



A STRATEGY FOR THE LONG-TERM AVAILABILITY AND QUALITY OF ALUMINIUM SCRAP IN EUROPE

Brussels, March, 2025

Position Paper

Aluminium is a strategic raw material with permanent characteristics¹ capable of being recycled over-and-over again without losing its original properties, such as lightness, conductivity, formability, durability, impermeability and multiple recyclability. Its properties make it a vital resource for a climate neutral and circular economy, being used for applications in key sectors, including transport, construction, packaging, renewable energy and digital technologies, as well as recognised by NATO as one of the critical raw materials for the manufacture of advanced defence systems and equipment².

Aluminium scrap is an important secondary raw material used as feedstock for aluminium recycling production. Aluminium recycling contributes to lowering emissions along the value chain, as its production requires only 5% of the energy needed to produce primary metal, and improving Europe's resource efficiency and strategic autonomy.

In Europe the recycling of end-of-life aluminium is already significant, this is due to an advanced circular economy framework and industry's commitment to boost recycling. European recycling rates are over 90 percent in the automotive and building sectors, and 75 percent for aluminium cans. The Clean Industrial Deal³ places circularity at the core of the EU decarbonisation strategy and increasing scrap recycling is an integral part of enhancing the competitiveness of the EU's circular economy while offering a concrete decarbonisation pathway⁴.

The EU has been a net exporter of aluminium scrap since 2002 and in 2023 alone (Annex I), the EU exported 1.2 Mio tonnes of aluminium scrap (HS 7602). Scrap exports are, in essence, exports of energy and scarce secondary raw materials.

For a continent starved for energy and raw materials, boosting European recycling production presents a win-win proposition. We urge the Commission to:

1. Make use of Export Fees to secure Scrap supply and adjoined measures for a competitive European Circular Economy
2. Capitalise on existing EU legislation to its full extent including timely implementation of CRMA, WSR and the revision of ELVD
3. Enhance EU industry competitiveness: from incentives to a separate ETS benchmark for recycling
4. Put forward a Circular Economy Act to establish a long-term strategy for the availability and quality of aluminium scrap

¹ Metal Packaging Europe, "Permanent material – summary" https://metalpackagingeurope.org/sites/default/files/2018-04/Permanent%20Material%20-%20summary%20-%20final_0.pdf

² NATO, "NATO releases list of 12 defence-critical raw materials", 11 December 2024. https://www.nato.int/cps/en/natohq/news_231765.htm

³ COM(2025) 85 final - The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation - [link](#)

⁴ Net-Zero by 2050: Science-based Decarbonisation Pathways for the European Aluminium Industry – [link](#)

1. Make use of Export Fees to secure Scrap supply and adjoined measures for a competitive European Circular Economy

European Aluminium fully supports the Commission's intention to consider '*measures to make recycling of critical raw materials waste within the Union more attractive than their export*' and the use of '*export fees*' as it is stated in the Clean Industrial Deal⁵, and we urge fast action to address the critical situation which the European aluminium industry is facing.

Keeping valuable raw materials within the EU is essential for maintaining both its competitiveness and sustainability goals. The same applies to ensuring the availability of scrap materials, which are crucial for the circular economy. In recent years, a significant share of European scrap exports has gone to countries that recognize the role of scrap in reducing emissions and have therefore imposed export restrictions to secure their domestic supply.

In his **recent report** on the 'Future of European competitiveness'⁶, Mario Draghi proposes the adoption of reciprocal measures. Reciprocity, as a principle, merits further attention but alone will not be sufficient.

According to the *OECD inventory of Export Restrictions on Industrial Raw Materials*⁷, the main export destinations for EU aluminium scrap—India, Malaysia, Indonesia, and China—have all implemented various trade restrictions on aluminium scrap. These restrictions differ by country (Annex II):

- **India** applies indirect measures such as tolls or vignettes, which influence the level or direction of exports, either de jure or de facto.
- **Malaysia** imposes a 10% export tariff and requires exporters to obtain prior approval through a licensing system.
- **Indonesia** enforces licensing requirements on aluminium scrap and has implemented an export ban on alumina.
- **China** applies a 15% export tariff on aluminium scrap.
- **Vietnam** applies an export tariff of 22% to aluminium waste and scrap (CN 760200).

These restrictions create an uneven playing field, reinforcing the need for the EU to consider reciprocal trade measures to ensure fair competition and secure access to critical raw materials.

