A SCRAP GAME

Impacts of the EU Carbon Border Adjustment Mechanism

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sandbag
smarter climate policy

Authors

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About Sandbag

Sandbag is a not-for-profit think tank that uses data analysis and targeted advocacy campaigns to improve EU climate policies. Our work focuses on EU policies such as the EU Emissions Trading System, carbon border adjustment mechanisms, and emissions reduction measures in industrial sectors. For more information, please visit our website: https://sandbag.be/.

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Executive Summary

Following the European Commission's initial proposal for a Carbon Border Adjustment Mechanism (CBAM) in July 2021, a mechanism that would put a carbon levy on imports of certain carbon- intensive products from third countries into the EU, Sandbag and E3G released the report *A Storm in a Teacup: Impacts and Geopolitical Risks of the European Carbon Border Adjustment Mechanism*.

That 2021 report raised points made by different stakeholders on the multi-faceted motivations of the CBAM, such as preventing "carbon leakage", driving climate ambition globally, and increasing new revenues internally, as well as some doubts and criticisms concerning legal, administrative and fairness matters. It also showed through scenarios and data analysis that the impact of the CBAM on EU imports of Chinese goods will be very small due to (i) its narrow sectoral scope, (ii) the 10-year phase-in of the system (only fully operational in 2034), including the transitional period during which no fees are applied, and (iii) the proportion of increased costs that will be directly passed on to EU consumers.

Over the following two years, the CBAM underwent a legislative process that led to its formal adoption on 17 May 2023. Some of the uncertainties present in 2021 (before lawmakers agreed on the text) were lifted, regarding, for example, the CBAM's coverage, implementation timeline and governance framework. However, some still remain. It will take another 13 pieces of legislation to hammer out the details of the regulation by 2026, including developing a detailed methodology to calculate the carbon emissions and carbon price of imports. While the CBAM only targets a limited list of products, it will – in its current scope – enable the removal of nearly 50% of the emission allowances currently given for free to ETS-covered installations once it is fully phased-in.

Complementing our previous work, this report takes stock of the legislative situation and evaluates the impact of the CBAM on the EU's main trade partners from a revenue-cost perspective, based on new rules and updated data, with a particular focus on China.

Key findings

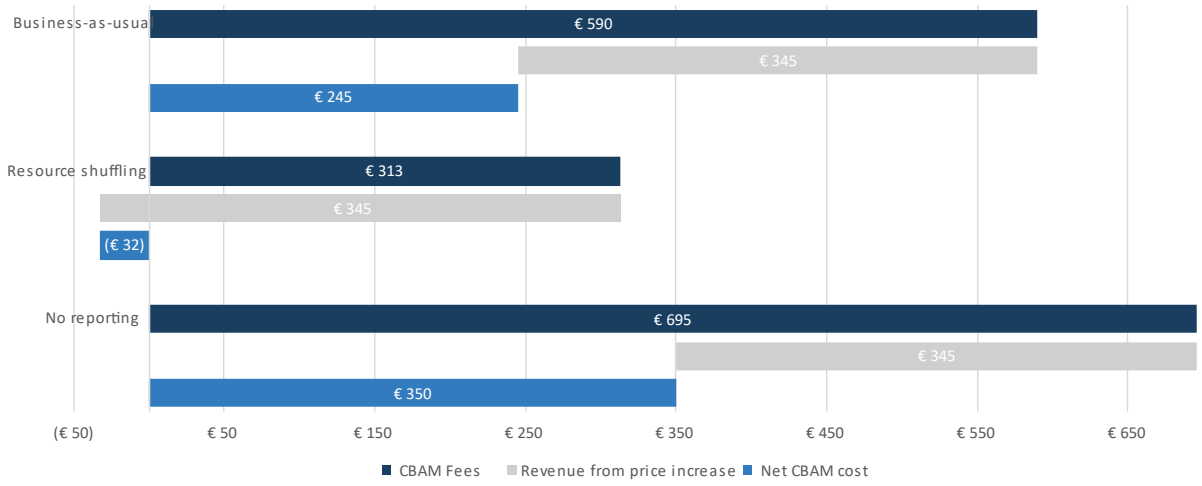
- The impact of the CBAM on the EU's trade partners will partly depend on the way these partners will react to the scheme. The estimated CBAM fees and *net costs* (i.e. CBAM fees minus additional profits resulting from higher market prices) are shown after the full implementation of the CBAM (and the full phase-out of free allocation under the EU ETS).

- If the rules set up for the transitional period remain in force, metal products (included in the list of covered goods) made from recycled materials such as recycled steel and aluminium will be **nearly exempt of CBAM charges**. This report describes a scenario in which non-EU manufacturers circumvent the system by voluntarily exporting only their low-emission goods to Europe and selling their high-emission goods on other markets to enjoy lower CBAM charges – a process known otherwise as "**resource shuffling**". Although the EU has already made clear it would try to prevent such practice, the current rules may not be sufficient to address this risk.

- With the simultaneous phase-in of the CBAM and the phase-out of free allocation under the EU ETS, carbon costs will increase for both importers and EU manufacturers. These additional costs will result in higher prices for products sold in the EU and will likely be directly passed on to EU consumers.[1] In a scenario where non-EU manufacturers engage in **"resource shuffling"**, importers could even manage to profit from the system, by avoiding to pay carbon charges equivalent to their EU competitors while selling their products at the new high prices. According to our calculations, in this 'resource shuffling' scenario, EU importers of Chinese goods would make a **net profit** of €32 million.

- The other scenarios detailed in this report illustrate the cases of unchanged export flows to the EU with the correct application of the CBAM charges ("**business-as-usual" scenario**), and of CBAM charges imposed on imports based on default emission intensity values due to missing information ("**no reporting" scenario**). Our analysis shows that these two scenarios would result in a **net loss** of €245 million and €350 million respectively for EU importers of Chinese goods.

Figure 1: **CBAM fees paid vs. net costs (including increased revenues)[2] for importers of Chinese goods**



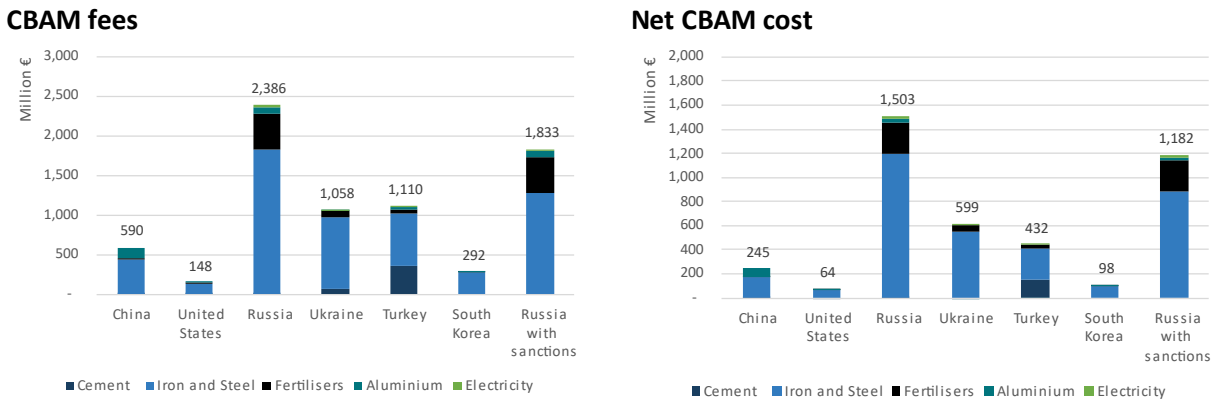
Source: Sandbag, based on data from Eurostat, the European Commission and academic sources

- EU imports from China covered by the CBAM Regulation account for €13.4 billion (2.82%) out of the €474 billion worth of EU imports from China in 2021. In the "business-as-usual" scenario, CBAM fees represent on average only 0.12% of the total value of imports from China. Furthermore, our analysis shows that the impact of the CBAM levy on trade partners will be somewhat limited, since the total net cost will not exceed €1 billion in any single country other than Russia.

[1] The price increase (cost pass-through to consumers) was calculated based on academic (empirical and theoretical) studies.

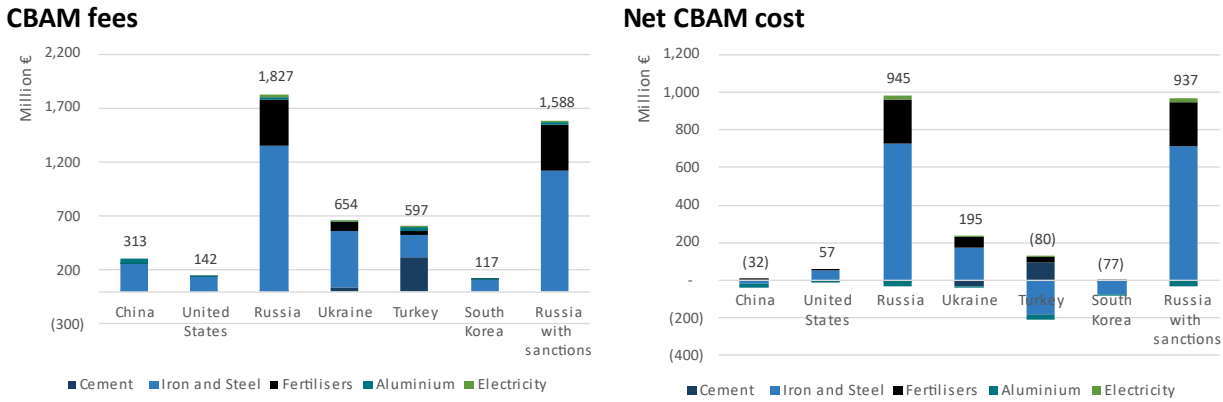
[2] Net CBAM Cost means the CBAM cost minus additional profit made from higher selling prices in the EU; negative Net CBAM Cost means profit.

Figure 2: **CBAM fees and Net CBAM cost for selected trade partners under the Business-as-usual scenario**[3]



Source: Sandbag, based on data from Eurostat, the European Commission

Figure 3: **CBAM fees and Net CBAM cost for selected trade partners under the Resource shuffling scenario**



Source: Sandbag, based on data from Eurostat, the European Commission

Our analysis shows that **the CBAM might hurt industrial manufacturers based in Europe more than those based in third countries**. More specifically, EU manufacturers of intermediary or final goods using more expensive raw materials (due to the end of free allocation under the ETS and CBAM fees on imports) might become **less competitive** than their peers located in third countries, since most **imported finished goods are not covered by the CBAM at this stage** and can be sold on the EU market at no additional cost.

The future of the CBAM is not set in stone yet and some loopholes can still be addressed. The CBAM Regulation was designed to be a moving instrument, with numerous review clauses allowing it to be reshaped and strengthened if necessary. For instance, the rules for assessing the carbon content of imports in force during the transition period allow non-EU exporters of metals to circumvent the system by strategically playing with the scrap content of their goods. However, the European Commission can still address this flaw and apply different rules for the definitive period starting in 2026. The CBAM's flexibility allows the EU to keep its cards close to its chest while trade partners work out how they will respond to it.

[3] The 'Russia with sanctions' bar shows the effect of the economic sanctions and import restrictions imposed by the EU on certain products from Russia since the start of the conflict in Ukraine.

1. Context[4]

On 17 May 2023, the European Union's Carbon Border Adjustment Mechanism (CBAM) was formally adopted and entered into force. This closes a legislative process that started on 14 July 2021, when the European Commission presented its initial proposal for a mechanism that would put a carbon levy on imports of certain emission intensive products from third countries into the EU. On 15 March and 23 May 2022, the Council and Parliament adopted their respective General Approach and Report on the legislative matter, giving the green light to enter inter-institutional negotiations. After several months of intense discussions, on 13 December 2022, the three EU institutions reached a political agreement on a CBAM that would start imposing constraints from 1 October 2023. The legislation was then formally adopted by the European Parliament on 18 April and the EU Council on 25 April 2023.

This report follows a previous report released in August 2021, just after the European Commission had made its initial proposal for the introduction of a CBAM as part of the 'Fit for 55' package, a group of 12 directives and regulations aiming to achieve 55% emission reductions compared to 1990 levels.

1.1. Origins of the CBAM: the EU ETS

Proposals for a CBAM have accompanied the EU's efforts at greater climate ambition. The introduction of a CBAM was first presented by the European Commission in 2019 as "an alternative to the measures that address the risk of carbon leakage in the EU's Emissions Trading System"[5] (EU ETS) as the EU steps up its ambition. *Carbon leakage* designates the displacement of emissions from jurisdictions with more to less stringent climate policies, through the displacement of production, investments or fossil fuel consumption.

One of the world's largest carbon markets, the EU ETS covers emissions from the power and heat, industry and aviation sectors, requiring that emitting installations and airlines surrender emission allowances (EUAs) equivalent to their annual emissions of carbon dioxide, nitrous oxide and perfluorocarbons, while decreasing the amount of permits available each year. Companies source these EUAs either by purchasing them from the market or, in the case of most industrial plants, receiving them for free.

[4] Parts of this chapter were derived from Sandbag and E3G's 2021 report *"A Storm in a Teacup: Impacts and Geopolitical Risks of the European Carbon Border Adjustment Mechanism."*

[5] Communication on the European Green Deal, European Commission, December 2019

Box 1: The European Green Deal

The European Green Deal is a flagship project of the current European Commission. When Ursula Von der Leyen was appointed European Commission President in 2019, an ambitious new direction for the bloc's climate policy was a prerequisite for her to win the approval of the European Parliament. Within 100 days of taking office, the new Commission President launched the European Green Deal on 11 December 2019, calling it Europe's "man on the moon moment". The European Green Deal is a legislative agenda covering energy, industry, agriculture, biodiversity, circularity, waste and social policies, and is underpinned by the EU's ambition to achieve net-zero carbon emissions by 2050. The new 2050 target, and the accompanying target of net CO2 emission reductions of 55% by 2030, necessitates a range of new policies to enable a fast-paced decarbonisation.

The free allocation of allowances was initially put in place as a protection against the risk of carbon leakage.[6]

While in the past, the ETS carbon price has been low and ineffective, ranging from €3-€8 since 2012, it has risen substantially since the 2018 revision and as market participants anticipated an increase in ambition in the July 2021 proposal. In 2022 and 2023, it exceeded €100 on several occasions. A high carbon price means that European producers face higher costs than their competitors elsewhere, leading to renewed and increased concerns over carbon leakage. For example, at a carbon price of €50/tCO2, the increase in costs per tonne of products like cement, chemicals and crude iron and steel ranges from 200-250% per unit of profit margins.[7]

Initially, allowances were allocated for free to the majority of installations covered by the EU ETS. Since 2013, with a few exceptions, installations in the power sector have not received free allowances. Industry actors, however, continue to do so: 95% of industrial emissions were covered by freely granted allowances in 2020.[8] While the level of free allocation granted to industry declines by a small percentage every 5 years, this declining rate is much slower than the reduction in the cap of the EU ETS, which is not sustainable in the long run.[9]

In addition, free allocation diminishes the decarbonisation incentive of the EU ETS, as industrial operators only pay for a small proportion of their carbon emissions. **The free allocation system supports high-carbon incumbent installations at the expense of lower-carbon competitors**, as low-carbon alternative technologies and products are often excluded or given fewer emission permits. This means that there is less incentive for industries to use more carbon-efficient production methods, defeating one of the main aims of the EU ETS.[10] For this reason, the free allocation system has been facing increasing criticism, from the European Court of Auditors,[11] certain EU governments, members of the European Parliament, civil society organisations, and even some industry actors pioneering low-carbon production techniques.

[6] Carbon Leakage: Theory, Evidence and Policy Design, Partnership for Market Readiness, October 2015

[7] Fostering climate-neutral, energy-intensive industries in Europe: A policy vision for the EU Industrial Strategy, E3G, February 2020

[8] Sandbag calculations based on 2020 Verified Emissions Data, European Union Transaction Log.

[9] A Clean Industry Package for the EU, Agora Energiewende, October 2020

[10] See e.g. Untangling the knots – Clearing the way to fast green hydrogen deployment, Sandbag, June 2021; Barriers to Industrial Decarbonisation, May 2018; Industrial Transformation 2050 - Towards an Industrial strategy for a Climate Neutral Europe, Institute for European Studies, 2019

[11] The EU's Emissions Trading System: free allocation of allowances needed better targeting, European Court of Auditors, September 2020

1.2. CBAM: the alternative to free allocation

Against this backdrop, **CBAM has emerged as an alternative to free allocation - a means of carbon leakage protection** which seeks to increase the carbon costs of imports while also increasing the carbon costs of domestic producers. This is not the first time a carbon border adjustment has been proposed in the context of the EU ETS. This was however rejected in favour of the continuation of free allocation for energy-intensive industries. In 2009, the French government put forward a non-paper proposing a "carbon inclusion mechanism", but no formal legislative proposal was made. Another 2016 proposal by the French government sought to implement an emissions pricing mechanism, specifically for cement imports, to replace free allocation for European cement producers. While this proposal received some support in the European Parliament, it was ultimately rejected in favour of maintaining free allowances.[12]

A number of arguments against the CBAM previously proposed were raised. Firstly, a perceived lack of legal basis. The measure was not seen as compatible with WTO rules and was perceived as a form of economic protectionism. Secondly, fear of retaliation, of the kind following the attempted (and failed) inclusion of external flights into the EU ETS in 2012. Thirdly, administrative difficulties in handling carbon accounting, registration of importers etc. Lastly, industry actors were reluctant to lose their free allocation, a system with which they are familiar and from which many had benefitted substantially.

However, recent developments in EU climate policy have not only put the CBAM back on the table but have also propelled it to a central position in the EU's legislative framework for climate action. **The change in the CBAM's fortunes can be explained in the context of the European Green Deal**. Existing climate policy legislation, such as the EU ETS Directive, is brought in line with higher targets, which is likely to result in higher carbon prices and to increase the threat of carbon leakage.

1.3. The EU's motivation

In her political guidelines for the next European Commission 2019-2024[13], Ursula von der Leyen's first priority was the introduction of a European Green Deal, aimed at making Europe the first climate-neutral continent. To complement this ambition, the text reads, she would introduce a Carbon Border Tax to **avoid carbon leakage and create a level-playing field**. The European Green Deal[14] includes similar language: "Should differences in levels of ambition worldwide persist, as the EU increases its climate ambition, the Commission will propose a carbon border adjustment mechanism, for selected sectors, to reduce the risk of carbon leakage". The CBAM would also be designed to comply with WTO rules and be an alternative to existing measures that address the risk of carbon leakage in the EU ETS.

The new climate policy momentum, as well as the heritage of the EU ETS, provide the many and occasionally contradictory motivations for the EU ETS. Many actors see the CBAM as a means to incentivise greater climate ambition globally. However, this motivation has drawn accusations of disregard for the principle of 'Common but Differentiated Responsibilities and Respective Capabilities' (CBDR-RC).

Beside the carbon leakage argument, some stakeholders have argued that one of the motivations for the CBAM may have been revenue-raising. In December 2020, the EU Institutions agreed that the revenues

[12] A European Border Carbon Adjustment Proposal – Greening EU trade, Europe Jacques Delors, June 2020

[13] A Union that strives for more - My agenda for Europe, Ursula von der Leyen, July 2019

[14] Communication on the European Green Deal, European Commission, December 2019

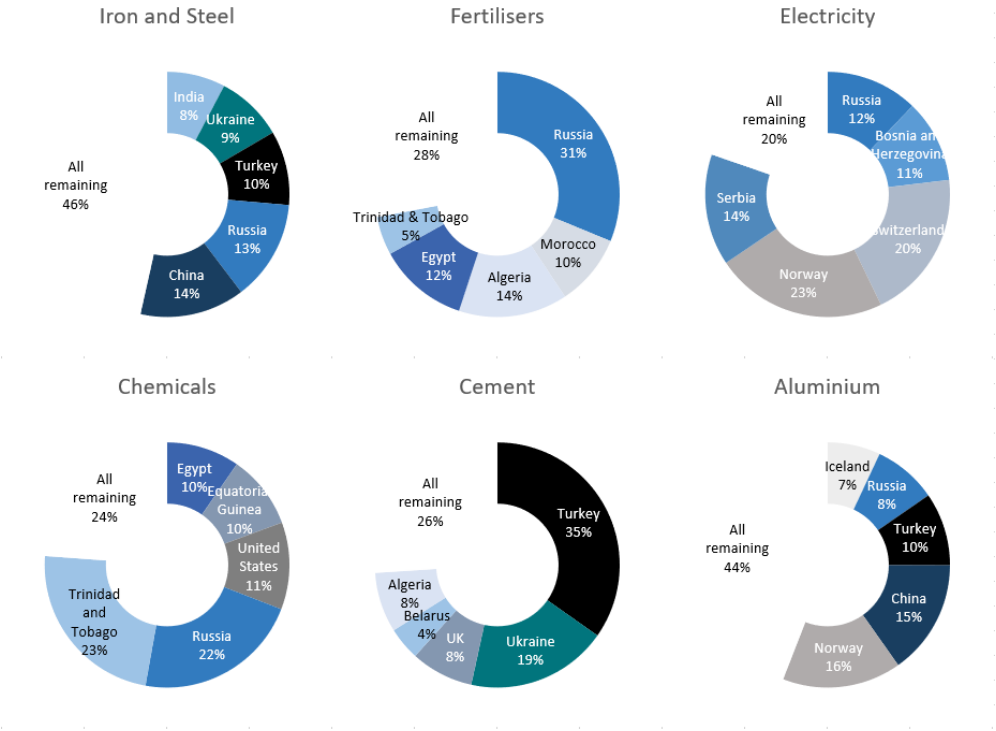
from the CBAM will be used as an EU 'own resource', that is, as one of the financing sources of the EU's budget.[15] As part of its Covid-19 Recovery Plan, the EU will borrow EUR 807 billion. Thus, new own resources are needed to cover this debt. This objective has led to strong opposition from trade partners. However, we will see in section 3.2.2 that the amounts raised by the CBAM are of a much smaller scale.

