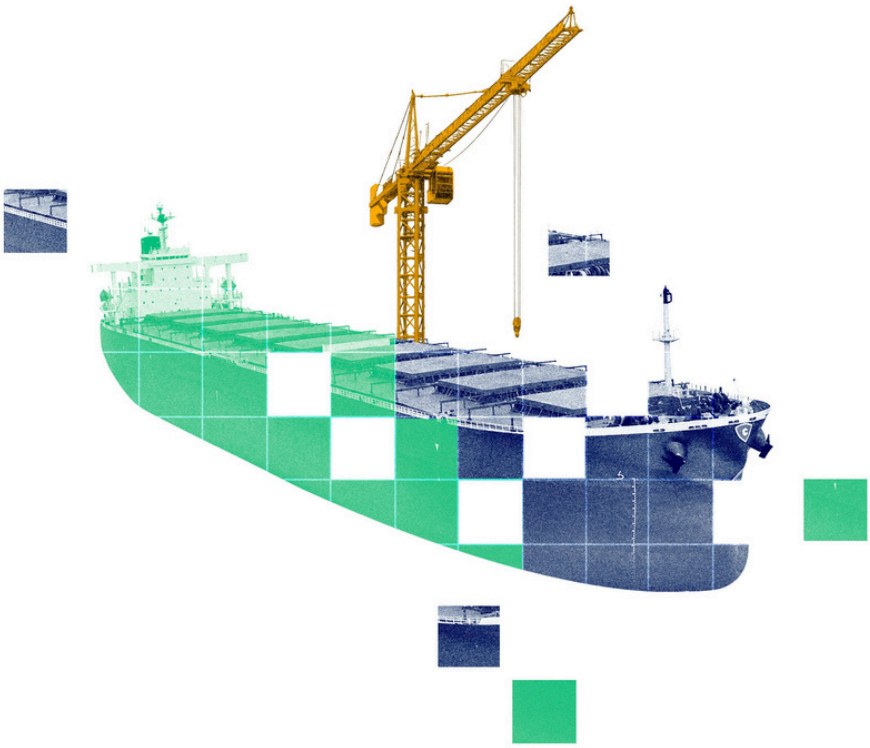
CAPACITY TO RECYCLE SHIPS IN THE EU

Assessing state of play and future opportunities

Why the EU can already recycle its end-of-life fleet, and what is needed to expand capacity for the decades ahead



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Terminology note

"EU-flagged" and "EU-owned vessels": For readability, this report uses the shortened terms "EU-flagged" and "EU-owned" to encompass vessels flagged in EU Member States, EEA EFTA states and Switzerland. EEA EFTA states have incorporated both the EU Ship Recycling Regulation (EU SRR) and the EU Waste Shipment Regulation (EU WSR) into their domestic legal frameworks. Switzerland, on the other hand, is not party to the EEA Agreement and has therefore not incorporated the EU SRR or EU WSR. Switzerland is, however, party to the Basel Convention and the Basel Ban Amendment, which prohibit the export of hazardous waste, including end-of-life vessels, from OECD to non-OECD countries. The world's largest shipowner, Mediterranean Shipping Company (MSC), which controls 25% of all containerships older than 20 years old, is, however, domiciled in Switzerland. For this reason, Switzerland-owned ships were included in the analysis.

"EU-flagged and/or EU-owned vessels": For the purposes of this report, references to "EU-flagged and/or EU-owned" vessels shall also be understood to also include vessels that swapped from an EU flag to a non-EU flag prior to their final voyage, stepping outside of the scope of the EU SRR.

"The EU list": We refer to the EU-list of approved ship recycling facility, as per EU SRR No 1257/2013.

"EU ship recycling yards" and "EU facilities": We refer exclusively to ship recycling yards located in EU Member States and Norway, corresponding to Part A of the EU-list of approved ship recycling facilities. Facilities included in part B (located in third countries) were excluded from the analysis.

Glossary

Light Displacement Tonnage (LDT)
Light displacement tonnage is defined as the weight of the ship with all its permanent equipment, excluding the weight of cargo, fuel, water, ballast, stores, passengers, crew, but usually including the weight of permanent ballast and water used to operate steam machinery. End-of-life ships are sold on the basis of USD per LDT as an indicator of the steel value.

Gross Tonnage (GT)
Gross tonnage is a non-linear measure of a ship's overall internal volume.

INTRODUCTION

In 2018, the NGO Shipbreaking Platform and T&E published a first report entitled "EU-Listed yards can handle the recyling demand of EU-flagged ships" which aimed to answer the shipping industry claims that there is not enough capacity in the EU to recycle the EU-flagged fleet according to the EU Ship Recycling Regulation No 1257/2013 (hereinafter EU SRR). The report concluded that ship recycling facilities included in the EU list[1] clearly had enough capacity, both in terms of LDT and size, to recycle all EU-flagged vessels from 2015 to 2018.

Eight years later, the shipping industry continues to rely on the same arguments and claim a lack of capacity in the EU to justify reflagging practices and push for the inclusion of South Asian beaching yards on the EU list. This report provides an updated picture of the EU's current capacity to recycle both EU-flagged and EU-owned vessels. Given the expected surge in end-of-life vessels over the coming decade, it further assesses whether additional recycling capacity will be needed to ensure that the entire EU-owned fleet can be recycled in EU ship recycling facilities.

This report demonstrates once again that the argument presented by ship owners on the lack of capacity under the EU SRR is not backed by data evidence and only serves to justify a pro-beaching agenda. The expected increase in end-of-life vessels represents an economic opportunity to expand ship recycling capacity within the EU and end the export of toxic waste to third countries. This aligns with the Council conclusions on the EU Industrial Maritime Strategy, which explicitly support the development of domestic EU ship recycling capacities ahead of the expected surge in end-of-life vessels.

