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European Green Deal

CBAM: Country and sector impacts start to emerge

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Climate Change - Europe

- The CBAM transition reporting period has started with purchases of CBAM certificates phased in from 2026
- CBAM is incentivising EU trade partners to strengthen their climate policies with future WTO challenges possible
- We look at the evidence and believe regions and sectors will be impacted differently – with China less so than India

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Reporting has started: The EU Carbon Border Adjustment Mechanism (CBAM) regulation requires EU importers of CBAM goods (including iron & steel, aluminium, cement, fertiliser, electricity and hydrogen) to record and report embedded emissions of their imports quarterly from 1 October 2023.

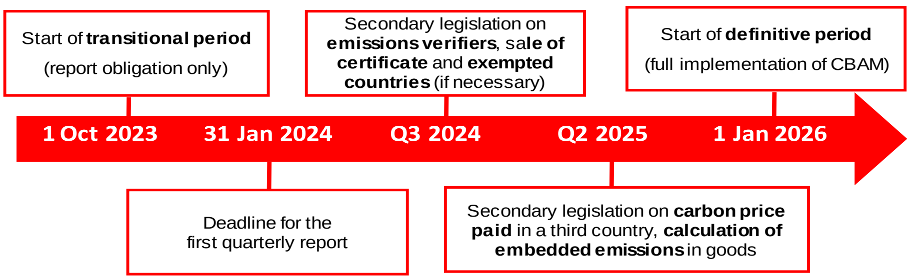
Latest developments: In our previous CBAM report, we conclude that the material issue for CBAM covered sectors in the EU is the loss of free emissions allowances (*CBAM: A clear signal to decarbonise. The rest is noise*,19 January 2023). In this report, we focus on recent developments, including further CBAM legislation and provide an EU cement sector update. We also explore CBAM's impacts on third countries.

Still more work to do prior to 2026: During the transitional period, the EU will develop rules for calculating embedded emissions in CBAM goods, rules for calculating the carbon price paid in a third country, decide on the inclusion of indirect embedded emissions for certain products, and examine CBAM impacts on trade flows. We believe this secondary legislation will be critical for determining WTO compatibility.

Which countries will be affected the most? Developing countries, in general, are more exposed to the CBAM, in particular Zimbabwe, Ukraine, Georgia and India. India is likely to be more affected than China. In our view, CBAM impacts on China are unlikely to be material – exports to the EU of CBAM covered goods are only a small proportion of China's total exports of these goods.

Incentivising action: Some EU trading partners, including India and Brazil, have already revised, or indicate an intention to strengthen, their climate policies, a move designed to mitigate potential CBAM impacts.

Chart 1. Timeline for the EU Carbon Border Adjustment Mechanism



Source: HSBC based on European Commission

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CBAM in a nutshell – a quick recap

On 16 May 2023, the EU's Carbon Border Adjustment Mechanism (CBAM) Regulation officially entered into force. The CBAM ensures certain goods (including iron & steel, cement, aluminium, fertilisers, electricity and hydrogen) imported into the EU will have to face the same equivalent carbon price as those produced in the EU.

Transitional period (1 October 2023 and 31 December 2025)
From 1 October 2023, CBAM goods importers will be required to report quarterly on (1) the quantity of goods covered by the CBAM, (2) embedded emissions of their goods (direct and indirect emissions), and (3) the carbon price due for the embedded emissions in the imported goods. During the transitional period, the importers do not have to pay for and surrender any CBAM certificate for the embedded emissions of their goods. Nevertheless, the European Commission has set out penalties for breaching reporting rules.

The European Commission adopted *rules for the CBAM's transitional period* on 17 August 2023, which set out reporting obligations of importers and penalties for breaches, administration regarding CBAM reporting, and the CBAM Transitional Registry. Importers will be charged between EUR10 and EUR50 per tonne of unreported emissions if they fail to submit their quarterly CBAM report. Higher penalties will be applied "when more than two incomplete or incorrect reports…have been submitted in a row or the duration of the failure to report exceeds 6 months."[1]

However, there are many important decisions still pending, including whether to include the embedded *indirect* emissions of iron & steel, cement and hydrogen in CBAM, and also rules on calculating the deduction of a carbon price already paid abroad (Chart 2).[2]

During the transitional period, the Commission will also review CBAM sector coverage (potential candidates for inclusion include oil refining, all metals, pulp paper, glass ceramics, acid organic chemicals, aviation, maritime, and lime) and examine impacts on downstream products, trade flows and least developed countries.

