



# Review of Carbon Leakage Risks of CBAM Export Goods

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- “By 31 December 2024 and as part of its annual report to the European Parliament and to the Council pursuant to Article 10(5) of this Directive, the Commission shall **assess the carbon leakage risk for goods subject to CBAM and produced in the Union for export to third countries** which do not apply the EU ETS or a similar carbon pricing mechanism. The report shall in particular assess the **carbon leakage risk in sectors to which CBAM will apply**, in particular the role and accelerated uptake of hydrogen, and the developments as regards trade flows and the embedded emissions of goods produced by those sectors on the global market. Where the report concludes that there is a carbon leakage risk for goods produced in the Union for export to third countries which do not apply the EU ETS or an equivalent carbon pricing mechanism, the Commission shall, where appropriate, **submit a legislative proposal to address that carbon leakage risk in a manner that is compliant with the rules of the World Trade Organization**, including Article XX of the General Agreement on Tariffs and Trade 1994, and takes into account the decarbonisation of installations in the Union.”

# Fertilizer

- Exports account for approximately 16% of total EU fertilizer production, with some plants exporting up to 60%.
- Seasonal demand requires fertilizers to export to other markets to function at optimal capacity level.
- Major export destinations include Brazil, the United States, Ukraine, the United Kingdom, and China.
- EU fertilizer products have lower carbon intensity compared to competitors, as depicted in Figure 2.

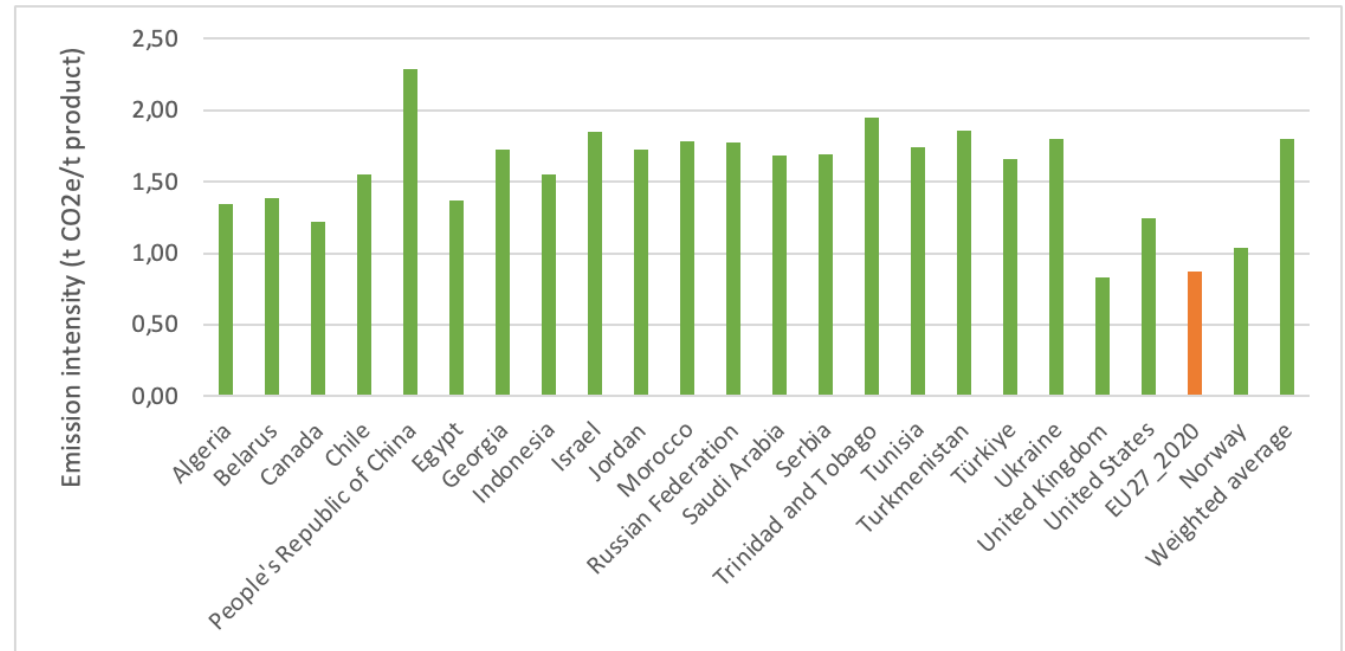


Figure 2: Average carbon intensity of fertilizer products covered by CBAM

Source: Based on JRC “Greenhouse gas emission intensities of the steel, fertilisers, aluminium and cement industries in the EU and its main trading partners” JRC134682.

# Cement

- About 6% of EU cement production is exported, with large variations among countries such as Greece and Ireland exporting more than 40%.
- High carbon costs constitute a significant portion of production costs.
- Major export destinations are the United Kingdom, United States, Bosnia-Herzegovina, Serbia, and Montenegro.
- EU cement products have a carbon intensity of 1.4 t CO<sub>2</sub>e/t product, compared to 1.9 t CO<sub>2</sub>e/t product for the sum of Bosnia and Herzegovina, 1.8 t CO<sub>2</sub>e/t product for the sum of Serbia, 1.7 t CO<sub>2</sub>e/t product for the sum of EU27, 1.6 t CO<sub>2</sub>e/t product for the sum of United Kingdom, 1.5 t CO<sub>2</sub>e/t product for the sum of Morocco, and 1.4 t CO<sub>2</sub>e/t product for the sum of Türkiye.

