



POLICY BRIEF

N°. 124
5 February 2024

How the EU's Carbon Border Adjustment Mechanism discriminates against foreign producers

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ABSTRACT

In April 2023, the European Parliament adopted the final text of the Carbon Border Adjustment Mechanism (CBAM) and revisions to the European Union (EU) Emissions Trading System (ETS). One of the stated objectives of CBAM is to create a level playing field for selected sectors in the EU market and to protect against the risk of 'carbon leakage'. Based on an analysis and comparison between the legal texts of CBAM and ETS, this paper finds that CBAM discriminates against foreign producers in favour of EU domestic producers in many areas including with regard to the scope and type of emissions covered, free allocation of allowances, exemptions under EU ETS not mirrored in CBAM, buying and selling of ETS allowances in comparison with CBAM certificates, verification, penalties, authorization, use of credits from the Clean Development Mechanism (CDM) and guarantees.

The paper also provides a brief overview of how the CBAM and ETS align with WTO rules, highlighting the potential discrepancies in the implementation as they apply to foreign and EU producers respectively. The paper provides several suggestions on how to make EU's CBAM more WTO-compatible and a recommendation for further legal research.

KEYWORDS: Carbon Border Adjustment Mechanism (CBAM), European Union (EU) Emissions Trading System (ETS), Clean Development Mechanism (CDM), WTO compatibility

En avril 2023, le Parlement européen a adopté le texte final du mécanisme d'ajustement carbone aux frontières (MACF) et la proposition de révision au système d'échange de quotas d'émission de gaz à effet de serre (SEQUE-UE). L'un des objectifs déclarés du MACF est de créer des conditions de concurrence équitables pour certains secteurs sur le marché de l'Union européenne et de se protéger contre le risque de « fuite de carbone ». Après une analyse et d'une comparaison des textes relatifs au MACF et au SEQUE-UE, le présent document parvient à la conclusion que le MACF discrimine les producteurs étrangers en faveur des producteurs nationaux de l'UE dans de nombreux domaines, notamment en ce qui concerne l'étendue et le type d'émissions couvertes, l'allocation gratuite de quotas, la non prise en compte dans le MACF des dérogations prévues dans le cadre du SEQUE-UE, l'achat et la vente de quotas d'émission à la suite des modifications introduites par la mise en place des certificats MACF, les vérifications, les pénalités, les autorisations, l'utilisation des crédits carbone du mécanisme de développement propre et les garanties.

KEY MESSAGES

- CBAM is discriminatory in specified sectors across a number of areas. Under CBAM, importers face more costs for embedded carbon emissions compared to EU domestic producers.
- Areas of discriminatory treatment include the scope and type of emissions covered, free allocation of allowances, exemptions under EU ETS not mirrored in CBAM, buying and selling of ETS allowances in comparison with CBAM certificates, verification, penalties, authorization, use of credits from the Clean Development Mechanism (CDM) and guarantees.
- WTO compatibility is not limited to the WTO's non-discrimination provisions and Article XX GATT (General Exceptions clause). There are other relevant WTO rules where WTO-compatibility is pertinent including those on import licensing, trade facilitation, and subsidies, amongst others. This paper provides suggestions on improving CBAM's WTO compatibility.

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Le document donne également un bref aperçu de la manière dont le MACF et le SEQE-UE s'alignent sur les règles de l'OMC, en soulignant les divergences potentielles dans leur mise en œuvre selon qu'ils s'appliquent aux producteurs étrangers ou à ceux de l'UE. Il suggère différentes pistes sur la manière de rendre le MACF et le SEQE-UE plus compatibles avec les règles de l'OMC, et recommande de poursuivre les recherches liées aux aspects juridiques.

MOTS-CLÉS: mécanisme d'ajustement carbone aux frontières (MACF), système d'échange de quotas d'émission de gaz à effet de serre (SEQE-UE), mécanisme de développement propre, la compatibilité avec les règles de l'OMC

En abril de 2023, el Parlamento Europeo aprobó el texto definitivo del Mecanismo de Ajuste en Frontera por Carbono (CBAM, por sus siglas en inglés) y las revisiones del Régimen de Comercio de Derechos de Emisión de la Unión Europea (RCDE UE). Uno de los objetivos declarados del CBAM es crear igualdad de condiciones para determinados sectores en el mercado de la UE y proteger contra el riesgo de "fuga de carbono". Basándose en el análisis y la comparación de los textos jurídicos del CBAM y del RCDE, este documento concluye que el CBAM discrimina a los productores extranjeros en favor de los nacionales de la UE en muchas áreas, incluso en lo que respecta al alcance y el tipo de emisiones cubiertas, la asignación gratuita de derechos de emisión, las exenciones del RCDE que no se reflejan en el CBAM, la compra-venta de derechos de emisión del RCDE en comparación con los certificados CBAM, la verificación, las sanciones, la autorización, el uso de créditos del Mecanismo de Desarrollo Limpio (MDL) y las garantías.

El documento también proporciona una breve visión general de cómo el CBAM y el RCDE se alinean con las normas de la OMC, destacando las posibles discrepancias en la implementación según se aplican a los productores extranjeros y de la UE, respectivamente. Además, el documento ofrece varias sugerencias sobre cómo hacer que el CBAM de la UE sea más compatible con la OMC y una recomendación para futuras investigaciones jurídicas.

PALABRAS CLAVES: Mecanismo de Ajuste en Frontera por Carbono, Régimen de Comercio de Derechos de Emisión de la Unión Europea (RCDE UE), Mecanismo de Desarrollo Limpio (MDL), compatibilidad con la OMC

Introduction

The European Union (EU) started to implement the transitional phase of its Carbon Border Adjustment Mechanism (CBAM) in October 2023. One of the stated grounds for the CBAM is to create a level playing field for the relevant sectors in the EU market, to protect against the risk of 'carbon leakage'.¹ According to the European Commission (EC), carbon leakage refers to 'the situation that may occur if, for reasons of costs related to climate policies, businesses were to transfer production to other countries with laxer emission constraints. This could lead to an increase in their total emissions. The risk of carbon leakage may be higher in certain energy-intensive industries.' The CBAM requires importers (and by extension foreign producers) to pay for the CO₂ (equivalent) emissions embedded in certain products, just as EU domestic producers are paying

for CO₂ emissions by having to buy EU Emissions Trading System (EU ETS) allowances.

The CBAM is a new EU Regulation. It will be directly applicable to EU Member States and comes into force and is legally binding without any action on the part of Member States in accordance with Article 288 of the Treaty on the Functioning of the European Union. The EU's ETS however, is a Directive which needs additional domestic legislation for each Member State. Invariably, a Directive is likely to lead to more variances in implementation across EU Member States.² For instance, in practice, monitoring, reporting and verification (MRV) obligations under ETS have been applied unevenly by EU Member States, meaning that several high(er)-emitting installations were subject to more lenient MRV obligations than prescribed under the ETS Directive.³

Article 1 of the CBAM Regulation states that it complements the EU ETS 'by applying an equivalent set of rules to imports' of certain goods. The EU has gone on record stating that, 'The CBAM is designed in a way to be WTO [World Trade Organization] compatible (there is no discrimination; no unnecessary restrictions)'. This brief explores whether and in what ways CBAM discriminates against foreign producers in favour of EU domestic producers. To provide insights into this question, relevant provisions of the CBAM Regulation are compared with the EU ETS contained in Directive 2003/87/EC (as amended) and/or their implementing regulations.

