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Evaluation of Regulation (EU) No 1257/ 2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling and amending Regulation (EC) No 1013/2006 and Directive 2009/16/EC

Accompanying the document

**Report from the Commission to the Council and the European Parliament
on the application of Regulation (EU) No 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling and amending Regulation (EC) No 1013/2006 and Directive 2009/16/EC**

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GLOSSARY

<i>Acronym</i>	<i>Meaning or definition</i>
DONA	The Dynamic Overview of National Authorities (DONA), is a stand-alone maritime application, developed, maintained, and enhanced by EMSA which became operational in June 2022. One of its functionalities is to provide a single-entry portal with restricted access, through which Member States could, if they opt to do so, fulfil their reporting obligations under EU maritime legislation. The SRR is one of the three legal acts covered by the portal in its initial phase.
DWT	Dead weight tonnage (DWT) measures the total weight that a ship can safely carry, including cargo, fuel, passengers and crew, and thus reflects the operational capacity of the ship and, indirectly, its size.
EEA	European Economic Area
EC	European Commission
ECSA	European Community Shipowners' Association
EMSA	European Maritime Safety Agency
EU	European Union
ESM	Environmentally sound management
ESG	Environmental social governance
FTE	Full time equivalent
GT	'Gross (registered) tonnage' (GT or GRT) is the measurement of total volume of all enclosed spaces in a ship . 1 GRT = 100 cubic feet \approx 2.83 cubic metres feet. It is used to refer to the overall size of a ship mainly during the operational life of a ship. Gross tonnage forms the basis for manning regulations, safety rules, registration fees and is also used to calculate port dues and fees for the transit of canals.
HBCDD	Hexabromocyclododecane (brominated flame retardant)
HKC	Hong Kong Convention
IHM	Inventory of hazardous materials
IMO	International Maritime Organisation
ISRA	International Ship Recycling Association
LDT	Light Displacement Tonnage (LDT) is used to measure the scrap metal content of a ship destined to be recycled. It is the weight (of the ship's hull and machinery, excluding cargo, fuel, water, ballast, stores, passengers, crew). LDT is mostly used by ship recycling facilities and for transactions at recycling stage. Displacement is measured in units of tonnes (also known as metric ton (t)) or long tons (LT). 1 Long Ton (LT) is 1.016 metric ton (t).
NGO	Non-governmental organisation
OECD	Organisation for Economic Cooperation and Development
OPC	Online public consultation
PFOS	Perfluorooctane sulfonic acid
PSC	Port State Control
RFRC	Ready for recycling certificate
RO	Recognised organisation
SoC	Statement of completion
SRF	Ship recycling facility
SRR	Ship recycling Regulation
SWD	Staff working document
WSR	Waste shipment regulation

1. INTRODUCTION

1.1. Purpose and scope of the evaluation

The aim of the [EU Ship Recycling Regulation](#) (the SRR or the Regulation)¹ is to prevent, reduce and eliminate the adverse effects on human health and the environment of the recycling of ships flying the flag of a Member State. The Regulation covers ships above 500 gross tonnage (GT)² and applies to shipowners and to ship recycling facilities.

The SRR also aims to facilitate the ratification of the International Maritime Organisation's (IMO) 2009 Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (the Honk Kong Convention) by applying proportionate controls to ships and ship recycling facilities on the basis of that Convention. The Honk Kong Convention sets out minimum ship recycling requirements. The SRR also contains provisions that go beyond the Honk Kong Convention, including a requirement for owners of EU-flagged ships to ensure their ships are only recycled in facilities listed by the Commission as meeting requirements for the protection of the environmental and human health.

The Regulation contains a review clause requiring the Commission, 5 years after the date of application of this Regulation³, to “*submit a report to the European Parliament and to the Council on the application of this Regulation, accompanied, if appropriate, by legislative proposals to ensure that its objectives are being met and its impact is ensured and justified*”⁴.

In line with this provision, the Commission launched a process to evaluate the SRR⁵. This report providing an evaluation of the SRR is the result of this process.

In line with the Commission's better regulation guidelines, this report assesses whether the SRR is still fit for purpose (Chapter 4) using the following five established criteria for Commission evaluations.

- **Effectiveness:** looking at the extent to which the objectives of the Regulation have been achieved by the actions linked it.
- **Efficiency:** assessing the costs and proportionality of the Regulation in relation to its benefits. Any potential for simplifying matters and reducing unnecessary regulatory costs should be identified.
- **Coherence:** assessing internal coherence, between the different articles of the Regulation, and external coherence, with other EU policy instruments (including the Waste Shipment Regulation, the Waste Framework Directive, the Port State Control

¹ <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32013R1257>

² The only exceptions are warships, other vessels on non-commercial government service and ships operating throughout their life only in waters subject to the jurisdiction of the Member State whose flag the ship is flying. The 500 GT threshold is the one used for IMO conventions in order to regulate large commercial vessels, which are the most active in international shipping and therefore pose cross-border challenges that warrant international intervention. This is also the case for the HKC. The SRR's scope is the same as the HKC's (also for exceptions), on the basis of the assessment of the costs and benefits of alternative options in its impact assessment.

³ The general date of application of the SRR is 31.12.2018, as Article 32(1) point (b) of it specifies. This means by 31.12.2023.

⁴ A possible future revision of the SRR has been announced in [the sustainable and smart mobility strategy](#) and in [the sustainable blue economy communication](#).

⁵ https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13377-EU-Ship-Recycling-Regulation-evaluation_en

Directive and the Flag State Requirements Directive) or international agreements (including the the Honk Kong Convention and the Basel Convention).

- **Relevance:** assessing whether the Regulation’s original objectives and provisions are still in line with current and emerging needs (including those set out in, for example, the European Green Deal⁶, the [Circular Economy Action Plan](#)⁷, the [Zero Pollution Action Plan](#)⁸, the [EU strategy on adaptation to climate change](#)⁹, [the EU’s strategic autonomy, its industrial strategy](#)¹⁰ and [Communication on long-term competitiveness](#)¹¹).
- **EU added value:** assessing whether the Regulation gives added value to ship recycling compared to what Member States could have done on their own.

The evaluation covers all the Regulation’s provisions of and its implementing acts. It covers the **Member States and EEA countries**¹², as well as the **Regulation’s impact on ship recycling practices in non-EU countries**.

The **evaluation period covers January 2013 to December 2023**. However, most of the requirements effectively entered into force from 31 December 2018 onwards. This affects the points of comparison presented in Section 2.2.

If appropriate, any proposal for a revision of the SRR will be tabled at a subsequent stage, supported by an impact assessment in accordance with the Commission’s Better Regulation Guidelines and Toolbox¹³.

1.2. Methodology, robustness and limitations

This report is based on extensive consultation with stakeholders and the gathering of information and expertise. The main research tools and consultations processes included the following.

- A review of relevant documents (including studies, legal texts and statistics).
- Consultation of stakeholders on the implementation of the SRR. This included a public consultation, targeted surveys and interviews (with expert stakeholders and with Member States)¹⁴, a stakeholder workshop¹⁵ and discussion in the Commission expert group on ship recycling. A wide range of stakeholders contributed, including Member State authorities, NGOs and research organisations, industry stakeholders and their associations (e.g. shipowners and ship management companies, ship recycling

⁶ [COM\(2019\) 640 final](#)

⁷ [COM\(2020\) 98 final](#)

⁸ [COM\(2021\) 400 final](#)

⁹ [COM\(2021\) 82 final](#)

¹⁰ [COM\(2020\) 102 final](#).

¹¹ [COM\(2023\) 168 final](#)

¹² The SRR is marked ‘text with EEA relevance’, meaning it applies in the EEA. The EEA links the Member States and Iceland, Liechtenstein and Norway. EEA countries are therefore covered by the evaluation.

¹³ https://commission.europa.eu/law/law-making-process/planning-and-proposing-law/better-regulation/better-regulation-guidelines-and-toolbox_en.

¹⁴ A total of 48 interviews including interviews with representatives of the steel industry (1 company + 1 association), recycling facilities (5 + 1 association), other businesses (5), various competent authorities in 4 EU countries, NGOs (2), shipowners (4 + 3 associations), workers (1 association). See support study.

¹⁵ On the ‘capacity of the European list’ with representatives from ISRA, ECSA and BIMCO.

facilities, steel industries), classification societies, consultancy firms and financial institutions.

- An evaluation support study carried out by external consultants between October 2022 and January 2024.
- Member State input through reports in line with the reporting obligations under Article 21(2) of the SRR. Annex IX to this evaluation makes available the content of this reporting and summarises it.

This evaluation is a response to evaluation questions, triangulating all available (quantitative and qualitative) information, while accounting for stakeholder vested interests and gaps of evidence and limitations to the extent to which impacts on ship recycling can be attributed to the Regulation.

The main limitation in the analysis is the few quantitative data available on the impact of the SRR on the health of workers and the pollution of the coastal and marine environment. Data on both aspects is poor due to a lack of transparency, the unavailability of data or of a robust monitoring methodology, making it difficult to know for sure if the Regulation's expected benefits (improvements in environmental and safety performance) have really materialised. When data is available, it is not always possible to link it directly to the impact of the SRR given the external factors (such as the entry into force of the Basel Ban Amendment¹⁶, the increasing attention being paid to environmental social and corporate governance), pollution from other sources and the decrease in ship recycling activities over the evaluation period. Nor is it easy to calculate economic impacts as there is limited data available on the economics of ship recycling, due to business secrecy on the one hand, and the fluctuating character of the market on the other hand. Due to sector's small size, the absolute number of respondents to the public consultation was relatively limited. However, the stakeholders most affected by the SRR (individual shipping companies, ship recycling, the steel industry and the associations representing it at EU level) gave their views during the public consultation and targeted surveys. When the contributions from the consultation were limited, triangulating the information from multiple data sources made possible to produce sufficiently robust findings for the evaluation of the SRR. Where there is uncertainty over the reliability of information, this is made clear in this document. If quantitative data was not available, a qualitative approach was adopted.

More details on **how the evaluation was done** are available in Annex II on the methodology, in Annex III on the evaluation matrix, and in Annex IV, the synopsis summarising the results of all the consultation activities carried out for this evaluation, of this report.

2. WHAT WAS THE EXPECTED OUTCOME OF THE INTERVENTION?

2.1 Description of the intervention and its objectives

When the SRR was adopted in 2013, more than 1,000 large seagoing vessels were being dismantled worldwide every year¹⁷. Ship dismantling can provide an important contribution to the circular economy as it leads to reuse, preparing for re-use and recycling of large amounts

¹⁶ <https://www.basel.int/Implementation/LegalMatters/BanAmendment/tabid/1484/Default.aspx>

¹⁷ [SWD\(2012\)47 Impact assessment, 2012](#) refers to 744 for 2008, 1299 for 2009. It is a fluctuating market. EMSA (based on Marninfo) refers to almost 1400 vessels dismantled in 2013 when the SRR was adopted. For 2013-2022 a downwards trend can be noted with less than 500 vessels dismantled in 2022.

of valuable resources (in particular high-quality steel, which typically represent between 75% and 85% of a vessel's weight, as well as other metals and equipment)¹⁸. But ships also contain large amounts of hazardous materials such as asbestos, Polychlorinated biphenyls (PCB), heavy metals, oil, mercury, ozone depleting substances (ODS) which, if not handled, removed and disposed of in a safe and environmentally sound manner generate significant risks for both human health and the environment. The International Labour Organisation considers shipbreaking as one of the most dangerous of occupations, with very high levels of fatalities, injuries and work-related diseases¹⁹.

On the basis of the Waste Shipment Regulation (WSR)²⁰, applicable also to EU-flagged vessels before the SRR, ships going for dismantling were classified as hazardous waste. As such, they should only be dismantled in OECD countries. However, this legislation was almost systematically circumvented by choosing a non-EU jurisdiction for their vessels at the end of the life of the ships, thereby rendering international rules and Union legislation ineffective (see Annex VI for the international and EU legal frameworks applicable to the transboundary movements of end-of-life vessels).

Member States and companies in the EU play a major role in international shipping²¹. However, before the adoption of the SRR, 95 % of the volume of large EU-flagged and EU owned ships were dismantled outside the OECD²², mostly in South Asia (India, Bangladesh and Pakistan) through the so-called 'beaching method' (see p.12) and with significant costs in the short and in the long term for human health and the environment. This was first explained²³ by **the lack of recycling capacity** available within the OECD resulting from the re-localisation of ship dismantling to South Asia for **economic reasons** (demand for steel, low labour costs, no internalisation of environmental costs). Second, at that time the **legislation was not adapted to the specificities of ships**, making it difficult to identify when a ship becomes waste and easy to take the decision to send ships for recycling while the ship is in international waters.

To improve the situation at the global level, the **Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships** (the Hong Kong Convention) was adopted in May 2009 under the umbrella of the International Maritime Organization (IMO). It will enter into force in 2025. At the time of the adoption of the SRR, the perspective of its entry into force was however unclear and not expected before 2020.

The SRR was adopted in 2013 to address the above problems and with the general objective to 'prevent, reduce, minimise and, to the extent practicable, eliminate accidents, injuries and other adverse effects on human health and the environment caused by recycling EU-flagged ships'. The legal base of the SRR is Article 192(1) of the Treaty on the Functioning of the European Union (Union policy on the Environment). The SRR pursues the **three following specific objectives**:

¹⁸ A ship can be recycled up to 95–98% of its gross weight. See Hossain K.A., [Calculation of yearly output of reusable materials of ship recycling industry in Bangladesh](#), Recent Adv. Petrochem. Sci., 5 (3) (2018). See also Annex VIII for a table with recycled materials and percentage of the recycled weight (LDT) by type of vessel.

¹⁹ <https://www.ilo.org/resource/ship-breaking-hazardous-work-0>

²⁰ [Regulation \(EC\) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste](#).

²¹ 17% of the international merchant fleet tonnage flying EU flags and about 37% of the tonnage belonging to EU owners, [SWD\(2012\)47 Impact assessment, 2012](#).

²² Impact Assessment 2012. 74% in India, Pakistan and Bangladesh, 22% in China, data from 2009. GT based.

²³ See Explanatory Memorandum in [COM \(2012\) 118](#), Commission proposal for a Regulation on ship recycling.

- Ensure EU-flagged ships are dismantled in safe and environmentally sound facilities.
- Ensure the proper management of hazardous materials on ships.
- Facilitate the ratification of the Hong Kong Convention.

As a result, the Regulation also aims to reduce disparities between the ship recycling facilities in the EU and in relevant third countries in terms of health and safety at the workplace and environmental standards.

Through these objectives the SRR contributes to UN the Sustainable Development Goals: SDG 12 and particularly SDG 12.4 target ‘sound management of all wastes throughout their lifecycle’, SDG 3 ‘Promoting good health and well-being’, while also ‘protecting the marine environment’ (SDG 14).

Table 1: Main requirements set out by the SRR.

Article	Who is mainly affected	Scope	Description of requirements
4,12	Shipowners	All ships	Prohibition/restrictions of the installation or use on ships of hazardous materials listed in Annex I.
5,12	Shipowners	All ships	Ships must have a properly maintained inventory of hazardous materials (IHM Part I) which identifies the hazardous materials listed in Annex II ²⁴ .
9	Flag states Shipowners	EU flagged ships	Administrations ²⁵ or recognised organisations (RO) must carry out surveys for issuance and renewal of inventory certificates ²⁶ . The latter is valid for maximum 5 years.
12	Flag states/ third countries	Non-EU-flagged ships	Third countries issue equivalent document to inventory certificate (statement of compliance).
6	Shipowners SRFs	EU flagged ships	Shipowners must recycle their ships in ship recycling facilities (SRFs) that are included in the European List and notify the Administration of the intention to recycle the ship in a specific SRF.
7, 13	Shipowners SRFs Recycling state	EU flagged ships	A ship recycling plan (SRP) must be prepared by the SRF based on information provided by the shipowner. Competent authority approves SRP (tacitly or explicitly), and SRFs send SRP to Administration and shipowner
8-9	Shipowners Flag state	EU flagged ships	Before the ship being taken out of service, the administration (or RO) performs a final survey and issue a ready for recycling certificate (RFRC). The latter is valid for maximum 3 months. It is supplemented by IHM Parts I, II and III and the SRP.
11	Port states Shipowners	All ships	Member States apply Port State (as relevant) control on inventory certificates, statements of compliance and RFRC.

²⁴ In addition, prior to recycling, EU-flagged ships must incorporate operationally generated waste as Part 2 of the IHM and stores as Part 3.

²⁵ Under the SRR ‘administrations’ means a governmental authority designated by a Member State as being responsible for duties related to ships flying its flag or to ships operating under its authority.

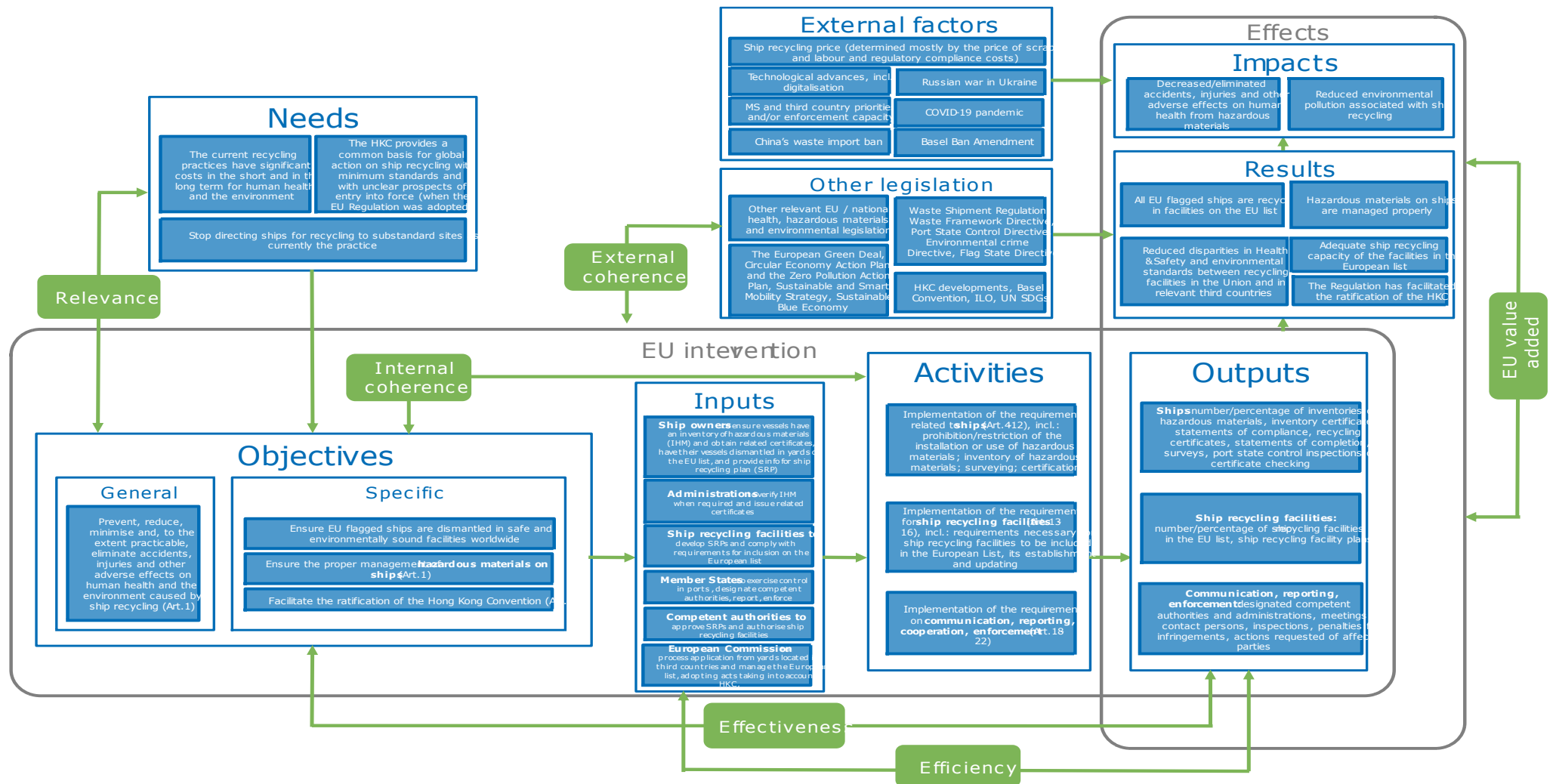
²⁶ The inventory certificate is issued after verification of the IHM that supplement the inventory certificate.

13	SRFs	EU flagged ships	SRF notifies the readiness to start the recycling and the completion of the recycling to the administration for each EU-flagged ship
13,15	SRFs	All SRFs	For SRFs to be included in the European List, they must meet requirements related to safe and environmentally sound management
14	MS competent authorities	EU	Member States authorise SRFs located on their territory that meet requirements for a maximum period of 5 years and notify the European Commission for inclusion in the European List. They can be renewed.
15	COM SRFs	Third countries	The EC assesses applications by SRFs to join the European List, including via site inspections, and monitor SRFs authorised and located in third countries. Facilities are included for a period of 5 years and may apply for renewal.
16	COM SRFs	All SRFs	The EC establishes and updates the European List to include, renew or remove SRFs through implementing acts
21	MS	EU	Member States report every 3 years on issued RFRC, received statement of completion and illegal ship recycling
22	MS	EU	Member States lay down provisions on penalties applicable to infringements, cooperate with one another for enforcement
5,7,9, 12,13, 16	COM	-	Adoption of delegated acts for updating Annex I and II, SRP must be developed in accordance with the Honk Kong Convention, adoption of implementing acts to adopt formats consistent with corresponding ones under the Honk Kong Convention, requirements for SRFs included

The **intervention logic** of the SRR is presented below. It shows the intended functioning, desired results and overall rationale of the SRR²⁷. It sets out the pathway from the general objectives to specific objectives, and the inputs required to deliver these objectives (in terms of the human and financial resources of actors) to undertake activities, which in turn should lead to certain outputs and ultimately impacts.

Figure 1: Intervention logic.

²⁷ A detailed intervention logic had not been elaborated in the context of the impact assessment that accompanied the proposal for a Regulation on ship recycling in 2012. One has been derived from the Regulation for the purpose of this evaluation.



2.2 Point of comparison

The evaluation period for this evaluation starts in 2013 with the adoption of the SRR. However, most of the SRR requirements started to apply on 31 December 2018. For the purposes of this evaluation, **31 December 2018** is therefore being used as a static point of comparison. Where possible relevant information is provided also for 2013, as the start of the evaluation period, which therefore acts as a secondary point of comparison. In some cases, where data is not available on an annual basis, other years are used.

The **indicators** related to the key objectives of the SRR, which are used for before/after comparisons, are:

- The number and percentage of EU-flagged ships dismantled in facilities on the European List compared to the worldwide number of ships recycled, as well as compared to the EU fleet, and the location of dismantling;
- The number of EU-flagged ships changing flag before being recycled;
- Accidents/occupational diseases/pollution (facilities that are on the European List and those that are not / before and after EU listing);
- The state of ratification of the Hong Kong Convention by the major flag and recycling states; Number of countries that ratified the Honk Kong Convention;
- Number/capacity of ship recycling facilities on the European List;
- Number of completed IHMs including whether they are properly completed.

The analysis of these indicators is presented mainly in section 4.1.1. Section 3. It provides information on basic trends in ship recycling, data on the share of the EU fleet and re-flagging, which feeds into the analysis in Section 4.

External factors (including the Basel ban amendment, China's import ban, Covid-19 pandemic) and their role in influencing the key results and impact variables are also presented in section 3.

3. HOW HAS THE SITUATION EVOLVED OVER THE EVALUATION PERIOD?

This section presents the state of play relating to the ship recycling market and the implementation of the SRR over the evaluation period.

Economics of ship recycling

There have **not been major structural changes** in the economics of ship recycling, compared to the general situation described in the impact assessment in 2012.

The **maritime transport sector is a major operator** in the ship recycling sector. The EU maritime transport sector is also a key economic operator for the EU economy. The **turnover** of this sector was estimated to reach around EUR176 billion in 2021²⁸, with a new significant

²⁸ European Commission (2024). The EU Blue Economy Report. 2024. Publications Office of the European Union. Luxembourg, accessible at <https://op.europa.eu/en/publication-detail/-/publication/ef90077b-1e82-11ef-a251-01aa75ed71a1/language-en>

increase in 2022, where it reached a **record level** of nearly EUR 270 billion²⁹. This increase is linked to the vigorous growth rate in international trade in the post-Covid and supply chain adjustments. The EU maritime sector, contributing to around 15% of global Gross domestic product³⁰, is composed of **very large companies operating worldwide, as well as smaller ones** but shipowners operating ships under the scope of the SRR are generally large companies. Shipowners operating merchant ships (cargo or passenger) are generally not SMEs. The overall revenues and profit margin heavily depend on the fluctuations in global economic growth, trends in international trade and freight rates. They also depend on the types of the ships considered (ie container ships, tankers, bulk carriers, roll-on/roll-off ships, passenger ships, offshore supply vessels...). The impact assessment for the SRR used the ClarkSea Index³¹ as an indicator for the overall profitability of the shipping sector at the global level. This index shows that the average earnings per vessel have more than doubled in the past 10 years (from USD 9,539 per day in 2013, up to USD 23,629/day in 2023³²).

As an example, the revenues and profitability of three EU leading maritime transport companies reached very high levels in 2022 (see Table below).

Table 2: Revenues and profitability of three European leading maritime transport companies in 2012, 2022 and 2023³³, not adjusted for inflation.

Name of Company	Revenues	Earnings before interest, taxes, depreciation, and amortization (EBITDA)
CMA-CGM group ³⁴ -	15.9 billion USD (2012) 74.5 billion USD (2022) 47 billion USD (2023)	1.3 billion USD (2012) 33 billion USD (2022) 9 billion USD (2023)
A.P. Moller - Maersk ³⁵	59.0 billion USD (2012) 81.5 billion USD (2022) 51 billion USD (2023)	8.1 billion USD (2012) 36.8 billion USD (2022) 9.6 billion USD (2023)
Hapag Lloyd ³⁶	6.8 billion USD (2012) 34.5 billion € (2022) 17.9 billion € (2023)	0.3 billion USD (2012) 19.4 billion € (2022) 4.5 billion € (2023)

²⁹ Calculations made on the basis of Eurostat data, compiling data from the following NACE categories:

1. Passenger transport: sea and coastal passenger water transport and inland passenger water transport: H 502+H504
2. Freight transport: sea and coastal freight water transport and inland freight water transport: H 503+H505
3. Services for transport: renting and leasing of water transport equipment: N 7734

³⁰ EMSA (2020) see <https://emsa.europa.eu/eumaritimeprofile/section-1-overview-on-the-eu-maritime-economy.html>

³¹ The ClarkSea Index is a weighted average index of earnings for the main vessel types where the weighting is based on the number of vessels in each fleet sector. It comprises the 'average vessel earnings across the major shipping sectors, including tankers, bulkers, containerships and gas carriers, weighted by the number of ships in each segment.'

³² See [Clarkson Research Services Limited](https://www.clarkson-research-services-limited) for 2013 and <https://www.seatrade-maritime.com/containers/clarksons-index-falls-back-2023-remains-33-above-long-term-trend> and <https://www.clarksons.com/home/news-and-insights/2023/2022-a-clarksea-record-against-a-disrupted-backdrop/> for 2023.

³³ Figures for 2012 are not necessarily directly comparable because of changes in market and company structures, such as divestments of different business units.

³⁴ macgm-group.com/en/news-media/2023-annual-financial-results

³⁵ APMM Annual Report 2023 (see <https://ml-eu.globenewswire.com/Resource/Download/51b09aae-eed3-4553-bbc9-e400896c6efe>)

³⁶ <https://hlag-2023.corporate-report.net/en/home.html>

End-of-life vessels destined for recycling represent a **source of revenues** for shipowners. The decision for shipowners to sell a ship for dismantling is usually based on a **comparison between the costs and benefits of maintaining an ageing ship in operating condition and the benefits of sending it for dismantling**. Besides the age of the vessel³⁷, this decision therefore significantly depends on the fluctuations in the conditions and rates of freight transport (which themselves depend on the growth in worldwide trade), regulations leading to the phase-out of specific types³⁸ of ships, entry of new ships into the fleet and also largely on the price being paid to recycle ships (which fluctuates depending on the steel market dynamics and dollar exchange rate).

Instead of negotiating directly with ship dismantling facilities, many shipowners prefer to sell their ships to **'cash buyers'** (companies that specialize in trading end-of-life ships), sometimes through the intermediary of brokers that represent and advise the seller during the sale negotiations³⁹. Cash buyers mediate around 80% of end-of-life sales⁴⁰. They have become an integral part of the ship recycling industry. After **taking ownership** of a ship, they either launch a bid towards different ship dismantlers for the sale of the ship in question, or directly sell it to a ship dismantling company linked to its own business. The last voyage of a vessel to a dismantling yard is then organised under the responsibility of the cash buyer, without direct involvement of the original shipowner. Cash buyers purchase ships and then sell them to the recycler, who normally pays the cash buyer with a bank letter of credit⁴¹. Using an intermediary presents advantage for recyclers who do not have to directly take care of the trading and export procedures of end-of-life vessels. In the same way, they bring expertise and reduce shipowners' risk; and they pay shipowners in cash a sizeable advance on signing of the sale contract and the balance on delivery (as opposed to payment by letter of credit from recyclers). Delivery takes place at the anchorage of the recycling yard or, at an agreed port or anchorage in another country. If the ship is delivered by the initial owner at the recycling yard, the ship is not re-flagged. If the final voyage, from the port or anchorage where the ship was delivered to the cash buyer to the place of recycling, is an international one, the ship is usually registered under a new flag. A number of open registers facilitate such short-term registrations⁴². When there is an intention to render the identification of the ship and of its destination to a recycling yard more difficult, the name of the ship can be changed at the time of re-flagging and a couple of months may elapse between the acquisition of the ship by the cash buyer and its delivery to the recycling yard.

The dismantling of ships is operated by **specialised recycling facilities**. This market has been dominated in the last decade by India, Bangladesh and Pakistan, while Türkiye has also a smaller but very active ship recycling sector. There are facilities in the EU operating ship

³⁷ The median lifetime for vessels recycled over the period 2012-2022 is between 19 and 48 years, depending on the type and size of the vessel. See Annex VIII and support study.

³⁸ Eg phasing-out may result from IMO International Convention for the Control and Management of Ships' Ballast Water and Sediments setting requirements performance standards for ballast water treatment systems or IMO regulations to cut emissions from ships.

³⁹ However, the broker does not own the ship at any time (contrary to the cash buyer).

⁴⁰ Alcaidea, J. I., Piniella, F., Rodríguez-Díaz, E. *The 'Mirror Flags': Ship registration in globalised ship breaking industry*. Transportation Research Part D: Transport and Environment, 48, 378–392. <https://doi.org/10.1016/j.trd.2016.08.020> (2016). Mikelis, N., *The recycling of ships* (2019) refers to 'nearly all merchant ships' sold for recycling via cash buyers.

⁴¹ It has the advantage for the recycler to pay it back to the bank after the sale of scraps.

⁴² Mikelis, N., *The recycling of ships* (2019).

recycling, often alongside other activities (like repair). In a volatile scrap steel market, **ship recycling facilities in Bangladesh, India, and Pakistan have been constantly offering significantly higher prices per LDT⁴³** for recycling end-of-life vessels than facilities located in other countries. In 2023, the price range offered in South Asia for bulk carriers and tankers was constantly above EUR 500 per LDT, while EUR 280-340 was offered in Türkiye and EUR 84-102 in the EU⁴⁴.

The price difference is mainly explained by (i) the use of the so-called ‘**beaching method**’ in ship recycling facilities in South Asia and (ii) the **high demand for steel scrap** which is reprocessed through the re-rolling method for the construction industry, at a lower cost than in the EU.

‘Beaching’ means that the ships are driven — usually under their own steam — onto sandy beaches and, most of the time, broken up without heavy machinery and without other containment than the hull of the ship itself. Compared to other ship dismantling methods, it often results in lower labour, operational, and infrastructure costs, as well as reduced expenses related to handling hazardous materials on board of vessels⁴⁵. It can be noted however that a few ship recycling facilities in India have demonstrated they improved their method of dismantling through significant investments⁴⁶. In the US and Europe, direct labour costs account for approximately 30% of the total recycling costs and similar percentage may be observed for costs due to compliance with environmental and worker safety regulations. In facilities using the beaching method these costs are often negligible, and the majority of the costs is related the ship purchase price.⁴⁷

Globally, the health and environmental record of South Asian ship recycling facilities remains of concern. The Shipbreaking Platform documented 449 deaths and 3412 injuries in Southeast Asian shipbreaking yards between since 2009⁴⁸. Particularly Bangladesh’s record of fatalities and injuries remain high: 78 deaths and 127 injuries in the period 2018-2022. Moreover, concerns are regularly raised about effective compliance with the requirements set by the laws of these countries for the management of the waste resulting from recycling⁴⁹.

The **domestic market demand for steel scrap** and goods present on board ships is another determining factor for the prices offered by recycling facilities, as it may represent up to 90%

⁴³ Light Displacement Tonnage (LDT) is used to measure the scrap metal content of a ship destined to be recycled. It is a measure of weight (of the ship’s hull and machinery). It is the unit that is mostly used by ship recycling facilities and for transactions at recycling stage.

⁴⁴ Support study based on (<https://www.gmsinc.net/>) and Survey inputs.

⁴⁵ Barua, et al. (2018), Environmental hazards associated with open-beach breaking of end-of-life ships: a review, Resources, Conservation and Recycling, Volume 107, February 2016, Pages 82-91. Choi, et al. (2016), Economic and environmental perspectives of end-of-life ship management, Resources, Conservation and Recycling, Volume 107, February 2016, Pages 82-91. Du, et al. (2017), Challenges and solutions for ship recycling in China, Ocean Eng, 2017;137:429-439.

⁴⁶ Resulting in adequate measures to protect the intertidal zone during cutting operations – see section 4.1.1.

⁴⁷ See support study. Note that percentages may vary substantially depending on the characteristics of the vessels and countries. Also Mikelis, N., (2019) estimates that financial costs, insurance costs, rental costs, taxes, investment costs, consumables and labour costs account for 15-20% of the purchase price of the ship in beaching facilities. Some illustrative examples collected during the evaluation show results in the range of 10-30%. In Europe, some examples show similar costs for the ship and for the other costs.

⁴⁸ Figures from October 2024. <https://shipbreakingplatform.org/>

⁴⁹ Support study on the basis of Shipbreaking platform data and for Bangladesh see also [Trading Lives for profit, Human Rights Watch \(2023\)](#).

of their revenue generated by recycling vessels.⁵⁰ Steel scrap is a valuable commodity used by the steel industry to produce new steel. The demand for such scrap is particularly important in some South Asian countries, where it represents a non-negligible supply for the steel industry, which are heavily relied upon by downstream industrial supply chains, especially the construction sector. One important reason why ship recycling facilities in South Asia are able to propose higher prices for steel scrap from end-of-life vessels is that steel scrap is commonly recycled ‘cold’ in re-rolling mills, without energy-intensive and thus expensive remelting in furnaces⁵¹. In South Asia, re-rollable steel constitutes the majority of the recycled ship's light displacement tonnage⁵². The ‘re-rolling’ method is less commonly used in the EU, as it does not allow to produce steel products complying with industry standards and specifications for high quality applications.

Overall, the determining factor for the choice of a dismantling location is the price that a ship recycling facility is ready to pay. **For the period between 2014 and 2023, the price offered by ship recycling facilities using the beaching method was from 30% to 90%⁵³ higher than the price offered by recycling facilities located in Türkiye⁵⁴. As a result, countries like Türkiye and even more Member States only account for a small fraction of the market as they are typically priced out of the market⁵⁵.**

The difference between the prices that can be offered by a yard in South Asia and a yard in Europe can amount to over EUR 1.5 million for an average ship subject to the SRR (ie sea-going vessel over 500GT). This is an important factor for the shipping industry when deciding on the choice of the dismantling location and methods for their end-of-life ships, including re-flagging, depending on the choice made. The EU shipping industry underlines it is operating in a competitive global market. In that context, the difference in prices for ship dismantling is one factor taken into consideration to maintain its competitiveness. It should be underlined though that the difference in prices mentioned above represents around 2.5% of the value of a new ship and indicatively between 0.0020 and 0.0050% of some shipping companies' annual revenues.⁵⁶ It can be noted that a number of shipowners prefer managing a young fleet and sell their ships before having to bear the costs and to manage the difficulties inherent to older ships (including ultimately their end-of-life).

Recycling trends over the evaluation period

In general, ship recycling volumes increase during economic recession, when global fleet utilisation rate tends to be lower, and decrease in moments of economic growth⁵⁷. There was a

⁵⁰ Besides scrap steel, other sources of revenues could be, for example, 0.50 % non-ferrous, 0.50% spare & stores, 1% electrical cables, motors and panels, 3% equipment & machineries, 5% weight loss. Based on data received from ship recyclers in South Asia. Percentages vary depending on the regions, type and condition of vessels and market conditions.

⁵¹ [SWD\(2012\) 47 final](#).

⁵² A minimum 72% in [Choi et al., 2016](#) ; around 60% in India for Mikelis (2019). The author notes that in recent years, India has imposed some limits on the use of rerolled steel for making bars and consequently lost part of its competitiveness compared to Bangladesh and Pakistan.

⁵³ Support study, p.60.

⁵⁴ Using the ‘landing’ method.

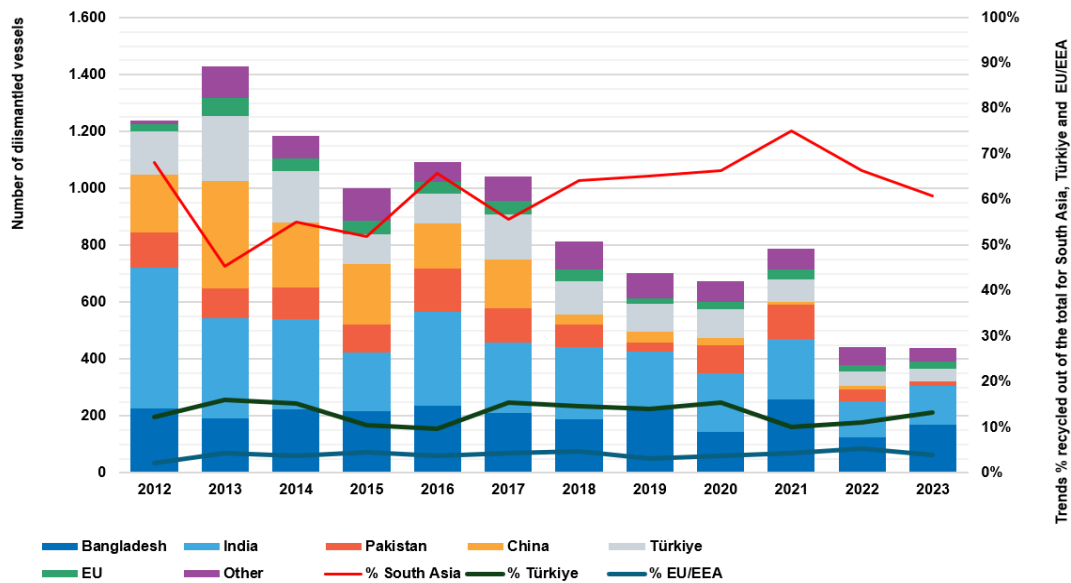
⁵⁵ [SWD\(2012\) 47 final](#). p.17.

⁵⁶ Support study, p.64.

⁵⁷ OECD (2017) See: [https://one.oecd.org/document/C/WP6\(2017\)14/en/pdf](https://one.oecd.org/document/C/WP6(2017)14/en/pdf).

noticeable decrease in recycling vessels worldwide over the evaluation period⁵⁸, as illustrated by Figure 2 below.

Figure 2: Number of vessels recycled worldwide and dismantling locations (2012-2023)⁵⁹



Source: Support study based on data of NGO Shipbreaking Platform and EMSA

The significant drop in terms of the number of ships scrapped in 2022 appears to be due to banks' shortages in providing credits to companies for the purchase of end-of-life assets and high ocean freight rates that made it profitable to continue operating older ships⁶⁰. Ship recycling of bulkers, tankers and container ships has dropped to its lowest level in 20 years. A combination of strong demand following a series of market shocks (changed consumer behaviours during the COVID pandemic and sanctions on Russian oil and coal export) and low orderbooks have kept older ships operating for longer than usual⁶¹.

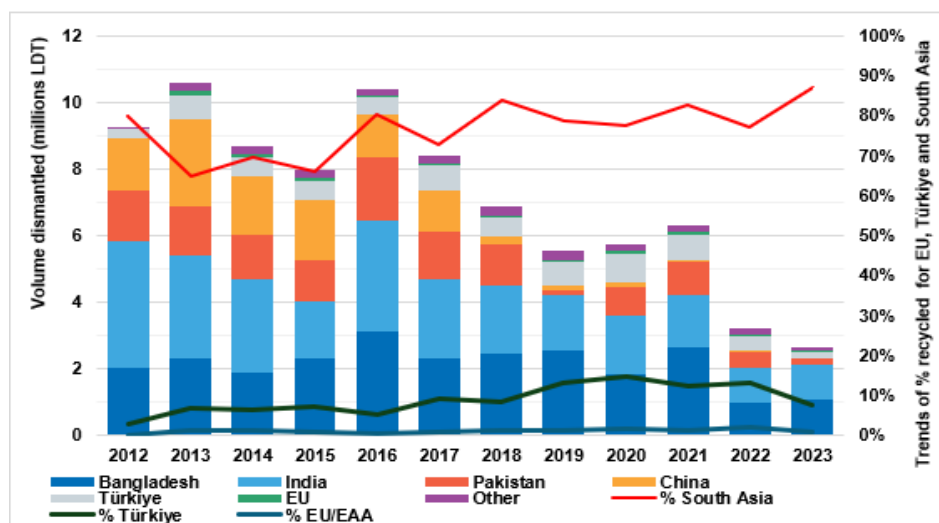
⁵⁸ See https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=89492&IF_Language=eng.

⁵⁹ Note that the figure does not include vessels with unknown location of dismantling.

⁶⁰ See also <https://shipbreakingplatform.org/platform-publishes-list-2022/>.

⁶¹ This includes, for example, some of the 600 tankers worldwide that make Russia's 'shadow fleet' and which consist of old ships which would in other conditions have been sent for dismantling. See [European Parliament Resolution of 14 November 2024 \(2024/2885\(RSP\)\)](#). See also [Demand shocks drive ship recycling to lowest level in 20 years \(bimco.org\)](#).

Figure 3: Light displacement tonnage (LDT) recycled worldwide and dismantling locations (2012-2023)⁶²



Source: Support study based on data of NGO Shipbreaking Platform and EMSA

Over the evaluation period the tonnage recycled worldwide has dropped from 9,219,887 in 2013 to 2,601,322 LDT in 2023. Figures 2 and 3 also shows that the **proportion of vessels recycled in South Asia increased** between 2013 and 2023. When considering the LDT, the proportion of vessels recycled in South Asia represents around 80% of the recycled vessels since 2018 and 87% in 2023. Over the evaluation period, the proportion taken up by India has fluctuated between 30% and 40% (40% in 2023). Bangladesh has significantly increased its share of the market to also reach 40% in 2023 and a positive trend is also observed in Türkiye which had in 2023 7.6% of the market⁶³. An important change is that China ceased to be one of the key players in the global ship recycling market⁶⁴, further to its decision in 2017 to stop the import of waste.

The market share of the ship recycling facilities located in the EU has remained very small over the considered period. It has evolved from 4.5% in 2013 to 5.3% of worldwide recycling when taking into account the number of vessels and from 1.5% in 2013 to 1% when size of the vessels and therefore their weight at scrap (LDT)). Unlike recycling facilities in South Asia and Türkiye, most recycling facilities in the EU are not exclusively recycling large vessels. Most of them are also dismantling vessels which do not fall within the scope of the SRR, especially smaller vessels (below 500 GT), as well as warships. A few new ship recycling facilities started their activities in the last 5 years in Denmark and Norway, which are particularly designed to dismantle floating oil platforms, in anticipation of the expected de-commissioning of a large number currently in use in the North Sea. Some ship recycling facilities in the EU are also carrying out other activities than dismantling, especially repair of vessels. The ship recycling facilities in the EU are most of the time SMEs, but some of them are also associated with larger companies active in waste management activities. These recycling facilities have to comply with the requirements of the SRR in terms of environmental and public health requirements.