1 The "EU list" refers to the official list of facilities approved by the EU to recycle EU-flagged vessels under the EU SRR.

1. Overview of the EU fleet and applicable ship recycling regulations

34.5% of the world tonnage is controlled by EU shipping companies, with 570.5 million GT across 22,403 vessels in 2025, according to ECSA. At the same time only about 15% of the world fleet was registered under the flag of an EU Member State [2].

At EU level, two regulations lay down shipowners' obligations with regards to the recycling of their fleet. The EU SRR, adopted in 2013, requires ships registered under the flag of an EU Member State to be recycled only at facilities that feature on the EU list.

The Waste Shipment Regulation (hereinafter EU WSR), adopted in 2006 and reviewed in 2024, incorporates into EU law the Basel Convention's Ban Amendment, which bans exports of hazardous wastes from OECD to non-OECD countries, as well as the Basel Convention's requirement to obtain prior informed consent for the export of hazardous waste. Consequently, ships that become waste in EU waters cannot be recycled in a non-OECD facility.

Despite these obligations, most of the EU-owned fleet continues to be scrapped in substandard yards in South-Asia: shipowners either reflag their ships to circumvent the EU SRR or fraudulently claim continued operation to evade the waste export restrictions under the EU WSR. As a result, the EU continues to export toxic waste in the form of end-of-life vessels to vulnerable communities, exposing workers and the environment to serious harm.

Global ship recycling at historic lows

The global ship recycling market is experiencing one of its most prolonged downturns as recycling volumes have collapsed due to several converging factors.

The most immediate driver has been the sustained profitability of shipping operations. Strong freight rates across most sectors, inflated by the diversion of vessels around the Red Sea, has kept ageing tonnage in active commercial service. Shipowners have had little economic incentive to scrap vessels still generating significant revenues.

2 This gap between ownership and registration reflects the widespread use of flags of convenience (FOCs). Ships are legally required to register under a flag state, which then bears regulatory responsibility for safety, pollution prevention, and crew certification, but there is no requirement for a genuine link between the ship's owner and the flag state. As a result, according to UNCTAD, almost 73% of the world fleet is flagged in a country other than that of the vessel's beneficial owner. While Greece, Japan, China, the US, and Norway are among the top ship-owning nations, **Panama, the Marshall Islands, and Liberia** are by far the three largest flag registries, offering low taxes, lighter regulation, and no nationality requirements for registration.

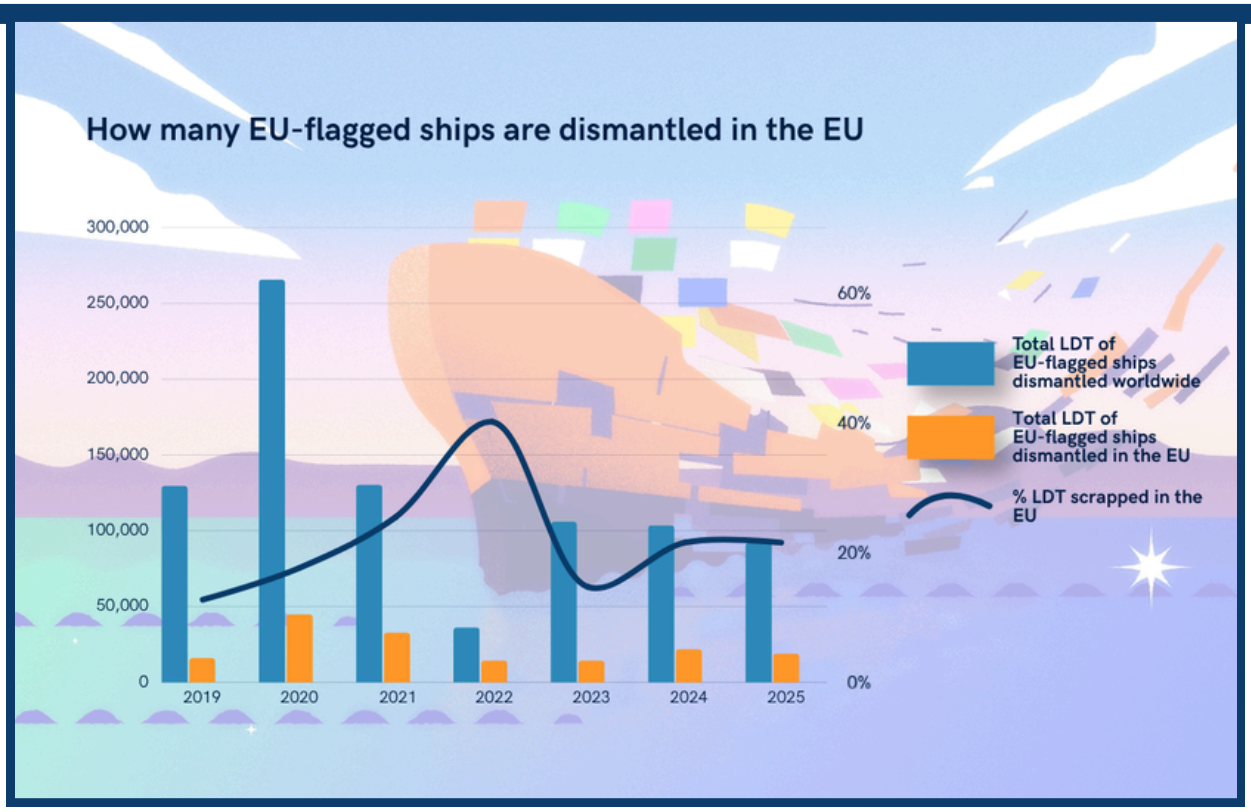
Demand for old crude oil tankers to operate in sanctioned trade routes has also given vessels past 20 or 25 years of age, which should long have been decommissioned, a new and deeply problematic commercial lease of life.