Snapshot of CBAM's evolution

The European Commission submitted proposals for the revision of the EU ETS⁴ and the CBAM⁵ in July 2021. On 22 June 2022, the European Parliament adopted the revised proposals, making various modifications to these proposals. On 13 December 2022, the European Council and the European Parliament reached provisional agreement on the CBAM which could be formally adopted only once the elements relevant for CBAM are resolved in other related dossiers, including the allocation of free allowances for CBAM sectors in the context of the then ongoing EU ETS negotiations (later referred to as 'draft CBAM Regulation').⁶ On 18 April 2023, the European Parliament adopted the final text of the CBAM⁷ and the revised text of the EU ETS⁸. On 17 August 2023, the European Commission adopted a CBAM Implementing Regulation on transitional reporting obligations.⁹

² Directives are not directly applicable due to the fact that they have to be transposed into national legislation. Each individual Member State chooses the 'form and method' to achieve the objectives set out in a directive. See EU Monitor, "Directive". Available from <https://www.eumonitor.eu/9353000/1/jyvvik7m1c3gyxp/vh7bhovvynh7>.

³ European Commission, Application of the European Union Emissions Trading Directive: Analysis of national responses under Article 21 of the EU ETS Directive in 2021 (2022), Section 'The quality of MRV has improved', page 11. Available from <https://op.europa.eu/en/publication-detail/-/publication/c295a008-e79d-11ec-a534-01aa75ed71a1/language-en>.

⁴ COM(2021) 551 final. Available from <https://eur-lex.europa.eu/legal-content/EN/TX/?uri=CELEX%3A52021PC0551>.

⁵ COM(2021) 564 final. Available from <https://eur-lex.europa.eu/legal-content/EN/TX/?uri=celex:52021PC0564>.

⁶ "EU climate action: provisional agreement reached on Carbon Border Adjustment Mechanism (CBAM)", Council of the EU Press release, 13 December 2022. Available from <https://www.consilium.europa.eu/en/press/press-releases/2022/12/13/eu-climate-action-provisional-agreement-reached-on-carbon-border-adjustment-mechanism-cbam/>.

⁷ European Parliament legislative resolution of 18 April 2023 on the proposal for a regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism. Available from https://www.europarl.europa.eu/doceo/document/TA-9-2023-0100_EN.html.

⁸ European Parliament legislative resolution of 18 April 2023 on the proposal for a directive of the European Parliament and of the Council amending Directive 2003/87/EC. Available from https://www.europarl.europa.eu/doceo/document/TA-9-2023-0098_EN.html.

⁹ Commission Implementing Regulation (EU) 2023/1773 of 17 August 2023 laying down the

¹ COM(2021) 564 final, page 48. Available from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52021PC0564>.

The CBAM applies to various product groups including cement, iron and steel, aluminium, organic basic chemicals, fertilizers and electricity. Polymers, organic chemicals, hydrogen and ammonia, added at a later stage, are also covered by CBAM. Indirect emissions i.e., emissions from combustion processes used to generate electricity, heat, and steam fall within scope of CBAM.

CBAM will be implemented in two main phases, with the first phase starting from 1 October 2023 and the second phase from 1 January 2026. In the first phase, the CBAM mechanism shall mainly apply as a quarterly reporting obligation for authorized declarants on direct and indirect emissions associated with the production of imported goods in the specified product groups. This reporting needs to be done at the latest one month after the end of each quarter; the first reporting period for importers ending 31 January 2024. The CBAM Implementation Regulation on transitional reporting obligations further specifies reporting obligations during CBAM's first phase.

In the second phase, the CBAM will be fully applied. Then, only authorized declarants can bring in CBAM covered goods into the EU and would need to hold and surrender CBAM certificates (representing CO₂ emissions embedded in these imported goods) to the EU's CBAM authority and comply with all the provisions of the CBAM regulation.

In the following sections, the following key design features of the CBAM Regulation are compared with mirroring provisions of the EU ETS Directive and its implementing regulations:

- Scope
- Free allocation of allowances
- Exemptions under EU ETS not mirrored in CBAM
- Buying and selling of ETS allowances vs CBAM certificates
- Verification
- Penalties
- Authorization
- Use of carbon credits from Clean Development Mechanism (CDM)
- Guarantees
- Public register

For the purposes of this paper, the comparison is limited to the CBAM Regulation and does not extend to its Implementing Regulations. For instance, reporting requirements and emission calculation methodologies that have been specified in the Commission Implementing Regulation on transitional reporting obligations might differ in important ways from ETS.

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. Available from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1773&qid=1695031320118>.

Comparison of CBAM's key design elements with ETS

I. Scope

a) Product scope

The EU ETS covers the production of various chemicals including bulk organic chemicals, nitric acid, ammonia, glyoxal and glyoxylic acid, soda ash (Na₂CO₃) and sodium bicarbonate (NaHCO₃). Ammonia and nitric acid are both intermediate products to produce nitrogen fertilizer.¹⁰

The production of fertilizer, while contributing to emissions through various processes such as energy consumption and the release of nitrous oxide, is not covered by EU ETS, whereas CBAM extends to nitrogen fertilizer (HS Code 3102) and compound fertilizers containing two or three of the elements: nitrogen, phosphorus and potassium (HS Code 3105).

With respect to aluminium, iron and steel, many final products are covered by CBAM but not by ETS. The EU ETS covers "processing of non-ferrous metals, including production of alloys, refining, foundry casting" and the "production or processing of ferrous metals". However, it does not directly cover the production of the final products made from processed metals.

In 2022, world exports of processed aluminium, iron and steel covered by CBAM accounted for around USD 458 billion in world exports, USD 300 billion for iron and steel and USD 158 billion for aluminium.

Developing countries with sizeable exports of processed iron and steel products include India (USD 7.3 billion), Thailand (USD 3.9 billion), Viet Nam (USD 3.5 billion), Malaysia (USD 2 billion), Indonesia (USD 1.4 billion), Brazil (USD 1.4 billion) and South Africa (USD 1 billion).

Developing countries with sizeable exports of processed aluminium products include China (USD 37.3 billion), Thailand (USD 2.5 billion), India (USD 2.4 billion), Malaysia (USD 2 billion), Viet Nam (USD 1.5 billion), Oman (USD 794 million), Brazil (USD 793 million), South Africa (USD 730 million) and Colombia (USD 613 million).

Coverage of processed products under CBAM incentivizes production of final products using metals (aluminium, iron, steel) as well as mineral fertilizer in the EU. In effect, the cost of compliance for foreign producers of processed products will be much higher when compared to EU producers of these same products. This puts foreign producers exporting to the EU at risk and could trigger the relocation of industries towards the EU.

b) Type of emissions covered – the case of aluminium

The ETS covers the release of greenhouse gases into the atmosphere from sources in an installation¹¹. CBAM covers emissions

¹⁰ Fertilizers Europe, "How fertilizers are made". Available from <https://www.fertilizers-europe.com/fertilizers-in-europe/how-fertilizers-are-made/>.

¹¹ Article 3(e) of the ETS Directive defines 'installation' as 'a stationary technical unit where one

embedded in imported goods. Annex I of the CBAM specifies the concerned greenhouse gas(es) by product, for instance carbon dioxide for cement clinkers, carbon dioxide and nitrous oxide (N₂O) for fertilizers and carbon dioxide (CO₂) and perfluorocarbons (PFCs) for aluminium products. Annex I of the EU ETS similarly specifies the concerned greenhouse gas(es) by activity.

CBAM requires importers to pay for CO₂ and PFC emissions for aluminium and aluminium products. PFCs are an important contributor to CO₂ equivalent emissions in aluminium production. The European Aluminium Association reports that two PFCs (perfluorocarbon compounds – CF₄ and C₂F₆) contribute about 48 per cent of primary aluminium greenhouse gas emissions.¹²

With respect to the production of primary aluminium¹³, the EU ETS covers CO₂ and PFCs as well. Based on available information, as of 2019, all EU Member States with aluminium smelters appear to require allowances for PFCs.¹⁴ In other words, with respect to primary aluminium, CBAM and ETS require importers and domestic producers to pay for embedded PFC emissions.