In addition, the recently proclaimed **tariffs from the US on aluminium imports**⁸ are already causing an unfavourable market distortion effect on the trade of aluminium scrap, since aluminium scrap (HS7602) falls outside the scope of restrictive measures, the pull of European scrap towards the U.S. will inevitably increase, worsening the issue of scrap leakage faced by European companies.

These asymmetrical trade measures create an uneven playing field, reinforcing the need for the EU to consider reciprocal trade measures to ensure fair competition and secure access to critical raw materials. **The EU must**

⁵ COM(2025) 85 final - The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation - [link](#)

⁶ https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en#paragraph_47059

⁷ [Export restrictions on critical raw materials | OECD](#).

⁸ Proclamation 10895 by the President of the United States of America "Adjusting Imports of Aluminium into the United States"—[link](#)
HS7602 is not

adopt a strategic approach, looking beyond reciprocity as a reactionary tool and instead proactively introduce an export fee to be applied on an erga omnes basis. This means implementing export fees universally rather than selectively targeting individual countries.

Export restrictions can be easily circumvented by rerouting exports through intermediary countries. A clear example is China's 2021 stricter scrap import policy, which limited direct scrap imports from Europe and the US. In response, Western scrap was diverted to Asia—such as Malaysia and Thailand—where it was further processed before being exported to China as high-quality scrap. (See Annex III).

The concept of environmental reciprocity must also be central to this approach. Many third countries operate with lower environmental and sustainability standards, allowing scrap to be processed under conditions that would not be acceptable in the EU.

2. Capitalise on existing EU legislation to its full extent including timely implementation of CRMA, WSR and the revision of ELVD

- **Strengthen the Critical Raw Materials Act (CRMA):** For critical and strategic materials essential to the energy transition, such as aluminium (Annex III), recycling plays a key role in ensuring reliable sourcing to meet the growing demand. It will be essential to ensure that the Circular Economy provisions under Article 26 are consistently implemented among Member States. Those provisions foresee improving collection, sorting and processing of waste, stricter enforcement of end-of-waste criteria, and increase technological maturity of recycling technologies among others. Moreover, we would like to stress the importance of having specific recycling benchmark for each strategic raw material as stated in article 5.2.
- **Timely implementation of the Waste Shipments Regulation (WSR)** to make sure waste exported to non-OECD is managed in an Environmentally Sound way. At the same time, attention should be paid to End-of-Waste Regulation 333/2011⁹. This regulation should only be used on a European basis, as it does not exist in any other region of the world, and if used for exports it will undermine the stricter exporting conditions set in the recently revised Waste Shipments' Regulation, which act as a safeguard to protect human health and the environment in third countries.
- **Swiftly revising the End-of-life Vehicles Directive (ELVD) to address the problem of vehicles of unknown whereabouts.** We welcome all measures to solve the issue of “missing vehicles” and to tackle the illegal treatment and illegal export of ELVs. We believe that the allocation of responsibilities for certificates of destruction, binding criteria for distinguishing used vehicles and ELVs, the ban on the export of vehicles that are no longer roadworthy, and new enforcement provisions will be crucial to reduce the number of ELVs treated or exported illegally. Vehicles are real “mines on wheels” that Europe could and should exploit to gain access to an incredible amount and variety of raw materials, including aluminium.
- **Leverage Regulation (EU) 2015/479 on common rules for export** - The EU's approach to export restrictions is outlined in Regulation (EU) 2015/479 (Regulation)¹⁰, which establishes the fundamental principle of **free exportation** of goods from the Union to third countries, except **where restrictions are applied in accordance with the Regulation**. Any such measures must align with the **Union's interests** and respect **international obligations**, including WTO rules. Additionally, Article 10 of the Regulation

⁹ <https://eur-lex.europa.eu/eli/reg/2011/333/oj/eng>

¹⁰ Regulation (EU) 2015/479 of the European Parliament and of the Council of 11 March 2015 on common rules for exports (codification), *OJ L 83, 27.3.2015, p. 34–40*.

allows Member States to impose export restrictions for specific reasons, such as **public security, health protection, environmental concerns, or the safeguarding of national treasures and intellectual property**.