European shipowners have not been passive bystanders: some profited directly from selling their ageing assets into the shadow fleet, offloading environmental and human rights liabilities onto unregulated operators while pocketing substantial returns.

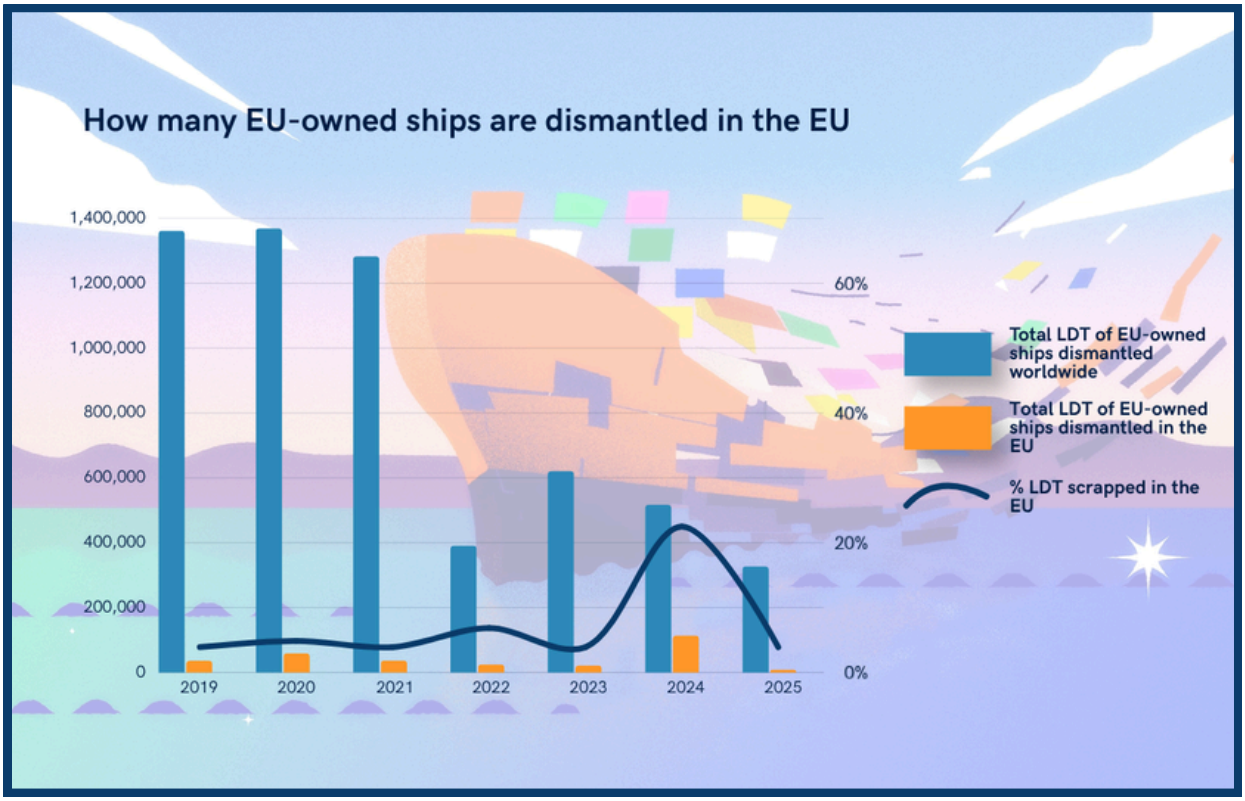
A significant wave of end-of-life tonnage is expected to reach the recycling market in the coming years, including the backlog of vessels that have remained in operation due to factors mentioned above. Ship recycling activity is expected to pick up as freight conditions normalise and regulatory pressure on older, less-efficient vessels intensifies under the IMO emissions frameworks. BIMCO forecast that more than 15,000 ships will be reaching end-of-life in the next ten years.

This report serves as an update to the assessment of capacity to recycle ships in the EU published in 2018, with data covering the period from 2019 to 2025 inclusive. Over those seven years:

- 706 EU-flagged and/or EU-owned ships were dismantled worldwide, representing around 6.7 million LDT.
- Out of those ships, only 22% have been recycled in an EU facility (153 ships). These ships constitute only 5% of the total tonnage. This illustrates that larger vessels are mostly recycled in third countries.
- Meanwhile, 49% of EU-flagged and/or EU-owned ships have been beached in India, Bangladesh and Pakistan (345 ships). This constitutes 66% of total tonnage. The remaining ships were dismantled primarily in Turkey.
- 102 ships swapped their EU flag to another flag shortly before dismantling, stepping outside the scope of the EU SRR.



Graph 1. EU-flagged ships dismantled worldwide and in the EU



Graph 2. EU-owned ships dismantled worldwide and in the EU

To explain these figures, shipowners argue that EU facilities:

1) do not have enough capacity to recycle all EU-flagged ships, let alone all EU-owned ships;

and

2) do not have capacity to dismantle the largest ships.