For the production of secondary aluminium and non-ferrous metals, EU ETS only covers CO₂ emissions.¹⁵ This would put foreign producers of processed aluminium products at a disadvantage.

The discriminatory treatment of secondary aluminium in CBAM vis-à-vis ETS seems also at odds considering the increasing attention at building a circular economy. Generally, secondary aluminium production is an environmentally and economically beneficial process i.e., energy consumption is significantly lower than primary production, the use of scrap aluminium reduces the industry's reliance on virgin materials, and it is lightweight, durable, and infinitely recyclable when compared to steel or plastic, thus playing an important role in sustainable resource management and global efforts to reduce carbon emissions. It would seem more logical for producers to be incentivized for using recycled aluminium which aids in waste management and promoting a circular economy rather than applying punitive measures to foreign producers.

c) Direct / indirect emissions

The Green House Gas (GHG) Protocol Corporate Standard (p. 33) divides a company's GHG emissions inventory into three categories when accounting and reporting on GHG emissions:¹⁶

or more activities listed in Annex I are carried out and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution'.

12 Eirek Nordheim, European Aluminium Association, "Greenhouse Gases Emissions from Aluminium Production – Industry Reduction Efforts and the Role of Voluntary Agreements in Emission Reductions", OECD Workshop, 2 December 2002. Available from <https://www.oecd.org/env/cc/2483490.pdf>.

13 The International Aluminium Institute defines primary aluminium as 'aluminium tapped from electrolytic cells or pots during the electrolytic reduction of metallurgical alumina (aluminium oxide)'. See <https://international-aluminium.org/statistics/primary-aluminium-production>.

14 'Regarding EU ETS activities additionally listed for non-CO₂ emissions, permits are reported as issued in 13 countries for primary aluminium and perfluorocarbons (PFCs) (DE, FR, EL, ES, IS, IT, NL, NO, RO, SE, SI, SK and UK)'. Report on the functioning of the European carbon market, COM(2020) 740 final, page 7. Available from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0740&from=EN>. A map with (primary) aluminium producers can be retrieved from European Aluminium, an industry association, at <https://european-aluminium.eu/about-aluminium/aluminium-industry/>.

15 ETS Directive, Annex I.

16 "CDP Technical Note: Accounting of Scope 2 emissions". Available from https://cdn.cdp.net/cdp-production/cms/guidance_docs/pdfs/000/000/415/original/CDP-Accounting-of-Scope-2-Emissions.pdf?1617880167.

- Scope 1 consist of direct emissions which are emissions from sources that are owned and controlled by the reporting company. It is important to clarify that Scope 1 emissions only account for emissions that occur within a company's operational boundaries.
- Indirect emissions are emissions that are a consequence of the activities of the reporting company, but occur at sources owned or controlled by another company. These indirect emissions fall under Scope 2 and Scope 3 emissions. Scope 2 includes emissions from energy purchased or acquired and consumed by the reporting company. Scope 3 emissions include upstream and downstream value chain emissions.

The ETS covers the release of greenhouse gases into the atmosphere from sources in an installation, i.e. direct emissions or Scope 1 emissions. Yet, EU producers generally also (indirectly) pay for Scope 2 emissions as a large part of the Scope 2 emissions of the European industry are the Scope 1 emissions of the electricity (including heat and steam) sector. The extent to which they are paying for Scope 2 emissions depends on the costs of ETS for the electricity sector (which is *inter alia* determined by free allocation of allowances to electricity generators under EU ETS, to be phased out by the end of 2024) and the extent to which such costs are transmitted to users (e.g. the existence of other subsidies). The EU Modernization Fund provides substantial support to electricity generation and may have a total budget of EUR 48 billion from 2021 to 2030 (at EUR 75 / tCO₂), depending on the carbon price.¹⁷ In practical terms, this means that by the end of 2024, EU producers would be effectively paying for Scope 2 emissions but the price of electricity might be lower due to subsidies under the EU Modernization Fund. Furthermore, the purchasing and surrendering of the allowances for Scope 2 emissions incentivize EU producers to consider the emissions intensity of the electricity they consume and promote the use of low-carbon or renewable energy sources.

CBAM covers the embedded emissions which are direct and indirect emissions released during the production of goods and the electricity consumed during the production processes of goods. For some CBAM covered products, only direct emissions are to be taken into account. A method to calculate embedded indirect emissions has been established and would be worked out in more detail by 2025.¹⁸ The anticipated scenario is that the default values for indirect emissions might be set very high and a country exporting to the EU would need to demonstrate 'on the basis of reliable data' that the average CO₂ emissions of the electricity sector is lower than the default value.. It is observed that the application of this methodology might result in discriminatory treatment under the CBAM.

The EU is likely to claim that the ETS covers other sectors or will cover Scope 3 emissions which are paid for by EU producers but not by foreign producers, emitted by sectors which may be important inputs to the production of CBAM covered goods. Road transport for instance will be within the scope of ETS II from 2027.

17 European Commission, "Modernisation Fund". Available from https://climate.ec.europa.eu/eu-action/funding-climate-action/modernisation-fund_en#size-of-the-modernisation-fund.

18 See Annex IV of the CBAM Regulation ('Methods for calculating embedded emissions for the purpose of Article 7'), Para. 4.3 on 'Default values for embedded indirect emissions'.

This means that EU producers could have to face higher production costs compared to foreign producers without carbon pricing or an equivalent measure for the transport sector.

II. Free allocation of allowances

The free allocation of allowances under the CBAM refers to the distribution of emission allowances to eligible industries to help mitigate the potential impact of carbon pricing on their competitiveness. The free allocation is intended to compensate these industries for the costs associated with carbon pricing, which may increase their production costs compared to competitors in countries with weaker climate policies. The free allocation for the production of CBAM covered products is based on the share of the demand for free allocation for the production of CBAM covered products compared to the calculated total free allocation demand for all installations, multiplied by a 'CBAM factor'. The 'CBAM factor' is the factor (carbon intensity benchmark used to calculate the carbon costs for imported goods under the CBAM) reducing the free allocation of allowances for the installations producing the goods covered in Annex I. It will be 100% until 31 December 2025 and will go down starting 1 January 2026 to 0% by 31 December 2034.

Prima facie, this proportionate approach to the 'CBAM factor' seems to equalize treatment between EU producers and imports. Yet, some observations can be made. Since free allowances are provided on a product group basis, it is not entirely clear how the allocation of allowances to installations corresponds with allowances to specific products. This is one of the main differences between the scope and coverage of the ETS and CBAM on producers. Using data for a product group could also imply that for a particular CBAM covered product, the free allocation of allowances under ETS might either be less or exceed that under the CBAM. In cases where the free allocation of allowances would be comparatively more under ETS, the CBAM would comparatively be more costly for a foreign producer. This concern is to be addressed through implementing regulations to be adopted by the European Commission (Article 31.2 of the CBAM regulation).

The final CBAM regulation does not specify how the EU intends to address 'carbon leakage risk' for goods subject to CBAM and produced in the Union for export to third countries which do not apply the EU ETS or a similar carbon pricing mechanism. This unresolved issue has been kicked down the road. By 31 December 2024, the European Commission will submit a legislative proposal where such risk(s) exist(s) 'in a manner that is compliant with the rules of the World Trade Organization, including Article XX of the General Agreement on Tariffs and Trade 1994...'

