Market evolution: Nickel ores and concentrates (CN 2604) — 2015–2025

Introduction

Nickel ores and concentrates (CN 2604) form a critical raw material for the EU's stainless steel and battery industries. This report examines the evolution of the EU's external trade in this commodity between 2015 and 2025. The data, drawn from the EU Trade Dashboard (Scope & Definitions), reveals a trade landscape profoundly reshaped by soaring unit prices, a sharp decoupling of value and volume flows, and a dramatic reconfiguration of supply sources. While the overall trade deficit remained structurally negative, it briefly turned positive in 2022. The period is marked by extreme price shocks, high volatility among key partners, and a gradual, though partial, diversification of both import origins and export destinations.

1. Decoupling of Volumes and Values: How Soaring Prices Reshaped EU Nickel Ore Trade

While the value of EU imports of nickel ores and concentrates increased by 17.2% over the period, the imported tonnage dropped by a quarter, pushing unit prices up by 57.0%.

The headline aggregate trade figures show import value rising from €267.6 million in 2015 to €313.7 million in 2025, while physical quantities fell from 273.5 thousand tonnes to 204.2 thousand tonnes. Consequently, the average import unit price climbed from €978 per tonne to €1 536 per tonne. This decoupling was not linear: import quantities peaked at 422.1 thousand tonnes in 2021, just as prices bottomed at €560 per tonne that same year, before the market tightened sharply.

Exports experienced an even more extreme divergence: export value rose 22.8% while exported tonnage collapsed by 77.6%, sending unit prices up 447.7%.

EU exports of nickel ores and concentrates were transformed from a bulk commodity flow into a high-value, low-volume trade. Export value went from €189.8 million to €233.0 million, but exported quantity plummeted from 263.6 thousand tonnes to just 59.1 thousand tonnes. The average export price consequently soared from €720 per tonne to €3 943 per tonne. The highest recorded unit value, €5 855 per tonne, occurred in 2024, underlining the strong upward price momentum.

The EU's trade deficit in this product remained persistent, narrowing only slightly from –€77.8 million to –€80.7 million, but a rare surplus of €138.8 million in 2022 stands out.

Despite the dramatic shifts in price and volume, the absolute trade balance changed only –3.7% over the decade. However, the balance swung from a deficit of –€77.8 million in 2015 to a surplus of €138.8 million in 2022, driven by a sharp fall in imports that year while export values remained elevated. This ephemeral surplus was the only positive balance recorded in the period and underscores the instability of the market.

2. The Great Supply Reconfiguration: From North American Reliance to Brazilian and African Diversification

Canada remains the top import supplier in value, but its relative weight has diminished, while Brazil has surged to become a comparable source.

Imports by partner show Canada's value falling by 9.4%, from €160.2 million to €145.2 million, though it remains the leading supplier. Meanwhile, Brazilian imports skyrocketed by 266.8%, climbing from €27.6 million to €101.4 million, with a peak of €137.5 million in 2023. The two countries now jointly account for a majority of EU import value, but their trajectories highlight a shift toward South American supply.

Traditional flows from the United States and Norway have largely evaporated, while new, highly intermittent suppliers – Zambia and Côte d'Ivoire – have introduced spikes of extreme volatility.

US imports collapsed by 91.1%, from €22.8 million to just €2.0 million, and Norwegian imports fell 20.0% to €1.9 million. In contrast, Zambian imports recorded a staggering increase of over 13 million percent, rising from negligible levels to €35.3 million in 2025, but with enormous year-to-year swings (from €260 in 2019 to €56.3 million in 2024). Côte d'Ivoire similarly appeared with sporadic, large shipments (e.g., €20.3 million in 2021, then a retreat). These new entrants reflect the EU's search for alternative ore sources, but they bring unprecedented supply uncertainty.

On the export side, China remains the dominant destination, yet its relative importance has ebbed, while Canada, Australia, the Philippines and South Africa have gained ground.

EU exports by partner to China grew 14.0% in value, from €140.3 million to €159.9 million, but after a peak of €307.7 million in 2024 it fell significantly. Exports to Canada rose 30.0%, reaching €63.8 million. Meanwhile, exports to the Philippines, almost non-existent in 2015, jumped to €2.3 million (a +2 075.9% change), and flows to South Africa and Australia also rose substantially. Exports to the United States and the Russian Federation, by contrast, virtually disappeared by 2025, each falling by –100%. This export re-orientation mirrors the broader geopolitical and market realignments that have affected the nickel sector.