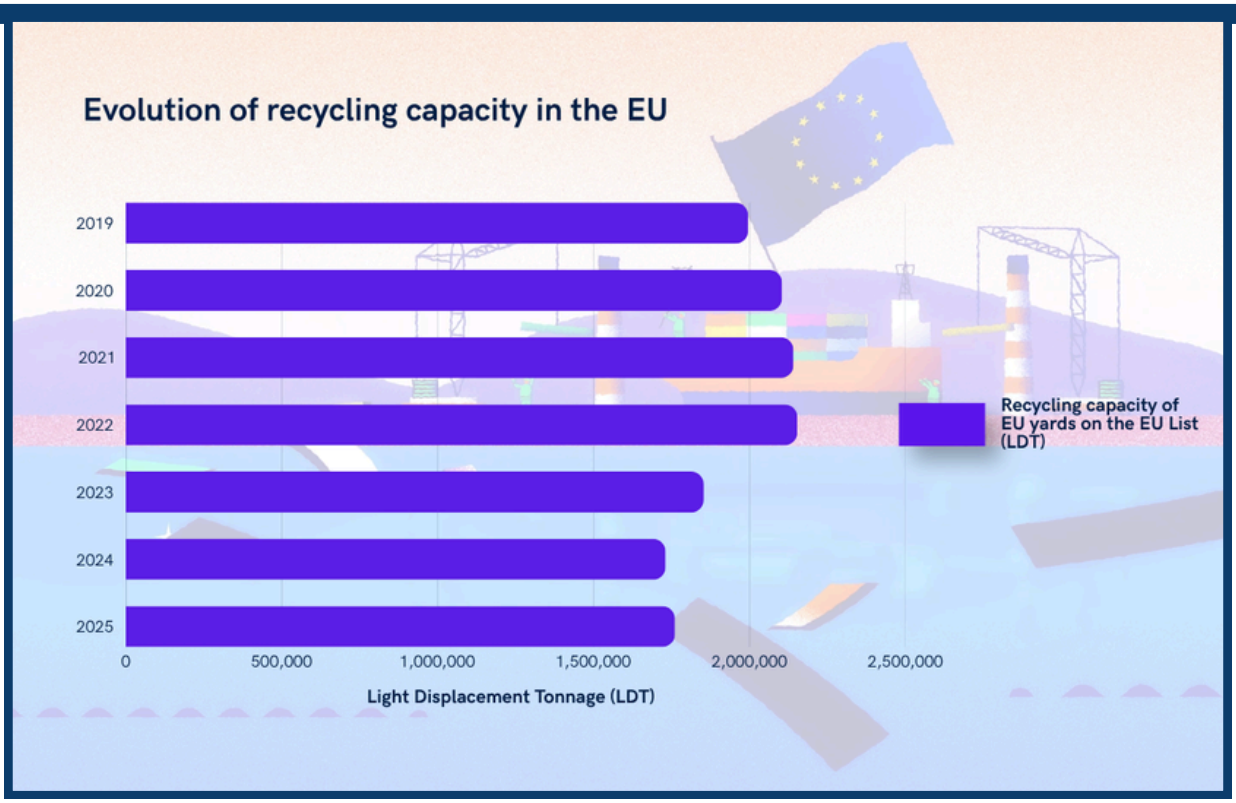
The following sections examine these claims by assessing whether EU facilities would have had the capacity to recycle the 706 EU-flagged and/or EU-owned ships dismantled between 2019 and 2025, and whether they could have received the largest vessels.

2. The EU has enough capacity to recycle the EU-owned fleet

Since 2018, the number of EU-based facilities on the EU list initially grew through successive editions between 2019 and 2022, with new yards added in Norway, Denmark, the Netherlands, Latvia, Lithuania, the UK and Bulgaria. With Brexit, the UK's departure from the EU cut the capacity attributable to EU Member States by almost 600,000 LDT, even though UK yards remained on the list as third-country facilities. From 2023 onward the trend reversed, with the 11th, 12th and 13th editions collectively removing six European yards, including Stena Recycling (DK), Scheepssloperij Nederland (NL) and Lutelandet Industrihamn (NO).

According to the European Commission, these removals reflected commercial disengagement rather than regulatory failure: Stena Recycling, Scheepssloperij Nederland and Lutelandet Offshore had their authorisations withdrawn after ceasing ship recycling operations, while Sagro (NL), UAB Demeksa (LT) and Ship and Industrial Service (BG) simply allowed their permits to expire without seeking renewal.

