



SLOVENSKI STANDARD
SIST EN 17988-5:2025

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Krožna zasnova ribolovnega orodja in opreme za akvakulturo - 5. del: Krožni poslovni model

Circular design of fishing gear and aquaculture equipment - Part 5: Circular business model

Kreislaufwirtschaftliche Gestaltung von Fischfanggeräten und Aquakulturausrüstungen - Teil 5: Kreislaufwirtschaftliches Geschäftsmodell

Circularité et recyclabilité des engins de pêche et des équipements d'aquaculture - Partie 5 : Modèles d'économie circulaire

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Circular design of fishing gear and aquaculture equipment - Part 5: Circular business models

Circularité et recyclabilité des engins de pêche et des équipements d'aquaculture - Partie 5 : Modèles d'économie circulaire

Kreislaufdesign von Fischfanggeräten und Aquakulturausrüstungen - Teil 5: Kreislaufwirtschaftliche Geschäftsmodelle

This European Standard was approved by CEN on 30 September 2024.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN 17988-5:2024) has been prepared by Technical Committee CEN/TC 466 “Circularity and recyclability of fishing gear and aquaculture equipment”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a standardization request addressed to CEN by the European Commission (M/574). The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

This document is part of the EN 17988 series.

The EN 17988 series consists of the following parts, under the general title *Circular design of fishing gear and aquaculture equipment*:

- Part 1: General requirements and guidelines
- Part 2: User manuals and labelling
- Part 3: Technical requirements and guidelines
- Part 4: Environmental and circularity requirements and guidelines
- Part 5: Circular business models
- Part 6: Requirements and guidelines for digitalization of information of components of fishing gear and aquaculture equipment

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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Introduction

As part of the European Green Deal, launched in 2019, the European Commission introduced measures to move to a climate neutral and circular economy, together with a digital transition. One of the targets in the transition to a circular economy was to reduce the amount of waste released into the environment by decreasing the amount of waste generated, increasing the amount of waste collected and re-introducing the materials regenerated from waste into the production of new products.

Specifically, the accumulation of plastics in marine and other aquatic environments were addressed in two directives:

- The revised Port Reception Facilities (PRF) Directive [1] encourages fishers and aquaculturists to bring not only their own end-of-use gear but also bring ashore abandoned, lost or otherwise discarded (ALD) fishing gear and aquaculture equipment, thus encouraging waste to be carried back to port.
- The Single Use Plastics (SUP) Directive [2], which lays down rules concerning different plastic products, including fishing gear and aquaculture equipment containing plastics, and sets requirements to the Member States to establish Extended Producer Responsibility (EPR) schemes. Concerning fishing gear, it also contains rules on minimum national annual collection rates, together with reporting on fishing gear placed on the market and waste fishing gear collected in ports.

In 2021, the standardization request M/574 on the circular design of fishing gear [3] was passed by the European Commission and the parliament and accepted by CEN, which forms the basis for this series of documents (EN 17988 series). While the term ‘fishing gear’ is used predominantly in the SUP Directive and M/574, both documents encompass aquaculture equipment.

The purpose of this series of documents is to provide stakeholders with requirements, recommendations and guidelines to address the different aspects of circular design of fishing gear and aquaculture equipment containing plastics, encourage preparing for reuse and facilitate recyclability at end-of-use. These requirements are intended to be applied from the design phase across the entire life cycle of the fishing gear and aquaculture equipment. This includes but is not limited to: manufacturing, use, maintenance, repair, collection, sorting, preparation for recycling, reuse, remanufacture, disposal, uptake of recycled content and recycling.

Although this standard is written for fishing gear and aquaculture equipment containing plastics, the requirements, recommendations and guidelines are also applicable to other materials.

This series of documents does not address other important design criteria such as fishing or farming efficiency. When implementing the requirements, recommendations and guidelines provided in these documents, balanced trade-offs between all relevant criteria need to be taken into account.

This series of documents aims to contribute to the following UN Sustainable Development Goals (SDGs) [4]:

- 9 Industry, innovation, and infrastructure,
- 12 Responsible consumption and production,

- 14 Life below water, in particular target 14.1: ‘By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.’

For a full outline of the parts of the standard, and how the parts relate to each other, see part 1.

Part 5 addresses developing circular business models for fishing gear and aquaculture equipment. Circular business models are intended to keep a product in its original intended use for as long as possible, as well as to provide business opportunities with other sectors. Such interactions enable the development of completely new market and cooperation opportunities.

This document provides supporting guidelines for Extended Producer Responsibility (EPR) schemes for fishing gear and aquaculture equipment.

Note to the reader on normative language: In this document, the following verbal forms are used in accordance with the CEN/CENELEC Internal Regulations Part 3, Clause 7:

- “shall” indicates a requirement;
- “should” indicates a recommendation;
- “may” indicates a permission;
- “can” indicates a possibility or a capability
- “must” indicates an external constraint.

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EN 17988-5:2024(E)**1 Scope**

This document provides guidelines and fundamental principles for the development of circular business models for fishing gear and aquaculture equipment containing plastics.