In the draft CBAM regulation it was proposed that, 'In order to ensure a level playing field, by way of derogation from paragraph 1(a), first and second subparagraphs, the production in the Union of products listed in Annex I to this Regulation shall continue to receive free allocation, provided such products are produced for export to third countries without carbon pricing mechanisms similar to the EU ETS' (Article 31, paragraph 1(b)). The second subparagraph of paragraph 1(a) refers to the 'CBAM factor'.

This draft clause raises various questions with respect to whether this may be challenged as a prohibited export subsidy on the basis that it confers a benefit. If a similar solution is proposed in future (by December 2024), it may be inconsistent with WTO rules, namely Article 3.1(a) of the WTO's Agreement on Subsidies and Countervailing Measures, which prohibits 'subsidies contingent, in law or in fact, whether solely or as one of several other conditions, upon export performance...'

III. Exemptions under EU ETS not mirrored in CBAM

EU ETS contains several exemptions which are not mirrored in CBAM. These include exemptions of small-scale installations, research exemptions and exclusion of low-emitting installations.

a) Exemptions of small-scale installations under EU ETS

The EU ETS does not cover the production of secondary aluminium or the production or processing of non-ferrous metals with combustion units with a total rated thermal input of 20 MW or less.

Furthermore, scale iron and cement factories with a capacity of up to 2.5 tonnes of pig iron per hour or 500 tonnes of cement clinkers per day are not covered by EU ETS. The applicable annual threshold values would be 21,900 tonnes of pig iron or 182,500 tonnes of cement clinkers. Small hydrogen factories with a production capacity of 5 tonnes per day or less are also excluded from EU ETS.

In the revised ETS, by 31 July 2026, the European Commission shall look at the feasibility of lowering the 20 MW total rated thermal input thresholds for the activities in Annex I from 2031. No revision is contemplated with respect to the exemption for small scale iron, cement or hydrogen factories.

These 'small scale' exemptions may be most relevant for the production of more specialized and high value items, as these goods are likely to be produced in relatively smaller factories compared to bulk products. At any rate, these exemptions may put smaller scale producers in developing countries at a disadvantage in the EU market vis-à-vis their EU counterparts.

b) Research exemption

Installations or parts of installations used for research, development and testing of new products and processes are not covered by the EU ETS. This exemption could be quite extensive. It would *inter alia* provide a competitive advantage for EU producers of new technologies, products or products made with 'new' processes ('new' presumably for the producer). A foreign producer, however, would have to surrender CBAM certificates for products made in 'new' processes which will evidently result in differential treatment.

c) Exclusion of low-emitting installations

EU Member States may exclude from the EU ETS installations that have reported to the competent authority of the Member State concerned emissions of less than 2,500 tonnes of carbon dioxide equivalent, disregarding emissions from biomass (Article 27a of EU

ETS Directive).

Furthermore, EU Member States may also exclude from the EU ETS installations which have reported to the competent authority emissions less than 25 000 tonnes of carbon dioxide equivalent and, where they carry out combustion activities, have a rated thermal input below 35 MW. Such installations would need to undertake equivalent measures (Article 27).

According to the European Commission, in 2019, seven countries (ES, FR, HR, IS, IT, SI and UK) have made use of the possibility to exclude small emitters from the EU ETS in line with Article 27 of the EU ETS Directive. Emissions excluded for 2019 amounted to 3.81 million tonnes CO₂ (some 0.25% of total stationary EU ETS emissions, compared to 0.17% the year before).¹⁹

IV. Buying and selling of ETS allowances vs CBAM certificates

Under EU ETS, buying and selling prices are determined by the auctioning system. EU ETS allowances can be transferred between persons within EU as well as between persons within the EU and persons in third countries where such allowances are recognized. Four months after the beginning of the first five-year period, any unused allowances which have not been sold are cancelled and replaced by new allowances valid for the next five-year period.

The ETS also provides safeguards in the form of a Market Stability Reserve which addresses excessive volatility in the price of ETS allowances through the release of additional allowances on the carbon market ('Measures in the event of an excessive price increase', Article 30h of EU ETS Directive).

The buying price of CBAM certificates is linked to the price of EU ETS allowances. It is a constructed price based on the average price of the closing prices of EU ETS allowances on the common auction platform for each calendar week. European Energy Exchange (EEX) has been awarded the role as the common auction platform to auction allowances.²⁰ Weekly auctions take place on Monday, Tuesday, and Thursday at 11 am CE(S)T. The European Commission shall publish the price on the first working day of the following calendar week (i.e., Monday) to be applied for a week, i.e., the price would apply from Tuesday to Monday. By Thursday the price which would apply from Tuesday the week after will be known (assuming the current practice continues).²¹

In the case of EU ETS, a secondary emissions market exists, providing for spot and derivatives trading of EU ETS allowances and related financial products. This secondary market allows EU companies to reduce their costs and shield against variability in prices.²² It remains to be seen whether a secondary market would develop

¹⁹ Report on the functioning of the European carbon market, COM(2020) 740 final. Available from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0740&from=EN>.

²⁰ EEX, "EU ETS Auctions". Available from <https://www.eex.com/en/markets/environmental-markets/eu-ets-auctions>.

²¹ This assumes that Thursday remains the last day in the week on which the EEX organizes EU ETS auctions.

²² See e.g. The Oxford Institute for Energy Studies, New Oxford Energy Forum – The Evolution of Carbon Markets and their Role in Climate Mitigation and Sustainable Development – Issue 132, June 2022. Available from <https://www.oxfordenergy.org/publications/new-oxford-energy-forum-the-evolution-of-carbon-markets-and-their-role-in-climate-mitigation-and-sustainable-development-issue-132/>.

for CBAM certificates. The absence of a well-developed secondary market for CBAM certificates could create unpredictability in the price which needs to be paid for CBAM certificates and hence unpredictability in trading. The rationale for WTO Members to fix their maximum import tariffs (bound tariffs) exactly serves this goal.

CBAM certificates cannot be transferred to other persons. CBAM certificates are valid until 30 June of the next year, a repurchase request to the European Commission need to be made before that date. Maximum one-third (1/3) of the amount purchased in the previous year can be sold. The selling (or repurchase) price is equal to the buying price. The maximum time between selling (repurchasing) CBAM certificates and receiving payment is not stipulated in the CBAM regulation. Any unused CBAM certificates are cancelled without any compensation and not replaced by new CBAM certificates for a new period.

Overall holders of CBAM certificates are exposed to more financial risk and are likely to face a higher financial burden compared with EU installations needing to surrender ETS allowances. The validity of CBAM certificates is much shorter than the validity of an EU ETS allowance; the market for CBAM certificates is not liquid; if the ETS price increases, holders of CBAM certificates do not benefit. The limit of 1/3 might lead to cancellation of unused CBAM certificates, and cancelled CBAM certificates are not exchanged for new CBAM certificates for the next year (as is the case for EU ETS).

One important observation is whether the money paid for CBAM certificates on account of imports could be characterized as 'a charge equivalent to an internal tax' in accordance with Article II.2(a) of the General Agreement on Tariffs and Trade (GATT). Paragraph 2 of Article III GATT on National Treatment states that imported goods 'shall not be subject, directly or indirectly, to internal taxes or other internal charges of any kind in excess of those applied, directly or indirectly, to like domestic products.' Furthermore, such taxes should not be applied to imported or domestic products so as to afford protection to domestic production.

