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**Waste reduction and treatment on  
fishing vessels**

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ISO 5020:2022

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 234, *Fisheries and aquaculture*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

A productive, healthy and clean aquatic environment is vital for fisheries and other sectors. In order to accommodate sustainable growth in marine sectors, it is essential to avoid littering and other types of pollution. Despite this, marine and inland waters are recipients of intentional and unintentional litter and other pollutants.

Waste occurring in freshwater and marine water and litter are to a large extent transported over large distances, often following the ocean currents. Problems due to marine pollution must therefore be solved at an international as well as at a national level.

Reduced release of waste into the ocean and inland water bodies will also make a significant contribution to improved resource management, increased sustainable food production and improved circular economy.

This document can contribute to:

- reduced global amount of litter and other pollutants from the fishing fleet;
- reduced macroplastic and microplastic levels in marine and inland waters, and on the seabed;
- reduced amount of litter in the littoral zone and nearby terrestrial areas, as well as in recreation areas;
- reduced ghost fishing and environmental impact from the seafood industry, e.g. on fish species, invertebrates, reptiles, birds and mammals;
- healthy aquatic ecosystems and sustainable fish stocks.

Biological waste in the form of, for example, offal, bycatch and discard does not lead to littering and should be treated as important and valuable resources for the fishing industry. This issue is therefore not treated in this document.

# Waste reduction and treatment on fishing vessels

## 1 Scope

This document specifies a system for waste reduction and treatment on fishing vessels. It includes principles, management plans, methods and requirements.

This document is applicable to both marine and inland fisheries.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

### 3.1 Materials and waste

#### 3.1.1

##### waste

substance or object which is disposed of, is intended to be disposed of or is required to be disposed of by the provisions of national law

#### 3.1.2

##### litter

solid material, object or fragment which has been deliberately discarded or unintentionally lost

Note 1 to entry: According to the International Convention for the Prevention of Pollution from Ships, MARPOL 73/78<sup>[3]</sup> (Appendix V “Rules for the Prevention of Pollution by Garbage from Ships”), litter means all types of food, household and operational waste (3.1.1), all types of plastics (3.1.3), cargo residues, ash from incinerators, cooking oil, fishing gear and carcasses of animals that are formed during the normal operation of the vessel and are subject to constant or periodic removal.

#### 3.1.3

##### plastic

polymer to which additives or other substances can be added, and which can function as a main structural component of final products

Note 1 to entry: In the context of this document, the polymers are mainly petroleum based.

Note 2 to entry: Onboard a *fishing vessel* (3.2.1), all types of plastics, including bioplastics and biodegradable plastics, should be treated as plastics.

#### 3.1.4

##### microplastic

solid plastic particles or fragments smaller than 5 mm in the largest dimension, insoluble in water and not degradable

**3.1.5**

**effluent**

outflowing of a liquid to a natural body of water

Note 1 to entry: Such liquids can be, for example, wastewater, sewage and bilge water generated on *fishing vessels* (3.2.1).

**3.2 Fishing vessels and onboard planning**

**3.2.1**

**fishing vessel**

vessel used to catch or collect fish or other biological resources in the sea or in inland water bodies

**3.2.2**

**geolocate**

identify a geographic location

**3.2.3**

**ghost fishing**

continuation of fishing by abandoned, lost and discarded fishing gear (ALDFG)

**3.2.4**

**bycatch**

fish or other aquatic species that is caught unintentionally while catching certain target species and target sizes of an aquatic species

Note 1 to entry: The bycatch is either of a different species, the wrong sex, or is undersized or juvenile individuals of the target species.

**3.2.5**

**discard**

portion of the total organic material of animal origin in the catch, which is thrown away, or dumped at sea

Note 1 to entry: It does not include plant materials and post-harvest *waste* (3.1.1) such as *offal* (3.2.6). The discards may be dead, or alive.

**3.2.6**

**offal**

scraps

entrails and other organs of an animal

**3.3 Principles and planning**

**3.3.1**

**circular economy**

economic system that systemically maintains a circular flow of resources, by regenerating, retaining or adding to their value while contributing to sustainable development

**3.3.2**

**recycling**

<waste> recovery operation by which waste materials are reprocessed into products, materials or substances, whether for the original or other purposes

**3.3.3**

**reuse**

operation by which products or components are used again for the same purpose for which they were conceived



**3.3.4****awareness programme**

campaign designed to increase knowledge among fishers and other interested parties concerning the impact of their activities on fish populations, the environment and human health, and to enhance their motivation to avoid negative impacts

**3.3.5****waste plan**

waste management plan

plan describing how to minimize, handle, treat and offload *waste* (3.1.1)

**3.3.6****waste management system**

waste handling system

systematic actions and activities required in order to manage *waste* (3.1.1) from its inception to its final disposal

**3.3.7****waste hierarchy**

waste pyramid

tool used in the evaluation of processes which prioritizes the most favourable to the least favourable actions in order to achieve sustainability

**3.3.8****risk assessment**

process of identifying and analysing potential events, related to *waste* (3.1.1), that can impact the environment and *circular economy* (3.3.1), making judgements on the tolerability of the risk on the basis of a risk analysis while considering influencing factors

**3.3.9****interested party**

stakeholder

person or organization that can affect, be affected by or perceive itself to be affected by a decision or activity

[SOURCE: ISO 14001:2015, 3.1.6, modified — “stakeholder” added as the admitted term. Example and Note 1 to entry deleted.]

**4 Principles****4.1 General**

The principles described in this clause are fundamental to the process of avoiding ghost fishing, littering and other types of pollution from fishing vessels. They are the basis for the requirements described in [Clauses 4 to 10](#). This document does not provide specific requirements for all situations; however, these principles provide guidance for decisions that need to be made in day-to-day situations as well as in unanticipated situations.

These principles of waste handling are for organizations to apply, taking into account the identification of interested parties and their needs and expectations.

**4.2 Avoid ghost fishing, littering and pollution****4.2.1 General**

In order to avoid littering, pollution and ghost fishing:

- Planning should be made to optimize waste minimization, including sorting and disposing of packaging quayside.

- Establish waste management routines and provide for physical measures such as waste bins.
- Make sure that appropriate routines to avoid littering and pollution are followed.
- Discarded fishing gear should never end up in the sea intentionally or accidentally.
- Toxic or non-degradable waste should never end up in the sea intentionally or accidentally.

#### 4.2.2 Equipment and products

Strive to use fishing gear that:

- is less likely to be lost in fishing areas;
- can be geolocated if lost at sea or in inland waters;
- is able to meet expected exposure where it is used.

Strive to use fishing gear and products that are:

- likely to deteriorate to non-hazardous products if lost at sea or in inland waters;
- not likely to fragment during fishing operations;
- possible to recycle.

#### 4.2.3 Best practice

When purchasing equipment that can generate or end up as waste, an emphasis should be put on characteristics such as quality, including recyclability, dismantlability, lifespan, ability to repair and environmentally friendly product design (eco-design), and on using subcontractors capable of providing sustainable products and/or services.

Lost fishing gear should be:

- recaptured immediately after the incident that led to the loss, if possible;
- reported to the relevant authorities.

Abandoned, lost and discarded fishing gear (ALDFG) captured should be taken care of and landed if not in conflict with issues such as life and safety.

Captured litter should be taken care of and landed.

### 4.3 Waste to be treated as a resource

#### 4.3.1 Optimize circular economy

In order to facilitate a circular economy, strive to:

- use products that can be separated in identifiable components for recycling and further use;
- use products that include circulated materials or reused parts;
- sort out reusable items and recyclable materials;
- keep waste fractions separated.