



SEARCULAR

Circular Solutions for Fishing Gears

CONCEPT

SEARCULAR's Gear Lifecycle Factsheet (GLF) a Digital Product Passport for fishing gear

SEARCULAR has developed a conceptual design and proposal for a standardised Gear tag and Gear Lifecycle Factsheet (known as a GLF), which will act as a Digital Product Passport for fishing gear¹.

The GLF will provide transparency around gear components and recyclability, and support best practice and circularity throughout the whole gear lifecycle.



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Background

It is widely accepted that **an integral step towards better management end-of-life (EOL) fishing gear, and reducing Abandoned, Lost or Discarded Fishing Gear (ALDFG) is to implement clear gear labelling and marking**. Gear marking supports the effective management of EOL gear by providing information on gear type and materials, the producer and ownership, and recycling method. Thus, marking gear allows for traceability in case of retrieval after loss². **We are proposing a Digital Product Passport comprising a mark (serial number) fixed to the gear, a tag kept by the owner and an associated standardised digital factsheet (GLF), all linked by the identifiable serial number**. This will support material transparency, traceability, and signposts pathways to high quality end-of-life (EOL) management and recycling.

The GLF has been designed to be:

- Aligned with **Circular Design Standards (EN 17988 parts 2 and 6)**³ to support end-of-life management and **FAO's Voluntary Guidelines on the Marking of Fishing Gear (VGMFG)**².
- A central point for gear information, and **act as a Digital Product Passport in accordance with the ESPR regulations**¹.
- **Practical and easy to use for the fishing industry at ports**, making gear labelling and information, transparent and accessible.
- Used by skippers and vessel owners at ports for sorting and **integrating EOL gear into SEARCULAR's SMART Blue Points and reverse logistic systems across regions**⁴.

This conceptual design supports SEARCULAR's policy recommendations⁵. Digital Product Passports should be made mandatory for new fishing gear manufactured across Europe.



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SEARCULAR Gear Lifecycle Factsheet (GLF) Proposal

In conjunction with the GLF, we have designed a simple colour-coded gear tag that is directly linked to the marked gear via its unique serial number. This serves to connect the owner to the 'digital gear passport' and provides an easy to use, attachable tag to aid EOL gear management at ports. The tag will include a QR code which provides a single entry point into the GLF and all of the relevant gear information required to enhance traceability and gear circularity.



Concept for a colour coded gear tag. The tag is linked to marked gear via a unique serial number (SN) and contains a QR code to access the Gear Lifecycle Factsheet (GLF). The tags are colour coded by waste management stream, and can easily be attached to gear at EOL.

The GLF will provide information on:

- The named gear type and serial number (SN)
- The manufacturer, and date and location of manufacture.
- Details of the gear construction and information on gear dismantling
- Details on the primary materials and their recycling options – e.g. mechanical or chemical. To support this the gear name and label will be categorised via distinct colour-coding to reflect specific collection streams and management groups.
- A link to an interactive map with regional waste management facilities and designated Blue Points⁴ for collection and preparation of recyclable materials.
- The EU Regulation and EcoDesign for Sustainable Products Regulation framework.
- Sustainability 'A-G' ratings for gear circularity categories, such as:
 1. Recycled content within the product at manufacture
 2. Recyclable content at EOL
 3. Gear Durability (Lifespan)
 4. Energy efficiency rating across the whole lifecycle



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GLF concept

(Based on hypotheticalal gear information)

GEAR LIFECYCLE FACTSHEET (GLF)

For circular fishing gear



SN: 00001

GEAR: BIO-SEINE ROPE



GEAR COMPOSITION, DISMANTLING & RECYCLING

68% BIO-PLASTIC > CHEMICAL RECYCLING

24% RECYCLABLE PVC > CHEMICAL. 8% NON-RECYCLABLE.
FULL COMPOSITION AND DETAILS.



PRODUCTION AND MANUFACTURE

MANUFACTURER, LOCATION, DATE.



INTERACTIVE MAP OF AVAILABLE
WASTE MANAGEMENT FACILITIES AND
BLUE POINTS



ESPR



RECYCLED CONTENT X%



RECYCLABLE CONTENT X%



DURABILITY/LIFESPAN X YEARS



ENERGY EFFICIENCY

FOR MORE DETAILS AND CALCULATIONS SEE BELOW

A-G RATING CALCULATIONS

SUSTAINABILITY RATING

SEARCULAR's core objective is to reduce marine litter and microplastic generated by European fisheries at source. Our project has implemented circular economy practices within the fishing sector value chain, including at ports in aid of this central objective. The project works holistically, building acceptance of the tried and tested solutions offered by the project and fostering behavioural change through fully integrated stakeholder engagement throughout the project.

SEARCULAR involves the collaboration of 13 organisations, over three years (2023 - 2026) and is funded by the European Union under the EU Mission 'Restore our Ocean and Waters' and UK Research and Innovation (UKRI).

RESOURCES

- [1] [What is the Digital Product Passport?](#)
- [2] [FAO Voluntary Guidelines on the Marking of Fishing Gear](#)
- [3] [Design of Gear Under Standards](#)
- [4] Ismo Ruohomäki, Paule España, 2025. Guidelines on Good Management Practices for EOL fishing gear, SEARCULAR Deliverable 4.1
- [5] Easman, E., Wilson, B., Cabezas, O., SEARCULAR Consortium, 2026. Set of policy recommendations for achieving a circular economy for European fishing gear. SEARCULAR Deliverable 5.4.



How to cite

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