V. Verification

Both EU ETS and CBAM require the verification of emissions reported to the authorities. Generally speaking, verification costs for imports could be relatively higher if the volume of imports is lower compared to the production volume of a single installation. A comparison on some key elements of the verification process, namely the general verification obligation, consequences of non-verification or untimely verification, accreditation of verifiers, the scope of work of accredited verifiers and some key verification principles (mandatory site visits and materiality levels) suggests that the verification under CBAM would be more costly and onerous than under ETS.

a) General verification obligation

Under the ETS, each operator of an installation must report the emissions from that installation during each calendar year after the end of that year and let them be verified by an accredited verifier. Under CBAM, the total embedded emissions declared in an annual

CBAM declaration, as well as the methodology and supporting data and documents, are verified by an accredited verifier.

In both cases, the frequency of verification is annually. In the draft CBAM text, the scope of the verification under CBAM appeared to be more comprehensive to also include “the methodology and supporting data and documents” (not in EU ETS). In the final CBAM text, this has been toned down. Yet, the European Commission remains empowered to adopt implementation acts with respect to “the supporting documentation needed for the verification report, including its format” (Article 8.3(c)). This might result in an increased scope of verification, which could imply higher costs for companies to comply with such (increased) requirements and higher costs for verifications.

b) Consequence of non-verification or untimely verification

The consequence of non-verification under EU ETS is the non-transferability of allowances. An operator whose report has not been verified as satisfactory by an accredited verifier by 31 March each year for emissions during the preceding year cannot make further transfers of allowances until a report from that operator has been verified as satisfactory (Article 15 of EU ETS Directive).

Under CBAM, CBAM certificates are effectively already non-transferable (see above under Section IV). The consequence of non-verification or untimely verification is the use of (high) default values.

In cases where reliable data would exist on the average emission intensity of an exporting country and for the particular CBAM covered good, that average would apply increased by a ‘proportionally designed’ mark up, to be determined at a later stage in implementing regulations as well (Section 4.1 of Annex IV of CBAM Regulation).

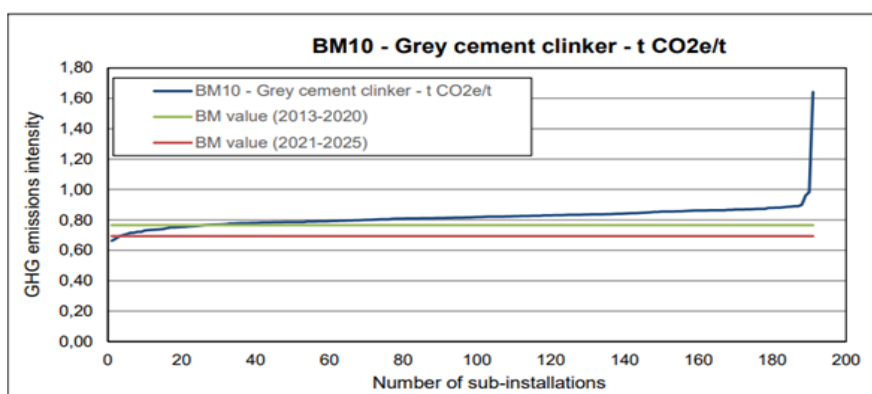
In the absence of ‘reliable data’, EU importers would need to surrender emission allowances as if they were belonging to the X% highest carbon emission emitting installations under EU ETS for a particular CBAM covered good, with X to be determined at a later stage in implementing regulations. The European Commission proposal was to use the 10% worst emitters benchmark, but the European Parliament opted for a more stringent 5% worst emitters benchmark.

Due to the lack of readily available data, many imported goods could be treated as if produced by the 5 or 10 per cent worst performing EU installations. Many studies in this area analyzing potential impact of CBAM on foreign producers use the 10% figure.²⁴ However, impacts might be larger if a larger X% would apply or a relatively high markup would be applied to the average emission intensity (in cases where ‘reliable data’ exists).

Using 5% instead of 10% may have implications if the so-called benchmark curve is not horizontal or gradual but rather moves steep upwards towards the end. This includes situations in which a relatively small number of installations are performing significantly worse compared to others. For several products, there are a few installations whose emissions intensity is significantly elevated compared to the average GHG emission intensity. Take for instance, cement clinker (see Figure below). The worst 10% would translate in a GHG emissions intensity at around 0.9 t CO₂e/t but the worst 5% perhaps around 1.5 CO₂e/t. Assuming a carbon price of EUR 90 per ton, moving from 10% to 5% worst emitting installations would translate into EUR 54 higher CBAM duties per ton of cement clinker.

As an illustration, in 2022, the unit value of cement clinker (HS Code 252310) for imports by Netherlands from China was USD 461 (around EUR 418 at time of writing). Moving from 10% to 5% would in this example imply an additional import duty of 13 percentage points which is significant considering that EU’s Most-favoured-nation (MFN) applied rate for cement clinkers is currently 1.7 per cent.²⁵

Figure: Benchmark curve for cement clinker



Source: European Commission²³

23 European Commission, “Update of benchmark values for the years 2021 – 2025 of phase 4 of the EU ETS - Benchmark curves and key parameters”, Updated final version issued on 12 October 2021. Available from https://climate.ec.europa.eu/system/files/2021-10/policy_ets_allowances_bm_curve_factsheets_en.pdf.

24 E.g. Heli Simola, “CBAM! - Assessing potential costs of the EU carbon border adjustment mechanism for emerging economies”, BOFIT Policy Brief, No. 10/2021. Available from <https://www.econstor.eu/bitstream/10419/251711/1/bpb2110.pdf>.

25 EU TARIC database. Available from https://ec.europa.eu/taxation_customs/dds2/taric/taric_consultation.jsp?Lang=en.

c) Accreditation of verifiers

Commission Implementing Regulation (EU) 2018/2067 of 19 December 2018 (as amended) lays down provisions for the verification of reports submitted pursuant to EU ETS Directive and for the accreditation and supervision of verifiers.²⁶ Under CBAM, all verifiers accredited in accordance with this Regulation can also verify emissions reports under CBAM.

Additional implementing Regulations could be adopted concerning the conditions for granting of accreditation, for the control and oversight of accredited verifiers, for the withdrawal of accreditation and for mutual recognition and peer evaluation of accreditation bodies. These future Regulations specific to CBAM would need to be compared with Commission Implementing Regulation (EU) 2018/2067 applicable to EU ETS.

At present, verifiers are EU-based companies. It appears that in practice verification would likely be more costly for foreign producers compared to the EU producers.

The European Parliament deleted a following paragraph proposed by the Commission which allowed for additional verifiers: "In addition to paragraph 1, a national accreditation body may on request accredit a person as a verifier under this Regulation after checking the documentation attesting its capacity to apply the verification principles referred to Annex V to perform the obligations of control of the embedded emissions established in Articles 8, 10 and 38." This seems to foreclose the possibility to request an accreditation of non-EU entities to verify emissions under CBAM (if such option would be entertained under the rules/regulation of a particular national accreditation body).

The implication of the final CBAM text is that non-EU verifiers have been ruled out.

Table: Correspondence between CBAM covered products and the scope of work of accredited verifiers

CBAM covered product	Activity group for accredited verifiers under Commission Implementing Regulation (EU) 2018/2067
Cement	Activity Group No.6, which includes production of cement clinker
Iron and steel	Activity Group No.3, which includes production of pig iron or steel (primary or secondary fusion) including continuous casting
Aluminium	Activity Group No.5, which includes production of primary aluminium (CO ₂ and PFC emissions); Activity Group No.4, which includes production of secondary aluminium
Chemicals – organic chemicals	Activity Group No.8, which includes production of bulk organic chemicals by cracking, reforming, partial or full oxidation or by similar processes
Chemicals – hydrogen	Activity Group No.8, which includes production of hydrogen
Chemicals – ammonia	Activity Group No.8, which includes production of ammonia
Electricity	Activity Group No. 98 - Other activities pursuant to Article 10a of Directive 2003/87/EC
Fertilizers	
Polymers (plastics)	

²⁶ Commission Implementing Regulation (EU) 2018/2067 of 19 December 2018 on the verification of data and on the accreditation of verifiers. Available from <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32018R2067>.

d) Verifiers and their scope of work

Accredited verifiers cannot verify emissions for any imported good, but only 'for a relevant group of activities.' According to Article 35 of the Commission Implementing Regulation (EU) 2018/2067, "The verifier shall only issue a verification report to an operator or aircraft operator that performs an activity that is covered by the scope of the activity referred to in Annex I for which the verifier has been granted accreditation according to the provisions of Regulation (EC) No 765/2008 and this Regulation".