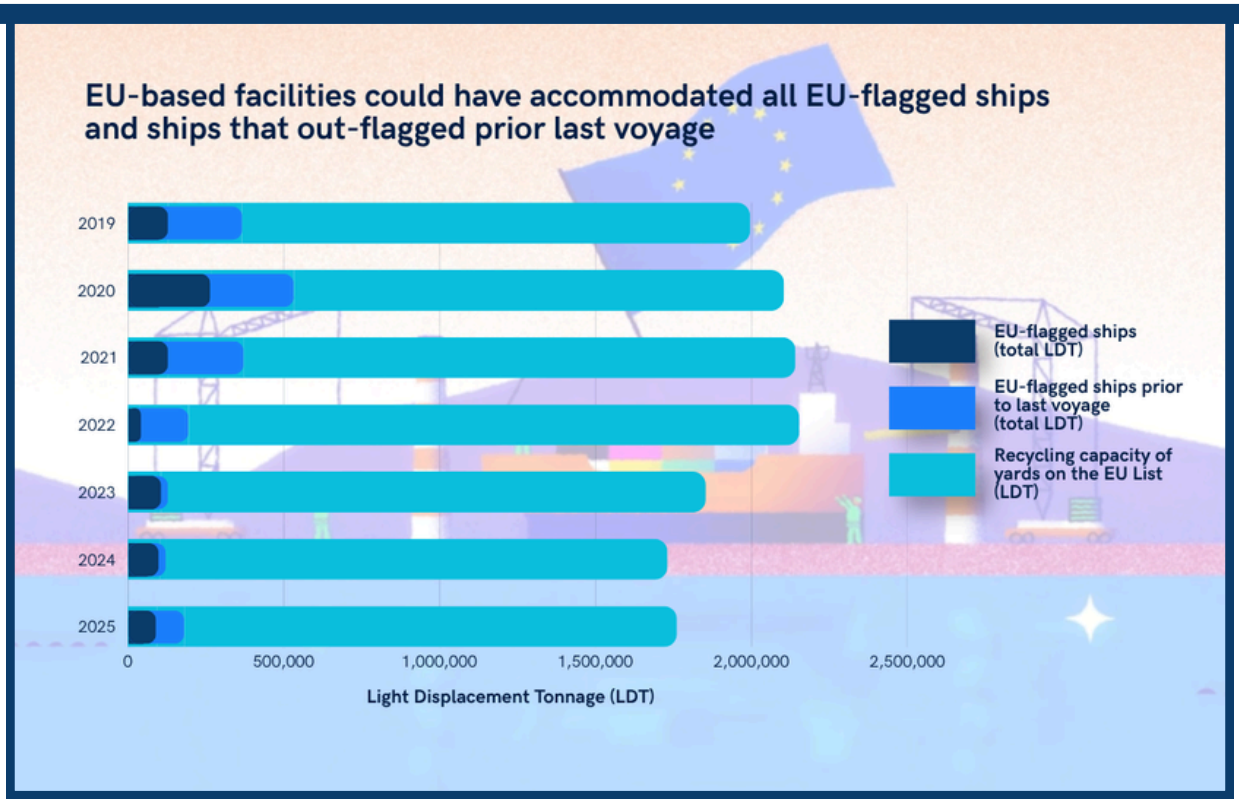
As for the most recent update, the 15th edition of the EU list (adopted 27 February 2026) contains 30 yards in Europe, with a combined authorised capacity of approximately 1,367,500 LDT. The edition is also notable for including the first German facility, while three yards were removed, among them a Finnish shipyard that chose not to renew its authorisation and one in Northern Ireland that failed to provide the information required for renewal.



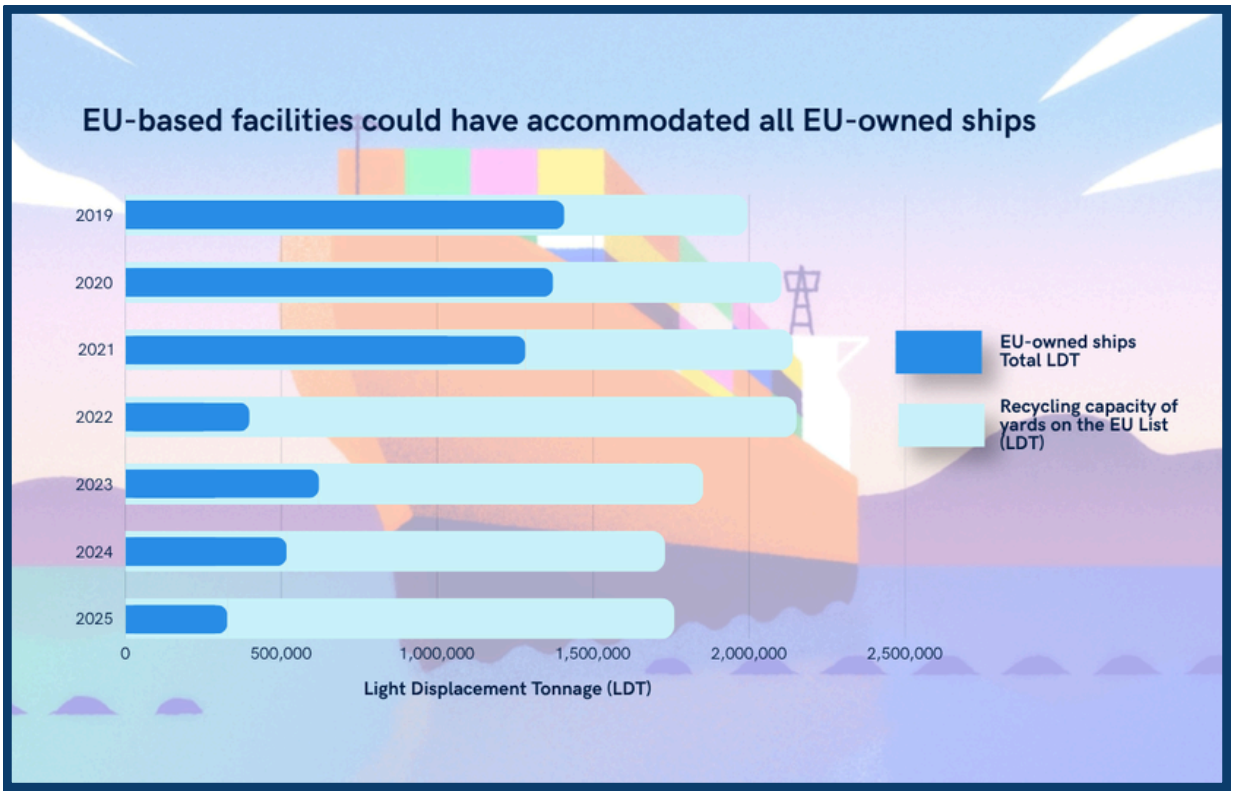
Graph 3. Recycling capacity of ship recycling yards in the EU

Our previous report had already concluded that, between 2015 and 2018, European yards had the capacity to recycle the entire EU-flagged fleet in accordance with the EU SRR, including vessels that swapped their EU flag at end-of-life. Looking at the EU recycling capacity since then and comparing it to the total LDT of EU-flagged ships that were dismantled worldwide, we reach the same conclusion: EU facilities listed by the European Commission can recycle the EU-flagged fleet, as well as all ships that swapped from an EU to a non-EU flag prior to the last voyage. Our analysis goes even further to show that EU facilities also had the capacity to recycle the entire EU-owned fleet sent for dismantling between 2019 and 2025.

