

Implementing circular economy for end-of-life recreational boats in the Circular Economy Act Position Paper

The recreational boating industry is a vital part of Europe's maritime economy. With over 6.5 million boats in European waters and a predominantly SME-driven industrial base, the sector is committed to sustainability and circularity. The sector is increasingly aligning with the EU's ambitions for a more circular, resource-efficient, and resilient economy.

A large share of boats is manufactured using composite materials, especially Fibre-Reinforced Polymers (FRP), valued for their durability and lightweight properties. It is well known how boats are considered ultra-durable, since the estimate is that their lifespan is more than 50 years. However, as boats reach their end-of-life (EoL), these materials pose significant challenges for dismantling, transport, and recycling. All other materials commonly used in boat building, such as wood and metals, have well-established recycling streams. Despite the overall low volumes of waste, the boating industry is a frontrunner on recycling within the large composite sector.

While the marine sector represents just 1.5% of total composite use in Europe¹, it generates uniquely distributed and technically challenging waste streams, particularly as boats reach their end-of-life. Boats also have a long lifetime of more than 50 years if well maintained. That is why in various cases it is essential to distinguish between obsolete and end-of-life boats.

The boating industry is taking significant steps towards ensuring the circular economy of materials in boat-building, by increasingly using new sustainable materials and pushing for dismantling and recycling systems. Crucially, the shift towards a circular economy is influencing not just the disposal of aging boats, but also the way new boats are built. Increasingly, manufacturers are taking the entire life cycle into account during design and materials selection, using methods like Life Cycle Assessment (LCA) to inform their approach from the outset.

The European Boating Industry and its members are actively developing a Life Cycle Assessment (LCA) approach specifically for recreational boats, drawing on the Product Environmental Footprint (PEFCR) guidelines set out by the European Commission. This methodology will enable manufacturers to better measure and enhance the environmental performance of boats at every stage—from sourcing raw materials and manufacturing through to use and eventual disposal. By integrating LCA into both design choices and policy frameworks, the industry aims to support EU sustainability goals and promote greater transparency and accountability throughout the sector.

Overall, there is a certainty of waste streams coming from composite waste in the next years and recycling technologies have been developed over the last years. The main issue is to develop the supply chain connecting the waste streams and activating the recycling technologies. This requires a suitable regulatory framework at EU level, which the upcoming Circular Economy Act can provide.

Recommendations for the Circular Economy Act

Composite materials currently lack dedicated waste codes and uniform classification, which makes their collection and treatment economically unviable at scale. Only about 30,000 to 40,000 boats are dismantled annually in the EU—far below the theoretical potential—due to barriers including high

¹ JEC Market Report 2019

transport costs, limited dismantling infrastructure, and insufficient policy incentives. Without intervention, growing volumes of composite waste risk ending up in landfills or informal disposal.

The Circular Economy Act offers an opportunity to close these regulatory gaps and provide the necessary conditions for scalable, sustainable solutions. EBI calls for the inclusion of composite waste, which includes recreational boating, in the Act's scope and the implementation of concrete measures to unlock circularity in boat end-of-life treatment:

- I. **Establish dedicated EU waste codes for composite materials.** To enable tracking, pooling, and efficient recycling of end-of-life composite materials, it is critical to create specific EU waste codes for fibre-reinforced polymers (FRPs), with distinct sub-codes for boats and other key sectors such as wind energy. This will improve visibility over available waste streams and facilitate investment in treatment infrastructure across Europe.
- II. **Allow decentralised dismantling and adapt the regulatory framework.** Recreational boats often cannot be transported to specialised waste centres due to their size and location. The EU should enable on-site dismantling by allowing marinas and boatyards to perform dismantling operations under simplified licensing rules. This would particularly benefit regions with limited dismantling infrastructure and reduce costs for owners and therefore incentivise dismantling.
- III. **Promote scalable recycling solutions including cement co-processing.** Cement kiln co-processing offers an immediately available route to recycle composite waste by replacing raw materials and fossil fuels in cement production. This method, already validated at industrial scale, should be recognised under EU waste legislation as a legitimate form of recycling while we transition towards a higher technology recycling schemes. Simultaneously, other innovative solutions such as mechanical and chemical recycling must be supported through targeted funding.
- IV. **Create enabling financial and logistical conditions.** To ensure the success of circular practices, each Member State should establish an appropriate system to finance and manage the end-of-life treatment of recreational boats. This could take the form of an Extended Producer Responsibility (EPR) scheme or alternative mechanisms suited to national contexts. Regardless of the approach, such systems must be operational, transparent, and effective in supporting the development of dismantling and recycling infrastructure. EU-level funding instruments should be leveraged to co-fund these national systems and ensure widespread implementation and innovation in sustainable boat disposal. Moreover, tailored EU funds and grants should be created or expanded to support companies that wish to enter the dismantling and recycling market for recreational boats. Such funding would ease access to recycling and dismantling for the industry while enabling the emergence of specialised marine-focused businesses.
- V. **Strengthen EU Waste Shipment Regulation for composites.** The Waste Shipment Regulation should be adapted to ease the movement of composite materials across borders, ensuring that recycling operations can achieve economies of scale. This would support the pooling of waste streams across sectors and geographies, allowing the establishment of regional treatment hubs and improved market conditions for recyclers.
- VI. **Enhance boat registration and data collection.** To advance circular economy objectives, it's important for all EU Member States to establish a unified and transparent system for boat registration. Accurate records on the quantity, location, and condition of boats—especially those

nearing the end of their usable life—would help authorities and industry coordinate dismantling and recycling efforts more effectively. Currently, the lack of standardised, accessible data is a major obstacle to developing and executing sustainable end-of-life processes for recreational boats.

To support these efforts and provide a structured path forward, a dedicated Roadmap for the circular economy of end-of-life recreational boats² has been developed jointly by the European Commission, European Boating Industry, and key stakeholders from across the value chain. This Roadmap outlines core recommendations, policy needs, and areas of collaborative action, serving as a guiding framework for future implementation. It reinforces the industry's demands and gives legitimacy to the proposed measures under the Circular Economy Act.

About European Boating Industry (EBI)

EBI represents the recreational boating industry in Europe. It encompasses all related sectors, such as boatbuilding, equipment manufacturing, marinas and service providers. The industry is a significant contributor to the European economy, representing 32,000 companies, predominantly SMEs that employ over 280,000 people directly. The mission of EBI is to advance and represent a sustainable boating and nautical tourism industry #MadeInEurope. More information on EBI's website: www.europeanboatingindustry.eu

² <https://europeanboatingindustry.eu/newsroom/newsletter/item/792-end-of-life-roadmap>
European Boating Industry