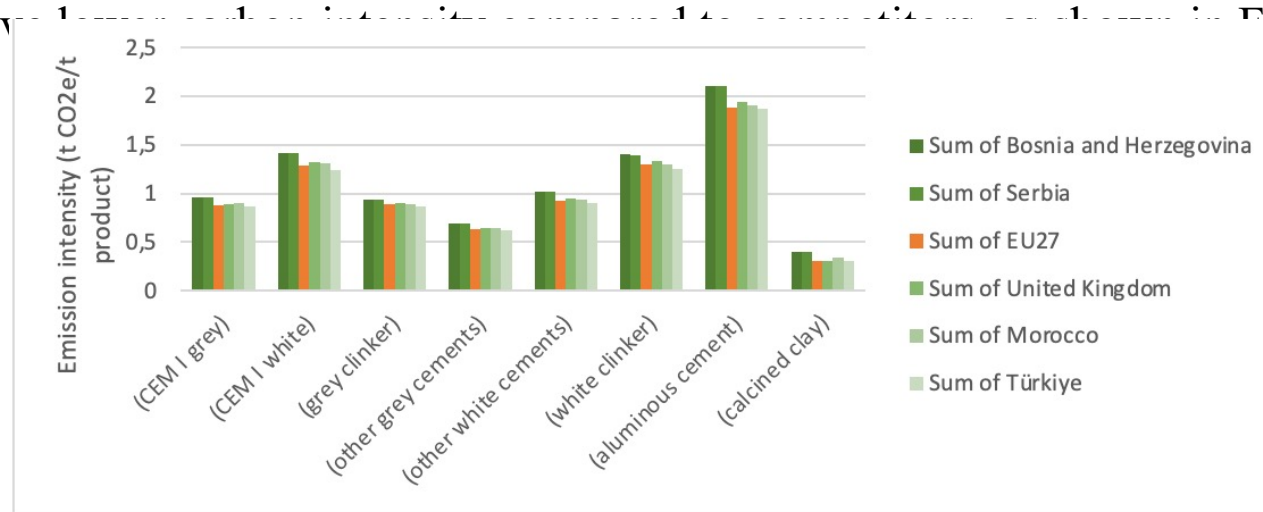
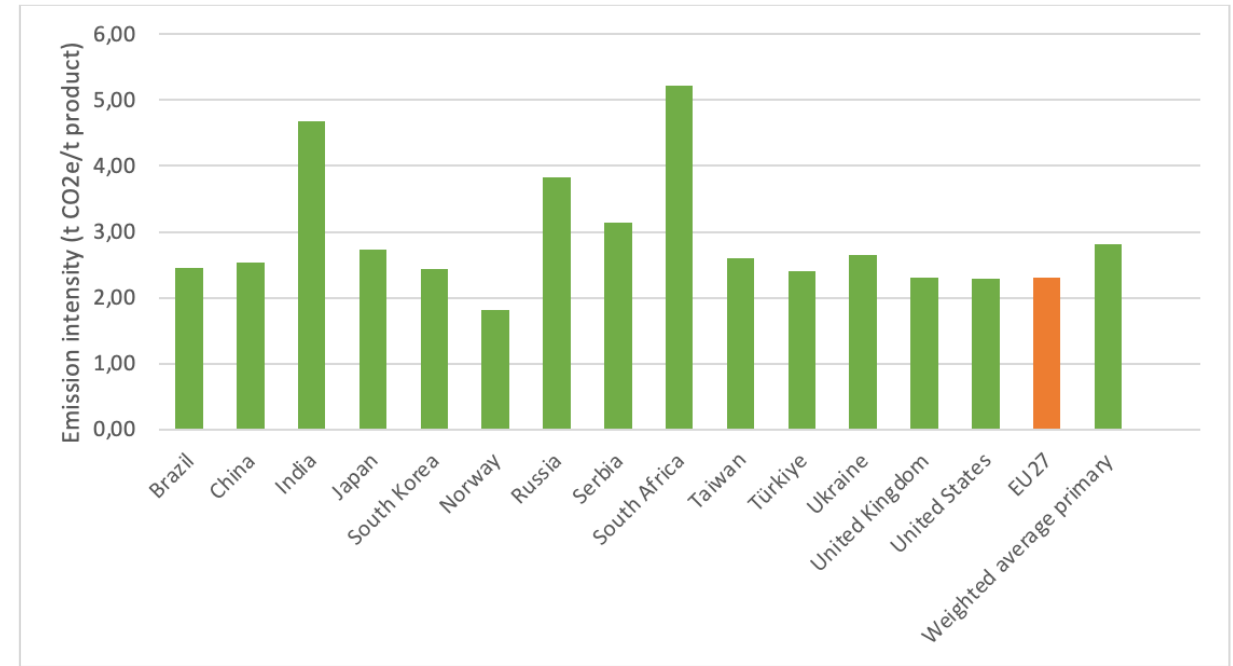


Figure 4 Carbon intensity of products covered by CBAM (Note: The countries that the EU exports to and countries that export to those countries that are also part of the JRC dataset were included in the graph.)