Annex I lays out the activity groups for which verifiers can be accredited. The table below shows a correspondence between CBAM covered products and the scope of work of accredited verifiers. Some of the CBAM sectors do not have a specific activity group, in particular plastics and fertilizers. In addition, some cement products under CBAM appear to fall outside the scope of cement clinkers and might not be covered under activity Group 6. These issues appear to have been recognized in the final CBAM text but no immediate solution is offered. The European Commission is empowered to adopt implementing regulation to align 'qualifications of an accredited verifier that are necessary to perform verifications for the purpose of this Regulation with the relevant group of activities listed in Annex I to Implementing Regulation (EU) 2018/2067' (Article 18.1 on CBAM Regulation).

Implementation of CBAM will increase the business of accredited verifiers and the question is whether there will be enough verifiers around to verify CBAM emission reports, especially since there does not appear to be an intention to expand the supply of accredited verifiers to include additional (non-EU) verifiers (see also previous subsection).

The lack of verification capacity within the EU itself has been of importance and findings show that it may create bottlenecks at key locations. For instance, one study shows that Europe faces a critical shortage of qualified 'verifiers' who check importers' declared carbon emissions. It elaborates that Belgium, the EU's second-largest steel and iron importer and home to Antwerp, its second-largest port has only two qualified verifiers whereas six EU Member States, including Ireland, have no verifiers at all.²⁷

²⁷ The Conference Board, "Navigating Europe's Carbon Tariff" (2023). Available from <https://www.conference-board.org/pdfdownload.cfm?masterProductID=49081>.

e) Verification principles – mandatory visit / simplified visit

Under EU ETS, some verifications do not need a physical site visit to installations subject to the approval by a competent authority and based on the outcome of the risk analysis and after determining that all relevant data can be remotely accessed by the verifier (Article 31 of Commission Implementing Regulation (EU) 2018/2067).

There are several situations when site visits are not carried out, including for

- Low emitting installations (less than 25,000 Tonnes of CO₂). In 2019, 57 per cent of the total installations were reported as 'installations with low emissions'.²⁸ This implies that the majority of EU installations is not visited physically by a verifier.
- Large installations with only one source stream which is natural gas or one or more de minimis source streams
- Installations located on an unmanned site
- Installations located on a remote or inaccessible site, in particular an off-shore installation

(Article 32 of Commission Implementing Regulation (EU) 2018/2067)

Under CBAM, the criteria for the possibility to not conduct site visits has been tightened. Installation visits by the verifier shall be mandatory except where specific criteria for waiving the installation visit are met (Annex VI, Section 2(c)). An implementing regulation would need to be crafted to define these specific criteria (Article 8.3(a) of CBAM). Absent such implementing regulation or a very restrictive regulation, all or most non-EU installations would need to be visited.

In contrast, under EU ETS, most installations are not visited physically by a verifier.

f) Verification principles – threshold for material misstatements / nonconformities

An important concept in auditing and verification is that of materiality thresholds or materiality levels. In financial audits, the materiality threshold in audits refers to the benchmark used to obtain reasonable assurance that an audit does not detect any material misstatement that can significantly impact the usability of financial statements.²⁹ Likewise, for emissions verifications, 'materiality level' means the quantitative threshold or cut-off point above which misstatements, individually or when aggregated with other misstatements, are considered material by the verifier (Article 3 of Commission Implementing Regulation (EU) 2018/2067).

Under EU ETS, the materiality levels have been defined (Article 23 of Commission Implementing Regulation (EU) 2018/2067). Under CBAM, the implementing act on this issue does not yet exist (Article 8.3(b) of CBAM).

In brief, ETS stipulates a materiality level of 2% for big installations

²⁸ Report on the functioning of the European carbon market, COM(2020) 740 final. Available from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0740&from=EN>.

²⁹ Corporate Finance Institute (CFI), "Materiality Threshold in Audits". Available from <https://corporatefinanceinstitute.com/resources/accounting/materiality-threshold-in-audits/>.

and 5% for smaller installations. If an implementing act is adopted which mirrors the same materiality levels, CBAM and ETS would be on par on this issue. Yet, applying the same materiality levels applicable under EU ETS to CBAM covered goods means that a distinction would have to be made between like imported goods, those produced by a 'smaller' and those by a 'big' installation. This could be in conflict with the MFN rule: big installations producing similar goods as smaller installations might be able to pay less for CBAM allowances due to the lower materiality level. If a materiality level were fixed at lower than 2% it would be more stringent for foreign producers, if the materiality level would be fixed at higher than 2% it would mitigate against products produced by large installations in non-EU countries. Consequently, given current materiality levels under EU ETS, applying the principle of non-discrimination would imply a materiality level of 2%.

VI. Penalties

Penalties are part of the ETS and CBAM's enforcement mechanisms. The ETS only prescribed specific penalties for a breach of the requirement to surrender sufficient allowances. For other penalties, Member States 'shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that such rules are implemented. The penalties provided for must be effective, proportionate and dissuasive'. (Article 16.1 ETS Directive).

While it appears that penalties under CBAM for surrounding insufficient allowances have been equalized with those applicable under EU ETS, other penalties under ETS may diverge across EU Member States and may not be applied for certain breaches depending on the Member State. Furthermore, for several breaches of obligations under CBAM, in particular relating to authorization and provisions of detailed information in CBAM reports, quite severe penalties are spelled out (and are in principle the same across the EU).

a) Penalties for surrendering insufficient allowances (excess emissions penalties)

Under ETS, liability for penalties arises when an operator does not surrender sufficient allowances by 30 April of each year to cover its emissions during the preceding year. Under CBAM, liability for penalties arises when an authorized declarant fails to surrender, by 31 May of each year, the number of CBAM certificates corresponding to the emissions embedded in goods imported during the previous year or who submits to the authority false information related to actual emissions with a view to obtaining a favourable individual treatment.

Under EU ETS, the operator shall be held liable for the payment of an excess emissions penalty of EUR 100 for each tonne of carbon dioxide equivalent emitted by that installation for which the operator has not surrendered allowances (Article 16.3 of EU ETS Directive).

In the draft CBAM text, the applicable penalties were significantly higher than under EU ETS. The amount of the penalty would be equivalent to three times the average price of CBAM certificates

in the previous year for each CBAM certificate that the authorized declarant should have surrendered. First, under EU ETS, it concerns an 'excess' emissions penalty. That is, the penalty is based on the difference between what is reported and what should have been reported. In the draft CBAM text, the penalty was based on what should have been reported. Secondly, the penalty per ton of carbon emissions is fixed under EU ETS Directive at EUR 100 per Tonne, whereas under CBAM it is 3 times the previous year's carbon price. The current EU carbon price is around EUR 90.³⁰ With this price, the penalty under the draft CBAM would be much higher than under ETS (3 x EUR 90 = 270 versus EUR 100).

