael, Harro van Asselt, Susanne Droege, Kasturi Das, and Catherine Hall. 2024. "Bridging the Divide: Assessing the Viability of International Cooperation on Border Carbon Adjustments." MIT Center for Energy and Environment Policy Research. <https://ceepr.mit.edu/bridging-the-divide-assessing-the-viability-of-international-cooperation-on-border-carbon-adjustments/>.

Ministry of Commerce and Industry. 2024. "India Does Not Rush into Trade Negotiations, Follows Careful and Calibrated Approach: Sh. Piyush Goyal." Press Information Bureau, Government of India. www.pib.gov.in/PressReleasePage.aspx?PRID=2008382.

Misch, Florian, and Philippe Wingender. 2024. "Revisiting Carbon Leakage." *Energy Economics* 140: 107786. <https://doi.org/10.1016/j.eneco.2024.107786>.

Naegele, Helene, and Aleksandar Zaklan. 2019. "Does the EU ETS Cause Carbon Leakage in European Manufacturing?" *Journal of Environmental Economics and Management* 93: 125–147. <https://doi.org/10.1016/j.jeem.2018.11.004>.

Nordström, Håkan. 2023. "Does the Risk of Carbon Leakage Justify the CBAM?" Robert Schuman Centre for Advanced Studies Research Paper No. RSC 08. <https://doi.org/10.2139/ssrn.4386792>.

Overland, Indra, and Rahat Sabyrbekov. 2022. "Know Your Opponent: Which Countries Might Fight the European Carbon Border Adjustment Mechanism?" *Energy Policy* 169: 113175. <https://doi.org/10.1016/j.enpol.2022.113175>.

Perdana, Sigit, and Marc Vielle. 2022. "Making the EU Carbon Border Adjustment Mechanism Acceptable and Climate Friendly for Least Developed Countries." *Energy Policy* 170: 113245. <https://doi.org/10.1016/j.enpol.2022.113245>.

———. 2023. "Carbon Border Adjustment Mechanism in the Transition to Net-Zero Emissions: Collective Implementation and Distributional Impacts." *Environmental Economics and Policy Studies* 25 (3): 299–329. <https://doi.org/10.1007/s10018-023-00361-5>.

Pirlot, Alice. 2024. "Carbon Leakage and International Climate Change Law." *Transnational Environmental Law* 13 (1): 61–86. <https://doi.org/10.1017/S2047102524000049>.

Prabhakar, Prerna, Latika Adlakha, and Hemant Mallya. 2024. "Strengthening India's Non-Tariff Measures' Compliance: A Comparative Analysis of Key Governance Frameworks." Council on Energy, Environment and Water. <https://www.ceew.in/publications/compliance-strategy-for-non-tariff-measures-in-international-trade>.

Regulation (EU) 2023/956. "Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 Establishing a Carbon Border Adjustment Mechanism." *Official Journal of the European Union*, L 130/52, May 16. www.eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0956&qid=%201694165990087.

Sen, Amiti. 2024. "India, Turkey, Indonesia Raise Concerns Over EU's Regulation on Waste Shipments." *Businessline*, July 6. <https://www.thehindubusinessline.com/economy/india-turkey-indonesia-raise-concerns-over-eus-regulation-on-waste-shipments/article68372019.ece>.

Singh, Ruchira. 2023. "Domestic Carbon Tax Could Help Avoid EU's CBAM, Says Indian Minister." *S&P Global Commodity Insights*, November 3. <https://www.spglobal.com/commodity-insights/en/news-research/latest-news/energy-transition/110323-domestic-carbon-tax-could-help-avoid-eus-cbam-says-indian-minister>.

Smith, Adam. 2024. "European Commission Studies CBAM Downstream Extension." *Eurometal*, October 1. <https://eurometal.net/european-commission-studies-cbam-downstream-extension/>.

Suneja, Kirtika. 2024. "EU Carbon Tariff: India Preps for a Fight at WTO." *The Economic Times*, May 31. <https://economictimes.indiatimes.com/news/economy/foreign-trade/eu-carbon-tariff-india-preps-for-a-fight-at-wto/articleshow/110573163.cms?from=mdr>.

Teusch, Jonas, Filippo Maria D'Arcangelo, Tobias Kruse, and Mauro Pisu. 2024. "Carbon Prices, Emissions and International Trade in Sectors at Risk of Carbon Leakage: Evidence from 140 Countries." OECD Economics Department Working Papers No. 1813. OECD Publishing. <https://doi.org/10.1787/116248f5-en>.

ET Bureau. 2025. "India Reserves Right to Negate Britain's CBAM Impact." *The Economic Times*, July 26. <https://economictimes.indiatimes.com/news/economy/foreign-trade/india-reserves-right-to-negate-britains-cbam-impact/articleshow/122912203.cms>.

Wildgrube, Theresa, Leon Heckmann, and Iryna Holovko. 2024. "Third-Country Carbon Pricing under the EU CBAM: Approaches for and Challenges of Recognising Domestic Payments." *German Environment Agency*. <http://www.umweltbundesamt.de/en/publikationen/third-country-carbon-pricing-under-the-eu-cbam>.

UNCTAD. 2013. *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*. United Nations Conference on Trade and Development. https://unctad.org/system/files/official-document/ditctab20121_en.pdf.

UNFCCC. 2015. *The Paris Agreement*. United Nations Framework Convention on Climate Change. https://unfccc.int/sites/default/files/resource/parisagreement_publication.pdf.

Van Schaik, Louise, Giulia Cretti, and Pieter Pauw. 2022. "The CBAM Effect: The World's Response to the EU's Climate Stick." *Clingendael*. <https://www.clingendael.org/publication/cbam-effect-worlds-response-eus-climate-stick>.

Xinlu, Sun, Zhifu Mi, Lu Cheng, D'Maris Coffman, and Yu Liu. 2024. "The Carbon Border Adjustment Mechanism Is Inefficient in Addressing Carbon Leakage and Results in Unfair Welfare Losses." *Fundamental Research* 4 (3): 660–670. <https://doi.org/10.1016/j.fmre.2023.02.026>.

Yermolenko, Halina. 2024. "EC Studies the Potential CBAM Extension to Processed Products." *GMK Center*, October 1. <https://gmk.center/en/news/ec-studies-the-potential-cbam-extension-to-processed-products/>.

Zachmann, Georg, and Ben McWilliams. 2020. "A European Carbon Border Tax: Much Pain, Little Gain." *Bruegel*. <https://www.bruegel.org/policy-brief/european-carbon-border-tax-much-pain-little-gain>.

Zhong, Jiarui, and Jiansuo Pei. 2023. "Carbon Border Adjustment Mechanism: A Systematic Literature Review of the Latest Developments." *Climate Policy* 24 (2): 228–242. <https://doi.org/10.1080/14693062.2023.2190074>.

United Nations Framework Convention on Climate Change, United Nations, 1992 <https://unfccc.int/resource/docs/convkp/conveng.pdf>

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