*This submission reflects the opinions of a group of consortium partners, prepared in good faith on short notice, and does not present project results or necessarily represent the exact position of all partners.

Submission to the European Commission's Call for evidence on the Circular Economy Act

6 November 2025

We thank the European Commission for the opportunity to contribute to the public consultation on the new Circular Economy Act (CEA). As a Horizon European-funded project, CirclesOfLife (COL) shares the Commission's vision of fostering market demand for secondary raw materials and creating a unified, competitive single market for waste and secondary resources.

The CEA has the potential to:

- Reinforce the single market for waste and secondary raw materials.
- Increase both supply and demand of high-quality, verifiable secondary raw materials at competitive prices.

This initiative is highly relevant to the maritime manufacturing industry, particularly in shipbuilding, ship maintenance, repair, conversion (SMRC), and ship dismantling.

The sector encompasses ship production, maintenance, retrofitting, conversion and recycling, as well as a vast supply chain of maritime systems, technologies, and services. It represents:

- 42.000+ equipment manufacturers and technology providers
- 300+ shipyards
- 500.000+ direct employment
- €153 billion annual production value

The project has received funding from the European Union's Horizon Europe Research and Innovation Programme under grant agreement No 101138013

COL project intends to advance circularity in the EU maritime sector by delivering practical and scalable tools or frameworks, developed in close collaboration with European shipyards and industry stakeholders to enhance their competitiveness. They aim to:

- Reduce emissions and material footprints
- Strengthen compliance with evolving EU legislation
- Enhance industrial competitiveness
- Secure Europe's strategic resilience in shipbuilding, repair, maintenance and recycling

The work of COL aims to align its work with current and emerging EU and international frameworks, including the Corporate Sustainability Reporting Directive (CSRD), Ecodesign for Sustainable Product Regulation (ESPR), Digital Product Passport (DPP), Industrial Emissions Directive (IED), and EU Ship Recycling Regulation (SRR).

The forthcoming Circular Economy Act presents a timely opportunity to integrate these tools into its provisions.

Problem definition

The **Circular Economy Act** is crucial for the **maritime manufacturing industry**, particularly in shipbuilding, maintenance, repair, conversion, and dismantling. This must be considered in the context of European shipyards facing stiff competition from Asian counterparts benefitting from supportive public policies, leading to a decline in market share and capacity in Europe.

- European shipyards have steadily lost market share to Asian competitors, facing mounting pressure to reduce emissions and material footprints while competing with regions operating under weaker environmental and labour standards.
- EU ship recyclers struggle to secure vessels and justify investment in clean technologies, due to unfair competition from yards operating under weaker environmental and labour standards and the limited scope of EU ship recycling regulations[1] The coming decades, however, could be a turning point, with recycling volumes expected to increase and significant flows of ship scrap steel entering the European secondary market.

This erosion has reduced revenues and capacity, weakening **Europe's maritime resilience.**

[1] While the EU shipping companies owns the 35% of the global fleet, only the 1% of EU-owned fleet is recycled in the EU.

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Key challenges contributing to this situation include:

- Fragmented data and inconsistent reporting
- Lack of transparency on environmental impacts
- Absence of clear, actionable guidance for decision-makers

These gaps hinder the adoption of circular practices and limit the shipyards to meet EU circularity goals and maintaining competitiveness. The forthcoming Circular Economy Act offers an opportunity to rebalance the market by emphasizing non-price factors such as innovation, life-cycle value, transparency, and resilience, transforming circularity into a competitive advantage for Europe's maritime industry.

CirclesOfLife contribution to anchor circularity in the EU maritime sector

Based on the Digital Product Passport (DPP) guidelines outlined in the Ecodesign for Sustainable Products Regulation (ESPR) and adapted for the maritime sector, CirclesOfLife is developing a blueprint for a Ship Lifecycle Passport (SLP) and a Ship Circular Materials Passport (SCMP). As part of this process, the DPP and ESPR guidelines are being analysed and translated for application within the maritime manufacturing industry. The **SCMP** functions as a material passport at the component level of a ship, while the **SLP** covers the vessel as a whole, integrating all individual SCMPs. Together, these digital passports will enable full traceability of materials and environmental impacts throughout a ship's entire lifecycle.