Chart 2. Implementing acts to be adopted during transitional period

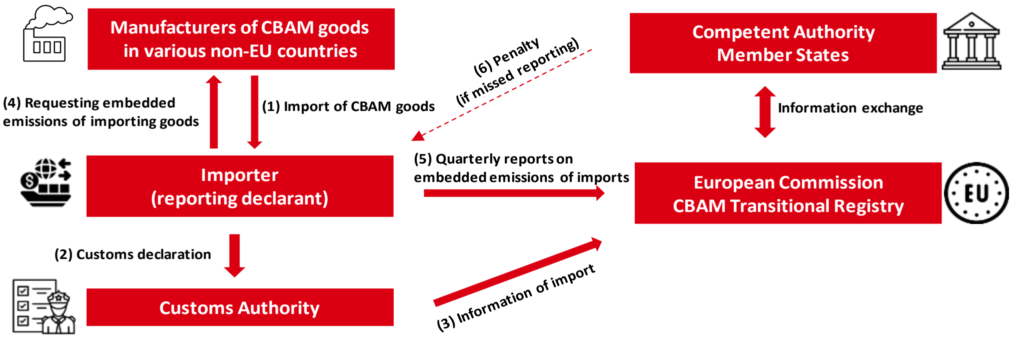
Timeline	Article	Item
Q3 2023	35	Reporting obligations and infrastructure
Q3 2024	5,17	Authorisation of CBAM declarants
	14	CBAM registry
	18	Accreditation of verifiers
	20	Selling and repurchasing certificate
Q2 2025	2	Continental shell
	6	CBAM declaration
	7	Calculation of embedded emissions
	8	Verification
	9	Carbon price paid in a third country
	21	Price of CBAM certificates
	25	Information for customs
	31	Free allocation
	Annex IV	Indirect emissions

Source: *European Commission*

1 Official Journal of the European Union (2023). Commission Implementing Regulation (EU) 2023/1773 of 17 August 2023 laying down the rules for the application of Regulation (EU) 2023/956 of the European Parliament and of the Council as regards reporting obligations for the purposes of the carbon border adjustment mechanism during the transitional period.

2 European Commission, Questions and Answers: Carbon Border Adjustment Mechanism (CBAM)

Chart 3. Overview of the reporting responsibilities in the transitional period



Source: HSBC based on European Commission's documents

Chart 4. Summary of the CBAM transitional period

Duration	1 October 2023 to 31 December 2025
Reporting of indirect emissions	Required for all CBAM goods
Frequency of reporting	Quarterly
Verification of reported data	Not required
Surrender of CBAM certificates	Not required
Flexibility regarding monitoring, reporting and verification (MRV) rules	The use of non-EU MRV rules are allowed for CBAM goods producers until the end of 2024. Importers may use estimation until 31 July 2024
Penalties	Between EUR10-50 per tonne of unreported emissions

Source: European Commission

Free allocation phase-out period (1 January 2026 – 31 December 2033)

From 2026, the importers shall surrender CBAM certificates that corresponds to the declared emissions. As revised in the final text of the CBAM legislation, if they fail to surrender sufficient certificates, importers will face penalties of EUR100 per each missing certificate. In tandem with the full implementation of the mechanism, free emissions allowances allocated to CBAM-covered sectors will be phased out from 2026. In our *last report on CBAM*, we estimated that CBAM sectors are set to lose cEUR20bn emissions subsidy per year when free allocation is completely phased out in 2034. Iron & steel and cement would account for the majority of the subsidy loss – more than EUR17bn. While these sectors will be exposed to an additional incentive to switch to new and cleaner technologies, some companies are placed better than others, e.g. Holcim and CRH. We update this analysis below.