Source: Based on JRC “Greenhouse gas emission intensities of the steel, fertilisers, aluminium and cement industries in the EU and its main trading partners” JRC134682.

# Iron and Steel

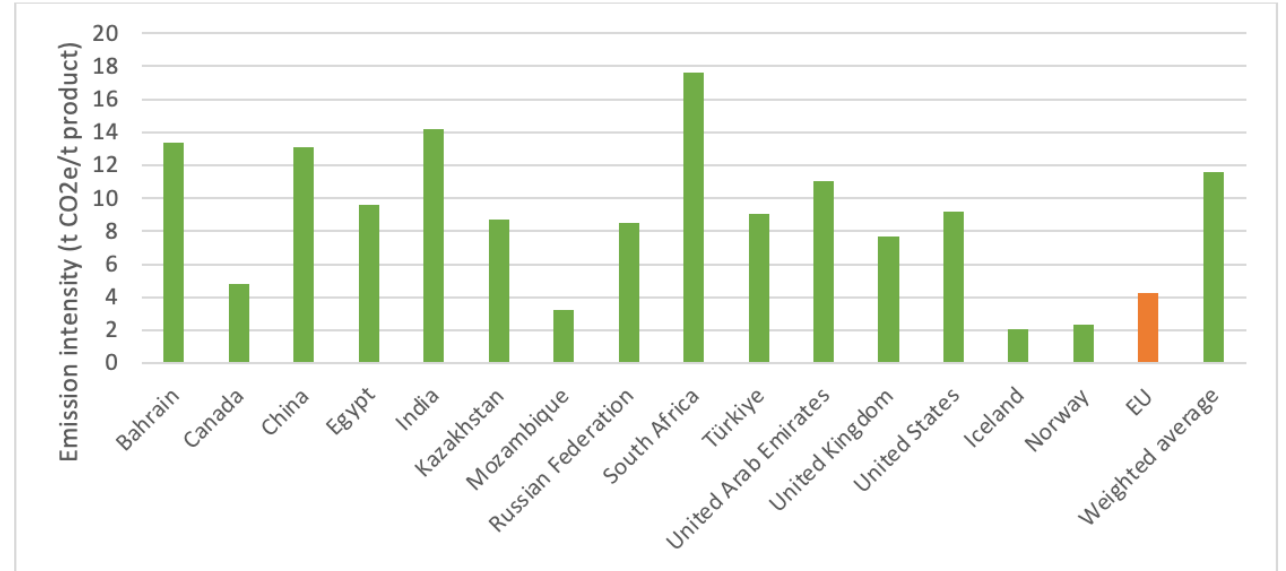
- Iron and steel exports represent around 18% of total EU production.
- High fixed costs and cyclical demand make the sector sensitive to export losses.
- Global overcapacity and competitive pressures affect EU steel industry.
- Main export destinations include the United Kingdom, United States, Turkey, Mexico, China, Canada, and Egypt.
- EU steel products have lower carbon intensity compared to competitors, as shown in Figure 6.



*Figure 6: Average carbon intensity of iron and steel products covered by CBAM/  
Source: Based on JRC “Greenhouse gas emission intensities of the steel, fertilisers, aluminium and cement industries in the EU and its main trading partners” JRC134682.*

# Aluminium

- EU exports of aluminium account for about 20% of production.
- Major export destinations include the United Kingdom, United States, China, Turkey, Mexico, Canada, and Japan.
- EU aluminium products have lower carbon intensity compared to competitors, as depicted in Figure 7.



*Figure 7: Average carbon intensity of aluminum products covered by CBAM*  
*Source: Based on JRC “Greenhouse gas emission intensities of the steel, fertilisers, aluminium and cement industries in the EU and its main trading partners” JRC134682.*