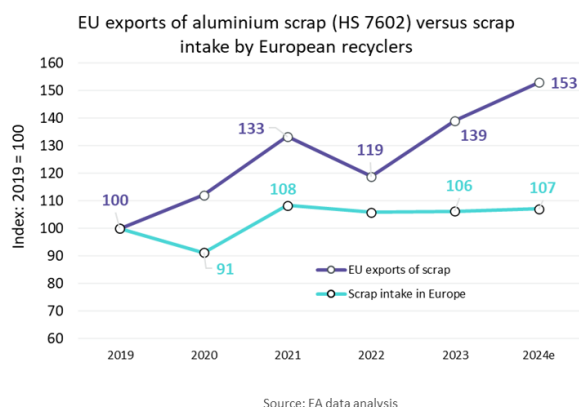
In terms of specific measures beyond general surveillance measures, the Regulation (Articles 5 and 6) allows the Commission:

- 1) *to make the export of a product subject to the production of an export authorization (in order to prevent a critical situation from arising on account of a shortage of “essential products”, or to remedy such a situation, and where EU interests call for immediate intervention);*
- 2) *to “adopt appropriate measures”:*
 - (a) *to prevent a critical situation from arising owing to a shortage of essential products, or to remedy such a situation;*
 - (b) *to allow international undertakings entered into by the Union or all the Member States to be fulfilled, in particular those relating to trade in primary products.*

There are three elements that would need to be established cumulatively here: an “essential product”, a “shortage” of that product, and a “critical situation” arising on account of that shortage.

The classification of bauxite, alumina, and aluminium as critical and strategic under the CRM Act¹¹ certainly supports considering aluminium scrap as an '**essential product**' under the Regulation. However, the other two conditions remain undefined in the CRM Act. We estimate a gap between European recycling capacity and production of approx. 2Mio tonnes. Since 2019, EU scrap exports have surged compared to the domestic scrap intake by European recyclers. For instance, from 2019 to 2024, EU exports of aluminium scrap increased by 53% while domestic scrap intake grew by only 7%.

Since 2002, the EU has been a net exporter of aluminium scrap, with approximately 1Mio tonnes leaving Europe for other parts of the world each year. Since 2015, EU scrap exports have nearly doubled. After a 17% increase in 2023, preliminary data for 2024 indicates a further 10% rise. Around 75% of the EU's scrap exports are directed to Asia.



This shortage creates a **critical situation** for the EU aluminium industry, as it threatens the security of supply for key manufacturing sectors that rely on recycled aluminium. With increasing exports and a

¹¹ Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020, *OJ L*, 2024/1252, 3.5.2024.

growing supply gap, EU producers face heightened competition for scrap, leading to price volatility and potential disruptions in production. Given aluminium's essential role in the green transition and strategic industries such as automotive, construction, aerospace and defence, addressing this shortage is crucial to maintaining Europe's industrial competitiveness and sustainability goals. NATO has also highlighted aluminium as one of the critical raw materials for the manufacture of advanced defence systems and equipment¹². Urgent measures are needed to ensure that sufficient aluminium scrap remains available within the EU to support a stable and resilient supply chain.

3. Enhance EU industry competitiveness: from incentives to a separate ETS benchmark for recycling

The volume of scrap exported is consistently increasing year by year. For instance, in the first semester of 2024, EU exports increased further by 17%¹³ (Annex I). One reason for this trend is recyclers in third countries are willing to pay higher prices, valuing scrap as a vital resource to boost their recycling production while reducing carbon emissions and costs. Many of these countries either have lower environmental and social standards (Annex IV) in place or finance their investments through subsidies, creating unfair market competition and overcapacities that undermine European competitiveness. For example, China's aluminium recycling capacity surged from 8 to 21 million tonnes for aluminium in just 10 years (Annex VI) with further increases projected in the coming years¹⁴. In addition, many of these countries benefit from lower energy costs. This poses a risk to the significant investments already made in Europe (Annex VII) and jeopardizes the opportunity to capitalize on Europe's leading position internationally. A future-proof legislative framework should be accompanied by the ad-hoc economic measures to maintain the competitiveness of domestic industries.