⁶² Note that the figure does not include vessels with unknown location of dismantling.

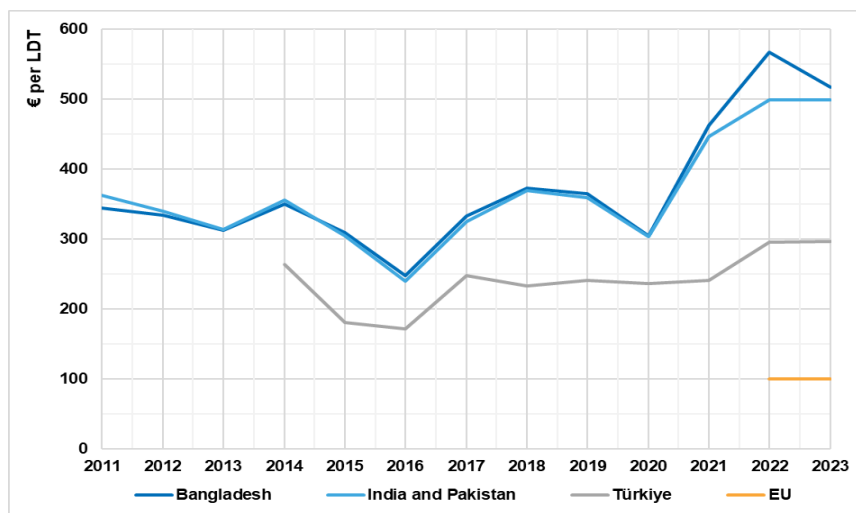
⁶³ Elaboration based on data of NGO Shipbreaking Platform and EMSA

⁶⁴ For a relatively long periods China had recycled 25% to 30% of the world's tonnage. Mikelis, N., (2019).

More data on the volume of ship recycled and locations can be found in Annex VIII.

In terms of costs and revenues from the actual demolitions, the period from 2018 to 2023 shows a recovery and **growth trend for demolition/scrap prices** per LDT for shipbreaking in South Asia and Türkiye, as shown in the figure below.

Figure 4: Rates for recycling vessels in Bangladesh, India, Pakistan, and Türkiye for the period 2011-2023 (in EUR per LDT)



Source: Support study based on (Sustainable Shipping Initiative, 2021), (Developed by 2BHonest based on (Mikelis, 2020)), (ISL, 2021), (Izmir Development Agency, 2022) and GMS website ((*) average value until 31 December 2023).

Recycling of EU fleet

The world merchant fleet was composed in the 1st quarter of 2023 of 131,185 vessels representing a gross tonnage of 1,596 million GT and a deadweight of 2,332 million tonnes⁶⁵. European companies owned approximately 21,000 ships, representing around 16% of the world commercial fleet in terms of number of vessels but **30% of the world commercial fleet in GT, and almost 40% of the world’s dead weight tonnage capacity.**⁶⁶ Around 60% of these ships were flying a Member State flag⁶⁷.

In 2023, the proportion of the world fleet above 500 GT represented by the EU-flagged vessels⁶⁸ was around 13% in number of vessels. However, the percentage of end-of-life vessels with an EU flag when sent to dismantling equalled 6.7% of the worldwide number of vessels recycled⁶⁹. Over the evaluation period, there was a significant **decrease, in the proportion of the vessels flying the flag of a Member State recycled, compared to the total volume**

⁶⁵ EMSA <https://www.emsa.europa.eu/eumaritimeprofile/section-2-the-eu-maritime-cluster.html>. The dead weight tonnage (DWT) is used to indicate the cargo carrying capacity of a ship, while the gross tonnage (GT) reflects its size. Figures are for ships of 100 GT and above.

⁶⁶ UNCTAD (2023), Clarkson Research including commercial ships of 1000 GT and above. Beginning-of-year figures. Greece ranked first with owned ship capacity exceeding 393 million DWT.

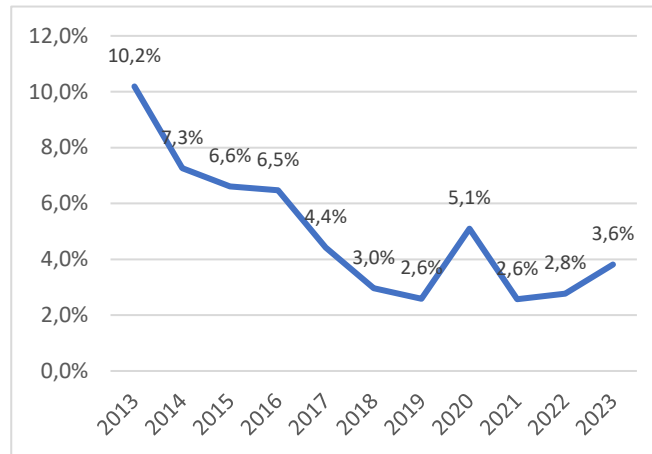
⁶⁷ EMSA <https://www.emsa.europa.eu/eumaritimeprofile/section-2-the-eu-maritime-cluster.html>

⁶⁸ ‘EU flag(ged)’ is to be understood in the text as ‘flying the flag of an EU/EEA Member State. EMSA and UNCTAD data.

⁶⁹ Support study based on EMSA and UNCTAD data.

recycled worldwide, especially when considering the weight of these vessels (LDT) as it dropped from 10.2 % in 2013 to a mere 3.6% in 2023, as shown in the figures below. Less than 40 EU-flagged vessels in average were recycled each year between 2018 and 2023. For these vessels, the main recycling destinations were Türkiye, Norway and Denmark⁷⁰.

Figure 5: Percentage of EU-flagged vessels recycled from the total recycled worldwide in LDT.



Source: EMSA using MARINFO database sourced by IHS S&P.

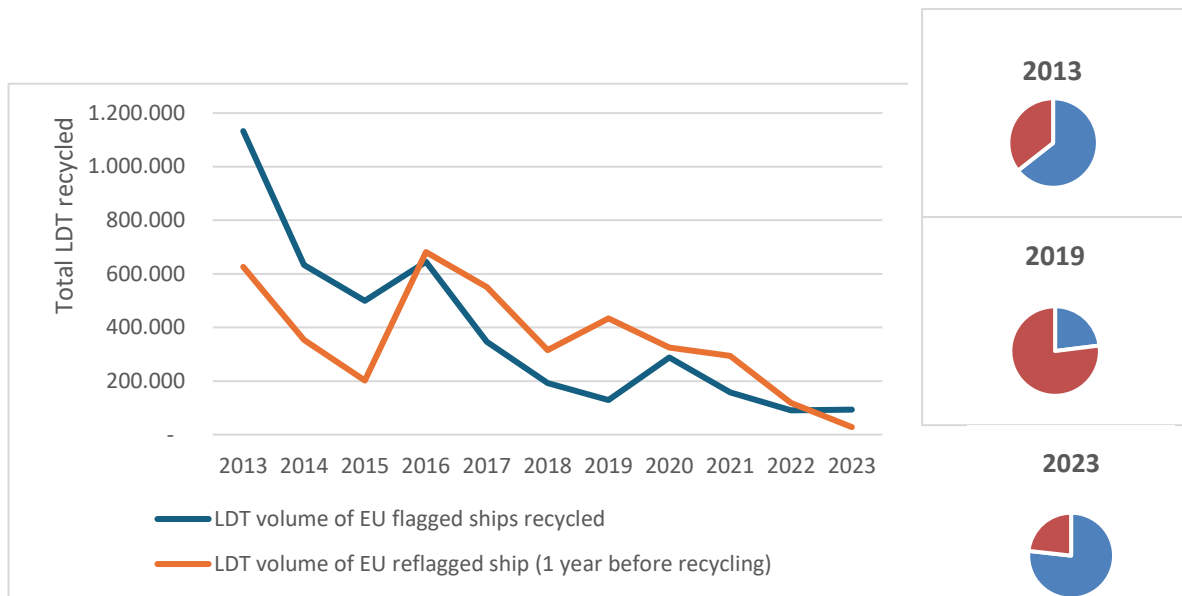
One important factor explaining the low number of EU-flagged vessels reaching the dismantling stage is that shipping companies used the practice of **re-flagging** to their end-of-life vessels. The significant discrepancy between the 25 largest flag states in general and the 25 largest flag states for end-of-life ships (see Annex VIII), shows that the ship operators often change flags before disposal. Changing flag from a Member State to a third country is done either directly with the shipping company remaining the owner of the vessel, or, when re-flagging occurs shortly before the dismantling stage, often through the sale of the vessel to a cash buyer which takes over the vessel and transfer it to a non-EU flag. Between 2013 and 2022, between 27% and 53% of vessels that still had an EU flag 1 year before being recycled changed for a non-EU flag before being recycled⁷¹. When taking as a reference the weight (LDT) of end-of-life vessels recycled, the re-flagging phenomenon is even more pronounced. This shows that vessels keeping an EU flag at the dismantling stage were predominantly smaller ships than those re-flagged to another flag⁷². As shown in the figure below, from 2016 until 2023, the **ships flying an EU flag that changed flag less than 1 year before being recycled consistently represented a higher tonnage (in LDT) than the ships that still had an EU flag at the time of recycling**. In 2019, a peak in re-flagging was reached as the ships that change their flag from an EU to a third country flag before being recycled was more than three times higher (in LDT) than the tonnage of ships that still had an EU flag at the time of dismantling.

⁷⁰ EMSA based on data derived from the MARINFO database (sourced to EMSA by IHS S&P).

⁷¹ Support study Figure 3.17 p.69. based on EMSA data. In absolute terms it represents between 10 and 66 vessels yearly.

⁷² The bigger the vessel the more profitable it is to have a last journey with South Asia as a destination.

Figure 6: Comparative visualisation of Light Displacement Tonnage of scrapped EU-flagged ships (falling within the scope of the SRR) that changed flag less than 1 year before being recycled and of ships recycled under an EU flag.



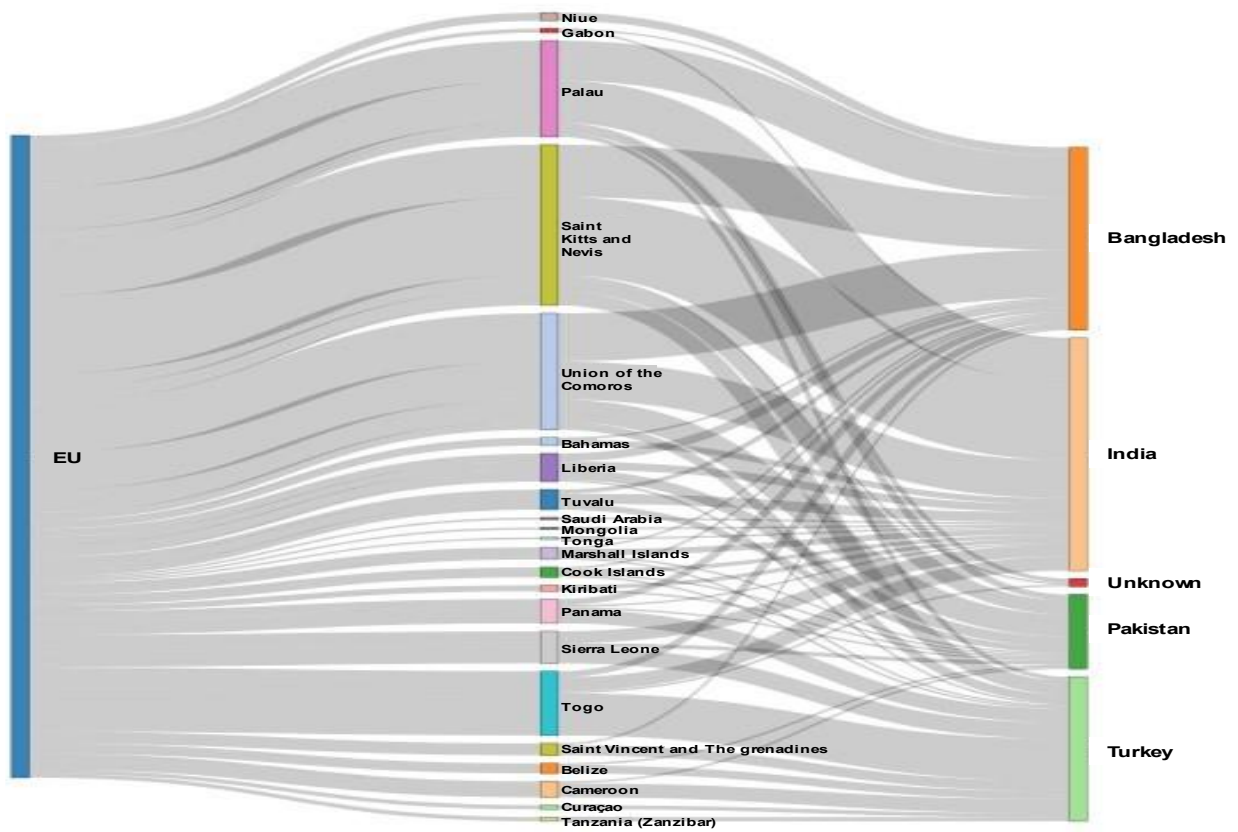
Source: Based on EMSA data

Though still significant, re-flagging before dismantling has been on a decreasing trend since 2022; this trend would need to be confirmed on a longer term, especially for the biggest vessels.

During the period 2013-2023, a total of 324 EU-flagged vessels were re-flagged less than 1 year before being recycled, often to countries with an open register such as Palau, St Kitts and Nevis, or the Union of the Comoros, and dismantled mostly in South Asia⁷³ (see figure below).

⁷³ The remaining (around 30%) of ships ended up in Türkiye. Of these, 65% were dismantled in facilities that are not on the European List, 22% in facilities that are on the European List and the final destination of the remaining is unknown.

Figure 7: EU-flagged ships that changed flag in the last year before being recycled: new flag and dismantling locations (2013-2022).⁷⁴



Source: Support study based on EMSA data.

The key driver for re-flagging end-of-life vessels is the higher prices that can be offered by third country recycling facilities not on the European List for dismantling end-of-life vessels, as explained above.

European List of ship recycling facilities

Since 31 December 2018, the SRR has required shipowners to only recycle large sea-going vessels sailing under a Member State flag in an approved ship recycling facility included in a dedicated European List.

To be included in the European List, any ship recycling facility, irrespective of its location, has to comply with a number of safety and environmental requirements. For facilities located in the EU, competent national authorities must check that all the relevant conditions are met, and then inform the Commission that the facility should be listed. Ship recycling facilities located

⁷⁴ In this Sankey the leftmost column indicates initial ship registrations under EU flags. The central column illustrates the flag changes these vessels undergo. The rightmost column denotes the final destinations for being scrapped. The flows connecting these columns are represented by streams, with the width of each band corresponding to the volume of ships that have undergone the specific transition.

in third countries and intending to recycle ships flying a flag of a Member State have to apply to the Commission for inclusion in the European List. The Commission then evaluates and checks how these yards comply with the requirements, including through inspections and proposes their inclusion in the European List when these requirements are met. All inspection reports are publicly available⁷⁵.

The first European List of ship recycling facilities was adopted in December 2016. It included 18 yards located in the EU. This List has been regularly updated by the Commission. The 12th edition of the list⁷⁶ was adopted in December 2023. It contains 45 ship recycling facilities, including 35 yards in Europe (EU, Norway and UK), 9 yards in Türkiye and 1 yard in the USA. The yards report a combined maximum annual ship recycling output of 1,140,060 LDT and a theoretical recycling capacity of 2,703,423 LDT.

Inventory of hazardous materials

Since 12 December 2016 it is mandatory for EU-flagged ships going for recycling to have completed an inventory of hazardous materials (IHM) and have it on board. Since 31 December 2018, this obligation has been extended to new EU-flagged ships and since 31 December 2020 to all existing EU-flagged ships and non-EU ships calling at an EU port or anchorage.

In October 2016, EMSA published a best practice guidance⁷⁷ for the development and maintenance of an IHM, as well as for conducting vessel inspections. This was complemented in 2019 by EMSA guidance on inspections of ships by the port States⁷⁸.

Ratification of Hong Kong Convention

The Hong Kong Convention was adopted in 2009. It contains very specific conditions for its entry into force, linked to the minimum number of countries ratifying it and their respective shares as flag States in the global fleet and as recycling States compared to the overall recycling levels worldwide. This minimum number was reached in June 2023, triggering the entry into force of the Convention on 26 June 2025.

As of December 2023, 23 countries had ratified the Convention (Ghana, Norway, the Republic of the Congo, France, Belgium, Panama, Denmark, Türkiye, the Netherlands, Malta, Serbia, Japan, Estonia, Germany, India, Croatia, Spain, Luxembourg, Sao Tome and Principe, Portugal, Bangladesh, Liberia and Pakistan).

It should be noted the Honk Kong Convention's entry into force provides the opportunity to amend and strengthen its standards and catch up with development since its adoption in 2009.

⁷⁵ https://environment.ec.europa.eu/topics/waste-and-recycling/ships/site-inspection-reports_en

⁷⁶ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202302726

⁷⁷ <http://www.emsa.europa.eu/we-do/sustainability/environment/150-ship-recycling/2874-emsa-s-best-practice-guidance-on-the-inventory-of-hazardous-materials.html>

⁷⁸ <http://www.emsa.europa.eu/we-do/sustainability/environment/150-ship-recycling/3721-guidance-on-inspections-of-ships-by-the-port-states-in-accordance-with-regulation-eu-1257-2013-on-ship-recycling.html>

Adoption of implementing and delegated acts

The EC adopted in 2016 implementing decisions on the format of the IHM certificate, of the ready for recycling certificate, of the report of planned start of ship recycling and of the statement of completion, consistent with the Honk Kong Convention's templates⁷⁹. No delegated acts were adopted as there was no need to amend the annexes to the SRR.

Implementation and enforcement in Member States

Member States have designated competent authorities, the contact persons responsible for responding to enquiries as well as members of their permanent staff responsible for the cooperation with other Member States for the prevention and detection of potential circumvention and breach of the SRR.

They also reported penalties laid down for infringements of the rules⁸⁰, which the Regulation requires to be effective, proportionate and dissuasive. Administrative penalties differ significantly between Member States and only 8 Member States⁸¹ have provided for the possibility to apply criminal sanctions for infringements of the SRR. There has been only few investigations and penalties imposed by Member States for breaches of the SRR, as reported under the first triannual report required from Member States under the Regulation (see more in section 4 on the effectiveness of enforcement in general).

External factors that have significantly impacted the implementation of the SRR⁸²

As indicated above, **China's waste import ban** introduced in 2017⁸³ led to the impossibility for EU-flagged vessels to be dismantled in China. Ship recycling facilities in China do not operate with the 'beaching' or 'landing' methods, but with drydock or alongside quays. Four ship recycling facilities had applied to join the European List and their application process was stopped because of the import ban. These facilities had substantial capacity to deal with the dismantling of large vessels⁸⁴ at a lower price than in Europe and therefore were expected to be in a better position to compete with yards operating under the 'beaching' method.

⁷⁹ [Implementing decision on the on the format of the certificate on the inventory of hazardous materials](#), [Implementing decision on the format of the ready for recycling certificate](#), [Implementing decision on the format of the report of planned start of ship recycling](#) and [Implementing decision on the format of the statement of completion of ship recycling](#).

⁸⁰ Information available under [Ships - European Commission \(europa.eu\)](#). The last infringement opened against Member States for non-communication under that article was closed in 2023.

⁸¹ These Member States are CY, DK, FR, FI, IS, EL and NO. State of play end of 2023.

⁸² Besides those mentioned in this section, which have directly impacted some of the provisions of the SRR, other external factors linked to the market conditions (eg freight rates, steel market, exchange rate, Russian war in Ukraine) had also a significant impact on the implementation of the SRR.

⁸³ China's waste import ban refers to a series of restrictions and bans implemented by the Chinese government on the import of various types of waste streams. The ban was introduced with the aim of reducing environmental pollution and improving public health caused by the processing and disposal of large quantities of foreign waste Support study and Brooks et al., (2018).

⁸⁴ 2012 Impact Assessment and BIMCO, Report on the European List of ship recycling facilities, (2022) [BIMCOReportontheEUList3rdEditionOCTOBER2022 \(6\).pdf](#)

Another external factor that influenced, temporarily, the implementation of the SRR was the **COVID-19** pandemic. The lockdown measures and travel restrictions linked to the pandemic led to delay on surveying of ships and the production of IHMs. In response to this situation, the Commission published guidelines on the enforcement obligations related to the IHM in October 2020⁸⁵. Besides, the pandemic resulted in a significant increase of cruise ships sent to recycling, mainly to Türkiye, where the recycling facilities reached full capacity and created a backlog until 2022.⁸⁶

The **Ban Amendment**⁸⁷ to the **Basel Convention**, adopted in 1995, entered into force on 5 December 2019, establishing a ban on the transboundary movements of hazardous waste from OECD countries to non-OECD countries. The consequence of this entry into force was that the export of end-of-life vessels from the EU to non-OECD countries would be in breach of international law. In practice, no such export could take place as no ship recycling facility located outside the EU had been included in the European List at the time when the Ban amendment entered into force. However, a number of such facilities (from India mainly) had applied to join the European List. The application process for these ship recycling facilities was put ‘on hold’ in December 2021⁸⁸. At the same period, the Commission proposed amendments to the WSR for the EU to meet its international obligations and at the same time to allow ship recycling facilities from non-OECD countries in the European List. The new WSR, incorporating these amendments, entered into force in May 2024⁸⁹. It allows EU-flagged end-of-life ships to be dismantled in ship recycling facilities located outside the OECD, when they have become waste outside the EU. There are therefore no legal obstacles any longer to continue the application process for the inclusion of facilities located outside the OECD.

Finally, the growing attention to **environmental social and corporate governance (ESG)** also contribute positively to the general objective pursued by the SRR⁹⁰ towards more sustainable ship recycling. A series of voluntary initiatives have been adopted by actors in the shipping sector in this sector, which make an explicit reference to the SRR⁹¹.

4. EVALUATION FINDINGS

The Evaluation matrix in Annex III sets out the overall approach followed in this report for the evaluation of the SRR, including all relevant evaluation questions and sub-questions. The

⁸⁵ See https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:JOC_2020_349_R_0001

⁸⁶ BIMCO, *Report on the European List of ship recycling facilities*, (2022)

⁸⁷ <https://www.basel.int/Implementation/LegalMatters/BanAmendment/tabid/1484/Default.aspx>

⁸⁸ Because the inclusion would have allowed exports of EU-flagged ships for recycling to the concerned non-OECD country, whereas the Ban Amendment generally prohibits such exports. See also Annex VI.

⁸⁹ OJ L, 2024/1157, 30.04.2024. See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024R1157>

⁹⁰ Most voluntary market-driven initiatives to more responsible ship recycling practices have also an industry-wide level playing field as primary objective. As a result, over the evaluation period it cannot be concluded to a positive impact of these initiatives on having EU-flagged ships dismantled in facilities that are on the European List.

⁹¹ See for example the Ship Recycling Transparency Initiative (<https://www.shiprecyclingtransparency.org/>) and the Responsible ship recycling standards for banks’ ([RSRS-Responsible_Ship_Recycling_Standards_March_2021.pdf](https://www.shiprecyclingtransparency.org/RSRS-Responsible_Ship_Recycling_Standards_March_2021.pdf) ([shiprecyclingtransparency.org](https://www.shiprecyclingtransparency.org/)))

questions are provided and answered below with sub-questions were considered necessary to outline findings.

4.1. To what extent was the intervention successful and why?

This section looks at whether the SRR has been a success, based on an assessment of whether it is effective, efficient, and coherent.

4.1.1. To what extent was the SRR effective?

The SRR is meant to deliver its general objective to reduce adverse effects on human health and the environment caused by recycling EU-flagged ships , through its contribution to its three specific objectives:

- Ensure EU-flagged ships are dismantled in safe and environmentally sound facilities.
- Ensure the proper management of hazardous materials on ships.
- Facilitate the ratification of the Hong Kong Convention.

The section starts with a general assessment of impact on how successful the SRR has been in contributing to its general objective and then examine in more details the effectiveness of the measures related to the specific objectives.

How successful has the SRR been in preventing, reducing, minimising and eliminating accidents, injuries, and other adverse effects on human health and the environment caused by ship recycling?

The impact of SRR on health and environment has been limited but positive globally. Despite the lack of robust quantitative data, which is developed further down, the tangible improvements in third country facilities carried out to be in conformity with the SRR, in combination with the feedback received during the consultation process, give reasonable reason to believe that the measures as designed have resulted in a positive impact for the improvements of health and the environment in the ship recycling sector.

The evolution of the ship recycling sector in Türkiye, which represents today 7.6% of the LDT dismantled worldwide and the destination for more than half of the EU-flagged vessels, is a useful indicator of the positive developments of applicant yards in third countries, as 18 out of the 22 facilities in Türkiye have applied to join the European List and, end of 2023, 9 facilities were included in the European List⁹². On the health impact, the average number of fatal accidents per year in Turkish ship recycling facilities shows a decrease from 7.1 fatalities per year in the period 2010-2018 to 1.7 in the period 2020-2023⁹³. This could reasonably be correlated to the application of Turkish ship recycling facilities to the European List. Trends should however be observed with caution as the positive evolution concerns a relatively short period, characterised by a notable downwards trend in the volume recycled and

⁹² And two more in the process of being included.

⁹³ Support Study and updated for 2023. On the basis of data from different sources. The authors note that data regarding accidents is often inconsistent and incomplete.

with irregular accident frequency rate for individual ship recycling facilities throughout that period.

What is clearer is that the **process of application** and inclusion of ship recycling facilities in the European List led to **improved working conditions and important investments to mitigate pollution, changing dismantling practices and improving the treatment of hazardous waste**. In 2023 the report from NGO Shipbreaking platform on Türkiye highlighted the **EU inspection reports' pivotal role in driving yard improvements**⁹⁴. The **reports**⁹⁵ from the Commission inspections which reflect more than 55 inspections in 25 ship recycling facilities worldwide including 16 ship recycling facilities in Türkiye represent a valuable and essential qualitative source of information for assessing the impact of the EU SRR. Mitigation of the externalities inherent to this industry that can be retrieved from the reports generally include, for examples, **better containment of hazardous materials during the entire ship dismantling process to prevent spills and leakages, use of impermeable floors with effective drainage systems, improved management, storage and disposal of hazardous waste (such as asbestos), improved systems for safely pulling a ship further away from the shore line (including winching gear and cables and their periodical control), availability and use of Personal Protective Equipment, better emergency preparedness and response evaluation, accident and incidents reporting and analysis, development of environmental monitoring on the basis of an improved methodology**.

The SRR also had an impact in India, which is the second biggest ship recycling nation in the world. Over the period 2016-2023, there is a general downwards trend in the number of fatalities in Alang, according to data from the Indian authorities. This could again be reasonably correlated to the application of Indian ship recycling facilities to the European List, with other contributing factors. 27 ship recycling facilities, representing around 30% of the overall recycling capacity of the country⁹⁶, had applied for inclusion in the European List end of 2023. Like in Türkiye most of these ship recycling facilities have made important investments to upgrade facilities and improve instructions, procedures and practices to meet the EU criteria. This appears most predominantly in the reports of the 6 ship recycling facilities that were subject to inspections by the Commission. Improvements vary according to the ship recycling facilities but generally include, for example, **systematic sampling regime to identify hazardous materials, health monitoring plans**⁹⁷, **safety trainings and monitoring**,

⁹⁴ <https://shipbreakingplatform.org/wp-content/uploads/2023/12/Turkey-Report-2023-NGOSBP.pdf>.

⁹⁵ https://environment.ec.europa.eu/topics/waste-and-recycling/ships/site-inspection-reports_en

⁹⁶ 131 plots are operational out of 153.

⁹⁷ The SRR requires to put in place a health monitoring system to reduce the health risks for the workers, based on relevant ILO and IMO guidelines, which entail (1) establishing an Occupational Safety and Health management systems and (2) make arrangements for the identification and periodic assessment of the hazards and risks to safety and health from hazardous ambient factors. This concerns for example adequate competence and training as well as medical surveillance. The ILO's Safety and health in shipbreaking: Guidelines for Asian countries and Turkey consider that the following types of hazardous substances may require appropriate health surveillance: (a) substances (dusts, fibres, solids, liquids, fumes, gases) that have a recognized systemic toxicity (i.e. an insidious poisonous effect); (b) substances known to cause chronic effects; (c) substances known to be sensitizers, irritants or allergens; (d) substances that are known or suspected carcinogens, teratogens, mutagens or harmful to reproductive health. The inspection of yards by the Commission also comprises checks based on the methodology by the European agency for safety and health at work. When checking the health surveillance system in place in yards, the inspection evaluates if relevant parameters are included, such as x-ray of lungs (important for checking disease caused by asbestos), blood tests, (i.e. lead), liver, kidney and hearing tests.

environmental monitoring, leakage control in the intertidal zone and handling of hazardous materials only on impermeable floors with effective drainage systems.

Implementation of the higher standards required by SRR in third countries is also reflected in the cost structure with significant more budget allocated to labour costs, ship cutting costs, waste disposal and other environmental compliance costs compared to yards in the same country not meeting the same standards (see section 4.1.2 for illustrative example).

The positive impact on the general situation can however be considered as limited by the fact that many ship recycling facilities in South Asia have not applied to join the European List and continue to operate under poor environmental and health conditions. No applications were registered for ship recycling facilities located in Bangladesh and Pakistan. Only **46% of respondents** in the public consultation had **positive** views on the contribution of the SRR to the **reduction of disparities** between EU and third country facilities. NGOs and academic and research institutions are generally of the opinion that the regulation had no effect, or negative effect on reducing disparities. Companies, business associations and public authorities are generally of the opinion that the SRR had an effect to some or a large extent. It can be noted that NGOs point to the general environmental and health record of South Asian beaching yards that remains of concern⁹⁸ but also for the ship recycling sector in Türkiye⁹⁹. On the other hand, shipowners and some Member States regret that the European List has not yet integrated some yards from India.

Despite these mitigated views on the reduction of disparities, **82% of respondents to the targeted survey and 86% to the public consultation were of the opinion that the SRR has contributed to mitigating adverse impact on health caused by ship recycling. This figure rises to 89% when considering the Regulation's positive impact on the environment.** This opinion was globally consistent across all stakeholder groups. The positive contribution is most often associated with the stringent criteria for ship recycling facilities and to the independent inspections in applicant and EU listed facilities in third countries. However, it is noteworthy that 67% of NGO respondents in the public consultation hold a different point of view, stating that the Regulation had no effect.

The fact that the SRR has been in place and represents an indisputable benchmark for sustainable ship recycling has been recognized well beyond the EU. The SRR had helped maintaining the issue of ship recycling sustainability on the international agenda and contributed to convince countries to ratify the Hong Kong Convention, as a recognition that sustainability requirements were needed for this sector. It has also provided incentives for the shipping and recycling sectors to improve their practices. One indicator for the overall amelioration in ship recycling practices is the fact that an important number of yards in India and some in Bangladesh have been certified by class societies in the last 5 years as ‘compliant’ with the requirements of the Hong Kong Convention. Although this is far from the threshold set in the SRR, and this certification is not as stringent as inspection by the Commission, this still demonstrates a willingness to improve ship recycling conditions. This upgrade is, at least partly, inspired by the SRR and its European List, either because these yards see this as a first

⁹⁸ The Shipbreaking Platform points particularly to Bangladesh’s record of fatalities and injuries in the period 2018-2022. See also [Trading Lives for profit](#), Human Rights Watch (2023).

⁹⁹ See [NGO Shipbreaking Platform, Ship Recycling in Turkey, Challenges and Future Direction \(2023\)](#).

step towards the European List, or in order for them to demonstrate green credentials and compete with Facilities on the European List.

As far as the **impact** on environmental and health of the SRR **in the EU** is concerned, **it has been limited**. Yards located in the EU have also to comply with the specific criteria, which were not in force before the SRR and are specific to ship recycling. The SRR has therefore also contributed positively to raise standards, and thereby to mitigate environmental and health adverse effect of ship recycling in yards dismantling vessels within the scope of the EU SRR. The impact is however much more limited than in third countries as more general EU environmental and health standards were already applicable in yards located in the EU¹⁰⁰.

Among the key limitations regarding the general objective of the SRR is the fact that a large proportion of EU-flagged vessels has been re-flagged to other jurisdictions before dismantling and hence did not get recycled in Facilities on the European List, but in yards with less advanced standards. This is further developed under the next question.

The impacts of the SRR are mainly presented in a qualitative due to the limitations with respect to quantification. **Quantitative data on the impact are limited** for a number of reasons.

On the protection of the marine and coastal environment, it is often not possible to quantify the progress made, as the effect can only be observed on a medium term, especially considering the ship recycling sector is operating under very fluctuating market conditions. There is also a lack of specific data covering the period before the beginning of the application process for individual yards. This can be explained by the fact that the ship recycling sector is composed of SMEs and is not always operating under very transparent conditions but also by the absence of proper environment monitoring in yards in third countries before the application process. The availability of data over a longer period should change in the future for Facilities on the European List, which have to carry out comprehensive environmental monitoring programmes at regular intervals. However, due to weaknesses in the sampling methodology, characterized by a high degree of uncertainty in the data collection and handling, it will remain challenging to reliably compare pollutant concentrations across different years, thereby limiting the assessment of temporal trends in environmental impact. This also suggests that the SRR requirement in relation to environmental monitoring could benefit from further clarification or guidance to meet and measure the intended objective. Another limitation which is more difficult to address is that most yards, having applied for inclusion in the European List or not, are located next to each other, in very industrialised bays, so that the environmental positive impact of more sustainable ship recycling practices remain difficult to isolate and identify, especially for some parameters¹⁰¹.

Regarding the impact on human health, data have been used in the evaluation report when available. This is the case for example for fatality rates. The analysis of data on accidents

¹⁰⁰ The data on this aspect are very limited as this was not seen as an objective of the Regulation, as also outlined in the 2012 Impact Assessment. Limited data were found in literature or received from yards in the EU regarding impact on environment and health. The European Recycling Industries' Confederation (EuRIC) nevertheless raised the difference of level of standards between EU yards dismantling vessels under the scope of the EU SRR and other EU yards as an issue, which also attest a positive impact in terms of standards of the EU SRR on the first group (see also section on relevance/scope).

¹⁰¹ This is the case for Aliaga in Türkiye but also for applicants located in Alang, India, which is furthermore accentuated due to the high tides and monsoon which have also an impact on the movement of sediments.

received from yards that have been included in the European List from a number of years (including accidents frequency and severity rates) is challenging, as the sample and the period covered is too limited to conclude to any trends. It can be noted that whilst individual health monitoring is required by the SRR and carried out by the Facilities on the European List for all workers, in line with ILO and IMO guidelines, there also limitations regarding the use of health data as indicator of impact due to the sensitivity character of these personal data.

The difficulty of having a quantified baseline given the dynamic nature of the sector, and the indicative non-comprehensive nature of the indicators, means that a full quantification (and hence monetization) of the SRR impacts is not possible.

How successful has the SRR been in ensuring that EU-flagged ships are dismantled in safe and environmentally sound facilities worldwide?

Meeting this objective requires that the European List of ship recycling facilities includes recycling yards that operate according to safe and environmentally sound standards, which is done through setting clear requirements, ensuring proper compliance assessment and monitoring, including through inspections, and transparent management of the list. The latter should have sufficient capacity and be used by EU-flagged ships at their end-of-life.

At the end of 2023, 45 ship recycling facilities were included in the European List of ship recycling facilities. Out of these 45 facilities, 33 facilities are located in 13 countries of EU, EEA and UK Northern Ireland¹⁰² and 12 facilities are located outside the EU, in Türkiye (9), United Kingdom (2) and USA (1). Including these 12 facilities, the Commission has received a total of 57 applications from third country facilities, including 27 from India, 19 from Türkiye¹⁰³, 3 from the UK, 2 from USA, 4 from China and 1 from Bahrein.

The positive impact of the SRR is often linked to the SRR standards associated with independent, transparent and professional auditing system carried out by the Commission in third country facilities. The answer to the previous question described the concrete measures and investments the applicant yards have taken to improve working conditions and to mitigate pollution, changing dismantling practices and improving the treatment of hazardous waste. This was done with the view to comply with the SRR standards and be included in the European List. The compliance assessment is a thorough process which lasts **several years** and includes **several inspections**.¹⁰⁴

Once in the European List, the facilities in third countries are also subject to **regular monitoring**, including a mid-term review and an assessment for their renewal, as facilities are included in the European List for a period of 5 years. In that context, it should also be noted that most stakeholders, including the industry, reacted positively to the Commission's decision to **remove** two yards located in Türkiye from the European List in 2022, underlining the importance of maintaining high standards, noting the **effectiveness of the EU audit system**,

¹⁰² Harland and Wolff (Belfast) Ltd located in UK Northern Ireland remains included in 'Section A – Member States' of the European List, in accordance with the Protocol on Ireland/Northern Ireland ('IE/Ni Protocol'). See Article 185 of the Withdrawal Agreement.

¹⁰³ One yard that was removed from the European List in 2022 has applied again for inclusion (i.e 2 applications linked to 1 yard).

¹⁰⁴ Typically, these facilities undergo 2-3 inspections over 2-3 years before inclusion in the European List.

including taking remedial action where necessary. One yard was de-listed due to a lack of transparency on ship dismantling operations and the second because it failed to sufficiently protect its employees' working conditions. These two yards were also subject to a **request to the Commission to take action**. This mechanism, provided by the Regulation for any natural or legal person affected or likely to be affected by a violation of the SRR, has been used by an NGO and proved to be effective to request to investigate the compliance of the facilities following fatal accidents.

Literature and interviewees also point to a number of areas for improvements with respect to the modalities of implementing the control mechanism provided by the SRR. The first one relates to the fact that conditions sighted during inspections often diverge from the day-to-day reality of ship recycling yards, when facilities in third countries are informed about inspections by the Commission. To address this challenge, the Commission started in autumn 2023 to **conduct unannounced inspections**¹⁰⁵. This is now seen as an essential tool for ensuring the effectiveness of the SRR. Member States and NGOs have also requested to address in a more effective and transparent way the **situations where non-compliance** and/or deficiencies are detected during inspections of facilities located in third countries, considering for example the possibility to suspend the inclusion in the European List of a given yard.¹⁰⁶ NGOs and ship recycling facilities located in the EU have also raised the need for further clarification of **the standards** for establishing compliance and inclusion in the European List to ensure a better level playing field, in particular between yards located in the EU and third countries. The standards and their effective implementation are considered not sufficiently **aligned with the EU safety and environmental acquis** relevant to ship recycling operations and downstream waste management. The concerns regularly raised relate to insufficient criteria to evaluate waste management and steel recovery operations, for proper waste management and storage system by the yards, effective pollution control measures and use of cleaner technologies for dismantling and recycling activities. On the other hand, some other stakeholders consider as **unbalanced** treatment the fact that the SRR does not provide for the possibility for the Commission to carry out inspections also in yards located in the EU. Literature also highlights the **more harmonised and transparent process**¹⁰⁷ **of the central monitoring of non-EU facilities, in contrast to the monitoring of EU facilities** by Member States' competent authorities¹⁰⁸. It can be noted that the SRR does not set any specific requirements for monitoring, inspections and transparency for yards located in Member States. The authorisation procedures also vary among Member States. These elements likely explain why only around 40% of respondents to the public consultation considered the monitoring of facilities as very effective or effective, with similar result observed for the monitoring of facilities located in the EU and for facilities located in third countries.

The active role taken by the Commission in the assessment and monitoring of facilities in third countries should still be linked to the fact that the certification from the **independent verifiers**

¹⁰⁵ At the time of the publication of the evaluation, 12 unannounced inspections had been organised in Türkiye.

¹⁰⁶ Article 14(4) provides for the possibility for Member States to suspend the authorisation of a yard located on their territory or require corrective actions, where a facility ceases to comply with the requirements of Article 13. An equivalent reference does not exist for facilities located in third countries.

¹⁰⁷ All inspections reports are published https://environment.ec.europa.eu/topics/waste-and-recycling/ships/site-inspection-reports_en.

¹⁰⁸ Hadjiyianni, I, and Pouikli., K., [The Regulatory Landscape of Ship Recycling: Justice, Environmental Principles, and the European Union as Global Leader](#), 2024

attesting the compliance of the yard with the SRR appears not to fulfil the intended purpose. The consecutive inspections by the Commission of facilities which had already been subject to certification by an independent verifier often showed that this certification did not provide the expected results in terms of stringency in verifying compliance with SRR requirements. This led the Commission to reverse the initial balance envisaged in the SRR between the inspections carried out by independent verifiers (systematic) and the Commission (optional risk-based) to rely predominantly on its own inspections.

To assess the effectiveness of the European List **the number of vessels which have been dismantled in the yards included in that List** must also be taken into consideration. 135 EU-flagged vessels subject to the SRR were dismantled in facilities that are on the European List during the period 2019-2023. The EU SRR aims at dismantling 100% of EU-flagged ships in facilities that are on the European List. All vessels flying an EU flag at dismantling were recycled in facilities that are on the European List, with only very limited exemptions. However, 108 vessels which flew the flag of a Member State less than 1 year before being recycled ended up in facilities that are not on the European List. While the formal objective of 100% of EU-flagged vessels recycled in facilities on the European List was therefore formally achieved, **the percentage of vessels flying an EU flag 1 year before dismantling that were recycled in facilities on the European List is a better indicator of effectiveness.** As shown in the table below, there is a positive trend towards a higher proportion of EU-flagged vessels dismantled in facilities on the European List in the period 2019-2023. **This percentage has increased from 33% to 86% if we consider the number of vessels and from 13% to 79% if we consider the weight of the ships concerned (in LDT).** This increase might be explained by the regular extension of the European List to new ship recycling facilities (especially in Türkiye), which have been dismantling a large share of EU-flagged vessels, as well as an interest by shipowners to ensure that their ships are dismantled in facilities on the European List. The positive trend appears clearly in terms of absolute number of vessels but needs to be confirmed regarding the biggest vessels, as only 2023 shows a significant progress¹⁰⁹. **Yet, in the period 2019-2023, in average, almost 45% of the vessels flying an EU flag 1 year before being recycled (representing more than 65% in scrap weight) were not dismantled in facilities on the European List. To a very large extent, this gap is due to the practice of re-flagging** described in section 3.

¹⁰⁹ Another reason to consider these numbers with caution is that the overall number of vessels concerned remains limited and the ship recycling market is heavily dependent on market fluctuations.

Table 3: Evolution of EU-flagged vessels scrapped in facilities on the European List between 2019-2023 compared to the scrapped vessels that still had an EU flag 1 year before being recycled (in absolute numbers and in LDT)¹¹⁰

		2019 ¹¹¹	2020	2021	2022	2023
Number of vessels	Number of vessels recycled in recycling facilities that are on the European List	15	36	35	24	25
	Number of vessels recycled in facilities that are not on the European List	30	33	29	12	4
	Percentage of vessels recycled in facilities on the European List	33%	52%	55%	67%	86%
	Market share represented by EU-flagged vessels recycled in facilities on the European List out of the total number of vessels recycled worldwide	3.5%	6.1%	5.9%	5.7%	6.7%
LDT	LDT recycled in facilities that are on the European List	67,138	257,655	121,843	96,284	93,171
	LDT recycled in facilities that are not on the European List ¹¹²	443,735	315,957	362,156	112,033	24,694
	Percentage of LDT recycled in facilities that are on the European List	13%	45%	25%	46%	79%
	Market share represented by EU-flagged vessels recycled in facilities on the European List out of the total recycled worldwide in LDT	2.6%	5.1%	2.6%	2.8%	3.6%

Source: Support study based on EMSA data.

For 2021 and 2022, the majority of the vessels that were flying an EU flag 1 year before being recycled were dismantled, in order of largest volume to lowest volume, in Pakistan, Türkiye, and Bangladesh, with smaller shares being recycled in India and the EU.

The table below indicates for Member State the cumulated volume of vessels for 2021 and 2022 that were registered under national flag 1 year before being recycled per dismantling destination in South Asia.

Table 4: Cumulated volume (GT) for 2021 and 2022 of EU-flagged vessels (including re-flagged vessels) recycled in South Asia and the percentage it represents out of the total recycled for the flag state during that period.

Vessel flag	Bangladesh	India	Pakistan
Croatia	-	-	30,770 (92.69%)
Cyprus	12,705 (6.68%)	51,049 (26.82%)	102,875 (54.05%)
Denmark	2,887 (5.72%)	-	-

¹¹⁰ Vessels for which the shipbreaker is unknown were excluded from the calculation.