Chart 5: Overview of CBAM coverage

Issue	**CBAM goods**					
	Cement	**Fertilisers**	**Iron/Steel**	**Aluminium**	**Hydrogen**	**Electricity**
Reporting metrics	(per) Tonne of good					(per) MWh
GHG covered	CO_2	CO_2 & N_2O(for some fertiliser goods)	CO_2	CO_2 & PFCs (for some aluminium goods)	CO_2	CO_2
Emissions coverage (transitional period)	Direct and indirect					Direct only
Emissions coverage (definitive period)	Direct and indirect		Direct only, subject to review			Direct only
Determination of direct embedded emissions	Based on actual emissions, unless they cannot be adequately determined					Based on default values, unless certain conditions are met
Determination of indirect embedded emissions	Based on default values, unless there is a direct technical connection or power purchased agreement					NA

Source: European Commission

Response from trading partners

Since our last report, various EU trading partners have enhanced their climate policies in response to the EU CBAM; various markets have indicated a plan, or an intention, to establish a carbon pricing mechanism (Chart 6). India, Indonesia, Taiwan, Türkiye, and Vietnam explicitly indicate that CBAM was a driver of these plans and intentions. Although not all of these policy developments are directly motivated by CBAM and many do not cover CBAM sectors, they serve as a foundation to expand carbon pricing in the future as CBAM is phased in from 2026 and possibly expanded to other goods and sectors in the future.

Chart 6. Highlights of responses from trading partners

Markets	Type of response	Details
Brazil	Carbon pricing mechanism	Brazil's government finalised a bill on creating a cap-and-trade carbon market and expects to send it to Congress in September 2023.
India	Carbon pricing mechanism	In March 2023, the Parliament of India passed the Energy Conservation (Amendment) Bill 2022, which includes the introduction of Carbon Credit Trading Scheme.
Indonesia	Carbon pricing mechanism	Indonesia plans to include industrial sector in its national emissions trading system by 2025.
Taiwan	Carbon pricing mechanism	In February 2023, an amendment of the climate bill in Taiwan entered into force. The bill includes the introduction of a carbon levy which has been delayed until 2025.
Türkiye	Carbon pricing mechanism	As stated in Türkiye's Medium Term Program (2024-2026), Türkiye plans to review its Climate Change Legislation and emissions trading system in the first quarter of 2024.
Vietnam	Carbon pricing mechanism	On 14 September 2023, the Department of Climate Change restated its plan to initiate a pilot emissions trading system (ETS) by no later than 2025 and launch an official ETS in 2028.
India	Ask for exemption	India has asked the EU to exempt micro, small and medium-sized enterprise (MSMEs) from its CBAM.
US	Ask for exemption	The US has asked the EU to exempt its steel and aluminium exports from the CBAM.
Korea	Ask for extension of grace period	Korea's industry ministry will ask the EU for temporary exception for its steel exports.
UK	CBAM	The UK government released a consultation on mitigation of carbon leakage, which includes the introduction of a UK CBAM.
Australia	CBAM	The Australian government announced its intention to introduce a CBAM. The review reporting will be finalised in the third quarter of 2024.

Source: WSJ, Economic Times, Asia Society Policy Institute, Bloomberg, Vietnam News, Korea Herald, Department for Energy Security and Net Zero of the UK, A speech from the Minister for Climate Change and Energy of Australia

G7 Climate Club. In December 2022, the G7 agreed to set up a Climate Club, aiming to gather nations with bold climate goals to speed up net zero transition by 2050 and reach the targets of the Paris Agreement.[3] The Club is expected to be fully launched at COP28 (30 November-12 December 2023). However, the EU hasn't granted any concession or exemption to the Club's members and there is no agreement on suspending the EU CBAM within the Climate Club.

WTO compatibility could be a deal-breaker for the EU CBAM. Despite the EU emphasis on CBAM compliance with WTO rules, a number of markets including mainland China and India have alleged the EU CBAM is protectionist.