- It is essential to foresee mechanisms to **encourage the market to invest in products and services with lower CO₂ emissions and boost recycling**. By incentivizing recycling, the legislation would cut down greenhouse gas emissions and decrease waste sent to landfills facilities. An option can be to integrate resilience criteria when developing new policies to promote lead markets for low carbon and circular aluminium products. This should be accompanied by a **revision of State Aid rules** to enhance support for circular economy initiatives. **Financing mechanisms, such as tax breaks and subsidies**, should be proposed to improve the economic viability across the entire value chain. These incentives are essential for **improving the collection, sorting, and pre-treatment infrastructure**, which are critical to supporting the recovery of strategic and critical raw materials and achieving higher quality outcomes.
- The EU Commission should **design a separate ETS Product Benchmarks for aluminium recycling**¹⁵. As it stands currently aluminium recycling falls under the non-sector specific ETS heat & fuel consumption benchmark. A new ETS Product benchmark is urgently needed and would recognise the role of recycling in the EU's decarbonisation efforts. Otherwise, the EU's objective to increase the resilience of the Union's supply chains of critical and strategic raw materials and accelerate the shift towards a more circular and low carbon industry will be undermined. To recall, In the revised ETS Directive, both Parliament and Council provided a mandate to the EU Commission to review the existing ETS Benchmarks, considering circularity and new amendments to the ETS Directive about the benchmarking methodology. For example,

¹² NATO, "NATO releases list of 12 defence-critical raw materials", 11 December 2024.

¹³ https://www.nato.int/cps/en/natohq/news_231765.htm

¹⁴ <https://ec.europa.eu/eurostat>

¹⁵ Find source

¹⁵ <https://european-aluminium.eu/wp-content/uploads/2024/01/2023-12-18-EA-consultation-response-to-draft-ETS-FAR-rules.pdf>

Alumina is also now specifically referenced in Annex I among the activities covered by the Directive together with Primary Aluminium. This means that the case of a separate benchmark for Alumina and aluminium recycling can and must be made.

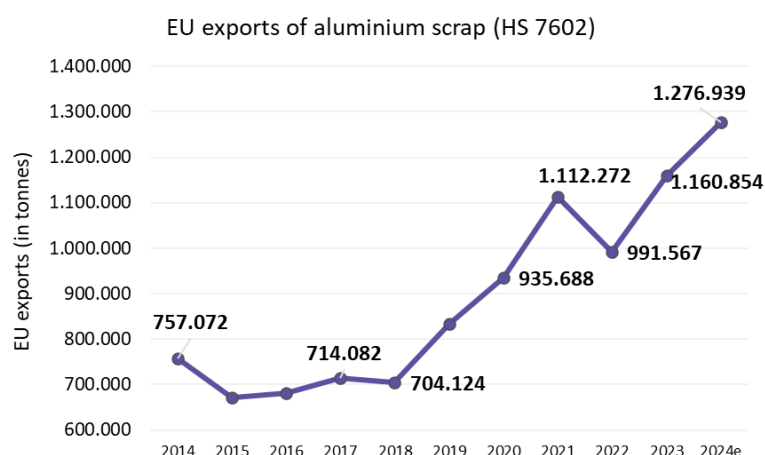
4. Put forward a Circular Economy Act to establish a long-term strategy for the availability and quality of aluminium scrap

Enhancing aluminium recycling is crucial not only for our value chain's decarbonisation but also for achieving the EU's circular economy objectives and strategic autonomy. Boosting domestic recycling of aluminium presents a win-win situation by saving scarce resources and energy. The Commission is set to publish a new Circular Economy Act by end 2026. We would propose this framework legislation to:

- **Establish a framework for a long-term availability and quality of Secondary Raw Materials** such as aluminium scrap.
- Adopt a **coordinated monitoring system for the exports of wastes** that include strategic and critical raw materials at the EU level.
- **Provisions to mandate quality requirements in the separation of aluminium scrap fractions at the end of the pre-treatment process.** This can already materialise in a first stage in the current revision of the ELVD, where we propose setting quality requirements to separate aluminium fractions into wrought and cast alloys to enhance material recovery. The inclusion of quality standards for output fractions, such as aluminium, represents a significant step toward improving the recovery of high-purity materials and will contribute to increasing the quality of the overall recycling process. Various aluminium alloys are used for different components based on specific performance requirements. Therefore, classifying scrap into distinct alloy families will improve efficiency and sustainability in the recycling process. We encourage the inclusion of this requirement in the current ELV revision, where we have identified four main alloy families¹⁶ to be obtained in the medium term. In the future, this approach could be applied to other markets, depending on the specific characteristics of the alloy composition of the aluminium products used.
- **Packaging and Packaging Waste Regulation (PPWR):** We propose establishing additional guidance to ensure the recovery and retention of high-purity materials from mandated European Deposit Return Schemes (DRS). Specifically, that within Annex X Minimum Requirements for Deposit and Return Schemes an additional requirement is placed upon System Operators to demonstrate that high-quality Used Beverage Can scrap is offered for sale to the European market before alternative markets are explored. Also, that countries seeking derogation from the provisions of Article 50 through Article 50 (5a) and reasonably demonstrate that whilst meeting the same 90% collection rate required by the Regulation, they also deliver the same high-quality scrap created within a DRS and become subject to the same European marketing provisions suggested above.