Most stakeholders who support introducing an EU CBAM will do so for a mix of these different motivations. There has also been commentary that, whatever the underlying motivation for the CBAM, it is only internationally justifiable in the name of action against climate change. For this reason, there have been calls for policy choices on the CBAM to be based on climate action motivations, and not other economic reasons.[16]

1.4. Trade volumes

In 2021, China was the third largest exporter of goods to the EU (22.29%, EUR 473.8 billion) and the largest importer of EU goods (10.25%, EUR 223.5 billion).[17]

Figure 4: **Major exporters to the EU27 in 2021 – CBAM product types**



Source: Eurostat (2021)

[15] Interinstitutional Agreement of 16 December 2020 between the European Parliament, the Council of the European Union and the European Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management, as well as on new own resources, including a roadmap towards the introduction of new own resources, European Institutions, December 2020

[16] Debate in the Committee on Environment, Public Health and Food Safety on the Carbon Border Adjustment Mechanism.

[17] China-EU - international trade in goods statistics, Eurostat, March 2021

We chose 2021 as reference year because it precedes any (presumably temporary) trade disruptions caused by the conflict in Ukraine. In comparison, the trade volumes of products included in the current CBAM proposal (see Section 3.2.1) are rather low. While China was among the five largest exporters of aluminium (15%, EUR 4.06 billion) and iron and steel (14%, EUR 9.3 billion) in 2021, exports from China to the EU in the other targeted sectors were a relatively small fraction of the total (fertiliser 0.4%, EUR 25.8 million; electricity 0%; chemicals 0%; cement 1.2%, EUR 9.1 million – see Figure 4).

2. Overview of the EU's CBAM

Many different policy options have been put forward by different stakeholders. These options deal with the coverage and scope of the CBAM, the type of compliance instrument which could be introduced, the method for assessing the carbon content in products, exemption options, as well as with how the CBAM will interact with other EU climate policies and international trade law. This section compares the compromise text on each feature with the Commission's initial proposal made in July 2021 and outlines the remaining steps in the legislative process.

2.1. Geographical scope

The CBAM will apply to imports originating from all countries outside the EU, with two current exceptions:[18]

1. Extra-EU countries covered by the EU ETS (i.e. EEA countries)
2. Extra-EU countries with a cap-and-trade scheme twinned with the EU ETS (i.e. Switzerland)

The Commission has been tasked to explore the feasibility of establishing agreements with third countries that consider introducing and/or aligning carbon pricing policies to that of the EU,[19] as well as to provide technical[20] and financial support[21] to help least developed countries adapt their manufacturing assets to the EU's climate standards.

All three institutions agreed that countries included in the EU ETS or those with a carbon pricing mechanism twinned with it would be automatically exempted from the CBAM. The carbon pricing policies in other countries would be considered in a different manner, where the number of CBAM certificates to be surrendered would be adjusted based on the carbon price paid in the country of origin. However, non-pricing policies would not be taken into account. Instead, alternative approaches such as agreements with third countries could be considered, provided they ensure a high level of effectiveness and ambition in achieving sector decarbonisation.

2.2. Implementation timeline

From 1 October 2023 until 31 December 2025, the CBAM is implemented as a transitional measure, with obligations limited to monitoring and reporting. EU importers of goods from third countries are only required to quarterly report the GHG emissions embedded in imported goods, with no financial consequence.[22]

[18] Article 2(6) of the CBAM Regulation
[19] Article 2(12) of the CBAM Regulation
[20] Recital 71 of the CBAM Regulation
[21] Recital 74 of the CBAM Regulation
[22] Article 32 of the CBAM Regulation

During the transitional phase of the CBAM, the Commission will finalise its implementing legislation while gathering information on embedded emissions and refine the methodology used to estimate them ahead of the definitive period.

Before the end of the transitional period, the Commission will undertake a thorough assessment and issue a report to the Parliament and the Council, analysing the potential extension of the carbon levy to additional goods that may be at risk of carbon leakage, such as organic chemicals, plastics or goods that are downstream in the value chain from currently covered goods.[23] The report will also assess whether to extend the coverage of indirect emissions and the methodology used to estimate them.

Starting from 1 January 2026, the CBAM will become fully effective, requiring from importers a specific authorisation[24] to import products into the EU (to be 'authorised declarants') and submit yearly declarations detailing the goods imported in the previous year and their verified embedded emissions. With each report, authorised EU importers must surrender a number of CBAM certificates based on the embedded GHG emissions of the imported goods in the previous calendar year. Certificates can be purchased from competent national authorities at any time at a price equal to the weekly average auction price of European Union Allowances (EUAs) and expressed in euros per tonne of CO_2 emitted.[25] The declaration for the first financial obligation period will therefore occur in 2027 based on 2026 imports. The number of CBAM certificates required will be reduced if they have already incurred a carbon price in their country of origin.[26]

During the legislative process, all three institutions (Commission, Parliament and Council) had proposed a transitional phase for the CBAM where importers would only be required to report on the embedded emissions of their imports without being charged. The differences between the proposals were minimal, with the Commission and the Council suggesting a transitional period from 2023 until 2026, while the Parliament proposed extending it until 2027. Ultimately, the position proposed by the Commission and the Council was the one adopted.

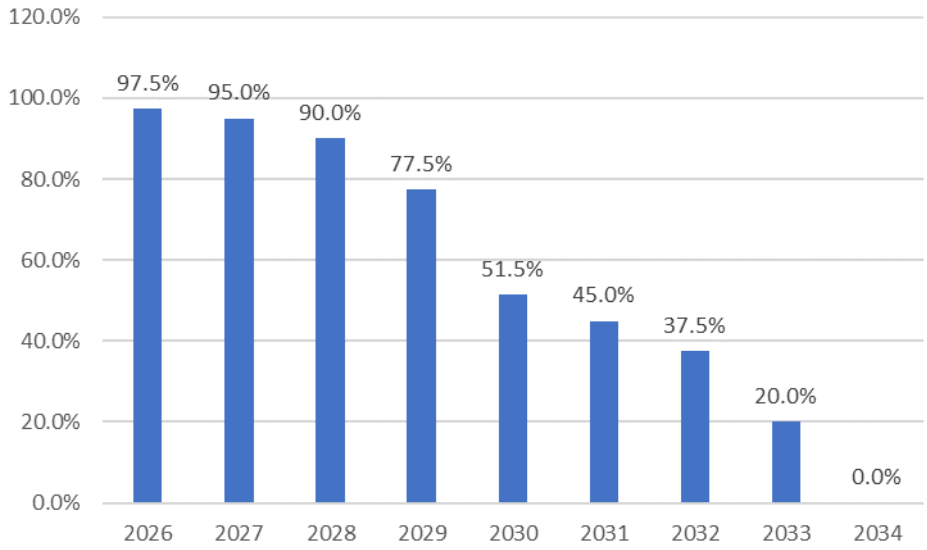
2.3. Free allocation

The introduction in 2026 of financial obligations under the CBAM comes together with the reduction of free allocation under the EU ETS. The *phase-in* of the CBAM charge and the *phase-out* of free allocation will happen simultaneously between 2026 and 2034.

The number of CBAM certificates to be surrendered will be vastly discounted to begin with, by the amount of free allowances that equivalent products covered by the EU ETS receive, as illustrated by Figure 5. As free allocation is reduced, the number of CBAM certificates to surrender will increase until they cover the entire share of embedded emissions by 2034, when EU-based plants making similar products will no longer receive free allowances.

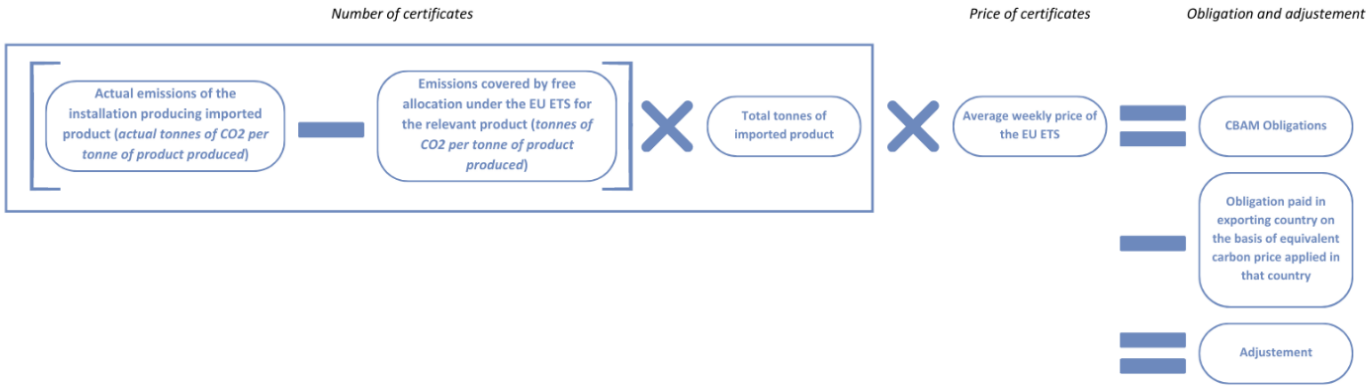
[23] Article 30 of the CBAM Regulation
[24] Article 30 of the CBAM Regulation
[25] Article 36 of the CBAM Regulation
[26] Article 9 of the CBAM Regulation

Figure 5: **Discount from CBAM certificates as proportion of free emission permits in the EU ETS**



Source: European Commission

Figure 6: **Value of CBAM financial obligations as free allocations are being phased out**



Source: European Commission

The three governing institutions had proposed different approaches to address the issue of free allocation under the EU ETS. The Commission suggested a plan for a yearly reduction of 10% in the issuance of free allowances, leading to a complete phase-out by 2035; the Council proposed a gradual and partial phase-out, with a 20% reduction in issuance each year after the transitional period also until 2035; the Parliament supported a similar gradual and partial phase-out but with a higher yearly reduction of 25% after the transitional period, until 2032. At the end of the trilogue negotiations, it was agreed that free allocation needed to be completely eliminated, although with a more gradual approach than initially proposed by the Commission.

Exports

Despite pressure from the European Parliament and certain Member States, the CBAM Regulation does not make exceptions for EU companies exporting their products outside the Union. The Parliament had initially proposed to keep giving free allowances under the ETS to manufacturers who export products to countries without equivalent carbon pricing mechanisms. However, this raised concerns about potential retaliation from trade partners on grounds of WTO rule violation. For this reason, the Commission and the Council did not include export rebates in their proposals, and the idea was not kept in the final text.

There are concerns that EU exporters may be disadvantaged on international markets, since they will be competing with more expensive goods. In turn, some believe this could lead to further deindustrialisation in Europe. However, the risks of export-related carbon leakage do not affect all goods covered by the CBAM, at least not equally. Electricity and hydrogen exports, for instance, should be relatively limited and are thus not particularly threatened. Similarly, EU exports of cement tend to be low on average, although more important in EU countries located at the Union's borders.

The European Commission will assess export-related carbon leakage risks in the upcoming reports on the functioning of the EU ETS (Q4 2024) and of the CBAM (by the end of the transitional period in 2025). If necessary, the Commission will present a legislative proposal to mitigate these risks, while still complying with WTO rules. It will also monitor these risks and the need for measures such as export rebates over time, with a first review due before 1 January 2028, and the next ones every two years thereafter.

In December 2022, the Parliament published a press release stating that an estimated 47.5 million EUAs would be used "to raise new and additional financing to address any risk of export-related carbon leakage". However, this specific only appears in the final legislation in the form of Recital 47 in the ETS Directive, mentioning (without giving explicit figures) that Member States should use revenues to address any residual risk of carbon leakage in CBAM sectors.

2.4. Scope

Goods

The regulation will initially apply to a specific range of goods. However, there is potential for the coverage to be expanded in the future through additional reviews conducted by the European Commission before 2030. Goods imported in consignments valued below €150 and those intended for military purposes will be exempt from the carbon levy.[27]

The products to which the CBAM will apply are summarised in Table 1. Some of them have "precursors" (basic materials used as feedstock for CBAM-covered goods) as well as a number of downstream products, which are also covered by the scheme.

[27] Article 2(3) of the CBAM Regulation

Table 1: **Goods covered by the CBAM** (in bold the original goods under the scope proposed by the Commission)

Product category	Products	Value traded with China (€)
Aluminium	**Unwrought aluminium, aluminium powders and flakes, and all kinds of aluminium products (including bars, rods, wires, plates, sheets, foils, tubes and pipes, tube and pipe fittings**, structures, reservoirs, tanks, casks, drums, cans, boxes, other containers, and cables)	3,973,905,647
Chemicals	Hydrogen	-
Cement	**Cement clinkers, white Portland cements, other Portland cements,** aluminous cements, **other hydraulic cements**, other kaolinic clays	9,110,901
Electricity	**Electrical energy**	-
Fertilisers	**Nitric acid, sulphonitric acids, urea, ammonia (anhydrous or in aqueous solutions), nitrates of potassium, mixed fertilisers (nitrogenous mineral and chemical fertilisers, and other fertilisers containing nitrogen, phosphorus and/or potassium)**	25,781,403
Iron and Steel	Agglomerated iron ores and concentrates (other than roasted iron pyrites), **pig iron, ferrous products obtained by DRI and other spongy ferrous products, crude steel, and all kinds of iron and steel products* (including bars, rods, rails, wires, tubes, pipes, sheets and other flat-rolled products, reservoirs, tanks, casks, drums, cans, boxes, containers,** as well as screws, bolts, nuts, hooks, and rivets) **– *except** certain **ferro-alloys** (only ferro-manganese, ferro-chromium, and ferro-nickel are covered), **and ferrous waste and scrap (including remelting scrap ingots and steel)**	9,270,169,170

Source: European Commission (Annex I, Regulation (EU) 2023/956)

Emissions

Direct vs. indirect

The CBAM covers emissions of the following GHG released during the manufacturing stage of the covered goods:

- Carbon dioxide (CO_2)
- Nitrous oxide (N_2O)
- Perfluorocarbons (PFCs)

Reporting obligations cover both direct and indirect emissions for all sectors. Direct emissions are GHG emissions that are released into the atmosphere from on-site activities, while indirect emissions are GHG emissions that occur off-site due to the consumption of electricity. The CBAM considers heating and cooling provided from external sources as direct emissions. Only imports of cement and fertilisers must pay for both direct and indirect emissions after the transitional period, while for all other CBAM goods, the levy will apply only to direct emissions.

Table 2: **Financial obligations for direct and indirect emissions as of 2026**

	Direct	Indirect
Aluminium	✓	
Cement	✓	✓
Electricity	✓	
Fertilisers	✓	✓
Iron and Steel	✓	
Hydrogen	✓	

Source: European Commission

All three institutions in their respective proposal agreed on the inclusion of direct emissions, which encompassed heating and cooling. However, there was a difference of opinion regarding the scope of these emissions. The Commission and the Council agreed that the scope should cover only direct emissions generated on production sites. The Parliament proposed to include indirect emissions for all products. In the subsequent trialogue negotiations, the three institutions reached an agreement to include indirect emissions for a specific subset of products, namely cement and fertilisers.

It remains to be seen however, if indirect emissions from fertilisers imports can really be covered by a CBAM charge because EU-based fertiliser producers are eligible for compensation for indirect carbon costs under the EU ETS in relation to their electricity use[28]. The WTO compliance of such combination (compensation for EU producers but CBAM charge for importers) would be difficult to justify. Unless the related EU ETS provision is amended, this should leave only cement under this obligation.

Precursors

The scope of emissions measured for the determination of CBAM fees replicate the boundaries covered by the EU ETS for similar products produced in the EU. It also covers emissions for *relevant* precursors, i.e. products used as inputs in the manufacturing of CBAM-covered products, on the condition that those products are themselves covered by the CBAM. For example, embedded emissions of steel products also covered sintered ore (which is in the CBAM-covered list) but not coke and lime (which are not).

We have noticed a few exceptions to this rule, as for example, although both steel and aluminium are covered by the CBAM, aluminium used as alloy in steel products is not considered as a relevant precursor. Table 3 below summarises products and their precursors and whether they are covered by the CBAM or not.

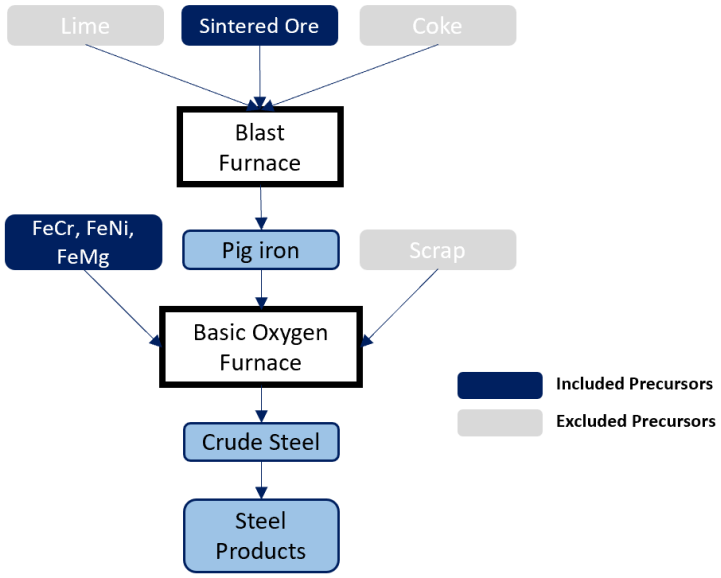
[28] See https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52012XC0605%2801%29

Table 3: **Coverage of precursors**

CBAM-covered product	Covered by CBAM, receiving free EU ETS allowances	Not covered by CBAM, receiving free EU ETS allowances
Steel (BF-BOF)	Hot metal, sintered ore, ferro-nickel, ferro-manganese, ferro-chromium	Coke, lime, all other ferro-alloys
Steel (EAF)	Direct reduced iron, hydrogen, ferro-nickel, ferro-manganese, ferro-chromium	Lime, other ferro-alloys
Aluminium	Aluminium	Alumina, pre-baked anode
Fertilisers	Ammonia, nitric acid, hydrogen	
Cement and clinker	Grey and white clinker, calcined clay	Alumina

Source: European Commission

Figure 7: **Relevant vs. non-relevant precursors for Steel products**



Source: European Commission

Actual vs. default values

In cases where actual emissions "cannot be adequately determined" by the declarant, as well as in the case of indirect emissions (from electricity use), default values will be used instead. The fact of emissions being "adequately determined" is determined by guiding principles. Monitoring methods are generally provided by the regulation, but "if for a specific data set there is no monitoring method, or it would incur unreasonable costs or is technically not feasible, monitoring methods from another eligible monitoring, reporting and verification system may be used under [some] conditions (…). Where such methods are not available, not technically feasible, or would incur unreasonable costs, indirect methods for determination

of the data set (…) may be used. Where such methods are not available, not technically feasible, or would incur unreasonable costs, default values may be used". [29]

Default values will be based on the average emission intensity of each exporting country for all goods except for electricity, and will be increased by proportionate mark-ups to uphold the CBAM's environmental integrity. The Commission will determine and periodically adjust these default values by relying on the best available data, which will be based on reliable and publicly accessible information. If reliable data is unavailable, default values will be based on the average emission intensity of a yet-to-be-defined percentage of the worst-performing installations covered by the EU ETS for that particular type of good.[30]

2.5. Governance

Unlike an initial proposal by the Commission to leave Member States in charge of the administration, the governance structure of the CBAM is centralised by the Commission, while Member States only manage authorisations and notary matters through their competent authorities.