¹¹¹ The requirement for shipowners to recycle EU-flagged ships in approved facilities included in the European List started to apply since 31.12.2018, even if the first publication of the European List took place in 12.12.2016.

¹¹² These numbers are very similar to the average figures on re-flagging. They however do not fully match due to the following reasons: 1) some vessels were excluded from these calculations, mainly due to unknown or uncertain scrapping locations; 2) certain vessels, despite being re-flagged, were recycled in Facilities on the European List; 3) some vessels, although not re-flagged, were recycled in non-Facilities on the European List.

Vessel flag	Bangladesh	India	Pakistan
Greece	87,407 (26.87%)	31,183 (9.59%)	197,631 (60.76%)
Italy	-	21,291 (15.78%)	-
Malta	135,401 (47.16%)	2,070 (0.72%)	-
Norway	-	112,116 (28.32%)	-
Portugal	9,600 (27.89%)	24,819 (72.11%)	-

Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

The above figures illustrate that **the effectiveness of the EU SRR has been substantially undermined by the practice of re-flagging ships**. Though it could be considered as an **unintended effect** of the SRR, it should be noted that the Commission had identified the risk of re-flagging in its impact assessment and included related measures in its proposal for a regulation in 2012. The flag state, as defined by the United Nations Convention on the Law of the Sea (UNCLOS), has overall responsibility for the implementation and enforcement of international maritime regulations for all ships granted the right to fly its flag. Changing flag allows the shipowners to change the legal regime for the ship. Changing of flag is a common practice along a ship's life. While UNCLOS requires a 'genuine link' between the ship and the flag under which the ship operates, this requirement is not defined and therefore often not implemented. According to UNCTAD, more than 70 per cent of the fleet (tonnage) is registered under a flag which is different from the country where their owners are based¹¹³. The possibility to change flag represents however a well-known challenge for the effectiveness of a number of legislations at national, European and International level¹¹⁴. For ship recycling, there is a serious risk of non-compliance as long as two recycling markets (one compliant with higher requirements and one not) are co-existing and competing. Some interviewees point to the low ship recycling market in the EU as an indicator of the low effectiveness of the SRR.

As explained in section 3, the substantial cost differences between dry-dock, alongside or landing methods and beaching methods remain a challenge to achieve the SRR objective, as recycling facilities on the European List face competition from facilities with a distinct cost structure.¹¹⁵ The competitive advantage of facilities operating under the 'beaching method' was expected to decrease with the listing of compliant facilities in China and, to address the residual risk, the Commission proposal included a provision to impose penalties to the penultimate owner of an EU-flagged ship if this ship is not flying anymore the flag of an European Member State within less than six months after the selling and sent for recycling in a facility which is not included in the European list. The proposal was however not retained by the co-legislators, notably due to opposition by some Member States. The SRR therefore does not contain any provision designed to prevent the practice of re-flagging a vessel, when such re-flagging is done for the purpose of circumventing the obligation for a shipowner to dismantle the vessel in an EU-listed yard.

¹¹³ UNCTAD, Review of Maritime Transport (2019).

¹¹⁴ See [Setting the course for a sustainable blue planet. Joint Communication on the EU's International Ocean Governance agenda. It includes in Annex specific measures](#) aimed at promoting the fulfilment of flag States responsibilities by those acting as open registers

¹¹⁵ Solakivi et al. (2021): *The European Ship Recycling Regulation and its market implications: Ship-recycling capacity and market potential*, Journal of Cleaner Production, Vol.294, 20 April 2021.

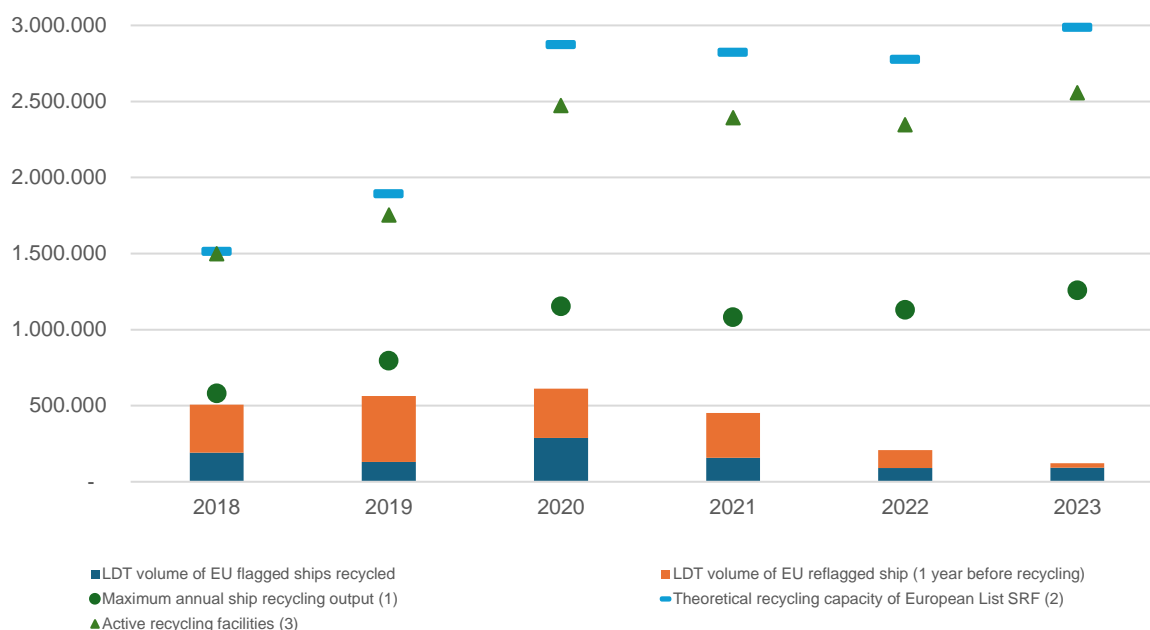
If the incentive to have a ship dismantled outside Facilities on the European List is primarily financial, a contrario, the incentive to have a ship dismantled in an EU-listed yard, beyond the legislative obligation under the SRR, is reflecting a preference of shipowners to reduce the environmental and safety risks associated with the dismantling of vessels. The fact that the European List provides for legal recycling destinations for EU-flagged ships and is underpinned by a unique monitoring and inspection scheme for facilities located in third countries, allows owners to send their ships for recycling in confidence that the EU partly shoulders transactional costs and reputational risks. Furthermore, shipowners can avoid the potential consequences of non-compliance such as penalties imposed by the competent authorities or negative campaigns by civil society or media.

The obligation requiring EU-flagged ships to undergo recycling in certified facilities poses the question about the adequate **capacity of these facilities to meet the demand** from the shipping industry for recycling EU-flagged ships. The insufficient capacity of the European List is a concern which has regularly been raised by the shipping industry, arguing that the capacity is theoretical, used for other activities or other vessels than those covered by the SRR and not able to deal with large vessels¹¹⁶. The evaluation has however shown that the European List, featuring 45 yards across 16 countries¹¹⁷ within and outside the EU, has **ensured so far sufficient capacity for EU-flagged ships** (including those re-flagged before being dismantled) to be recycled in safe and environmentally sound facilities. The number of facilities on the European List has nearly doubled since 2018, with all facilities located in the EU that dismantle vessels in the scope of the SRR being in the European List. In 2023, the list recorded an annual output in LDT of 1.3 million and a theoretical recycling capacity of around 2.6 million LDT for facilities active in ship recycling. Since 2018, the highest annual LDT, combining EU-flagged and EU reflagged vessels, amounted to 0.6 million LDT only.

¹¹⁶ See BIMCO, [Report on the European List of Ship Recycling Facilities, \(2022\)](#)

¹¹⁷ Figures based on the 10th edition of the European List of ship recycling facilities adopted in December 2022.

Figure 8: Different capacity measurements¹¹⁸ of the European List and EU-flagged vessels falling within the scope of the SRR recycled worldwide (including those that changed flag 1 year or less before being recycled) (2018-2023)



Source: Support study analysis based on different sources, including the European Lists of ship recycling facilities and EMSA data on re-flagging.

The list also shows a diversified capacity in terms of size, with 10 yards¹¹⁹ capable of recycling in principle the largest vessels that have been re-flagged and dismantled in the past decade.¹²⁰ The capacity **needs however to keep growing to face the forecasted demand** expected to peak in 2032 to almost 2.5 million LDT for EU-flagged vessels.¹²¹ The expected pressure on recycling capacity is the result of the large expansion of the merchant fleet in the 2000s that is starting to age and will likely be recycled with a decade.¹²² The expected demand will be more

¹¹⁸ The European List refers to two different types of recycling capacity: (1) the Maximum Annual Ship Recycling output, determined by selecting the highest value occurring in the preceding 10-year period for each ship recycling facility expressed in LDT and (2) the Theoretical Maximum Annual Ship Recycling Capacity, determined according to the facility's permit or data submitted. The actual recycling capacity is likely to lie between these two specified reference values. The 'Active Recycling Capacity' (3), concept introduced by the support study, considers only the yards that are operational and actively recycling ships, as opposed to those yards that may have capacity but are not currently recycling ships. The three metrics exceed existing recycling needs for the period analysed.

¹¹⁹ Situation end of 2022 (10th edition of the European List).

¹²⁰ Over the past decade, 5 'very large vessels have been re-flagged and dismantled in South Asia. The two biggest had a length of 332m and 335m and both a width of 58m. Ecorys on the basis of data from EMSA and [VesselFinder](#).

¹²¹ Support study, p.51. It can be noted that the forecast trends may vary depending on the predictive models used, resulting in differences regarding the magnitude of the capacity gap and in the time of the peak for the demand. See also Tola .F, al, [Demolition of the European ships fleet: A scenario analysis](#), Marine Policy, Volume 166, August 2024.

¹²² Support study, p.51. Globally recycling is expected to grow from around 19 million LDT today to a peak of almost 25 million by 2032. Similarly Sustainable Shipping Initiative 2021, Exploring shipping transition's transition to a circular industry (Based on UNCTAD 2020), indicates that tonnage due for ship recycling capacity is projected to double by 2028 and nearly quadruple by 2033.

than the theoretical recycling capacity of the facilities active in ship recycling at the end of the evaluation period and more than the double of their maximum annual ship recycling output. In time of general high demand for ship recycling, it may also be expected that a number of recycling facilities on the European List prefer not to recycle the biggest vessels, which will become more numerous though. The capacity of the European List remains therefore a significant concern expressed by the shipping industry.

What factors have affected (positively or negatively) progress towards ensuring that EU-flagged ships are dismantled in safe and environmentally sound facilities worldwide? How was the Regulation enforced in that respect?

In addition to the external factors presented in section 3 (Basel Ban Amendment, Covid-19 and China's waste import ban), there are other factors that have affected **negatively** the progress towards the objectives of the Regulation, especially linked to its enforcement. The main challenges identified in relation to enforcement are the following¹²³:

- **Differences in costs and benefits for the shipping sector between EU and non Facilities on the European List:** as illustrated in section 3 (*economics of ship recycling*), an important reason for shipowners to send their ships for dismantling to non Facilities on the European List is that the prices offered by these yards for their ships is much higher than in facilities on the European List, due to the lack of internalisation of the environmental and social costs linked to ship recycling practices and the higher prices for steel scrap;
- **De-registering and re-flagging:** The implementation of the provisions of the SRR related to the recycling stage and enforcement in relation to illegal ship recycling taking place in facilities that are not on the European List is often just not possible due to the re-flagging practice outlined in the previous sections and authorised under international maritime law. It should be noted that the SRR does not contain specific provisions on enforcement designed to avoid that ship owners circumvent the obligation to recycle EU-flagged end-of-life vessels in Facilities on the European List. Enforcement might be pursued in some cases under the WSR that has reportedly offered so far, a more effective basis for enforcement, with a clearer definition of 'waste' and a path to investigate and address violations compared to the SRR, though it has its own challenges as referred to in section 2.1.

The practice of re-flagging often covers cases of circumvention of the SRR but not only. The selling of the vessel to a cash buyer, frequently resulting in the de-registering of the vessel from its flag state and then also often followed by a re-flagging, creates a complicated and suspicious context for enforcement authorities, even when a ready for recycling certificate has been issued under the SRR for a dismantling in a facility that is not on the European List. Some enforcement authorities have expressed concerns that, further to the re-flagging of the vessel, this vessel will not be dismantled in a EU-listed yard, as it will not be under the control of the Member State any longer and not subject to the SRR. On the other hand, for some Facilities on the European List, the use

¹²³ See Study on enforcement Rambol, Ecorys, Grimaldi Studio Legale, ABS (2024) – to be published.

of a cash-buyer and the possible re-flagging of a vessel are part of normal commercial operations, with no intention to circumvent the SRR obligations.

- **Complex and intertwined legal framework:** Implementing and detecting infringements of the SRR provisions is challenging due to the global nature of ship operation and recycling, a complex supply chain involving various stakeholders and limited transparency¹²⁴. In addition to the difficulty to identify a vessel that is destined to be recycled and to trace its journey, cooperation between Member States and with third countries is challenging due to jurisdictional complexities. Determining which set of regulations applies due to the dual legal status of an end-of-life vessel as hazardous waste and ship can be problematic (See Annex VI). This is even more complicated when a third country is involved and depending on whether or not he is a Party to the relevant Conventions. As a result, **identifying the authoritative body responsible** for enforcement is often problematic too. Obviously, the **cooperation between different authorities** in this context is also not easy to develop, considering distinct authorities are responsible for matters related to environment, shipping, and judicial affairs. Difficulty in cooperating with other competent authorities may be encountered **within a Member State, among Member States and with third country authorities**, although much needed at all levels with the view to prevent, detect and take action against suspected illegal ship recycling.
- **Lack of specific provision/definition in SRR:** The lack of a definition of ‘End-of-Life’ vessels in particular is reported as an issue for enforcement authorities to identify ships ready for recycling and detecting breaches of the obligation to recycle in Facilities on the European List, since the obligation for the shipowner to notify the flag state of the intention to recycle the ship seems not effective. This lack of clarity makes it challenging for enforcers to apply fundamental legal principles, such as the requirement to prove guilt beyond a reasonable doubt and the necessity to establish the defendant's intent. Also, the definition of ‘shipowner’ is often reported by those responsible for enforcement and NGOs as too restrictive to allow investigation and prosecution of those that really took the decision about the illegal recycling of the ship.
- **Lack of dedicated national provisions implementing the SRR:** To secure the enforcement of its obligations, Article 22(1) of the SRR requires Member States to lay down provisions on penalties applicable to infringements and take all the measures necessary to ensure that they are applied. The penalties must be effective, proportionate and dissuasive. The evaluation found that less than half of the Member States have adopted all necessary measures to cover the possible infringements of SRR provisions. Most Member States have only adopted measures concerning some aspects of the SRR and seven have not adopted any specific measures on the basis of the SRR. These Member States rely on more general rules designed for addressing non-compliance with national environmental regulations on the handling of waste and shipment of waste¹²⁵,

¹²⁴ For instance, when a ship is owned by a company domiciled in one country, flagged in a second, located in a third and then recycled in a fourth.

¹²⁵ 11 out of 30 EU/EEA States have administrative or civil measures that are applicable specifically to all of the infringements of the SRR provisions. These MS includes BE, CZ, EL, FR, IS, IT, MT, NL, NO, PT and SI). 12 EU/EEA States (BG, CY, DK, ES, FI, HR, IE, LT, PL, SK, RO and SE) have adopted some measures and

which undermines the effectiveness of the SRR. **When present, the level and typology of sanctions in place vary significantly.** The sanctions are **often too low** and not effectively discouraging non-compliance. In Belgium the maximum fine could however reach EUR 16 million¹²⁶; in Spain, illegal ship recycling could result in disqualification from exercising any of the activities for a period of no less than 1 year and no more than ten years and in Denmark, France and Netherlands infringement could be punishable up to two years of imprisonment. It can be noted that only 8 Member States have introduced the possibility to apply criminal sanctions for some infringements of the SRR¹²⁷. In some Member States the penalty for illegal ship recycling is only a few thousand euros.

A problem of a different nature has also been reported, at least in one Member State, where several stakeholders indicated that the national or subnational legal frameworks did not allow them to obtain a permit for carrying ship recycling activities in line with the SRR. This legal obstacle acted as market barrier for them, discouraging the development of ship recycling activities in the country concerned.¹²⁸

- **Lack of expertise and training:** Even though EMSA provides regular trainings, it has been reported that Port State Control Officers and officers in competent authorities and administrations often lack knowledge in environmental and technical aspects, as well as investigation tools to carry out investigation.
- **Insufficient data for continuous monitoring:** The THETIS-EU¹²⁹ platform which records SRR related port state controls, is not used by all Member States as it is used only on a voluntary basis. Without sufficient information in THETIS-EU, it becomes challenging to generate alerts, initiated by either Member States or inspectors, which is a key support for selecting vessels for inspection and identifying potential non-compliance with SRR requirements.

These numerous challenges potentially result in a scenario where non-compliance goes unnoticed.

For the **first Member States' triannual reports under Article 21** covering the period from January 2019 to 31 December 2021, almost all Member States (26 MS and Norway¹³⁰) reported via the Dynamic Overview of National Authorities (DONA)¹³¹. Ten Member States¹³² and

7 EU/EEA States have not adopted specific measures based on SRR and rely on waste and waste shipments legislation (AT, DE, EE, HU, LIE, LU and LV). Support study, p.76.

¹²⁶ In BE, minimum level of penalty is EUR 500. In ES, penalties range between EUR 45,000 and EUR 1.7 million; in IT between EUR 5,000 and 0.3million; NL between EUR 25,750 to EUR 1.03 million; in IE up to 0.3 million

¹²⁷ BE, EL, FR, MT, NO, CY, DK, FI, IS, NL, SE and SI

¹²⁸ See DMZ | German Maritime Centre, [Sustainable ship recycling in Germany - a market study \(dmz-maritim.de\)](https://www.dmgz-maritim.de)

¹²⁹ THETIS-EU is used by 16 Member States and Norway for monitoring compliance. As its use is not mandatory it provides an incomplete picture in terms of inspections data. <https://www.emsa.europa.eu/thetis-eu.html>.

¹³⁰ Czech Republic and Iceland did not submit a report.

¹³¹ The Dynamic Overview of National Authorities (DONA), is a stand-alone maritime application, developed, maintained and enhanced by EMSA which became operational in June 2022. One of its functionalities is to provide a single-entry portal with restricted access, through which Member States could, if they opt to do so, fulfil their reporting obligations under EU maritime legislation. The SRR is one of the three legal acts covered by the portal in its initial phase.

¹³² Belgium, Croatia, Cyprus, Denmark, Greece, Italy, Malta, The Netherlands, Spain and Sweden

Norway identified 90 ships to whom they have issued a Ready for Recycling Certificate and provided specific details though often incomplete (e.g. 41% of the cases did not include the issue date of the certificate). A comparison with the MARINFO database shows that there are at least 9 ships that have not been reported by Member States, though falling under the scope of the reporting¹³³. Only two Member States reported information on cases related to illegal ship recycling in non listed facilities.¹³⁴ The limited dataset does not allow to draw trends and conclusion on the enforcement by Member States, on the basis of this first triannual reporting only.

In light of the elements presented above (complex legal framework; absence of detailed and specific provisions on enforcement; insufficient expertise), the enforcement of the SRR has been uneven in the Member States, depending to a large extent on the commitments or interests by the relevant competent authorities to act in this field (see in that respect the question below relating to the involvement of Member States in the enforcement of the SRR). It can also be noted that due to the fact that the SRR is still relatively new and due to the difficulties in enforcing the legislation, there is no case law related to the SRR. The case law in the field of ship recycling is still exclusively related to the Waste Shipment Regulation.

How successful has the SRR been in ensuring the proper management of hazardous materials on ships? What factors have affected progress towards this objective and its enforcement?

78% of respondents to the public consultation think that the SRR **obligation** to develop and maintain an inventory of hazardous materials (IHM) is ‘very effective’ or ‘effective’ in contributing to the objective. At the same time, only 49% have the same opinion on the **control and enforcement**.

The EU requirements to prohibit/restrict the presence of specific hazardous materials on board vessels and to keep on board an inventory of hazardous materials are stemming from the Hong Kong Convention (even if the SRR contains additional materials). The aim of these provisions is to reduce the presence of toxic materials, as well as to inform about the location and quantities of hazardous materials present on board ships. This information is useful both during the operational life of the ship during any repairs and maintenance, as well as for ship recycling facilities for developing the ship recycling plan for the vessel concerned. It is therefore an important instrument, whose quality and completeness are essential to ensure safe and sustainable dismantling practices.

The SRR has triggered many efforts by the Commission and EMSA aimed at standardising the development and maintenance of IHM and providing standard procedures and trainings for port state control inspections¹³⁵, based on relevant IMO Guidelines. However, data reported on a voluntary basis over the period 2021-2023 on SRR related port state control inspections that verified the inventory of hazardous materials show that 45% of inspections¹³⁶ found instances of non-compliance with the SRR and that, in 2023 in 54% of the cases of non-compliance

¹³³ These concern only countries that have reported RFRC.

¹³⁴ Greece (1) and Italy (2). BE also reported an infringement case related to a vessel flagged out without notifying the Belgian Flag State of their intent to recycle the vessel. The vessel was heading towards a facility that was on the European List.

¹³⁵ EMSA trained 119 inspectors over the last 4 years on the implementation of the SRR.

¹³⁶ 761 out of 1,707 inspections, EMSA data based on THETIS EU.

concerning both the Inventory certificates and Statements of Compliance¹³⁷, those documents were just missing. At the same time, a positive trend can be noticed from the table below regarding non-compliance rate and missing certificates.

Table 5: Non compliances for inspections reported in THETIS EU carried out in 2021, 2022 and 2023.

	2021	2022	2023
Total inspections carried out	950	472	285
Total inspections reported with non-compliances	515	173	73
Non-compliance rate	54%	37%	26%
Missing certificate among the non-compliance issues which relate to the inventory certificates	90%	52%	42%
Missing statement among the non-compliance issues which relate to the statement of compliance	78%	66%	59%

Source: EMSA data (THETIS EU).

For Member States to issue the ready for recycling certificates, the administration or recognised organisation authorised by it must verify the IHM, which ultimately will supplement the certificate. While IHMs are present at recycling stage¹³⁸, there is a general **call for more qualitative and reliable IHMs**. The certification scheme does not seem to be a satisfactory indicator for the quality of IHM. The competitive context of survey services, the **qualification** of the persons in charge of preparing the initial IHM and the obtention of proper **Material Declarations and Suppliers Declaration of Conformity** necessary for the development and maintenance of the IHM have been raised among underlying problems affecting the quality. IHM-Maintenance is also often reported as a formal exercise, downgrading the quality of IHMs, or not done at all. This remains largely undetected due to the **absence of structured control and insufficient enforcement activities** but also, as underlined by Member States, the lack of proper **guidance** for PSC Officers on how to check adequacy of IHM maintenance and take samples,¹³⁹ and need for adequate **tools** for carrying out the investigations. (e.g. protective equipment and instruments for laboratory analysis). Several interviewees underlined that the generally **light penalties** for not having an IHM on board¹⁴⁰, combined with the fact that the document is not always checked for its quality or even presence, have led many shipowners to forgo the IHM as a **cost-saving measure**¹⁴¹. Literature also notes that the lack of obligations for shipowners for pre-cleaning¹⁴² and decontamination from hazardous waste shifts ultimately the burden of handling the most hazardous materials often to those less equipped to do so¹⁴³.

¹³⁷ The inventory certificate is the name of the certificate that includes the IHM issued by Member States; the statement of compliance is the corresponding document to be issued by third countries.

¹³⁸ In facilities that on the European List and applicants, as sighted in inspections carried out by the Commission.

¹³⁹ 2019 EMSA Guidance on ship recycling inspections do not refer only to paper checks but to controls that require specialised knowledge from inspectors that are not traditional Port State Control Officers checking international conventions (as so far HKC is not in force).

¹⁴⁰ The administrative penalties differ significantly between countries.

¹⁴¹ See also p.34 and Annex IV.

¹⁴² The pre-cleaning refers to the initial process of cleaning before ship dismantling. It involves removing toxic substances, such as oils, fuels, and other hazardous liquids from the ship's tanks and systems.

¹⁴³ Hadjiyianni, I, and Pouikli., K.(2024).

How successful has the SRR been in facilitating the ratification of the Hong Kong Convention?

A significant increase in the number of ratifications can be noted in 2019 after the SRR became applicable. The European Commission encouraged Member States to prioritise ratification, based on a Council Decision of 2014.¹⁴⁴ Almost 50% of the countries that have ratified the Honk Kong Convention are Member states¹⁴⁵. While the EU has promoted the ratification of the Honk Kong Convention by Member States, it remains a prerogative of each government. The fact that the Honk Kong Convention has not been ratified by a number of Member States yet can be explained by a lack of priority in the Member State concerned or by the relationship between the second (minimum tonnage) and third (minimum recycling capacity) conditions for triggering the entry into force of the Honk Kong Convention which created ‘the unintended effect’ of restraining large flag states from acceding to the Convention. Now that the conditions for the entry into force of the Honk Kong Convention have been met, other Member States are in the process of ratifying the Honk Kong Convention.

It is difficult to assess to which extent the SRR also contributed to the ratifications of the Honk Kong Convention by non-EU Parties. What is clear is that the SRR had been since 2013 the only legal regime setting out specific requirements on ship recycling and that it was considered as an important benchmark by many stakeholders and authorities outside the EU. This made sure that the need for regulating ship recycling remained on the agenda of stakeholders in the maritime industry, and in turn pushed some of them to promote a global solution through the entry into force of the Honk Kong Convention. After the criteria for entry into force of the Honk Kong Convention were met, most stakeholders agreed that the EC and the SRR played a role in facilitating the ratification, though the opinion was more negative when the same question was asked earlier in the evaluation process.

Are there unexpected or unintended effects that have occurred?

Though the risk of circumvention of the SRR due to re-flagging had been anticipated (see also section 4.1.1.), the scale of the phenomenon had maybe been underestimated by the EU co-legislator. Another effect which may be qualified as unintended resulting from the implementation of the SRR is that the Turkish yards represented at the end of the evaluation period more than half of the capacity of the European List and Türkiye being the first destination for dismantling EU-flagged vessels.

To what extent have Member States and stakeholders been engaged in the process of improving implementation and enforcement of the SRR?

Member States' commitment to the process of improving enforcement of the SRR has differed from country to country. While some have actively participated in meetings, enforcement

¹⁴⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014D0241>

¹⁴⁵ The Member States that ratified the HKC are: France in 2014, Belgium in 2016, Denmark in 2017, the Netherlands, Malta, Estonia, and Germany in 2019, Spain and Croatia in 2021, and Portugal in 2023. It can be noted that the ratification of some MS, could have led to compromising at some point the combined targets set by the criteria for the entry into force due to their significant share in world's merchant shipping.

network and reporting, as well as in initiating investigations, some others have been more passive.

Interviews highlighted the scarcity of human, technical, and financial resources allocated for SRR enforcement as an issue. When considering the associated costs, this had an impact on the low number of enforcement actions (including detentions and prosecutions) linked to possible breaches of the SRR. Belgium, France, Netherlands and Norway have been noted as having developed good legal framework and practices regarding enforcement of the SRR¹⁴⁶. Italy as well has been particularly active in checking SRR under port state controls, detaining vessels until compliance is demonstrated and carrying out investigations against potential cases of illegal ship recycling.

Different channels, including the meetings of the Commission expert group on ship recycling, are actively used to share data and perspectives on possible improvements of the SRR¹⁴⁷. The participation of Member States in the Commission expert group has generally been high, with an average attendance rate of around 75% of Member States present in the period 2018-2022. Two important flag states, namely Cyprus and Greece, used to have a very low attendance rate, which triggered the European Commission in 2020 to send letters to invite these Member States to intensify efforts to ensure an effective and successful implementation of the SRR. This had at least the effect to increase their participation to the meetings. Several Member States are also engaged in the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL)¹⁴⁸ Ship Recycling Project. The main objective of this network is to exchange information and best practices between the various authorities involved in the implementation and enforcement of the regulations on ship recycling.¹⁴⁹ In 2023, it has also issued Guidance for relevant stakeholders on the EU's Ship Recycling Regulation and Waste Shipment Regulation. Besides, bilateral cooperation takes place between countries within and outside the EU, which is however generally considered as limited and insufficient.

The NGO shipbreaking platform has been very active in monitoring ship recycling activities and alerting enforcement authorities on possible illegal activities linked to ship recycling or fatal accident in the yards. They also regularly publish valuable information and data about shipbreaking in South Asia and Türkiye and work on the promotion of innovative techniques.

Stakeholders were also very active during the evaluation process, which shows their commitment to improving the SRR implementation and enforcement.

¹⁴⁶ Study on enforcement, Rambol, Ecorys, Grimaldi studio legale, ABS, 2024 (not published).

¹⁴⁷ The expert group is composed of EU/EEA Member States and invited stakeholders (usually ISRA, ECSA and NGO Shipbreaking platform).

¹⁴⁸ IMPEL is an international non-profit association of the environmental authorities of the European Union Member States, acceding and candidate countries of the EU, EEA and EFTA countries and potential candidate countries. The project 2022-2024 aims at increasing the collaboration between environmental and maritime authorities involved in ship recycling, developing guidance material for better understanding of the WSR and SRR, share experience and knowledge and extend collaboration with European bodies, networks and NGOs. <https://www.impel.eu/srp/projects/ship-recycling>

¹⁴⁹ The project is working with a core group with representatives from Norway, Sweden, Germany, UK (England and Scotland), Malta and Netherlands. Other active project members are coming from Albania, Belgium, Bulgaria, Denmark, Estonia, France, Iceland, Poland and Portugal.

4.1.2. To what extent was the SRR efficient?

Are the costs related to the SRR proportionate to the benefits (overall and for different stakeholder groups)? Are there significant differences in terms of costs (or benefits) for Member States and different stakeholder groups, and if so, what are the underlying causes?

Based on the opinions and data received from the surveys and interviews, the costs entailed by the SRR requirements are considered to have generally been low to moderate for implementing the requirements set by the SRR over the evaluation period. The compliance costs are difficult to isolate for the yards that were also seeking to comply with the Honk Kong Convention, as the majority of the requirements from the EU SRR are stemming from the Honk Kong Convention. On the other hand, tangible improvements in the facilities carried out to be in conformity with the specific requirements of the SRR, in combination with the feedback received during the consultation process, give reasonable reason to believe that the measures as designed have resulted in a positive impact on the health and environment. It was also acknowledged that this could not be quantified in a granular manner, and monetised. **The assessment on costs and benefits therefore needs to take account of limited data availability, as well as a lack of a clear baseline** of what would have happened in the absence of the SRR. Besides, the absolute value of the costs and benefits remains low, due to the limited overall impact of the core measures during the evaluation period, notably due to the effect of external factors (see section 4.1.1) but also by the fact the effectiveness of the core measures is hampered by a number of other factors (as re-flagging for objective 1 or weak enforcement for objective 2). The combination of all these elements does not make it possible to perform a fully quantified cost benefit analysis but allows to draw **overall prudent general conclusion on efficiency, largely based on qualitative data.**

From the stakeholders' consultation, it came out that more than 70% of respondents to the targeted survey, including national competent authorities, recycling yards and classification societies, **consider the costs of the SRR to be proportionate – if not outweighed - by the benefits.** The fourth of respondents that consider the SRR is inefficient are coming from academics and civil society, shipowners and some ship recycling facilities¹⁵⁰.

Responses from the public consultation also indicate that a majority of stakeholders (46 out of 63 replies) recognise the brand value and increased reputation for the facilities included on the European List, bringing more commercial benefits to listed facilities. Half of the recycling yards surveyed, seconded by shipowners and the steel industry, stressed this **reputational benefits** that results (all other things being equal) in positive evolution of revenues and investments. No quantitative data on revenues, turnover and jobs were received to back up this qualitative feedback received in consultation.

The positive impacts referred to under the previous section on workers health and safety as well as on the environment are also to be considered as benefits of the SRR for all stakeholder's categories and for the society but as these were not quantifiable, they can't be monetised either.

¹⁵⁰ Academic, research and civil society: 2 out of 3 responses; shipowners: 2 out of 4 responses and recyclers: 4 out of 15 responses.

The **costs** entailed by the SRR requirements are generally considered **low to moderate for** implementing the requirements set by the SRR (See also Annex IV for an overview of benefits and costs).

There was no mention of disproportionate costs for **ship recycling facilities**, which are mainly SMEs. The most important compliance costs for this stakeholder group are the costs of putting in place systems to ensure the sound management of recycling, and the proper response to safety and environmental risks. These costs **vary considerably depending on the initial situation** of each facility, and how much changes it needs to operate to meet the requirements to get on the European List, as well of the size of the yard. In addition to the investment costs, there are compliance costs, in particular for yards not located in the EU, linked to the maintenance and repair of the equipment and infrastructure necessary to meet the EU requirements, as well as to operate on a daily basis in accordance with these rules. A longer period for dismantling vessels is also needed and represents indirect costs.

For most of the yards located in the EU, the feedback provided during the consultation process for this evaluation is that compliance costs are limited. Recurrent compliance costs for listed facilities located in the EU are mainly linked to the development of a ship recycling plan for each vessel to be recycled, since general EU environmental and health standards were already applicable¹⁵¹. The reported costs vary significantly between yards. Although the compliance costs are generally reported as limited, as evoked. under section 4.1.1. the European Recycling Industries' Confederation (EuRIC) raised the difference of level of standards between EU yards dismantling vessels under the scope of the EU SRR and other EU yards as an issue affecting the level of playing field within the EU. Insufficient quantitative data on further significant compliance costs were however communicated by facilities in the EU for a comprehensive monetization of these costs. What is clearer is that the practice of re-flagging and significant difference in cost structure and revenues with Asian facilities, and to a lesser extent with Turkish facilities, did not remediate their **competitive disadvantages** (see section 5). The direct benefits of the SRR have therefore remained limited for these facilities.

For yards located in third countries, which have to operate higher investments to upgrade their technologies, machinery (eg purchase cranes), infrastructures (eg impermeabilize floor, establishment of a proper drainage system) and procedures (eg ensure outer hull of vessels are only dismantled in impermeable floor) the compliance costs are more substantial. Investments are nevertheless lower in countries like the USA than in India. In India, some yards have reported investments costs specifically attributed to the SRR of EUR 2.3 and 6 million. Only limited data could be made available by the yards on compliance costs. The example below for a 20,000 LDT container vessel dismantled in India in 2023 aims to estimate the SRR compliance costs for a yard in that region through a comparison with a yard having sought only for Honk Kong Convention certification. This example has an illustrative character only and figures are to be considered as estimates which may vary based on the vessel individual characteristics, and market conditions.¹⁵² For yards working with standards to obtain EU

¹⁵¹ Note that the requirement for a ship recycling plan will also be required under the HKC after its entry into force.

¹⁵² Source not to be disclosed. Similar estimates have been received from different sources.

certification, the example below in Table 6 shows a lower cost for purchase of the end-of-life vessel and higher operational costs, resulting overall in additional profit for those yards.

Table 6: Estimates of additional operational costs to meet SRR requirements for a SRF in South Asia. Costs are expressed in Euro per ton.

Costs	Honk Kong Convention	EU SRR
Ship Purchase Price	€ 490	€ 390
Other dismantling costs (excluding investments and taxes on profit)		
Finance Cost	€ 18	€ 29
Labor cost and other ship dismantling expenditure	€ 22	€ 41
Waste disposal and other environment compliance costs	€ 8	€ 13
Consumables	€ 3	€ 5
Fixed Overheads	€5	€ 12
Other Expenses	€5	€ 15
Total dismantling costs	€ 61	€ 115
Total costs	€ 551	€ 505

For the **shipping industry**, the main costs and benefits linked to the implementation of the SRR are firstly relating to the revenues generated by the sale of end-of-life vessels for dismantling. As indicated in section 3, these revenues are lower when the vessels are sent to Facilities on the European List, compared to other yards. The difference in revenues for an average vessel falling within the scope of the SRR is estimated at EUR 1.5 million. The number of vessels dismantled in Facilities on the European List has remained limited due notably to re-flagging but there is no indication that the shipping companies which sent their vessels to these yards suffered from any substantial competitiveness disadvantages. For shipowners, the expected **negative economic impacts** of the SRR¹⁵³ on their operating costs in the short, medium and long term therefore **did not materialise**. The aggregated additional costs paid over period 2019-2023 by the shipowners that sent their end-of-life vessels to facilities that are on the European List compared to dismantling costs in facilities that are not on the European List has been estimated to a maximum EUR 178 million¹⁵⁴. The IHM-related costs can be considered as marginal for shipowners. The reported price for the preparation of an IHM by hazmat experts is usually between EUR 4,000-8,000. It **varies depending on the type/size of the ship and the quality of the inventory** provided. The issuance of inventory certificate, which is often done by Recognized Organisations and charged to shipowners, costs around EUR 5,500 for approval and EUR 2,100 for the survey. Direct regulatory costs for shipowners to elaborate and maintain a list of hazardous materials are also considered low to moderate by most shipowners who responded to the targeted survey¹⁵⁵. However, the process of establishing

¹⁵³ As reflected in [SWD\(2012\)47 Impact assessment, 2012](#).

¹⁵⁴ These “costs” are actually additional revenues that shipowners would have made by beaching the vessels in South Asia. Elaboration based on the LDT of the vessels dismantled in facilities on the European List over the period 2019-2023, considering the respective market share EU and Turkish yards and respective price gap for selling vessels compared to rates for recycling in South Asia.

¹⁵⁵ Only 5 shipowners responded to the targeted survey but the result was confirmed in interviews.

and maintaining the inventory can be time-consuming and administratively complex, resulting in shipowners outsourcing these tasks to external suppliers. Maintenance costs are reportedly ranging roughly between EUR 500-1,500 per ship per year, depending on the amount and complexity of the service. The administrative burden of providing recycling facilities with necessary information to recycle the ship and of notifying the relevant authority is also considered minimal by shipowners¹⁵⁶.

Costs for Member States (direct compliance costs, enforcement costs and administrative costs) are reportedly low to moderate. It should be recalled that for ship recycling facilities located in the EU, the requirements of the SRR regarding approval and monitoring of facilities is facilitated by the fact it relies mainly on national permitting procedures. Competent authorities that provided data indicate mobilising on average 2 Full Time Equivalent (FTE) per country working on issues related to the SRR (excluding Port State control inspections). Reflecting this, an upper limit estimate of the costs for all Member States would be EUR 1.6 million¹⁵⁷. These are mostly used for conducting research on potential cases of violation and to perform checks and inspections of ship recycling facilities. Moderate costs are attributed to authorisations of ship recycling facilities on their territory (approximately 5-20% of total time dedicated by MS for the SRR) and to performing surveys of ships (equivalent to approximately 30%, typically outsourced to recognised organisations). Costs associated with port state control and inspection of IHM, Ready for recycling certificates and statements of compliance are also considered low (approx. 5% of the inspection costs during Port State control), depending on the type/size of the ship and the quality of the inventory provided. Obviously, the more in-depth an inspection is, the more expensive it is, but also the more effective it is for a proper management of hazardous materials. Inspectors implementing 2019 EMSA Guidance on ship recycling inspections are not traditional Port State Control officers checking international conventions. For these controls to be effective, several Member States in expert group meeting expressed the need for more training, resources, and investigation tools which has a cost, which should also be considered. General enforcement costs (under Article 22) vary substantially depending on the type of administration and country (from 3% to 50%). Finally, **costs for reporting** to the Commission are considered low, with still room for further rationalisation as suggested under the next question. The costs for **cooperation** with other national authorities are also considered low, which however may also suggest a relatively limited number of initiatives and activities conducted in this regard. Costs incurred, however, **vary** across Member States depending first on the importance of shipping and ship recycling for the Member States but also largely on different implementation practices, enforcement powers of competent authorities (i.e. Port State, Flag State and environmental authorities) and resources allocated to implement and enforce the SRR.

For the EU budget, compliance costs represented around 0.75 FTE and EUR 3 million between 2016 and end of 2023, in order to cover the implementation of the SRR, with a special focus on the daily management and regular updates of the European List of ship recycling facilities (including desk assessments and inspections of facilities applying to the European List and located in third countries). The budget for the latter has nevertheless been less than planned due to the putting on hold for more than 2 years of the applications from the facilities

¹⁵⁶ 4 respondents to the targeted survey considered these costs as ‘low’ and 1 respondent as ‘moderate’.

¹⁵⁷ Based on 2 FTE for 20 most relevant Member States and a cost of EUR 40,000 per FTE.

located in non-OECD countries. This budget is therefore expected to increase with the constantly increasing number of active applications and facilities that are on the European List for which compliance assessment and monitoring have to be ensured. The lack of effectiveness of the independent verifiers' inspections and certifications, combined with the need for monitoring by the Commission through unannounced inspections, have increased the tasks of the Commission and costs to be born by the EU. Impact on the longer term should be further assessed, including, for example, envisaging delegation of tasks to EMSA, yards bearing more costs related to inspections and increasing efficiency of controls by independent verifiers.

Are there opportunities to simplify the legislation or reduce unnecessary regulatory costs/burdens without undermining the intended objectives of the intervention?

Two thirds of respondents to the targeted survey see opportunities to simplify the legislation or reduce unnecessary regulatory burdens. No specific issue was raised regarding the relevance of some standards and/or procedure. Digitalisation was suggested by a limited number of respondents for making available ship recycling plans as well as for submitting documents for issuing Inventory certificates. A number of ship recycling facilities outside the EU suggest reducing the time to include recycling facilities in the European List as the process often takes years and several inspections before compliance can be confirmed¹⁵⁸. EU ship recycling facilities would like to see the update the European List more dynamic to reflect the approval of the permit at national level¹⁵⁹. Both EU and non-EU ship recycling facilities also suggest decreasing the administrative burden by extending the period of validity of inclusion in the European List that is limited to 5 years¹⁶⁰.

As the effectiveness of the certification by the independent verifiers required for applications and renewals of facilities located in third countries shows its limit, it could be considered waiving that requirement for the renewals if the yard was subject to a recent inspection by the Commission.

Regarding the Member States tri-annual reporting obligations required under Article 21 of the SRR, they are considered relevant as they are also included in the annual reporting obligation under the Honk Kong Convention and proportionate as their scope and frequency are more limited than under the Honk Kong Convention¹⁶¹. Several Member States have however requested the Commission to consider a data flow between the reporting portal Dynamic Overview of National Authorities (DONA) and the future dedicating module on ship recycling of the IMO Global Integrated Shipping Information System (GISIS) to prevent double reporting.

¹⁵⁸ The situation is different for each yard, but the quality of the initial application and the ability for a yard to respond quickly and comprehensively to the observations by the Commission are often key elements for the duration of the application process.

¹⁵⁹ The European List is updated twice a year by a Commission decision under the examination procedure and including a 4 weeks period for public feedback. Several interviewees also suggested to extend from 5 to 10 the validity of the inclusion in the list.

¹⁶⁰ Before its expiry the procedure for the renewal should be completed to secure the inclusion in the list. Several interviewees suggested to extend from 5 to 10 the validity of the inclusion in the list.

¹⁶¹ See Article 12 of the Hong Kong Convention.

Another opportunity for possible simplification (raised by national authorities and industry) relates to the need to ensure a smooth articulation between the regimes applying under the SRR and under the Honk Kong Convention related requirements, after the entry into force of the latter in June 2025 (i.e. recognition of certificates, reporting, tasks and role of port State control authorities...) (see as well section 4.1.3).

4.1.3. To what extent is the SRR coherent?

To what extent is the SRR internally consistent and coherent?

Overall, the SRR is internally coherent and consistent, as supported by positive views of stakeholders. At the same time, it was mentioned in section 4.1.1. that some **concerns are raised regarding the clarity/scope of the definitions** for ‘shipowner’ and ‘waste’. The latter relates to the lack of a definition for ‘**End-of-Life**’ vessels. This poses a challenge for enforcement authorities in identifying ships ready for recycling and detecting breaches of the obligation to recycle in Facilities on the European List since the obligation for the shipowner to notify the flag state of the intention to recycle the ship appears not to be effective.

Also, to ensure coherence with respect to the objectives pursued by the SRR, the need was expressed to clarify that **no double standards should apply** in facilities that are on the European List for recycling vessels falling within the scope of the SRR and vessels falling outside its scope.