# Brief History of Exclusion of Exports from CBAM

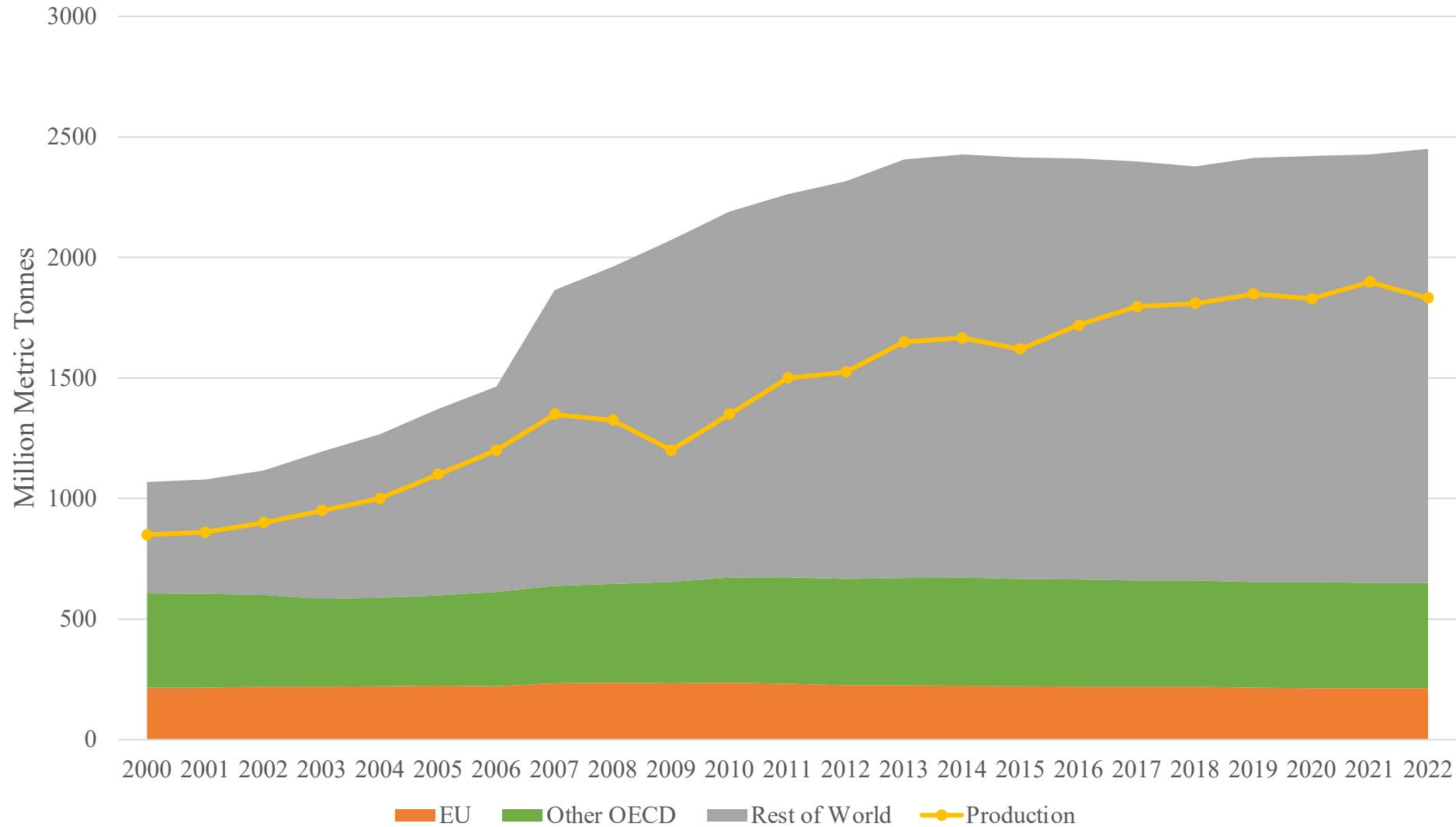
- In the initial debate surrounding export provisions in the CBAM, industry emphasized the importance of export solutions to maintain competitiveness and mitigate adverse effects on EU producers, while some NGOs expressed concerns about the potential impact on global climate ambition and compatibility with WTO regulations.
- Commission proposal did not address issue but EU Parliament position included a suggestion for a solution for exports and Council position included a suggestion for a review of the export issue in 2026.
- In final legislation, Commission has to review the CBAM, including its impact on carbon leakage concerning exports in a review before January 2028.

# Competing in the Global Marketplace: An Evolving Context

- Since CBAM design options were evaluated during the impact assessment process and a legislative proposal was unveiled in July 2021, global markets for goods covered by the CBAM have undergone major shifts that bear on how the CBAM will affect EU producers.
- Relevant developments include:
  - a significant increase in production and especially energy costs faced by European producers relative to foreign competitors;
  - continued growth in foreign production capacities and persistent global excess capacities, especially in the steel sector;
  - and a dramatic increase in market interventions and aggressive industrial and trade policy tactics deployed by trade partners of the EU.
- For EU producers of CBAM-covered goods, these developments increase concerns about the ability of decarbonization investments to yield normal market returns in the absence of additional policy interventions.