CBAM registry

The European Commission:

- Will set up a CBAM registry where authorised CBAM declarants (i.e. EU importers) will (1) be registered, (2) hold their CBAM accounts and (3) submit their yearly CBAM declarations. It has already set up a transitional registry for the period until 2025.
- Will assign and manage CBAM accounts for authorised CBAM declarants through the CBAM registry, including maintaining records of surrendered CBAM certificates.
- Will publish yearly reports on the aggregated emissions embedded in the imports covered by the CBAM.
- Will maintain a list of operators and installations of third countries that determine and verify their embedded emissions according to the CBAM's methodology. This list will be included in a separate section of the CBAM registry.[31]

Member States:

- Will grant and revoke the status of authorised CBAM declarant to EU importers, enabling them to be listed in the CBAM registry.[32]

[29] Annex III A.3 of the Implementing Regulation on reporting methodologies
[30] Annex IV 4 of the CBAM Regulation
[31] Article 14 of the CBAM Regulation
[32] Article 17 of the CBAM Regulation

CBAM declarations

Member States:

- Will be responsible for reviewing the annual CBAM declarations submitted by CBAM declarants registered in their respective countries.

The European Commission:

- Will oversee the national review processes, and in cases where a CBAM declaration has not been submitted or is incorrect, it will provide the competent authorities of the Member States with a non-binding preliminary calculation of the number of CBAM certificates due.[33]

CBAM certificates

The European Commission:

- Will develop and manage a central platform for the sale and repurchase of CBAM certificates, as well as calculate the price of CBAM certificates and publish average prices according to the EU ETS.[34]
- Will notify Member States when a CBAM account at the end of each quarter holds less than 80% of CBAM certificates accounting for the embedded emissions in all CBAM goods imported by the owning CBAM declarant.[35]

Member States:

- Will sell[36] and re-purchase[37] CBAM certificates to and from authorised CBAM declarants and maintain records of these transactions in their respective CBAM accounts.
- After being notified by the Commission, they will inform authorised CBAM declarants when needed to ensure that there is an adequate number of CBAM certificates in their CBAM account.[38]

2.6. Compatibility with WTO Agreements[39]

Since the EU's CBAM plan was first announced, the EU institutions have stressed the importance of compliance with WTO rules. Legal scholars have argued that it is possible to design a mechanism that would be compatible with WTO rules[40]. To do so, the CBAM must follow certain criteria:

[33] Article 19 of the CBAM Regulation
[34] Article 20 of the CBAM Regulation
[35] Article 22 of the CBAM Regulation
[36] Article 20 of the CBAM Regulation
[37] Article 23 of the CBAM Regulation
[38] Article 22 of the CBAM Regulation
[39] Parts of this section were derived from Sandbag and E3G's 2021 report *"A Storm in a Teacup: Impacts and Geopolitical Risks of the European Carbon Border Adjustment Mechanism"*
[40] Changing Climate for Carbon Taxes: Who's Afraid of the WTO?, The Climate Advisors, 2013; A European Border Carbon Adjustment Proposal – Greening EU trade 3, Europe Jaques Delors, June 2020

1. No discrimination against importers

Article III of the GATT prohibits discrimination between imports and domestic production. Imports cannot be subject to a charge to which domestic producers are not. However, states do have a right to impose a border charge equivalent to taxes or charges paid by domestic producers. This has several implications for the design of the CBAM:

- The CBAM price must follow, as closely as possible, the carbon price of the EU ETS
- Importers cannot be charged a CBAM on the full extent of their emissions if domestic producers are still receiving some of their emission allowances for free. Either free allocation must be removed as the CBAM is introduced, or the CBAM can only apply on emissions above the level of the free allocation benchmark.

2. No unequal treatment of importers from particular countries

Under WTO rules, the MFN principle means that a tariff should not privilege or disadvantage importers from a particular country.

- If a default emissions intensity value is used for calculating the CBAM price, it should be either the global or the EU average emissions intensity. If different emission intensity values were used for different countries of origin, this could be perceived as discrimination as different CBAM prices would be charged solely on the basis of country of origin of the products.
- However, different CBAM prices could be charged depending on the origin of a product, if a carbon price had already been paid on that product in its country of origin. Any such equivalence provisions would have to be well implemented to ensure that no country's carbon pricing scheme would be overlooked.

3. Direct tax on like products

Articles II and III of the GATT permit the replication of domestic charges for imports, stating that the tax or charge should be direct; that is, it is charged on the imported products and not the wealth or income of the importer. It should be charged on "like products", that is, products that have similar characteristics, end uses, product classifications and consumer perceptions to domestically produced products.

- The CBAM should be charged according to the products imported, for example by weight.
- The "like products" requirement would mean that the CBAM should only be charged on goods also produced in the EU (which in any case matches with the aim of the instrument to protect against carbon leakage).

While the CBAM could be justified under articles II and III of the GATT alone[41], Article XX of the GATT also provides justification for such a measure. Article XX states "Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures" and lists a range of circumstances under which trade restrictions could be justified, including:

[41] Changing Climate for Carbon Taxes: Who's Afraid of the WTO?, The Climate Advisors, 2013; Debate in the Environment Committee of the European Parliament on the Carbon Border Adjustment Mechanism, Dec 2020

- (b) necessary to protect human, animal or plant life or health;
- (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.

Both these circumstances can be tied to environmental or climate measures such as the CBAM. However, the most important part of this Article is still the chapeau, i.e. measures for climate or environmental protection must not constitute discrimination between different countries or disguise a barrier to international trade[42].

Therefore, it is key that the CBAM is not perceived as a protectionist measure, either by trading partners or by the Appellate Body of the WTO. Several factors that could affect this perception are:

- Equivalence provisions: As the aim of the CBAM is to prevent carbon leakage by ensuring that importers pay a price on the carbon content of their goods, it is coherent that the carbon pricing policies of other countries are taken into account. If an exporter has paid a carbon price or tax in the country of origin of the good, this already paid carbon price should be discounted from the CBAM price.
- Use of revenues: If the revenues from the CBAM are used entirely as a source of EU income, this could enhance the perception that the CBAM is a protectionist measure. This could be alleviated by channelling (some of) the revenues specifically to decarbonisation investments within the EU, or towards international climate finance.
- Price calculation based on real emissions: The fairest implementation of the CBAM would allow importers to prove that the carbon intensity of their products is less than the default value, and to face a lower CBAM price accordingly. However, this would be administratively challenging as it would require a reporting and verification system in line with EU standards.

The EU's CBAM plans had already been discussed at WTO level during the June 2020 meeting of the Council for Trade in Goods. Several countries sought assurances from the EU that the CBAM would be consistent with WTO rules, and asked for more details of affected sectors and timelines[43].

The CBAM Regulation broadly meets the criteria listed under points 1, 2 and 3 for compliance with articles II and III, with a few caveats:

1. It ensures that the CBAM follows the price of EU allowances closely and is discounted by the amount of free allocation for each product type. However, the provision to increase its coverage to indirect emissions for electricity use is not matched by equivalent provisions to reduce the compensation received by EU firms at Member State level.
2. Different treatments with regards to countries of origin depend on whether a carbon price has been paid. However, default carbon intensity values, based on the country of origin, might fail point 2.
3. The CBAM is charged by weight of product (or MWh), only on products also produced in the EU, which is in line with point 3.

Regarding Article XX, equivalence provisions based on carbon pricing in the country of origin, and the option to let importers prove the carbon intensity of their goods based on verified emissions meet two of the criteria listed in the above bullet-points. Regarding use of revenue, the fact that the CBAM

[42] General Agreement on Tariffs and Trade, WTO, 1947

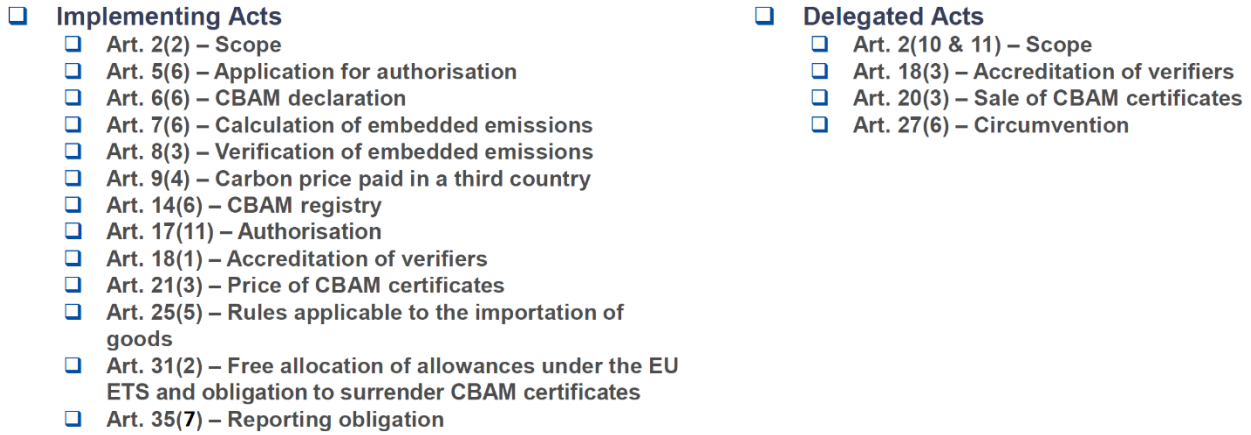
[43] Goods Council considers EU plans for carbon taxes on certain imports, WTO, 2020

proceeds will all be kept by the EU might be perceived negatively, although this is not strictly a reason for incompliance. That argument could even be contradicted by the net balance of the CBAM for importers, which might not even be negative for them as they benefit from higher prices on EU markets, and some non-EU manufacturers of finished products might gain in competitiveness.

2.7. Remaining legislative process

The CBAM necessitates the development of methodologies for implementation and new administrative procedures. While the regulation provides an outline of the functioning, objectives, and scopes of the scheme, the European Commission is mandated to formulate detailed measures required to operationalise it. The agreed text lays the foundation for 13 Implementing Acts and 4 Delegated Acts.

Figure 8: **additional legislation needed to implement the CBAM Regulation**



Source: European Commission

An implementing act (IA) is a legislative measure adopted by the European Commission to execute and detail the provisions of an existing EU law. A delegated act (DA) is a legislative measure adopted by the European Commission to supplement or amend non-essential parts of an existing EU law.

All these texts need to come into force before the CBAM becomes fully effective in 2026. The following reviews each of them in chronological order of expected adoption.

2.7.1. IA on Reporting obligations under Article 35(7)

This was the most urgent text and it was adopted on 17 August 2023. It describes the rules on the information to be reported by importers of CBAM-covered goods into the EU during the transitional period, between 1 October 2023 and 31 December 2025. Further rules will follow covering the definitive period from 2026 onwards. The requirements include information on declarants, imported goods, their origin, embedded emissions (direct and indirect) and the carbon price paid in the country of origin. The IA also sets guidelines for applicable penalties in case of failure to report: €10-50 per tonne of CO2 equivalent.

The question of metal scrap

Importantly, the IA details the type of emissions that should be reported or ignored in each production route, e.g. from the use of metal scrap. According to Annex II, Art 2.15, only the carbon mass present in steel scrap is counted as an emission source, but the carbon emitted to produce it (usually more than 100 times higher) is ignored. Annex III, Art F.2 further stipulates that scrap produced by a process is "assigned zero embedded emissions when entering another production process", even if the emissions of the first process are mostly not counted under the CBAM (e.g. if most of the products produced by the first process are not all exported to the EU).

Furthermore, the IA makes no accounting difference between the use of pre-consumer scrap (generated by a factory making metallic products) and post-consumer scrap (recovered from previous use). Pre-consumer scrap is pristine metal that comes from off-cuts in the production of finished products, especially from less efficient factories, and can be used in substitution to primary (carbon-intensive) metal. If these same rules applied during the definitive period, it will therefore be possible for imported goods to **avoid paying most CBAM fees** by selectively sourcing them from production lines that use large amounts of scrap.

This IA only regards the transitional phase, so the rules might change for the definitive period. However, having them set this way in the first place may create a bias that could undermine the accuracy of the data collected by the Commission in the transitional period.

Exemption of waste gas exports

Another important point is that waste gases exported by industrial plants to external installations are counted negatively by the methodology, as per the formula shown in Figure 9. This reduces significantly the coverage of the CBAM for steelmaking, as 40% of blast furnaces gases are usually exported.

Figure 9: **Attributed emissions as calculated by the CBAM methodology**[44]

$$AttrEm_{Dir} = DirEm^{*} + Em_{H,imp} - Em_{H,exp} + WG_{corr,imp} - WG_{corr,exp} - Em_{el,prod}$$

Source: European Commission

[44] $\boldsymbol{AttrEmdir}$: attributed direct emissions of the production process; $\boldsymbol{DirEm}*$: directly attributable emissions; $\boldsymbol{EmH,imp}$ and $\boldsymbol{EmH,exp}$: emissions related to imported/exported measurable heat; $\boldsymbol{WGcorr,imp}$ and $\boldsymbol{WGcorr,exp}$: Correction for imported/exported waste gases; $\boldsymbol{Emel,produced}$: Emissions related to electricity production.

2.7.2. Key legislation to come

Of the 13 IA and DA that will be passed in the next two years, three could directly impact the price paid by importers.

Q2 2025: IA on Calculation of embedded emissions – Article 7(7)

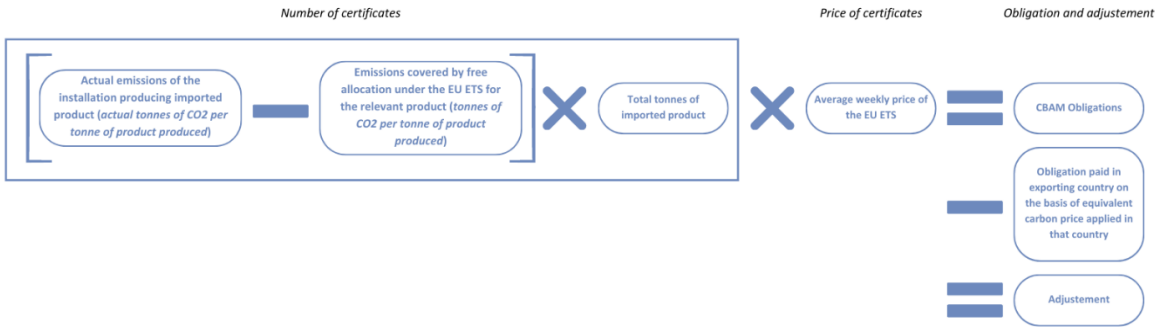
This IA will set the rules for calculating the embedded emissions of CBAM goods. These rules will replace those set by the IA on Article 35(7) in place during the transitional period. They also cover requirements for data accuracy, instructions in case of difficulties in calculating emissions, exemption criteria from using the specified methodology, based on the availability of actual emissions.

It will also include guidelines on adapting default values to specific areas, regions, or countries, considering objective factors that influence emissions, such as prevailing energy sources or industrial processes. These guidelines will be based on existing legislation for monitoring and verifying emissions from installations and data concerning installations' activities.

Q2 2025: IA on Free allocation of allowances under the EU ETS and obligation to surrender CBAM certificates – Article 31(2)

This IA will determine the calculation of the deduction applied to the CBAM charge due to emission allowances being allocated for free to EU plants covered by the EU ETS, as illustrated by Figure 10.

Figure 10: **Deduction from CBAM fee due to free allocation under the EU ETS**



Source: European Commission

From 2026: DA on Circumvention – Article 27(6)

The Commission is empowered to modify the list of goods subject to the CBAM for anti-circumvention purposes.

A comprehensive chronology of forthcoming legislation is included in Annex II.

3. Impacts of the CBAM, including on China

The introduction of a CBAM along with the phase out of free allocation will impose carbon costs on both EU producers and importers. In turn, these carbon costs could then be passed on to the final EU consumers through increased prices of basic materials. EU and Chinese (or other foreign) producers would sell those materials for higher prices, recovering the compliance costs of the EU ETS (EU producers) and CBAM (imports) to preserve their profit margins. Further down the value chain, more expensive basic materials will impact the profit margins of intermediary EU manufacturers using these materials in their products. Foreign-based manufacturers of final products would likely be positively impacted by an EU CBAM as they would pay less for basic materials than their EU competitors, resulting in a competitive advantage.

However, the immediate impact of an EU-imposed CBAM still partly depends on a small number of parameters, such as how the EU will enforce it and how trading partners will react, as well as a few other assumptions.

3.1. Assumptions

In the following analysis, the impact of the exclusion of products under €150 is ignored. All figures are based on 2021 trade volumes and not on projections. Product-specific assumptions on carbon intensity are given in the appendix. Emission intensity estimates are largely derived from the JRC study published by the European Commission in October 2023[45]. It should be noted that we chose to ignore the official values published by the Commission in December 2023 applicable during the transitional period[46] because those are likely to be very different from the values applicable during the definitive period. For example, definitive default values will be country-specific whereas transitional values are generic across all countries.

3.1.1. Scope

Electricity use

As described in section 2.4, off-site electricity use is only covered by the CBAM for fertilisers and cement products. We therefore only apply a CBAM to electricity use (indirect emissions) for imported cement products and fertilisers.

2034 scope

According to the regulation, the scope of the CBAM may be extended in the future. The extension may concern the goods covered, the methodology used to calculate their embedded emissions as well as the

[45] JRC (2023) *Greenhouse gas emission intensities of the steel, fertilisers, aluminium and cement industries in the EU and its main trading partners*

[46] European Commission (2023), Default values for the transitional period of the CBAM between 1 October 2023 and 31 December 2025

type of emissions (direct or indirect). In the following results, we take the assumption that there will be no change in the CBAM scope compared to the one currently described in the regulation.

3.1.2. Carbon price

The following analysis assumes a carbon price of €60 per tonne of CO2-equivalent for units traded under the EU ETS. It is close to the prevailing market price at the time of writing and matches the assumption we used in our previous report *A Storm in a Teacup*. One might object that carbon prices have reached much higher levels in the past two years (up to €100 per tonne of CO2e) and the yearly supply of carbon allowances will decrease as the emissions cap goes down. However, many factors driving the price rise were temporary[47] and our analysis made after the EU ETS reform showed that the number of available allowances will be vastly sufficient to cover EU emissions until 2030[48]. What could justify higher prices is the expectation of a tighter cap after 2030, but given the current political uncertainty in the EU, this is far from guaranteed.

3.1.3. Minimisation strategies

The CBAM will be calculated using actual emissions intensity (EI) factors for the goods whose embedded emissions have been verified. Given the financial consequence, one might expect importers to react by trying to minimise the declared factors.

A strategy to minimise CBAM charges could consist of selectively declaring verified data on lower emission imports, while letting the authorities set a default value on higher emission ones. This could work if the default values are based on country average rather than on worst-case data. However, there are two caveats: 1) on principle, the regulation allows Member States to punish with fines repeated failures to report emissions, and 2) the EU may add a 'markup' to default values, which may cancel any gain made.

Another way of minimising CBAM charges is sometimes called 'resource shuffling', i.e. the selective export to Europe of the "cleanest" products to benefit from lower CBAM, while the "dirtier" ones are directed to other markets.

The EU is opposed to such practices and aims to keep a close watch on them: as per Article 30 of the regulation, before 2028, and every two years thereafter, the Commission shall assess the impact of the mechanism on *'international trade, including resource shuffling'*.

However, as no enforcement mechanism is provided, it is possible that some resource shuffling will occur.

3.1.4. Emission calculation in the business-as-usual scenario

To estimate CBAM charges, we need to estimate the emission intensities of the products covered by the CBAM manufactured by different trade partners. In a "business-as-usual" scenario, imported products are manufactured using the same production processes as now.

[47] Sandbag (2021) *Letting industry loose*

[48] Sandbag (2023) *Powering through the cap*

Aluminium

To estimate emissions intensity for all aluminium products, we use the following formula:

$$EI_{product} = EI_{unwrought} + EI_{transformation}$$

Where $EI_{unwrought}$ combines the EI of "new" aluminium and scrap content, and $EI_{transformation}$ is found by taking the difference $EI_{product\ JRC} - EI_{unwrought\ JRC}$ between emission intensities given by JRC for unwrought aluminium and transformed products.

Table 4: **scrap use in Aluminium production**

	China	US	Russia	Ukraine	Turkey	S. Korea
Scrap content in aluminium production	17%	57%	33%	61%	61%	23%

Source: Caixin Global, World Aluminium, WEF, JRC[49]

Steel

We estimate emissions intensity for all steel products using the following formula:

$$EI_{product} = EI_{pig\ iron} \times Pig\ iron\ \% + EI_{DRI} \times DRI\ \% + EI_{Alloy} \times Alloy\ \% + EI_{transformation}$$

Where $EI_{pig\ iron}$ is derived from JRC's values for basic steel, pig iron and DRI rates are derived from the above scrap rates, alloy rates are either 1% or 10% for non-stainless and stainless products. $EI_{transformation}$ is found by taking the difference between emission intensities given by the JRC for basic steel and transformed products.

