

Tackling marine litter

Fishing and
aquaculture gear

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The world is taking notice

Attention from governments, media and the public in recent years has stimulated widespread support for action on marine litter.

UK Governments are researching measures to manage waste from fishing and aquaculture gear, supported by research from Resource Futures. EU member states are also evaluating how to tackle the waste gear problem.

In the public domain, documentaries such as *Seaspiracy* and *Blue Planet II* have gained significant traction in highlighting issues of marine litter and waste fishing and aquaculture gear.

The EU set out requirements for an Extended Producer Responsibility (EPR) scheme which requires EU member states to implement fishing and aquaculture gear EPR by 2025. Since 2022, member states have additionally been required to report gear sold and waste tonnages.

Until recently there was limited information on fishing and aquaculture gear. Resource Futures' work gathers the information and quantifies material flows, informing the development of policies tailored to the specific industries and waste of a region and enabling data-driven decision making.

// Economies of scale in managing end-of-life fishing and aquaculture gear will encourage investment in infrastructure and behaviour change needed to effectively tackle the problem of marine waste. //

George Cole, Director at Resource Futures

The current system is not working

Marine litter represents a failure in product and waste management. If all waste gear were managed responsibly, and reasons for accidental loss were addressed, almost none would be lost to the marine environment.

Waste gear can contain potentially valuable materials, but current product design and waste management systems make it difficult to recover these.

Implementing circular economy practices will also reduce carbon emissions associated with manufacturing and waste management.

Time for a new approach

Several manufacturers, recyclers, and fishing and aquaculture industries are seeking to address the waste gear problem. However, coordinated action is needed at scale, and governments can drive this change.

Achieving economies of scale in managing end-of-life fishing and aquaculture gear will encourage the investment in infrastructure and behaviour change needed to effectively tackle the problem.

But, more importantly, this work can catalyse circular economy thinking that designs out waste and maximises the value of materials used, avoiding marine litter altogether.

Resource Futures' three-step approach can help understand the problem and identify the best solutions for government and industry.



Our three-step approach



Step One: Quantify gear use and waste

Understanding the scale of the problem is essential to evaluating appropriate solutions. Using our resources and expertise, we quantify the products in use and waste from fishing and aquaculture gear.

The uniquely rich data we develop in Step One allows granular assessment of how policies could impact different gear types and materials, down to the level of different plastic polymers.



Step Two: Design effective policy solutions

Policy measures can be co-designed to create a financially and environmentally sustainable waste management system. Considerations include import, export, and market competitiveness, as well as the nature of the products, supply chains, waste stream, and infrastructure challenges of waste management in remote locations.

Industry-led or government supported schemes, extended producer responsibility (EPR), advance disposal fees, and engagement and education measures are explored and tailored to the local context. We then compare different options in policy impact assessments to establish the most effective and cost-efficient solutions.



Step Three: Improve and expand recycling

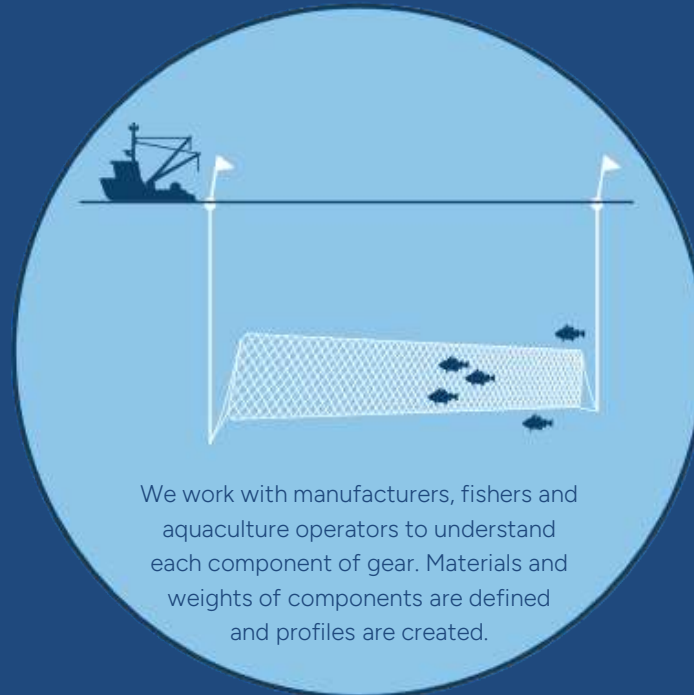
Recycling is a cornerstone of any solution. We review existing recycling and waste management pathways and analyse the capacity gap against our data from Step One on waste quantities and composition.

Recycling pathways can then be established and improved, working with the waste management industry to adapt and enhance existing infrastructure or invest and expand where necessary. The analysis provides a clear view of what is needed and who to work with.



Data-driven decision making

Governments and industry are looking for new solutions to better manage waste fishing and aquaculture gear. We have collected a huge quantity of data on fishing and aquaculture gear to understand the products, materials and waste arisings. Solutions are tailored to regional circumstances. We compare policy options to determine the biggest impact and best value; the resulting evidence is used to engage industry and other key stakeholders.



Our existing resources

Resource Futures provides a holistic view of opportunities to improve waste management and reduce marine litter: from waste management systems to eco-design, policy drivers and incentives. These are informed by our specialised knowledge of fishing and waste practices and how they can vary between fisheries, vessels and harbours.

Gear profiles

- Full breakdown of gear type into components, material composition, weight and lifespans;
- Verified by gear manufacturers and industry experts;
- Tailored to different fisheries in each country.

Extensive networks

- Gear manufacturers, waste managers, and experts in gear design, materials and circular design.

Methodologies

- Providing much needed insight on the products used, waste created, and the pros and cons of different approaches in any geographical and political context.

Quantification

- Resource Futures provides national material estimates using the gear profiles and market data;
- Sub-national geographic breakdowns.

Engagement

- Ensuring a human-centred and participatory approach;
- Helping to unite industry and government in co-designing lasting solutions.

Impact assessment

- To compare different solutions;
- To provide an evidence base for industry engagement and public consultation.



Our expertise

Our work is helping to shed light on the size and the nature of waste fishing and aquaculture gear, to develop practical and cost-effective solutions, and bring together key stakeholders needed to support a successful system.



Case study Developing policy across the UK

Resource Futures worked with the governments of England, Scotland, Wales and Northern Ireland to profile the fishing and aquaculture gear of local industries.

Policy options were co-developed with government departments, critically analysed, and assessed using economic impact assessment and cost-benefit analysis.

The outputs will inform government action and industry engagement, supporting a transition to a circular economy.

[View case study](#)



Case study Focusing on Scottish industries

Scotland has unique fishing and aquaculture industries, hosting many different types of fishing and farming methods.

Resource Futures undertook several studies for the Scottish Government to understand gear use and waste management in greater detail, focusing on the large industries of aquaculture and creel pot fishers.

This work provides a significant new evidence base and insight on potential solutions.

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Get in touch

Resource Futures works in collaboration with policy makers around the world to deliver meaningful impacts.

Interested in our approach? Want to know more about how our resources could help inform your decision-making?

Contact

George Cole, Director

george.cole@resourcefutures.co.uk

07793 647189