¹⁶ <https://european-aluminium.eu/wp-content/uploads/2024/10/2024-09-03-European-Aluminium-position-paper-on-ELVD-revision.pdf>

ANNEX I – EU exports of aluminium scrap (HS 7602)



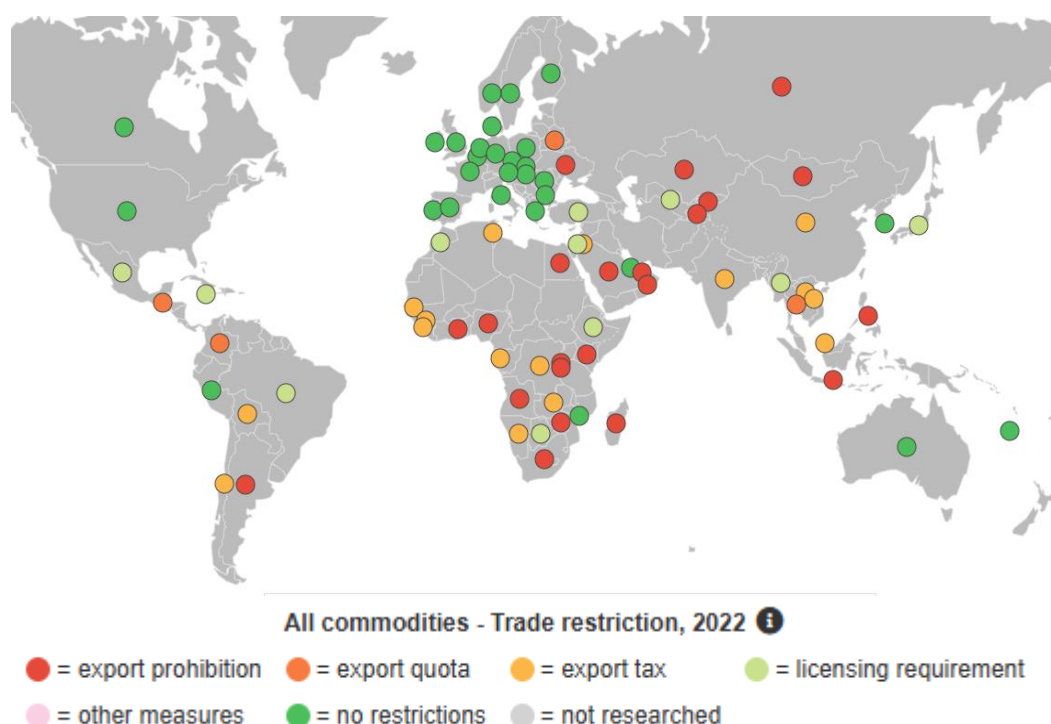
Main trade partners	2023 share (%)	2024 growth rate (%)**
India	27%	4,2%
China & Hong Kong	12%	7,9%
Thailand	10%	34,0%
Malaysia	9%	28,0%
Pakistan	8%	11,0%
Rest of Asia*	9%	
Other	25%	
Total	100%	7,3%

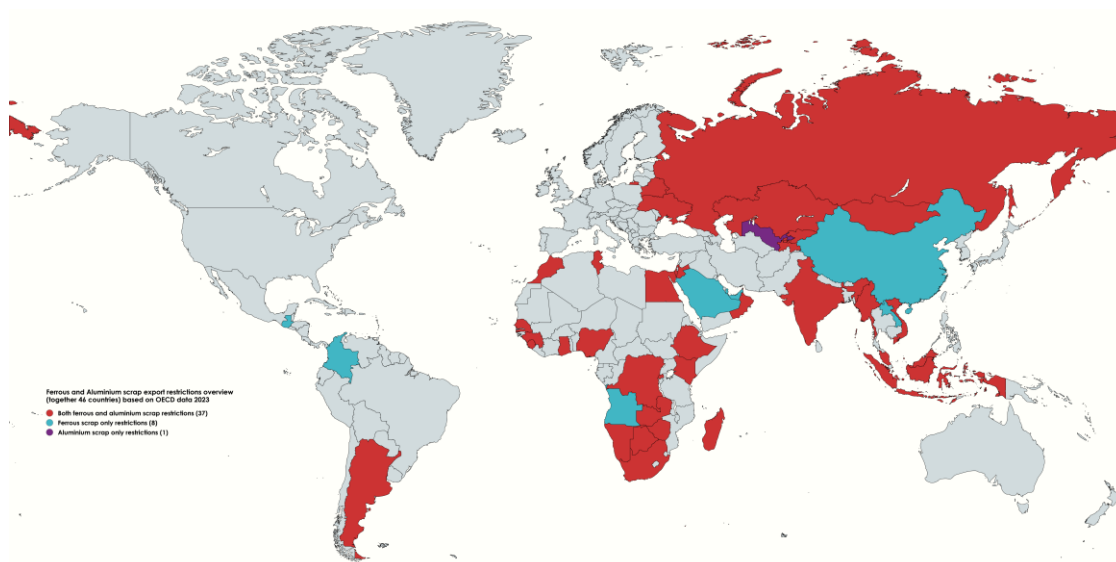
*e.g. Taiwan, Vietnam, Indonesia, S. Korea