Import partner	Value 2015 (€)	Value 2025 (€)	Change (%)
Canada	160,206,751	145,162,053	–9.4
Brazil	27,636,917	101,367,759	+266.8
South Africa	50,994,388	23,166,334	–54.6
United States	22,787,624	2,020,013	–91.1
Zambia	260	35,346,226	+13,594,602.3
Côte d'Ivoire	1,242	705,246 (2023)	+56,683.1

Export partner	Value 2015 (€)	Value 2025 (€)	Change (%)
China	140,315,189	159,941,560	+14.0
Canada	49,089,447	63,800,653	+30.0
Australia	1	2,836,364	+283,636,300
Philippines	106,651	2,320,654	+2,075.9
South Africa	136	2,172,648	+1,597,435.3
United States	299,197	118	–100.0
Russian Federation	6,311,042	5	–100.0

3. Heightened Volatility and Structural Shocks: Fragility Behind the Headline Numbers

Price shock events dominated the decade, with imports from South Africa suffering an 87.8% price spike in 2022, and Brazilian import prices leaping by 1,379% in 2018–2019.

The shock detection analysis identified major price shocks on both import and export flows. The South African shock (2022) saw the unit price jump from a baseline of €1 285/tonne to €2 413/tonne while volume crashed to just 7.4% of the baseline average, followed by a volatile partial recovery. The Brazilian price shock, centred on 2018, pushed the unit import price from a baseline of €724/tonne to €10 708/tonne, as quantities nearly vanished before coming back in later years at still-elevated prices. These shocks reflect acute supply-side disruptions and the EU's exposure to concentrated sourcing.

Export prices also exhibited sharp discontinuities: the unit price for exports to Canada tripled in 2019, and prices to China surged by 155% in 2022.

On the export side, Canada experienced a price spike in 2019, with unit value soaring 193.3% above the 2017-2018 baseline, alongside a collapse in traded volume. The shock to China in 2022 was even more systemic: export prices jumped from a baseline of €2 818/tonne to €7 192/tonne, while volumes fell to 65% of baseline and then further to 47.5% during the volatile recovery phase of 2023-2024. Given China's dominant share (76.1% of export value at the shock centre), this shock reverberated through the entire EU export performance, contributing to the record unit values observed in 2023-2024.

Volatility, measured by the coefficient of variation of trade quantities, remains extremely high for many emerging and traditional partners, exacerbating supply risks.

The volatility bars reveal that imports from Türkiye (CV 2.61), Australia (2.48), Guatemala (2.00) and Côte d'Ivoire (1.61) are among the most erratic. Even major suppliers such as Brazil (CV 1.05) and the United States (1.49) have been highly unpredictable. On the export side, the United States stands out with a CV of 2.99, and several Asian destinations – Korea (1.33), Malaysia (1.56), Viet Nam (1.05) – also display elevated instability. While traditional partners like Canada and Norway show lower volatility, the overall picture is one of persistent uncertainty in quantity flows, which amplifies the impact of the price shocks.

Market concentration has declined moderately on both the import and export side, but remains notable, with Finland acting as the central EU trade hub.

The Herfindahl–Hirschman Index (HHI) for import concentration fell by 18.4%, from 4 128 to 3 368, indicating some diversification of supplier countries. Export HHI also dropped by 10.9%, from 6 135 to 5 466. Despite these improvements, concentration levels remain moderately high. On the intra-EU front, Finland overwhelmingly dominates both imports (rising from €263 million to €307 million, +16.6%) and exports (from €93 million to €228 million, +145.7%), underlining its role as the primary processing and re-export centre. Notably, specialisation indices for 2025 show the Netherlands (RSCA 0.65) and Belgium (RSCA 0.51) as the most specialised member states in nickel ores and concentrates trade, suggesting that logistical and refining capacities are concentrated in a few northern European hubs.

Conclusion

The EU's external trade in nickel ores and concentrates between 2015 and 2025 has been defined by a powerful price-driven decoupling between value and volume, a profound re-shuffling of trade partners, and an environment of extreme price and quantity volatility. Surging unit prices, particularly in exports, have masked a dramatic shrinkage in traded tonnages. The supplier base has shifted away from the United States and Norway toward Brazil and a set of high-risk, sporadic African sources, while export markets have partially diversified beyond China toward Canada, the Philippines and South Africa. However, this reconfiguration has not eliminated vulnerability: price shocks of extraordinary magnitude have struck key partners, and quantity flows remain highly erratic. Finland's dominant intra-EU role and the moderate, albeit declining, concentration of external trade partners underscore the structural dependencies that the European nickel ore supply chain must manage. As the transition to electric mobility intensifies demand for nickel, these dynamics will require careful monitoring and, possibly, strategic stockpiling and diversification efforts to ensure supply security.

Generated on 2026-07-24 based on data from tradedashboard.eu

If you need advice on European trade policy, or representation for your interests in Brussels, feel free to contact me at support@tradedashboard.eu. You can find my CV at this address.