Table 5: **share of scrap by product type**

	China	US	Russia	Ukraine	Turkey	S. Korea
Scrap per ton of long products	13%	100%	100%	100%	100%	86%
Scrap per ton of flat products	10%	38%	21%	21%	21%	21%

Source: Sandbag, using BIR, CRU[50]

Cement

Values for cement are taken as:

$$EI_{Cement} = EI_{Clinker} \times Clinker\ to\ cement\ ratio + Indirect\ EI$$

Table 6: **clinker-to-cement ratio**

	China	US	Russia	Ukraine	Turkey	S. Korea
Clinker to cement ratio	60%	65%	83%	71%	71%	71%

Source: IEA, CemBR, R. Andrew (2019)[51]

[49] Missing value for Russia was replaced with a global average figure; South Korea's was taken as equal to Europe's.

[50] For flat steel, a global average figure was used except for China and US.

[51] Missing values for Ukraine, Turkey and S. Korea were taken as world average.

Fertilisers

The values used for fertilisers are those given by JRC, except for the products 310520, 31055100 and 31055900 (see annex for detailed CN codes), for which we use the average between JRC values and the value of diammonium phosphate. This is because for these CN codes which group several products, JRC selected the EI of the most emission intensive value products. In contrast, we assume that the products can equally be the most or the least emission intensive ones.

3.1.5. Alternative scenarios

Aluminium is a very recyclable material, for which products made from recycled material have very similar properties to products made from primary material. The average share of post-consumer recycled aluminium in global production was 33% in 2018.[52]

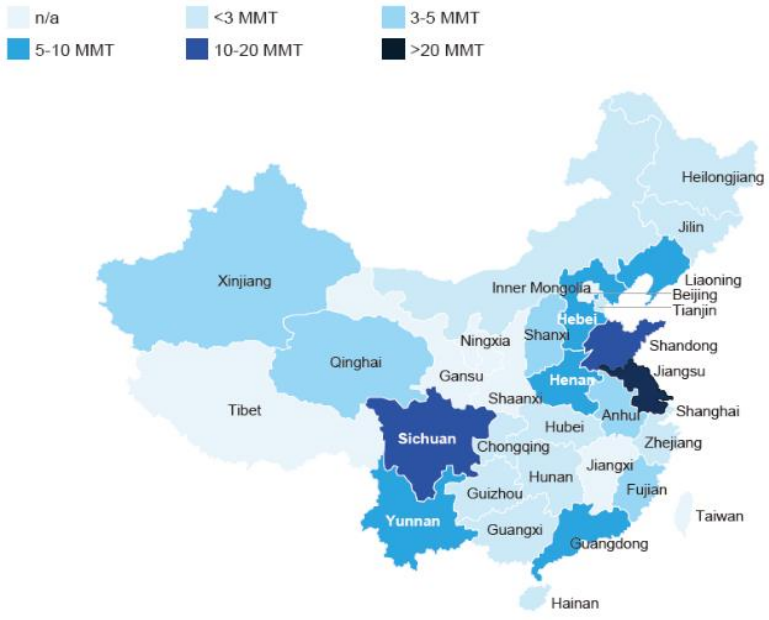
As explained in section 2.7.1, the reporting regulation in place for the transitional period considers as low carbon if they are made from recycled products (even from pre-consumer scrap). If this same regulation applies after the transitional period, a simple way to reduce CBAM charge will be to increase the content of scrap in exported products.

Given the high availability of aluminium scrap in China (about 6.02 million mt[53], compared to only 610,564 tonnes of aluminium exports to the EU), products with high scrap content can easily substitute the entire Chinese exports. Such substitution may happen fairly quickly, as it can use existing recycling infrastructure.

Like aluminium, steel is highly recyclable, and the quality of recycled steel can match that of primary material if mixed with a certain quantity of direct reduced iron (DRI) or pig iron. Embedded emissions from DRI are much lower than those of blast-furnace steel, so for the mix (DRI + scrap) it is considered even lower. Although China does not yet have casting installations at its electric arc furnaces to produce flat steels from DRI and scrap, it can easily acquire it by 2034 to substitute its 1.4m tonnes of exports to the EU.

Source: McKinsey (2019)[54]

Figure 11: **Annual production capacity of Chinese electric arc furnaces**



[52] World Economic Forum, (2021) *The answer to the aluminium industry's emissions issue? Aluminium's infinite recyclability*,

[53] Analysis of Aluminium Scrap Supply and Demand in China, SMM, December 2022

[54] How should steelmakers adapt at the dawn of the EAF mini-mill era in China?, McKinsey, June 2019

'Resource shuffling' scenario

Corresponds to importers minimising CBAM costs by carefully selecting lower-carbon products for import into the EU.

- Imported steel products are all made from electric furnaces, with 50% scrap and 50% DRI or pig iron for flat products vs. 100% scrap for long products.
- Aluminium imports are made of 80% scrap.
- Imported cement products are made of 20% clinker.

'No reporting' scenario

Corresponds to importers not declaring their emissions accurately and being imposed CBAM fees based on default emission intensity values. Those will probably be higher than average country values, and the Commission might even add 'markups' to those values. They would apply to importers which do not provide the necessary information. Although the European Commission has proposed to apply fines in case declarants suspected of deliberate misreporting, so this is for cases where such fines would not apply. One example could be if declarants do not have access to the information. This might happen in countries where information is not easy to access. In this scenario, we use the values given in the JRC study, which will probably be a major source for the definition of those default values.

3.2. Results

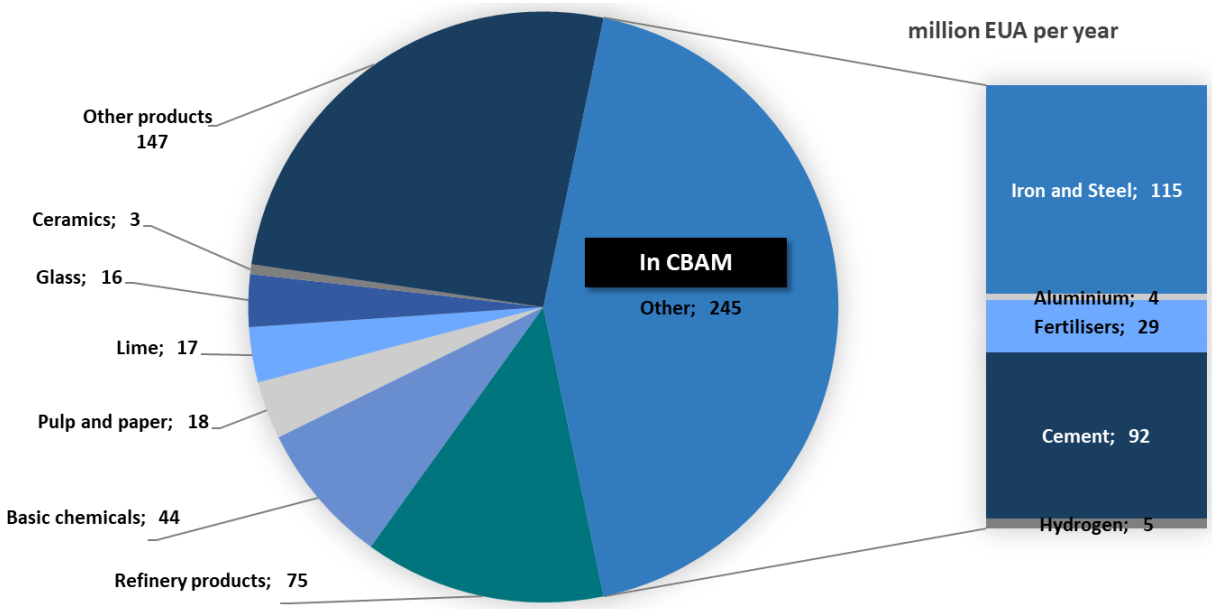
We extracted trade data from Eurostat's Comext database, which covers about 20,000 product types split between 100 main "families".

3.2.1. Coverage

EU imports from China covered by the CBAM Regulation represent €13.4 bn (2.82%) out of €474 bn Chinese exports to Europe in 2021, in value. Despite being limited in its number of sectors, the current scope of the CBAM is said as covering over 50% of the emissions in ETS-covered sectors once it is fully phased in, according to the Commission.[55] According to our own calculations, the CBAM would however only remove 43.4% of the free allowances given to industry under the EU ETS. This number is down from a previous estimate of 47%, which we adjusted due to the exemption of numerous upstream products ('precursors') from the emission scope.

[55] See https://ec.europa.eu/commission/presscorner/detail/en/IP_22_7719

Figure 12: **Free allowances received by industrial sectors in 2021**



Source: Sandbag, using EU ETS data

3.2.2. CBAM costs

CBAM fees charged to importers

The following gives an estimate of the CBAM fees paid by importers of Chinese goods, under the scenarios presented in Section 3.1.5 (Scenarios), with three levels of emissions intensity. The fee is based on the formula shown in section 2.3 after full phase-in, i.e. when free allocation for the goods is zero:

Figure 13: **CBAM cost from 2034 onwards**

Source: European Commission

Our estimates of the CBAM's total CBAM cost for importers of Chinese goods are between €313m (in a 'resource shuffling' scenario) and €695m in a 'default values' scenario. In a 'business-as-usual' scenario, where importers duly report emissions without changing trade patterns, it would be €590m.

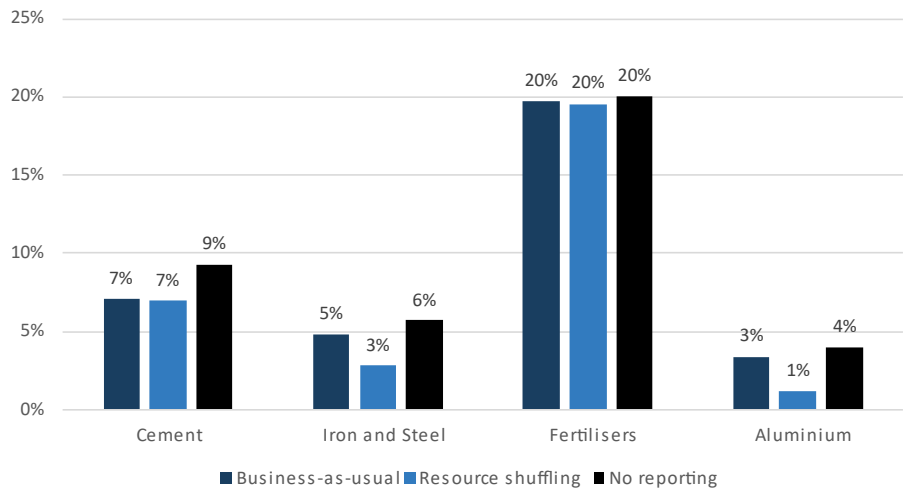
Table 7: **CBAM fees paid by importers of Chinese good, in €**

Scenario	Business as usual	Resource Shuffling	No reporting
Iron and Steel	447,728,001	259,237,795	528,502,959
Aluminium	136,695,582	47,723,047	160,704,044
Fertilisers	5,080,699	5,033,991	5,159,430
Cement	640,755	632,767	847,867
Chemicals	-	-	-
Electricity	-	-	-
Total	590,145,037	312,627,600	695,214,300

Source: Sandbag. For the rest of this report, calculations are based on the assumption of a full phase-out of free allocation for the sectors covered by the CBAM, as planned by EU regulation from 2034 onwards.

The value of the goods covered by the CBAM Regulation represented €13.4bn of the €474bn goods imported from China, i.e. only 2.82%. Actual CBAM fees represent only 0.12% of total traded amounts, even though for some of the goods covered such as fertilisers, they can be a significant share of the product's value (see Figure 14). Those estimates have been revised downwards as a result of the exclusion of some emissions from the scheme's scope (coking, waste gases exported from blast furnaces…) and a more granular analysis.

Figure 14: **CBAM fees paid as percentage of the value of goods imported from China**



Source: Sandbag, based on data from Eurostat, the European Commission and academic publications

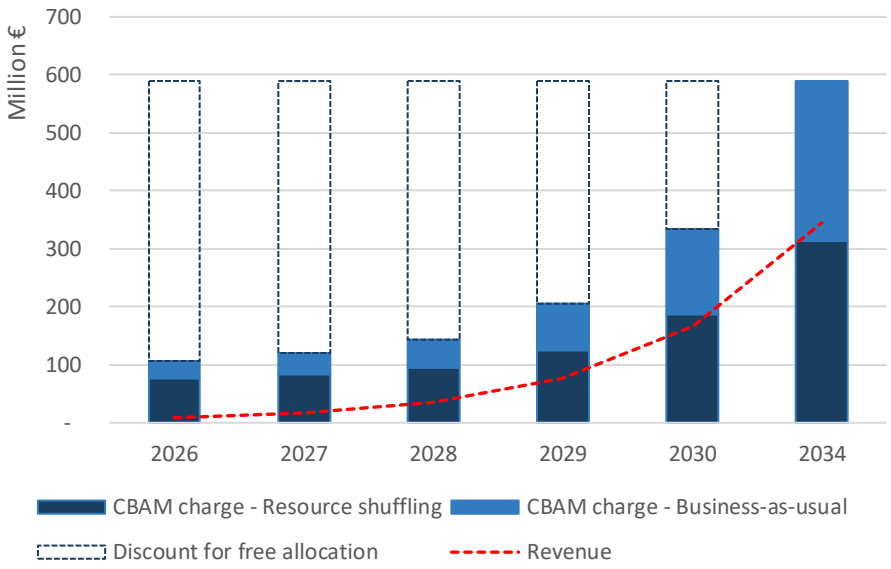
Ramp-up of CBAM charge from 2026-2034

During 2026-34, the number of CBAM certificates required from importers will be discounted by an amount corresponding to the number of emission allowances that the exporting factories would receive, were they located in Europe, as per the formula in Figure 5. From a total €590m for China, a discount corresponding to the 97.5% remaining free allocation would be applied in 2026, bringing the CBAM charge down to €107m. This discount will gradually decrease down to zero in 2034.

Free allocation during that period is not yet known with precision, as it depends (for the period 2026-30) on production levels for the period until 2023, as per the Free Allocation Regulation. We therefore had to

make assumptions on free allocation, as well as on production processes used by exporting factories, to produce the chart on Figure 15. We did not risk any assumption for free allocation over 2031-33.

Figure 15: **CBAM charge, discount for free allocation and revenue, for Chinese goods**



Source: Sandbag, based on data from Eurostat and the European Commission

Revenue from price effect, Net CBAM cost

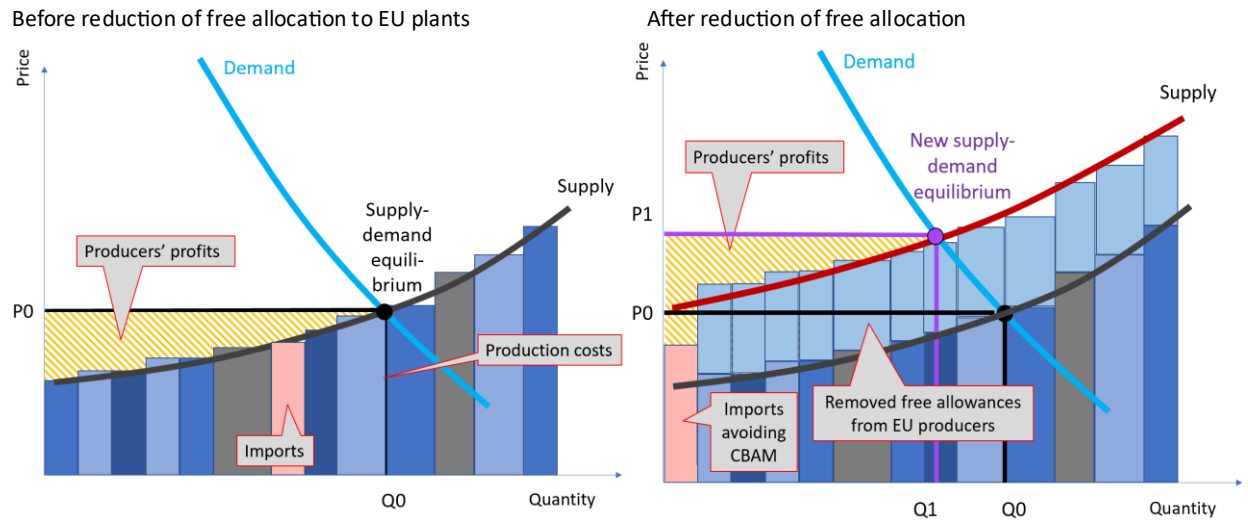
Free allocation (FA) under the EU ETS will have a double-sided effect on CBAM costs. At the same time as a decreasing discount from CBAM charges will be apply during the CBAM's ramp-up period to compensate for the FA still in place, a revenue effect will appear and grow as market prices increase in Europe for CBAM-covered goods.

This is because, as free allowances are phased out, EU-located factories will bear increasing carbon costs under the EU ETS, which they will aim to pass through to their clients. The proportion of those costs that firms can pass on to their customers (the ***cost pass-through rate***) depends on the shape of the demand and supply curves of the product. In the example illustrated in Figure 16, the carbon costs caused by reduced free allocation create an upward shift of the supply curve, which will intersect the demand curve at a higher equilibrium price than before. Profit margins are mostly preserved thanks to the higher price, but the demand decreases slightly, which limits the price increase.

As explained by an economics text book, "the more keenly consumers decrease purchases in response to a price rise (i.e. the flatter or more 'elastic' the demand curve) and the less responsive are firms' output decisions to changes in price (i.e. the steeper or more 'inelastic' and upward sloping is the supply curve), the lower the degree of pass-through."[56] We did not estimate the cost pass-through rate of the particular goods covered by the CBAM, but we can guess that their demand is relatively inelastic/steep (being essential materials) and their supply elastic/flat (having homogeneous production processes), which both characterise high pass-through rates.

[56] See page 14, RBB Economics for the Office of Fair Trading in UK, (February 2014) *Cost pass-through: theory, measurement, and potential policy implications.*

Figure 16: ***impact of phasing out free allocation on EU market prices***



Source: Sandbag

When applied to carbon pricing, economic theory cited in a study[57] indicates that "under full carbon price internalization, pass-through rates should typically be close to 100%." *Full carbon price internalization* is described as the combination of perfect competition, the integration of carbon prices into decision-making and the same carbon price applying to all firms that compete on the same market product. This, the study says, would be achieved through "a move to full auctioning" of emission allowances "combined with a border carbon adjustment that mirrors the domestic carbon price in international trade", which is exactly what will happen once the CBAM is fully implemented.

Rather than 100%, we assume a more conservative cost pass-through rate of 80%. This is lower than some results found by different studies for electricity ("at least 84 %, with a central range of 98 %–104 % for different load periods"[58]) and cement (89%[59]). Our estimated price increase does not take into account the reduction of free allocation unrelated to the CBAM, which will be significant in 2026.

Another assumption here is that the CBAM will not result in significant changes in trade patterns. Import may become more profitable than they currently are (see pink bar before and after the CBAM) but do not end up flooding the EU market. This condition is important for keeping pass-through rates high. Pass-through rates would decrease if cheaper imports started flooding EU markets as a result of ETS costs, which the Commission is mandated to prevent as part of the CBAM legislation.