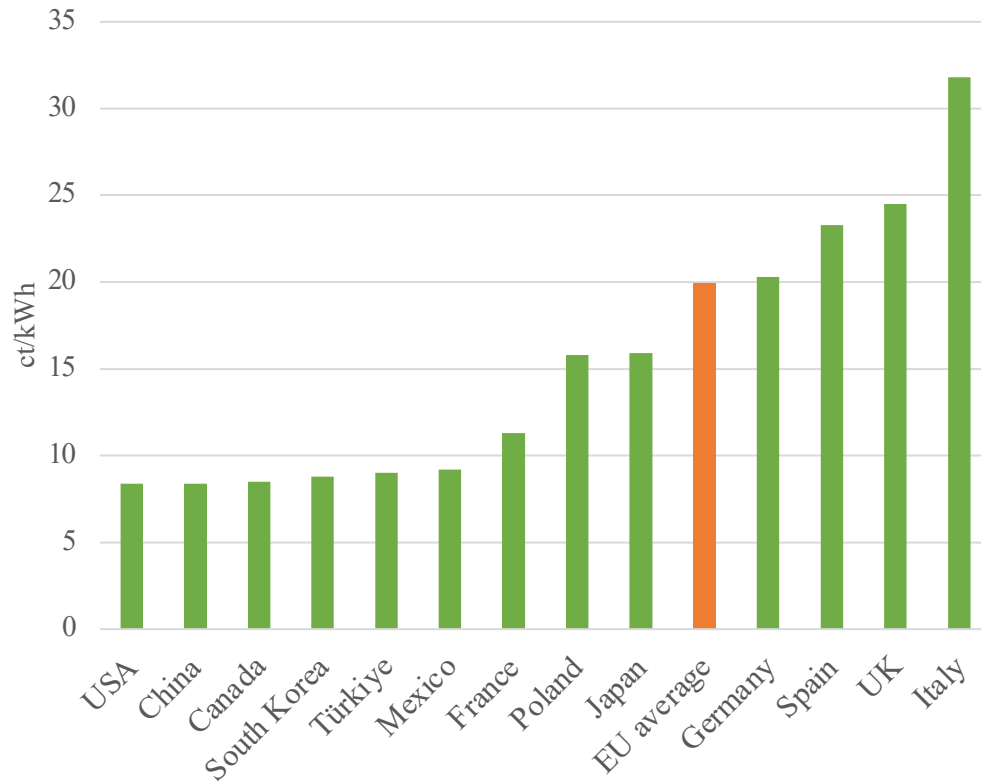


# Crude Steelmaking Capacity (2000-2022)

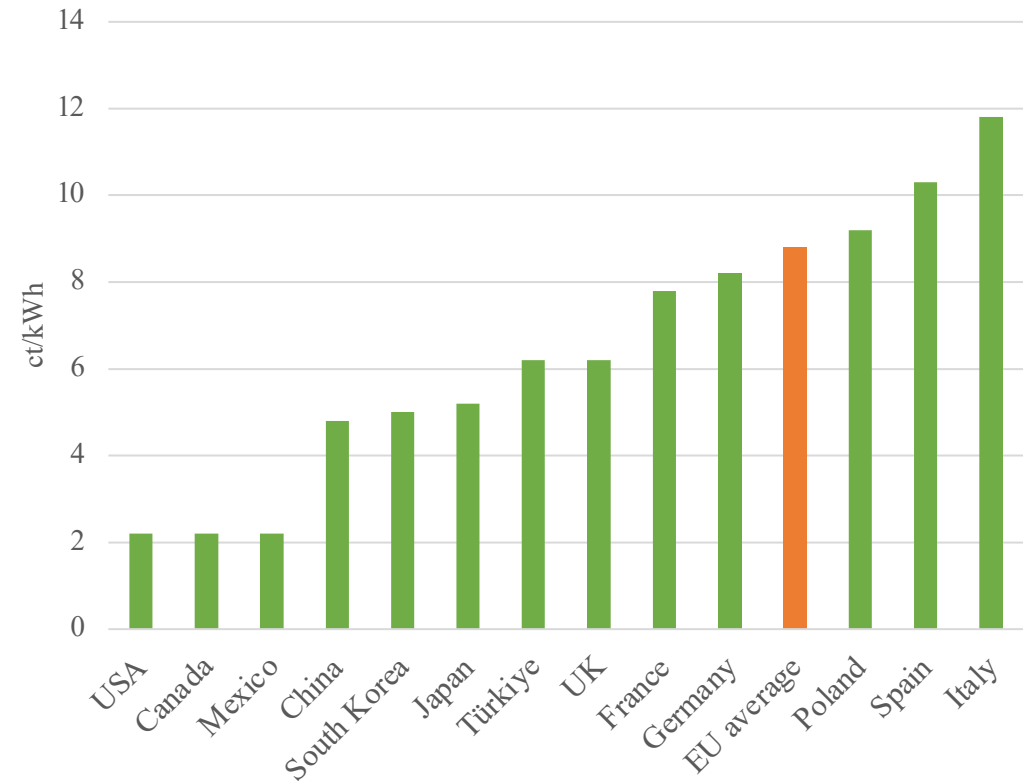


# Energy Prices for Industrial Consumers

## Electricity Prices for Industrial Consumers, 2023

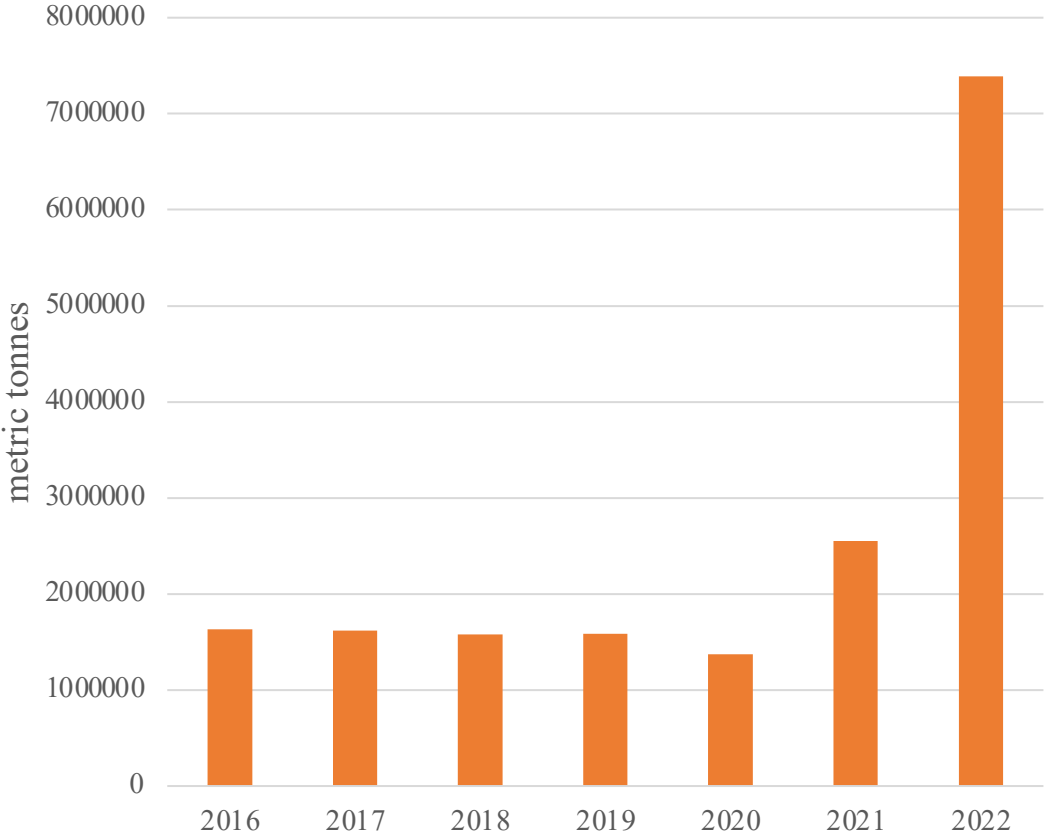


## Natural Gas Prices for Industrial Consumers, 2022

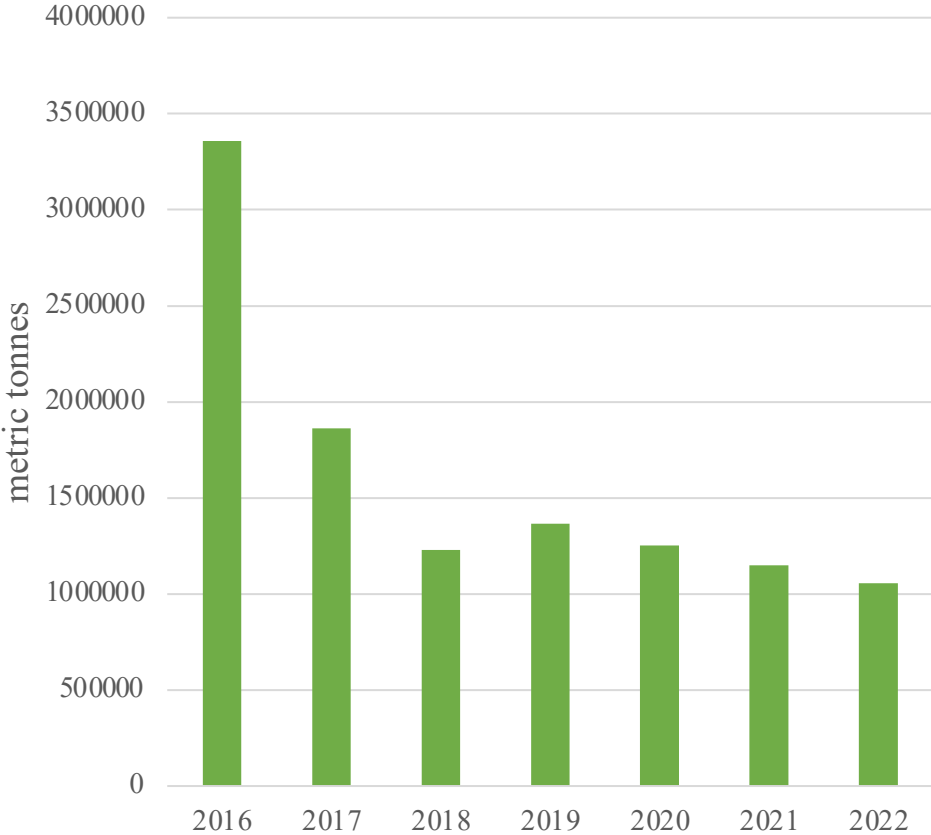


# Imports and Exports of Nitrogenous Fertilizers, 2016-2022

### EU 27 Imports of HS3102, 2016-2022

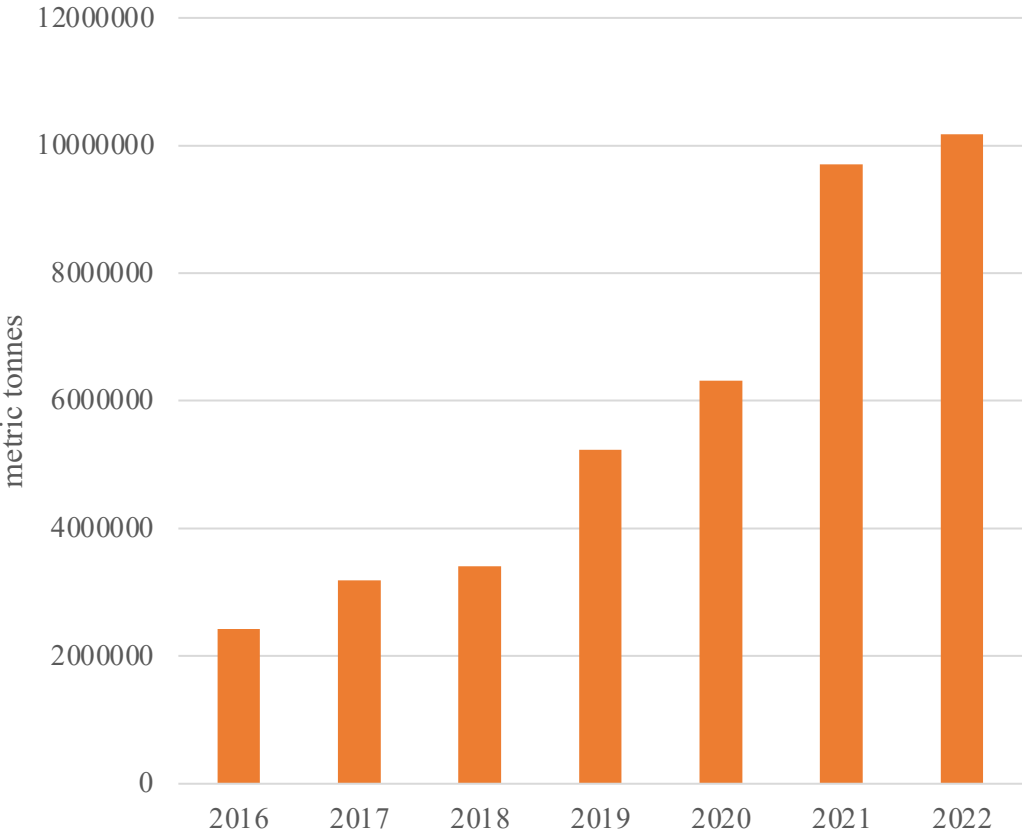


### EU 27 Exports of HS3102, 2016-2022

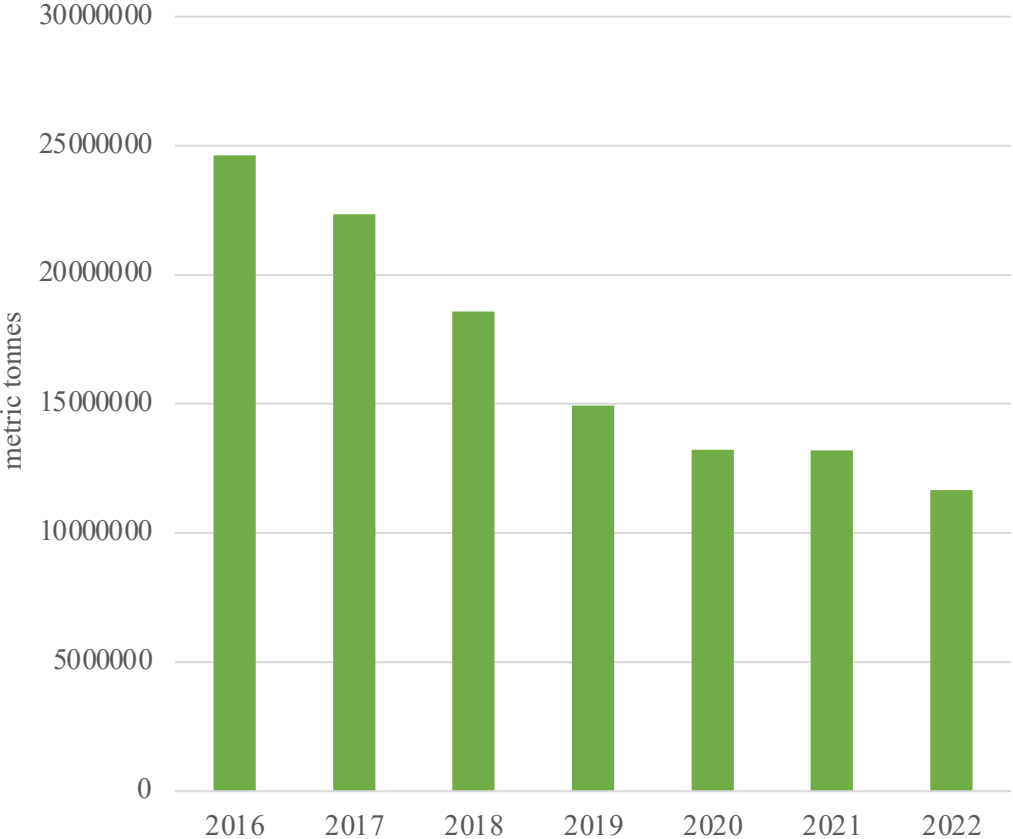


# Imports and Exports of Cement and Clinker, 2016-2022

### EU 27 Imports of HS2523, 2016-2022



### EU 27 Exports of HS2523, 2016-2022



# Policy Certainty for the Next Investment Cycle

- Within less than a decade, incumbent production processes in affected sectors will no longer be viable, necessitating a significant wave of capital investment in new, low-carbon production assets.
- Whether European exports receive any leakage protection will influence these investment decisions, and whether they are channelled into new installations in Europe or redirected to regions offering more favourable conditions for production and investment.
- As this upcoming investment cycle unfolds, the direction taken will not only shape the immediate investment context for producers already affected by the CBAM, but also set a precedent for additional sectors or downstream goods poised for future inclusion.
- Additional urgency arises from the fact that current safeguard measures for certain steel products in the form of tariff-rate-quotas (TRQs) are set to expire at the latest by 30 June 2026.

