TURNING END-OF-LIFE SHIPS INTO LOW-CARBON STEEL: INDUSTRIAL OPPORTUNITY FOR GERMANY AND EUROPE

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On 17 November, NGO Shipbreaking Platform, EPICO and the Lower Saxony Permanent Representation to the European Union organised a policy event in Brussels. It showcased the emerging ship recycling cluster in Lower Saxony, one of Europe's established maritime regions. Ship recycling fits the region's industrial profile, as its steel producers are already investing in low-emission production routes. EWD Benli in Emden and Lloyd Werft close by in Bremerhaven operate within a wider network of steel plants, ports and research centres.

Setting the scene

Lena Rieforth, the Deputy Head of the Representation of the State of Lower Saxony opened the event by highlighting the recently adopted EU Industrial Maritime Strategy and its recognition of ship recycling's role in circularity, material autonomy and industrial resilience. By hosting the discussion in Brussels, the Representation drew on Lower Saxony's experience: the state is home to a ship recycling yard in Emden and to Salzgitter, a frontrunner in cleaner steel production. Both provide a concrete backdrop for exploring the synergies between ship recycling and the steel sector.

Dr Kirsten Scholl, Director for EU Affairs at EPICO, then placed the discussion within the sector's current reality. The European-owned fleet is a floating bank of certified high-quality steel, yet only 1% of EU-owned vessels are recycled in Europe. Keeping that material in Europe could help decarbonise European steelmaking. With decarbonisation at the top of the policy agenda. After placing this issue within current policy discussions, such as the circular economy act, she introduced the Northern Germany Maritime Cluster as a speaker and invited them to share their sectoral experience.

Marvin Natz of EurA AG explained how the North German ship recycling cluster came about through years of collaboration. EurA AG manages the ShipRec Network, which brings together shipyards, engineers and maritime actors and fosters dialogue with local authorities. With a wave of end-of-life ships approaching, Natz argued that the sector must act together. He added that ship recycling is not the end of a long process but one link in a much larger value chain.

Lessons from Lower Saxony's permitting experience

The Lower Saxony Ministry for the Environment, Energy and Climate Protection shared the view from the authority side. Katharina Endler, Policy Officer at the Ministry, explained that the state has worked on ship recycling for roughly five years. EWD Benli is the first German yard on the EU list under the Ship Recycling Regulation (SRR). That experience showed that recycling ships in Germany is possible, but only with considerable preparation, coordination and commitment from everyone involved.

What worked. Endler identified three success factors:

- the shipyard's entrepreneurial decision to develop ship recycling as an additional line of business, as a strategic choice to diversify
- close cooperation between the company and the permitting authority, with dialogue starting well before a formal application
- active support from the state administration throughout the process

In her words, successful permitting is built on early communication, mutual understanding and thorough preparation.

What remains difficult. Approval under the SRR is still not routine in Germany, and practical experience is limited. One of the main hurdles was working out which documents and evidence demonstrate compliance. Because ship recycling is both a maritime and a waste management activity, responsibilities are split. Environmental permits come from the competent regional authority, while SRR approvals are currently handled by the Ministry. For new entrants the challenge is greater still. They need substantial investment in infrastructure, a suitable site, waste management and disposal routes, storage, occupational safety and emergency preparedness. High environmental, safety and labour standards add costs, while European facilities compete with regions where labour, environmental protection and operating costs are far lower.

What is changing. Lower Saxony and Bremen took the issue to the German Conference of Environment Ministers, seeking a clearer legal basis for ship recycling facilities in the permitting framework. As part of transposing the Industrial Emissions Directive into German law, the 4th Ordinance under the Federal Immission Control Act is being revised. Ship recycling facilities are expected to benefit from a simplified procedure.

Endler's overall assessment was that technical feasibility is no longer the issue. **The real challenge is creating reliable economic and regulatory conditions that make recycling commercially viable.**

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The steel connection

Aurelio Braconi, Policy and Industry Expert at EUROFER, stressed the need for closer collaboration, not only between ship recyclers and steelmakers, but also scrap yards, logistics providers and other actors across the value chain. Ship recycling is a source of scrap that Europe needs, and the demand side must be prepared ahead of investment. ArcelorMittal's transformation plans for its Bremen site illustrate the potential demand: if an EAF were developed there, it could require scrap equivalent to 20 - 40 cargo vessels. Lloyd's estimates that ship recycling could meet 10 -15% of future scrap demand, underscoring the need to build European recycling capacity ahead of that demand.

Christelle Rousseau, Policy Officer in charge of ship recycling at DG ENV, set out the EU measures supporting the sector. The EU backs electric arc furnaces as low-emission steelmaking infrastructure and could act on demand through public procurement rules and minimum recycled content requirements in products. The Commission continues to support innovative projects such as CirclesOfLife, and it recently launched the EU Maritime Value Chain Alliance.

The need for a true level playing field

Ingvild Jenssen, Executive Director and Founder of the NGO Shipbreaking Platform, raised the practice of reflagging vessels to flags of convenience at the end of their operations. European decision makers know that this practice undermines the EU Ship Recycling Regulation. Besides, **the Commission's proposal to include two beaching yards in the 16th EU List of ship recycling facilities also sparked debate**. Participants noted that the decision would act as a disincentive to responsible recyclers who have invested in Europe. This echoed the Ministry's call for fair competition with facilities outside Europe that operate under very different economic conditions.

What is needed

Taken together, the panel's contributions point to a clear set of priorities.

- Recognition of ship recycling as a source of high-quality scrap steel;
- Clear responsibilities within authorities and faster permitting for companies wanting to invest long-term in ship recycling activities;
- Demand-side rules that reward recycled steel, including recycled content targets and procurement that favours it;
- Early coordination and dialogue across sectors and relevant levels of governmens;
- Funding for pilots and R&D, including material passports and circular shipyard hubs;
- Last but not least, a level playing field with yards outside Europe

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Europe is investing in hydrogen and clean steel production. Ship recycling belongs in the same industrial and climate transition strategy. Circularity, industrial resilience and strategic autonomy cannot be delivered by rhetoric alone. The ShipRec Network already shows the way forward, with recyclers, steelmakers and researchers working from the same agenda.

Will other European coastal regions follow the path of Lower Saxony?