**until October 2024 i.e. Oct 2024 YTD

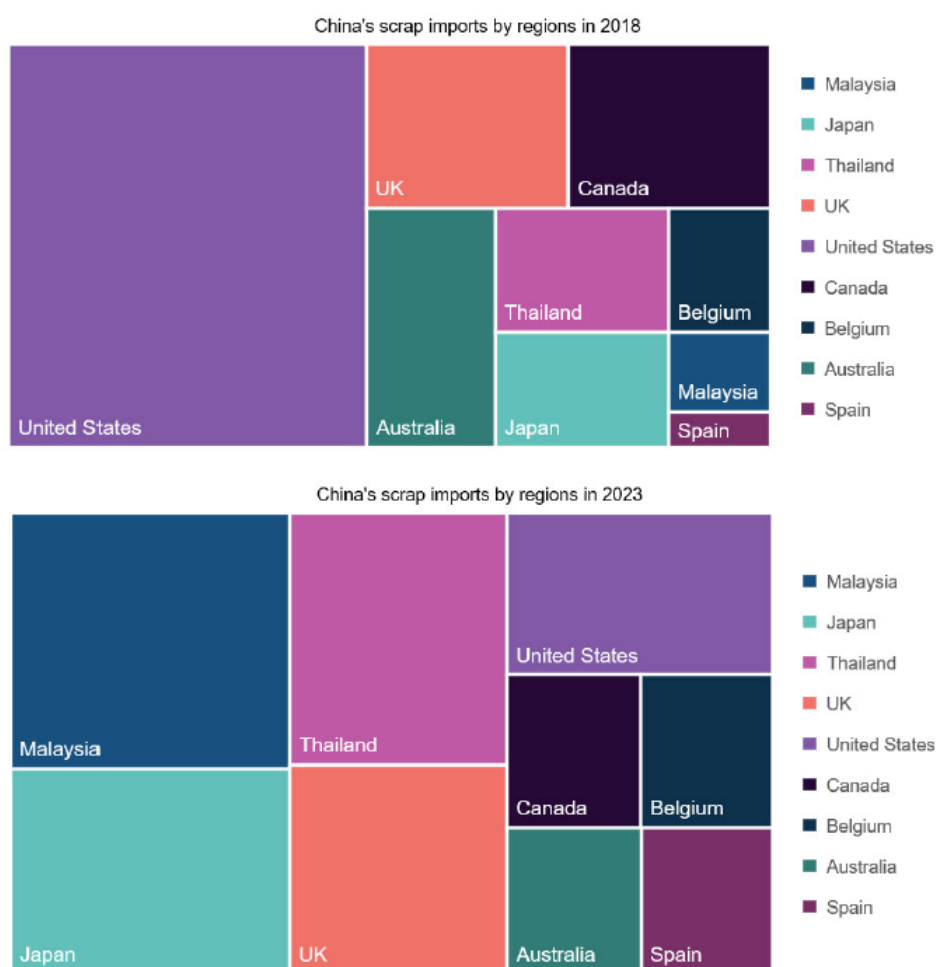
ANNEX II: Overview of Export Restrictions on Industrial Raw Materials, based on OECD Inventory

The aim of the OECD Inventory of Export Restrictions on Industrial Raw Materials is to improve the transparency of the use of these export restrictions, in place since 2009. The inventory covers information on 80 exporting countries and 65 industrial raw materials, representing the most comprehensive inventory on raw materials export restrictions. The map below shows the presence and degree of any type of export restrictions applied from the 80 jurisdictions in the sample.