The SLP and SCMP contribute directly to the objectives of the Circular Economy Act by:

- Bridging data gaps across the maritime value chain, enabling transparency and informed decision-making,
- Facilitating compliance with EU design and waste legislation, ensuring ships meet circularity and sustainability requirements,
- Translating and applying the guidelines of DPP and the ESPR to the maritime sector, supporting standardized digital tracking and regulatory alignment, and
- Promoting circular strategies such as reuse, repair, and refurbishment under the 9R framework, embedding circularity from design to dismantling and maximizing the retention and recovery of high-value materials.

Additionally, the Shipyard Environmental Performance Index (SEPI) will evaluate the environmental footprint of shipyard processes. This unique standardized software tool will helps assess and improve shipyard sustainability and circularity across newbuilds, repairs, and end-of-life operations.

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As a building block of the SLP, SEPI enables:

- Benchmarking and hotspot identification to target environmental improvements,
- Adoption of cleaner and more circular technologies,
- ESG-driven branding and access to green finance,
- Information about the environmental footprint of the shipbuilding process,
- Incentivization of Best Available Techniques (BATs).

However, there is currently no single standardized methodology for calculating environmental performance. To ensure consistency and a reliable digital passport for the maritime sector, alignment or clear guidelines on environmental and circular assessment methodologies will be critical. SEPI's proposition and tools are positioned to meet this challenge. In this case, the COL project is working with several European shipyards on specific case studies. These "living labs" aim to create digital tools and modelling systems, which could provide useful ideas and examples for putting the CEA regulation into practice and help with an initial learning phase.

Major roadblocks to circularity

Three main roadblocks have been identified, that are currently hindering the broader adoption of circularity practices in the maritime sector and could limit the commercial uptake of digital tools like the SLP and SCMP.

- **Regulatory Clarity:** current regulations on requirements for digital passport (ESPR) do not explicitly cover ships or maritime components, creating uncertainty in timelines and requirements. The lack of a common baseline or minimum dataset for passports leads to fragmented initiatives.
- **Governance and Assurance:** ownership of data and responsibility for maintaining, updating, and verifying passport information is unclear. A central repository at the EU level for data storage is needed, while verification could be performed by classification societies.
- **Economic misalignment:** those who pay for creating passports (e.g., shipyards) may not directly receive the benefits (e.g., shipowners would retain a higher value of the ship at the end of life). The lack of financial incentives or regulatory motivation slows implementation.

Policy recommendations for the new Circular Economy Act

COL is designing tools such as the SEPI, SCMP and SLP in collaboration with the European shipyards and maritime industries to reduce their environmental footprint, improve the circularity of products and operations, strengthen compliance with EU legislation and enhance the sectors' competitiveness.

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However, without a clear regulatory framework and adequate incentives, there is a high risk that any solution to improve circularity developed by COL will have limited impact if left as voluntary industry initiatives. Therefore, the COL consortium urges the European Commission to consider the following key recommendations for the Circular Economy Act.

A) Reinforce the single market for waste and secondary raw materials

- **Harmonise definitions and methodologies assessing circularity and the across the EU.** Currently, there is no common definition of circularity for companies, nor a harmonised methodology for measuring it. This regulatory gap is creating market uncertainty, fragmentation of approaches, and increased risks of greenwashing in products and services claiming circular credentials.
- **Establish a harmonised, accessible EU-level repository for material environmental footprints**, mandatory and free of charge, to prove standardised datasets to enable consistent environmental footprint calculations. An industry-wide database encourages shipyards and related maritime sectors to adopt uniform LCA practices, supporting transparency and comparability.
- **Clarify and standardise which certification systems are to be recognised for EU-wide circularity compliance** and ensure a level playing field where certification costs and requirements do not disadvantage early adopters. This would address the market resistance among customers and suppliers, who are often unwilling to bear the additional costs of circular components and materials.
- **Recognise the EU-owned fleet as a strategic material bank** of high-value secondary raw materials and call for closing existing loopholes in the EU Ship Recycling Regulations that allow shipowners to export high-quality steel for dismantling under weaker environmental and regulatory systems.
- **Recognise Green Marine Europe certification as a specific and holistic, pioneering certification on circularity in shipping industry.** This allows early adopters to measure and clearly demonstrate their compliance and even go beyond it with full transparency. The results of the COL project will directly contribute to the development of Green Marine Europe's upcoming performance indicators, strengthening its position as a transnational standard that connects the environmental, social, and economic aspects of sustainability. In addition, the new CEA regulation will serve as the foundation for these performance indicators