The principle of the WTO trade rule is non-discrimination – treating every trading partner virtually equally when trading directly competitive or substitutable products (as known as "like products"). The major concern of EU trading partners is that CBAM could treat countries differently based on their products' carbon content. Developing countries could be placed in a disadvantaged position since they have don't have capacity to implement carbon pricing and have less resources to decarbonise, potentially resulting in an unfair trading system.

As indicated by the WTO, adjustment of the effective carbon prices paid in a third country will be key to the determination of discriminatory treatment.[4] The European Commission will develop secondary legislation before the end of the transitional period that will set out the rules and process for deducting the carbon price paid in a third country on the embedded emissions for

3 G7, Terms of reference for the Climate Club, 12 December 2022

4 WTO, DDG Paugam: WTO rules no barrier to ambitious environmental policies, 16 September 2021

the production of the CBAM goods. This legislation is crucial as it will provide clarity around the prospects for a successful WTO challenge.

CBAM vulnerability

In our previous note, we highlighted that CBAM impacts on EU trading partners should be concentrated in small number of countries, including the UK. We think the recent weakening of UK net zero policy will add additional CBAM costs on the UK as the carbon price differential has significantly widened. The price of emissions in the UK-ETS has fallen to cGBP33/tCO_2 (half the spot price of the European Emissions Allowance) in September 2023. This implies UK CBAM covered exports to the EU will pay a higher tariff on their emissions and increase revenue to the EU.

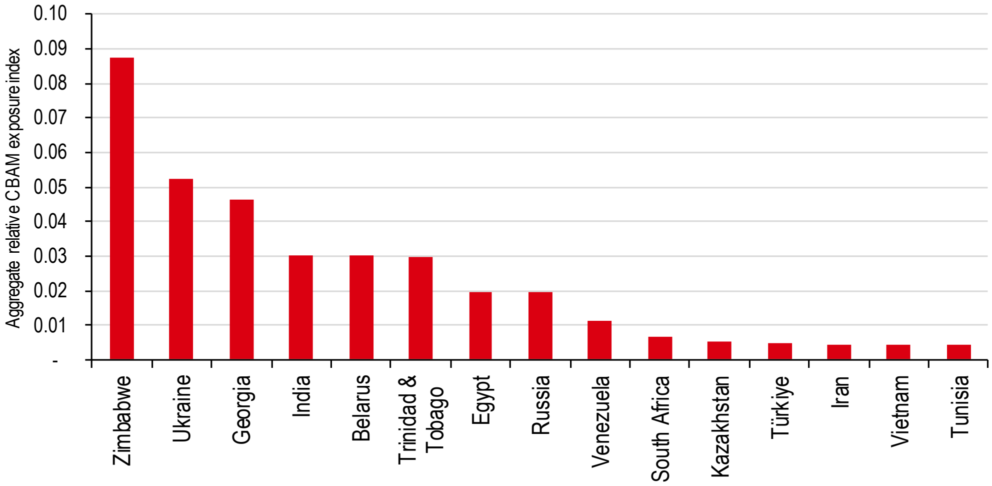
Beyond the UK, when we examine the World Bank's Relative CBAM Exposure Index…

…we find that developing countries are the most vulnerable.

The World Bank's Relative CBAM Exposure Index estimates countries' exposure to the CBAM based on (1) carbon emissions intensity, (2) exports of to the EU, and (3) domestic carbon price. 29 out of 30 trading partners with the highest Aggregate Relative CBAM Exposure Index (the Index) are developing economies (Chart 7).

When the proposal for CBAM was first released in July 2021, the European Commission *stated* that "the Union will also support less developed countries with the necessary technical assistance". However, despite the potential for the CBAM to raise revenues of around EUR8-9bn, concrete commitments on exemption or financial assistance to developing countries still haven't been seen.