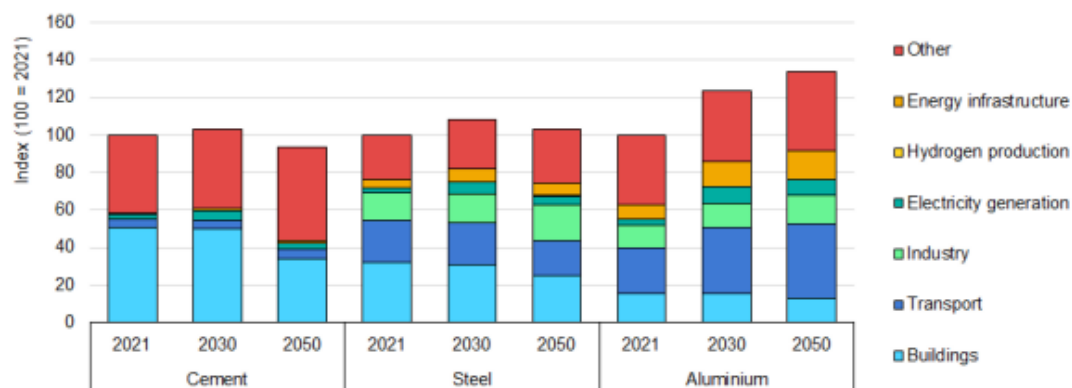
ANNEX III – Chinese imports of aluminium scrap: 2018 vs 2023



SOURCE: Global Trade Tracker

ANNEX VI - Estimated global demand for Net-Zero Technologies

Figure 3.4 Estimated global bulk material demand by end use in the NZE Scenario



IEA. CC BY 4.0.

Notes: Energy infrastructure includes electricity grids, oil and gas pipelines, hydrogen transport, and CO₂ transport and storage. Industry includes material demand from industrial equipment but not from the plant shell. Transport includes vehicles and estimated material demand from road and rail infrastructure. Other includes non-energy infrastructure, consumer goods, packaging, textiles and miscellaneous uses.

Global demand for cement and steel is relatively flat as it is less driven by clean energy technologies and infrastructure, while demand for aluminium increases more substantially due to its role in electricity generation and distribution and low-emission vehicles.

IEA (2023), *Energy Technology Perspectives 2023*, IEA, Paris <https://www.iea.org/reports/energy-technology-perspectives-2023>, Licence: CC BY 4.0

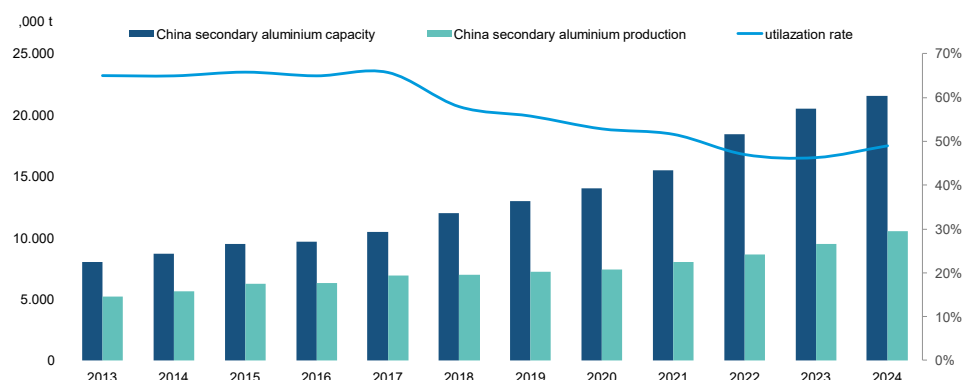
ANNEX V - Environmental equivalence

Environmental Performance Index 2024 (rank 1-180; score range 0-100 ; 0 = worst ; 100 = best)										
Top destinations of EU aluminium scrap						European Countries				
	India	Thailand	Malaysia	Pakistan	China	Italy	Spain	France	Germany	Norway
rank	176	90	118	179	156	29	22	12	3	7
score	27,6	45,7	41	25,5	35,4	60,3	64	67	74,5	69,9
Air quality										
rank	177	139	79	178	168	57	45	29	26	5
score	6,8	25,4	43,2	6,3	14,3	52,2	56,2	65,2	66,9	82,9
Waste management										
rank	86	78	71	107	39	21	29	18	7	20
score	31,8	33,6	35,4	29,3	43,3	57,5	50,8	59,6	67,4	58,3
Controlled solid waste										
rank	113	86	81	111	47	50	1	1	1	51
score	9,3	40,1	47,2	10,8	91,4	90,9	100	100	100	90,4
Waste recovery										
rank	61	40	37	101	93	20	28	19	5	13
score	9,3	26	32,2	3,6	4,5	70,2	48,1	75,2	98,9	87,3