In the final CBAM text, the penalties have been equalized with those applicable under EU ETS (Article 26.1).

b) Penalties for not submitting a CBAM report (transitional period)

During the first period of CBAM, the amount of the penalty for not submitting a CBAM report is between EUR 10 and EUR 50 per tonne of unreported emissions, subject to factors such as the extent of unreported information, the unreported quantities of imported goods and the unreported emissions relating to those goods. The penalty shall increase in accordance with the European index of consumer prices (Article 162, CBAM Implementing Regulation on transitional reporting obligations).

c) Penalties for non-authorized CBAM declarants importing EU goods

Under CBAM, persons other than an authorized CBAM declarant who introduce a CBAM covered good into the EU's customs territory would face a penalty three to five times the carbon price applicable at time of import (assuming that such persons cannot or do not surrender any CBAM certificate for embedded emissions associated with such goods). It is dependent on a number of factors viz., duration, gravity, scope, and repetition of the non-compliance according to Article 26(2) of the CBAM Regulation. Effectively, this implies a very high cost to import CBAM covered goods when not authorized to import such goods. Applied to cement clinker (see Section V.b above), this could mean a default CBAM associated import duty of 161% ($(1.5 \times 90 \times 5) / 418 \times 100\%$).

VII. Authorization

To be authorized as CBAM declarant, the applicant must be established in an EU Member State (Article 17.2(c) of CBAM regulation). For some operators in developing countries exporting to the EU, this might be challenging. Besides that, EU establishment for the purposes of trading would entail additional cost, the absence of visa/services/investment commitments by the EU vis-à-vis the exporting country could pose practical obstacles for non-EU producers to become CBAM declarants for their produced goods. This may lead to the emergence of relatively few EU import agencies acting as middlemen declaring imports on behalf of many clients. Overall, this requirement could increase costs for imports vis-à-vis EU domestic production or add another layer of bureaucracy to comply with these new CBAM requirements.

³⁰ Carboncredits.com, "Live Carbon Prices today". Available from <https://carboncredits.com/carbon-prices-today/> (consulted on 2 May 2023).

In accordance with WTO rules, the authorization of CBAM declarants as well as the conditionalities set for the importation of covered products has direct relevance for the WTO Agreement on Import Licensing, notably non-automatic import licensing in this instance. Accordingly, Members:

- Should take into account the economic development purposes and financial and trade needs of developing country Members (Article 1.2 of Import Licensing Agreement).
- Should not require documents and information that are not strictly necessary for the proper functioning of the licensing regime (Article 1.5). For instance, is the requirement to be based in EU strictly necessary?
- Must publish sufficient information for other Members and traders to know the basis for granting and/or allocating licenses (Article 3.3). For instance, it is not clear what 'serious infringement or 'repeated infringements' of customs legislation, taxation rules and market abuse rules' means?
- Upon request by other Members the EU should provide information *inter alia* on the distribution of authorizations among supplying countries and import statistics of CBAM covered goods (Article 3.5).

Further, WTO Members which institute licensing procedures or changes in these procedures shall notify WTO's Committee on Import Licensing within 60 days of publication (Article 5). The CBAM regulation which embodies licensing procedures was published on 16 May 2023 and hence should have been notified by mid-July 2023 (Article 5.2 provides a list of minimum requirements for such a notification).

VIII. Use of carbon credits from Clean Development Mechanism (CDM)

In CBAM, carbon prices paid under a non-EU emissions trading system may lead to a reduction in CBAM related import costs, which may be claimed only if the carbon price has been effectively paid in the country of origin (Article 9.1 of CBAM Regulation).

Under EU ETS, international carbon credits generated through the Clean Development Mechanism (CDM) can be used for compliance with EU ETS (Article 11a of the EU ETS Directive). While the EU has stated that it does "not envisage continuing the use of international credits for EU ETS compliance after 2020", Article 11a has still not been revised.³¹ CDM allows industrialised countries with a greenhouse gas reduction commitment (called Annex 1 countries) to invest in projects that reduce emissions in developing countries as an alternative to more expensive emissions reductions in their own countries. Under CBAM, Annex I countries exporting to EU are not offered the possibility to use emission reduction credits for compliance with CBAM.

While EU ETS arguably provides incentives to make investments in developing countries, CBAM lacks this feature.

³¹ European Commission, "Use of international credits". Available from https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/use-international-credits_en.

IX. Guarantees

The EU ETS does not require financial guarantees from operators for authorization or during the year.

The CBAM regulation mentions two types of guarantees, one in the form of a monetary amount for 'new' declarants and one in the form of CBAM certificates for all declarants:

1) If the declarant was not established throughout the two financial years that precede the year when the application for authorization was submitted, the guarantee will be fixed at the monetary value of the CBAM certificates that the authorized declarant would have to surrender in the calendar year during which the application is submitted, and for the following calendar year (Article 17.5 in conjunction with Article 5.5(g) of CBAM Regulation).

2) Once authorized, the declarant shall ensure that the number of CBAM certificates on its account in the CBAM registry at the end of each quarter corresponds to at least 80 per cent of the embedded emissions, determined by reference to default values in accordance with the methods set out in Annex IV, in all goods it has imported since the beginning of the calendar year (Article 22.2).

In the draft CBAM Regulation, it was unclear whether the first guarantee was refundable and when it would be refundable. Article 17.7 of the final CBAM text now states that the guarantee shall be released 'immediately' after 31 May of the second year in which the authorized CBAM declarant has surrendered CBAM certificates.

A guarantee as a condition for authorization could be considered a fee. If a declarant could be characterized as a 'service supplier' under the WTO General Agreement on Trade in Services (GATS), the plurilateral Services Domestic Regulation disciplines (not yet adopted by participants) would be relevant: "Each Member shall ensure that the authorization fees charged by its competent authorities are reasonable, transparent, based on authority set out in a measure, and do not in themselves restrict the supply of the relevant service."³²

With respect to the second guarantee, adding CBAM certificates to an account is related to import of CBAM covered goods and can be considered a charge on or in connection with importation (within the scope of Article VIII GATT). Article 7.3.3 of the WTO's Trade Facilitation Agreement stipulates that "such guarantee shall not be greater than the amount the Member requires to ensure payment of customs duties, taxes, fees, and charges ultimately due for the goods covered by the guarantee." 80% of default values (which assume worst emission intensity) can and will likely be in many cases, more than 100% of the amount actually due.

³² Reference Paper on Services Domestic Regulation, WTO document INF/SDR/2, 26 November 2021. Available from <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/INF/SDR/2.pdf&Open=True>.

X. Public register

Under ETS, there is no publicly accessible registry of stationary installations located in the EU.

In the draft CBAM text, the names of the authorized declarants and operators, the location and, where appropriate, the name of the installations in third countries and their verified emissions, shall be accessible to the public in an interoperable format.

In the final CBAM text, information sharing is limited to customs authorities and competent authorities (Article 14 of the CBAM Regulation). As such, the treatment with respect to publicly available information about producers seems to have been equalized.

A Note on Article XX of GATT (General Exceptions)

Based on the findings of the paper, the CBAM has clear discriminatory impacts to importers. As affected Members consider the legal compatibility of the CBAM, notably under GATT Article XX, two cumulative requirements will have to be proven by the EU under the GATT rules to justify the WTO-incompatible measures:

- First, that it falls under at least one of the exceptions listed under paragraphs (b) to (g). In this case, the exceptions 'necessary to protect human, animal or plant life or health' (GATT Article XX(b)) or 'relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption' (GATT Article XX(g)) are applicable.
- Second, that the measure satisfies the requirements in the chapeau i.e., that such measures are not a disguised restriction on international trade or applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail.