The combination of CBAM charges and price effect due to free allocation phase out may have a positive or negative impact on the profitability of imported goods, depending on their embedded carbon. For example, comparing current steelmaking technologies, shown in Figure 17, lower carbon technologies such as electric arc furnaces (EAF) with 50% direct reduced iron (DRI) could profit from the CBAM, once price increases are considered. Meanwhile, higher carbon technologies, such as the standard blast furnace

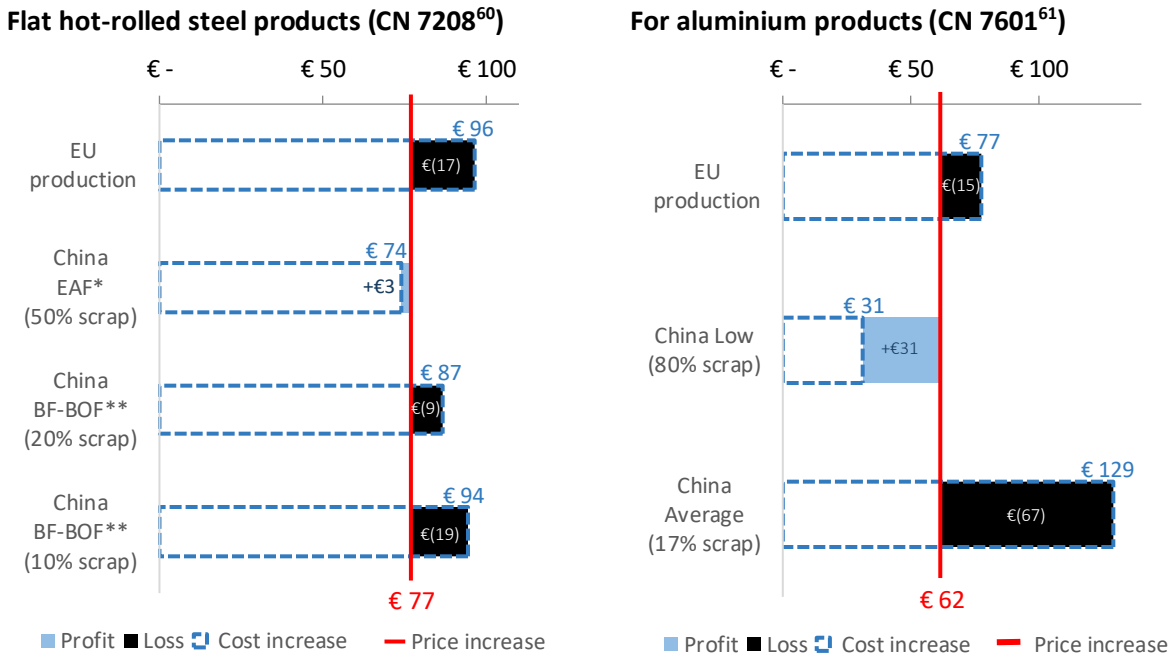
[57] Karsten Neuhoff and Robert A. Ritz (October 2019) Carbon cost pass-through in industrial sectors

[58] Pass through of CO2 Emission Costs to Hourly Electricity Prices in Germany, CESifo, September 2014

[59] Miller, Osborne and Sheu (2017): Pass-through in a concentrated industry: empirical evidence and regulatory implications

– basic oxygen furnace (BF-BOF) integrated steelmaking route are likely to face CBAM costs in excess of the additional revenue from price increase. For aluminium, imported goods made from 80% scrap become more profitable, whereas imports made from only 17% scrap become less profitable.

Figure 17: **Cost vs. revenue increase (from price effect) caused by the CBAM and EUETS (in € per tonne of product)**



* EAF: electric arc furnace; ** BF-BOF: blast furnace with basic oxygen furnace

Source: Sandbag, using data from JRC and the European Commission

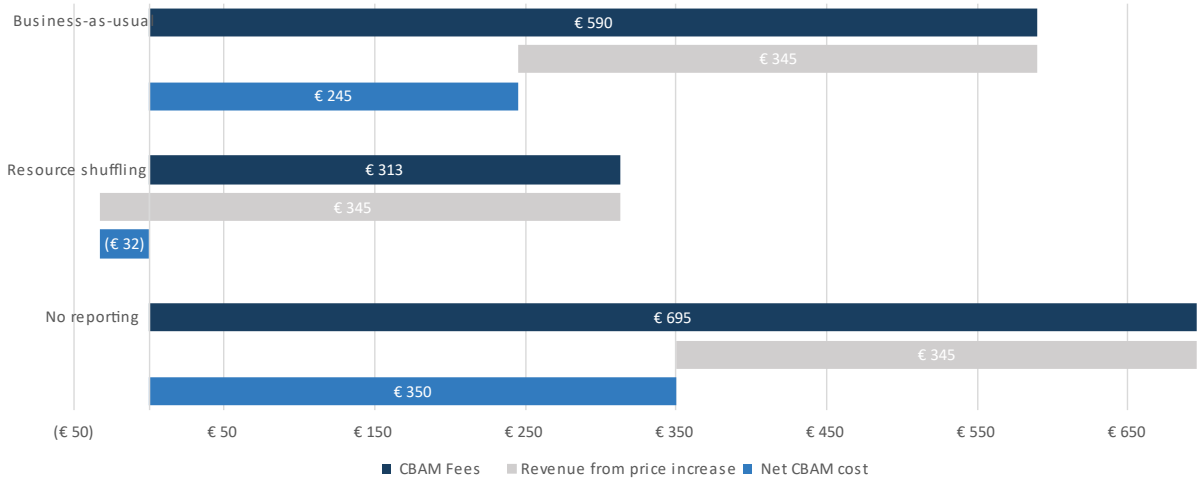
The overall consequence of those three possible reactions to the CBAM is illustrated in Figure 18. In the 'resource shuffling' scenario, importers of Chinese goods make a small net profit, whereas in the other two scenarios they make a net loss. 'Net cost' represents the CBAM charge minus the added revenue expected from rising product prices.

It should be noted that the value under the business-as-usual scenario (€590m) is higher than the one we had projected in our "Storm in a Teacup" report in 2021 (€485m) based on the European Commission's proposal made at the time. The higher amount is due to the scope extension that happened between the Commission's initial proposal and the scheme's final scope. However, we find relatively lower CBAM fees per value traded.

[60] Flat-rolled products of iron or non-alloy steel, of a width >= 600 mm, hot-rolled, not clad, plated or coated

[61] Unwrought aluminium

Figure 18: **CBAM fees paid vs. net costs for Chinese importers**



Source: Sandbag, using data from Eurostat and the European Commission

3.2.3. Cost to Europe's main trade partners

This section analyses the impact of the CBAM on the EU's major trading partners, to compare China with its competitors. Exporters of the most carbon-intensive sectors (steel, aluminium, etc.) into the EU, according to the Comext database, are a mix of large producing countries and smaller states that are neighbours of the EU.

The Ukraine conflict

Table 8: **Value of imports from Russia and Ukraine in 2021, in €**

Tonnes	Ukraine	Russia	Russia with sanctions
Iron and Steel	5,939,298,512	8,866,178,545	5,707,390,289
Aluminium	46,904,903	2,249,071,451	2,082,223,334
Fertilisers	293,590,826	1,972,513,887	1,972,513,887
Cement	136,817,382	595,742	1,334
Electricity	71,833,852	562,832,638	562,832,638
Total	6,488,445,475	13,651,192,263	10,324,961,482

Source: Eurostat

In response to the military conflict between Russia and Ukraine, the EU banned the imports of certain products from Russia, including products from sectors covered by the CBAM proposals: iron and steel, fertilisers, aluminium and cement (Articles 3i and 3g in Council Regulation 2023/427). Nevertheless, a decrease can't be seen in fertilisers and cement because the import quantities of banned products in these categories are already zero to start with. Quotas have also been introduced for fertilisers, however, the quantity allowed is already more than the quantities imported from Russia in 2021, hence these quotas do not affect our estimates of CBAM fees.

Table 9: **Traded value of the products subject to an import ban**

	Traded value in 2021 (€)
Iron and steel	3,158,788,256
Aluminium	166,848,117
Fertilisers, Cement, and Electricity	594,408
Total Value - Banned products	3,326,230,781
Total Value - All products	13,651,192,263
Share of banned products	24%

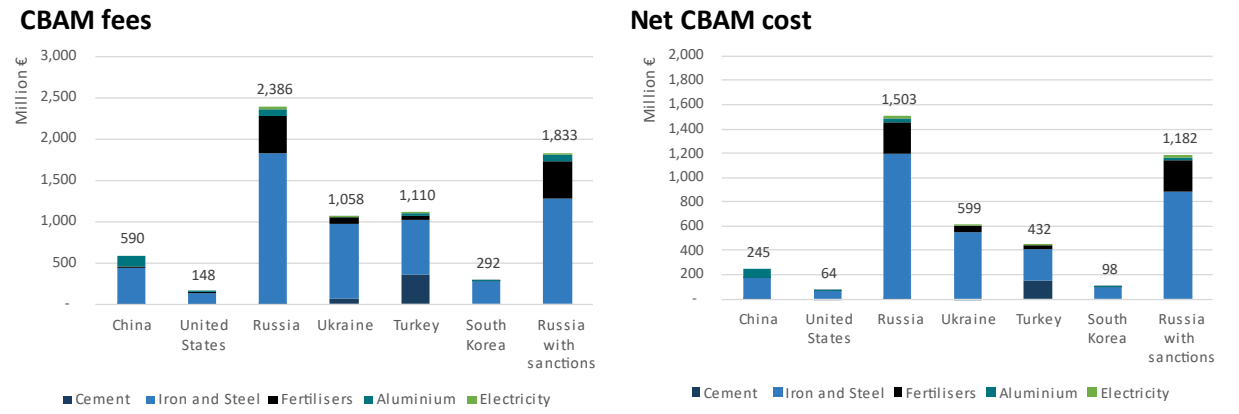
Source: Sandbag, Eurostat

Major trade partners

The graphs below show the CBAM amount due by five major economies that were significant trading partners in 2021: the US, Turkey, Russia, Ukraine, and South Korea. In response to Russian's military intervention in Ukraine, the EU banned the imports of certain products from Russia, as described in Council Regulation 2023/427. The effect of these restrictions on CBAM costs is shown under the "Russia with sanctions" label in Table 5.

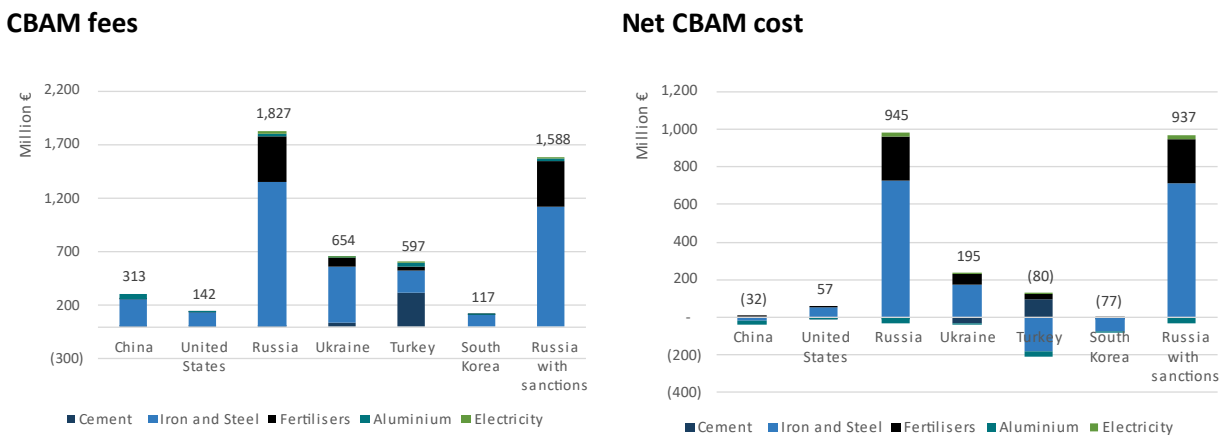
The estimated CBAM fees and net costs are given after the full implementation of the CBAM (and full phase-out of free allocation). Net costs are the CBAM cost minus additional profits made from higher selling price in the EU. These values use the estimated country average emissions intensity for each benchmark. Where there was insufficient data found, EU average values were used.

Figure 19: **Business-as-usual scenario**



Source: Sandbag, based on data from Eurostat and the European Commission

Figure 20: **Resource shuffling scenario**



Source: Sandbag, based on data from Eurostat and the European Commission

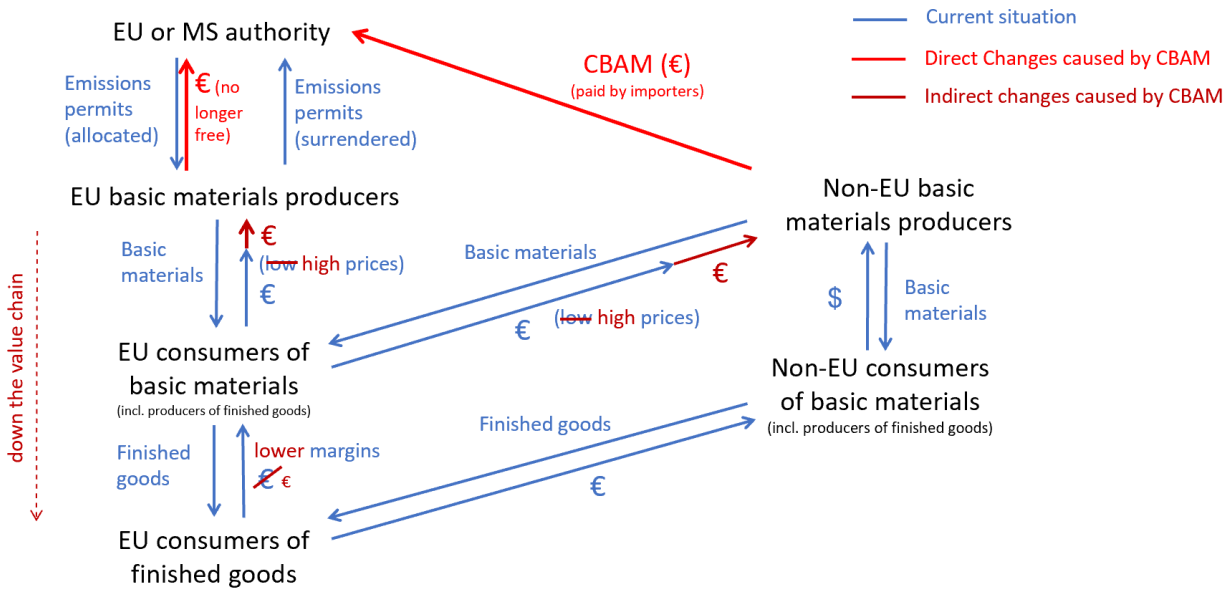
The results show that CBAM fees paid by any single country will not exceed the €1bn mark, except for Russia. Net CBAM costs for importers can be very small and even negative, on average, for some countries.

3.2.4. Cost to European industry

Charging CBAM fees and phasing out free allocation does not only impact importers of CBAM goods and producers covered by the EU ETS. Figure 17 illustrates the indirect impact down the value chain, in particular for industrial consumers, domestic and foreign-based. In summary:

- ✓ The EU or a relevant public authority collects the CBAM, raising funds. In addition, public finances benefit from the proceeds of selling emissions allowances, which are no longer given for free.
- ✓ EU basic material production plants pay more for their emissions permits, but pass those costs through to consumers to protect their profit margins. They are equally off, except for the potentially reduced demand for goods that have become more expensive.
- ≈ Importers of Chinese basic materials pay the CBAM fees, but can enjoy higher selling prices in the EU market, which helps them recovering costs.
- ✘ EU consumers of basic materials face higher costs, among which are producers of finished goods. As finished goods are not covered by a CBAM, EU manufacturers that use basic materials as inputs cannot pass the cost of more expensive basic materials through to the selling prices of finished goods. They need to squeeze their margins to remain competitive.
- ✓ Chinese consumers of basic materials do not bear carbon costs. Producers of finished goods can keep selling their goods for the same price as before, keeping their margins untouched, unlike their European peers.

Figure 21: **Impact of a CBAM on different stakeholders**



Source: Sandbag

Impact on supply chains

Increasing prices of basic materials is likely to have an impact on the trade of products down the value chain of some finished products. Below we analyse the effect on two products with large contents of steel.

Example 1: an offshore wind farm

This paragraph analyses potential effects on the real-life example of an offshore windfarm which was built in the North Sea. The total budget for the final client for this 300+MW wind farm comprising 54 wind turbine generators (WTG) was €1bn, of which most was for the EPCI contracts (Engineering, Procurement, Construction and Installation) of the farm's main elements.

All the main elements were manufactured in the EU, where steelmakers receive free CO_2 permits. If those free permits were removed as the CBAM enters into force, and carbon costs were passed through to the final product, it would cost more to manufacture wind farms in Europe than currently, which could comparatively benefit suppliers based overseas.

Table 10 shows that a carbon price of €60, if the carbon costs were passed through to the client as described in the previous section, would raise the overall price by 0.65%, which would probably not materially affect the demand for EU-made wind farms overall. However, one of the farm's elements could suffer from overseas competition: EU-made foundations (i.e. sets of two long tubes called 'monopiles' and 'transition pieces' screwed together) would become 5.06% more expensive. Given the very specific transport conditions of these elements, it is unlikely that those would be sourced from remote areas, so the risk of carbon leakage related to this product seems however limited.

Transition pieces awaiting transport onto an offshore windfarm's site. (c) Sandbag 2016

Table 10: **Cost to EU manufacturer of an offshore wind farm (assuming a carbon price of €60)**

	#	Weight	EPCI price per item (m€)	CO2 cost per item (m€)	CO2 cost of EPCI (%)	CO2 cost of procurement (est, %)	Total CO2 cost (m€)
Foundations	54	1,007	2.30	0.078	3.38%	5.06%	4.192
Offshore substation	1	5,200	80.00	0.401	0.50%	0.75%	0.401
WTG	54	455	9.80	0.035	0.36%	0.54%	1.894
Other	1	-	260.00		0.00%	0.00%	-
Total	-	84,148	993.40		0.65%	1.33%	6.488

Source: Sandbag

Example 2: Passenger vehicles

A car is broadly speaking made up of the following materials shown in the Figure 19, with examples of where these materials are used.

Of these materials shown above, only steel and aluminium are covered by the CBAM. As explained in the previous case study, the CBAM cost pass through will increase the cost of these basic materials for an EU car manufacturer. In 2034, once free allocation is removed and the CBAM is paid in full, the additional cost passed through to the EU car manufacturer is assumed to be based on the amount of free allocation removed. Table 11 below shows an estimate of the cost increase to the EU car manufacturer in 2035.

Figure 22: **Common materials used in the manufacturing of a car.**

Source: Allianz Australia

Table 11: **Cost to EU manufacturer of a passenger vehicle (assuming a carbon price of €60)**

Material	Weight (kg)	Direct Emissions Intensity (tCO2/t)	Additional Cost (with carbon €60/tCO2)
Steel	900	1.285	69.39
Aluminium	211	1.279	16.19
Total			85.58

Source: Sandbag

While the price increase shown in the table may represent a relatively large proportion of the cost of the basic material, a €85.58 increase to the price of a car worth, say, €15,000 is less significant.

Cost to EU exporters

The CBAM creates extra costs for EU manufacturers using products covered by it, as soon as the other existing compensations for carbon costs are removed (as seen with the example of passenger vehicles). This will somehow reduce profit margins for European manufacturers exporting their products to the rest of the world, unless some equivalent compensation is set up for exporters. Without such compensation, Chinese (and other foreign-built) products would become financially more attractive comparatively than EU-built ones.

3.3. Ancillary costs

Some costs have been ignored in these results. As well as charges and price effects, the CBAM creates new obligations for importers to fill in quarterly (and in the future, yearly) declarations. Foreign manufacturers have to report yearly the activity of their factories, starting with the year 2023. These obligations require to mobilise resources (labour and sometimes equipment) which also come at some cost. They include:

- For importers:
    - for each type of CBAM good imported, getting quantitative data from the manufacturing plants which produced those types of goods in the previous year;
    - entering quarterly declarations into the CBAM registry.
- For foreign manufacturers:
    - reporting inputs, outputs, types of process and carbon price already paid;
    - in some (rare) cases, measuring greenhouse gas emissions using specific equipment;
    - from 2026, pay accredited verifiers to verify emission reports.

The cost of those activities is difficult to estimate and varies across firms. For example, larger firms might bear relatively lower unitary costs as the marginal effort becomes small once the teams and processes are in place. CBAM declarations are quite similar to custom declarations already filled in by importers. Moreover, some firms might already report a large part of the data required by the CBAM to their customers as as part of ESG requirements, which makes the specific CBAM work smaller. And importantly for competition aspects, most of the reporting required from CBAM goods manufacturers is exactly the same as the one currently done by EU-based manufacturing plants covered by the EU ETS.

4. Possible evolution of the CBAM

The CBAM is designed as self-transforming regulation, so its features might look quite different in the future from what they are now. This section explores the drivers of potential change.

4.1. Scheduled reviews and reports

During the transitional period (1 October 2023 – 31 December 2025) and beyond, the Commission will be fulfilling several reporting obligations to continually evaluate the CBAM throughout its features and impact across different frameworks already in place. Article 30 of the CBAM Regulation sets out these obligations.

Before the end of the transitional period, the Commission is required to publish two reports. The first one (due by the end of 2024) will identify downstream products within the goods covered by the Regulation that are susceptible to carbon leakage and recommend their inclusion in the CBAM. To accomplish this, the Commission will develop a methodology that considers the overall greenhouse gas emissions produced and the risk of carbon leakage.