In addition, the fact that there is no **possibility to suspend the inclusion in the European List of a ship recycling facility located in a third country**, as also mentioned in section 4.1.1 (p.24), can also be considered as a lack of coherence as the SRR provides for this possibility for ship recycling facilities located in the EU under its Article 14.

Finally, the coherence of **Article 30(2)** that relates to the review of the SRR 18 months before the entry into force of the Honk Kong Convention is questioned, both in terms of timeline and substance. Several stakeholders, specifically international associations, believe the article may need to be revised considering the disparities and lack of a comparable system in authorising ship recycling facilities between the SRR and the Honk Kong Convention

To what extent is the SRR coherent with other existing EU environmental and maritime legislation?

The coherence with other existing related EU environmental and maritime legislation was positively assessed to a large extent by stakeholders. This applies to the Port State Control Directive designed to establish common criteria for the control of ships by port States and the Flag¹⁶² that ensures that Member States effectively and consistently discharge their obligations as flag States. This was confirmed by the support study. Increased synergy¹⁶³ is underlined as

¹⁶² [Directive 2009/21/EC of the European Parliament and of the Council of 23 April 2009 on compliance with flag State requirements](#)

¹⁶³ [Directive \(EU\) 2024/1203 of the European Parliament and of the Council of 11 April 2024 on the protection of the environment through criminal law and replacing Directives 2008/99/EC and 2009/123/EC](#)

it requires Member States to ensure that illegal ship recycling under SRR constitutes a criminal offence.

The SRR only covers EU-flagged vessels within the limits defined by its scope. Other vessels which become waste in European waters are covered by the WSR (see Annex VI). While this was intended to avoid overlaps, it is also sometimes considered as not coherent and a source of confusion, since end-of-life vessels located in the EU are covered under different regulations based on their flag state. Stakeholders have also highlighted the different approach between the SRR and the WSR, pointing mainly to the differences in some definitions, and to the export ban. On the latter point, the amendments adopted by the co-legislator in 2024 (see section 3) increases the coherence between the two legislations.

To what extent is the SRR coherent with other relevant international policies and instruments, such as the Basel Convention and the IMO Hong Kong Convention?

The SRR is largely consistent with the Honk Kong Convention, as it implements it in EU law: most of the provisions of the SRR therefore stem from the Honk Kong Convention. The SRR contains nevertheless **additional and more stringent requirements**. These relate in the first place to the European List and its criteria for inclusion, including requirements for yards to have impermeable floors and effective drainage systems, set up rapid emergency response systems and make sure that waste leaving their premises are managed properly afterwards. Besides, the SRR provides for an independent third-party certification and auditing of third country facilities, as well as the possibility for natural or legal person affected or likely to be affected to request the Commission to take action vis-à-vis facilities. With the new WSR, another significant difference with the Honk Kong Convention is the fact that all vessels becoming waste in the EU cannot be exported outside the OECD. Finally, the SRR differs from the Honk Kong Convention in that it has expanded the list of hazardous material within its annexes compared to the Honk Kong Convention. The SRR prohibits the use of Perfluoro octane sulfonic acid (PFOS) in new installations on ships (Annex I) and require this material and Brominated Flame Retardant (HBCDD) to be listed in the inventory of hazardous materials (Annex II). Among the inconsistencies frequently reported, the **notifications by the yards to the flag state authority** (instead of the competent authority responsible for the ship recycling facilities under the Honk Kong Convention) before and after recycling has been reported as an issue by a few stakeholders. A more detailed overview of the differences between the Honk Kong Convention and the SRR is included in Annex X.

The consequences of the entry into force of the Honk Kong Convention in 2025 can be assessed from different perspectives. From a legal perspective, the two instruments are consistent. The Honk Kong Convention provides explicitly for its Parties to take more stringent measures consistent with international law, with respect to the safe and environmentally sound recycling of ships, in order to prevent, reduce or minimise any adverse effects on human health and the environment. The SRR also requires that consistency is ensured with relevant Appendix of the Honk Kong Convention for the formats of certificates established to implement the SRR. While seeing an added value to the higher standards, several stakeholders expressed concerns about the implementation difficulties that will emerge when both frameworks will be in force. Two Member States brought forward the risk of double certification and double regime under port state controls. There are small differences in some procedural or reporting aspects between

the two instruments. If this proves needed, this could be addressed either through minor adjustments of the SRR or through technical guidance. The policy perspective is addressed under the next evaluation question (see section 4.2) which concerns the EU added value.

Concerning the coherence with the Basel Convention, with the new WSR amending the SRR, the EU ensured legal compatibility of the Union’s legal regime with its international obligations under the Basel Convention, notably to take account of the entry into force of the Basel ban amendment which prohibits the export of hazardous waste from OECD to non-OECD countries. This was done through ensuring that the ships covered by the scope of the SRR that are considered waste and are exported from the Union are made subject to the Ban Amendment. On the other hand, the export ban does not apply to those EU-flagged ships that have become waste outside the jurisdiction of a Member State. These ships can therefore get recycled in facilities located outside the OECD, as long as these facilities are included in the European List set out by the SRR.

As a result, the SRR ensures that the legal regimes from the Basel and Hong Kong Conventions are applied together in a consistent manner in the EU and to EU-flagged vessels¹⁶⁴.

4.2. How did the EU intervention make a difference and to whom?

This section examines the evidence in relation to two evaluation questions focused on the EU value-added of the SRR.

What has been the EU added value of the SRR compared to what could have been reasonably achieved by Member States acting alone?

In the absence of an operational dedicated global instrument addressing the problems related to ship recycling at international level, a large majority of participants to the consultation activities considered that SRR has provided a needed instrument at EU level to implement the Hong Kong Convention provisions within the EU. 87% of respondents in the public consultation answered positively to the question on whether they consider the SRR to be a relevant piece of legislation, and better than if Member States were acting alone¹⁶⁵.

In the absence of the SRR, rules related to ship recycling would have only been addressed through the WSR, which does not fully take account of the specificities of ships, making it therefore, challenging to tackle ship recycling issues. This, therefore, raises doubts that in the absence of the SRR, the objective of reducing adverse effects on human health and the environment caused by recycling EU-flagged ships could have been better achieved.

By setting requirements to ships and ship recycling facilities on the basis of the Hong Kong Convention, the SRR provides at the same time the legal framework required from the Member States by the upcoming entry into force of the Convention.

¹⁶⁴ The issue of the interplay between the HKC and the Basel Convention is out of the scope of the evaluation and being addressed in the relevant international fora.

¹⁶⁵ 59 out of 63 replies. The opinion is shared across the different stakeholder groups. Note that the public consultation on the evaluation took place before the numbers of ratifications necessary for the entry into force of the Hong Kong Convention was reached.

To what extent do the needs/problems addressed by the SRR continue to require action at EU level? Should they be better addressed at global level?

Arguments on the most appropriate level of legislation (EU or international) to address ship recycling issues differ across stakeholders¹⁶⁶. Stakeholders from the shipping industry and some Member States consider that the issue of sustainable recycling would be better addressed globally through the Honk Kong Convention, underlining also the need for a level playing field at the global level and the fact that its scope would be sufficiently broad to avoid circumventions through reflagging¹⁶⁷.

On the other hand, arguments in favour of continuing efforts at the EU level point out the higher level of ambition and scrutiny set by the SRR compared to the Honk Kong Convention. These are notably supported by NGOs, trade unions and ship recycling associations.

Where the two groups meet is when evoking a possible revision of the Honk Kong Convention after its entry into force, where the EU should promote its higher standards at IMO level.

Over two-thirds of respondents to the public consultation consider that the European List should not automatically include ship recycling facilities having received a Honk Kong Convention certification, considering the stricter requirements of the EU regulation¹⁶⁸. Only 3% of respondents to the public consultation think that the European List should be removed when HKC enters into force. These opinions were shared across the different stakeholder groups.

The SRR reflects the EU's recognition that it is necessary to go beyond the requirements of the Honk Kong Convention, to ensure that EU-flagged ships are only dismantled in yards which achieve a high level of protection of human health and of the environment that is broadly equivalent to that in the Union. This is the justification for the additional provisions in the SRR on (i) additional criteria on sustainable recycling in Facilities on the European List and (ii) regular scrutiny by the Commission of the compliance of yards authorised to dismantle ships, to ensure that they effectively meet the criteria. A political decision would be needed to decide if the justification for keeping these provisions remains valid. This goes beyond the remits of the evaluation process.

However, without prejudice to an upcoming political choice, it seems clear that the provisions of the Honk Kong Convention still fall short of what is required under the SRR on sustainable criteria for ship recycling. It is also too early to assess how the implementation of the HKC would work in practice, and especially if and how its Parties will take the necessary actions to ensure that shipowners, recyclers and certifiers effectively comply with its provisions. The current situation in many yards outside the European List (especially in South Asia, which remains the largest region for ship recycling) is far less advanced than for those in the European List and substantial progress will be needed for these yards to get to the level of Facilities on the European List. At the same time, other, more modern yards are being built and represent a

¹⁶⁶ Support study, p.97 on the basis of interviews and 14th meeting of Commission expert group on ship recycling, January 2024.

¹⁶⁷ The Honk Kong Convention has been ratified by the main recycling states (India, Bangladesh, Pakistan and Türkiye).

¹⁶⁸ This was also underlined in Commission expert group Meetings, including the International Ship Recycling Association in January 2024.

departure from ‘traditional’ ship recycling practices used in many parts of the world. It seems unreasonable to rely solely on the current Honk Kong Convention’s standards to ensure a real progress towards sustainable ship recycling.

In absence of SRR and reliance only on the Honk Kong Convention, there is for example a serious risk that a significant number of yards which perform under poor conditions manage to obtain HKC certificates and become eligible for dismantling EU-flagged vessels. Many ship recycling yards have been certified as ‘Hong Kong compliant’ by classification societies in the last years, while it is clear that, for a number of them at least, they were operating under poor environmental and safety conditions¹⁶⁹. It is currently unclear how such situations could be avoided, once the Honk Kong Convention enters into force. This is a serious possible shortcoming in the implementation of the Convention, which should be addressed in that context. In the meantime, it does not seem sound to set aside the EU SRR and rely only on the Honk Kong Convention framework.

The EU approach can continue to operate in conjunction with efforts to promote an ambitious approach to improve the criteria under the Honk Kong Convention and ensure that it is properly enforced.

4.3. Is the intervention still relevant?

Is the scope of the SRR still appropriate?

The need to ensure EU-flagged ships are dismantled in safe and environmentally sound facilities and to ensure proper management of hazardous materials remains **highly relevant**, as shown in previous sections. The growing forecasts for the ship recycling market¹⁷⁰ could be interpreted as indications that the SRR will become even increasingly relevant in the future. The fact that the Honk Kong Convention will enter into force in 2025 does not affect the relevance of the objectives set in SRR. It can be noted that an entry into force of the Honk Kong Convention in 2020 was part of the baseline scenario when the SRR was adopted¹⁷¹.

60% of the participants to the targeted survey see a need for extending the **scope** of the SRR to non-EU-flagged vessels in order to harmonise the applicability of the legislation in the EU¹⁷² or to address the issue of reflagging. Simply extending the SRR to non-EU-flagged ship has some jurisdictional limits, especially if the end-of-life vessels are not located in the EU. Applying the concept of ‘beneficial owner’¹⁷³ is regularly evoked as a potential solution by NGOs and EU ship recycling facilities. At the same time serious concerns are expressed by

¹⁶⁹ Situation in October 2024: In India 114 plots (i.e 86%) were certified compliant with the Hong Kong Convention, as reported by Indian authorities. Bangladesh had five certified yards with 15 more in the process of approval. [The Business Standard Towards Green Shipyards](#). In 2024 a tragic explosion in one of the certified yards, killed six people including three workers and several safety officers.

¹⁷⁰ See also Annex VIII for estimates of recycling forecast.

¹⁷¹ [SWD\(2012\) 47 final](#).

¹⁷² Eg. to include in the scope non-EU-flagged ships that become waste and/or recycled in the EU U

¹⁷³ The ‘Beneficial Owner’ is the ultimate beneficiary of any monetary gain from the use or sale of a ship and often makes the final decision on scrapping or recycling. Support study referring to [https://shipbreakingplatform.org/our-work/glossary/#:~:text=The%20Beneficial%20Owner%20\(BO\)%20is,sell%20a%20vessel%20for%20scrap](https://shipbreakingplatform.org/our-work/glossary/#:~:text=The%20Beneficial%20Owner%20(BO)%20is,sell%20a%20vessel%20for%20scrap).

various stakeholders, including shipowners and some Member States about the complexity and effectiveness of such a measure. One reason put forward is the difficulty to define the ‘beneficial owner’ in the sphere of the SRR, especially since the term has been used and defined differently in other pieces of EU and International legislation. Another argument is that it would be very difficult to identify the natural or legal persons corresponding to the beneficial owners, and therefore to avoid legal challenges when fine applied or prosecutions launched, as the entities may be hidden behind shell companies, offshore companies or ship management companies. This is especially so as all maritime legislation rely primarily on the natural or legal person registered as the owner of the ship. Besides stakeholders’ opinion, it could not be found any literature elaborating on this subject matter. Full assessment of the feasibility, costs and benefits of implementing such a concept under the SRR would therefore be needed in a potential impact assessment.

Another scope related measure regularly raised by NGO and EU ship recyclers to address the issue of circumvention is a financial instrument such as the **ship recycling licence applying to all vessels calling at an EU port bridging the revenue gap** between dismantling in facilities that are on the European List and in facilities not operating in a safe and environmentally sound manner. The possibility of such a financial incentive was referred to in Article 29 of the SRR and subject of one study in 2016 and a report of the Commission in 2017¹⁷⁴. All shipowners that participated to the consultation, oppose to the introduction of such instrument, arguing it would affect negatively the EU shipping sector as it would be applied only on a regional scale. Again, the evaluation, as a backward-looking exercise, is not meant to elaborate on measures destined to address the problems outlined in the evaluation. A dedicated study will cover that matter¹⁷⁵.

Finally, the extension of the scope to smaller vessels, and naval vessels is also regularly mentioned, especially by EU ship recyclers and NGOs. However, stakeholders provided limited evidence of a problem supporting their request. Stakeholders at the workshop discussed the recycling of ships of less than 500 GT and noted that smaller ships are often recycled within the EU. These observations are supported by data on ship recycling and reflagging, where the majority of reflagged ships are larger vessels. The European Recycling Industries Confederation (EuRIC) reported however the development of facilities within the EU that are not on the European List and only look for vessels out of the SRR. As these yards do not have to comply with the SRR, Member States would generally be laxer about the requirements and controls applying to them, creating an unlevel playing field within the EU and higher risks for pollution and workers health.

Views on extending the scope therefore differ according to the stakeholder group. While almost all recycling yards, NGOs and environmental authorities that responded to the survey are in favour of extending the scope of the SRR, almost all shipowners and representatives of flag states and Port States expressed negative views.

¹⁷⁴ [2016 study \(Ecorys, DNV-GL\)](#), 2024 study (not available yet), COM(2017)420.

¹⁷⁵ An update of the 2016 study, carried out by the same consortium as the support study for the evaluation, is planned to be published early 2025.

.How well adapted is the SRR to technical and scientific progress and EU and global market developments?

New technologies for cutting (e.g. abrasive water jet cutting, pulsed laser), cleaning and coat stripping but also innovative systems relying on robotics to improve automation have recently been developed, mainly in Europe¹⁷⁶. These could significantly reduce environmental hazards and improve worker safety linked to ship recycling. These measures have also the potential to improve efficiency of ship recycling in the EU¹⁷⁷. Vessels using alternative fuels and authorities exploiting satellite images for monitoring pollution or illegal shipping is emerging. Some studies highlight possible techniques to decontaminate seawater, whereas others focus on the ship-design stage to decrease cost and increase safety during dismantling operations¹⁷⁸.

Considering the fact that the level of uptake of most of these innovations, in particular at large-scale, remains unclear to date, it cannot be concluded that the SRR accelerate innovations. The SRR however does not hamper these developments. It can be noted that the requirement of the SRR for certification as ‘safe-for-hot work’ are however interpreted by some ship recycling facilities as a difficulty for a ship to be ‘safe-for-hot-work’ even if it is being disassembled in a facility that would not use hot work¹⁷⁹.

Regarding the global market developments, the forecasts for the ship recycling market (see section 4.1.1.), could be interpreted as indications that the objective of sustainability pursued by the SRR Regulation will become even increasingly relevant in the future.

To what extent is the SRR still relevant and does it correspond to the needs within the EU, in particular as regards the new policy ambitions?

Since the adoption of the SRR, both the policy and regulatory landscapes have considerably evolved. It is therefore opportune to assess the coherence of the SRR with the new policy agenda.

By the fact it focuses on the environmentally sound management and storage of hazardous materials and waste, and that it increases energy and resource efficiency through the recycling of material (in particular scrap steel), the SRR corresponds to the objectives set out in the **EU Green Deal, the Circular Economy Action Plan, the Zero Pollution Action Plan, the Sustainable Blue Economy Communication**, the green transition under the EU **taxonomy**.¹⁸⁰

On the other hand, interviewees underlined the potential for the SRR to have a key role in supplying large amounts of high-quality scrap steel, which is needed for the **decarbonisation**

¹⁷⁶ In Türkiye, one applicant facility has recently started to operate with cold cutting method (shear) in the zone above the drainage.

¹⁷⁷ [Shipbreaking Platform \(2022\) Breaking out – Anchoring circular innovation for ship recycling.](#)

¹⁷⁸ [Dey, A. \(2021\) Sustainability challenges and enablers in resource recovery industries: A systematic review of the ship-recycling studies and future directions.](#)

¹⁷⁹ This certification would not be needed for yards using only cold cutting techniques and automated technologies. This is not the case yet for any of the facilities on the European List.

¹⁸⁰ [COMMISSION DELEGATED REGULATION \(EU\) 2023/2486](#). Annex II of the Regulation refers to the facilities that are on the European List as substantial contribution to the transition to a circular economy.

of the industry and meeting EU climate objectives. Also, recent literature points to ship recycling as a potential future source for secondary steel in green transformations¹⁸¹.

Respondents to the consultations also generally believe that the SRR does not contribute to the EU's industrial strategy¹⁸². They commented that certain aspects of the strategy, including ensuring a **competitive EU steel industry and supply of raw materials**, is not fully championed by the SRR due to the majority of EU ships being dismantled in non-EU recycling facilities, particularly Türkiye, allowing valuable EU scrap metals to leave the EU. Neither the SRR nor the Honk Kong Convention indeed specifically target steel recovery.

EU steel market and ship recycling

- EU production of crude steel: 126 million tonnes

- EU consumption of steel: 138 million tonnes

- EU consumption of scrap: 75 million tonnes

- EU Imports of scrap of good quality: 3.9 million tonnes¹⁸³

The amount of steel scrap made available worldwide through ship recycling in the past years has been estimated to reach between 2.3 and 6.4 million tonnes on a yearly basis¹⁸⁴.

For the reasons mentioned in section 3, that steel scrap is not ending up on the EU market. As explained in section 4.1.1., over the last years, the world fleet has been growing and ageing; it is likely that the number of end-of-life ships sent for recycling will therefore go up significantly in the next ten years, with a corresponding growth in the volume of steel scrap from end-of-life vessels being made available on the market. At the same time, the demand for steel scrap is also expected to increase considerably, as steel scrap is an essential component for the decarbonisation of the steel industry, both in the EU and in the rest of the world¹⁸⁵. The steel scrap stemming from EU-flagged vessels sent to recycling over the evaluation period represents around 0.65 million tonnes/year in average¹⁸⁶. This represents a small proportion of the volume of steel scrap used in the EU every year but steel scrap from ship recycling is of very high quality, with low contamination levels compared to most steel scrap stemming from other industries. It can meet stringent specifications required for many industrial applications in the EU and hence represents a valuable resource. Around 4 million tonnes of high quality steel scrap are currently imported into the EU every year. Increased ship recycling in the EU, with a corresponding higher uptake of steel scrap from ship recycling, could provide the steel industry with a steady supply of quality scrap and reduce its import, especially important in a context where the demand for such scrap is expected to increase to meet the EU decarbonisation targets in the steel industry. Scrap from ship recycling could also be a good supplier for the 0.8

¹⁸¹ Bleischwitz, R., Höller J., Kriegl M., (2023). [Ship recycling – estimating future stocks and readiness for green steel transformation](#). Environmental Research Letters, November 2023.

¹⁸² COM(2020)102 final.

¹⁸³ Eurofer, European Steel in Figures (2024), for the year 2023, crossed checked with some datasets of the market analysis of ESPR-steel.

¹⁸⁴ Bleischwitz, R., Höller J., Kriegl M., *Ship recycling – estimating future stocks and readiness for green steel transformation*. Environmental Research Letters, November 2023. Note that the global end-of-life scrap steel supply per year was estimated to 445 million tonnes in the IEA Steel Technology Roadmap.

¹⁸⁵ And steel demand is growing at a faster rate than scrap is being released from the pool of 'steel in use' See Worldsteel Association, [Fact sheet, scrap use in the steel industry \(2021\)](#).

¹⁸⁶ Based on Table 3.

to 1 million of steel plate consumed annually for ship buildings in the EU. An even more interesting use might be related to its dilution potential: diluting one tonne of high quality of scrap from ships with scrap of less good quality could result in 2 to 2.5 tonnes of scrap of sufficient quality to be used in the EU¹⁸⁷. It is also important to mention again in this context that the number of end-of-life ships sent to recycling is expected to go up significantly in the next ten years, with a corresponding growth in the volume of steel scrap from end-of-life vessels being made available on the market (estimated to 7 to 10 million tonnes of secondary steel coming from EU-flagged vessels to be dismantled over the next ten years¹⁸⁸).

Also, the SRR **does not set GHG emissions targets** for ship recycling companies. Some participants to the consultation mentioned that in most cases the dismantling of EU-flagged ships still use carbon-intensive methods per ton of recycled steel compared to low-carbon methods available¹⁸⁹.

Acknowledging the contribution of the SRR to the transition to a circular economy, several respondents to the consultation consider nevertheless that the definition of ‘ship recycling’ in the SRR is too narrow to align with broader sustainability goals¹⁹⁰. More generally, there are voices in literature and in the sector that underline that the SRR **does not sufficiently consider the life cycle approach of the vessel, through cradle-to-cradle design**. The inventory of hazardous materials represents a first materialisation of such a life cycle approach but the need for traceability of all materials through a breakdown of materials, including their weight and location was underlined. This would facilitate both the planning and operation of the recycling process.¹⁹¹

5. WHAT ARE THE CONCLUSIONS AND LESSONS LEARNED?

The evaluation results show that the **SRR has to a large extent achieved all its objectives compared to what could have been achieved had the EU not intervened**. The effectiveness of the Regulation has however been significantly hampered by its circumvention through the practice of re-flagging, and to a lesser extent through weak enforcement of IHM related measures. This section outlines the evaluation’s main conclusions, highlighting the main areas where challenges have been identified and suggesting improvements.

¹⁸⁷ Estimations based on the Commission Joint Research Center, *Preparatory study on iron and steel – ecodesign measures under the EU Ecodesign for Sustainable Products Regulation*, draft report, 2024.

¹⁸⁸ Elaboration based on the 100-150 million tonnes of secondary steel from dismantled vessels over the next 10 years estimated in Bleischwitz R., Höller J., Kriegl M., (2023).

¹⁸⁹ Although currently the percentage of lifecycle CO₂ emissions emitted during shipbuilding and recycling is negligible compared to that emitted during a ship’s operational life, the shift towards ships that operate on zero or low emission fuels and technologies will affect these percentages significantly, increasing the need to tackle the problem of and reduce CO₂ emissions at other stages of the lifecycle See SSI (2021).

¹⁹⁰ The SRR defines ship recycling as ‘the activity of complete or partial dismantling of a ship at a ship recycling facility in order to recover components and materials for reprocessing, for preparation for re-use or for re-use, whilst ensuring the management of hazardous and other materials, and includes associated operations such as storage and treatment of components and materials on site, but not their further processing or disposal in separate facilities’. It has been suggested to expand the definition of ship recycling beyond a ship recycling facility’s activities, by including the entire lifecycle of materials to better fit the definition to circular economy goals.

¹⁹¹ Jain, Prunyn and Hopman, 2016; Soares and Santos, 2014; NGO Shipbreaking platform 2023; Sustainable Shipping Initiatives, 2013. Some refer to a ‘Material Flow Analysis’, a ‘Material Passport’ or ‘cradle to cradle passport’.

Re-flagging

The **effectiveness** of the **first and main operational objective of the SRR** to have EU-flagged ships dismantled in facilities approved by virtue of being included in the European List, has been significantly **undermined** by the practice of re-flagging ships. After re-flagging, these ships often reach the end of their service life in Bangladesh, India or Pakistan, effectively circumventing the obligations imposed by the SRR. Between 2016 and 2023, ships flying an EU flag that changed flag less than 1 year before being recycled represented a higher tonnage than ships that still flew an EU flag at the time of recycling (based on the weight of those ships/LDT).

Despite the increased recognition by many economic operators of their social and environmental responsibility and the fact that the European List has had sufficient capacity over the evaluation period, the possibility to easily change flag has been widely used by EU shipowners for end-of-life ships. These ships get dismantled in recycling facilities that are not on the European List, generating higher revenues for the shipowners than the revenues generated for dismantling in facilities that are not on the European List. These additional revenues are presented by the shipping sector as an important factor in maintaining their global competitiveness. The price range for South Asian countries (determined mainly by the price of scrap steel, labour costs and compliance costs related to social and environmental standards) was consistently above EUR 500 per LDT in 2023, and around EUR 300 per LDT in Türkiye, while in the EU they were reported to be around EUR 100 per LDT. This difference amounts to over EUR 1.5 million more for an average-sized ship to be recycled in South Asia than for it to be recycled in a recycling facility in Europe. Most cases of the re-flagging of end-of-life EU-flagged ships can therefore be seen as the result of the lack of an economic incentive to recycle in facilities that are not on the European List, due partly to the market failure of not internalising the environmental and social costs of recycling in South Asia and the regulatory failure of providing adequate mechanisms to prevent circumvention of the rules. Given the practice of re-flagging shortly prior dismantling, it is often just not possible to enforce the SRR provisions related to a shipowner's obligation to have an EU- flagged ship dismantled in a recycling facility that is on the European List. Consideration should therefore be given to how to ensure that the SRR remains applicable to EU-flagged ships until dismantling. Both the situation of the de-registering of a ship after a ready-for-recycling certificate has been issued and sold to an intermediary for the ship to be recycled in a facility that is on the European List, and the situation of re-flagging in order to circumvent EU law, should be addressed.

The **relevance** of basing the **scope** of the SRR on a ship's flag, as in the case of the Honk Kong Convention, plays a **pivotal role in the circumvention of the SRR**, by making it possible for EU shipowners to avoid discharging their responsibility for ensuring the safe and environmentally sound dismantling of their end-of-life ships. To address the matter, EU ship recycling facilities and NGOs in particular are calling for the scope of the SRR to be changed so that the responsibility for implementing it lies a ship's beneficial owner, instead of with the registered owner linked to the country whose flag the ship is flying. This option has been criticised by various other groups of stakeholders arguing that it is difficult to put into practice and that it complicates matters. It follows from this that no clear conclusion can be drawn at this stage based solely on stakeholders' opinions on this sensitive matter, and that the impact of such a measure under the SRR required careful analysis.

Another way of dealing with the matter of circumvention worth exploring further, is a financial instrument such as a **ship recycling licence's applying to all ships calling at an EU port, to bridge the revenue gap** between dismantling in facilities that are on the European List and dismantling in facilities that do not operate in a safe and environmentally sound way. The possibility of a financial incentive was referred to in Article 29 of the SRR and subject of one study in 2016 and of a 2017 Commission report¹⁹². Views on this matter are also polarised. Again, the evaluation, as a 'backward-looking' exercise, is not supposed to go into detail on measures to address the problems outlined in it. An ongoing study will constitute a preliminary step towards a possible detailed impact assessment study.

The shipping industry frequently questions the obligation of dismantling EU-flagged ships in facilities on the European List given these facilities do not have enough capacity to meet the demand for them. The evaluation showed that with its 45 recycling facilities, the **SRR and its European List so far managed to ensure sufficient capacity** for the dismantling of ships in its scope (including ships re-flagged in the year before they are dismantled). However, the evaluation has also shown that capacity needs to keep growing to be able to meet the increasing demand for recycling EU-flagged vessels expected, expected to peak in 2032 to almost 2.5 million LDT. Capacity needs would be even greater if the SRR's scope were extended to the beneficial owners of ships or also covered the recycling of non-EU-flagged vessels frequently calling at EU ports.

The European List and level of standards

Despite re-flagging and the entry into force of the Basel Ban Amendment which resulted, for over 2 years, in applications from facilities in non-OECD countries to be put on hold, stakeholders are largely of the view that the SRR for the most part achieved its **general objective of mitigating the adverse impacts** of ship recycling on workers' health and on the environment¹⁹³. This can in the first place be attributed to its stringent **criteria** for ship recycling facilities that apply both to facilities in the EU and in third countries, and to its independent assessment and **inspections** that have so far concerned 56 applications and over 55 inspections in 23 ship recycling facilities. Both the additional criteria for being put on the European List and the SRR's its audit mechanisms are considered an EU added value, resulting also in a reputational benefit for the companies on the list. Unannounced inspections carried out since 2023 are considered a key way of ensuring effective monitoring and compliance.

The evaluation has nevertheless shown there is room for improvement in the implementation of the European List. For example, **consideration could be given to clarifying the criteria for establishing compliance** with the SRR and for being put on the European List to ensure a more level playing field. In this respect further consideration could be given to assessing the need for additional and/or more specific criteria to evaluate waste management and steel recovery operations, effective pollution control measures and the use of cleaner dismantling and recycling technologies and methods. The request from the Commission expert group on ship recycling, to clarify the **application of corrective and punitive actions** in case of deficiencies identified during inspections, is being followed up on by the Commission.

¹⁹² [2016 study \(Ecorys, DNV-GL\)](#), 2024 study (not available yet), COM(2017)420.

¹⁹³ Over 80% of respondents to the public consultation and survey – see page 27.

The **costs** of fulfilling the SRR requirements are generally considered **low to moderate**¹⁹⁴. Opportunities to reduce unnecessary administrative burdens without undermining the achievement of the SRR's objectives still exist. Ship recycling facilities suggested, for example, extending the period of validity of inclusion in the European List. Recycling facilities in the EU are also looking for a more dynamic way to reflect on the European List the nationally granted recycling permits. Given the costs for the EU budget of managing the European List, the impact of having some costs linked to compliance assessments and inspections of third country facilities borne by the facilities themselves could be assessed in a possible revision of the SRR to increase **efficiency**, as could the possibility of the EMSA's doing the inspections. How to increase the use of independent verifiers could also be assessed, by ensuring adequate safeguards are in place to ensure the reliability of doing so.

The evaluation's findings are mainly the result of a qualitative approach given the lack of comprehensive quantitative data on benefits and costs. Quantitative data on the SRR's impact on the health of workers and the pollution of the coastal and marine environments are limited due to the lack of transparency of the ship recycling sector. There is also often a lack of specific data on individual facilities covering the period before to the beginning of the application process, as well as a difficulty isolating the impact of the SRR from the impact of multiple external factors. More effective reporting and measuring tools are therefore needed, for a more quantified evaluation of the SRR using meaningful indicators.

Impact of the SRR on the competitiveness of EU economic operators

While increasing the competitiveness of EU economic operators involved in ship recycling was not an explicit objective of the SRR, the expectations at the time of its adoption were that it would benefit the EU ship recycling sector, but could have a negative impact on the competitiveness of the EU shipping industry.

The evaluation shows that the SRR has had a very modest impact on the competitiveness of the **EU shipping sector** (all EU-based companies involved in shipping and using both EU-flagged and non-EU-flagged ships). It shows that **the costs of and revenues from implementing the SRR** (dismantling a vessel and the requirement to establish and maintain an IHM) **are low compared to the overall turnover of shipping companies, which are mostly large companies**. During the SRR implementation period, the shipping sector's competitiveness has been affected by other factors, linked to the fluctuations of the world economy and the resulting freight rates associated. The expectations that the SRR would affect their costs and revenues were based on the assumption that more ships owned by EU companies would be recycled in EU-listed facilities operating under higher standards, thereby reducing the shipping sector's revenues from the sales of end-of-life vessels. In practice however, the shipping companies did not make the shift they were expected to make towards dismantling their ships in facilities on the European List. This is mainly due to the practice of re-flagging shortly before dismantling. At the same time, for shipowners who changed their behaviour by opting to send their ships to facilities on the European List, the loss of revenue remains minimal compared to their overall economic performance.

During the evaluation period, the **EU ship recycling sector** operated according to environmental and safety standards close to those required to be on the European List even

¹⁹⁴ See Annex IV for an overview of benefits and costs.

before the SRR entered into force. **The additional regulatory costs linked to the SRR were moderate.** They consisted mostly, for the ship recycling sector, bringing its practices and procedures into line with the SRR's requirements, specific to ship recycling activities, while the requirements that applied before the SRR were mostly general in nature¹⁹⁵. There are therefore no material concerns about the direct cost of implementing the SRR on the EU ship recycling sector's competitiveness. **At the same time, the benefits were also quite limited for most of the sector. Contrary to expectations when the SRR was adopted, most of the ship recycling facilities in the EU did not report an increase in turnover resulting from the SRR** as they did not receive more ships for dismantling than before the SRR. The proportion of EU recycling facilities has remained small over the evaluation period, representing 5.3% of the number of ships recycled worldwide in 2023 (and 1% in LDT), while the proportion of the ships recycled in South Asia and Türkiye increased. Due to the difference in revenues and cost structure, the competitive disadvantage of EU facilities can be observed compared to the facilities in Türkiye that are on the European List but also, due to re-flagging, compared to facilities worldwide that are not on the European List¹⁹⁶. As a result, the number of ships in the scope of the SRR and dismantled by facilities in the EU has not increased as expected. A few facilities have not asked for their national permit to be renewed, resulting in their being taken off the European List. However, the trend of inclusion or renewal of facilities remained largely positive over the evaluation period.

Unlike facilities in South Asia and Türkiye, most facilities in the EU are not exclusively recycling large ships. The ship recycling facilities in the EU are most often SMEs, but some are associated with larger waste management companies. Most of them also dismantle ships that are not in the SRR's scope, especially smaller ships (below 500 GT), and warships. A few new facilities have started operating in the last 5 years in Denmark and Norway, which are particularly designed to dismantle floating oil platforms, in anticipation of the expected decommissioning of a large number of platforms currently in use in the North Sea. Some facilities in the EU are also carrying out activities other than dismantling, especially repairing ships. Some EU facilities are waiting for the ship recycling market to show clear signs of growth, while others have made investments to upgrade their facilities or practices. There are also projects underway to develop new types of ship recycling facilities, using automated, innovative, low-carbon technologies. However, the uncertain prospects for these facilities of generating a sufficient level of economic activity, sometimes combined with complicated national and sub-national requirements, have considerably hindered their development. The EU ship recycling sector has expressed concerns that facilities in the EU did not benefit as much from the SRR as facilities outside the EU (especially in Türkiye), while the requirements and their effective implementation are considered to not be sufficiently aligned with the body of EU law on safety and the environment relevant to ship recycling operations and downstream waste management.

The EU steel sector has only been marginally affected by the SRR. The volume of steel recycled from ships subject to the SRR and used by the EU steel industry has remained low. This is seen by the sector as a lost opportunity, as steel scrap from end-of-life vessels is of high

¹⁹⁵ ie stemming from regulations on waste management, industrial activities or health and safety.

¹⁹⁶ Competition comes both from facilities operating with the lowest possible costs and from applicants for inclusion on the European List building a relationship with EU shipowners based on compliance with SRR requirements without however being on the European List.

quality, with huge potential for being recycled into high quality applications, and a key asset for the decarbonisation of the steel industry. The sector expects demand for green steel to increase in the future, while the EU currently exports around 20% of steel scrap, making the need to increase domestic supply all the more pressing.

Inventory of hazardous materials

With regard to the SRR's second objective, the evaluation concludes that **the requirement to establish and maintain an IHM is seen as a good way of properly managing hazardous materials on ships and** appreciated by all stakeholders. Despite the efforts to standardise the development and maintenance of IHM and provide standard ship inspection procedures and training courses, **compliance with and enforcement of IHM-related requirements remain insufficient**. Available data show that 45% of reported inspections carried out in the period 2021-2023 found instances of non-compliance with the SRR. Non-compliance findings largely involved missing or incomplete IHM-related certificates. However, the situation has improved over the evaluation period. There is also a clear need for **more qualitative and reliable IHMs**. To address this, the whole chain of responsibilities should be looked at and strengthened, including the qualifications of experts drawing up IHMs, the way the Material Declarations and Supplier's Declaration of Conformity are obtained, attendance to training courses and guidance and investigation tools necessary for carrying out effective inspections under the SRR.

Enforcement

The evaluation has identified multiple challenges related to the enforcement of the SRR. It is first a necessary to clarify some concepts in the SRR that are crucial for enforcement by determining effectively when a ship is destined to be recycled or become a waste and by identifying the responsible owner in case of infringement, given the practice of re-flagging and the role cash buyers play.

Stakeholders also emphasised the need to clarify how to address situations where several legal frameworks apply and called for more specific guidance and training. They also highlighted the importance of improving cooperation and information exchange (between environmental and maritime authorities, between Member State' authorities and with relevant third countries), and of developing adequate monitoring and investigation tools. In that context, the potential of technology-based approaches could be further explored. The evaluation has also shown that there is room for improvement in data reporting for it to become an effective monitoring tool. This is the case for tri-annual reporting under Article 21, which lacked data, but also for THETIS EU, used to report on SRR-related port state controls, but only voluntarily and therefore not giving the full picture. Finally, the evaluation found that less than half of Member States have adopted all the measures necessary to cover possible SRR infringements. Most Member States have only adopted measures concerning some aspects of the SRR and some have not adopted any specific measures on the basis of the SRR. These Member States rely on more general rules designed for addressing non-compliance with national environmental regulations on the handling and shipment of waste. When they are in place, the level and type of penalties vary significantly. Consideration should be given to how to ensure that **penalties are sufficiently dissuasive in all Member States to discourage non-compliance**. The entry into force of the new Directive on Environmental Crime, which includes illegal ship recycling

under the SRR among the criminal offences it covers, will certainly help matters, but it does not address other types of non-compliance under the SRR.

The SRR and the Honk Kong Convention

Regarding the SRR's third and last operational objective, namely the ratification of the Honk Kong Convention, the evaluation finds that the Regulation has been effective. Beyond the analysis of the figures on ratification, what is clear is that the SRR had been for many years the only international legal instrument setting out specific ship recycling requirements and that many stakeholders and authorities outside the EU considered it as an important benchmark. This made sure that the need to regulate ship recycling remained on the agenda of stakeholders in the maritime industry, and prompting some of them to promote a global solution through the entry into force of the Honk Kong Convention.


Many people who responded to the consultation believe that the SRR keeps its **added value and relevance**, even after the entry into force of the Honk Kong Convention. The evaluation shows how its more stringent health and environmental requirements and strong monitoring and control mechanisms are also relevant in a global context and **could be promoted in the IMO context**. Ship recycling volumes are expected to grow significantly in the coming years, due to the ageing of the current fleet, so it is more important than ever that this be done sustainably. Shipowners' associations and some Member States seeking primarily to ensure a level playing field consider high global standards to be the best way to address the problem of reflagging.

The entry into force of the Honk Kong Convention also raises some questions about the relationship between the Honk Kong Convention and the SRR and between the HKC and the **Basel Convention**, with shipowners and public authorities pointing out **legal and implementation uncertainties that need to be addressed in good time in the relevant international fora**. In this context, considerations should also be given to how to avoid unnecessary administrative burden in terms of reporting or certification resulting from the co-existence of the SRR and the Honk Kong Convention.

Coherence with other EU policy ambitions

Not only the global context has significantly changed since the adoption of the SRR, especially with the entry into force of the Basel Ban amendment and the perspective of the entry into force of the Honk Kong Convention. The EU policy agenda has also changed. By the focusing on the environmentally sound management and storage of hazardous materials and waste, and increasing energy and resource efficiency through the recycling of materials (in particular steel scrap), the SRR serves the needs identified in many EU policy goals set during the evaluation period, in particular the EU Green Deal, the Circular Economy Action Plan, the Zero Pollution Action Plan, the Sustainable Blue Economy Communication, the Sustainable and Smart Mobility Strategy and the green transition under the EU taxonomy. However, stakeholders generally believe that the SRR does not sufficiently address the needs of certain policy ambitions. In particular, a possible revision could further assess if there is a need to strengthen the SRR and if it is advisable and opportune for the SRR play a role in making ship recycling a key supplier for the EU green steel supply chain, as part of the EU's ambitions in terms of

EU's competitiveness, resilience, climate neutrality and circularity. Considerations could be given, for example, to setting GHG emissions, recycling targets or a comprehensive materials' passport. As a matter of priority, consideration should be given to how to increase the effectiveness of the SRR's current core objective of ensuring EU-flagged ships are dismantled in safe and environmentally sound facilities.



LEAD DG: DG Environment
DECIDE/AGENDA PLANNING REFERENCE: PLAN/2021/13186
CWP REFERENCE: N.a.

1. Derogations granted and justification

No exceptions were made to the Better Regulation Guidelines during this Evaluation.

2. Organisation and timing

The Inter-service Steering Group for the evaluation of Regulation (EU) 1257/2013 on ship recycling was created in 2022. It is set up with representatives from the following Directorate Generals:

- Secretariat General (SG)
- Legal Service (SJ)
- Environment (ENV)
- Climate Action (CLIMA)
- Internal Market, Industry, Entrepreneurship and SMEs (GROW)
- Maritime Affairs and Fisheries (MARE)
- Mobility and Transports (MOVE)
- Trade (TRADE)
- Taxation and Customs Union (TAXUD)
- Employment, Social Affairs and Inclusion (EMPL)
- Neighbourhood and Enlargement Negotiations (NEAR)
- Justice and Consumers (JUST)
- Budget (BUDG)
- Economic and Financial Affairs (ECFIN)
- European Anti-Fraud Office (OLAF)
- Joint Research Centre (JRC)
- Eurostat (ESTAT)
- European Maritime Agency (EMSA)

The group met 5 times during the Evaluation process, first to steer work related to the support studies which were carried out for this evaluation, and then on the draft evaluation. Details on consultations on the Group are provided in the following table. There were also written consultations.