Source: <https://epi.yale.edu/measure/2024/epi>

ANNEX VI – Secondary aluminium production/capacity in China

China's secondary aluminium capacity continue to expand



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ANNEX VII - investments on recycling capacity in Europe

COMPANY	WHERE	WHAT	CAPACITY	MARKET	INVESTMENT	YEAR
Constellium	France	New plant	130,000 t		EUR130m	2024
Link: https://www.aluminium-journal.com/constellium-opens-new-recycling-centre-in-neuf-brisach						
Hydro	Norway	New unit	25,000 tonnes of post-consumer aluminium scrap annually		NOK 100 million	2024
Link: https://www.hydro.com/en/global/media/news/2024/hydro-ardal-opens-new-recycling-unit-with-capacity-to-process-25000-tonnes-of-post-consumer-aluminium-scrap-annually/						
Hydro	Hungary	New plant	Annual capacity of 90,000 tonnes. The recycling plant will initially process 15,000 tonnes of post-consumer scrap annually,	Automotive	around €88m	2024
Link: https://www.hydro.com/en/global/media/news/2024/hydro-opens-new-aluminium-recycling-plant-in-hungary/						
Novelis	UK	Expansion	This expansion will increase the facility's recycling capacity for UBC by 85,000 tonnes per year	Packaging	approximately \$90 million	begin commissioning in December 2026
Link: https://www.novelis.com/novelis-invests-in-doubling-its-uk-recycling-capacity-for-used-beverage-cans/						

ASG	France	New plant	80.000 tonnes		EUR 50 million	2024
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Link: <https://www.lesechos.fr/pme-regions/hautes-de-france/asg-va-construire-une-fonderie-daluminium-recycle-dans-la-somme-2093297>

Hydro	Spain	New plant	120,000 metric tonne		EUR 180 million	2026
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Link: <https://www.alcircle.com/news/hydro-to-build-a-new-aluminium-recycling-plant-at-eur-180-million-in-torija-spain-105785>

Speira	Norway	Expansion			NOK 6 million, a new, state-of-the-art slag press will be installed, which will allow waste from aluminium production to be recycled.	2025
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Link: <https://www.speira.com/newsroom/press/minimizing-waste-and-boosting-recycling-in-karmoev/>

Speira	Germany	Expansion			40 million euros for additional recycling capacity	operational by 2026
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Link: <https://www.speira.com/newsroom/press/further-transforming-to-circular-economy/#:~:text=Speira%20is%20investing%2040%20million,per%20year%20at%20the%20site.>

Exlabesa	Spain	Expansion	expanding recycling capacity for aluminium billet production . The capacity of this furnace will be increased by 30,000 tonnes to 80,000 tonnes per year			2024
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Link: <https://www.alcircle.com/news/exlabesa-to-expand-recycling-capacity-for-aluminium-billet-production-with-new-hertwich-continuous-homogenising-furnace-111769>

Trimet	Germany	Expansion	Trimet has completed the expansion of its recycling plant in Gelsenkirchen and increased capacity by around 20%.			2024
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Link: <https://www.aluminium-journal.com/trimet-expands-recycling-plant-in-gelsenkirchen>

Hydro	Poland	Expansion	will increase capacity at the plant by approximately 30,000 t of foundry alloys	Automotive	The investment of around NOK 200 m	The modernized recycling facility is expected to be operational during first half of 2025
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Link: <https://www.aluminium-journal.com/hydro-invests-in-expansion-of-alumetal-recycling-plant>

Hydro	Germany	Expansion	The plant currently produces some 95,000 t of extrusion ingot per year. With the expansion, Rackwitz plans to produce an additional 25,000 t of HyForge		The investment is expected to be around EUR40 million.	2023
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Link: <https://www.aluminium-journal.com/hydros-expands-aluminium-recycling-plant-in-rackwitz>

Befesa	Germany	Expansion	Approx. 30Kt of new aluminium recycling capacity.		Approx. EUR 30 million	To be commissioned in 2026
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