The second report (due by the end of 2025) will assess potential expansions to the CBAM's scope, such as:

- indirect emissions for goods that are currently only accounted for direct emissions;
- embedded emissions related to the transport and transportation services of goods covered by the Regulation;
- additional goods at risk of carbon leakage beyond those already agreed upon, with a particular focus on organic chemicals and polymers, and
- other input materials (precursors) used in the production of goods covered by the Regulation.

In addition, the report will:

- Define criteria to systematically identify goods at risk of carbon leakage for inclusion in the Regulation, accompanied by a timetable for their gradual incorporation by 2030.
- Assess technical requirements for calculating embedded emissions for goods to be potentially included in the Regulation.
- Provide updates on global climate action discussions following the implementation of the CBAM.
- Evaluate the governance system and associated administrative costs of the CBAM.
- Assess the impact of the Regulation on imported goods from developing countries, with a focus on Least-Developed Countries, with an analysis on the effects of technical assistance provided to them in relation to the CBAM.
- Assess the methodology used to calculate embedded indirect emissions.

Based on the shortcomings identified in this second report, the Commission will propose legislative measures to address these issues, particularly regarding the extension of the product scope of the Regulation.

Later on, the Commission will publish a series of reports to monitor the functioning of the CBAM. The first report is due before 1 January 2028 and the following ones every two years thereafter. These reports will examine the impact of the CBAM on:

- Carbon leakage, specifically its occurrence in relation to exports and the potential for rebates.
- EU industry in sectors covered by the CBAM.
- The internal market, encompassing the economic and territorial implications across the EU.
- Inflation and commodity prices for the value chain of goods subject to the CBAM.
- Domestic downstream industries that utilise goods covered by the CBAM.
- International trade, including any resource shuffling effects.
- Least-Developed Countries.

These bi-annual reports will also assess:

- The governance system, including an evaluation of the implementation and administration of CBAM declarant authorizations by Member States.
- The scope of the Regulation, considering its coverage and applicability.
- Practices of circumvention and measures to address them.
- The enforcement of penalties in Member States.
- Results of investigations conducted and penalties imposed.
- Aggregated information on the emission intensity for each country of origin regarding the different goods covered by the CBAM.

In addition, the Commission will assess the risk of carbon leakage associated to goods produced in the EU and exported to third countries that are not subject to carbon pricing. If such risk is identified, it will propose legislative measures to address it a WTO-compatible way.

Lastly, the Commission will assess the impact of the financing provided under the Regulation and how it has contributed to the decarbonisation of manufacturing industries in Least-Developed Countries.

4.2. Past stakeholders' positions

Each of the reports mentioned above will most likely provoke strong reactions from the Parliament and the Council upon their publication and may require further amendments or additions to EU legislation. In addition, as previously mentioned in Section 2.7.4 of this report, the Commission has been empowered to adopt several delegated acts to amend and supplement parts of the CBAM Regulation between May 2023 and May 2028 – as detailed in Article 28 of the Regulation. The European Parliament and Council will still have the possibility to object to each of these delegated acts during the first two months of notification of these acts. Consequently, it is interesting to look back at the co-legislators' previous positions expressed during the trilogues to better understand possible future points of contention.

4.2.1. Export rebates

In their March 2021 resolution on the CBAM and its compatibility with WTO rules, the Parliament urged the Commission to consider the possible introduction of export rebates for European industries to ensure a global level playing field. This argument was also supported by key European industries, including the

European steel industry association. The Parliament proposed that EU producers continue receiving free allocations under the ETS for any export to third countries lacking carbon pricing mechanisms equivalent to the EU ETS. The rationale behind this proposition was that the "carbon leakage protection", the CBAM offers, only addresses for imports, and that the elimination of free allowances under the ETS would leave EU producers at a competitive disadvantage when exporting their more expensive products to countries with less stringent climate standards.

In contrast, the Council suggested to exclude export compensations in its March 2022 general approach. Although some Member States (in particular Belgium, as we were told) expressed support for export compensations, they lacked sufficient voting power to influence the general approach. There were unresolved issues with the idea of export rebates, including potential retaliation from trade partners but also the risk that some goods could evade carbon pricing policies all together if they were subsidised in importing (non-EU) countries, too.

During the trilogues, the co-legislators were not able to find an agreement on this issue and thus resorted to mandate the European Commission to regularly review the impacts of the ETS and the CBAM on EU exports, and to assess the need for measures such as export rebates as well as their compatibility with WTO rules. The first review due before 1 January 2028, and the following reviews will take place every two years thereafter.

The European Commission's priority is to make sure the CBAM implementation remains in line with WTO rules. However, it will likely explore the question of export rebates and alternative solutions as part of the report on the functioning of the EU ETS (due in Q4 2024) and the report on the functioning of the CBAM (due in Q4 2025). The European Commission will assess the risks of carbon leakage in both reports, and pay particular attention to goods produced in the EU and destined for exports. Depending on the findings, the European Commission will be entrusted to provide a WTO-compliant legislative proposal to address these risks.

4.2.2. Scope (products)

When the Parliament adopted its position on the CBAM Regulation on 22 June 2022, it supported a broadening of the scope of the Commission's proposal to include hydrogen, ammonia, organic chemicals, and polymers. Yet only hydrogen was added to the final list of goods covered by the CBAM. As mentioned in the previous section of this report, the Commission will present a report to the Parliament and the Council before the end of the transitional period which will assess, inter alia, the possibility to extend the scope to organic chemicals and polymers. The publication of this report will most certainly reopen the debate around this issue.

During the drafting stage of the Parliament's position in 2022, the ENVI Committee had also expressed its wish to withdraw the gradual phase-out of free allocations for the cement sector all together and instead include it immediately. Although this proposal was not included in the final text presented in plenary, it demonstrates a political will within the Parliament to further reinforce the CBAM's provisions for the cement sector, which may resurface before the end of the transitional period.

4.2.3. Indirect emissions

In their position, the Parliament put forth the proposal that the CBAM should encompass both direct and indirect emissions from the beginning. They identified 'embedded emissions' as a combination of direct emissions and indirect emissions released during the production of goods and the electricity consumed during their production processes. Conversely, the Council supported the Commission's proposal, which advocated for a phased approach to the CBAM and the possibility to extend its scope to include indirect emissions following further evaluation. According to the Council, the CBAM should initially focus on direct emissions generated during the production of goods until they enter the Union's customs territory. Only after a transitional period and subsequent assessment should it also cover indirect emissions.

As part of the final compromise on the CBAM Regulation, financial obligations will be imposed for indirect emissions of cement and fertiliser imports starting from 2026. However, the first Commission's report, due before the end of the transitional period will re-examine the possibility of expanding the financial obligations to include all indirect emissions, as well as additional precursors.

4.2.4. Exemption for poorer countries

In June 2022, the Parliament highlighted the importance of addressing the impacts of the CBAM for Least Developed Countries and Small Island Developing States. They proposed the introduction of either exemptions or extended transitional periods for these countries so as to mitigate any negative impacts on their development. Yet the adopted Regulation does not provide such exemptions unless a country is already subject to the EU ETS or a similar carbon pricing mechanism. The Commission's annual evaluations of the impacts of the CBAM on international aid – as set out in its Global Europe programme – will however provide an opportunity to re-evaluate the question of exemptions for Least Developed Countries and Small Island Developing States.

4.2.5. Use of revenues

The Commission recently proposed a mechanism in the context of the 2021-2027 EU budget review regarding the utilisation of revenues generated from the implementation of financial obligations in 2026.[62] According to this proposal, the competent authority of the Member State where the CBAM declarant is located will be responsible for collecting CBAM revenues. Under this mechanism, Member States will retain 25% of the CBAM revenues, while the remaining 75% will go into the EU budget. Member States will be required to make the necessary transfers in February each year, following the Commission's annual call for funds. There is currently limited scope for alterations to this arrangement, as both the Parliament and the Council are in favour of maintaining the status quo and keeping the revenues generated by the CBAM within the EU budget.

[62] See https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_3329

5. A game with no clear winner

The CBAM has mobilised the public debate in Europe around issues such as its disrupting effect on industry by replacing free emission permits, its combination with support schemes to large electricity users and its treatment of exporting industries. Overseas, it has raised fears on its protectionist appearance, the use of the revenues it will raise and its cost to importers of goods into Europe. This report finds that, although the CBAM will make some of Europe's trading partners worse off than others, its effect might not be negative for all of them. Above all, its most negative effect might be on the EU itself, by making its steel, aluminium, cement and fertilisers more expensive.

As the EU is collecting data during the CBAM's transitional period, importers must wonder how to best respond to this new reality, which will start impacting them financially in 2026. Some might want to exploit the scheme's weaknesses by enjoying a competitive advantage over Europe on the more finished goods that are not covered by the scheme, or redirecting low-carbon goods to Europe while keeping the rest for other markets, without really changing their production methods.

However, the EU also has a few cards up its sleeve to react. Not least, the CBAM is designed as a moving instrument, with reviews and revision clauses and a mandate given to the Commission to take action to address evidence of circumvention. Special provisions are even included to propose solutions to the competitive disadvantage caused to EU exporters by the phasing out of free allocation under the EU ETS. Not to mention the inclusion of maritime emissions into the EU ETS, which adds more trade frictions.

All these elements make it difficult to predict who will come out better off or worse off with the CBAM. Rather than spending time arguing about winners and losers, a more constructive approach would consist of collectively working at fixing the problem the CBAM and EU ETS were created for in the first place: tackling greenhouse gas emissions.

Annex I – Scope of goods covered by CBAM

SOURCE: EUROSTAT COMEXT DATASET

ALUMINIUM

CN Code	Product	Traded quantity (tonnes)	Traded value (euros)
76	**ALUMINIUM AND ARTICLES THEREOF**		
7601	**Unwrought aluminium**	4,382	11,541,820
Downstream			
7603	**Powder and flakes, of aluminium (excl. pellets of aluminium, and spangles)**	1,188	5,350,549
7604	**Bars, rods and profiles, of aluminium, n.e.s.**		
76041010	Bars, rods and profiles, of non-alloy aluminium	216	1,335,802
76041090	Profiles of non-alloy aluminium, n.e.s.	5,452	24,191,539
76042100	Hollow profiles of aluminium alloys, n.e.s.	12,321	49,365,417
76042910	Bars and rods of aluminium alloys	1,535	5,792,633
76042990	Solid profiles, of aluminium alloys, n.e.s.	22,548	91,474,312
7605	**Aluminium wire (excl. stranded wire, cables, plaited bands and the like and other articles of heading 7614, electrically insulated wires, and strings for musical instruments)**	4,373	18,496,184
7606	**Plates, sheets and strip, of aluminium, of a thickness of > 0,2 mm (excl. expanded plates, sheets and strip)**	117,547	337,904,121
7607	**Aluminium foil, "whether or not printed or backed with paper, paperboard, plastics or similar backing materials", of a thickness "excl. any backing" of <= 0,2 mm (excl. stamping foils of heading 3212, christmas tree decorating material)**	98,961	320,751,998
7608	**Aluminium tubes and pipes (excl. hollow profiles)**	6,106	36,361,832
7609	**Aluminium tube or pipe fittings "e.g., couplings, elbows, sleeves"**		
76090000	Aluminium tube or pipe fittings "e.g., couplings, elbows, sleeves"	5,796	69,231,347
7610	**Structures and parts of structures "e.g., bridges and bridge-sections, towers, lattice masts, pillars and columns, roofs, roofing frameworks, doors and windows and their frames and thresholds for doors, shutters, balustrades", of aluminium (excl. prefabricated buildings of heading 9406)**		
76101000	Doors, windows and their frames and thresholds for door, of aluminium (excl. door furniture)	26,359	76,465,284
761090	Structures and parts of structures, of aluminium, n.e.s., and plates, rods, profiles, tubes and the like, prepared for use in structures, of aluminium, n.e.s. (excl. prefabricated buildings of heading 9406, doors and windows and their frames and thresholds for doors)		
76109010	Bridges and bridge-sections, towers and lattice masts, of aluminium	643	3,202,777
76109090	Structures and parts of structures, of aluminium, n.e.s., and plates, rods, profiles, tubes and the like, prepared for use in structures, of aluminium, n.e.s. (excl. prefabricated buildings of heading 9406, doors and windows and their frames and thresholds for doors, bridges and bridge-sections, towers and lattice masts)	148,076	506,472,635
7611	**Reservoirs, tanks, vats and similar containers, of aluminium, for any material (other than compressed or liquefied gas), of a capacity of > 300 l, not fitted with mechanical or thermal equipment, whether or not lined or heat-insulated (excl. containers specifically constructed or equipped for one or more types of transport)**		
76110000	Reservoirs, tanks, vats and similar containers, of aluminium, for any material (other than compressed or liquefied gas), of a capacity of > 300 l, not fitted with mechanical or thermal equipment, whether or not lined or heat-insulated (excl. containers specifically constructed or equipped for one or more types of transport)	105	866,905

7612	**Casks, drums, cans, boxes and similar containers, incl. rigid or collapsible tubular containers, of aluminium, for any material (other than compressed or liquefied gas), of a capacity of <= 300 l, not fitted with mechanical or thermal equipment, whether or not lined or heat-insulated, n.e.s.**	6,325	76,456,770
7613	**Aluminium containers for compressed or liquefied gas**		
76130000	Aluminium containers for compressed or liquefied gas	3,076	25,585,552
7614	**Stranded wire, cables, plaited bands and the like, of aluminium (excl. such products electrically insulated)**	8,960	18,597,413
7615	**Table, kitchen or other household articles, sanitary ware, and parts thereof, of aluminium, pot scourers and scouring or polishing pads, gloves and the like, of aluminium (excl. cans, boxes and similar containers of heading 7612, articles of the nature of a work implement, spoons, ladles, forks and other articles of heading 8211 to 8215, ornamental articles and fittings)**		
76151010	Table, kitchen or other household articles and parts thereof, and pot scourers and scouring or polishing pads, gloves and the like, of cast aluminium (excl. cans, boxes and similar containers of heading 7612, articles of the nature of a work implement, spoons, ladles, forks and other articles of heading 8211 to 8215, ornamental articles, fittings and sanitary ware)(2012-2500)	33,589	184,408,005
76151030	Table, kitchen or other household articles and parts thereof, of aluminium, manufactured from foil of a thickness <= 0,2 mm (excl. cans, boxes and similar containers of heading 7612)	1,326	6,261,227
76151080	Table, kitchen or other household articles and parts thereof, and pot scourers and scouring or polishing pads, gloves and the like, of uncast aluminium (excl. cans, boxes and similar containers of heading 7612, articles manufactured from foil of a thickness <= 0,2 mm, articles of the nature of a work implement, spoons, ladles, forks and other articles of heading 8211 to 8215, ornamental articles, fittings and sanitary ware)	110,683	615,028,508
76152000	Sanitary ware and parts thereof, of aluminium (excl. cans, boxes and similar containers of heading 7612, and fittings)	3,905	22,989,128
7616	**Articles of aluminium, n.e.s.**		
76161000	Nails, tacks, staples, screws, bolts, nuts, screw hooks, rivets, cotters, cotter pins, washers and similar articles, of aluminium (excl. staples in strips, plugs, bungs and the like, threaded)	2,724	31,710,928
76169100	Cloth, grill, netting and fencing, of aluminium wire (excl. cloth of metal fibres for clothing, lining and similar uses, and cloth, grill and netting made into hand sieves or machine parts)	1,218	7,189,879
76169910	Articles of aluminium, cast, n.e.s.	19,063	171,157,512
76169990	Articles of aluminium, uncast, n.e.s.(2017-2500)	113,598	829,370,393

CEMENT

CN Code	Product	Traded quantity (tonnes)	Traded value (euros)
25	**SALT**		
2523	**Cement, incl. cement clinkers, whether or not coloured**		
252310	Cement clinkers	5,260	2,355,469
252321	White portland cement, whether or not artificially coloured	-	352
252329	Portland cement (excl. white, whether or not artificially coloured)	99	32,570
252330	Aluminous cement	13,889	5,965,849
252390	Cement, whether or not coloured (excl. portland cement and aluminous cement)	143	120,358
Precursor			
2507	**Kaolin and other kaolinic clays, whether or not calcined**		

25070080	Kaolinic clays (other than kaolin)	1,713	636,303

ELECTRICITY

CN Code	Product	Traded quantity (tonnes)	Traded value (euros)
27	**Electrical energy**		
271600	Electrical energy	-	-

FERTILISERS

CN Code	Product	Traded quantity (tonnes)	Traded value (euros)
31	**FERTILISERS**		
3102	**Mineral or chemical nitrogenous fertilisers (excl. those in tablets or similar forms, or in packages with a gross weight of <= 10 kg)**		
310210	Urea, whether or not in aqueous solution (excl. that in tablets or similar forms, or in packages with a gross weight of <= 10 kg)	2,289	1,613,304
31022100	Ammonium sulphate (excl. that in tablets or similar forms, or in packages with a gross weight of <= 10 kg)	34,278	5,675,023
31022900	Double salts and mixtures of ammonium sulphate and ammonium nitrate (excl. goods of this chapter in tablets or similar forms or in packages of a gross weight of <= 10 kg)	8	3,844
310230	Ammonium nitrate, whether or not in aqueous solution (excl. that in tablets or similar forms, or in packages with a gross weight of <= 10 kg)	72	12,751
310240	Mixtures of ammonium nitrate with calcium carbonate or other inorganic non-fertilising substances for use as fertilisers (excl. those in tablets or similar forms, or in packages with a gross weight of <= 10 kg)	37	12,094
31025000	Sodium nitrate (excl. that in tablets or similar forms, or in packages with a gross weight of <= 10 kg)	-	406
31026000	Double salts and mixtures of calcium nitrate and ammonium nitrate (excl. those in tablets or similar forms, or in packages with a gross weight of <= 10 kg)	9,271	2,318,518
31028000	Mixtures of urea and ammonium nitrate in aqueous or ammoniacal solution (excl. those in packages with a gross weight of <= 10 kg)	4	1,375
3105	**Mineral or chemical fertilisers containing two or three of the fertilising elements nitrogen, phosphorus and potassium**		
310520	Mineral or chemical fertilisers containing the three fertilising elements nitrogen, phosphorus and potassium (excl. those in tablets or similar forms, or in packages with a gross weight of <= 10 kg)	794	945,129
31053000	Diammonium hydrogenorthophosphate "diammonium phosphate" (excl. that in tablets or similar forms, or in packages with a gross weight of <= 10 kg)(1998-2500)	849	755,194
31054000	Ammonium dihydrogenorthophosphate "monoammonium phosphate", whether or not mixed with diammonium hydrogenorthophosphate	20,161	13,335,982

	"diammonium phosphate" (excl. that in tablets or similar forms, or in packages with a gross weight of <= 10 kg)(1998-2500)		
31055100	Mineral or chemical fertilisers containing nitrates and phosphates (excl. ammonium dihydrogenorthophosphate "Monoammonium phosphate", diammonium hydrogenorthophosphate "Diammonium phosphate", and those in tablets or similar forms, or in packages with a gross weight of <= 10 kg)	13	10,187
31055900	Mineral or chemical fertilisers containing the two fertilising elements nitrogen (excl. nitrate) and phosphorus but not nitrates (excl. ammonium dihydrogenorthophosphate "monoammonium phosphate", diammonium hydrogenorthophosphate "diammonium phosphate" in tablets or similar forms, or in packages with a gross weight of <= 10 kg)	744	486,933
Precursor			
28	**INORGANIC CHEMICALS**		
2808	**Nitric acid**		
28080000	Nitric acid	0	3,687
2814	**Ammonia, anhydrous or in aqueous solution**	26	184,026
2834	**Nitrites**		
28342100	Nitrate of potassium	485	422,950

Iron and Steel

CN Code	Product	Traded quantity (tonnes)	Traded value (euros)
72	**IRON AND STEEL**		
7201	**Pig iron and spiegeleisen, in pigs, blocks or other primary forms**	187	351,705
7202	**Ferro-alloys**		
720211	Ferro-manganese, containing by weight > 2% of carbon	27	61,552
720219	Ferro-manganese, containing by weight <= 2% carbon	374	811,598
720241	Ferro-chromium, containing by weight > 4% of carbon	-	-
720249	Ferro-chromium, containing by weight <= 4% of carbon	1,075	2,436,127
72026000	Ferro-nickel	95	380,020
7203	**Ferrous products obtained by direct reduction of iron ore and other spongy ferrous products, in lumps, pellets or similar forms**	39	157,117
7205	**Granules and powders of pig iron, spiegeleisen, iron or steel (excl. granules and powders of ferro-alloys, turnings and filings of iron or steel, radioactive iron powders "isotopes" and certain low-calibre, substandard balls for ballbearings)**	8,664	44,500,126
7206	**Iron and non-alloy steel in ingots or other primary forms (excl. remelting scrap ingots, products obtained by continuous casting and iron of heading 7203)**		
72061000	Ingots, of iron and non-alloy steel (excl. remelted scrap ingots, continuous cast products, iron of heading 7203)	29	193,655
72069000	Iron and non-alloy steel, in puddled bars or other primary forms (excl. ingots, remelted scrap ingots, continuous cast products, iron of heading 7203)	995	11,764,294
7207	**Semi-finished products of iron or non-alloy steel**		