Date	Topic of discussion
7 October 2022	Background and scope of evaluation Draft Call for Evidence Draft Terms of reference for a service contract supporting the evaluation
10 January 2023	Draft inception report presented by the contractor for the supporting study, followed by written consultation
22 May 2023	Draft interim report presented by the contractor for the supporting study, followed by written consultation
26 October 2023	Draft final report followed by written consultation
2 May 2024	Discussion on Draft Commission evaluation report (Staff working document for the evaluation and executive summary) followed by written consultation

3. Consultation of the Regulatory Scrutiny Board

Following its examination by the Regulatory Scrutiny Board on 19 June 2024, this report was modified with the following main changes:

Comment by the Board	Modifications made
(1) The report should clearly state the lack of quantitative data concerning the health and environmental benefits. It should strengthen its analysis by providing additional evidence, e.g., from inspection reports, individual health monitoring data from workers etc., and further develop the qualitative analysis. It should clarify whether a monitoring system is in place that allows an analysis of how the situation has evolved in terms of health and environment impacts due to the SRR.	The lack of quantitative data is clearly stated and further underlined and developed in section 1.2. on methodology, robustness, and limitations. It is also further and mainly developed under Section 4.1.1 on effectiveness (p.24 and p.25). Specific areas of improvements retrieved from reports are highlighted for Türkiye and India. Qualitative analysis on the impact has been further developed and clarified, through a dedicated question on the effectiveness of the SRR regarding the general objective in reducing adverse effects on human health and the environment caused by ship recycling. Under that section, the monitoring systems in place for measuring how the situation has evolved in

	<p>terms of health and environment impacts due to the SRR are presented, highlighting its limitations.</p>
<p>2) The report should provide both the estimates of the total costs resulting from the SRR and the aggregated estimates for the different stakeholders (shipping companies, recycling facilities, inside and outside the EU, and the European List). In particular, the compliance costs for the ship recycling facilities should be presented clearly, both for EU and non-EU facilities, considering the different original local requirements regarding health, environment and occupational safety. Total compliance costs should be stated so that they are isolated and separately identifiable from labour costs and steel revenues on particular markets, differentiating business as usual costs for EU and non-EU facilities.</p>	<p>The evaluation explains that the assessment on costs and benefits needs to take account of limited data availability, as well as a lack of a clear baseline of what would have happened in the absence of the SRR. A fully quantified cost benefit analysis was not possible, including the presentation of comprehensive aggregated data. The evaluation therefore draws overall prudent analysis and conclusion on efficiency, largely based on qualitative data. In section 4.1.2. the compliance costs have been more distinctively presented for EU and non-EU facilities, as well as for shipowners. Some useful additional data are also presented on SRR compliance costs for recycling facilities in India. Costs analysis for EU facilities have slightly been developed, based on new input received from EuRIC but this could be done only in a qualitative manner as no additional quantitative data were received from EU recycling facilities on investment and compliance costs. An estimation of aggregated costs paid over the evaluation period by the shipowners that sent their end-of-life vessels to facilities on the European List compared to dismantling costs in facilities in South Asia has been added.</p>
<p>(3) The analysis of the impacts on competitiveness on EU ship recycling facilities, the EU maritime shipping industry and the EU steel sector should be further developed. The report should clearly describe the key drivers for re-flagging of ships, including how the steel scrap market affects the market conditions for ship recycling. It should also discuss what the competitive advantage is, or could be,</p>	<p>The impact on the competitiveness of the key EU stakeholders has been further developed and addressed under a dedicated sub-section under section 5. The competitive advantage for EU recycling facilities to be on the European List (not effective) is discussed both under section 4.1.2 on efficiency (p.43) and section 5 on competitiveness (p. 59). These sections also refer a contrario to the competitive advantage of recycling facilities in third country that are on the European List but also of applicants</p>

<p>for ship recycling facilities to be on the European List. The evaluation should present an analysis of whether, and to what extent SRR compliance costs might contribute to driving ship recycling business away from EU-listed facilities. It should also analyse the unintended effects of the SRR. It should discuss the coherence of the SRR with broader EU industrial and raw material strategies.</p>	<p>referring to SRR compliance. The competitive advantage of Turkish recycling facilities on the European List is also referred to in section 4.1.1 where the unintended effects are discussed (p.40). Section 5 also explains that a few facilities have not requested the renewal of their national permit to carry out ship recycling business and were therefore removed from the European List. The trend of inclusion or renewal of facilities remains however largely positive over the evaluation period. Section 5 puts in evidence that leaving the recycling business is attributed to the economics of ship recycling resulting in competitive disadvantage of EU recycling facilities rather than to the SRR compliance costs that are considered moderate. These two aspects are developed respectively in more details under section 3 and 4.1.2. of the report.</p> <p>Under section 3, the sub-section on the economics of ship recycling (p.10-14) describes the key drivers for re-flagging of ships, including how the steel scrap market affects the market conditions for ship recycling. It is also described under section 4 (on page 34 when assessing the effectiveness of the European List. The same section has added the incentives to dismantle vessels recycling facilities on the European List.</p> <p>Coherence of the SRR with broader EU industrial and raw material strategies has been developed under section 4.3 (p.54-56).</p>
<p>(4) Since many EU recycling facilities are SMEs, the report should provide a more specific SME analysis. It should clarify if and how the SRR takes into account SMEs, e.g., if there are mitigation measures or if they are more or less affected by the overlaps and differences regarding the Hong Kong Convention. It should inform</p>	<p>No specific SME analysis has been developed. The two associations representing interest of EU ship recycling facilities were consulted. It was answered that in principle, with regards to ship recycling, rules and legislation should be the same for all types of companies. The clarity of the rules has nevertheless been underlined as point which is of particular importance for the SMEs, without mentioning a particular aspect</p>

<p>how the EU ship recycling sector has developed in terms of cost and SME competitiveness over the evaluation period and clarify to what extent the SRR had an effect on this.</p>	<p>of the SRR. The elements of the SRR that would benefit from clarifications have been covered by the report (under sections on effectiveness eg p. 31 and 35), on coherence (p.47), and underlined in section 5 on lessons learnt. The possibilities for simplification which is generally raised by SMEs have also been covered under the dedicated evaluation question (section 4.1.2 on efficiency p.46).</p>
<p>5) The report should more transparently state what conclusions can be reached, or that it is not possible to draw sufficiently robust conclusions in particular areas. It should also state the limitations on any conclusions particularly those based solely on stakeholder opinion data and be clear whether the conclusions were supported by other evidence. For example, given the lack of quantitative data for the health and environmental benefits, the report should clarify to what extent conclusions can be drawn regarding effectiveness (the extent to which benefits have been attained).</p>	<p>The report has been adjusted in various locations where necessary accordingly, in particular section 4.1.1 on effectiveness and section 5 on lessons learnt.</p>
<p>(6) The conclusion that the benefits outweigh the costs should be substantiated with further evidence, if this conclusion is retained in the evaluation. Additionally, the report should present the conclusions on the objectives in a more differentiated manner along the three specific objectives of the SRR. It should provide more nuanced conclusions and lessons learned on re-flagging including the analysis of limitations regarding transparency of ownership. Given the lack of data on benefits and costs, the report should draw clear</p>	<p>The conclusion that the benefits outweigh the costs as not be retained as significant limitations concern the quantification of costs and benefits. The conclusion on the three specific objectives has been presented in a clearer way, while retaining the structure by key thematic areas which has the advantage to somewhat reduce redundant inputs. The conclusion on re-flagging and reference to beneficial ownership has been nuanced. Limitations and operational conclusion have been added in the lessons learnt regarding the 'European List and level of standards'(p.57).</p>

<p>operational conclusions for a monitoring and evaluation system including data needed for demonstrating causality of impacts.</p>	
<p>(7) The report should further discuss the coherence, relevance and EU-added value of the SRR in light of the entering into force of the Hong Kong Convention (HKC) and its coherence with other EU legislation.</p>	<p>The relevant sections have been further developed supported by a new Annex on the main differences between the SRR and HKC) added to the report. The coherence with other EU legislation has been covered by the evaluation questions but no significant issue has been reported, with the exception of the coherence with the Waste Shipment Regulation, which has therefore received a specific attention in the report (sections 4.1.1. on enforcement, 4.1.3. on coherence and Annex VI)</p>
<p>(8) The system of enforcement for the SRR, or lack thereof, should be further analysed. The report should clarify the enforcement obligations for Member States and how they are applied differently across different Member States, including the difference regarding penalties.</p>	<p>Enforcement is specifically addressed under section 4.1.1. under p.35-38 in relation to the first specific objective and under p.38-39 in relation to the second specific objective. Enforcement obligations are outlined in Table 1 on p.8, under section on p.22.and reminded in section 4.1.1. Some information on penalties applied has also been added under that section.</p>

This evaluation has been supported by two studies undertaken by a consortium composed of Ramboll, Ecorys, Grimaldi Alliance and ABS for that purpose¹⁵⁸, used as a basis for this evaluation report and complemented as appropriate. The first study was to support the evaluation in general (‘the support study’) and the second study was dedicated to the issue of enforcement. The first study represented a solid support to the work of the Commission, with the limits outlined below, whilst the second was less relevant and also had difficulties to obtain the needed data. EMSA has also supported the Commission with statistics and analytic work based on the databases THETIS-EU¹⁹⁷, MARINFO¹⁹⁸ and EQUASIS¹⁹⁹ as well on the reports from Member States under Article 21 of the SRR submitted the reporting portal Dynamic Overview of National Authorities (DONA).

The methodological approach for this evaluation covers:

- The definition of the scope
- The intervention logic
- The identification of the evaluation matrix and the approach to evidence gathering (in Annex III)
- Desk research
- Consultation strategy and consultation activities (synopsis report in Annex IV).

The evaluation followed the classical four steps: structuring, data gathering, analysis, and reporting.

The sources of information used for this evaluation have been:

- A review of existing literature.
- Member States implementation reports (under Article 21 of the SRR).
- Data from the European Maritime Safety Agency.
- Stakeholder consultations, to gather additional data and information on the stakeholders’ perception of the extent to which the SRR has been successfully implemented, its coherence, relevance and added value. This included an online public consultation, targeted surveys and interviews (with public and private entities), a stakeholder workshop and an expert group meeting. A wide range of stakeholders contributed, including Member States’ competent authorities, shipowners’ and recyclers’ associations, NGOs, classification societies, law firms and research institutes.

In the table below we provide an overview of the methods applied in the evaluation.

¹⁹⁷ <https://www.emsa.europa.eu/thetis-eu.html>.

¹⁹⁸ MARINFO is EMSA’s own internal database based on data purchased to the same company as Equasis but contrary to the latter not enhanced through the provision of data from other data providers.

¹⁹⁹ <https://www.emsa.europa.eu/equasis-statistics.html>

Overview	Input into the evaluation and limitation of the instrument	
Literature review	<p>The following steps have been carried out:</p> <ul style="list-style-type: none"> • Identification of literature and data sources; • Assessment of available literature and data sources identifying data gaps and key issues to allow them to be addressed through other means; and • Recording of the results in a database that was updated throughout the study. 	<p>Mostly Effectiveness.</p> <p>While the literature review contributed to answering the evaluation questions, most of the available literature was not using up-to-date data</p>
Databases	<p>The following data/databases from EMSA were used in the evaluation:</p> <ul style="list-style-type: none"> • the THETIS-EU on the inspections of ships on the inventories of hazardous materials; • the MARINFO database on the list of vessels sent for recycling; • the EQUASIS database for data on the EU and world’s merchant fleet; • reporting portal DONA allowing for Member States to report on implementation in line with Article 21 of the SRR under a common portal. <p>They were used for:</p> <ul style="list-style-type: none"> • Analysis of the compliance with the IHM requirements; • Presenting the number/percentage of ships recycled; • Review of the re-flagging phenomenon. • Assess the quality of reporting by Member States and infringement related actions. 	<p>Overall, the data from THETIS-EU and MARINFO provided up-to-date and extensive information. However, THETIS-EU is used on a voluntary basis by 16 MS and Norway to report SRR related PSC controls. Therefore, it provides an incomplete picture in terms of inspections data.</p> <p>The first triannual reporting exercise by MS (using DONA) revealed incomplete reporting by Member States.</p>
Call for evidence	<p>The purpose of the Call for Evidence was to gather views from the public and stakeholders on the SRR as a starting step in the evaluation process. It was open 2-30 June 2022. The Commission received 16 responses. The responses came from business associations (6), companies (2), NGOs (2), Citizens (2), trade union (1), public authority (1) and other (2).</p>	<p>All evaluation criteria.</p> <p>Limitation: relatively limited number of responses received.</p>
Public consultation	<p>A public consultation was published on the Have Your Say website to gather opinions and evidence on the key elements of the SRR (based on the evaluation criteria : effectiveness, coherence, relevance, and EU added value) for a period of 12 weeks between 15 March 2023 and 7 June 2023. A total of 63 responses were received from 18 Member States and 7 non-EU countries. Additionally, 12 position papers were received.</p>	<p>All evaluation criteria.</p> <p>Limitation: relatively limited number of responses received.</p>
Survey	<p>The survey-questionnaire was open for about a month, with an official launching date on 3</p>	<p>All evaluation criteria.</p>

	<p>March 2023. The main purpose was to gather information and feedback from the relevant stakeholders to produce quantitative and qualitative analyses. The targeted audience included all the interested parties encompassing European shipowners, recycling facilities, environmental and workers' right organisations and other relevant entities impacted by or interested in the SRR. Some questions were for all, some others targeted to a specific category of respondents. 79 respondents took part in the survey, with 69 completed responses.</p>	<p>Limitation: relatively limited number of responses received.</p>
<p>Interviews and written feedback</p>	<p>A total of 48 organisations were interviewed and/or provided written feedback between May and September 2023. During the targeted interviews, questions were asked to assess how well the regulation has achieved its objectives, and whether it continues to deliver in terms of effectiveness, efficiency, relevance, coherence, and EU added value, as well as areas for future improvement.</p>	<p>All evaluation criteria.</p> <p>The written feedback provided by Member States was very valuable for the analysis of Efficiency. Yet, as always with this evaluation criterion, the data on the costs (full-time equivalents) and their distribution per activity depends on the (limited) availability of the data and the perceptions of the people reporting.</p>
<p>Workshop and expert group meeting</p>	<p>A workshop was organised in June 2023 to discuss the intermediate findings from the support study on the evaluation. The workshop gathered 62 stakeholders and 26 representatives of Member States. The consortium presented the outcome of their work to the Commission expert group on ship recycling during a meeting organised in January 2024. The expert group meeting served as an occasion for validating the key findings of the support study.</p>	<p>All evaluation criteria</p>

Data limitations and measures to address them

The main limitations in the analysis are the few quantitative data available on the impact of the SRR on the health of workers²⁰⁰ and on the pollution. Data is poor on both of these aspects, making the identification of the benefits (ie improvements in environmental and safety performance) uncertain. When data are available, the correlation is also hindered by the influence of external factors and the decrease in ship recycling activities over the evaluation period. It is therefore difficult to estimate the likely situation had the SRR not been adopted. In third countries, it is difficult to isolate its effect from the adoption of the Hong Kong

²⁰⁰ The sector suffers from a serious lack of transparency, many likely go unreported, particularly in Bangladesh, India and Pakistan. There is also an absence of data on occupational diseases, including cancer (NGO Shipbreaking Platform (2024)).

Convention, partnership initiatives carried out by individual shipping companies or third countries and the general development towards more social corporate responsibility.

The calculation of economic impacts is difficult due to the lack of data on the economics of ship recycling, resulting from business secrecy, on one hand, and the fluctuating character of the market, on the other. Also, limited data on the costs per stakeholder group and item could be collected. For the assessment of benefits and of the ratio between the costs and the benefits a qualitative assessment was preferred to avoid arbitrary assumptions in monetising the contribution of the SRR.

Evidence from stakeholder consultations always reflects the interests of the respondents, which always represents a potential bias in the evidence base. In the sector, strong diverging views are expressed on a number of topics, like the capacity of the European List and the priority given to ensure a level playing field. This is to be kept in mind, especially in a small sector like ship recycling. Inevitably, the number of respondents to the public consultation was somewhat limited but considered sufficient for the size of the sector. It remains however difficult to constitute a representative sample, especially for specific stakeholders' group. To a lesser extent, this is also a limitation for the targeted surveys.

These limitations have, to some extent, negatively affected the robustness of the evaluation findings. The results are however seen as sufficiently robust through best efforts to mitigate the limitations. Findings have been essentially based on triangulating the information from multiple data sources. The consultation methods complemented each other and did not have significant divergence across consultation tools, neither within a stakeholder' group as far as the main findings concerned.

ANNEX III EVALUATION MATRIX

In line with the Commission's better regulation policy, this report assesses the SRR along five criteria: effectiveness, efficiency, coherence, EU added value, and relevance. These criteria were operationalised via elaborating questions specific to this Regulation, which were systematically answered to assess the different criteria in a way that is specific to the Regulation (how these criteria translate in the context of this Directive). This set of (15) questions was also provided in the Call for evidence published at the start to inform citizens and stakeholders to allow them to provide feedback on the evaluation initiative.

These questions were broken down into sub-questions, and, for each of them, assessment criteria, indicators, approach to take for the analysis and sources of information to use to answer the questions were identified. This resulted in the evaluation matrix presented here.

General questions	Specific questions	Judgement criteria	Indicators	Data sources
Effectiveness				
1. How successful has the SRR been in achieving (or progressing towards) its objectives?	<p>EQ1.1: How successful has the SRR been in preventing, reducing, minimising and eliminating accidents, injuries, and other adverse effects on human health (e.g. occupational disease) and the environment caused by ship recycling?</p> <p>EQ1.2: How successful has the SRR been in ensuring the proper management of hazardous materials on ships?</p> <p>EQ1.3: How successful has the SRR been in facilitating the ratification of the Hong Kong Convention?</p> <p>EQ1.4: How successful has the SRR been in ensuring that EU-flagged ships are dismantled in safe and environmentally sound facilities worldwide?</p>	<p>EQ1.1: Decreased rate and severity of accidents, injuries and other adverse effects on human health (e.g. occupational disease) caused by ship recycling</p> <p>EQ1.1: Decreased rate and severity of adverse effects on the environment caused by ship recycling</p> <p>EQ1.1: Increased number/size of EU-flagged ships recycled in facilities on the European list (by EU flags)</p> <p>EQ1.1: Decreased number/percentage/size of ships that have changed their EU flag before recycling</p> <p>EQ1.1: Increased values (number) of the output indicators (statements, facilities, recycling plans, etc.)</p> <p>EQ1.1: Perception of high quality of the outputs related to the regulation (e.g. statements, recycling plans)</p> <p>EQ1.2: Increased values (number) of the output indicators on the</p>	<p>EQ1.1: Trends in the numbers and severity of accidents, injuries, occupational disease, etc. inside and outside the EU after the Regulation has been applied</p> <p>EQ1.1: Trends in the numbers and severity of environmental pollution accidents in ship recycling facilities inside and outside the EU after the Regulation has been applied</p> <p>EQ1.1: Trend in the number/size of EU and non-EU-flagged ships recycled in facilities on the European list</p> <p>EQ1.1: Number/percentage/size of ships that have changed their EU flag before recycling</p> <p>EQ1.1: Trends in the output indicators (statements, facilities, recycling plans, etc.), including: Number of ships for which Ready For Recycling Certificates (RFRC) are issued; Number of EU-flagged ships for which a Statement of Completion has been completed and sent to the Administration</p> <p>EQ1.1: Perception of the quality of statements, recycling plans, etc.</p> <p>EQ1.2: Output indicators on inventory of hazardous materials (Number of inventories (Part I) of hazardous materials; Number of inventories of</p>	<p>EQ1.1: Desk research on health and environmental impacts and sustainable management of hazardous waste, including: E3 modelling (2021) EU Reference Scenario 2020, Energy Transport and GHG Emissions – Trends to 2050; COWI (2009) Support to the impact assessment of a new legislative proposal on ship dismantling; Wei-Te Wu (2016) Science for Environment Policy, Issue 55 on ship recycling; NGO Shipbreaking Platform (quarterly updates); IMO (2016) Evaluation of Environmental Impacts of Ship Recycling in Bangladesh; Ship Recycling Transparency Initiative – 2020 Report and SRTI database; SSI (2021): Exploring shipping’s transition to a circular industry; European Commission (2022), Updated list of ship recycling facilities; European Commission, desk assessment and inspection reports of third country ship recycling facilities;</p>

General questions	Specific questions	Judgement criteria	Indicators	Data sources
		<p>inventories/certificates of hazardous materials</p> <p>EQ1.2: Perception of high quality (i.e. compliance) of the inventories</p> <p>EQ1.3: Increased ratifications of the HKC</p> <p>EQ1.4: Reduced disparities in Health & Safety and environmental standards between recycling facilities in the Union and in relevant third countries</p> <p>EQ1.4: Adequate ship recycling capacity in the European list</p> <p>EQ1.4: Increased number of applications of non-EU ship recycling facilities</p> <p>EQ1.4: Increased number of third country ship recycling facilities in the European list</p>	<p>hazardous materials and number of inventory certificates issued by MS administrations or RO (Art.9); Number of third country ships with inventories of hazardous materials / compliance statements)</p> <p>EQ1.2 Perception of the quality of inventories and evidence of non-compliance (if any)</p> <p>EQ1.3: Number of ratifications of the HCK</p> <p>EQ1.4: Perception of the stakeholders on the disparities in Health & Safety and environmental standards between recycling facilities in the Union and in relevant third countries</p> <p>EQ1.4: Ship recycling capacity in the European list compared to the needs</p> <p>EQ1.4: Number of applications of non-EU ship recycling facilities</p> <p>EQ1.4: Number of third country ship recycling facilities in the European list</p>	<p>UNCTAD Statistics on Ship Recycling.</p> <p>EQ1.1: Data from ship recycling facilities on accidents during ship recycling and on occupational diseases</p> <p>EQ1.1-1.4: EMSA report</p> <p>EQ1.2: Data from EMSA on Port State control checks</p> <p>EQ1.3: IMO, Ratification by Treaty</p> <p>EQ1.1-1.4: Stakeholder consultations Online public consultation; Targeted survey / Bespoke survey; Interviews; Workshop.</p> <p>1.4 Studies on capacity....</p>
2. What factors have affected (positively or negatively) progress towards the objectives and its enforcement?	<p>EQ2.1: What factors have positively affected the progress towards each of the objectives?</p> <p>EQ2.2: What factors have negatively affected the progress towards each of the objectives?</p>	<p>EQ2.1: There are identifiable factors that have (had) a positive impact on the progress towards the objectives</p> <p>EQ2.2: There are identifiable factors that have (had) a negative impact on the</p>	<p>EQ2.1-2: Evidence of factors having positive/negative impact on progress towards objectives</p> <p>EQ2.1-2: Stakeholder opinion on factors having positive/negative impact on progress towards objectives External factors may include, for example:</p>	<p>EQ2.1-2: Desk research on factors Zhou et al. (2021): Factors influencing green ship recycling: A conceptual framework and modelling; Solakivi et al. (2021): The European Ship Recycling Regulation and its market implications: Ship-</p>

General questions	Specific questions	Judgement criteria	Indicators	Data sources
	<p>Objectives as per the Intervention logic: Ensure EU-flagged ships are dismantled in safe and environmentally sound facilities worldwide; Ensure the proper management of hazardous materials on ships; Facilitate the ratification of the Hong Kong Convention.</p>	<p>progress towards the objectives</p>	<p>Technological advances, incl. digitalisation MS and third country priorities MS and third country enforcement capacity Russian war in Ukraine COVID-19 pandemic The entry into force of the Basel Ban Amendment</p>	<p>recycling capacity and market potential; B van Werven (2019): European Ship Recycling Regulation: can we make a difference towards safe and environmentally sound practices? N. Mikelis (2019), The Recycling of Ships; EMSA data on fleets and change of flags.</p> <p>EQ2.1-2: Stakeholder consultations Interviews; Workshop.</p>
<p>3. Are there unexpected or unintended effects that have occurred (for example, have there been harmful circumvention of the obligations of the SRR)?</p>	<p>EQ3.1: Are there unexpected / unintended effects? EQ3.2: What are the causes and effects of circumvention through re-flagging?</p>	<p>EQ3.1: There are identifiable unexpected / unintended effects EQ3.2: There is evidence of circumvention through re-flagging</p>	<p>EQ3.1: Evidence of unexpected / unintended effects contributing to or hindering the progress EQ3.1: Stakeholder opinion on unexpected / unintended effects contributing to or hindering the progress EQ3.2: Number/percentage/size of ships that have changed their EU flag before recycling EQ3.2: Other evidence of circumventing the Regulation, e.g., criminal investigation cases and cases raised to the EC attention and its effects</p>	<p>EQ3.1: Desk research on effects Lin et al. (2022): Unexpected side effects of the EU Ship Recycling Regulation call for global cooperation on greening the shipbreaking industry; EMSA statistics on ship recycling.</p> <p>EQ3.1: Stakeholder consultations Online public consultation; Interviews; Workshop.</p> <p>EQ3.2: EMSA information, Shipbreaking platform data, IMPEL, IMO</p>

General questions	Specific questions	Judgement criteria	Indicators	Data sources
				Abandonment of Seafarers database
4. To what extent Member States and stakeholders have been engaged in the process of improving implementation and enforcement of the SRR?	<p>EQ4.1: To what extents have Member States been engaged in the process of improving implementation and enforcement of the SRR?</p> <p>EQ4.2: To what extent have stakeholders been engaged in the process of improving implementation and enforcement of the SRR?</p>	<p>EQ4.1: Member States and other relevant stakeholders consider that MS have been engaged in the process</p> <p>EQ4.1: Increased values of the relevant output indicators on administration and reporting</p> <p>EQ4.2: Stakeholders consider that they have been engaged in the process</p>	<p>EQ4.1-2: Stakeholder perception of their own and others' engagement in the process of improving implementation and enforcement of the SRR</p> <p>EQ4.1: Output indicators on administration and reporting (Number/comprehensiveness/timeliness of the MS reports; Number of meetings) – also a link to the indicators on enforcement</p>	<p>EQ4.1: EMSA report, minutes of Committee/Experts groups meetings</p> <p>EQ4.1-2: Stakeholder consultations Online public consultation; Surveys;</p>
Efficiency				
5. Are the costs related to the SRR proportionate to the benefits (overall and for different stakeholder groups)?	<p>EQ5.1: What are the costs related to the SRR for the key activities (see below the activities, the costs are in the Indicators column)?</p> <p>EQ5.2: Can they be considered proportionate to the benefits for the key activities (see below)? Key activities, as per the developed Intervention logic: Meeting the requirements for ship recycling of EU-flagged ships;</p>	<p>EQ5.1: Exploratory question (no need for a judgement criterion)</p> <p>EQ5.2: The benefits outweigh the costs / stakeholders consider benefits to outweigh the costs</p>	<p>EQ5.1: Costs for: For shipowners - to keep a list of hazardous materials (Art.5), provide information/conditions and have their ships dismantled in facilities on the European List (Art.6), shipowners of third countries to keep an inventory (Art.12) For administrations²⁰¹ or a recognised organisation²⁰² – to verify the list (Art.5), to approve the ship recycling plan (Art.7), to perform surveys (Art.8), issue certificates (Art.9) Port state control costs (Art.11)</p>	<p>EQ5.1: Desk research on costs European Commission (2012) Commission Staff Working Document on the impact assessment accompanying the legislative proposal for the SRR (SWD(2012) 47 final); European Commission (mission costs, contracting); OECD (2019) Ship recycling: An overview; OECD Science, Technology and</p>

²⁰¹ 'administration' means a governmental authority designated by a Member State as being responsible for duties related to ships flying its flag or to ships operating under its authority.

²⁰² 'recognised organisation' means an organisation recognised in accordance with Regulation (EC) No 391/2009 of the European Parliament and of the Council.

General questions	Specific questions	Judgement criteria	Indicators	Data sources
	<p>Meeting the requirements for authorisation of EU ship recycling facilities; Inventory, maintenance and verification of hazardous materials; Facilitation of ratification of the HKC; Meeting the requirements for third-country ship recycling facilities and ships flying the flag of a third country; Communication, reporting, and enforcement.</p> <p>Beyond the key activities/objectives, benefits for some stakeholders in addition to the main objectives pursued (e.g., reputational value of the European List)</p>		<p>For ship recycling companies²⁰³ – to develop a ship recycling plan (Art.7), to be included in the European list (Art.13), in third countries (Art.15) The European Commission – to establish and update the European list of ship recycling facilities (Art.16), other costs related to the SRR (adoption of formats / implementing acts / delegated acts / actions requested of affected parties) For Member States to authorise ship recycling facilities (Art.14), to participate in meetings (Art.20), to report (Art.21), enforce (Art.22), to cooperate between each other (Art.22)</p> <p>EQ5.2: Stakeholder assessment on the costs/benefits ratio (incl. e.g. reputational benefits of being on the European List)</p>	<p>Industry Policy Papers April 2019, No 68.</p> <p>EQ5.1-5.2 Stakeholder consultations Online public consultation; Targeted survey / Bespoke survey; Interviews; Workshop.</p> <p>EQ5.2: Effectiveness assessment</p>
<p>6. Are there significant differences in terms of costs (or benefits) for Member States and different stakeholder groups, and if so, what are the underlying causes?</p>	<p>EQ6.1: Are there significant differences in costs across MS and/or stakeholder groups? EQ6.2: In case of differences, what is causing them?</p>	<p>EQ6.1-6.2: exploratory questions (no need for judgement criteria)</p>	<p>EQ6.1: same as for EQ5.1 EQ6.2: Stakeholder opinion on the causes of differences in costs</p>	<p>EQ6.1: same as for EQ5.1 EQ6.2: Stakeholder consultations Targeted survey / Bespoke survey; Interviews.</p>

²⁰³ ‘ship recycling company’ means, the owner of the ship recycling facility or any other organisation or person who has assumed the responsibility for the operation of the ship recycling activity from the owner of the ship recycling facility.

General questions	Specific questions	Judgement criteria	Indicators	Data sources
7. Are there opportunities to simplify the legislation or reduce unnecessary regulatory costs/burden without undermining the intended objectives of the intervention?	-	EQ7: Available opportunities for simplification and costs/burden reduction without hampering effectiveness	EQ7: same as for EQ5.1 EQ7: Stakeholder opinion on the opportunities for simplification and cost/burden reduction	EQ7: same as for EQ5.1 and: International Chamber of Shipping (2022) Industry Guidance to Ship Suppliers and Shipowners on Materials Declarations for Inventories of Hazardous Materials. EQ7: Stakeholder consultations Online public consultation; Interviews; Workshop.
Relevance				
8. To what extent is the SRR still relevant and does it correspond to the needs within the EU, in particular as regards the new policy ambitions (as set out, for example, in the European Green Deal, the Circular Economy Action Plan, the Zero Pollution Action Plan, the Sustainable and Smart Mobility Strategy and the Sustainable Blue Economy)?	EQ 8.1: To what extent the SRR corresponds to the needs relevant to the sustainability principles included in the Circular Economy Action Plan, such as improving product durability, reusability, upgradability and reparability, addressing the presence of hazardous chemicals in products, and increasing their energy and resource efficiency? EQ 8.2: Does the SRR contribute to addressing the EU Green Deal needs to reduce by more than 55% (by 2030) the health impacts of air pollution? EQ 8.3: To what extent the SRR contributes to	EQ 8.1: SRR provisions are in line with the EU needs stemming from the sustainability principles, such as the Circular Economy Action Plan EQ 8.2: SRR provisions are in line with the EU needs embodied in the EU Green Deal EQ 8.3: SRR provisions are in line with the needs embodied in the Zero Pollution Action Plan, the Sustainable and Smart Mobility Strategy and the Sustainable Blue Economy	EQ 8.1: Assessment of comparability between the provisions of the SRR and the needs related to the Circular Economy Action Plan EQ 8.1: Stakeholder opinion on the correspondence between the provisions of the SRR and the ones of the Circular Economy Action Plan EQ 8.2: Assessment of comparability between the provisions of the SRR and the needs identified in the EU Green Deal EQ 8.2: Stakeholder opinion on the correspondence between the provisions of the SRR and the ones of the EU Green Deal EQ 8.3: Assessment of comparability between the provisions of the SRR and	EQ 8.1-3: Desk research (review of the mentioned EU initiatives) EQ 8.1-3: Stakeholder consultations Online public consultation; Targeted survey; Interviews; Workshop.

General questions	Specific questions	Judgement criteria	Indicators	Data sources
	addressing the needs identified in the Zero Pollution Action Plan, the Sustainable and Smart Mobility Strategy and the Sustainable Blue Economy?		the needs identified in the Zero Pollution Action Plan EQ 8.3: Stakeholder opinion on the correspondence between the provisions of the SRR and the ones of Zero Pollution Action Plan, the Sustainable and Smart Mobility Strategy and the Sustainable Blue Economy	
9. How well adapted is the SRR to technical and scientific progress and EU and global market developments?	EQ 9.1: What are the technical developments and market trends that occurred in the field of ship dismantling since the entry into force of the SRR? EQ 9.2: Are the SRR provisions still fit and in line with these developments?	EQ 9.1: Identifiable technical developments and market trends occurred after the entry into force of the SRR EQ 9.2: SRR provisions are considered fit for purpose in light of technical/market developments	EQ 9.1: Market trends in the ship dismantling industry after 2013 EQ 9.1: Technical developments in the ship dismantling industry after 2013 EQ 9.2: Stakeholder opinion on the relevance of the SRR provisions in light of market trends and technical developments in the ship dismantling industry after 2013	EQ 9.1: Desk research EQ 9.1-2: Stakeholder consultations Interviews; Workshop.
10. Is the scope of the SRR still appropriate?	EQ 10.1: To what extent are the objectives of the SRR relevant to the current problems and needs of the ship dismantling industry? EQ 10.2: Are there any newly emerged or increasingly important needs which are currently not (adequately) covered by the SRR? EQ 10.3: Should the SRR scope be extended, e.g. by covering all ships without any size and class limitation?	EQ 10.1: SRR objectives match the current problems and needs of the ship dismantling industry EQ 10.2: Identifiable emerging needs that are not adequately covered by the SRR EQ 10.3: Identification of the needs for an extension of the scope of the SRR by ships size and class EQ 10.4: Identification of the needs for an extension of the scope of the SRR by flag	EQ 10.1: Stakeholder opinion on the correspondence between current problems and needs of the ship dismantling industry and SRR objectives EQ 10.2: Stakeholder opinion on the emergence of new needs within the ship dismantling industry which are not adequately covered by the SRR EQ 10.3: Stakeholder opinion on the need to extend the scope of the SRR to cover all types of ships by size and class EQ 10.4: Stakeholder opinion on the need to extend the scope of the SRR	EQ 10.1-4: Stakeholder consultations Online public consultation; Targeted survey; Interviews; Workshop. EQ10.4: Data from EMSA

General questions	Specific questions	Judgement criteria	Indicators	Data sources
	EQ 10.4: Should the SRR scope be extended beyond ships flying the flag of a Member State ²⁰⁴ ?		beyond ships flying the flag of a Member State EQ 10.4: Number of abandoned vessels in EU ports with no flag or non-EU flag, or vessels under EU ownership which operate under a non-EU flag in European waters	
Coherence				
11. To what extent is the SRR internally consistent and coherent?	EQ 11.1: To what extent are there inconsistencies among the requirements and provisions of the SRR? EQ 11.2: Do these inconsistencies create overlaps between different provisions, resulting in a lack of coherence of the SRR? EQ 11.3: To what extent are there synergies among the requirements and provisions of the SRR?	EQ 11.1: Identifiable inconsistencies between different SRR provisions EQ 11.2: Identifiable overlaps between different SRR provisions resulting in a lack of coherency EQ 11.3: Identifiable synergies between different SRR provisions	EQ 11.1: Stakeholder opinion on the existence of inconsistencies between different SRR provisions EQ 11.2: Stakeholder opinion on the degree of coherence of the SRR due to overlaps between different SRR provisions EQ 11.3: Stakeholder opinion on the existence of synergies between different SRR provisions	EQ 11.1-4: Stakeholder consultations Interviews; Workshop.
12. To what extent is the SRR coherent with other existing EU environmental and maritime legislation (such as the Waste Shipment Regulation, the Waste Framework Directive and other EU	EQ 12.1: Is the SRR coherent with the Waste Shipment Regulation, in light of the entry into force of the Basel Ban Amendment (i.e. an export ban outside the OECD)?	EQ 12.1: SRR is coherent with the Waste Shipment Regulation EQ 12.2: SRR is coherent with the EU Directive on environmental crime, Waste	EQ 12.1: Assessment of coherence between the provisions of the SRR and the ones of the Waste Shipment Regulation EQ 12.1: Stakeholder opinion on the coherence between the provisions of	EQ 12.1-3: Desk research of the mentioned legislation EQ 12.1-3: Stakeholder consultations Interviews; Targeted surveys; Workshop.

²⁰⁴ As specified in the ToR, for example, abandoned vessels in EU ports with no flag or non-EU flag, or vessels under EU ownership which operate under a non-EU flag in European waters, both of which cases currently fall outside the scope of application of the SRR, in order to take into account the possibilities for ownership transfers to offshore companies.

General questions	Specific questions	Judgement criteria	Indicators	Data sources
waste legislation, the Port State Control (PSC) Directive and the Flag State requirements Directive)?	<p>EQ 12.2: Is the SRR coherent with the EU Directive on environmental crime, the Waste Framework Directive and the other EU waste legislations?</p> <p>EQ 12.3: Is the SRR coherent with the Port State Control Directive and the Flag State requirements Directive?</p>	<p>Framework Directive and the other EU waste legislations</p> <p>EQ 12.3: SRR is coherent with the Port State Control Directive and the Flag State requirements Directive</p>	<p>the SRR and the ones of the Waste Shipment Regulation</p> <p>EQ 12.2: Assessment of coherence between the provisions of the SRR and the ones of the EU Directive on environmental crime, Waste Framework Directive and other EU waste legislations</p> <p>EQ 12.2: Stakeholder opinion on the coherence between the provisions of the SRR and the ones of the EU Directive on environmental crime, Waste Framework Directive and other EU waste legislations</p> <p>EQ 12.3: Assessment of coherence between the provisions of the SRR and the ones of the Port State Control Directive and the Flag State requirements Directive</p> <p>EQ 12.3: Stakeholder opinion on the coherence between the provisions of the SRR and the ones of the Port State Control Directive and the Flag State requirements Directive</p>	
13. To what extent is the SRR coherent with other relevant international policies and instruments such as the Basel Convention and the IMO Hong Kong Convention?	<p>EQ 13.1: Are there synergies or overlaps (potentially leading to inefficiencies) between the SRR and the Basel Convention?</p> <p>EQ 13.2: Are there synergies or overlaps between the SRR and the IMO Hong Kong Convention?</p>	<p>EQ 13.1: Identifiable synergies and overlaps (with examples of inefficiencies) between the SRR and the Basel Convention</p> <p>EQ 13.2: Identifiable synergies between the SRR and the IMO Hong Kong Convention</p>	<p>EQ 13.1: Assessment of synergies and overlaps between the SRR and the Basel Convention</p> <p>EQ 13.1: Stakeholder opinion on the synergies and overlaps between the SRR and the Basel Convention</p>	<p>EQ 13.1-3: Desk research</p> <p>EQ 13.1-3: Stakeholder consultations Interviews; Workshop.</p>

General questions	Specific questions	Judgement criteria	Indicators	Data sources
	EQ 13.3: Are there any potential synergies or overlaps between the SRR and other international initiatives, policies and instruments?	EQ 13.3: Identifiable synergies between the SRR and other international initiatives, policies and instruments	EQ 13.2: Assessment of synergies and overlaps between the SRR and the IMO Hong Kong Convention EQ 13.2: Stakeholder opinion on the synergies and overlaps between the SRR and the IMO Hong Kong Convention EQ 13.3: Assessment of synergies and overlaps between the SRR and other international initiatives, policies and instruments EQ 13.3: Stakeholder opinion on the synergies and overlaps between the SRR and other international initiatives, policies, and instruments	
EU added value				
14. To what extent do the needs/problems addressed by the SRR continue to require action at EU level? Should they be better addressed at global level?	EQ14: To what extent global initiatives (such as the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships) are effective in addressing the needs/problems within the scope of the SRR?	EQ14: Global initiatives like the HKC have identifiable effects in addressing the needs/problems covered by the SRR	EQ14: Stakeholder opinion on the extent to which the HKC and other global initiatives are ensuring or able to ensure adequate environmental and safety standards EQ14: Number of ratifications of the HCK	EQ14: Desk research EQ14: IMO, Ratification by Treaty EQ14: Stakeholder consultations Online public consultation; Targeted survey; Interviews; Workshop.
15. What has been the EU added value of the SRR compared to what could have been reasonably achieved by Member States acting alone?	EQ 15.1: To what extent could the SRR's outputs/ results/impacts have been achieved without EU intervention? EQ 15.2: Could the objectives of the SRR have been	EQ 15.1: Identifiable evidence that the SRR's effects could have been achieved without EU intervention EQ 15.2: Identifiable evidence that Member States	EQ 15.1: Stakeholder opinion on the extent to which the SRR's outputs/results/impacts could have been achieved without EU intervention EQ 15.2: Stakeholder opinion on the possibility for Member States acting	EQ 15.1-3: Stakeholder consultations Online public consultation; Interviews; Workshop.

General questions	Specific questions	Judgement criteria	Indicators	Data sources
	<p>achieved by each Member State acting alone? If yes, are there any efficiency/effectiveness gains by doing so at EU level?</p> <p>EQ 15.3: To what extent is EU level coordination needed in each of the areas covered by the SRR?</p>	<p>acting alone met equivalent objectives to the ones of the SRR</p> <p>EQ 15.2: Identifiable evidence that the SRR ensures efficiency/effectiveness gains compared to Member States acting individually</p> <p>EQ 15.3: EU level coordination is needed to meet the objectives of the SRR</p>	<p>alone to meet the same objectives of the SRR</p> <p>EQ 15.2: Stakeholder opinion on efficiency/effectiveness gains driven by the SRR compared to Member States acting individually</p> <p>EQ 15.3: Stakeholder opinion on the need for EU level coordination</p>	

ANNEX IV OVERVIEW OF BENEFITS AND COSTS

TABLE 1: Overview of costs and benefits identified in the evaluation

Type	Name	Description	One-off / Recurrent / Long-term	Stakeholder		
				Shipowners	Recycling facilities	MS / EU administrations
Direct compliance costs	Inventory of Hazardous Materials costs	Costs to develop a IHM	Recurrent	Between EUR 4,000-8,000 per ship, meaning a total of between EUR 88.6 and 177.2 million for existing (EU and non-EU) fleet calling at EU ports ²⁰⁵	/ ²⁰⁶	/
		Costs to keep the IHM updated	Recurrent	Between EUR 500-1500 per ship per year meaning a total of between EUR 11-33.2 million per year ²⁰⁷	/	/
Direct compliance costs	Ship recycling plan costs	Costs associated to the development and approval of a ship recycling plan	Recurrent	/	From EUR 2,300 in the United Kingdom to EUR 100,000 in Norway.	Up to EUR 160 000 per annum based on 7~10% of the total time dedicated by national administrations to the SRR
Mixture of direct compliance costs and enforcement costs	European List management costs	EU resources mobilised to manage the European List (compliance cost), and desk assessment and inspections of third country applications to ensure enforcement	Recurrent	/	/	0.75 of a FTE and EUR 3 million spent between 2016 and 2023

²⁰⁵ Unit costs based on the survey and interviews. Total estimate based on the number of EU and non-EU vessels (i.e., 22,146) calling on EU ports in 2019 according to AIS data.

²⁰⁶ When vessels do not come with a proper IHM, recycling yards may face the costs shipowners should normally bear to prepare an IHM or complementary costs to assess the hazardous materials with additional samplings on the ship to properly prepare the ship recycling plan.

²⁰⁷ Estimates of unit costs are based on the responses to the survey and interviews. Total estimate based on the number of EU and non-EU vessels (i.e., 22,146) calling on EU ports in 2019 according to AIS data.

TABLE 1: Overview of costs and benefits identified in the evaluation

Type	Name	Description	One-off / Recurrent / Long-term	Stakeholder		
				Shipowners	Recycling facilities	MS / EU administrations
Direct compliance costs	Survey costs	Costs to perform surveys of ships	Recurrent	+/- EUR 2,100, meaning a total of around EUR 20 million ²⁰⁸	/	Up to EUR 500,000 per annum based on 30% of the total time dedicated by national administrations to the SRR (Typically it is outsourced to recognised organisations and charged to the shipowners)
Direct compliance costs	Certificate costs	Costs associated with the issuance of inventory and ready for recycling certificates	Recurrent	+EUR 5,500, meaning a total of around EUR 3.7 million ²⁰⁹	/	Up to EUR 160,000 per annum based on 10% of the total time dedicated by national administrations to the SRR (Typically it is outsourced to recognised organisations and charged to shipowners)
Direct compliance costs	Ship recycling facilities approval costs	Costs associated with the authorisation of ship recycling facilities	Recurrent	/	/	Up to EUR 320,000 per annum based on between 5% and 20% of the total time dedicated by national administrations to the SRR
Direct compliance costs	Costs of environmentally sound and safe recycling	Costs for selling to a facility on the European List instead of a non-compliant facility in South Asia.	Recurrent	+/-EUR 200-350/ ton (LDT) or EUR, resulting in +/- a cost of 178 million for dismantling vessels in facilities on the European List over the period 2019-2023 ²¹⁰	/	/
Direct compliance costs	Investment costs	Costs of the upgrade to meet the required standards	One-off	/	Very variable depending on the upgrade needed and size of the yard. Amounts to 0.5 million in USA but can easily be 10 times more in South Asia ²¹¹ .	/

²⁰⁸ Total estimate based on the number of EU-flagged vessels (i.e., 9,523) calling on EU ports in 2019 according to AIS data.

²⁰⁹ Total estimate based on the number of individual vessels (i.e., 678) recycled in the EU in 2019 according to EMSA data.

²¹⁰ These ‘costs’ are actually additional revenues that other shipowners would have made by beaching the vessels in South Asia.

²¹¹ This does not include costs for upgrade needed for downstream waste management facilities and emergency capabilities, where necessary.