For example, in 2020, the year with the biggest number of ships dismantled worldwide, EU facilities had an overall recycling capacity of 2.104.000 LDT while the total of EU-owned ships dismantled that year amounted to 1.369.554 LDT, which represents 65% of European recycling capacity. Yet, that year, 71% of EU-owned tonnage (LDT) was dismantled on the beach in India, Bangladesh and Pakistan.



Graph 4. Total LDT of EU-flagged ships in comparison with the recycling capacity of yards on the EU list



Graph 5. Total LDT of EU-owned ships in comparison with the recycling capacity of yards on the EU list

Methodology

To calculate the overall capacity of EU listed yards, we aggregated the so-called "theoretical" capacity as reported in each year's official list. This is the capacity each yard is licensed to handle. The so-called "historical" capacity that appears on the EU list only reflects the maximum tonnage that a given facility has recycled in the past 10 years. As EU ship recycling yards have been operating under capacity due to unfair competition from yards with lower environmental and social standards, the "historical capacity" poorly reflects actual capacity.

Newly opened yards that have not yet started operations are furthermore listed as having zero (historical) capacity.

It is thus what is labelled "theoretical" capacity that represents the real capacity of each yard, i.e. what they are licensed to recycle and can recycle each year.

To calculate the overall LDT of ships dismantled, we have relied on the Shipbreaking Platform's annual Dumpers List , for the full list of ships please see here. For the ships which did not have a known LDT, we calculated it by using the European Commission's conversion ratio for different types of ships[3].

3. What about big ships?

European shipowners, insisting that EU-listed facilities cannot accommodate large ocean-going vessels, called on the European Commission to approve facilities in non-OECD countries[4]. We examined every EU-owned vessel sent to the beaches of India, Bangladesh and Pakistan between 2019 and 2025, checking each ship's dimensions against the EU facilities size and infrastructure as published in the EU list.

3 COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT Accompanying the document Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on ship recycling. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=swd%3ASWD_2012_0047
It should be noted that these ratios are from 2009 and LDT is generally lower today than in the past for a given GT, as modern ship designs use more efficient structures and higher-strength materials, resulting in less steel weight, . Therefore, using 2009 ratio for ships reaching end-of-life today will most likely overestimate the total LDT.
Besides, for specific types of ships where the ratio was missing, we used the ship's GT value. Since the GT of a ship is in most cases significantly higher than its LDT, our figures on the overall LDT of the European fleet dismantled each year are likely an overestimate. This, however, only reinforces our conclusion on European shipyards' capacity to dismantle those ships.

4 A recent position paper by ECSA states that despite a growing number of facilities on the EU list, capacity "remains insufficient to meet the demands of the shipping industry, and to meet the needs of ocean-going ships" and calls on the European Commission to approve facilities in non-OECD countries. However, this claim is not backed by evidence, nor is data on the type and sizes of the ships they plan to retire provided.

The question was simple: could these vessels have been recycled responsibly in the EU? The answer is yes. A full overview of the data can be found here.

Every vessel beached in the Global South could have been accommodated by at least 6 to 8 yards, depending on the EU list edition.

Take 2020, the peak year for EU-owned vessels sent for scrapping on a South Asian beach: 89 ships were broken down on beaches that year. To understand what EU-listed capacity was suitable for these vessels, we looked at their size distribution and matched each size bracket against the dimensions of EU-listed yard infrastructure.

Size bracket	Ship length	EU-listed yards available
Smallest 25% of vessels	up to 162 m	23 yards
Median vessel	182 m	17 yards
Largest 25% of vessels	up to 207 m	16 yards
Largest vessel beached that year	333 m	6 yards

Table 1. Number of yards in the EU per maximum ship size available to recycle

Even the largest ship broken down in 2020, the Gema, a 333-metre crude oil tanker owned by Greek company Angelicoussis Group, which was beached in Bangladesh, had 6 compliant EU facilities capable of dismantling it. There was thus no shortage of options. The vessel, however, changed its Greek flag prior to beaching to that of Comoros.

While it is clear that EU facilities can also handle the larger ships, some shipping industry stakeholders claim that these yards are too occupied with repair contracts, oil & gas assets or government vessel dismantling to take on commercial ship recycling projects. To assess the validity of this argument, this report sought direct input from recycling facilities. Their responses are set out below.

"EU recycling capacity is not the problem. The issue is that many shipowners still want to squeeze the last dollar out of their vessels. If the question is 'where do I get paid the most?', the answer will often be India or Bangladesh, where standards still fall far below the much higher EU Ship Recycling standards, which should be the bare minimum for worker safety and environmental protection."

Marcella Croes-Schalken
Chief Commercial Officer (All Non-US Business)
MARS Europe A/S

"EU-based ship recycling has been very low since 2022 due to a lack of available recycling tonnage. Yards have been working at 20% of normal capacity!"