72071111	Semi-finished products, of non-alloy free-cutting steel, containing by weight < 0,25% carbon, of square or rectangular cross-section, the width < twice the thickness, rolled or obtained by continuous casting	20	25,814
72071114	Semi-finished products, of iron or non-alloy steel, containing by weight < 0,25% carbon, of square or rectangular cross-section, the width < twice the thickness of <= 130 mm, rolled or obtained by continuous casting (excl. free-cutting steel)	1,326	1,323,012
72071116	Semi-finished products, of iron or non-alloy steel, containing by weight < 0,25% carbon, of square or rectangular cross-section, the width < twice the thickness of > 130 mm, rolled or obtained by continuous casting (excl. free-cutting steel)	1	6,047
72071190	Semi-finished products of iron or non-alloy steel, containing by weight < 0,25% carbon, of rectangular cross-section, the width < twice the thickness, forged	85	64,824
72071210	Semi-finished products of iron or non-alloy steel, containing by weight < 0,25 of carbon, of rectangular "other than square" cross-section, the width measuring >= twice the thickness, rolled or obtained by continuous casting	1,714	994,548
72071290	Semi-finished products of iron or non-alloy steel, containing by weight < 0,25% carbon, of rectangular "other than square" cross-section, the width >= twice the thickness, forged	56	77,858
72071912	Semi-finished products, of iron or non-alloy steel, containing by weight < 0,25% carbon, of circular or polygonal cross-section, rolled or obtained by continuous casting	1,614	1,342,774
72071919	Semi-finished products of iron or non-alloy steel, containing by weight < 0,25% carbon, of circular or polygonal cross-section, forged	515	977,374
72071980	Semi-finished products of iron or non-alloy steel, containing by weight < 0,25% carbon (excl. semi-products, of square, rectangular, circular or polygonal cross-section)	953	2,044,901
72072011	Semi-finished products, of non-alloy free-cutting steel, containing by weight >= 0,25% carbon, of square or rectangular cross-section, the width < twice the thickness, rolled or obtained by continuous casting	193	607,665
72072015	Semi-finished products of iron or non-alloy steel, containing by weight >= 0,25% but < 0,6% carbon, of square or rectangular cross-section, the width < twice the thickness, rolled or obtained by continuous casting (excl. free-cutting steel)	24	9,576
72072017	Semi-finished products of iron or non-alloy steel, containing by weight >= 0,6% carbon, of square or rectangular cross-section, the width < twice the thickness, rolled or obtained by continuous casting (excl. free-cutting steel)	44	68,830
72072019	Semi-finished products of iron or non-alloy steel, containing by weight >= 0,25% carbon, of square or rectangular cross-section, the width < twice the thickness, forged	54	71,516
72072032	Semi-finished products of iron or non-alloy steel, containing by weight >= 0,25 of carbon, of rectangular "other than square" cross-section, the width measuring >= twice the thickness, rolled or obtained by continuous casting	1,689	1,809,499
72072039	Semi-finished products of iron or non-alloy steel, containing by weight >= 0,25% carbon, of rectangular "other than square" cross-section and the width >= twice the thickness, forged	0	1,780
72072052	Semi-finished products of iron or non-alloy steel, containing by weight >= 0,25% carbon, of circular or polygonal cross-section, rolled or obtained by continuous casting	3,686	3,347,864

72072059	Semi-finished products of iron or non-alloy steel, containing by weight >= 0,6% carbon, of circular or polygonal cross-section, forged	3,789	6,043,472
72072080	Semi-finished products of iron or non-alloy steel, containing by weight >= 0,25% carbon (excl. those of square, rectangular, circular or polygonal cross-section)	370	1,090,337
7208	**Flat-rolled products of iron or non-alloy steel, of a width >= 600 mm, hot-rolled, not clad, plated or coated**	28,044	18,817,742
7209	**Flat-rolled products of iron or non-alloy steel, of a width of >= 600 mm, cold-rolled "cold-reduced", not clad, plated or coated**	125,748	123,147,888
7210	**Flat-rolled products of iron or non-alloy steel, of a width >= 600 mm, hot-rolled or cold-rolled "cold-reduced", clad, plated or coated**	802,156	717,329,542
7211	**Flat-rolled products of iron or non-alloy steel, of a width of < 600 mm, hot-rolled or cold-rolled "cold-reduced", not clad, plated or coated**		
72111300	Flat-rolled products of iron or non-alloy steel, simply hot-rolled on four faces or in a closed box pass, not clad, plated or coated, of a width of > 150 mm but < 600 mm and a thickness of >= 4 mm, not in coils, without patterns in relief, commonly known as "wide flats"	0	311
72111400	Flat-rolled products of iron or non-alloy steel, of a width < 600 mm, not further worked than hot-rolled, not clad, plated or coated, of a thickness of >= 4,75 mm (excl. "wide flats")	142	178,128
72111900	Flat-rolled products of iron or non-alloy steel, of a width < 600 mm, simply hot-rolled, not clad, plated or coated, of a thickness < 4,75 mm (excl. "wide flats")	391	508,213
721123	Flat-rolled products of iron or non-alloy steel, of a width of < 600 mm, simply cold-rolled "cold-reduced", not clad, plated or coated, containing by weight < 0,25% of carbon	523	1,043,941
72112900	Flat-rolled products of iron or non-alloy steel, of a width of < 600 mm, simply cold-rolled "cold-reduced", not clad, plated or coated, containing by weight >= 0,25% of carbon	522	972,904
721190	Flat-rolled products of iron or non-alloy steel, of a width of < 600 mm, hot-rolled or cold-rolled "cold-reduced" and further worked, but not clad, plated or coated	587	945,868
7212	**Flat-rolled products of iron or non-alloy steel, of a width of < 600 mm, hot-rolled or cold-rolled "cold-reduced", clad, plated or coated**	8,156	16,169,530
7213	**Bars and rods of iron or non-alloy steel, hot-rolled, in irregularly wound coils**	27	91,366
7214	**Bars and rods, of iron or non-alloy steel, not further worked than forged, hot-rolled, hot-drawn or hot-extruded, but incl. those twisted after rolling (excl. in irregularly wound coils)**		
72141000	Bars and rods, of iron or non-alloy steel, not further worked than forged (excl. in irregularly wound coils)	36,432	31,233,823
72142000	Bars and rods, of iron or non-alloy steel, with indentations, ribs, groves or other deformations produced during the rolling process	3,543	2,331,061
72143000	Bars and rods, of non-alloy free-cutting steel, not further worked than hot-rolled, hot-drawn or hot-extruded (excl. containing indentations, ribs, grooves or other deformations produced during the rolling process or twisted after rolling)	4	7,218
721491	Bars and rods, of iron or non-alloy steel, not further worked than hot-rolled, hot-drawn or hot-extruded, of rectangular "other than square" cross-section (excl. containing indentations, ribs, grooves or other deformations produced during the rolling process, bars and rods twisted after rolling and free-cutting steel)	57	115,614

721499	Bars and rods, of iron or non-alloy steel, only hot-rolled, only hot-drawn or only hot-extruded (excl. of rectangular {other than square} cross-section and those containing indentations, ribs, grooves or other deformations produced during the rolling process, and of non-alloy free-cutting steel)	31,791	25,156,127
7215	**Bars and rods, of iron or non-alloy steel, cold-formed or cold-finished, whether or not further worked, or hot-formed and further worked, n.e.s.**	5,215	6,640,115
7216	**Angles, shapes and sections of iron or non-alloy steel, n.e.s.**	28,102	34,013,134
7217	**Wire of iron or non-alloy steel, in coils (excl. bars and rods)**		
721710	Wire of iron or non-alloy steel, in coils, not plated or coated, whether or not polished (excl. bars and rods)	18,299	24,919,926
721720	Wire of iron or non-alloy steel, in coils, plated or coated with zinc (excl. bars and rods)	42,369	52,413,914
721730	Wire of iron or non-alloy steel, in coils, plated or coated with base metals (excl. plated or coated with zinc, and bars and rods)	43,027	62,434,789
721790	Wire of iron or non-alloy steel, in coils, plated or coated (excl. plated or coated with base metals, and bars and rods)	8,924	14,861,872
7218	**Stainless steel in ingots or other primary forms (excl. remelting scrap ingots and products obtained by continuous casting)**		
72181000	Steel, stainless, in ingots and other primary forms (excl. waste and scrap in ingot form, and products obtained by continuous casting)	160	1,211,178
721891	Semi-finished products of stainless steel, of rectangular "other than square" cross-section	260	868,934
72189911	Semi-finished products of stainless steel, of square cross-section, rolled or obtained by continuous casting	5	48,257
72189919	Semi-finished products of stainless steel, of square cross-section, forged	92	448,320
72189920	Semi-finished products of stainless steel, of circular cross-section or of cross-section other than square or rectangular, rolled or obtained by continuous casting	64	745,918
72189980	Semi-finished products of stainless steel, forged (excl. products of square or rectangular cross-section)	251	1,669,313
7219	**Flat-rolled products of stainless steel, of a width of >= 600 mm, hot-rolled or cold-rolled "cold-reduced"**		
72191100	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than hot-rolled, in coils, of a thickness of > 10 mm	2,235	4,764,661
721912	Flat-rolled products of stainless steel, of a width of>= 600 mm, not further worked than hot-rolled, in coils, of a thickness of >= 4,7 mm and <= 10 mm	13,828	31,181,735
721913	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than hot-rolled, in coils, of a thickness of >= 3 mm and < 4,75 mm	14,040	21,912,338
721914	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than hot-rolled, in coils, of a thickness of < 3 mm	75	129,272
721921	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than hot-rolled, not in coils, of a thickness of > 10 mm	3,259	7,762,765
721922	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than hot-rolled, not in coils, of a thickness of >= 4,75 mm and <= 10 mm	449	781,121
72192300	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than hot-rolled, not in coils, of a thickness of >= 3 mm and < 4,75 mm	207	806,722

72192400	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than hot-rolled, not in coils, of a thickness of < 3 mm	164	444,873
72193100	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than cold-rolled "cold-reduced", of a thickness of >= 4,75 mm	1,185	3,014,902
721932	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than cold-rolled "cold-reduced", of a thickness of >= 3 mm but < 4,75 mm	2,800	6,567,115
721933	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than cold-rolled "cold-reduced", of a thickness of > 1 mm but < 3 mm	4,301	10,768,777
721934	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than cold-rolled "cold-reduced", of a thickness of >= 0,5 mm but <= 1 mm	5,827	12,641,452
721935	Flat-rolled products of stainless steel, of a width of >= 600 mm, not further worked than cold-rolled "cold-reduced", of a thickness of < 0,5 mm	1,717	5,289,084
721990	Flat-rolled products of stainless steel, of a width of >= 600 mm, hot-rolled or cold-rolled "cold-reduced" and further worked	13,072	30,719,966
7220	**Flat-rolled products of stainless steel, of a width of < 600 mm, hot-rolled or cold-rolled "cold-reduced"**		
72201100	Flat-rolled products of stainless steel, of a width of < 600 mm, not further worked than hot-rolled, of a thickness of >= 4,75 mm	82	240,487
72201200	Flat-rolled products of stainless steel, of a width of < 600 mm, not further worked than hot-rolled, of a thickness of < 4,75 mm	160	486,581
722020	Flat-rolled products of stainless steel, of a width of < 600 mm, not further worked than cold-rolled "cold-reduced"	3,211	13,195,523
722090	Flat-rolled products of stainless steel, of a width of < 600 mm, hot-rolled or cold-rolled "cold-reduced" and further worked	2,285	8,523,936
7221	**Bars and rods of stainless steel, hot-rolled, in irregularly wound coils**	6,834	16,541,546
722211	Bars and rods of stainless steel, only hot-rolled, only hot-drawn or only hot-extruded, of circular cross-section	2,669	3,793,464
722219	Bars and rods of stainless steel, only hot-rolled, only hot-drawn or only extruded (excl. of circular cross-section)	805	2,130,178
7222	**Other bars and rods of stainless steel**		
722220	Other bars and rods of stainless steel, not further worked than cold-formed or cold-finished	4,396	12,517,289
722230	Other bars and rods of stainless steel, cold-formed or cold-finished and further worked, or not further worked than forged, or forged, or hot-formed by other means and further worked, n.e.s.	547	2,364,077
722240	Angles, shapes and sections of stainless steel, n.e.s.	3,837	14,591,310
7223	**Wire of stainless steel, in coils (excl. bars and rods)**		
722300	Wire of stainless steel, in coils (excl. bars and rods)	23,052	74,715,279
7224	**Steel, alloy, other than stainless, in ingots or other primary forms, semi-finished products of alloy steel other than stainless (excl. waste and scrap in ingot form, and products obtained by continuous casting)**		
722410	Steel, alloy, other than stainless, in ingots or other primary forms (excl. waste and scrap in ingot form, and products obtained by continuous casting)	23	302,075
72249002	Semi-finished products of tool steel	443	1,805,855

72249003	Semi-finished products of high-speed steel, of square or rectangular cross-section, hot-rolled or obtained by continuous casting the width measuring < twice the thickness	6	63,837
72249005	Semi-finished products of steel containing by weight <= 0,7% of carbon, 0,5% to 1,2% of manganese, 0,6% to 2,3% of silicon, or of steel containing by weight >= 0,0008% of boron with any other element < the minimum content referred to in Note 1 f to chapter 72, of square or rectangular cross-section, hot rolled or obtained by continuous casting, the width measuring < twice the thickness	51	22,358
72249007	Semi-finished products of alloy steel other than stainless steel, of square or rectangular cross-section, hot-rolled or obtained by continuous casting, the width measuring < twice the thickness (excl. of tool steel, high-speed steel and articles of subheading 7224.90.05)	21	161,098
72249014	Semi-finished products of alloy steel other than stainless steel, of square or rectangular cross-section, hot-rolled or obtained by continuous casting, the width measuring >= twice the thickness (excl. of tool steel)	284	323,062
72249018	Semi-finished products of alloy steel other than stainless steel, of square or rectangular cross-section, forged (excl. of tool steel)	220	810,453
72249031	Semi-finished products of steel containing by weight 0,9% to 1,15% carbon, 0,5% to 2% of chromium and, if present, <= 0,5% of molybdenum, cut into shapes other than square or rectangular, hot-rolled or obtained by continuous casting	-	1,555
72249038	Semi-finished products of alloy steel, other than stainless steel, cut into shapes other than square or rectangular, hot-rolled or obtained by continuous casting (excl. of tool steel and products containing by weight 0,9% to 1,15% of carbon, 0,5% to 2% of chromium and, if present, <= 0,5% of molybdenum)	208	334,251
72249090	Semi-finished products of alloy steel, other than stainless steel, forged (excl. of tool steel and products of square or rectangular, circular or polygamol cross-section)	320	1,348,025
7225	**Flat-rolled products of alloy steel other than stainless, of a width of >= 600 mm, hot-rolled or cold-rolled "cold-reduced"**		
72251100	Flat-rolled products of silicon-electrical steel, of a width of >= 600 mm, grain-oriented	21,073	45,509,098
72251910	Flat-rolled products of silicon-electrical steel, of a width of >= 600 mm, hot-rolled	-	-
72251990	Flat-rolled products of silicon-electrical steel, of a width of >= 600 mm, cold-rolled "cold-reduced", non-grain-oriented	64,493	64,138,166
722530	Flat-rolled products of alloy steel other than stainless, of a width of >= 600 mm, not further worked than hot-rolled, in coils (excl. products of silicon-electrical steel)	1,106	808,222
722540	Flat-rolled products of alloy steel other than stainless, of a width of >= 600 mm, not further worked than hot-rolled, not in coils (excl. products of silicon-electrical steel)	18,102	23,107,851
722550	Flat-rolled products of alloy steel other than stainless, of a width of >= 600 mm, not further worked than cold-rolled "cold-reduced" (excl. products of silicon-electrical steel)	381	654,918
72259100	Flat-rolled products of alloy steel other than stainless, of a width of >= 600 mm, hot-rolled or cold-rolled "cold-reduced" and electrolytically plated or coated with zinc (excl. products of silicon-electrical steel)(2007-2500)	251	262,085

72259200	Flat-rolled products of alloy steel other than stainless, of a width of >= 600 mm, hot-rolled or cold-rolled "cold-reduced" and plated or coated with zinc (excl. electrolytically plated or coated and products of silicon-electrical steel)(2007-2500)	47,756	32,301,757
72259900	Flat-rolled products of alloy steel other than stainless, of a width of >= 600 mm, hot-rolled or cold-rolled "cold-reduced" and further worked (excl. plated or coated with zinc and products of silicon-electrical steel)(2007-2500)	466	911,020
7226	**Flat-rolled products of alloy steel other than stainless, of a width of < 600 mm, hot-rolled or cold-rolled "cold-reduced"**		
72261100	Flat-rolled products of silicon-electrical steel, of a width of < 600 mm, hot-rolled or cold-rolled "cold-reduced", grain-oriented	2,633	6,443,328
72261910	Flat-rolled products of silicon-electrical steel, of a width of < 600 mm, not further worked than hot-rolled	-	547
72261980	Flat-rolled products of silicon-electrical steel, of a width of < 600 mm, cold-rolled "cold-reduced", whether or not further worked, or hot-rolled and further worked, non-grain-oriented	1,964	3,506,520
72262000	Flat-rolled products of high-speed steel, of a width of <= 600 mm, hot-rolled or cold-rolled "cold-reduced"	522	3,391,511
722691	Flat-rolled products of alloy steel other than stainless, of a width of < 600 mm, not further worked than hot-rolled (excl. products of high-speed steel or silicon-electrical steel)	3,302	6,849,646
72269200	Flat-rolled products of alloy steel other than stainless, of a width of < 600 mm, not further worked than cold-rolled "cold-reduced" (excl. products of high-speed steel or silicon-electrical steel)	432	744,382
722699	Flat-rolled products of alloy steel other than stainless, of a width of < 600 mm, hot-rolled or cold-rolled "cold-reduced" and further worked (excl. products of high-speed steel or silicon-electrical steel)	550	1,933,620
7227	**Bars and rods of alloy steel other than stainless, hot-rolled, in irregularly wound coils**	26	80,963
7228	**Other bars and rods of alloy steel other than stainless, angles, shapes and sections of alloy steel other than stainless, n.e.s.**		
72281020	Bars and rods of high-speed steel, not further worked than hot-rolled, hot-drawn or extruded, and hot-rolled, hot-drawn or extruded, not further worked than clad (excl. semi-finished products, flat-rolled products and hot-rolled bars and rods in irregularly wound coils)	343	3,596,995
72281050	Bars and rods of high-speed steel, forged (excl. semi-finished products, flat-rolled products and hot-rolled bars and rods in irregularly wound coils)	850	4,598,310
72281090	Bars and rods of high-speed steel, not further worked than cold-formed or cold-finished, whether or not further worked, or hot-formed and further worked (excl. forged products, semi-finished products, flat-rolled products and hot-rolled bars and rods in irregularly wound coils)	2,399	16,799,691
722820	Bars and rods of silico-manganese steel (excl. semi-finished products, flat-rolled products and hot-rolled bars and rods in irregularly wound coils)	513	477,186
722830	Bars and rods of alloy steel other than stainless, not further worked than hot-rolled, hot-drawn or extruded (excl. products of high-speed steel or silico-manganese steel, semi-finished products, flat-rolled products and hot-rolled bars and rods in irregularly wound coils)	157,463	133,139,714
722840	Bars and rods of alloy steel other than stainless, not further worked than forged (excl. products of high-speed steel or silico-manganese	63,325	73,274,855