Chart 7. Top 15 countries with the highest Aggregate Relative CBAM Exposure Index



Source: HSBC based on World Bank's Relative CBAM Exposure Index

Among the two of the world's largest countries impacted by the EU CBAM, China and India, **we think India will be more affected in terms of cost and trade impacts**. Nearly 20% of India's total CBAM products are exported to the EU. With high carbon intensity and share of export of CBAM products to the EU, India ranks the fourth in the World Bank Aggregate Relative CBAM Exposure Index (Chart 7). In addition, iron and steel in India are the most exposed CBAM goods. Wood Mackenzie estimates the costs of Indian steel delivered to the EU could increase by 56% 2026-2034 due to EU CBAM, higher than China at a 49% increase 2026-2034.[5]

5 Wood Mackenzie, Playing by new rules: how the CBAM will change the world, 21 September 2023

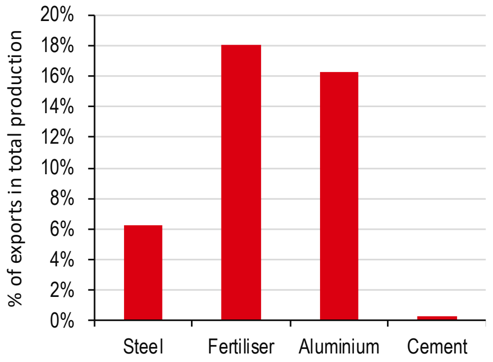
India is thus considering to impose a carbon export tax on goods to the EU in order to keep the companies' emissions revenue in the country, according to *The Hindu Businessline.*[6] The implementation details are not officially revealed but we think compliance against the WTO rules would be a concern since this would be a unilateral tax levied against the EU.

CBAM impacts on China will be modest, in our view. Only a small proportion of China's total production of CBAM goods (iron & steel, aluminium, cement, fertiliser, electricity and hydrogen) is exported (Chart 8). The majority of CBAM covered products, particularly iron & steel, cement and aluminium, are consumed domestically in infrastructure, property development and industrial manufacturing. Moreover, of all the CBAM goods that are exported from China, less than 9% of these are exported to the EU, with aluminium the highest at 13% (Chart 9).

In light of this, we estimate that exports to the EU are less than 0.5% of China's **total** fertiliser, cement and iron & steel production, and merely 2% of China's **total** aluminium production. Therefore, the CBAM is unlikely to have material impact on China's trade or economy.

Despite the insignificant economic impacts, the CBAM would still inevitably increase the cost of goods delivered to the EU. Estimates suggest that the cost of steel delivered to the EU could increase by nearly 50% over the period 2026-2034.[7]

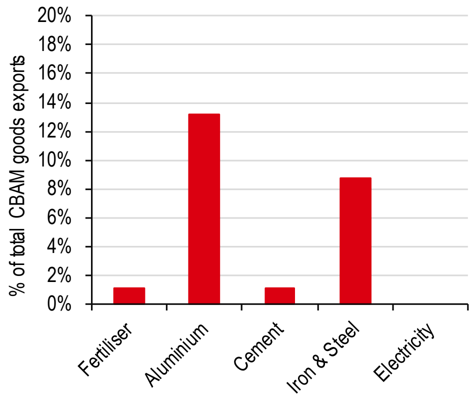
Chart 8. Share of exports in China's total production of CBAM goods (2019)



Note 1: Exports of electricity and hydrogen from China are insignificant
Note 2: Aluminium production derived from output of electrolyzed aluminium. Fertilizer production refers to sum of outputs of synthetic ammonia, chemical fertilisers, nitrogen fertilisers, and phosphate fertilisers
Note 3: Aluminium exports include unwrought aluminium and aluminium products. Cement exports include cement and cement clinkers

Source: National Bureau of Statistics of China, China Customs, Department of Commerce of US, HSBC

Chart 9. Share of China's total exports of CBAM goods going to the EU (2019)



Source: World Bank, HSBC

The full report includes a section on the impact of CBAM on various impacts on EU sectors and the preparedness of EU companies to comply with the new regulations. Please contact your HSBC representative or email us at *AskResearch@hsbc.com* for more information.

6 The Hindu Businessline, India wants to charges its own carbon tax on the lines of CBAM from exporters, 24 September 2023
7 Wood Mackenzie, Playing by new rules: how the CBAM will change the world, 21 September 2023

Disclosure appendix

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