Peter Wyntin
Head of ship recycling
Galloo Ghent Recycling

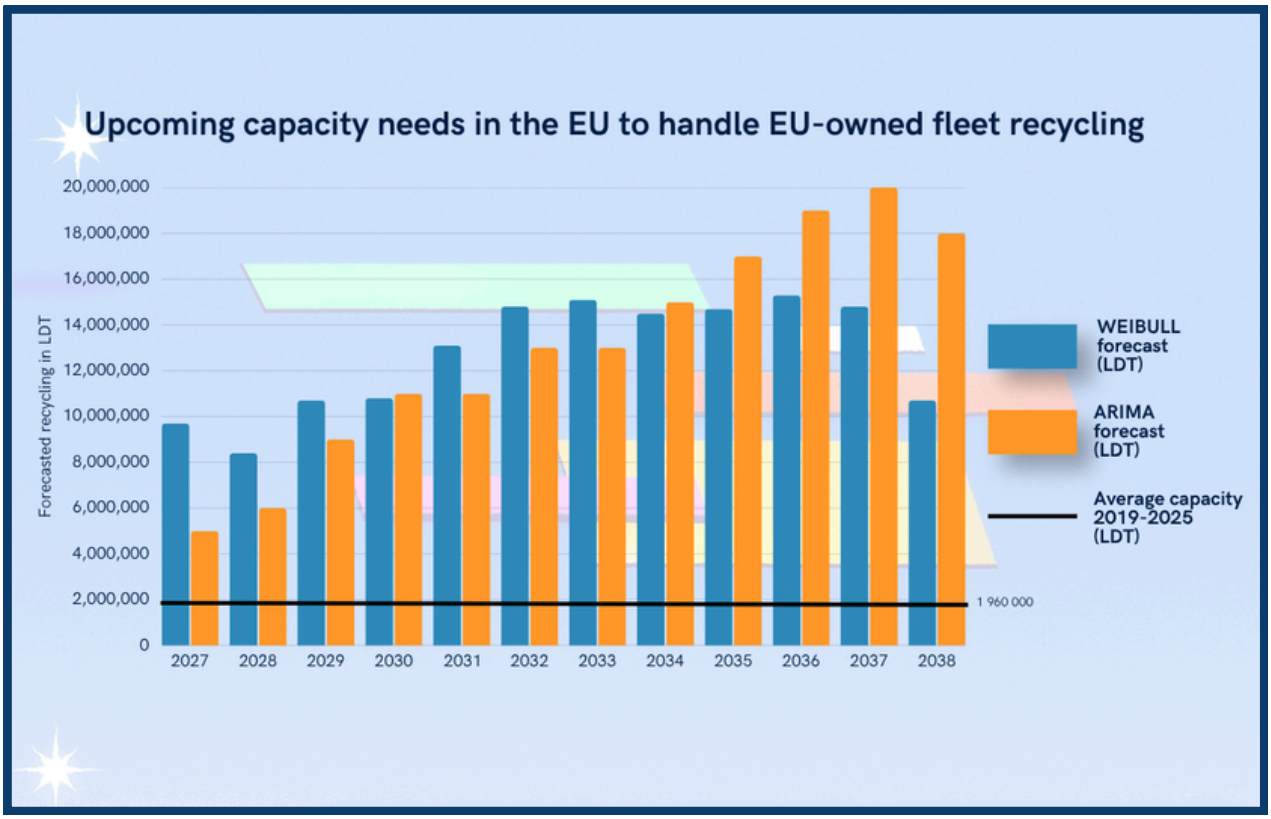
4. Upcoming surge of end-of-life ships and future needed capacity

As demonstrated in the report published in November 2025 in collaboration with Sandbag and the University of Tuscia, a new wave of EU-owned vessels is approaching the end of their operational lives. By applying two complementary forecasting methodologies to a sample of 11,902 EU-owned vessels older than ten years, the analysis converges on the 2030s as the critical decade for recycling, projecting sustained annual demolitions of 600–700 units at peak, generating between 12 and 15 million tonnes of scrap steel per year, with the highest concentration of demolitions expected between 2033 and 2037.

The EU has recognised that accessing high-quality scrap steel from ships provides an industrial opportunity to help decarbonise its steel sector. Major industry associations such as Recycling Europe and EUROFER are now also calling on the EU to boost its ship recycling capacity.

Current EU facilities have the capacity to recycle an averaged 1.96 million LDT per year, a figure that could prove sufficient to recycle EU-flagged ships but falls short of what the coming wave of EU owned vessels will demand. If Europe fails to support the scaling up of existing solutions and development of new ship recycling hubs in time, European ships will continue to be scrapped outside the EU, resulting in a loss of value, strategic materials and autonomy.

Despite industry experts predicting for years that a ship recycling wave was imminent, it has yet to materialise. Strong freight rates, Red Sea diversions, and demand for ageing vessels have kept old tonnage in commercial use rather than sending it to scrap. But this only delays the inevitable, as the backlog ages further and freight conditions normalise, a significant surge in demolitions is forecast.



Graph 6. Estimated upcoming capacity needs for the EU-located ship recycling yards

Forecasts were conducted in 2025 as part of the NGO Shipbreaking Platform's report "Scrap Steel at Sea". The two forecasting methods are complementary: The Weibull methodology estimates the probability of demolition within the ship sample. It captures both lower and upper bounds of demolition events, reflecting variability across ship classes and service lifetimes. The ARIMA model, by contrast, emphasises the cyclical dimension of ship demolitions, applying a moving average framework to capture temporal seasonality and fluctuations in vessel EoL dynamics. Both methods converge in highlighting the period between 2030 and 2038 as a peak in EU-owned ships reaching end-of-life.

A surge in ship recycling is coming: why expanding the EU list to beaching yards is not the answer

As a significant wave of end-of-life tonnage is expected to reach the recycling market in the coming years, European shipowners have not taken any step to scale viable solutions in the EU. Instead, they continue to push for the EU to approve beaching yards in India as a mean to close the capacity gap.