	steel, semi-finished products, flat-rolled products and hot-rolled bars and rods in irregularly wound coils)		
722850	Bars and rods of alloy steel other than stainless, not further worked than cold-formed or cold-finished (excl. products of high-speed steel or silico-manganese steel, semi-finished products, flat-rolled products and hot-rolled bars and rods in irregularly wound coils)	18,930	33,375,392
722860	Bars and rods of alloy steel other than stainless, cold-formed or cold-finished and further worked or hot-formed and further worked, n.e.s. (excl. products of high-speed steel or silico-manganese steel, semi-finished products, flat-rolled products and hot-rolled bars and rods in irregularly wound coils)	4,639	12,115,332
722870	Angles, shapes and sections of alloy steel other than stainless, n.e.s.	478	1,216,173
72288000	Hollow drill bars and rods, of alloy or non-alloy steel	1,024	1,608,578
7229	**Wire of alloy steel other than stainless, in coils (excl. bars and rods)**	70,034	86,085,587
7301	**Sheet piling of iron or steel, whether or not drilled, punched or made from assembled elements**	25,478	19,778,009
Precursor			
26	ORES, SLAG AND ASH		
26011200	Agglomerated iron ores and concentrates (excl. roasted iron pyrites)	885	154,144
Downstream			
73	**ARTICLES OF IRON OR STEEL**		
7302	**Railway or tramway track construction material of iron or steel, the following : rails, check-rails and rack rails, switch blades, crossing frogs, point rods and other crossing pieces, sleepers "cross-ties", fish-plates, chairs, chair wedges, sole plates "base plates", rail clips, bedplates, ties and other material specialised for jointing or fixing rails**	7,627	14,876,509
730300	Tubes, pipes and hollow profiles, of cast iron	9,539	12,351,465
7304	**Tubes, pipes and hollow profiles, seamless, of iron or steel (excl. products of cast iron)**		
73041100	Line pipe of a kind used for oil or gas pipelines, seamless, of stainless steel	965	4,883,376
730419	Line pipe of a kind used for oil or gas pipelines, seamless, of iron or steel (excl. products of stainless steel or of cast iron)	3,824	4,784,272
73042200	Drill pipe, seamless, of stainless steel, of a kind used in drilling for oil or gas	-	147
73042300	Drill pipe, seamless, of a kind used in drilling for oil or gas, of iron or steel (excl. products of stainless steel or of cast iron)	1,703	3,283,137
73042400	Casing and tubing, seamless, of a kind used for drilling for oil or gas, of stainless steel	95	809,827
730429	Casing and tubing, seamless, of iron or steel, of a kind used in drilling for oil or gas (excl. products of cast iron)	1,358	1,844,339
730431	Tubes, pipes and hollow profiles, seamless, of circular cross-section, of iron or non-alloy steel, cold-drawn or cold-rolled "cold-reduced" (excl. cast iron products and line pipe of a kind used for oil or gas pipelines or casing and tubing of a kind used for drilling for oil or gas)	2,638	5,795,188
730439	Tubes, pipes and hollow profiles, seamless, of circular cross-section, of iron or non-alloy steel, not cold-drawn or cold-rolled "cold-reduced" (excl. cast iron products, line pipe of a kind used for oil or gas pipelines, casing and tubing of a kind used for drilling for oil or gas)	60,292	55,943,061
73044100	Tubes, pipes and hollow profiles, seamless, of circular cross-section, of stainless steel, cold-drawn or cold-rolled "cold-reduced" (excl. line	1,529	8,353,412

	pipe of a kind used for oil or gas pipelines, casing and tubing of a kind used for drilling for oil or gas)		
730449	Tubes, pipes and hollow profiles, seamless, of circular cross-section, of stainless steel, not cold-drawn or cold-rolled "cold-reduced" (excl. line pipe of a kind used for oil or gas pipelines or of a kind used for drilling for oil or gas)	723	3,495,516
730451	Tubes, pipes and hollow profiles, seamless, of circular cross-section, of alloy steel other than stainless, cold-drawn or cold-rolled "cold-reduced" (excl. line pipe of a kind used for oil or gas pipelines, casing and tubing of a kind used for drilling for oil)	2,959	6,010,023
730459	Tubes, pipes and hollow profiles, seamless, of circular cross-section, of alloy steel other than stainless, not cold-drawn or cold-rolled "cold-reduced" (excl. line pipe of a kind used for oil or gas pipelines, casing and tubing of a kind used for drilling for oil)	5,315	7,623,606
73049000	Tubes, pipes and hollow profiles, seamless, of non-circular cross-section, of iron or steel (excl. products of cast iron)	2,153	5,356,276
7305	**Tubes and pipes, having circular cross-sections and an external diameter of > 406,4 mm, of flat-rolled products of iron or steel "e.g., welded, riveted or similarly closed"**	10,639	12,930,878
7306	**Tubes, pipes and hollow profiles "e.g., open seam or welded, riveted or similarly closed", of iron or steel (excl. of cast iron, seamless tubes and pipes and tubes having internal and external circular cross-sections and an external diameter of > 406,4 mm)**		
73061100	Line pipe of a kind used for oil or gas pipelines, welded, of flat-rolled products of stainless steel, of an external diameter of <= 406,4 mm	-	-
73061900	Line pipe of a kind used for oil or gas pipelines, welded, of flat-rolled products of iron or steel, of an external diameter of <= 406,4 mm (excl. products of stainless steel or of cast iron)	-	-
73062100	Casing and tubing of a kind used in drilling for oil or gas, welded, of flat-rolled products of stainless steel, of an external diameter of <= 406,4 mm	9	115,233
73062900	Casing and tubing of a kind used in drilling for oil or gas, welded, of flat-rolled products of iron or steel, of an external diameter of <= 406,4 mm (excl. products of stainless steel or of cast iron)	0	5,554
73063012	Precision tubes, welded, of circular cross-section, of iron or non-alloy steel, cold-drawn or cold-rolled "cold-reduced"	-	-
73063018	Precision tubes, welded, of circular cross-section, of iron or non-alloy steel (excl. cold-drawn or cold-rolled)	-	-
73063041	Threaded or threadable tubes "gas pipe", welded, of circular cross-section, of iron or non-alloy steel, plated or coated with zinc	185	434,678
73063049	Threaded or threadable tubes "gas pipe", welded, of circular cross-section, of iron or non-alloy steel (excl. products plated or coated with zinc)	66	269,927
73063072	Other tubes, pipes and hollow profiles, welded, of circular cross-section, of iron or non-alloy steel, of an external diameter of <= 168,3 mm, plated or coated with zinc (excl. line pipe of a kind used for oil or gas pipelines or casing and tubingof a kind used in drilling for oil or gas)	400	764,296
73063077	Other tubes, pipes and hollow profiles, welded, of circular cross-section, of iron or non-alloy steel of an external diameter of <= 168,3 mm (excl. plated or coated with zinc and line pipe of a kind used for oil or gas pipelines, casing and tubing of a kind used in drilling for oil or gas, precision tubes and threaded or threadable tubes "gas pipe")	797	1,839,501

73063080	Tubes, pipes and hollow profiles, welded, having a circular cross-section, of iron or steel, of an external diameter of > 168,3 mm but <= 406,4 mm (excl. line pipe of a kind used for oil or gas pipelines or casing and tubing of a kind used in drilling for oil or gas, or precision steel tubes, electrical conduit tubes or threaded or threadable tubes "gas pipe")	3,828	3,255,408
73064020	Tubes, pipes and hollow profiles, welded, of circular cross-section, of stainless steel, cold-drawn or cold-rolled "cold-reduced" (excl. products having internal and external circular cross-sections and an external diameter of > 406,4 mm, and line pipe of a kind used for oil or gas pipelines or casing and tubing of a kind used in drilling for oil or gas)	8,953	31,315,861
73064080	Tubes, pipes and hollow profiles, welded, of circular cross-section, of stainless steel (excl. products cold-drawn or cold-rolled "cold-reduced", tubes and pipes having internal and external circular cross-sections and an external diameter of > 406,4 mm, and line pipe of a kind used for oil or gas pipelines or casing and tubing of a kind used in drilling for oil or gas)	6,789	26,154,267
73065021	Precision steel tubes, welded, of circular cross-section, of alloy steel other than stainless, cold-drawn or cold-rolled "cold-reduced"	-	-
73065029	Precision steel tubes, welded, of circular cross-section, of alloy steel other than stainless (excl. cold-drawn or cold-rolled)	-	-
73065080	Tubes, pipes and hollow profiles, welded, of circular cross-section, of alloy steel other than stainless (excl. tubes and pipes having internal and external circular cross-sections and an external diameter of > 406,4 mm, and line pipe of a kind used for oil or gas pipelines or casing and tubing of a kind used in drilling for oil or gas, and precision steel tubes)	617	1,774,875
73066110	Tubes and pipes and hollow profiles, welded, of square or rectangular cross-section, of stainless steel	8,211	16,420,271
73066192	Tubes and pipes and hollow profiles, welded, of square or rectangular cross-section, of iron or steel other than stainless steel, with a wall thickness of <= 2 mm	12,018	12,613,967
73066199	Tubes and pipes and hollow profiles, welded, of square or rectangular cross-section, of iron or steel other than stainless steel, with a wall thickness of > 2 mm	22,794	19,247,940
73066910	Tubes, pipes and hollow profiles, welded, of non-circular cross-section, of stainless steel (excl. tubes and pipes having internal and external circular cross-sections and an external diameter of > 406,4 mm, line pipe of a kind used for oil or gas pipelines or casing and tubing of a kind used in drilling for oil or gas, and tubes and pipes and hollow profiles of square or rectangular cross-section)	631	1,948,723
73066990	Tubes, pipes and hollow profiles, welded, of non-circular cross-section, of iron or steel other than stainless steel (excl. tubes and pipes having internal and external circular cross-sections and an external diameter of > 406,4 mm, line pipe of a kind used for oil or gas pipelines or casing and tubing of a kind used in drilling for oil or gas, and tubes and pipes and hollow profiles of square or rectangular cross-section)	3,357	5,480,789
73069000	Tubes, pipes and hollow profiles "e.g., open seam, riveted or similarly closed", of iron or steel (excl. of cast iron, seamless or welded tubes and pipes and tubes and pipes having internal and external circular cross-sections and an external diameter of > 406,4 mm)	1,101	3,570,803
7307	**Tube or pipe fittings "e.g. couplings, elbows, sleeves", of iron or steel**		

730711	Tube or pipe fittings of non-malleable cast iron	15,118	34,680,956
73071910	Tube or pipe fittings of cast iron (excl. of non-malleable)(2020-2500)	46,120	108,981,954
73071990	Cast tube or pipe fittings of steel(2020-2500)	8,418	53,168,783
73072100	Flanges of stainless steel (excl. cast products)	19,166	108,077,136
730722	Threaded elbows, bends and sleeves of stainless steel (excl. cast products)	2,904	28,550,245
730723	Butt welding tube or pipe fittings of stainless steel (excl. cast products)	2,822	26,613,685
730729	Tube or pipe fittings of stainless steel (excl. cast products, flanges, threaded elbows, bends and sleeves and butt weldings fittings)	10,568	123,205,206
73079100	Flanges of iron or steel (excl. cast or stainless products)	77,866	137,234,070
730792	Threaded elbows, bends and sleeves, of stainless steel (excl. cast or stainless products)	6,381	36,238,663
730793	Butt welding fittings of iron or steel (excl. cast iron or stainless steel products, and flanges)	7,587	14,491,590
730799	Tube or pipe fittings, of iron or steel (excl. cast iron or stainless steel products	13,536	81,059,632
7308	**Structures and parts of structures "e.g., bridges and bridge-sections, lock-gates, towers, lattice masts, roofs, roofing frameworks, doors and windows and their frames and thresholds for doors, shutters, balustrades, pillars and columns", of iron or steel**	579,817	1,190,060,624
7309	**Reservoirs, tanks, vats and similar containers, of iron or steel, for any material "other than compressed or liquefied gas", of a capacity of > 300 l, not fitted with mechanical or thermal equipment, whether or not lined or heat-insulated (excl. containers specifically constructed or equipped for one or more types of transport)**	7,798	28,985,927
7310	**Tanks, casks, drums, cans, boxes and similar containers, of iron or steel, for any material "other than compressed or liquefied gas", of a capacity of <= 300 l, not fitted with mechanical or thermal equipment, whether or not lined or heat-insulated, n.e.s.**	29,276	148,634,735
7311	**Containers of iron or steel, for compressed or liquefied gas (excl. containers specifically constructed or equipped for one or more types of transport)**		
731100	Containers of iron or steel, for compressed or liquefied gas (excl. containers specifically constructed or equipped for one or more types of transport)	47,079	132,284,824
7318	**Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter pins, washers, incl. spring washers, and similar articles, of iron or steel (excl. lag screws, stoppers, plugs and the like, threaded)**		
73181100	Coach screws of iron or steel	18,219	27,983,607
73181210	Wood screws of stainless steel (excl. coach screws)	4,721	16,641,290
73181290	Wood screws of iron or steel other than stainless (excl. coach screws)	51,570	93,636,804
73181300	Screw hooks and screw rings, of iron or steel	13,534	35,492,380
73181410	Self-tapping screws, of iron or steel other than stainless (excl. wook screws)	4,965	20,022,451
73181491	Spaced-thread screws of iron or steel other than stainless	7,822	15,355,019
73181499	Self-tapping screws of iron or steel other than stainless (excl. spaced-thread screws and wood screws)	30,533	58,726,267
731815	Threaded screws and bolts, of iron or steel, whether or not with their nuts and washers (excl. coach screws and other wood screws, screw hooks and screw rings, self-tapping screws, lag screws, stoppers, plugs and the like, threaded)	342,428	638,427,133
731816	Nuts of iron or steel	156,787	338,891,041
73181900	Threaded articles, of iron or steel, n.e.s.	71,013	191,206,252

73182100	Spring washers and other lock washers, of iron or steel	5,611	17,906,303
73182200	Washers of iron or steel (excl. spring washers and other lock washers)	50,275	104,920,718
73182300	Rivets of iron or steel (excl. tubular and bifurcated rivets for particular uses)	3,725	15,801,185
73182400	Cotters and cotter pins, of iron or steel	4,889	25,174,828
73182900	Non-threaded articles, of iron or steel	18,284	85,395,942
7326	**Articles of iron or steel, n.e.s. (excl. cast articles)**		
73261100	Grinding balls and similar articles for mills, of iron or steel, forged or stamped, but not further worked	6,337	7,792,230
732619	Articles of iron or steel, forged or stamped, but not further worked, n.e.s. (excl. grinding balls and similar articles for mills)	23,679	88,299,439
73262000	Articles of iron or steel wire, n.e.s.	73,726	204,140,913
73269030	Ladders and steps, of iron or steel	19,037	53,585,145
73269040	Pallets and similar platforms for handling goods, of iron or steel	30,041	69,302,131
73269050	Reels for cables, piping and the like, of iron or steel	3,626	10,499,598
73269060	Ventilators, non-mechanical, guttering, hooks and like articles used in the building industry, n.e.s., of iron or steel	6,691	26,523,274
73269092	Articles of iron or steel, open-die forged, n.e.s.	24,147	69,189,369
73269094	Articles of iron or steel, closed-die forged, n.e.s.	19,902	67,865,344
73269096	Sintered articles of iron or steel, n.e.s.	1,190	8,975,221
73269098	Articles of iron or steel, n.e.s.(2017-2500)	677,015	2,365,784,678

Annex II – Chronology of forthcoming legislation

Legislation due by Q3 – 2024

IA on Application for authorisation – Article 5(8)

This will set rules and procedures for authorising CBAM declarants. It will establish a standard application format, the process for submitting applications through the CBAM registry, the stages national authorities should follow in the assessment and the timeline for processing authorising applications.

IA on Authorisation – Article 17(10)

This IA will list the conditions for granting the status of authorised CBAM declarant to EU importers, such as not being involved in serious or repeated infringements and demonstrating the financial and operational capacity of applicants to fulfil CBAM obligations. Conditions for revoking a declarant's authorisation will include serious or repeated infringements, and the IA will detail the consequences of such revocation. Consultation procedures (deadline, format…) will also be set for applications and revocations.

IA on CBAM registry – Article 14(6)

This IA will govern the infrastructure of the CBAM registry. The registry is an electronic database that will store data from CBAM declarations and transmit information on the sale, repurchase and cancellation of CBAM certificates. The IA will set procedures such as the need to run risk analyses to prevent irregularities in the circulation of CBAM certificates and mechanisms to cross-check information with the respective national authorities of CBAM declarants.

Legislation due by Q4 – 2024

IA on Accreditation of verifiers – Article 18(1)

This IA will set criteria on the qualifications required from an accredited verifier.

IA on Verification principles of embedded emissions – Article 8(3)

This IA will govern the implementation of the verification principles listed in Annex VI of the CBAM Regulation. It will set guidelines covering e.g. the conditions under which a verifier may be exempted to physically visit a production facility, thresholds to determine the significance of misstatements or nonconformities and the documentation requirements for the verification report – including its format. These rules will seek equivalence and coherence with domestic procedures concerning the verification of data and accreditation of verifiers.

DA on Sale and repurchase of CBAM certificates – Article 20(6)

This will govern the timing and administration of the sale and repurchase of CBAM certificates, in a way consistent with the auctioning of emission allowances under the EU ETS.

IA on good brought from artificial islands or exclusive economic zones – Article 2(2)

This IA will ensure that the CBAM also covers goods coming from artificial islands, floating structures or exclusive economic zones that are adjacent to the customs territory of the Union.

IA on Rules applicable to the importation of goods – Article 25(6)

This will govern the circulation of information on imported CBAM goods between customs authorities, . between customs authorities, Commission and competent CBAM authority of the Member State where the CBAM Declarant is established.

LEGISLATION DUE BY Q2 – 2025

IA on CBAM declaration – Article 6(6)

This will govern the submission of CBAM declarations, including their format, required content, submission procedure and procedure for surrendering CBAM certificates.

IA on Calculation of embedded emissions – Article 7(7)

This important IA will set the rules for calculating the embedded emissions of CBAM goods. These rules will replace those set by the IA on Article 35(7) in place during the transition period. They also cover requirements for data accuracy, instructions in case of difficulties in calculating emissions, exemption criteria from using the specified methodology, based on the availability of actual emissions.

It will also include guidelines on adapting default values to specific areas, regions, or countries, considering objective factors that influence emissions, such as prevailing energy sources or industrial processes. These guidelines will be based on existing legislation for monitoring and verifying emissions from installations and data concerning installations' activities.

IA on Carbon price paid in a third country – Article 9(4)

This IA will govern the conversion of the annual average carbon price paid in the country of origin into a corresponding reduction of CBAM certificates to be surrendered. It will include the conversion of the foreign currency carbon price into euro using the annual average exchange rate, the evidence needed to demonstrate the actual payment of the carbon price, examples of any applicable rebates or compensations, the qualifications required for the independent person certifying the imposition of a carbon price in the country of origin and the conditions to ensure the person's independence is verified.

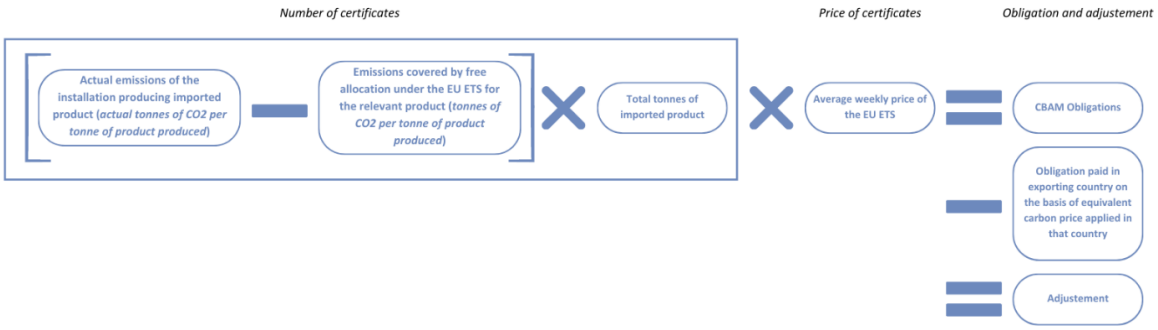
IA on Price of CBAM certificates – Article 21(3)

This will describe the methodology for calculating the average price of CBAM certificates from the EU ETS and establish practical procedures for their publication.

IA on Free allocation of allowances under the EU ETS and obligation to surrender CBAM certificates – Article 31(2)

This IA will determine the calculation of the deduction applied to the CBAM charge due to emission allowances being allocated for free to EU plants covered by the EU ETS, as illustrated by Figure 10.

Figure 10: **Deduction from CBAM fee due to free allocation under the EU ETS**



Source: European Commission

DA on Scope – Article 2(10-11)

A number of countries outside the EU are exempted from the CBAM because they are covered by the EU ETS (Norway, Iceland, Lichtenstein) or a scheme twinned with it (Switzerland). The list may grow in the future as more third countries adopt similar initiatives. Exemptions limited to electricity imports may also happen for territories where there are technical issues in applying the CBAM to such imports. The DA on scope will govern additions and removals of third countries and territories to/from these two lists.

DA on Accreditation of verifiers – Article 18(3)

This DA will specify the conditions for the granting and revoking of verifiers' accreditations and the oversight of accredited verifiers. It will supplement the IA under Art 18(1) which set qualification criteria for verifiers.

LEGISLATION THAT MAY APPEAR FROM 2026 ONWARDS

DA on Circumvention – Article 27(6)

The Commission is empowered to modify the list of goods subject to the CBAM for anti-circumvention purposes.