TABLE 1: Overview of costs and benefits identified in the evaluation

Type	Name	Description	One-off / Recurrent / Long-term	Stakeholder		
				Shipowners	Recycling facilities	MS / EU administrations
Mixed of direct and indirect compliance costs	Operational and maintenance costs	Costs to operate and ensure maintenance in accordance with the standards	Recurrent	/	Up to +- EUR 100/ton ²¹² As well as longer time necessary for dismantling vessels	/
Enforcement costs	Port State control	Port State inspections	Recurrent	/	/	Up to EUR 80,000 per annum based on less than 5% of the time needed for a Port State control inspection
Enforcement costs	Costs related to applying penalties, sanctions, monitor for infringements	Costs to monitor and ensure that the SRR provisions are applied	Recurrent	/	/	Up to EUR 800,000 per annum based on between 3%~50% of the total time dedicated by national administrations to the SRR
Direct compliance costs	Reporting costs	Costs to report to the European Commission	Recurrent	/	/	Up to EUR 80,000 per annum based on <5% of the total time dedicated by national administrations to the SRR
Direct benefits	Economic benefits	Economic benefit of being included in the European List	Recurrent		(for some yards) Increased demand, turnover and jobs ²¹³	
Indirect benefits	Reputational benefits	Reputational benefit of being included in the European List	Recurrent	/	Not quantifiable	/
Direct benefits	Social benefits	Improved health and working conditions	Recurrent	Workers: improved health and working conditions (less accidents, enhanced health monitoring, better evaluation of the safety risks and protection of the workers). Indirectly, these benefits affect positively all stakeholder groups and the whole society ²¹⁴ .		
Direct benefits	Environmental benefits	Decreased environmental damage from ship-recycling activities	Recurrent	Less pollution of air, noise, soil, water and sediments resulting from the operations of the recycling facilities that applied or are on the European List as well as better environment monitoring ²¹⁵ . Indirectly, these benefits affect positively all stakeholder groups and the whole society		

²¹² Estimates based on the costs incurred by an applicant to European List in India working in accordance with standards of EU companies.

²¹³ Fluctuating depending on market conditions. No quantitative data available.

²¹⁴ Based on qualitative analysis. Quantification/monetisation not possible.

²¹⁵ Based on qualitative analysis. Quantification/monetisation not possible.

TABLE 2: Overview of simplification and burden reduction

<i>Simplification and burden reduction (savings already achieved)</i>						
	Ship recycling facilities		Shipowners		Administrations	
	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
	/		Reduction of administrative burden was expected for both Member States and shipowners mainly related to the early implementation of the HKC in EU legislation, preventing in that way 27 diverging versions of national legislation. This happened to some extent but is not quantifiable.			
<i>Potential simplification and burden reduction (savings)</i>						
	Ship recycling facilities		Shipowners		Administrations	
	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
Considering longer period for inclusion in the European List until it has to be renewed, considering monitoring mechanisms in place.	Instead of needing to be renewed every 5 years, it could be set to say 8 years (to be investigated).		/		Instead of needing to be renewed every 5 years, it could be set to say 8 years (to be investigated). This would have also a burden reduction effect on the Commission	
Waiving the certification by an independent verifier required in the context of the renewal procedure of facilities located in third countries if the yard was subject to a recent (to be defined) inspection by the Commission.	The cost of a certification process (for a renewal) by an independent verifier. This concern only ship recycling facilities located in third countries.		-		-	
Rationalisation and/or data flow between the EU portal DONA and ship recycling module of GSIS (IMO reporting portal) to implement ‘once only principle’ (after entry into force of the HKC and implementation of GSIS implementing ship recycling module	n.A.		n.A.		Recurrent (note that it is not a simplification compared to the evaluation period but a potential of rationalisation to avoid duplication of reporting after the into force of the HKC in 2025	
Ensuring optimal synergies between HKC and SRR (avoiding unnecessary duplications)	n.a.		Recurrent (note that it is not a simplification compared to the evaluation period but a potential of rationalisation to avoid duplication of certification, port state control and reporting after the into force of the HKC in 2025 (to be investigated)			

ANNEX V STAKEHOLDERS CONSULTATION - SYNOPSIS REPORT

This Annex provides an overview of the consultation activities carried out in line with the consultation strategy for this evaluation, as well as the responses and results received.

Consultation strategy

The stakeholder consultation strategy aimed to complement the information collected through desk research in policy documents, reports, literature and databases. It included the use of the following consultation tools:

- **A call for evidence:** to gather views from the public and stakeholders on the SRR as a starting step in the evaluation process.
- **A Public consultation:** to complement the evidence collected with targeted tools to support the analyses by asking questions to a larger audience, granting them the possibility to contribute to the evaluation and future review process of the Regulation.
- **Targeted consultation:** to collect specific evidence from a variety of groups that represent the enforcers and addressees of the Regulation, as well as other parties that play a role in the ship recycling system. This included notably the running of:
 - **Targeted surveys:** to collect (to the extent possible quantitative) information, which cannot (easily) be found in written sources.
 - **Targeted interviews:** to collect more qualitative insights and complement the inputs collected through the public consultation and surveys.
- **General workshop:** to complement primary data collection (from research and other consultation activities) as well as to validate the initial resulting analysis performed.
- **Dedicated workshop:** to complement the data on ship recycling capacity.
- **Expert group meeting:** to validate findings.

The table below presents an overview of the stakeholder groups targeted through the different consultation activities.

Overview of stakeholder groups consulted per consultation activity

Stakeholder group	Call for evidence /Public consultation	Targeted consultation		Workshops	Expert group meeting
		Survey	Interviews		
1. Member State and third state authorities (in their capacity as Flag State, Port State, environmental administrations competent for recycling facilities)	√	√	√	√	√
2. Shipowners	√	√	√	√	√
3. Cash buyers	√			√	
4. Recycling facilities	√	√	√	√	√

5. Steel industry	√	√	√	√	
6. Classification societies	√	√	√	√	
7. Banks financing the shipping sector	√				
8. Maritime Law offices	√	√			
9. EU and international associations / organisations	√	√	√	√	√
10. Academia, research institutions and civil society	√	√	√	√	√
11. Citizens	√				

1. Call for evidence

A call for evidence²¹⁶ for the evaluation of the Ship Recycling Regulation was launched on the Have Your Say website between 2 and 30 June 2022 to gather views from the public and stakeholders on the SRR as a starting step in the evaluation process. A total of 16 responses were submitted from stakeholders representing different groups such as businesses (4 respondents) and business associations (4 respondents), NGOs (2 respondents), citizens (2 respondents) as well as one public authority and trade union. Inputs provided by respondents across evaluation criteria were analysed and integrated into each evaluation criteria of the study. These inputs were triangulated with inputs provided through the public and targeted consultations and contributed to the evidence base of the evaluation analysis.

2. Public consultation

An open public consultation was published on the ‘Have your say’ portal²¹⁷ and made available in all EU languages to gather opinions and evidence on the key elements (effectiveness, coherence, relevance and EU-added value) of the SRR for 12 weeks between 15 March 2023 and 7 June 2023. The questionnaire was targeted at a broad range of stakeholder groups, including the general public, public authorities and bodies responsible for the enforcement of the Regulation, shipowners and recycling facilities, industry and sectorial associations, environmental organisations and NGOs, universities and research institutes.

Respondents’ profile

A total of 63 responses were received from 18 Member States and 7 non-EU countries. No duplicates nor campaigns were identified among the answers provided by respondents. Most contributions to this public consultation came from respondents identifying as businesses and business associations (44%, 28 out of 63 respondents), followed by public authorities (27%, 17 out of 63 respondents), EU and non-EU citizens (13%, 8 out of 63 respondents) and non-governmental organisations (11%, 7 out of 63 respondents). A large majority of respondents (83%, 52 out of 63 replies) replying to the public consultation indicated being very familiar or familiar with the Ship Recycling Regulation.

Inputs received

²¹⁶ [EU Ship Recycling Regulation – evaluation \(europa.eu\)](#)

²¹⁷ [Have Your Say website](#)

Effectiveness

Most respondents consider that the EU Ship Recycling Regulation has been successful in achieving its objectives compared to a situation without any EU legislation. Overall, 86% (54 out of 63 replies) of respondents consider that the Regulation was to a large or some extent successful in preventing and reducing adverse effects on human health and the environment and in ensuring the proper management of hazardous materials on ships. This opinion was globally consistent across all stakeholder groups. However, it is noteworthy that 67% of NGO respondents hold a different point of view, stating that the Regulation had no effect.

Over two-thirds of respondents (67%, 42 out of 63 replies) also consider the Regulation successful in ensuring that EU-flagged ships are dismantled in safe and environmentally sound ship recycling facilities. Within the group affirming the effectiveness of the regulation, stakeholders identified as NGOs, EU citizens and others are the most favourable in their views, demonstrating support for the regulation's ability to ensure safe and environmentally sound ship dismantling practices.

Less than half of respondents (46%, 29 out of 63 replies) consider that the Regulation reduced disparities in health, safety and environmental standards between recycling facilities in the EU and in third countries, while 35% (22 out of 63 replies) indicate that the Regulation had no effect in this regard. When analysing the responses of the different stakeholder groups, it was found that companies, business associations and public authorities are more likely to support the effectiveness of the Regulation in this respect. In contrast, stakeholders among NGOs and academic and research institutions state that the regulation had no effect or negative effect.

A majority of respondents (78%, 49 out of 63 replies) think that the Regulation's requirement to develop and maintain an inventory of Hazardous Materials (IHM) was very effective or effective, while 49% consider the control and enforcement of IHM as such. The opinion is shared across the different stakeholder groups.

Almost two-thirds of respondents (65%, 41 out of 63 replies) think that the safety and environmental standards requirements for ship recycling facilities to be listed on the European List were very effective or effective. However, it is important to note that the assessment of effectiveness was less favourable among certain stakeholder groups. Specifically, business associations and companies/businesses were less likely to consider these standards requirements effective.

Respondents' views on the effectiveness of the requirements to monitor ship recycling facilities differ, with only 37% of respondents considering the monitoring of EU ship recycling facilities as very effective or effective and 38% for the monitoring of third countries' facilities. These views are consistent among the various stakeholder groups.

When asked about the European List of ship recycling facilities, almost two-thirds of respondents (63%, 40 out of 63 replies) strongly or somewhat agree that the List has been an effective tool in preventing and reducing adverse effects on human health and the environment. Additionally, a majority of respondents (73%, 46 out of 63 replies) think that the list has a brand value and increases the reputation of the facilities included on the list. These opinions are consistent across all stakeholder types.

Nevertheless, around half of respondents do not consider that the European List has sufficient recycling capacity to cover current and future needs. 43% of respondents (27 out of 63 replies) strongly or somewhat disagree that the list has sufficient capacity to cover current needs and 57% (36 out of 63 replies) disagree that it has sufficient capacity for forecasted needs. These opinions are particularly shared among businesses and business associations, notably shipowners (9 out of 9 replies).

Coherence

With regards to the coherence of the Ship Recycling Regulation, less than half of respondents consider the Regulation as very coherent or coherent with other EU priorities. About 44% of respondents think that the Regulation is very coherent or coherent with the EU's transition towards a circular economy (27 out of 63 replies) and its ambition to achieve zero pollution for air water and soil (28 out of 63 replies).

However, 46% of respondents (29 out of 63 replies) think the Ship Recycling Regulation is not coherent or not coherent at all with the EU's sustainable and smart mobility strategy and 37% of respondents (23 out of 63 replies) do not consider it coherent with the EU's strategic autonomy policy. When perceptions are analysed according to stakeholder groups, two distinct categories emerge. Academic and research institutions tend to consider regulation to be more coherent in all these areas. In contrast, NGOs, business associations, businesses and public authorities show more mixed views. The different opinions between the two groups remain when considering the priorities individually.

Relevance and EU-added value

A majority of respondents consider the Ship Recycling Regulation as relevant and recognise its EU-added value. 87% of respondents (59 out of 63 replies) consider the Regulation to be a relevant piece of legislation and to bring better results than if Member States were acting alone. The opinion is shared across the different stakeholder groups.

However, 46% of respondents (29 out of 63 replies) do not consider the scope of the Ship Recycling Regulation to be appropriate. In this regard, the suggestion was particularly made for enlarging the scope of the Regulation to go beyond the flag of the vessel and studying the possibility of covering vessels below 500 GT. When examining responses across stakeholder groups, it was observed that all groups demonstrated a similar pattern of response except for the NGO respondents. In this group, the view was unanimous: none of the NGO respondents considered the scope of the regulation to be appropriate.

On the articulation of the European List with an entry into force of the Hong Kong Convention, over two-thirds of respondents (68%, 43 out of 63 replies) consider that the European List should not automatically include ship recycling facilities having received a Hong Kong Convention certification, considering the stricter requirements of the EU regulation. About a fifth of respondents (22%, 14 out of 63 replies) consider that the European List should include all ship recycling facilities, while 3% think that the European List should be removed if the Hong Kong Convention enters into force. These views remain consistent across all types of stakeholders.

3. Targeted surveys

The survey questionnaire was open for about a month, with an official launching date of 3 March 2023. The survey has been formally closed on 31 March 2023. Together with the European Commission, a long list of respondents (i.e. 514 individual contacts) was selected

and invited to participate in the survey questionnaire. The questionnaire aimed to collect inputs on the key elements of the SRR (effectiveness, efficiency, relevance, coherence and EU added value) as well as inputs feeding the study on a potential financial incentive.

Respondents' profile

The distribution of the questionnaire led to a total of 148 registered results. Out of those 148 responses, many have been found incomplete (i.e. only introductory questions answered) or duplicates (i.e. multiple entries under the same name and/or organisation). After the cleaning process had been completed, the team ended up with a sample of 79 respondents, of which 69 reached the end. Respondents answering the survey represented national competent authorities (20 respondents), recycling facilities (17), EU and international associations (8), shipowners (7), classification societies (6) and other stakeholder groups such as maritime law offices, academia, cash buyers, the steel industry.

In parallel, **another targeted survey** was conducted between 03 March and 12 April 2023 to collect inputs on **enforcement procedures** and sanctions in place in Member States for infringements and circumvention of the SRR. After the cleaning process was completed, 17 responses from respondents originating from 9 MS (FR, PL, MT, LT, LI, SK, LU, BE, NL) were analysed. Responding stakeholders involved competent authorities responsible for recycling facilities; administrations responsible for duties related to ships flying their flag or to ships operating under their authority; Port State Control Inspectors; Environmental Inspectors/Police Environmental agencies; Prosecutors officers, and NGOs. Inputs provided for this survey were directly included in the study on enforcement procedures and sanctions in place related to the SRR.

Inputs received

Effectiveness

A large majority of stakeholders surveyed consider that the SRR contributed to a large or some extent to prevent and reduce the adverse effects of ship recycling on the environment (62 out of 67 responses) and on human health (57 out of 69 responses). These responses are shared across all stakeholder groups.

Additionally, most respondents surveyed (52 out of 60 responses) also indicate that the SRR contributed to a large or some extent to reducing disparities in environmental and health & safety standards between recycling facilities in the Union and in third countries. This opinion is shared across stakeholder groups except for academic and research institutes and international organisations. Among respondents indicating the SRR had no or a negative effect in reducing disparities, two stakeholders (one shipowner and one recycling yard) pointed out the difference in standards between European (higher standards) and Asian recycling facilities (lower standards).

Respondents to the survey disagree on the question if the ship recycling capacity currently included in the list can cover the current needs or not. Most participants in the survey disagree that the capacity is sufficient (17 out of 29 responses to the question). Looking at the group of recycling facilities (n=14), 7 consider the capacity insufficient, while 4 consider it sufficient (with 3 neutral answers).

As concerns the forecasted needs, out of 28 respondents, 16 strongly disagree that the European list of ship recycling facilities has sufficient capacity to cover future needs. Responses provided

among recycling facilities particularly differ, showing different points of view among the stakeholder group - 6 out of 14 strongly disagree that the capacity is sufficient, while 3 strongly agree.

Efficiency

Overall, around half of the stakeholders surveyed (18 out of 39 responses) consider the SRR efficient, with benefits outweighing (by far) the costs associated with the requirements. This opinion is particularly shared among recycling facilities (9 out of 15 responses), competent authorities such as Member States in their capacity of Port State (3 out of 5 responses) and classification societies (3 out of 4 responses). A fourth of stakeholders (10 out of 39 responses), particularly Member States in their capacity as Flag States (5 out of 9 responses) consider the costs of the SRR proportionate to the benefits.

Another fourth of respondents (11 out of 39 responses) however indicate that the SRR is inefficient or very inefficient. This opinion is notably shared among a majority of academic, research and civil society organisations (2 out of 3 responses), half of the shipowners surveyed (2 out of 4 responses) and a minority of recycling facilities (4 out of 15 responses).

On costs associated with the SRR, a majority of shipowners (associations) surveyed (4 out of 5 responses) indicate low costs for shipowners flying the flag of a Member State associated with the SRR requirement to provide and notify ship recycling facilities operators and Member States with all the necessary information to recycle. Similarly, costs associated with establishing and maintaining a list of hazardous materials are considered moderate to low for ships flying an EU flag as well as for ships flying the flag of a third country (4 out of 5 responses).

Administration and competent authorities consulted through the survey indicate low costs for some of the SRR requirements. This is notably the case for costs associated with cooperation with other Member States authorities to prevent and address potential circumventions (6 out of 9 responses) and for the reporting to the EC on the state of ship recycling (5 out of 8 responses). Most of the administration and competent authorities indicate moderate costs associated with granting ship recycling facilities authorisations and performing the monitoring of those authorised (5 out of 9 responses), issuing inventory and ready-for-recycling certificates (6 out of 11), approving ship recycling plans (4 out of 7 replies) and performing surveys to ensure compliance with the list of hazardous materials and ship recycling plans (5 out of 9).

Administration and competent authorities indicate low to moderate costs associated with the control and inspection of inventory, ready-for-recycling certificates and statements of compliance (3 out of 6 responses each).

Quantifications of the costs associated with the development of a ship recycling plan are provided by a few recycling facilities but are very different and range from GBP 2,000 in the UK to EUR 100,000 in Norway. While half of the recycling facilities – both listed and non-listed - in the EU consider costs to develop a ship recycling plan as low (4 out of 8 responses), a majority of them indicate high costs associated with compliance with EU requirements to be included in the European list (5 out of 8 responses). The scope of these costs is currently unknown, with one yard claiming they could reach EUR 500,000.

High costs are also identified by ship recycling companies (8 out of 12 responses) to apply to the European list and meet the requirements. These views are shared by both non-listed and listed yards.

Regarding benefits brought by the SRR, half of the recycling facilities, shipowners and the steel industry surveyed (7 out of 13 responses) indicate that the SRR was a determining factor in the evolution of their revenues. One recycling yard mentioned the role of the SRR in stimulating investors' funding to establish recycling facilities. Another recycling yard mentioned that the SRR incentivised the facility to use better quality personal protective equipment which reduced workers' injuries and therefore resulted in lower costs.

Coherence

A majority of stakeholders surveyed do not see inconsistencies between the SRR and the Flag State requirements (11 out of 14 responses), the Port State Control (9 out of 13 responses) or the Waste Framework Directives (7 out of 10 responses). However, a majority indicates elements of inconsistencies between the SRR and the Waste Shipment Regulation (11 out of 17 responses), the Basel Convention (11 out of 16 responses) and the Hong Kong Convention (13 out of 19 responses).

Some stakeholders clarified their answers stating that inconsistencies with the HKC (2 responses) lie in the difference of hazardous materials covered and in the management of downstream waste. With regards to the WSR and the Basel Convention, one respondent highlighted a potential contradiction in that the WSR implements the Basel Ban Amendment into EU law where it prevents waste from OECD countries from being recycled in non-OECD countries, which would subsequently exclude non-OECD countries from the European List of ship recycling facilities under the SRR.

EU added value

Stakeholders' responses to the targeted survey indicate a positive EU-added value of the SRR compared to what Member States could have achieved alone for all three points. A large majority of stakeholders surveyed (46 out of 57 respondents) think that the SRR brings an added value compared to what Member States could reasonably achieve alone in the absence of the entry into force of the HKC. A fifth of the stakeholders surveyed (11 out of 57 respondents, which mainly represent recycling facilities, shipowners and two Member States) disagree with this statement.

A few stakeholders (2 out of 57 responses) see the SRR as a solution to avoid the multiplication of national legislations and act faster than what Member States alone could achieve. However, more than half of the survey respondents (31 out of 45 responses) also see opportunities to simplify the legislation or reduce unnecessary regulatory burdens.

A wide range of stakeholders consulted (16 out of 68 respondents representing ship recycling facilities, classification societies, consultancies and academics) also values the role of the SRR in setting minimum standards for ship recycling. One stakeholder recognises the role of the SRR to ensure the required level playing field for the maritime industry and recycling yards operating in the EU. However, three stakeholders also mention the need to not limit the level playing field at the EU level only and take instead a global approach as initially foreseen with the HKC.

Relevance

A majority of stakeholders surveyed (27 out of 45 responses) consider the need to extend the scope of the SRR beyond ships flying the flag of a Member State. However, views differ according to the stakeholder group. While a majority of recycling facilities (10 out of 11 responses) and environmental authorities (4 out of 4 responses) are in favour of extending the scope of the SRR, a majority of shipowners (5 out of 6 responses), Flag States (5 out of 7 responses) and Port States (5 out of 6 responses) are against.

Arguments in favour of a scope extension brought by stakeholders suggest including all types of ships (fishing vessels, yachts, inland navigation), including ships of less than 500 gross tonnage. Suggestions to extend the scope to the ownership of the ship instead of the flag the ship is flying were also made by one public authority. On the other hand, arguments against it point out the existing limited capacity of the European List to absorb existing ship recycling needs as well as the misalignment with the scope of the HKC it would create.

Concerning the relevance of a financial instrument, the majority of stakeholders surveyed either strongly agreed or agreed that a financial incentive (completely or partially) bridging the revenue gap may be helpful to encourage safe and environmentally sound recycling. Overall, the majority of respondents surveyed across stakeholder groups, except for shipowners and EU and international believe that introducing a financial incentive would have a positive impact. However, stakeholders' views on the impacts of introducing a Ship Recycling Licence for smaller vessels differ. The stakeholders in favour indicate that this would be consistent with the broadening of the scope of the EU SRR. They indicate that the same rules should apply to all vessel types, including pleasure yachts and shipowners that often adjust tonnage to circumvent regulation.

The stakeholders that disagree with the extension are often also not in favour of the financial instrument. The other arguments against the extension of under 500 GT vessels are that (i) it would cause market distortion, given that the scope of SRR Regulation would be wider than the one of the HKC, (ii) it would unreasonably add a disproportionate burden to small shipping companies and thus would not be in line with the principle of proportionality.

4. Targeted interviews

During the targeted interviews, questions were asked to assess how well the regulation has achieved its objectives, and whether it continues to deliver in terms of effectiveness, efficiency, relevance, coherence and EU-added value, as well as areas for future improvement. Some interviews also touched upon the likely evolution of the current situation in the absence of a potential financial incentive and the impacts stemming from its implementation. As a follow-up to the interviews, **written feedback** was provided by a few Member States on issues related to SRR administrative costs and burdens. This input was used for the analysis of Efficiency.

Respondents' profile

A total of 48 organisations were interviewed and/or provided written feedback between May and September 2023. These included stakeholder groups such as EU and international associations, Member States' competent authorities, shipowners, recycling yards, businesses, classification societies and representatives from the steel industry.

Inputs received

Effectiveness

Stakeholders interviewed have different views on the effective **role the SRR has in ensuring that EU-flagged ships are safely dismantled**. Two environmental administrations recognised that the SRR allowed to establish good standards for the dismantling of ships and a couple of stakeholders (one classification society, one shipowner association and one shipowner) consider that the SRR has contributed to setting higher standards than the HKC would have. One shipowner association, one consultancy and one recycling yard however point out the lack of effectiveness of the SRR due to the existing circumventions of the regulation where ships are being re-flagged before being sent for recycling, while two shipowners refer to the lack of available capacity (with difficulties to host larger vessels and with recycling yards already occupied with other activities such as the recycling of offshore oil and gas facilities) as hampering factors. One public authority also indicated low levels of ship recycling requests as an indicator of the limited effectiveness of the SRR.

Views on the **evolution of health and safety and environmental standards in EU ship recycling facilities** are positive across most stakeholders interviewed. One classification society and one consultancy interviewed note the positive impacts of the regulation to establish recycling standards. They notably referred to the inclusion of requirements for safety incident reporting and follow-up (corrective measures), the provision of personal protective equipment to workers, the use of fit-for-purpose machinery to move the ships into the dismantling surfaces, emergency response (availability of firefighting equipment, medical services) and environmental monitoring procedures in listed yards. Additionally, one recycling yard, one classification society and one organisation from the steel industry considered that the SRR contributed to creating a business case and establishing a market – even if currently limited – for ship recycling in Europe.

Stakeholders' views are split on the effectiveness of the SRR to **ensure the proper management of hazardous materials**. On the one hand, two environmental administrations stress the poor management of hazardous waste afterwards and notably the persistence of health and environmental risks linked to the presence of asbestos and PFOS in extinguishing systems on tankers which remain insufficiently addressed. On the other hand, one consultancy considers that the SRR had a positive impact, requiring shipowners to establish an inventory of hazardous materials.

On the **role of the SRR in facilitating the Hong Kong Convention**, one public authority interviewed considered that the regulation did not contribute to facilitating the ratification of the convention.

When asked about potential changes to **improve the regulation's enforcement**, most stakeholders (one shipowner association, one consultancy, one organisation from the steel industry and one NGO) agree with the idea of introducing the **concept of beneficial ownership liability**. One shipowner association also suggests additional solutions: these include for example the extension of the SRR's scope to include all ships that have, at some point within their lifetime, flown an EU flag. Another suggestion put forward is to require a temporary restriction to obtain a recycling licence (e.g., for a couple of years) for EU vessels having re-flagged to a non-EU flag, to discourage re-flagging practices just before sending the vessel to waste/recycling.

While public authorities do not necessarily object to the idea of introducing the concept of beneficial ownership liability, two of them mention that it could complicate enforcement due

to legal difficulties. They notably refer to the complexity of identifying ownership and the necessity of agreeing on a clear definition of ‘beneficial owner’ and suggest that introducing a hierarchy of responsibilities is essential. One consultancy also has more nuanced views on the introduction of the concept which is not perceived as a comprehensive solution for improving enforcement but did not specify further its reasoning.

On whether current **sanctions** are sufficient to ensure an effective enforcement of the regulation, a couple of stakeholders (one consultancy, one recycling yard) consider that the current administrative sanctions in case of infringement are too low to be effective while one public authority considers them adequate.

Efficiency

Interviews with stakeholders show differences in **costs for public authorities** in charge of implementing the SRR. One public authority mentioned that the enforcement costs of the SRR were minimal for their administration as the national legislation is already well aligned with EU standards. Another public authority estimated enforcement costs to be about 10% of an FTE to monitor ship recycling facilities and up to 5% of an FTE for other reporting and monitoring activities. Finally, a third authority indicated that the SRR requires significant resources, mobilising at least 8 to 9 FTEs. However, these costs can also vary across competent authorities of the same jurisdiction depending on their level of responsibility to enforce the regulation.

Costs associated with the development and maintenance of IHM also vary according to stakeholders interviewed. Three consultancies and one shipowner association explained that many shipowners use external companies to develop and maintain their IHM as these activities can entail important administrative tasks to cope with.

Coherence

A few concerns related to the **internal coherence** of the SRR were raised by a couple of stakeholders. One NGO emphasised the challenges arising from the regulation's current definition of 'ship recycling', which is considered too narrow to be sufficiently aligned with broader sustainability goals. One public authority also raised concerns about the **ambiguity in the definitions** within the SRR, the HKC, the Basel Convention, and the Waste Shipment Regulation. The lack of a specific definition of when a ship becomes ‘waste’ is identified as a significant issue affecting both supervision and enforcement efforts. Another public authority identified procedural gaps within the SRR as an internal coherence concern, noting the absence of explicit requirements for maintaining Part I of the inventory of hazardous materials.

Regarding **external coherence**, one NGO recognised some progress in aligning the SRR with the circular economy objectives and other environmental legislation, especially concerning high-quality scrap steel recycling from ships. However, they also identified areas for improvement, considering that the SRR and the Waste Shipment Regulation overlap. One public authority also considered that the SRR is not consistent with the Waste Shipment Regulation, supporting simplification measures to enhance overall external coherence, such as extending the approval period for EU facilities and limiting the number of entities under obligations.

EU added value

Stakeholders interviewed recognise **the EU added value of the ship recycling regulation**. One public authority mentioned the added value of the SRR in setting stricter rules for ship recycling and setting an example for ship recycling practices beyond the EU. This opinion is shared by other stakeholders (one organisation from the steel industry and one consultancy) who stress the role of the SRR in providing clear guidance for the industry on the direction to follow to adopt and implement sustainable ship recycling practices.

A few stakeholders (one public authority and one consultancy) consider that having a regulation at the EU level rather than at national levels allows to reduce discrepancies and inconsistencies. They considered that the SRR avoids the multiplication of different legislations across countries and sets a **harmonised approach and standards**.

Relevance

Stakeholders offer diverse perspectives on the relevance of the SRR. Two consultancies expressed concerns about the **coexistence of dual regulatory frameworks**, such as the HKC and European regulations, which could pose challenges in Europe, and stressed the importance of aligning these regulations for consistency. They suggested exploring synergies with complementary sectors and expanding the SRR's scope to include non-EU-flagged ships, irrespective of their ownership or flag.

From a shipowner's perspective, limitations in the geographical distribution and size capacity of the European List of recycling yards' have posed challenges. According to them, the current capacity, the pricing constraints and underquoted vessels in approved yards make it difficult for stakeholders to meet the SRR standards. Questions on whether the SRR's impact stems from its effectiveness or diplomatic efforts were raised, suggesting focusing on **enhancing global regulations like the HKC instead**.

5. General workshop

The workshop included three sessions: one related to the evaluation of the SRR which touched upon issues related to capacity, control of hazardous materials and the extension of the regulation's scope; another one discussed the enforcement of the regulation and included exchanges of views on the definition of end-of-life vessels, transfer of liability, and effects of sanctions; a third session dealt with the introduction of a potential financial incentive to facilitate safe and sound ship recycling. The key points raised per topic are presented below for the three sessions.

Respondents' profile

Organised in June 2023, the workshop gathered 62 stakeholders and 26 representatives of Member States. Out of these 88 participants, 36 joined the meeting in person and 52 online via a teleconferencing platform.

Session 1 – Evaluation of the Ship Recycling Regulation

The first session focused on the evaluation of the Ship Recycling Regulation. The participants expressed different opinions on two main aspects: the capacity of the Facilities on the European List to handle the current and future demand for ship recycling and the control of hazardous materials that are present or generated during the recycling process. Some stakeholders argued that there is enough capacity on the Facilities on the European List, while others pointed out the limitations and challenges, especially for larger ships. Some stakeholders also raised

concerns about the enforcement and monitoring of the regulation, the quality and availability of the inventory of hazardous materials, and the level playing field between the EU and non-EU ship recycling facilities. There was a debate on whether to extend the scope of the regulation to other vessels, such as fishing vessels, inland waterway vessels, and military vessels, and under what conditions.

Session 2: Enforcement

The second session discussed the challenges and solutions for the effective enforcement of the Ship Recycling Regulation. The participants highlighted the role of different actors, such as flag states, port state control, classification societies, and financial institutions, in ensuring compliance with the regulation. They also addressed the issues of transfer of liability, re-flagging, and beneficial ownership, which can be used to circumvent the regulation or avoid responsibility for ship recycling. They stressed the need for more transparency, cooperation, and harmonization among the relevant authorities and stakeholders, as well as the use of incentives and sanctions to promote responsible ship recycling practices.

Session 3: Financial instrument

The third session debated the pros and cons of a financial instrument, such as the Ship Recycling Licence, to support the implementation of the Ship Recycling Regulation. The participants expressed doubts about the feasibility, effectiveness, and fairness of such an instrument, and raised concerns about its possible negative impacts on the EU ports and shipping industry.

6. Dedicated workshop on capacity

A dedicated workshop on the capacity of recycling yards was held in Brussels on 3 August 2023 and involved representatives from the ship recycling industry and shipowners. The discussion focussed mainly on the current ship recycling capacity in the Facilities on the European List and how it compares to the demand from EU-flagged ships. It also allowed to exchange on respective quantitative data available.

7. Expert group meeting

Findings of the evaluation of the SRR were presented to the expert group on ship recycling during a meeting organised in January 2024. The presentation was followed by discussions. This meeting gathered representatives from national competent authorities, the NGO Shipbreaking platform, ISRA and ECSA. Downstream waste management costs (linked to the costs of management of hazardous materials) and corporate costs (eg insurance) were mentioned as important factors in the determination of the recycling price. Member States also highlighted that the fact that the SRR allows for independent inspection of yards, which the HKC does not, should be considered as an important EU added value. In relation to the efficiency/costs aspects, it was underlined that controls of ships by inspectors are currently mainly documents checks but there is a need for more training, resources, and investigation tools for better enforcement. Finally, the actual impact of the SRR on the ratification of HKC and the concept of beneficial ownership was also questioned.

On enforcement specifically, a few competent authorities raised the possibility of using new tools to enforce compliance and bring evidence of cases where ships are being illegally recycled. They noted the challenges of Port State Control Officers to verify and check some elements such as hazardous materials.

The legal status of an end-of-life vessel is peculiar as an end-of-life vessel can be defined both as a waste and as a ship. When considered as waste, end-of-life vessels are subject to specific rules applying to hazardous waste, as they contain hazardous materials. This dual legal status as hazardous waste and ship has a particular importance in relation to the transboundary movements of end-of-life vessels.

International legal framework

At the international level, the transboundary movements of hazardous waste are subject to the **Basel Convention** on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, which has been in force since 1992 and has 191 Parties, including the EU and its Member States. This Convention sets out a comprehensive regime governing the transboundary movements of hazardous waste. The Convention was amended in 1995 by the so-called '**Ban Amendment**' which prohibits the exports of hazardous wastes from OECD countries to non-OECD countries. The Ban Amendment entered into force at the international level on 5 December 2019. Parties to the Basel Convention which have ratified the Ban Amendment and are members of the OECD are therefore not authorised to allow the export hazardous waste (such as end-of-life vessels) to non-OECD countries.

End-of-life vessels are also covered by **Hong Kong Convention** for the safe and environmentally sound recycling of ships ("HKC"). This Convention aims to address '*the environmental, occupational health and safety risks related to ship recycling, taking into account the particular characteristics of maritime transport and the need to secure the smooth withdrawal of ships that have reached the end of their operating lives*'. It was adopted in 2009 under the auspices of the International Maritime Organisation (IMO). It has 23 Parties, including 11 Member States and Norway. The HKC will enter into force in June 2025. The HKC establishes a dedicated regime for ship recycling, which sets out obligations for its Parties, in respect of the vessels flying their flags and ship recycling facilities located in their territory. One key element of the HKC is that each Party shall only authorise ships to be dismantled in recycling facilities that meet the requirements of the Convention relevant to such facilities; and conversely that recycling facilities shall only be authorised to recycle ships meeting the requirements of the Convention relevant to ships.

Unlike the Basel Convention, the HKC does not contain any geographical limitation, so that it does not prohibit the movements of an end-of-life vessel from OECD to non-OECD countries.

Discussions took place in the context of the Basel Convention on the interplay between the HKC and the Basel Convention. In October 2011, Parties to the Basel Convention encouraged the ratification of the HKC in order to enable its entry into force. However, they could not reach a consensus on the question of equivalence between the Basel and HKC regime²¹⁸. These discussions took place before the Basel Ban amendment and the Hong Kong Convention entered into force. No further discussion took place since then at the multilateral level.

²¹⁸ BC-10/17: Environmentally sound dismantling of ships:
<https://www.basel.int/Portals/4/download.aspx?d=UNEP-CHW-COP.10-BC-10-17.English.pdf>

EU legal framework

At the EU level, the shipments of hazardous waste are regulated through the **Waste Shipment Regulation**, which implements the Basel Convention. This includes the Ban Amendment, which is implemented into EU law through the Waste Shipment Regulation (WSR), therefore establishing a ban on the export of hazardous waste from the EU to countries outside the OECD. The WSR has just been revised and a new version of this Regulation entered into force in May 2024. It contains specific provisions designed to ensure the implementation of the Basel Ban amendment to end-of-life vessels, taking their specificity into consideration. Under the WSR, it is prohibited to export end-of-life vessels which have become waste in the EU to non-OECD countries (and therefore fall within the scope of the Basel Ban amendment). On the other hand, those EU-flagged ships that have become waste outside the EU are exempted from the regime established by the WSR and are subject to the Ship Recycling Regulation, as they are outside the scope of the Basel Ban amendment. This means that they can still get recycled in facilities located outside the OECD, as long as these facilities are included in the European List set out by the Ship Recycling Regulation. In this respect, it is also important to note that a certain proportion of the EU-flagged fleet reportedly operates solely outside European waters. Furthermore, a decision to recycle a ship is often taken while the ship is in international waters outside the jurisdiction of a Member State.

The EU is not a Party to the Hong Kong Convention as only States can become Parties to it. In 2009, the Council adopted conclusions to ‘encourage strongly Member States to ratify the Hong Kong Convention as a matter of priority so as to facilitate its entry into force as early as possible and to generate a real and effective change on the ground.’²¹⁹. The Commission adopted in 2010 a Communication on ‘An assessment of the link between the IMO Hong Kong Convention for the safe and environmentally sound recycling of ships, the Basel Convention and the EU waste shipment regulation.’²²⁰ This Communication laid the ground for the development of the **Ship Recycling Regulation**, which was adopted in 2013. The Council of the European Union adopted a Decision in 2014 authorising Member States to ratify or accede to the HKC. The EU Ship Recycling Regulation contains provisions which implement the HKC and makes several references to the latter. Yet it also includes a few different definitions, more stringent environment and safety requirements, a different control system and standalone administrative documents to support implementation. The Ship Recycling Regulation was amended in May 2024 through the revised WSR²²¹, to ensure consistency with the WSR and a sound implementation of the Ban amendment in EU legislation.

The EU legislation on the transboundary movements of end-of-life vessels is therefore in line with the Basel Convention, including the Basel Ban amendment. It does not go against the Hong Kong Convention, which states in its Article 1(2) that the provision of the HKC shall not be interpreted as preventing a Party from taking ‘more stringent measures consistent with international law, with respect to the safe and environmentally sound recycling of ships, in order to prevent, reduce or minimize any adverse effects on human health and the environment’.

²¹⁹ https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/envir/110626.pdf

²²⁰ COM(2010)88 final.

²²¹ OJ L, 2024/1157, 30.4.2024, <https://eur-lex.europa.eu/eli/reg/2024/1157/oj>

Practical implications

In practice, the EU rules applicable to the transboundary movements of an end-of-life vessel depend on the location where such vessel becomes waste.

If a vessel becomes waste in the EU, then it cannot be exported outside the OECD, in line with the provisions in the waste shipment regulation which implement the Basel ban amendment. In addition, if that vessel is flying the flag of a Member State, it can only be recycled in facilities included in the European List of ship recycling facilities, in line with the SRR.

If a vessel flying an EU flag becomes waste outside the EU, then it is only subject to the SRR and not to the ban on export to non-OECD countries: it can be recycled in facilities outside the OECD, as long as the facility is included in the European List established under the SRR.

In its Communication on ‘Long-term competitiveness of the EU: looking beyond 2030’, the Commission stressed the importance of a regulatory system that ensures that objectives are reached at minimum costs. It committed to rationalise and simplify reporting requirements, with the ultimate aim to reduce such burdens by 25%, without undermining the related policy objectives.

Reporting requirements play a key role in ensuring correct enforcement and proper monitoring of legislation. Their costs are overall largely offset by the benefit they bring, in particular in monitoring and ensuring compliance with key policy measures.

A ‘reporting requirement’ (RR) is a requirement stemming from EU legislation that obliges Member States authorities, private organisations and/or public organisations to provide (in principle periodically) structured or unstructured data (qualitative or quantitative) to competent authorities at EU or national level. The notion of reporting requirements includes the provision of information from businesses to other businesses or from businesses to consumers, while certification, labelling, permitting, and similar processes are not included.

In the context of the SRR, ten potential reporting requirements are identified. Of these, four are included in the Commission’s baseline of reporting requirements (as set out by the Office of Publications and being used to measure the reduction of reporting burdens by 25%). The six excluded are either obsolete, related to notification of competent authorities or contacts, or relate to the Commission notifying the other institutions of the exercise of its delegated acts.

Of the four, each is considered proportionate. The reporting obligations under Articles 14, 15 and 16 are indispensable information for the management of the European List of ship recycling facilities and costs are negligible. Without that information the Commission cannot include the ship recycling facilities that have been authorised by Member States (Article 14) and update related information where needed (Article 16). This said, to reduce administrative burden it could be considered to increase the period of validity of inclusion in the European List (currently of 5 years after which it can be renewed) (see also Annex IV), taking into account the monitoring mechanisms put in place. As the certification by the independent verifiers required for applications and renewals of facilities located in third countries shows some limits, it could also be envisaged to waive that requirement at least for the renewal if the yard was subject to a recent (to be defined) inspection by the Commission. The Commission needs also to be kept informed about any change in the facilities located in third countries and receive updated evidence of compliance for their renewal (Article 15).

The reports by the Member States under Article 21 are important for the enforcement of the Regulation. It enhances transparency of ship recycling and should contribute to Member States taking measures to prevent circumvention of ship recycling rules. With that objective, Member States should report information concerning ships to which an inventory certificate has been issued, ships for which a statement of completion has been received and information regarding illegal recycling and follow up actions that they have undertaken. This information should in principle be ready-made-available in relevant competent authorities’ record. It can be noted that the reporting of these three items is required under the Hong Kong Convention (HKC). However, the HKC includes a longer list of seven items that must be reported annually, whereas the reporting is every 3 years under the SRR. In view of the entry into force of the HKC in June 2025, the Commission is working with EMSA to rationalise the reporting via the Dynamic

Overview of National Authorities (DONA) in accordance with the ‘once only principle’ to prevent double reporting to the IMO and to the Commission. In this context, it will be assessed how a dataflow could take place between IMO Global Integrated Shipping Information System (GISIS) and DONA.