This framing must be rejected. Beaching is not allowed in the EU, is explicitly banned in China and the UAE, and has even been identified as a method that needs to be replaced by drydocks by the Indian government in its own Maritime India Vision 2030. Including beaching yards in the EU list would not solve a capacity problem, it would simply allow shipowners to continue externalising the environmental and human costs of end-of-life vessel disposal onto workers and communities in the Global South, while profiting from the higher scrap prices those yards offer. The answer to the coming surge in ship recycling is not a race to the bottom. It is investment in compliant capacity, enforcement of existing rules, and an end to the impunity that still defines this industry.

New horizons: investment and capacity growth in European ship recycling

The European ship recycling sector is seeing a hopeful wave of new investment and capacity development. In the Netherlands, Marine Metals, born from a determination to end dangerous shipbreaking practices, has secured a multi-million euro investment round from Sojitz Corporation, Jansen Recycling Group, SPDG, and Victrix, and merged with Marine Steel, to scale its innovative automated wire-saw dismantling technology toward industrial capacity. The precise location of its future dismantling yard has not yet been publicly confirmed.

In Norway, Nordic Circles within the project Oppsirk have announced a NOK 1.3 billion agreement with Höegh Autoliners to upcycle up to eight decommissioned vessels into certified building materials entirely within Norway. Their model, re-certifying ship steel into building products and structural components, offers a new economic proposition for compliant recyclers while simultaneously supplying the construction sector with lower-emission, traceable steel.

In Germany, the European Commission's 15th edition of the European List of Ship Recycling Facilities, adopted in February 2026, included the first shipyard approved in Germany, located in Emden, operated by EWD Benli Recycling on the site of the historic Emder Werft und Dock, equipped with two floating docks, a dry dock, and nearly 2km of quay facilities.

In Belgium, Galloo's Ghent yard stands to benefit significantly from the new Terneuzen lock, which opened in 2024, substantially enlarging the size of ships the yard can receive for dismantling.

Finally, in Scotland, Kishorn Port has commenced the expansion of its dry dock to accommodate vessels of up to 260 meters in length, backed by a £42 million investment, significantly increasing its decommissioning and recycling capacity. Together, these developments signal a meaningful and accelerating growth in safe, compliant ship recycling capacity across Europe.

5. Conclusion and policy recommendations

CONCLUSION

The data presented in this report is unambiguous: the obstacle to responsible ship recycling has never been capacity, it has been shipowners consistently choosing to maximise residual vessel value by externalising the true costs of safe and environmentally sound recycling onto workers, communities, and ecosystems in the Global South.

Shipowners have had every opportunity to direct end-of-life vessels to compliant facilities and have consistently chosen not to. Instead, they have benefitted from well-documented legislative loopholes, whereby vessels are either transferred to non-EU registries at end-of-life or fraudulent accounts of further operational use are provided to circumvent EU waste laws.

By not addressing these loopholes, the EU has not only failed its own ship recycling sector, which has faced unfair competition from yards with unacceptably lower standards, it has also enabled the continued export of European end-of-life ships to regions that do not have the capacity to recycle this waste in a safe and environmentally sound way.

The coming surge of end-of-life EU-owned vessels is an opportunity for the EU to put an end to such environmental injustice, all while enhancing the decarbonisation of its steel sector, retaining skilled labour and gaining strategic autonomy. Tools to ensure that the EU

does not miss this opportunity include boosting investment in compliant capacity in the EU and not opening the EU list to beaching yards, a practice that would never be allowed in the EU. However, investments will only be mobilised if European shipping companies are effectively directed to scrap their vessels in the EU and prevented from breaching EU laws.

Importantly, the EU must close well-documented loopholes related to the scope of both the EU WSR and EU SSR. Clearly, this report showcases that the shipping sector will not comply on a voluntary basis, therefore regulatory action is necessary.

RECOMMENDATIONS

1. **Ban beaching.** EU guidelines must explicitly ban beaching and landing as dismantling methods and authorise only facilities ensuring full containment of pollutants. The current ambiguity in standards has been exploited repeatedly.

2. **Deliver on the Industrial Maritime Strategy commitment**. The European Commission has committed to exploring ways to support the expansion of domestic EU ship recycling capacity. That commitment must now translate into concrete action: public investment in yard infrastructure, support for innovation and R&D, and incentives to unlock private investment. Such incentives could include a ship recycling return scheme as provided for under Article 29 of the EU SRR, or linked to the Circular Economy Act.

3. **Hold the Polluter Accountable & Enhance Transparency**. Legal loopholes allowing EU shipping companies to avoid EU waste and ship recycling rules must be addressed. The scope of relevant regulations should be extended to the real beneficial owners of vessels, regardless of the flag they fly at end-of-life or the location of the ship. Flag-swapping in the final stages of a vessel's life must be explicitly recognised as a practice intended to circumvent EU rules and treated accordingly. The EU must require comprehensive and reliable data on vessel beneficial ownership, flag history, and compliance records across all maritime sectors, ensuring that accountability is backed by full transparency.

4. **Promote EU standards for ship recycling**: the EU must explicitly ban beaching and landing as acceptable dismantling methods and authorise only facilities ensuring full containment of pollutants under the EU SRR. The EU must take leadership on advocating for higher standards at the international level to ensure a global level playing field that does not disadvantage truly sustainable practices and EU facilities.

The EU has the industrial base and a growing cross-sectoral coalition demanding action. What is required now is the political will to hold shipowners accountable and to treat the recycling of the EU-owned fleet as an industrial responsibility and priority.