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B) Increase both supply and demand of high-quality, verifiable secondary raw materials at competitive prices

- **Introduce ships as a distinct product group under ESPR** to enable a dedicated DPP, promoting reuse, recycling, and circularity of components. Set mandatory minimum thresholds for recycled content, supplier information, and circularity metrics, and encourage cross-sectoral use of recycled materials.
- **Establish unified regulatory requirements for retrofit, maintenance, repair, and dismantling operations under the Ship Lifecycle Passport across the maritime sector.** The unified regulatory requirements should encompass the procedure for selecting the shipyards, equipment suppliers, and dismantling facilities certified for the above-mentioned lifecycle operations under the Ship Lifecyle Passport. Selection should be based on transparent criteria, including technological capability, resilience (with local content requirements for specific strategic markets), and working conditions.
- **Require ships to complete a predefined set of lifecycle operations**, as a condition for accessing European ports, while harmonizing requirements for documentation of material passports, including inventories of hazardous materials, and administration of substances of concern.
- **Explore tools like the Carbon Border Adjustment Mechanism (CBAM)** to boost demand for secondary raw materials and overcome price and competitiveness barriers to circular materials in the maritime sector. CBAM revenues should be reinvested in affected downstream industries such as Europe's shipbuilding sector. A detailed impact assessment is needed before including ships as downstream products to avoid harming competitiveness. Any inclusion should be gradual, with support for industry adjustment and consideration of sector-specific CBAM measures to protect European shipyards from unfair competition
- **Use public procurement as a market driver** by integrating non-price factors such as circularity requirements into the next revision of the Public Procurement Directives, in accordance with the Clean Industrial Deal. In particular, the public transport sector (including public transport operators and maritime infrastructures such as ferries, ports, harbours and offshore assets) should set the example and acts as early adopter to create stable demand and demonstration effects for circular products.

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C) 'Get the economics right' for circular markets to ensure competitiveness and scale

- **Fully align financial frameworks with circularity and sustainability objectives.** Link bank financing, public funding, and ESG-related incentives (including the EU Taxonomy) to performance covering full environmental and circular performance, not only emissions. Create a level playing field so regulations guarantee fair access to financing for circular projects.
- **Allocate specific funding via the EU Innovation Fund or other funding for the decarbonisation and circularity of shipyards** to modernize shipyards, invest in clean technologies, and enable better material sorting, industrial symbiosis, and local circular supply chains.
- **Address barriers in financing circular transitions and share responsibility across stakeholders.** Develop financial mechanisms linked to the EU Ship Recycling Regulation to incentivize dismantling at EU-approved facilities, e.g., offering lower insurance premiums for shipowners adopting circular operations. Establish tax and financial incentives to offset higher initial costs for circular certifications, retrofits, and the use of verified secondary materials.
- **Introduce financial incentives to stimulate the growth of secondary raw materials markets across Europe.** Efforts should focus on increasing both the quantity and quality of recovered materials, minimizing the outflow of secondary materials to non-European markets, and supporting the transformation processes that enable their adaptation for industrial applications, particularly in sectors such as shipbuilding, where material performance and traceability are critical.

These measures aim also to **establish a strong business case for ship lifecycle management in Europe**, starting from newbuild and including fully automated, efficient, safe, health and environmentally sound ships dismantling and waste treatment downstream management, positioning Europe as a frontrunner in this market and ultimately enhancing the competitiveness of European shipyards, maritime equipment manufacturers, and shipowners. **That business case should be profitable for both the shipbuilding supply chain and shipowners**.

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We are available to provide further technical input from the COL project to support the Commission's work.

The following organisations participate CirclesOfLife: DAMEN RESEARCH DEVELOPMENT & INNOVATION BV, BALance Technology Consulting GmbH, Center of Maritime Technologies gGmbH, Green Marine Europe, Netherlands Maritime Technology Foundation, FSG Shipyard GmbH, Bureau Veritas M&O, VTT Technical Research Centre of Finland, Delft University of Technology, NGO Shipbreaking Platform, University of Genoa, GALLOO, SEA Europe, ERIKS.

For questions about the CirclesOfLife project, its partners ant its progress, please contact Rosanne van Houwelingen at info@circles-of-life.eu

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