	Article title	Reporting requirement identified by the Office of Publications	<i>In the Commission baseline (for measurement of the 25%)?</i>	Reporting entity	Addressee	Frequency
1	Article 14: Authorisation of ship recycling facilities located in a Member State	Where a ship recycling facility has been authorised in accordance with paragraph 1, the Member State concerned shall inform the Commission thereof without delay.	YES	The Member State concerned	the Commission	Every 5 years and where needed
2	Article 15: Ship recycling facilities located in a third country	The ship recycling company shall provide updated evidence without delay in the event of any changes to the information provided to the Commission and shall, in any event, 3 months prior to expiry of each 5 year period of inclusion on the European List, declare that: (a) the evidence that it has provided is complete and up-to-date; (b) the ship recycling facility continues and will continue to comply with the requirements of Article 13.	YES	Ship recycling company	the Commission	without delay and, in any event, 3 months prior to expiry of each 5 year period of inclusion
3	Article 16: Establishment and updating of the European List	Member States shall communicate to the Commission all information that may be relevant in the context of updating the European List. The Commission shall forward all relevant information to the other Member States.	YES	Member States	the Commission	
4	Article 21: Reports by the Member States	Each Member State shall send to the Commission a report containing the following: (a) a list of the ships flying its flag to which a ready for recycling certificate has been issued, and the name of the ship recycling company and the location of the ship recycling facility as shown in the ready for recycling certificate; (b) a list of the ships flying its flag for which a statement of completion has been received; (c) information regarding illegal ship recycling, penalties and follow-up actions undertaken by the Member State.	YES	Each Member State	the Commission	Every 3 years
5	Article 18: Designation of competent authorities and administrations	Member States shall designate the competent authorities and administrations responsible for the application of this Regulation and shall notify the Commission of those designations. Member States shall immediately notify the Commission of any changes in such information.	NO - provision of information on contact points	Member States	the Commission	-
6	Article 19: Designation of contact persons	Member States shall notify the Commission of the designation of contact persons.	NO - provision of information on contact points	Member States	the Commission	-

7	Article 19: Designation of contact persons	Member States shall immediately notify the Commission of any changes to that information.	NO - provision of information on contact points	Member States	the Commission	-
8	Article 22: Enforcement in Member States	Member States shall communicate to the Commission the provisions of their national law relating to the enforcement of this Regulation and the applicable penalties.	NO - only once off transposition notification	Member States	the Commission	-
9	Article 29: Financial incentive	The Commission shall, by 31 December 2016, submit to the European Parliament and to the Council a report on the feasibility of a financial instrument that would facilitate safe and sound ship recycling and shall, if appropriate, accompany it by a legislative proposal.	NO - obsolete	The Commission	the European Parliament and the Council	-
10	Article 24: Exercise of the delegation	As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.	NO - exercise of derogation power	the Commission	the European Parliament and the Council	-

ANNEX VIII MORE DATA ON VESSEL RECYCLING, AND THE EVOLUTION OF THE FLEET AND ITS RECYCLING FORECAST

1. Detailed information about vessel recycling

1.1. Recycled materials by type of vessel

Table 0-1 Recycled materials and percentage of the recycled weight (LDT) by type of vessel

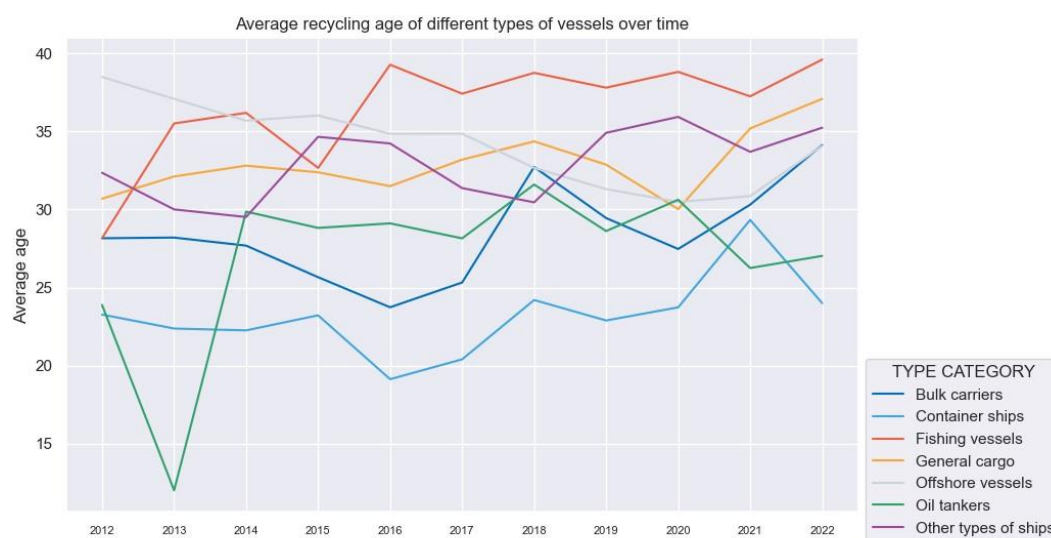
Recycled material	General cargo	Bulk carriers	Oil tankers
Re-rollable ferrous steel	56 - 70%	61 - 76%	72 - 81%
Melttable ferrous steel	10%	8 - 10%	5 - 7%
Cast iron scrap	1.5 - 5%	1.5 - 2.5%	1.5 - 3%
Non-ferrous metals	0.5 - 1%	0.5%	0.5 - 2%
Weight loss	9 - 15%	10 - 16%	10 - 12%
Machinery	4 - 8 %	1 - 6%	0.5 - 2%
Wooden furniture and fitting/ Fixtures	5%	1 - 5%	1.5 - 2%

Source: Compilation based on Mahindrakar et al. (2008).

1.2. Evolution of the average age of recycling from 2012 to 2022

Most vessels have a normal life span of about 30 to 40 years after which they are send for recycling, although in the specific case of container vessels the age of recycling has been consistently lower than that in the period from 2012 to 2022. The average recycling age varies over time, with shipping market conditions largely determining whether the recycling of a vessel is delayed or done before the expected lifetime. Recycling data for this period also suggests that this recycling age varies not only on the type of the vessel as shown in the figure below, but also depending on its size.

Figure 0.1.: Average age of recycling per type of vessel 2012-2022



Source: Elaboration by consortium that carried out the support study based on NGO Shipbreaking Platform and EMSA data.

On the basis of data of the vessels recycled during 2012-2022, the median lifetime for all vessel types have been calculated and are presented in the table below. The calculated median lifetime for vessels recycled in this timeframe is between 19 and 48 years, depending on the type and size of the vessel.

Table 0.2.: Median age at which vessels are recycled, broken down by vessel size and type

Vessel size	Vessel type	Median	Standard deviation
Small GT<500	General cargo	48	7.2
	Other types of vessels	45	15.7
	Fishing vessels	28	n. a.
	Offshore vessels	36	3.0
Medium 500≤GT<25,000	General cargo	33	8.5
	Container vessels	23	5.5
	Bulk carriers	30	7.1
	Oil tankers	28	6.3
	Other types of vessels	34	9.6
	Fishing vessels	37	8.0
	Offshore vessels	36	10.7
Large 5,000≤GT<60,000	General cargo	31	5.1
	Container vessels	20	7.3
	Bulk carriers	24	5.3
	Oil tankers	23	6.3
	Other types of vessels	25	6.3
	Fishing vessels	25	n. a.
	Offshore vessels	33	12.2
Very large GT≥60,000	Container vessels	19	3.3
	Bulk carriers	22	3.7
	Oil tankers	25	8.6
	Other types of vessels	20	5.3
	Offshore vessels	27	11.3

Source: Elaboration by consortium that carried out the support study based on NGO Shipbreaking Platform and EMSA data (EQUASIS).

1.3. Recycling in 2021 and 2022

The table below shows the total number of ships, gross tonnage, and LDT recycled in the last two years for which data was available. It is worth noting that the dataset used include only vessels of 500 GT or above.

Table0.3.: Recycling volumes in 2021 and 2022 by size - number of ships, total volume in GT and LDT

Recycling year	Total number of ships	Gross tonnage	LDT
2021	809	16,206,825	6,348,159

Recycling year	Total number of ships	Gross tonnage	LDT
2022	451	8,067,298	3,225,854
Total	1,260	24,274,123	9,574,013

Source: Elaboration by consortium that carried out the support study based on NGO Shipbreaking Platform and EMSA data

The volumes recycled are lower in 2022 than they are in 2021. The combined recycled volume for 2021 and 2022 can also be broken down by vessel size as seen in the table below.

Table0.4.: Cumulated recycling volumes for 2021 and 2022 by vessel type - number of ships, total volume in GT and LDT (for all ships)

Vessel type	Total number of ships	Gross tonnage	LDT
Bulk carriers	128	5,734,262	1,648,999
Container ships	22	269,904	130,994
Fishing vessels	61	138,757	119,231
General cargo	182	1,121,276	611,962
Offshore vessels	237	4,241,464	2,268,387
Oil tankers	295	8,657,234	2,885,358
Other types of ships	335	4,111,226	1,909,082
Grand total	1,260	24,274,123	9,574,013

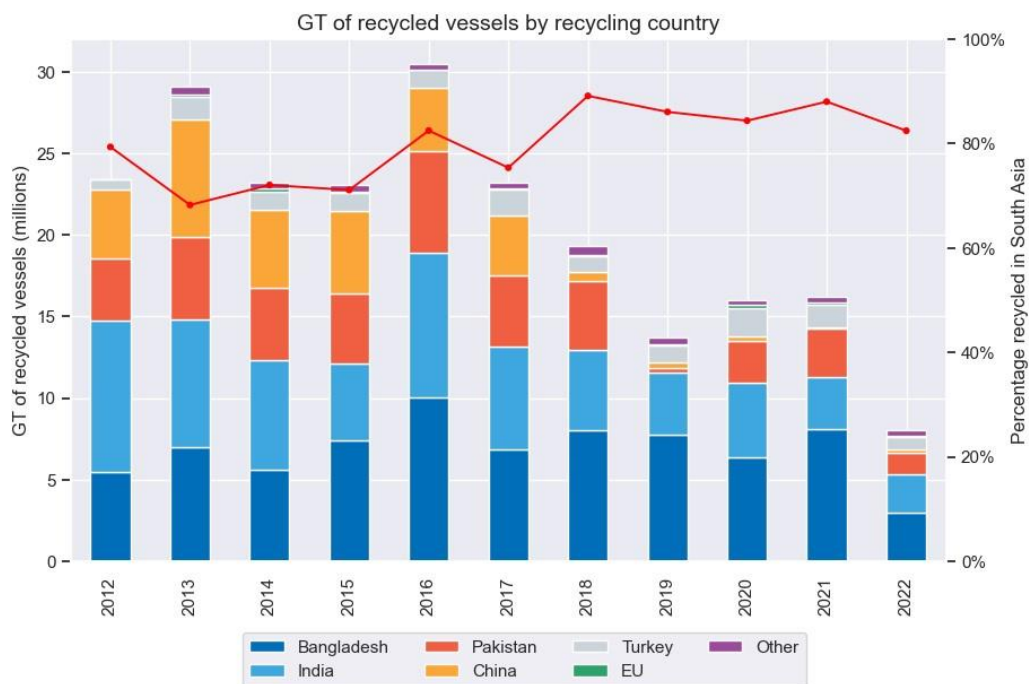
Source: Elaboration by consortium that carried out the support study based on NGO Shipbreaking Platform and EMSA data

The largest share of vessels (measured by GT) over that period is taken by oil tankers, followed by bulk carriers. In contrast, very little container vessels were recycled over that period, possibly reflecting shipping market conditions where container shipping rates were high.

1.4. Evolution of the recycling locations from 2012 to 2022

The figure below shows the geographical distribution of vessel recycling from 2012 to 2022.

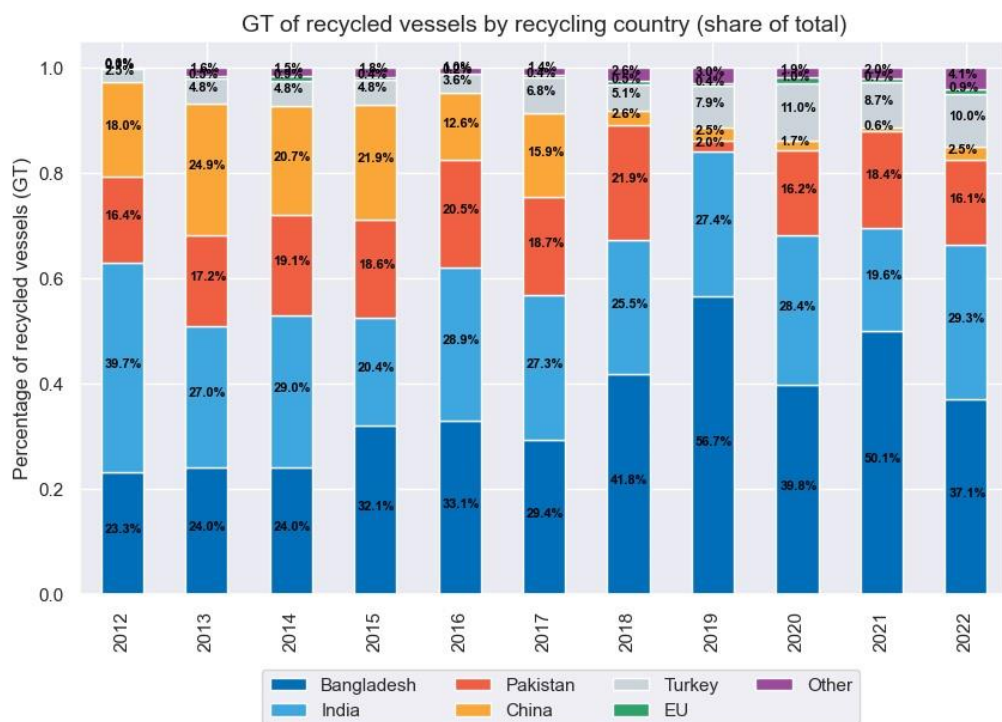
Figure 0.2.: Gross tonnage of recycled vessels by country



Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

The figure shows that in recent years the total recycling activity has slowed, while the share that South Asian facilities take from the global activity has slowly increased and is now upwards of 80%. The figure below shows the share of each country in greater detail.

Figure 0.3.: Share of gross tonnage of recycled vessels by country

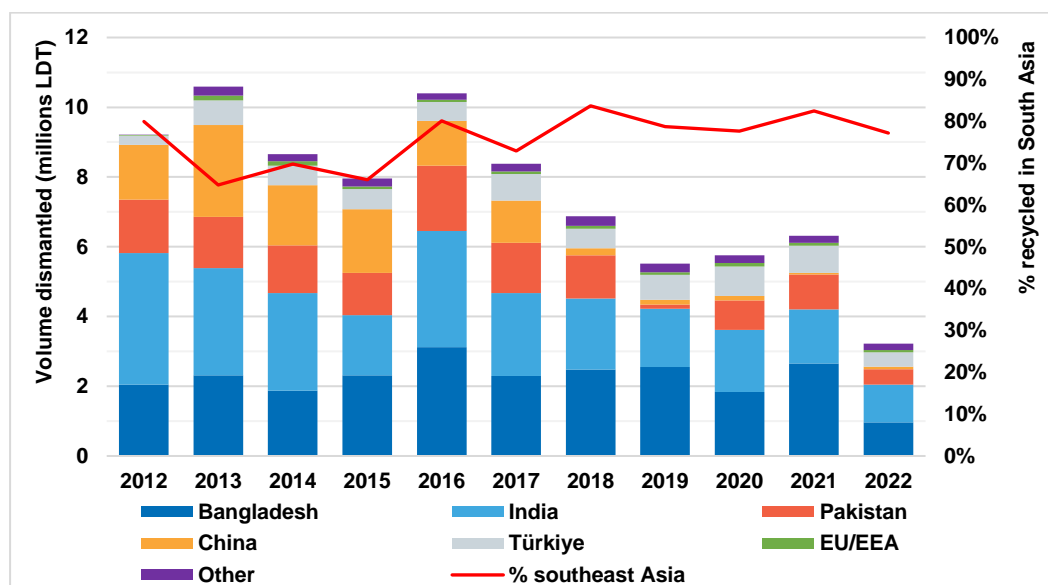


Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

The share of global vessel recycling taken up by India has decreased from almost 40% to almost 30% from 2012 to 2022. In contrast, over the same period Bangladesh has almost doubled its share from 23% to 37%, and Türkiye has grown from around 2% to 10% of the market. During this period China implemented a ban on the recycling of foreign-flagged vessels, bringing the share of Chinese facilities from 18% to just over 2%.

The figure below represents the volume of vessels recycled by country over the evaluation period, this time expressed in LDT recycled.

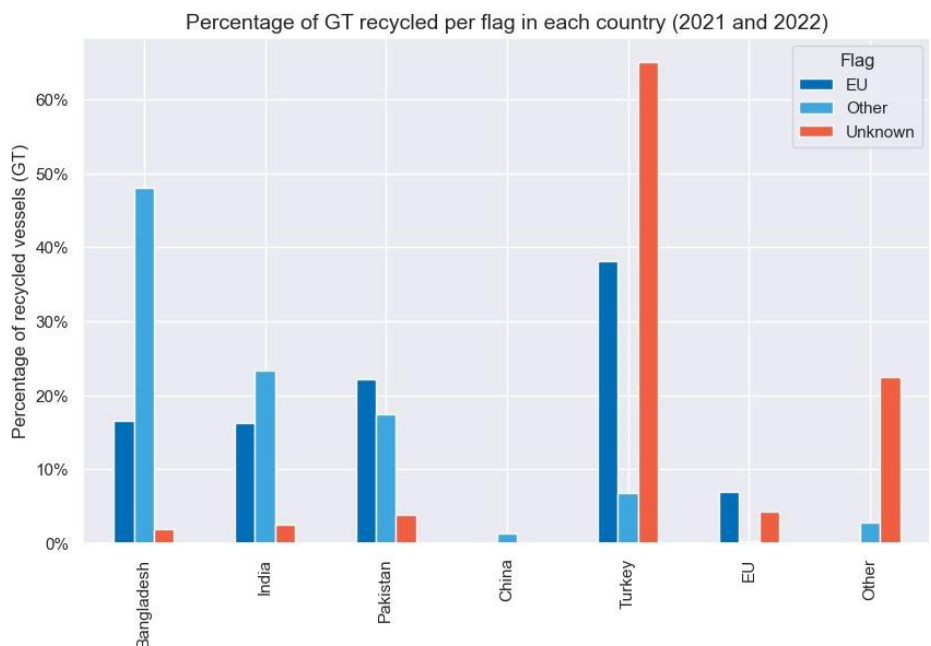
Figure 0.4.: Volume of scrapped vessels by country of recycling (in LDT) (2012-2022)



Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

For 2021 and 2022, the majority of EU-flagged vessels (including re-flagged 1 year or less before being dismantled) were recycled, in order of largest volume to lowest volume (in GT), in Pakistan, Türkiye, and Bangladesh, with smaller shares being recycled in India and the EU (see figure below).

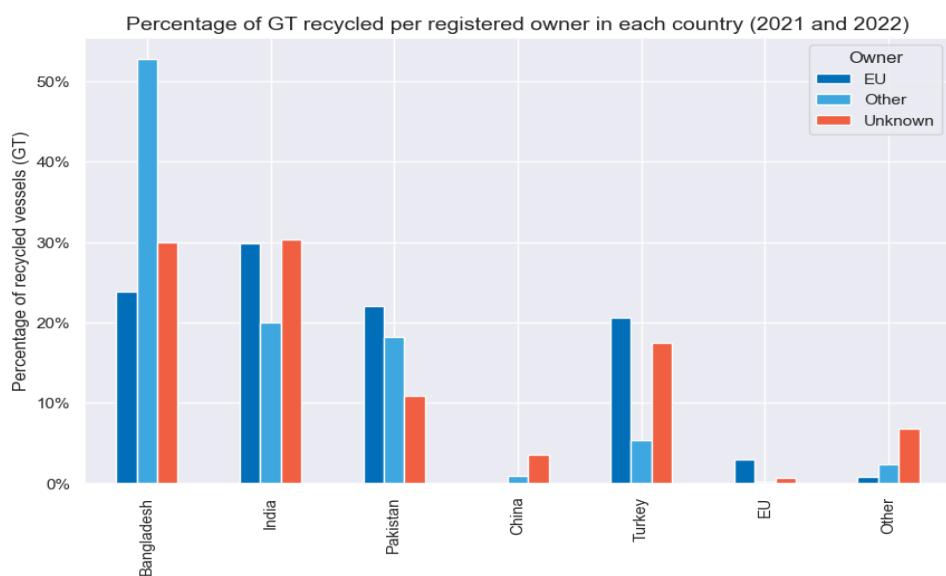
Figure 0.5.: Share (GT) of EU and non-EU-flagged vessels recycled in each country.



Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

In terms of registered ownership, Indian recycling facilities receive the largest share of vessels owned by EU companies, followed by Bangladesh, Pakistan, and Türkiye, with only a very minor fraction ending in EU recycling facilities. The share of EU-owned vessels recycled in South Asia is larger than the share of EU-flagged vessels recycled there.

Figure 0.6.: Share (GT) of EU and non-EU owned vessels recycled in each country.



Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

Table 0.5.: Recycling locations of EU-flagged and EU owned commercial vessels (of over 500 GT) in terms of percentage of total recycling (GT) in 2021 and 2022

Country of recycling	Total gross tonnage	Share of total gross tonnage
Bangladesh	968,547	24.18%
India	1,071,422	26.75%
Pakistan	853,917	21.32%
Türkiye	954,020	23.82%
EU	155,884	3.89%
Other	1,286	0.03%

Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

The two tables below allow a comparison of the top flag states by vessels recycled and by vessels in operation in 2022.

Table 0.6.: Top 25 flag states by recycling volume in 2022 (registered flags at the moment of recycling)

Flag	GT	Number of vessels	Percentage from global fleet (GT)	Cumulative percentage
St Kitts & Nevis	1567374	66	19.86	19.86
Comoros	1106032	33	14.02	33.88
Panama	949802	47	12.04	45.92
Liberia	837363	17	10.61	56.53
Palau	383011	22	4.85	61.39
Bahamas	309264	6	3.92	65.31
Gabon	261269	17	3.31	68.62
Tanzania	234934	9	2.98	71.6
Togo	234608	11	2.97	74.57
Marshall Islands	230127	6	2.92	77.49
Isle of Man	186554	4	2.36	79.85
China	179523	11	2.28	82.12
United States of America	161480	7	2.05	84.17
Indonesia	108075	11	1.37	85.54
Cameroon	107582	12	1.36	86.9
Dominica	100179	2	1.27	88.17
South Africa	92993	1	1.18	89.35
Sierra Leone	79702	12	1.01	90.36
Norway	75310	9	0.95	91.32
India	70352	7	0.89	92.21
Vietnam	62162	5	0.79	93
Saudi Arabia	57949	1	0.73	93.73
Guyana	48953	2	0.62	94.35
St Vincent & The Grenadines	43703	5	0.55	94.91

Flag	GT	Number of vessels	Percentage from global fleet (GT)	Cumulative percentage
Singapore	40581	3	0.51	95.42

Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

Table 0.7.: Top 25 flag states by vessels in operation in 2022

Flag	GT	Number of ships	Percentage from global fleet (GT)	Cumulative percentage
Panama	230487027	7986	15.52	15.52
Liberia	207730469	4304	13.99	29.52
Marshall Islands	177890350	4047	11.98	41.5
China, Hong Kong SAR	131258613	2663	8.84	50.34
Singapore	89004784	3226	5.99	56.33
Malta	83140842	2046	5.6	61.93
China	77171289	7939	5.2	67.13
Bahamas	61513721	1309	4.14	71.27
Greece	36397286	1230	2.45	73.73
Japan	29815720	5193	2.01	75.73
Denmark	22961571	735	1.55	77.28
United Kingdom	22927210	1181	1.54	78.82
Cyprus	22572765	1030	1.52	80.34
Indonesia	21217721	11243	1.43	81.77
Norway	19763660	1712	1.33	83.11
Portugal	19221303	824	1.29	84.4
Italy	14197620	1285	0.96	85.36
Korea, Republic of	12598918	2147	0.85	86.2
Iran (Islamic Republic of)	11708882	949	0.79	86.99
United States of America	10835458	3529	0.73	87.72
India	10451434	1813	0.7	88.43
Bermuda	10396365	135	0.7	89.13
Russian Federation	9326566	2925	0.63	89.76
Malaysia	7965360	1763	0.54	90.29
France	7789102	561	0.52	90.82

Source: Elaboration by consortium that carried out the support study based on data of UNCTAD maritime transport statistics

In 2022 a total of 42 EU-flagged vessels were sent to dismantling, including both vessels that had an EU flag upon arrival to a recycling facility and those that had still an EU flag 1 year before being recycled. This amounted to 8.52% of the worldwide volume sent for recycling in that year (see figure below).

Table 0.8.: Proportion of EU-flagged vessels recycled (including vessels re-flagged in the last year before being recycled) compared to the worldwide volume sent for recycling in 2022.

Flag	GT	Number of vessels	Percentage from global fleet
Norway	259,875	12	3.28
Malta	130,294	5	1.64
Cyprus	126,071	5	1.59
Greece	94,694	4	1.19
Italy	43,502	2	0.55
Denmark	6,797	3	0.09
France	3,162	2	0.04
Netherlands	2,622	2	0.03
Croatia	2,425	1	0.03
Germany	1,992	1	0.03
Romania	1,047	1	0.01
Iceland	1,876	3	0.02
Spain	715	1	0.01
Total	675,072	42	8.52

Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

In 2022, 8.63% of the total volume of vessels recycled was registered under the ownership of EU entities (EU-owned). It is worth noting that this includes a number of vessels for which registered ownership is not identified, and that EU-owned vessels represent 12.22% of the vessels for which there is an owner noted in the data.

Table 0.9.: Proportion of EU-flagged vessels recycled in 2022 (including re-flagged vessels)

Registered owner	Flag	GT	LDT	DWT	Number of vessels
Non-EU	Non-EU	4,564,768	1,677,383	6,870,167	241
	EU	434,031	164,077	580,740	12
EU	Non-EU	505,039	186,671	791,776	25
	EU	191,266	79,903	273,437	23
Unknown	Non-EU	2,179,329	994,877	2,894,497	125
	EU	49,775	30,049	43,294	7
	Unknown	143,090	92,894	138,428	18

Source: Elaboration by consortium that carried out the support study based on data of NGO Shipbreaking Platform and EMSA.

2. Detailed information about the fleet and recycling forecasts

2.1. World fleet and EU-flagged vessels

Table 0.10.: The world fleet of small vessels not covered by the Hong Kong Convention (500 GT and below) by type - number of vessels and total volume in GT (2021)

	Total number of vessels		Total volume (GT)	
	World fleet	EU-flagged	World fleet	EU-flagged
Bulkers	286	0	115,001	0
Containers	12	0	7,999	0
Fishing ship	20,185	926	4,399,002	201,943
General cargo	4,135	42	1,444,000	14,208
Offshore vessels	2,809	207	789,000	58,994
Oil tankers	2,015	22	651,000	7,057
Other vessels	25,929	2,107	6,340,001	515,139

Source: Elaboration by consortium that carried out the support study based on Equasis data.

Only a relatively small fraction of vessels from the global fleet flies an EU flag. Elaborating on EMSA's data, below shows the share of the world fleet that flies an EU flag per vessel type. The share of the world fleet that flies an EU flag goes from 1.7% for offshore vessels to 18.8% for container vessels, or around 13.3% overall (or 16.23% in GT). This compares with 33.17% of vessels globally owned by nationals or companies of the EU.

Table 0.11.: Share of world fleet vessels by flag

Vessel type	EU share of world fleet	Non-EU share of world fleet
Bulk carriers	9.9%	90.1%
Container vessels	19.0%	81.0%
Fishing vessels	12.6%	87.4%
General cargo	10.4%	89.6%
Offshore vessels	1.7%	98.3%
Oil tankers	12.0%	88.0%
Other types of vessels	15.1%	84.0%

Source: Elaboration by consortium that carried out the support study based on EMSA (2022) and UNCTAD (2022).

The table below shows the size of the EU and global fleets in number of vessels and GT, for vessels over 500 GT.

Table 0.12: The world fleet of large vessels covered by the Hong Kong Convention (500 GT and above) by type - number of vessels and total volume in GT

	Total number of vessels		Total volume (GT)	
	World fleet	EU-flagged	World fleet	EU-flagged
Bulkers	12,586	668	509,063,000	24,756,482
Containers	5,539	544	265,885,001	33,021,617
Fishing ship	5,766	190	8,032,000	259,098
General cargo	14,132	1,978	117,185,999	16,165,191

	Total number of vessels		Total volume (GT)	
Offshore vessels	5,551	275	56,384,999	1,493,567
Oil tankers	14,497	1,664	467,267,999	59,280,647
Other vessels	5,808	1,012	42,235,002	11,839,262

Source: Elaboration by consortium that carried out the support study based on Equasis data

Projections were elaborated for the recycling of vessels in the future until 2050, taking into account also the recycling of vessels that are not yet in the fleet but that are expected to join in the future, for both the EU-flagged fleet and the global fleet, which can be found summarised in the tables below, for both vessels under 500 GT and vessels of 500 GT and above. **2.2. Projected evolution of vessel recycling**

Table0.13: Projected future volumes of recycling of vessels not covered by the Hong Kong Convention (under 500 GT) by flag state and year of recycling - number of vessels and total volume.

Year	Total number of vessels		Total volume (GT)	
	World fleet	EU-flagged	World fleet	EU-flagged
2024	1,420	73	332,098	16,404
2025	1,529	81	354,168	17,956
2026	1,607	84	373,232	19,346
2027	1,680	92	387,234	20,402
2028	1,710	92	394,868	21,021
2029	1,720	93	396,284	21,205
2030	1,708	90	393,088	21,066
2031	1,688	95	387,630	20,754
2032	1,654	90	382,225	20,459
2033	1,621	86	378,294	20,271
2034	1,599	89	376,155	20,207
2035	1,586	90	375,166	20,236
2036	1,559	86	374,036	20,261
2037	1,529	86	371,561	20,198
2038	1,492	80	366,895	19,984
2039	1,461	81	360,117	19,641
2040	1,417	83	352,151	19,246
2041	1,384	78	344,363	18,890
2042	1,341	79	338,134	18,683
2043	1,316	77	334,425	18,688
2044	1,312	75	333,266	18,909
2045	1,297	85	333,795	19,268
2046	1,294	78	334,413	19,618
2047	1,289	81	333,459	19,856
2048	1,254	77	329,896	19,859
2049	1,233	72	323,831	19,663
2050	1,217	84	316,503	19,324

Source: Elaboration by consortium that carried out the support study.

Table 0.14: Projected future volumes of recycling of vessels covered by the Hong Kong Convention (500 GT<) by flag state and year of recycling - number of vessels and total volume.

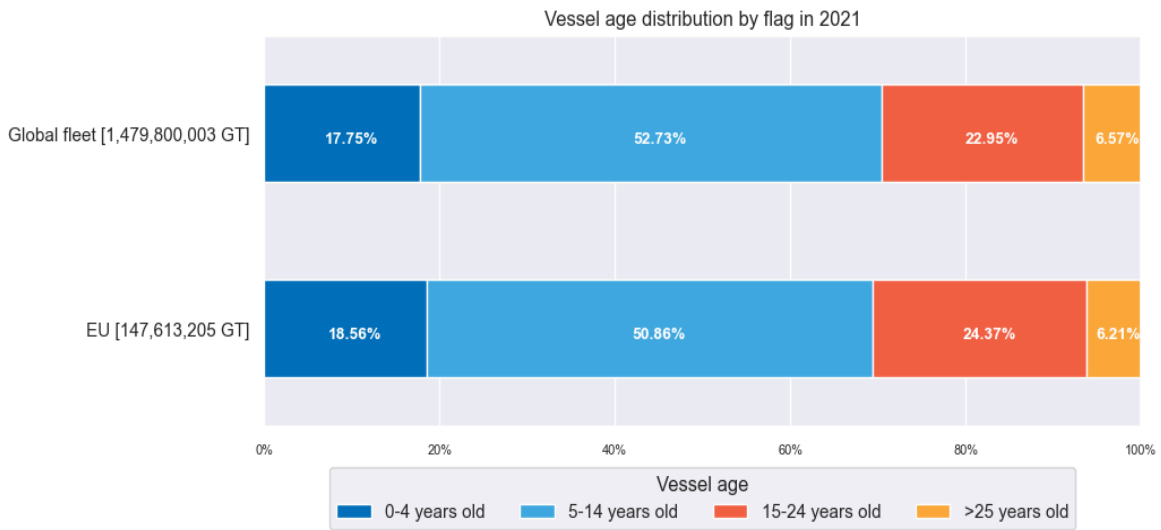
Year	Total number of vessels		Total volume (GT)	
	World fleet	EU-flagged	World fleet	EU-flagged
2024	2,372	239	49,387,546	5,323,160
2025	2,403	245	49,878,380	5,303,007
2026	2,394	235	51,397,761	5,423,817
2027	2,424	234	54,103,240	5,689,927
2028	2,445	241	57,809,502	6,058,014
2029	2,486	244	62,016,759	6,449,297
2030	2,491	239	66,053,871	6,776,260
2031	2,511	244	69,285,085	6,973,530
2032	2,512	231	71,298,335	7,019,663
2033	2,466	228	71,997,334	6,939,185
2034	2,486	238	71,570,341	6,785,961
2035	2,422	217	70,368,835	6,617,077
2036	2,375	223	68,768,055	6,471,979
2037	2,332	217	67,069,582	6,365,217
2038	2,256	205	65,468,211	6,292,524
2039	2,226	208	64,066,802	6,242,864
2040	2,176	199	62,907,278	6,207,438
2041	2,147	202	61,995,662	6,182,429
2042	2,094	198	61,316,709	6,167,001
2043	2,043	194	60,842,477	6,159,799
2044	2,042	189	60,540,128	6,157,742
2045	2,015	199	60,378,735	6,157,105
2046	2,002	186	60,331,215	6,154,844
2047	1,997	191	60,373,241	6,149,884
2048	2,003	200	60,480,685	6,142,582
2049	1,983	193	60,629,089	6,134,300
2050	1,970	167	60,796,413	6,126,634

Source: Elaboration by consortium that carried out the support study.

In the projections above, recycling is forecasted on the basis of vessel ages, however, the forecasts reveal a rate of recycling that is significantly higher than current trends in recycling (please see further below). This means that a backlog of vessels that are due for recycling is likely to be developing, likely due to higher demand for capacity. In practice this could mean that the average ages of recycling could increase in future years, and that when demand for capacity drops and shipping rates decrease, recycling facilities could see a marked increase in the influx of vessels for recycling due to a possibly no longer profitable ageing fleet.

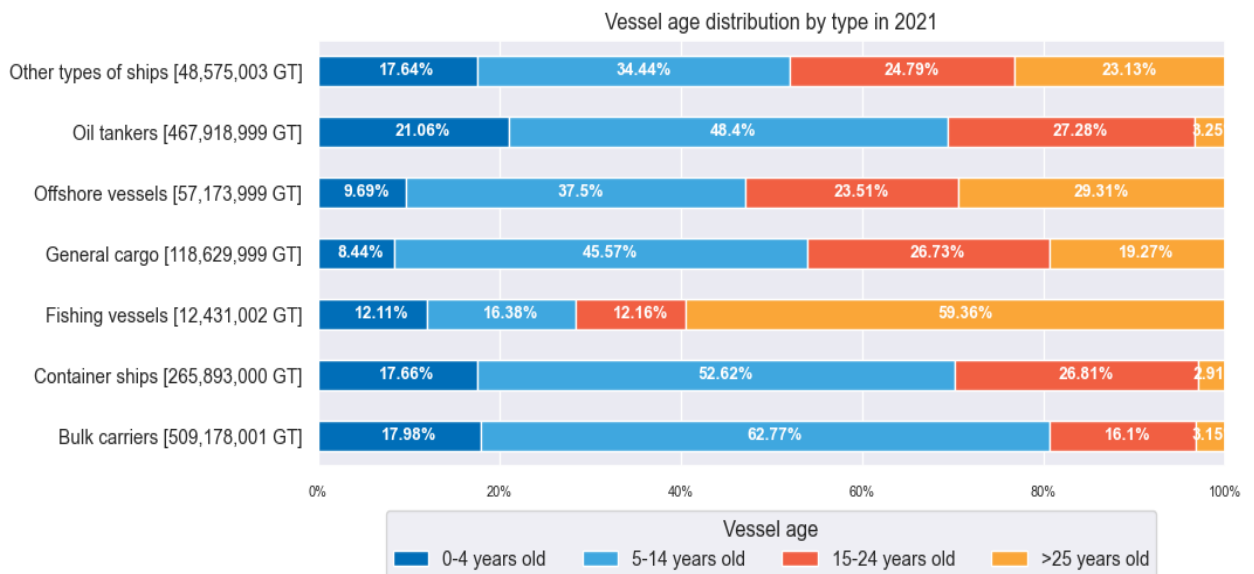
2.3. Age profile of the fleet

Figure 0.7.: Age profile of the fleet (percentage by Gross Tonnages)



Source: Elaboration by consortium that carried out the support study.

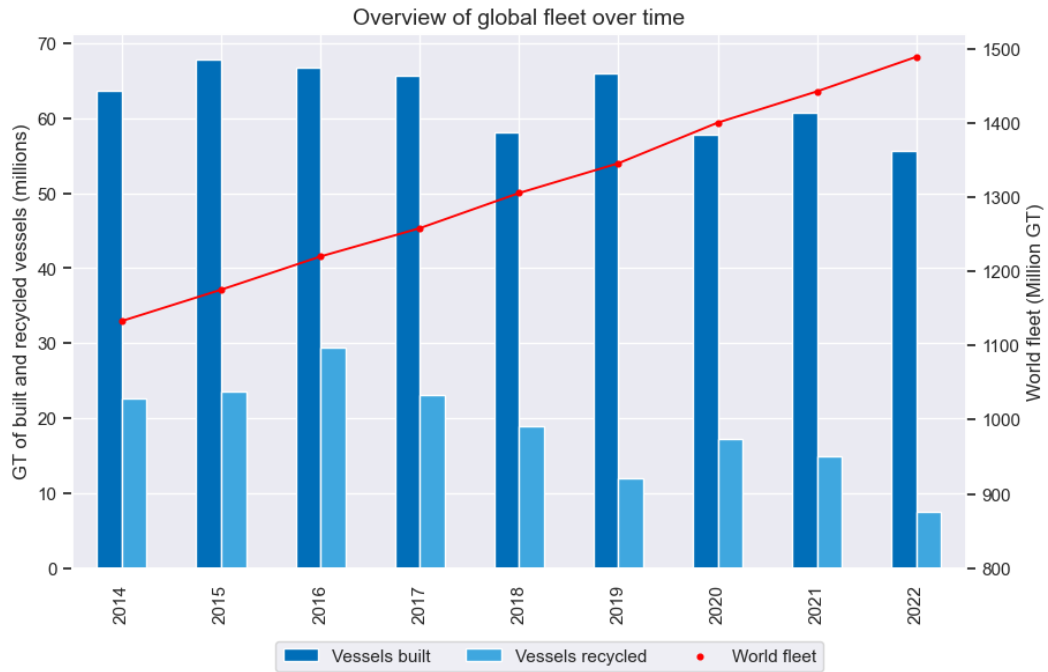
Figure 0.8.: Age profile of the fleet per type category in Gross Tonnage



Source: Elaboration by consortium that carried out the support study based on Equasis

2.4. Evolution of the world fleet: comparison between the number of vessels delivered and the number of vessels recycled between 2014 and 2022.

Figure 0.9: Increasing capacity of the world fleet, number of vessels recycled and vessels built, in GT



Source: Elaboration by consortium that carried out the support study based on UNCTAD data.

1. INTRODUCTION

This report is part of the obligation of the Commission under Article 21 of the Ship Recycling Regulation to report on the implementation of the Regulation based on the individual reporting of Member States required under the same article. This first report covers the information on the period from 1 January 2019 to 31 December 2021 that was due in autumn 2022. Considering the limited dataset received and the upcoming evaluation, the Commission decided to integrate this first report in the evaluation. The European Maritime Safety Agency (EMSA) that has developed a dedicated reporting portal has contributed substantially to accompany this exercise in providing guidance and analysing the contributions from Member States.

2. REPORTING OBLIGATIONS UNDER SRR

2.1. Requirements

Article 21 of the SRR requires Member State to send every three years to the Commission a report containing the following:

- (a) a list of the ships flying its flag to which a ready for recycling certificate has been issued, and the name of the ship recycling company and the location of the ship recycling facility as shown in the ready for recycling certificate;
- (b) a list of the ships flying its flag for which a statement of completion has been received;
- (c) information regarding illegal ship recycling, penalties and follow-up actions undertaken by the Member State.

In accordance with Article 21, the first 3-year reporting period covers 1 January 2019 to 31 December 2021 with 30 September 2022 as deadline for submission of individual reports by Member States. No later than nine months after receiving the reports from the Member States, the Commission should publish a report on the application of the SRR.

1.2.Method

The Dynamic Overview of National Authorities (DONA), is a stand-alone maritime application, developed, maintained and enhanced by EMSA which became operational in June 2022. One of its functionalities is to provide a single-entry portal with restricted access, through which Member States could, if they opt to do so, fulfil their reporting obligations under EU maritime legislation. The SRR is one of the three legal acts covered by the portal in its initial phase.

Where possible, DONA reporting template has tried to reduce the administrative burden for Member State's by eliminating the necessity to repeat entries, which was for example the case for ships for which Member States had both the Ready for Recycling Certificate (RFRC) and the 'Statement of Completion' (SOC). Also, if the information in the RFRC and SOC had already been uploaded into the relevant Ship Recycling module of THETIS-EU²²² by the relevant Member State, then this information is automatically available to DONA.

²²² A tool developed by EMSA for the recording of inspections on the inventories of hazardous materials, to support the Ship Recycling Regulation.

To provide information regarding illegal ship recycling, penalties and follow-up actions undertaken by the Member State, the relevant template in DONA provided a section where free text could be added.

The Commission and EMSA issued a note and organized a training event for Member States on the use of the Ship-Recycling module in DONA and expected reporting content.

3. OVERVIEW OF THE REPORTING FROM MEMBER STATES

All Member States used DONA for their reporting under Article 21 of the SRR. 26 Member States and Norway submitted a report. The submissions can be presented in two categories:

- 10 Member States (Belgium, Croatia, Cyprus, Denmark, Greece, Italy, Malta, Netherlands, Spain, and Sweden) and Norway submitted reports, providing specific details or the certificates issued to the vessels flying their flag. 3 Member States (Belgium, Italy, Greece²²³) provided information regarding actions undertaken with respect to illegal ship recycling.
- 16 Member States (Austria, Bulgaria, Estonia, Finland, France, Germany, Ireland, Hungary, Latvia, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovenia and Slovakia) provided a report with no information on vessels that have been issued a RFRC or for which a SOC had been received. This means that each of these Member States reported they had not issued any RFRC over the reporting period, and therefore not received any SOC, as none of their flagged vessels had been recycled in the reporting period. Half of the Member States have just left blank the entire form. The others (Finland, Ireland, Latvia, Lithuania, Luxembourg, Romania, Poland and Slovenia) provided a specific statement saying no RFRC or SOC were issued, and no illegal action was identified.

3.1. On the quality of the reporting

Regarding the respect of the deadline, it can be noted that Latvia, Lithuania and Greece submitted their report several months after the deadline and that Czechia and Iceland did not submit any report.

For the 10 Member States and Norway that submitted detailed information, the datasets were on many occasions not complete. For almost half of the ships reported the date of the RFRC is missing and for less than one third the date of the receipt of the SOC is indicated. Limited report was received on actions undertaken by Member States regarding illegal ship recycling. Member States may have focused their reporting on infringements for ships flying their flag, rather than on all ships which they would have taken measures against.

The dataset provided by Member States (Appendix I) was compared with the information extracted by EMSA from MARINFO²²⁴. 54 vessels that were registered in MARINFO as recycled between 2019 and 2021 were not part of the Member States' reporting (Appendix II). It appears that 84% of these vessels had a domestic shipping pattern and might therefore not fall under the scope of the SRR. However, 9 vessels had a clear international trading pattern in the last year of their operation and should therefore have been reported by Member States. These came from 6 different flags, all of which provided information on other vessels through

²²³ The information provided by NL was not sufficient to understand the case.

²²⁴ Marinfo is EMSA's own internal database based on purchased data.

DONA. This comparative exercise underlines the need to improve the completeness of the reports.

3.2. The outcome on substance

Member States and Norway reported a total of 90 ships for which RFRC were issued in the period from 1 January 2019 to 31 December 2021²²⁵. A SoC had been received for 41 of them²²⁶. From the information requested no inference could be made as to whether the recycling started within the 3 months that the RFRC is valid.

The reports refer to vessels recycled in 7 countries at recycling facilities included in the European list.²²⁷

Table0.15: Location of recycling of reported ships per Member State

Flag	Country of Recycling	Number of vessels
Belgium	Belgium	2
Croatia	Türkiye	1
Cyprus	Türkiye	5
	Norway	4
	Spain	1
	Belgium	1
Denmark	Denmark	10
	Türkiye	2
Greece	Türkiye	6
	Ship still in service	2
Italy	Türkiye	4
	Italy	1
	Unknown	1
Malta	Türkiye	18
	Unknown	6
The Netherlands	The Netherlands	4
	Belgium	1
	Spain	1
	Türkiye	1
Spain	Spain	1
Sweden	Türkiye	1
Norway	Türkiye	11
	Norway	4
	Denmark	2
TOTAL		90 (including 7 unknown and 2 still in service)

²²⁵ BE:2, HR:1, CY:11, DK:9, EL:8, IT:6, MT:24, NL:7, ES:1, Se:1, NO:17.

²²⁶ There are various reasons for why a Member State has given a ship a RfRC but does not have a corresponding SoC. These include: i) The ship is still trading ii) The ship was still being recycled and the SoC had not been completed iii) The ship-recycling facility has not forwarded the SoC to the flag State iv) The ship was recycled in a facility that is not on the EU-List v) The SoC has been sent but not recorded by the MS or has been recorded but not reported in DONA.

²²⁷ Note that the country and the recycling facility were provided for 90% of the submissions.

In general, considering that only a few Member States reported issuing RFRC, no clear patterns can be deduced from these data. Nevertheless, the following can be observed:

- 51.1% of the vessels reported by the Member States were recycled in Türkiye.
- For 3 Member States most of their vessels have been recycled in the country of their flag:
 - 100% of Belgian flagged vessels were recycled in Belgium;
 - 83% of Danish flagged vessels were recycled in Denmark; and,
 - 57% of Dutch flagged vessels were recycled in The Netherlands.
- Conversely, 3 Member States reported that most of their vessels were recycled in Türkiye:
 - 75% of Maltese and Greek flagged vessels and 69% of Norwegian flagged vessels.