# Export Impact : The case of cold-rolled steel (CN 7209)

	Free allocation	Free allocation after CBAM Factor	EUA price	GHG intensity	Cost of C	Global price	Premium over world price	Premium over world price
	<i>tonnes C per tonne crude steel</i>		<i>€ per tonne C</i>	<i>tC per t crude steel</i>	<i>€/tonne crude steel</i>	<i>€ per tonne</i>	<i>€ per tonne</i>	<i>percentage</i>
2024	1.462	1.462	65	1.95	32	700	0	0
2025	1.462	1.462	92	1.92	43	700	11	2%
2026	1.318	1.285	99	1.90	61	700	29	4%
2027	1.300	1.235	107	1.87	68	700	36	5%
2028	1.282	1.154	116	1.84	80	700	49	7%
2029	1.264	0.980	125	1.82	105	700	73	10%
2030	1.247	0.642	135	1.79	155	700	124	18%
2031	1.216	0.474	143	1.75	183	700	151	22%
2032	1.187	0.314	152	1.71	212	700	180	26%
2033	1.158	0.162	161	1.67	242	700	210	30%
2034	1.129	0.000	169	1.63	275	700	244	35%

# Export impact: The Case of CAN (fertilizer, CN 3102)

	Free allocation		Free allocation after CBAM Factor		EUA price € per tonne C	GHG intensity CAN		Cost of C €/tonne CAN	Global price € per tonne	Premium over world price € per tonne	Premium over world price percentage
	tonnes C per tonne nitric acid	tonnes C per tonne Ammonia	tonnes C per tonne nitric acid	tonnes C per tonne Ammonia		tC per t NH3	tC per t NA				
2024	0.230	1.570	0.230	1.570	65	1.98	0.77	30	260	0	0
2025	0.230	1.570	0.230	1.570	92	1.95	0.76	41	260	11	4%
2026	0.150	1.522	0.146	1.484	99	1.93	0.75	51	260	21	8%
2027	0.148	1.501	0.141	1.426	107	1.90	0.74	56	260	26	10%
2028	0.146	1.480	0.131	1.332	116	1.87	0.73	63	260	33	13%
2029	0.144	1.460	0.112	1.131	125	1.85	0.72	76	260	46	18%
2030	0.142	1.440	0.073	0.741	135	1.82	0.71	100	260	70	27%
2031	0.138	1.405	0.054	0.548	143	1.78	0.69	114	260	83	32%
2032	0.135	1.370	0.036	0.363	152	1.73	0.67	128	260	97	37%
2033	0.132	1.337	0.018	0.187	161	1.69	0.66	142	260	112	43%
2034	0.129	1.304	0.000	0.000	169	1.65	0.64	158	260	128	49%

## Assumptions in the estimates

- **ETS Allowance price:** increasing, per the average of a set of six modelling predictions out to 2030, then continuing that trend.
- **World prices:** 10-year averages for the products involved
- **Improvements in GHG intensity of production:** Started with values from EC technical report. From 2027 – 2030, used mid-value for max and min assumed improvement (per ETS phase 4 benchmarks). Thereafter used max.
- **Cost of production:** Assumed a normal 5% rate of profit in 2024, given world price, carbon cost. Held that cost constant out to 2034 (conservative).
- *None of these variables in and of themselves significantly changes the outcomes.*



# Export impact: summary

- This is an illustrative exercise only. These are representative products from 2 sectors, and we've had to make a lot of assumptions.
- But the illustration we derived from that exercise shows major impact: essentially a full loss of export markets by or before 2034. Final picture does not change much if we vary our assumptions within reasonable bounds.
- That finding matters, given what we have noted: the importance of exports to CBAM-covered sectors, and the environmental impact of replacing those exports with foreign production.

# Takeaways

- Exports are, and will continue to be an important component of EU economy (and CBAM covered sectors).
- Important economically and environmentally
- Excess capacity, aggressive marketing, high energy prices – and ETS/CBAM – after 2030 EU not competitive in export markets
- Exports important for incremental market share & commercial viability
- Carbon leakage for CBAM covered sector as a “normal” part of ETS market functioning not good enough

# Takeaways

- The investment cycle requires urgency and focus and spotlight
- The issue of exports under the CBAM sectors expands horizontally and vertically to additional sectors and across value chains.
- The review should also assess export-related leakage risks for product categories in other sectors and in downstream value chains to which the CBAM may eventually be extended.
- Approach:
  - Dynamic approach, , future trends
  - Own process
  - Stakeholder consultations
  - Findings to be debated with stakeholders before finalizing them

# Takeaways

- Exports issue will increase in visibility and political sensitivity ( e.g. agriculture)