It discusses opportunities for value retention, product life extension and recycling of fishing gear and aquaculture equipment.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 17988-1, *Circular design of fishing gear and aquaculture equipment – Part 1: General requirements and guidelines*

EN 17988-2, *Circular design of fishing gear and aquaculture equipment – Part 2: User manuals and labelling*

EN 17988-4, *Circular design of fishing gear and aquaculture equipment - Part 4: Environmental and circularity requirements and guidelines*

EN 17988-6, *Circular design of fishing gear and aquaculture equipment – Part 6: Requirements and guidelines for digitalization of information of components of fishing gear and aquaculture equipment*

CEN/TS 18101, *Circular design of fishing gear and aquaculture equipment - Terms and definitions*

3 Terms and definitions

<https://www.iso.org/obp/ui/#iso:code:3d:17988-5:2025> For the purposes of this document, the terms and definitions given in CEN/TS 18101 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

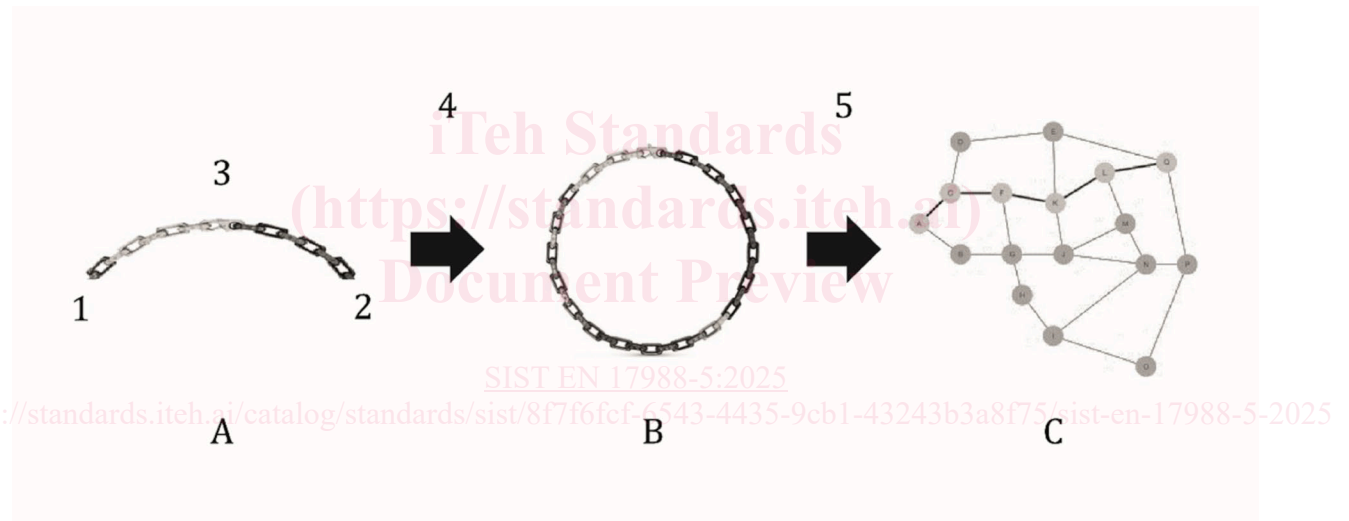
- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Principle

4.1 General

Often the transition from a linear to a circular economy is depicted as the closing of the value chain (see A) and B) in Figure 1), while it rather should be seen as the transition to a value network (see C) in Figure 1). Only when looking beyond the life cycle of a specific product to the network of possible combinations of the different stages of product life cycles can a material, component, part or product remain in the (circular) economy as long as possible. The aim shall always be to choose the pathway giving the highest possible value to the materials, components, parts and products. In this context it is important to identify the possible gaps and opportunities.

One example of a potential opportunity is the current trend to take up materials, components, parts and products from fishing gear or aquaculture equipment applications and introduce them into the fashion industry, for example as fabric and/or apparel. These initiatives can be viewed as stunts rather than fully developed business models. However, they have value in promoting circularity commercially and with customers. This can be an important step towards developing stronger networks and therefore, increasingly advanced business models.



Key

A	linear value chain	1	materials
B	circular value chain	2	waste
C	circular value network	3	products
		4	close the loop
		5	from chain to network

Figure 1 — Circular economy transition process [adapted from ISO 59010:2024, Figure 4]

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The ultimate goals of the circular economy are (i) to eliminate the production of waste and pollution, (ii) circulate all materials, components, parts and products at their highest value, and (iii) regenerate nature, while decoupling economic activity from the consumption of finite resources and minimising emissions and losses from the economic system. This document aims to provide the reader with tools to develop or participate in the development of business models which support these ultimate goals.

In a first step the type of business model shall be determined. Selected examples for different business models are provided in Annex A.

In a second step the key elements for the business model shall be identified. Clause 6 provides guidelines for identifying and implementing the key elements for developing and setting up business models. It is advisable to draft several business models, taking into account possible variations of the key elements. These different business models shall then be compared, and the most suitable options shall be identified.

The aim shall be to develop self-sufficient business models and processes, but in some cases, subsidies can be needed to start up the process until it can become self-sufficient or to support the process when economic values change.

4.2 Value networks for fishing gear and aquaculture equipment

Figure 2 shows a diagram describing part of a circular value network applicable to fishing gear and aquaculture equipment.

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