Table0.16: Where ships reported by MS were recycled

Country of Recycling	Number of vessels where information was reported	Percentage share of Recycling
Türkiye	46	51.1%
Denmark	12	13.3 %
Norway	8	8.8%
Belgium	4	4.4%
The Netherlands	4	4.4%
Spain	3	3.3%
Italy	1	1.1%
Unknown	7	7.7%
Still trading	2	2.2%
Total	90	100%

Table0.17: A breakdown of reported vessels with a RFRC issued, per ship type

IMO Ship Type		Number of Ships
Oil Tanker		11
General Cargo		7
Liquid Gas Tanker		5
Ro-Pax		4
Bulk Carrier		7
Cruise Ships		5
Chemical Tanker		2
Container Ship		6
Ro-Ro		6
Vehicle Carrier		3
Others	Fishing Vessels	1
	Tugs/ Oil Support Vessel	21
	Research/Survey Ship	4
	Dredger	3
	Other	2
TOTAL		88²²⁸

²²⁸ Tables .0.17 and 0.18 do not include the 2 Greek vessels still in service with a RfRC.

Table0.18: A breakdown of reported vessels with a RFRC issued by ship size

Size range	Number of ships
500GT to 1,000GT	4
1,000GT to 2,000GT	9
2,000GT to 3,000GT	14
3,000GT to 4,000GT	10
4,000GT to 5,000GT	4
5,000GT to 10,000GT	2
10,000GT to 50,000GT	4
50,000GT to 100,000GT	27
100,000GT to 150,000GT	10
150,000GT to 200,000GT	1
Over 200,000GT	1
Unknown	2
TOTAL	88

Finally, four Member States provided information on infringements of the SRR that they have pursued. This information, as reported by the Member States, can be found in Table 5 below. Among the reported cases, only four clearly relate to illegal ship recycling²²⁹. Due to the limited dataset, it is therefore difficult to gauge the level of enforcement of the Regulation based on this reporting only.

Table0.19: Infringements of Ship Recycling Regulation as reported by Member States as follows²³⁰:

	Country	Date	Ship	Issue	Measures/Penalty
1	Belgium	2019	<i>ATLANTICO DUE</i> IMO 760629 3	The ship flagged out without notifying the Belgian Flag State of their intent to recycle the vessel (15/02/2019). In this case they were headed to the recognized Belgian facility (GALLOO)	They ship was required to re-flag and register the vessel back to follow the right procedure so we as Belgian flag State could issue a ready for recycling certificate. An official report was made by the Belgian Flag State. A fine was issued of 100.000 euro (10.000 euro to pay immediately and 90.000 euro if they make another breach of the SRR in the coming 3 years).

²²⁹ Cases 6, 7 and 8 concern the control of inventory certificates or statement of compliance. Case 4 is not clear.

²³⁰ References to personal data have however been removed.

2	Italy	Feb 202 1	<p><i>JUMEIR A</i> (IMO 7396769) Purchased by 'Rimorchiatori Riuniti' in 2019, then transferred to 'Ammat Marine limited', based in Kalkara (Malta). On 01/12/2020, it was resold to Mr. ■ domiciled Greece.</p>	<p>DG Environment reported to the Directorate General that the shipowner had sold the ship, for its recycling, to a Turkish shipyard (Dortel Gemi Sokum) not included in the European list of recycling facilities.</p> <p>Necessary checks were initiated, with the Port Authority of Genoa, the competent body under Art. 2, paragraph n. 1, letter c) of the Interministerial Decree 12/10/2017.</p>	<p>Under Legislative Decree no. 99 of 30/07/2020, the owner has been fined a total of € 33,000.00 for the violations of art. 6, paragraph n. 2, letter a) and lett. c) of the Regulations.</p> <p>It should be noted that the same owner was also under investigation in violation of other regulations, including those relating to Article 160 of the Italian Navigation Code: (https://www.gazzettaufficiale.it/dettaglio/codici/navigazione).</p>
3	Italy	2021	ASSO VENTURO	<p>On 18/02/2021 the ship was sold with contract for demolition, by the company Augusta Offshore S.p.A. (Naples, Italy), to the recycling facility Isiksan Gemi Sokum (Aliaga - Izmir Türkiye), enlisted in European List of ship recycling facilities.</p> <p>Subsequently, the NGO Shipbreaking Platform provided evidence that the ship was recycled in the Dortel Demi Sokum shipyard (not included in the aforementioned List). After investigation this was found to be true, despite</p>	<p>The Port Authority of Naples, ascertained that the shipping company, obtained the required certifications, after the ship was delivered the unit to the Isiksan shipyard in Izmir (Aliaga) in Türkiye. The company also confirmed that it did not receive any request or communication from the Turkish purchaser, nor the shipowner has authorized, or agreed, to transfer the 'Asso Venturo' to a different ship recycling facility.</p>

				the fact that a ship recycling plan from the initial recycling yard Isiksan Gemi Sokum, had been passed to the Authorities by RINA.	
4	The Netherlands			Dutch owned ship, under a different EU flag.	No further information provided
5	Greece	2019	<i>Taxiaschis S</i> , IMO 6913340	The vessel was recycled in January 2019 on the 22 nd , carrying the Greek Flag. The vessel has been sent for recycling in the port facility named 'EGE GEMI SAN VE TIC S.A.' in Türkiye. The said facility was not included in the European List of ship recycling facilities pursuant to Regulation (EU) No 1257/2013.	A monetary fine of 30000 EUROS has been imposed to the ship-owners for not complying with the requirements of Regulation (EU) No 1257/2013 (in particular Article 6.2a thereof) for recycling the ship in a facility not included in the European list.
6	Greece		<i>M/V Rudolf</i> IMO:9535591	On the 3 rd of November 2021 the carrying the flag of ANTIGUA and BARBUDA was found not carrying on board a valid inventory of hazardous material and a statement of compliance issued by the authorities of the country whose flag is flying according to the provisions of Article 12.5 of No 1257/2013 EU Regulation .	A monetary fine of 10000 EUROS has been imposed.
7	Belgium	2021	<i>SCOT BREMEN</i> (9260835)	no inventory certificate (11/01/2021)	Fine 2500 euro to pay immediate. 7500 euro if the company makes another breach of the SRR in the coming 3 years
8	Belgium	2021	<i>BASHT</i> (9346536):	no statement of compliance (02/06/2021)	Fine 2500 euro to pay immediate. 7500 euro if the company makes another breach of the SRR in the coming 3 years.

4. CONCLUSION

Due to the limited dataset resulting from the first tri-annual reporting period and its completeness, no conclusion on the level of implementation of the Regulation and its enforcement based on this first reporting exercise only. For the next reporting period, further guidance will need to be provided to Member States to improve the completeness of the data.

Appendix 1: List of vessels reported by Member States

Flag	IMO Number/Name	RFC Issued	Certificate Issued By	Survey Date	Survey by	Company Recycling the Ship	Address of Company	SOC Received.
BE	7606293 ATLANTICO DUE	29/05/2019	RINA Services S.p.A	29/05/2019	RINA Services S.p.A	NV Galloo Recycling Ghent	Scheepzatestraat 99000 Gent Belgium	19/12/2019
BE	7816288 PANTAGRUELE	29/07/2020	RINA Services S.p.A	29/07/2020	RINA Services S.p.A	NV Galloo Recycling Ghent	Scheepzatestraat 99000 Gent Belgium	05/05/2021
CY	8416906 OSPREY EXLORER	07/05/2020	RINA Services S.p.A.			NV Galloo Recycling Ghent	Scheepzatestraat 99000 Gent Belgium	
CY	8824139 WADDEN 4	02/12/2021	Bureau Veritas			DDR VESSELS XXI, S.L.	Port of 'El Musel' Gijon Spain	
CY	9161338 HIGHLAND ROVER	16/07/2020	American Bureau of Shipping			Isiksan Gemi Sokum Pazar-lama Ve Tic. Ltd. Sti.	Gemi Söküm Tesisleri, Parcel 22 Aliğa	15/02/2021
CY	9166364 SEA LEOPARD Tug 2990	26/05/2020	DNV GL AS			Green Yard AS	Angholmen, 4485 Feda	15/02/2021
CY	9166376 SEA TIGER	28/10/2021	DNV AS			Green Yard AS	Angholmen, 4485 Feda	18/02/2021
CY	9171747 SEA PANTHER Tug 1968	13/08/2021	DNV AS			Green Yard AS	Angholmen, 4485 Feda	19/02/2021
CY	9169677 CHALLENGER Offshore Supply 1968	18/09/2020	American Bureau of Shipping			Isiksan Gemi Sokum Pazar-lama Ve Tic. Ltd. Sti.	Gemi Söküm Tesisleri, Parcel 22 Aliğa	02/04/2021

CY	9249441 BUGLER 1992 OSV	18/09/2020	American Bureau of Shipping			Isiksan Gemi Sokum Pazar-lama Ve Tic. Ltd. Sti.	Gemi Söküm Tesisleri, Parcel 22 Aliğa	
CY	9249491 HIGHLAND COURAGE Tug	16/07/2020	American Bureau of Shipping			Isiksan Gemi Sokum Pazar-lama Ve Tic. Ltd. Sti.	Gemi Söküm Tesisleri, Parcel 22 Aliğa	
CY	9249506 VALOR	28/09/2020	American Bureau of Shipping			Isiksan Gemi Sokum Pazar-lama Ve Tic. Ltd. Sti.	Gemi Söküm Tesisleri, Parcel 22 Aliğa	
CY	9392951 SEA POLLOCK	29/10/2021	DNV AS			Green Yard AS	Angholmen, 4485 Feda	
DK	9146455 STINE MÆRSK					Sök Denizcilik Tic. Ltd. Sti	Gemi Söküm Tesisleri, Parcel 8- 9 Aliğa, Izmir 35800, Türkiye	Yes
DK	9100231 NUKA ARCTICA					Jatob ApS Langerak 12, 9900 Frederikshavn	Jatob ApS Langerak 12,9900 Frederikshavn	Recycling not yet completed.
DK	9100229 NAJA ARCTICA					Jatob ApS Langerak 12, 9900 Frederikshavn	Jatob ApS Langerak 12, 9900 Frederikshavn	Yes
DK	9227754 OCEA NIC PHOE NIX					Smedegaarden A/S Vikingkaj 5, 6700 Esbjerg	Smedegaarden A/S Vikingkaj 5, 6700 Esbjerg	RfRC not reported ahead of RFRC. and SOC has been reported

DK	1832186 AARSLEFF					Jatob ApS Langerak 12, 9900 Frederikshavn	Jatob ApS Langerak 12, 9900 Frederikshavn	Yes
DK	7724540 PAJUTTAAT					Jatob ApS Langerak 12, 9900 Frederikshavn	Jatob ApS Langerak 12, 9900 Frederikshavn	Recycling not yet completed.
DK	9134531 NORTHERN SEA					Smedegaarden A/S Vikingkaj 5, 6700 Esbjerg	Smedegaarden A/S Vikingkaj 5, 6700 Esbjerg	Yes
DK	9183609 DAN EAGLE					Gemi Sokum Tesisleri Parsel 25 Aliaga, Izmir 35800, Türkiye	Gemi Sokum Tesisleri Parsel 25 Aliaga, Izmir 35800, Türkiye	RfRC not received ahead of recycling. Only the SOC has been reported
DK	7432202 HOLGER DANSKE					Fornæs Ship Recycling	Rolshøjvej 12, 8500 Grenaa	Yes
DK	9246736 MÆRSK HELPER					Fornæs Ship Recycling	Rolshøjvej 12, 8500 Grenaa	Recycling not yet completed.
DK	7704849 NORDVÅG					Fornæs Ship Recycling Rolshøjvej 12, 8500 Grenaa	Fornæs Ship Recycling Rolshøjvej 12, 8500 Grenaa	Yes
DK	8316871 NIELS PAULI					Smedegaarden A/S Vikingkaj 5, 6700 Esbjerg	Smedegaarden A/S Vikingkaj 5, 6700 Esbjerg	Recycling not yet completed.
ES	8611180 DRAVO COSTA DORADA	24/03/2021	S.G. de Seguridad, Contaminación e Inspección Marítima	24.03.2021		DDR VESSELS XXI, S.L. AA1106/14		19.11.2021

EL	8813130 EKO 3	18/06/2019	Hellenic Lloyds			LEYAL-DEMTAŞ GEMİ SÖKÜM SANAYİ ve TİCARET A.Ş	Gemi Söküm Tesisleri Parcel 3-4 Aliaga, Izmir 35800 TURKEY	
EL	8813142 EKO 4	09/10/2019	Hellenic Lloyds			ISIKSAN GEMİ SÖKÜM PAZARLAMA VE TİCARET LTD.STİ.	Gemi Söküm Tesisleri Parcel No : 22 Aliaga – Izmir / TURKEY , Post code: 35800	
EL	8820121 EKO 5	09/10/2019	Hellenic Lloyds			ISIKSAN GEMİ SÖKÜM PAZARLAMA VE TİCARET LTD.STİ.	Gemi Söküm Tesisleri Parcel No : 22 Aliaga – Izmir / TURKEY , Post code: 35800	
EL	7521651 EXPRESS PEGASUS	22/10/2021	Hellenic Lloyds			SIMSEKLER GIDA GEMİ SOKUM INSAAT SANAYI VE TICARET LTD.STİ.	Ataturk Mah. Aygaz Cad., No:41 Gemi Söküm Bolgesi, 35800 Aliaga, Izmir, TURKEY	
EL	9934890 IRINI	05/07/2021	Hellenic Lloyds			LEYAL-DEMTAS GEMİ SOKUM SAN VE TIC A.S.	Gemi Söküm Tesisleri, Parcel 25 Aliaga, Izmir 35800, Turkey	
EL	9401075 MELINA	11/03/2020	Hellenic Lloyds			LEYAL-DEMTAS GEMİ SOKUM SAN VE TIC A.S.	Gemi Söküm Tesisleri, Parcel 25 Aliaga, Izmir 35800, Turkey	
EL	9650054 MARAN GAS ALEXANDRIA	17/12/2020	ABS					
EL	9724075 ELIA TSAKOS	08/08/2020	Lloyd's Register					

HR	8351118 LUBERNICE	15.12.21	Croatian Register of Shipping			Isikan Ship Recycling Facility		1/6/22
IT	7018422 MAR GRANDE	04/05/2021	RINA Services S.p.A			San Giorgio del Porto S.p.A.	Calata Boccardo 8 16128 — Genova	28/10/2021
IT	9030864 SPES	11/08/2020	RINA Services S.p.A			ÖGE GEM? SÖKÜM ITH. IHR. TIC. SAN.A?.	Gemi Söküm Tesisleri, Parcel 23 Alia?a, Izmir 35800,	21/01/2021
IT	9109031 ST VICTORIA	01/12/2020	RINA Services S.p.A			EGE CELIK SAN. VE TIC. A.S	Gemi Söküm Tesisleri, Parcel 23 Alia?a, Izmir 35800,	16/02/2022
IT	9183192 ASSO VENTURO	09/02/2021	RINA Services S.p.A			Sanctions	Türkiye	
IT	9435466 NORMAN ATLANTIC	25/06/2019	RINA Services S.p.A			LEYAL GEMİ SÖKÜM SANAYI ve TICARET LTD	Gemi Söküm Tesisleri, Parcel 3- 4 Alia?a,	11/11/2019
IT	9504645 MARMED	03/01/2021	RINA Services S.p.A					
MT	7393822 ASSO ZEJT 1					ISIKAN GEMİ SOKUM PAZARLAMA VE TIC. LTD STI, TÜRKİYE		
MT	9074389 APL CHINA					LEYAL GEMİ SOKUM SANAYI ve TICARET Ltd., ALIAGA TÜRKİYE		

MT	9030852 FIDES					LEYAL GEMİ SOKUM SANAYİ ve TİCARET Ltd., ALIAGA TÜRKİYE		
MT	8512281 SOVEREIGN					EGE ÇELİK SAN. Ve Tic A.S		
MT	8819500 MONARCH					SOK DENİZCİLİK VE TİCARET LTD ŞİKETİ, ALIAGA, İZMİR, TÜRKİYE		
MT	8027298 MARELLA CELEBRATION					İSİKSAN Gemi Sokum, TÜRKİYE		
MT	8807088 HORIZON					İSİKAN GEMİ SOKUM PAZARLAMA VE TİC. LTD ŞTİ, TÜRKİYE		
MT	9131515 EUROCAR GO TRIESTE					LEYAL GEMİ SOKUM SANAYİ ve TİCARET Ltd., ALIAGA TÜRKİYE, OGE GEMİ SOKUM İTHALAT İHRACAT TİCARET ve SANAYİ AS & LEYAL DEMTAS GEMİ SOKUM SANAYİ ve TİCARET AS		
MT	84077435					İSİKAN GEMİ SOKUM		
	MARELLA DREAM					PAZARLAMA VE TİC. LTD ŞTİ, TÜRKİYE		

MT	7616779 CALAMITY JANE					LEYAL DEMTAS GEMI SOKUM San Ve Tic. S.A		
MT	9112143 B GAS CHAMPI ON					Gemi Söküm Bölgesi Nolu Parsel 25, Aliğa 35800 – İzmir – Türkiye		
MT	9112155 B GAS COMMAND ER					GEMI SOKUM ITHALAT IHRACAT TICARET ve SANAYI AS & LEYAL DEMTAS GEMI SOKUM SANAYI ve TICARET AS		
MT	8008450 CSL RHINE					SOK DENIZCILIK VE TIKARET LTS SIKETI, ALIAGA, IZMIR, TÜRKIYE		
MT	8107062 GSP VEGA					ISIKAN GEMI SOKUM PAZARLAMA VE TIC. LTD STI, TÜRKIYE		
MT	9083158 GSP PHEONIX					ISIKAN GEMI SOKUM PAZARLAMA VE TIC. LTD STI, TÜRKIYE		
MT	9131527 EUROCAR GO PATRASSO					Oge Semi Sokum, Ticaret ve Sanayi A.S		

MT	9083172 GSP LICORN					ISIKAN GEMİ SOKUM PAZARLAMA VE TİC. LTD STİ, TÜRKİYE		
MT	8405892 AMT EXPLORER					LEYAL Gemi Sokum San. ve Tic. Ltd		
MT	9125372 CELESTINE RORO 23986	02/06/2021	DNV AS					
MT	9166625 VALENTIN E RORO 23987	03/01/2020	DNV GL AS					
MT	9425124 IOLCOS PRIDE BULK 47984	25/03/2021	Lloyd's Register					
MT	9489560 BOMAR VESTA CHEMICAL 4365	05/02/2021	RINA Services S.p.A					
MT	9776432 CMA CGM LOUIS BLERİOT CONTAINER 219277	23/06/2021	Bureau Veritas					
MT	9835795 MALYOVİSTA BULK 29076	30/06/2020	DNV AS					

NL	JAN STEEN					Galloo Gent	Scheepzatestrat 9 Kaainummers 750-790 9000 Gent – Belgium	
NL	VOS POWER					Scheepssloperij Nederland B.V.	Havenweg 1 3295 XZ 's- Gravendeel The Netherlands	
NL	VOS PRODUC ER					Scheepssloperij Nederland B.V.	Havenweg 1 3295 XZ 's- Gravendeel The Netherlands	
NL	VOS PROMINENCE					Scheepssloperij Nederland B.V.	Havenweg 1 3295 XZ 's- Gravendeel The Netherlands	
NL	SLIEDRECHT 26					DECOM Amsterdam B.V.	Siciliëweg 10 1045 AS Amsterdam	
NL	ESPERANZA					DDR VESSELS XXI, S.L.	1ª alineación Muelle de Ribera Rincón de Langre, 33212 Gijón, Asturias, Spain	
NL	GEOPOTES 15					ISIKSAN GEMI SOKUM PAZARLAMA VE TICARET LTD STI	Gemi Söküm Tesisleri, Parcel 22 Aligia Izmir 35800, Türkiye	
SE	8705383 SASSNITZ RFRC	14/10/2021	RINA SERVICES S.p.A	12/10/2021	RINA SERVICE S S.p.A.	Gemi Söküm Tesisleri	Parcel 3-4 Aliaga, Izmir, TÜRKIYE	
EFTA Countries								

NO	8309830 STAR FUJI	08/08/2019				Leyal / Leyal Demtaş	Aliaga / Türkiye	
NO	9431848 HÖEGH XIAMEN	03/10/2020				Leyal	Aliaga / Türkiye	
NO	8750833 DEEPSEA BERGEN	04/12/2020				ISIKSAN	Aliaga / Türkiye	
NO	7431698 IDUNA	08/03/2021				FORNAES	Denmark	
NO	9204752 NAVION ANGLIA	10/03/2021				Leyal	Aliaga / Türkiye	
NO	9209130 NAVION OSLO	27/04/2021				OGE	Aliaga / Türkiye	
NO	9172870 BETTY KNUTSEN	06/07/2021				Leyal	Aliaga / Türkiye	
NO	9186675 FAR SOVEREIGN	09/11/2021				Green Yard AS - Norway	Norway	
NO	9121053 NORMAND NEPTUN	30/11/2021				Green Yard Kleven AS - Norway	Norway	
NO	9155054 NORMAND ATLANTIC	30/11/2021				Green Yard Kleven AS - Norway	Norway	
NO	9229477 NORMAND BORG	30/11/2021				Green Yard Kleven AS – Norway	Norway	
NO	9190298 POLAR MARQUIS	07/12/2021				Simsekler	Aliaga / Türkiye	

NO	9194115 OCEANIC CHALLENGER	21/12/2021				Simsekler	Aliaga / Türkiye
NO	8420799 STAR GRAN	19/02/2019				Leyal Demtas Gemi Sokum San. Ve Tic. AS	Izmir, Türkiye
NO	8420787 STAR GRIP	26/02/2021				Leyal Demtas Gemi Sokum San. Ve Tic. AS	Izmir, Türkiye
NO	7369027 TERNESKJAER	10/06/2021				Smedegaarden A/S – CVR No. 36024992	Esbjerg, DENMARK
NO	9216389 VINLAND	07/07/2020				Leyal Demtas Ship Recycling Yard	Aliaga, Türkiye.

Appendix 2: List of ships found in MARINFO as having been recycled and not part of the reporting by the Member States

FLAG AT SCRAP	IMO NOS	SHIP NAME	SCRAP DATE	SCRAP YEAR	EST. LDT	GT	SHIP TYPE IHS	PLACE OF BREAKING	SHIP BREAKER	COUNTRY
Belgium	8515520	ORWELL	9/10/2020	2020	2468	2598	Trailing Suction Hopper Dredger	Gijon	Ddr Vessels Xxi Sl	Spain
Belgium	8638932	ADRIATICO	2/1/2021	2021	627	840	Bucket Ladder Dredger	Ghent	Van Heyghen Recycling	Belgium
Bulgaria	7911052	NORVARG	11/9/2021	2021	828	1085	Products Tanker	Aliaga	Ersay Gemi Geri Donusum As	Türkiye
Cyprus	8422723	ODIN R	4/1/2020	2020	2440	2081	Cutter Suction Dredger	Grenaa	Fornaes Aps	Denmark
Cyprus	8915782	MUNIN EXPLORER	8/1/2019	2019	1405	2387	Research Survey Vessel	Esbjerg	Smedegaarden	Denmark
Denmark	5100477	ELBJORN	1/1/2020	2020			Restaurant Vessel, Stationary	Denmark	Jatob ApS	Denmark
Denmark	7516876	SABLE EXPRESS	5/29/2021	2021	1875	2341	Platform Supply Ship			Denmark
Denmark	7921007	BLUE ALFA	4/1/2021	2021	1875	1887	Anchor Handling Tug Supply			Denmark
Denmark	8510972	GRETHE HVIID	12/18/2020	2020	537	630	Fishing Vessel	Grenaa	Fornaes Aps	Denmark
Denmark	8516990	SC NORDIC	4/13/2021	2021	1566	4876	Palletised Cargo Ship			Denmark
Denmark	8521531	SHELF EXPRESS	4/1/2021	2021	1164	1423	Platform Supply Ship			Denmark

Denmark	9198044	ESVAGT CONNECTOR	11/4/2020	2020	1671	1890	Anchor Handling Tug Supply	Grenaa	Fornaes Aps	Denmark
Estonia	7362524	FOREST COSTA RICA	8/1/2021	2021	0	1403	Fishing Vessel			Belgium
France	4546844	MALABAR	2/13/2021	2021	464	896	Tug			France
France	4546856	TENACE	1/27/2021	2021	464	896	Tug			France
France	7704552	VLAANDEREN XIX	7/12/2021	2021	2468	2970	Cutter Suction Dredger	Ghent	Van Heyghen Recycling	Belgium
France	7813391	KURA ORA II	1/11/2019	2019	1566	1113	General Cargo Ship	Unknown	Unknown	
France	7912745	HALTEN BANK II	4/2/2021	2021	537	791	Fishing Vessel			Belgium
France	9075589	CORSAIRE	1/1/2020	2020	694	851	Passenger/Ro-Ro Ship (Vehicles)			
Germany	8986896	BREDSTEDT	12/31/2021	2021	547	784	Patrol Vessel	Frederikshavn	Jatob Aps, Handelsselskabet	Denmark
Greece	6517005	ANASTASIA III	8/27/2020	2020	782	1286	General Cargo Ship	Aliaga	Bereket Gemi Sokum Ltd Sti	Türkiye
Greece	7517533	TZOANNA VI	2/10/2021	2021	968	977	General Cargo Ship	Unknown	Unknown	Türkiye
										Türkiye
Greece	9249104	ELKA VASSILIKI	6/5/2021	2021	17843	55096	Chemical/Products Tanker			Pakistan
Latvia	8721765	SOLVITA	4/17/2021	2021	806	734	Fishing Vessel			Latvia
Latvia	8846694	INTA	5/24/2020	2020	0	718	Bunkering Tanker	Liepaja	Unknown Shipbreakers, Latvia	Latvia
Malta	9004217	PURKI	2/22/2020	2020	4950	10396	Container Ship (Fully Cellular)	Alang	Leela Ship Recycling Pvt Ltd	India

The Netherlands	8414790	GEOPOTES 15	7/18/2020	2020	7319	10188	Trailing Suction Hopper Dredger	Aliaga	Unknown Shipbreakers, Türkiye	Türkiye
The Netherlands	8639728	TRITON	1/28/2019	2019	627	662	Cutter Suction Dredger	s- Gravend eel	Scheepssloperij Nederland Bv	Netherlands
Netherlands	8863745	STEMAT SCRADEWAY	1/11/2019	2019	11606	2054	Pontoon (Function Unknown)	Netherla nds	Scheepssloperij Nederland Bv	Netherlands
Romania	8767630	GLORIA	5/1/2019	2019	11606	8763	Drilling Rig, jack up	Romani a	Gsp Offshore	Romania
Spain	6506329	NAUMON	3/4/2021	2021	1954	1057	Theatre Vessel			Spain
Spain	8619704	CHILREU	11/29/2019	2019	1077	1316	Fishery Patrol Vessel	Gijon	Ddr Vessels Xxi Sl	Spain
Sweden	8705383	SASSNITZ	10/20/2021	2021	9805	21154	Passenger/Ro-Ro Ship (Vehicles/Rail)	Aliaga	Leyal Gemi Sokum Ltd Sti	Türkiye
EFTA Countries										
Iceland	6721216	STURLA	12/5/2020	2020	537	672	Fishing Vessel	Klaipeda	Unknown Shipbreakers, Lithuani	Lithuania
Iceland	6828923	SNAEFELL	9/25/2019	2019	2481	1319	Fishing Vessel	Ghent	Van Heyghen Recycling	Belgium
Iceland	7607065	HJALTEYRIN	9/25/2019	2019	537	658	Fishing Vessel	Ghent	Van Heyghen Recycling	Belgium
Iceland	8003993	MARS	6/8/2021	2021	537	716	Fishing Vessel			Belgium
Norway	5051224	ISELIN	1/1/2019	2019	481	542	General Cargo Ship	Stokksund	Fosen Gjenvinning As	Norway
Norway	7207463	SIGMA	1/1/2020	2020	1954	1467	Research Survey Vessel	Hanoyta ngen	Norscrap West As	Norway
Norway	7303267	HERLAUG	6/29/2020	2020	694	737	Passenger/Ro-Ro Ship (Vehicles)	Stokksund	Fosen Gjenvinning As	Norway

Norway	7369027	TERNESKJAE R	6/8/2021	2021	481	882	General Cargo Ship				Denmark
Norway	7412020	EIDE FIGHTER	8/1/2021	2021	1875	1388	Anchor Handling Tug Supply				Denmark
Norway	7508881	EIDE TRAVELER	5/21/2021	2021	1875	1389	Anchor Handling Tug Supply				Denmark
Norway	7705116	BIOTRANS	4/1/2021	2021	537	797	Fishing Vessel				Norway
Norway	7712951	NORDMORE	11/18/2021	2021	1584	1105	Passenger/Ro-Ro Ship (Vehicles)	Stokksu nd	Fosen Gjenvinning As		Norway
Norway	7728508	FRAFJORD	9/28/2020	2020	522	739	Passenger/Ro-Ro Ship (Vehicles)	Unknow n	Unknown		Norway
Norway	7805124	VETNE	10/1/2020	2020	1584	1660	Passenger/Ro-Ro Ship (Vehicles)	Esbjerg	Smedegaarden		Denmark
Norway	8211899	ANDAL	4/27/2019	2019	1114		Passenger/Ro-Ro Ship (Vehicles)	Norway	Fosen Gjenvinning As		Norway
Norway	8412261	MELDESKIN	6/29/2020	2020	1584	1974	Passenger/Ro-Ro Ship (Vehicles)	Hanoyta ngen	Norscrap West As		Norway
Norway	8510673	VENTURER	4/7/2019	2019	2795	3935	Research Survey Vessel	Aliaga	Ege Celik Gemi Sokum As		Türkiye
Norway	8714281	SKJERVOEYF ISK	7/1/2019	2019	537	579	Fishing Vessel	Eydeha vn	Norsk Skipsbrukt As		Norway
Norway	9043081	WOLVERINE	7/18/2020	2020	6950	11360	Chemical/Products Tanker	USA	ISL		United States Of America
Norway	9183867	GEOWAVE COMMANDER	8/1/2020	2020	5002	5631	Research Survey Vessel		Green Yard As		
Norway	9190298	SW MARQUIS	11/11/2019	2019	8867	13339	Research Survey Vessel	Aliaga	Simsekler Gida Gemi Sokum Sti		Türkiye

ANNEX X MAIN DIFFERENCES BETWEEN THE SRR AND THE HKC

The documents used in the comparison exercise²³¹ are the following:

The Hong Kong Convention and the following IMO guidelines:

- [MEPC.211\(63\)](#) Guidelines for the authorisation of ship recycling facilities
- [MEPC.196\(62\)](#) Guidelines for the Development of the Ship Recycling Plan
- [MEPC.210\(63\)](#) Guidelines for Safe and Environmentally Sound Ship Recycling

Regulation (EU) No 1257/2013, as amended by Decision (EU) 2018/853 and Regulation (EU) 2024/1157 and implemented by [Commission Implementing Decision \(EU\) 2016/2325](#) on the format of the certificate on the inventory of hazardous materials, [Commission Implementing Decision \(EU\) 2016/2321](#) on the format of the ready for recycling certificate, [Commission Implementing Decision \(EU\) 2016/2324](#) on the format of the report of planned start of ship recycling, [Commission Implementing Decision \(EU\) 2016/2322](#) on the format of the statement of completion of ship recycling and [Commission Implementing Decision \(EU\) 2015/2398](#) on information and documentation related to an application for a facility located in a third country for inclusion in the European List of ship recycling facilities. It also covers the [Communication from the Commission — Requirements and procedure for inclusion of facilities located in third countries in the European List of ship recycling facilities — Technical guidance note under Regulation \(EU\) No 1257/2013 on ship recycling](#). A reference is also made to the [Directive \(EU\) 2024/1203](#) on the protection of the environment through criminal law.

HKC	SRR	Differences	Target group
Art 3 Art 6 Reg 17	Art 2, 15 (recital 9)	<p>Application/scope</p> <p>The SRR defines its scope by reference to EU-flagged vessels. Only with respect to the obligation to hold an IHM onboard, the scope also includes ships flying the flag of a third country calling at a port or anchorage of a MS. The SRR is applicable to EU SRFs, but also to third countries SRFs if they apply for inclusion in the European List. The HKC applies to ships flying the flag of a Party and SRFs operating under its jurisdiction. For ships flying a non-Party flag, Parties shall apply the HKC as may be necessary to ensure that no more favourable treatment is given to such ships when recycled. This is a clearer obligation to apply the same requirements for dismantling non-parties ships than in the SRR On the other hand it is not clear to what extent Parties to the HKC will decide to require an IHM from non-parties flag, in application of the ‘no-more favourable’ clause.</p>	All
Art 5 Art 8	Art 8, 9, 10 Art 11 Art 12	<p>Hazardous materials and inspection of ships</p> <p>- For ships flying the flag of a Party under the HKC and a Member state under the SRR, identical regimes for survey, certification and inspection apply identical but they are parallel.</p> <p>-Under the SRR, non-EU-flagged ships visiting an EU port may be subject to an inspection to check the validity of the statement of</p>	Port states, flag states, shipowners

²³¹ Elaboration based on input provided under a contract with DNV AS.

<p>Appendix 1, 2</p> <p>Art 9</p>	<p>Annex 1, 2</p> <p>Art 11, Art 12</p>	<p>compliance (IHM certificate) which is required under the SRR. Under the HKC there is no such an obligation to require an IHM for vessels flying the flag of a non-party.</p> <p>-Annex I of the on control of hazardous materials includes PFOS but not the Appendix I of HKC. Annex II of the SRR on the minimum List of Items for the Inventory of Hazardous Materials includes 15 hazardous materials. The HKC Appendix 2 lists 13 materials. The SRR includes Brominated Flame Retardants (HBCDD) and PFOS (as part of Appendix I) but not the HKC.</p> <p>-See also below ‘Certificates and reporting forms.’</p> <p>-Under the HKC, any Party with some evidence of violation or intention to violate can ask another Party to investigate when a ship is calling its port. The party must report back about action to the Party that requested the investigation, to the flag state and to IMO. Though slightly different, it can be considered the mechanisms under Port State Control Directive allow similar action and communication between authorities.</p>	
<p>Art 4, Art 6, Reg 15, Reg 16, Art 9, Reg 17</p>	<p>Art 13, Art 14, Art 15, Art 16, Art 22, Art 23</p>	<p>Authorisation and controls of ship recycling facilities</p> <p>-Authorisation from competent local authorities to conduct ship recycling is required both under the HKC and the SRR. The SRR includes however additional requirements (see below). In the HKC there is a form for the ‘authorisation of ship recycling facilities’, while there is no dedicated template in the SRR.</p> <p>- Under the HKC, parties should provide upon request of IMO or other parties, information on which its decision for SRF authorization was based. There is no similar provision under EU SRR. However, COM makes publicly available all compliance assessment reports related to decision for listing third countries facilities and publish draft decisions for updates of the European List for public feedback, as part of its decision-making process.</p> <p>-The HKC requires the parties to identify the terms for which the authorization will be issued, withdrawn, suspended, amended and renewed. The SRR indicates that any non-compliance with Art.13 shall lead to withdrawal, suspension or corrective actions of SRFs located in MS and the Commission should be informed about it. If their country facilities on the European List cease to comply with EU SRR requirements, the SRR only provide for the removal from the European List.</p> <p>- The HKC has a specific provision related to the obligation to establish mechanism for inspection, monitoring and enforcement for SRFs. If audits are carried out under the HKC, the results should be communicated to IMO. There is not such a provision under the SRR applying to MS; only a general provision on enforcement. However, SRFs in third countries before and after inclusion in the European List, are subject to specific compliance assessment and monitoring by independent verifiers and/or the Commission (in additional to any national measure).</p> <p>- Under the HKC, another Party with evidence may request another party to investigate alleged violation by a SRF under its jurisdiction. Report of such investigation is to be sent to the Party requesting it and</p>	<p>Recycling States, SRFs, COM</p>

		to IMO. Under the SRR, there is a general duty of cooperation among MS and, in addition, any third party affected may request action from the Commission with respect to a breach of the SRR by a third country SRF. There are no specific provisions concerning SRF located in MS.	
Reg 3, Reg 17 Reg 19 Reg 20 Reg 21 Reg 22 MEPC .210(6 3)	Art 13 Art 15 EC TGN	<p>Standards for Safe and environmentally sound management</p> <ul style="list-style-type: none"> - Under the SRR, environmentally sound management may only be assumed to be in place for waste recovery and disposal concerned provided the SRF located in third countries can demonstrate operations in accordance with human health and environmental protection standards that are broadly equivalent to relevant international and EU standards. -The SRR explicitly requires monitoring systems. Under HKC it is implicit in having an effective management system that monitoring is performed with nevertheless guidance for monitoring provided under MEPC.210(63). On environmental monitoring, the EU Technical note goes beyond and suggests e.g. additional monitoring of high temperatures. -Specific guidance on control of leakage is included in MEPC Guideline but the HKC does not include the specific requirement of the SRR related to demonstration of control of any leakage (complemented by its Technical Guidance Note (EC TGN) explaining how to prevent adverse effects on the environment from ‘hazardous materials’ as well as ‘waste generated during the ship recycling process’) and of their handling ‘only on impermeable floors with effective drainage systems. - The requirement to operate on built structures as included in the SRR (+ EC TGN) is not included in the HKC. - Regarding the removal of hazardous waste, the SRR does include the specific requirement of documenting the quantities of removed hazardous waste and the identification and handling of additional hazardous materials that may be part of the structure of the ship. The EU SRR also requires evidence of competence for the personnel authorized to carry out removal of hazardous materials in facilities in third countries. - The IMO guidelines reference the same ILO and Basel Convention guidelines, but the EU Technical note goes beyond in some aspects by suggesting how to apply environmentally sound management principles (‘transfer of elements from the ship to the facility’s impermeable floor is done without the elements coming in contact with the sea, the intertidal zone or any other permeable surface such as sand or gravel’). EC TGN also suggests some specific technical measures to control, respond and mitigate on adverse effects on the environment (‘prior assessment of pollutants remaining on board the ship; rapid-response teams; oil absorption booms; oil containment booms; drainage canals and impermeable floors’); on containment of hazardous materials, it describes measures to be taken when risks related to exposure to asbestos at work and on elevated tanks to store oily residues. 	SRFs, downstr eam waste manage ment facilities

		<p>-The HKC describes more detailed requirements for the emergency preparedness and response plan (i.e. the plan shall ensure that the necessary equipment and procedures are in place, necessary information and internal communication and training (including drills) but EU SRR goes beyond HKC when requiring rapid access for emergency response. However, both HKC and EU SRR make reference to the Basel Convention, Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships (BC TG) where immediate first aid and rapid additional medical care from medical personnel is described.</p> <p>- For EU SRR, EC TGN also suggests that the current layout of the recycling facility is reflected in the plan and that workers, including contractor personnel and employees hired for a short period of time is informed about the plan.</p> <p>- The Stockholm Convention on Persistent Organic Pollutants is not referenced in the HKC.</p>	
Reg 8, Reg 17	Art 6	<p>Preparation for ship recycling</p> <p><u>General:</u></p> <p>- Under EU SRR the obligations are for the shipowners (of EU-flagged ships) whereas under HKC the obligations are on all ships intended to be recycled in a facility located in a party.</p> <p>- The HKC requires a ship to use a SRF authorized in accordance with the Convention, while the EU SRR requires end-of-life ships to be dismantled in a facility on the European List (i.e. compliant with EU requirements) and applies an export ban to non OECD countries if these vessels became waste in the national jurisdiction of a Member State.</p> <p>- Under EU SRR shipowners retain responsibility in case the operator of the SRF declines to accept the ship for recycling if the condition of the ship does not correspond substantially with the particulars of the IHM.</p> <p>- Shipowners are required to prepare similar Ready for Recycling Certificates under the HKC as under the EU SRR but (potentially) issued for different regimes.</p> <p>- In the case of a tanker, HKC stipulates that it should arrive at the SRF with cargo tanks and pump room(s) in a condition that is ready for certification as Safe-for-entry, or Safe-for-hot work, or both, according to national laws while the EU SRR does not refer to ‘safe-for-entry’ and applicable laws.</p> <p><u>Ship recycling plan</u></p> <p>- The EU SRR is more detailed in its description of requirements for the ship recycling plan, namely on ship-specific considerations or special procedures (if not included in SRFP), consistency with IHM, information about preparatory work location, about where the ship will be placed during recycling operations, concise plan for the arrival and safe placement of the specific ship to be recycled, reminding of taking into account structure, configuration and previous cargo when monitoring safe recycling , storage of hazardous waste and waste.</p>	All
Reg 9	Art 7, Art 17		

		-HKC defines a 14-day review period for tacit approval of the SRP, while the EU SRR points to national regulations for the duration of review period.	
Reg 11, Reg 14, Appendix 3, 4, 5, 6, 7	Art 9, Art 10, Art 12, Art 13	<p>Certificates and reporting forms</p> <p>- The EU SRR requires the ‘<u>Certificate on inventory of hazardous materials</u>’ for EU-flagged ships following model adopted under Decision 2016/2325 and consistent with Appendix 3 to HKC. A ‘statement of compliance’ is the equivalent document requested for non-EU-flagged ships calling at EU ports) that may be modelled on Appendix 3 to HKC (model proposed by EMSA). If the models set by HKC and EU SRR are similar, they refer to different legal frameworks (EU or HKC) and the list of hazardous materials to be included in the IHM required under the EU SRR contains two more materials. Therefore, an IHM certificate issued for compliance with the EU SRR would be in substance compliance with the HKC but not the other way around.</p> <p>-According to HKC, the validity of IHM certificates shall cease to be valid upon transfer of a ship to the flag of another State. The new State can request the former flag state to transmit copies of certificates and if available, copies of the relevant survey. There is no similar provision in the EU SRR.</p> <p>- The EU format of the ‘<u>Ready for recycling certificate</u>’ (Decision 2016/2321) is very similar to the HKC format, but are issued by virtue of two different instruments and their annexes (IHM and SRP have additional requirements under EU SRR)</p> <p>- There is no form for the <u>authorisation of ship recycling facilities</u> under EU SRR.</p> <p>- In addition to the fact that they refer to different legal frameworks, HKC and EU SRR (Decision 2016/2324) formats for <u>Report of Planned Start of Ship Recycling</u> are similar. Minor differences exist however as HKC includes additional data (State that has issued the DASR, Place of authorization and full designation of the Competent Authority).</p> <p>- HKC form and the EU SRR format (Decision 2016/2322) on <u>Statement of Completion of Ship Recycling</u> are very similar, only difference being that they refer to different legal frameworks.</p>	Flag states, Shipowners
Art 10	Art 22, Art 15 ECD	<p>Violations/sanctions</p> <p>Both frameworks provide for members to establish sanctions that must be adequate in severity to discourage violations. However, COM role regarding control (and therefore sanctions/de-listing) of third country facilities on the European List is a difference as well as the fact that illegal recycling of ships should constitute a criminal offence (through Directive (EU) 2024/1203 [Environmental Crime Directive (ECD)]).</p>	All
Reg 23, 24, 25, Art 12	Art 6, Art 7, Art 13, Art 14, Art 21	<p>Reporting requirements</p> <p>- On the notification by the shipowner of the <u>intention</u> to recycle a ship to flag state, EU SRR specifically ask for the name of the SRF, the IHM and detailed ship-specific information. HKC does not.</p> <p>- It is optional under EU SRR for EU flag states to send to the competent authority of the recycling state the information provided by the shipowner part of the notification of its intent to recycle a ship</p>	All

		<p>and further details. Under HKC, there is a requirement for the SRF to inform its Competent Authority about the intent to recycle the ship, with similar details.</p> <ul style="list-style-type: none"> - The HKC requires the SRF to report to its Competent Authority the planned <u>start of the recycling</u> while the EU SRR requires the SRF to report this to flag state - The HKC requires SRFs to send the Statement of <u>Completion</u> to its Competent Authority and that the latter send a copy to the Administration that issued the (International) Ready for Recycling Certificate (flag state). The EU SRR asked the SoC to be sent only by the SRF to the flag state. - The HKC requires SRF to report to the Competent Authority, on incident, accident, occupational diseases, or chronic effects, whilst the EU SRR require that the SRFs to establish records. - The Commission and the IMO require information to be submitted from their members. The information required is similar but there are differences in substance, Also the format and frequency are different. 	
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