According to the WTO rulebook, the questions around whether the CBAM is necessary in the context of GATT Article XX(b) or whether there are other measures that are available to avoid such discrimination will be relevant. WTO jurisprudence provides some guidance on how this necessity test may be applied. For instance, in assessing if a measure is "necessary" for safeguarding human, animal, or plant life or health under GATT Article XX(b), the Appellate Body employs a method of evaluating and balancing various elements. This includes considering the measure's effectiveness in achieving the environmental goal, the significance of the common interests or values said measure upholds, and its effects on global trade. Should this evaluation initially indicate that the measure is essential, this finding needs to be verified by contrasting the measure with alternative approaches. These alternatives should be less obstructive to trade but equally effective in accomplishing the

intended objective.

In the case of invoking GATT Article XX(g), a substantial relationship between the measure and the conservation of exhaustible natural resources needs to be established (*United States – Gasoline*) i.e., a close and genuine relationship of ends and means were met. In *United States – Shrimp*, it was determined that a measure has to be “reasonably related” to the ends i.e., the stated policy goal of conservation of exhaustible natural resources.³³ In *China – Rare Earths*, the Appellate Body held that there must be ‘a close and genuine relationship of ends and means’ between that measure and the conservation objective of the Member maintaining the measure. Hence, a GATT-inconsistent measure that is merely incidentally or inadvertently aimed at a conservation objective would not satisfy the ‘relating to’ requirement of Article XX(g).³⁴

Based on this cursory glance of some relevant WTO jurisprudence and the current design of the CBAM, the EU will need to make a strong case to demonstrate that the CBAM will indeed create a level playing field for the relevant sectors in the EU market, to protect against the risk of ‘carbon leakage’ and that no other measures were available to avoid such discrimination. An important data point relevant in this context are the findings by the United Nations Conference on Trade and Development (UNCTAD) (2021) that estimates that CBAM will only reduce global carbon emissions by 0.1 per cent or 0.9 per cent of the European Union’s emissions³⁵ which is minuscule when assessing the distributional impacts that CBAM will have on developing countries.

Conclusions

The EU has an ETS which requires companies to purchase emission allowances for their emissions. Parallel to the ETS, the EU has now introduced the CBAM Regulation, which requires exporters to also pay for their carbon emissions, through additional charges on imports of goods covered by CBAM.

In April 2023, the European Parliament adopted the final CBAM Regulation as well as a revised ETS Directive. The paper arrives at two key conclusions. First, developing country exporters under the CBAM will face a number of bureaucratic hurdles, adding additional layers of complexity to comply with the new CBAM requirements. Second, the CBAM discriminates against developing country exporters in the specified sectors across a number of areas. Non-discriminatory treatment is an important principle of the multilateral trading system. Discriminatory treatment also has practical implications, namely that exporters in non-EU countries including in developing countries would have to shoulder a disproportionate burden of the EU’s climate policies.

While the CBAM generally mirrors the ETS this is not absolute, thereby leading to a discrimination of foreign producers.

³³ GATT 1994, WTO Analytical Index. Available from https://www.wto.org/english/res_e/publications_e/ai17_e/gatt1994_art20_jur.pdf.

³⁴ Ibid.

³⁵ UNCTAD, A European Union Carbon Border Adjustment Mechanism: Implications for developing countries (2021).

The main areas in which the CBAM does not mirror the ETS include:

- CBAM requires importers to pay also for PFCs in processed aluminium products, whereas EU ETS only considers carbon dioxide. This could put non-EU companies using aluminium scrap as input or exporting processed aluminium products at a disadvantage.
- Many aluminium, iron or steel products covered by CBAM are not covered by EU ETS. The production of fertilizer is not covered by EU ETS. These discrepancies mean that EU producers would face lower costs as they would not have to pay for all carbon emissions associated with the production of the final good, whereas non-EU producers exporting to the EU would. This would have an effect similar to tariff escalation, e.g., cocoa beans are duty free but the higher the level of processing the higher the import duty.
- The EU ETS has several exemptions which are not mirrored in CBAM, including on small-scale installations, low-emitting installations, and a relatively broadly worded research exemption. This puts the concerned EU installations as well as those benefiting from the research exemption at an advantage.
- Verification of emissions under CBAM is more onerous compared to ETS, resulting in more administrative costs for foreign producers.
- Overall holders of CBAM certificates are exposed to more financial risk and are likely to face a higher financial burden compared with EU installations needing to surrender ETS allowances. The validity of CBAM certificates is much shorter than the validity of an EU ETS allowance; the market for CBAM certificates is not liquid i.e., they cannot be traded like the emissions permit under the EU ETS; if the ETS price increases, holders of CBAM certificates do not benefit. The repurchase limit of 1/3 might lead to cancellation of unused CBAM certificates, and cancelled CBAM certificates are not exchanged for new CBAM certificates for the next year (as is the case for EU ETS).

Other areas where unequal treatment between CBAM and ETS exists include penalties, the obligation of and the conditions for being authorized as an importer of CBAM covered products, the use of credits from the Clean Development Mechanism (CDM) and guarantees. With respect to alignment of CBAM with ETS on free allocation of allowances, Implementing Regulations would need to address possible non-alignment; and the current CBAM regulation does not specify how the EU intends to address ‘carbon leakage risk’ for goods subject to CBAM and produced in the EU for export to third countries which do not apply the EU ETS or a similar carbon pricing mechanism.

Many issues will have to be worked out in the Implementing Regulations, and the extent of the discriminatory treatment will only be known at a later stage, including how the EU intends to address ‘carbon leakage risk’, the materiality level, accreditation and availability of verifiers, use of default values and detailed methodologies to calculate embedded indirect emissions.

Ways forward

This paper finds that CBAM discriminates against foreign producers in favour of EU domestic producers in many areas. New issues and challenges are expected to arise as the implementation of the CBAM begins. The EU could improve CBAM's WTO-compatibility in the following ways:

- Generally, aligning the CBAM with the EU ETS Directive as much as possible, in the existing text of the Regulation as well as in future Implementing Regulations. Specific instances of non-alignment have been pointed out in this brief.
- In some cases, (further) discrimination may be reduced or resolved through Implementing Regulations, but in most cases the discrimination is inherent in CBAM and cannot be resolved through Implementing Regulations. Implementing Regulations may also increase discrimination, for instance, through reporting requirements, methodologies for calculating embedded emissions or proposals to address 'carbon leakage risk' for goods subject to CBAM and produced in the Union for export to third countries which do not apply the EU ETS or a similar carbon pricing mechanism.
- Ensuring that the provisions on guarantees are consistent with Article 7.3.3 of the WTO Trade Facilitation Agreement.
- Allowing reduction in the obligation to surrender CBAM certification for investment in developing countries through the Clean Development Mechanism (CDM) or other schemes that reduce emissions in developing countries.
- Broadening verification and the provision of guarantees to non-EU suppliers might help in easing the implementation of CBAM.
- WTO rules on non-automatic licensing as contained in the WTO

Import Licensing Agreement would need to be observed by EU, including the notification to the Committee on Import Licensing within 60 days of publication of the CBAM Regulation.

It is confusing for the EU to argue that the CBAM is WTO compatible while also claiming that GATT Article XX can be invoked. This Article can be used when a measure is WTO incompatible but is necessary and justifiable.

Furthermore, more legal analysis is warranted. This should not only encompass WTO's non-discrimination provisions and Article XX of GATT and its necessity test but also other applicable WTO rules such as those contained *inter alia* in the Agreement on Import Licensing, Trade Facilitation Agreement, Agreement on Technical Barriers to Trade and Agreement on Subsidies and Countervailing Measures. Similarly, Regional Trade Agreements, where applicable, contain (additional) rules that have a bearing on CBAM.

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