

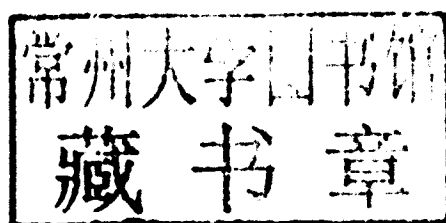
Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels



INTERNATIONAL
MARITIME
ORGANIZATION



Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels



The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO), International Labour Office (ILO) or the International Maritime Organization (IMO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO, ILO or IMO in preference to others of a similar nature that are not mentioned.

ISBN 978-92-5-107397-1

All rights reserved. FAO, ILO or IMO encourages the reproduction and dissemination of material in this information product. Non-commercial uses will be authorized free of charge, upon request. Reproduction for resale or other commercial purposes, including educational purposes, may incur fees. Applications for permission to reproduce or disseminate such copyright materials, and all other queries concerning rights and licences for FAO information products, should be addressed by e-mail to copyright@fao.org or to the Chief, Publishing Policy and Support Branch, Office of Knowledge Exchange, Research and Extension, FAO, Viale delle Terme di Caracalla, 00153 Rome, Italy.

Cover photo:
Courtesy of the International Maritime Organization (IMO).

Preparation of this document

The *Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels* contained in this publication are the result of the continuing cooperation between the Food and Agriculture Organization of the United Nations (FAO), the International Labour Organization (ILO) and the International Maritime Organization (IMO), in relation to the safety of fishing vessels.

The IMO Sub-Committee on Stability and Load Lines and on Fishing Vessels' Safety (SLF) undertook the development of the Safety Recommendations in collaboration with FAO and ILO in order to provide guidelines to competent authorities for the design, construction, equipment and training of the crews of small fishing vessels, as well as operational safety, and established a correspondence group that commenced work in 2005 to develop recommendations.

The draft Safety Recommendations were submitted to other relevant subcommittees and, following their acceptance, the revised text was submitted to the IMO Maritime Safety Committee (MSC) at its eighty-seventh session (12 to 21 May 2010) at which it was approved. The Governing body of ILO approved the publication of the Safety Recommendations at its 309th session (November 2010). Thereafter, at the twenty-ninth session of the Committee on Fisheries in January 2011, FAO recommended the early publication of the Safety Recommendations.

Abstract

The purpose of the Safety Recommendations contained in this publication is to provide information on the design, construction, equipment, training and protection of the crews of small fishing vessels with a view to promoting the safety of the vessel and the safety and health of the crews. The Safety Recommendations may also serve as a guide for those concerned with the safety of vessels used in support of aquaculture activities.

They are not intended as a substitute for national laws and regulations but may serve as a guide to those persons concerned with framing such national laws and regulations. Unless otherwise stated, the provisions of the Safety Recommendations are intended to apply to new decked vessels of less than 12 m in length and new undecked vessels intended to operate at sea (as well as on oceans, rivers, lakes and dams, or on any body of water). Nevertheless, even where not otherwise stated, the competent authority should as far as reasonable and practical give consideration to the application of these provisions to existing vessels.

Preface

The Safety Recommendations are the result of the continuing cooperation between the Food and Agriculture Organization of the United Nations (FAO), the International Labour Organization (ILO) and the International Maritime Organization (IMO), in relation to the safety of fishing vessels that began with the development of Parts A and B of the *Code of Safety for Fishermen and Fishing Vessels* between 1968 and 1974 (hereinafter referred to as the Code) for decked fishing vessels of 24 m in length and over. The Code was followed by the development of the *Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels* (hereinafter referred to as the Voluntary Guidelines) approved by the Maritime Safety Committee (MSC) at its forty-first session in October 1979 and by FAO in November 1979 for circulation to governments. The ILO Governing Body was informed at its 211th session in November 1979 of the intention to publish this document.

On adopting the Torremolinos Protocol of 1993 relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977, the International Conference on the Safety of Vessels recommended revision of the Code. Consequently, IMO undertook a review and invited the participation of FAO and ILO. It also decided, at the same time, to review the Voluntary Guidelines that are directed at decked fishing vessels of 12 m in length and over but less than 24 m in length.

Following the completion of the review of the Code and the Voluntary Guidelines, the revised texts were approved by MSC at its seventy-ninth session (1 to 10 December 2004). Thereafter, at the twenty-sixth session of the Committee on Fisheries held in March 2005, FAO welcomed the revisions and recommended the early publication by IMO of these documents. Later the Governing Body of the ILO approved the revised texts at its 293rd session in June 2005.

During the process of revising the Code and the Voluntary Guidelines it became evident that there were no guidelines or recommendations for small fishing vessels of less than 12 m in length that were similar to Part B of the Code or the Voluntary Guidelines. As a consequence, the MSC, at its seventy-ninth session, agreed to include in the work programme of the Sub-Committee on Stability and Load Lines and on Fishing Vessels' Safety (SLF) a new high-priority item on "Safety of small fishing vessels". The aim was to develop safety recommendations for decked vessels of less than 12 m in length and undecked vessels, bearing in mind that the majority of fishing fatalities occur aboard such vessels.

The SLF Sub-Committee undertook the development of the Safety Recommendations in collaboration with FAO and ILO in order to provide guidelines to competent authorities for the design, construction, equipment and training of the crews of small fishing vessels, as well as operational safety, and established a correspondence group that commenced work in 2005 to develop recommendations. In this regard, the importance of addressing the small fishing vessel sector, which includes more than 80 percent of all fishing vessels, was emphasized by the more than 30 entities agreeing to participate in the work of the correspondence group.

The draft Safety Recommendations were submitted to other relevant subcommittees and, following their acceptance, the revised text was submitted to the MSC at its eighty-seventh session (12 to 21 May 2010) at which it was approved. The Governing body of ILO approved the publication of the Safety Recommendations at its 309th session (November 2010). Thereafter, at the twenty-ninth session of the Committee on Fisheries in January 2011, FAO recommended the early publication of the Safety Recommendations.

In addition to the IMO competence in relation to safety of life, vessels and equipment at sea, the correspondence group drew heavily on the wide experience of FAO in the design, construction and operation of small fishing vessels, particularly in developing countries where the majority of small fishing vessels operate. It also drew on the competence of ILO regarding conditions of work and service aboard small fishing vessels. The cooperation between FAO and IMO in relation to measures to combat Illegal, Unregulated and Unreported (IUU) fishing was recognized with particular regard to the adverse impact these kinds of fishing activities have on the safety of small fishing vessels in many parts of the world.

The FAO/ILO/IMO *Code of Safety for Fishermen and Fishing Vessels*, 2005, Part A, Safety and Health Practice, provides in Section I, General, and in Section II, Undecked vessels and decked vessels of less than 12 m in length, and in certain of its appendices, guidance that concerns the safety and health of fishermen on small vessels. The Safety Recommendations should be read in conjunction with the Code, Part A. During the preparation of the Safety Recommendations, it was, however, noted that additional operational guidance was needed concerning these vessels. This consideration has been taken into account in the text. It is further recommended that in framing national safety requirements it would be essential to give consideration to local weather and sea conditions and any special operational requirements.

Following the adoption of the ILO *Work in Fishing Convention*, 2007 (No. 188) and *Recommendation*, 2007 (No. 199), the draft Safety Recommendations were reviewed to ensure that they were consistent with the ILO standards.

The FAO applied the draft Safety Recommendations in various countries through its field projects. The objective was to confirm their relevance to diverse fishing vessel types and operations. The positive feedback was very useful in further developing the final content of the Safety Recommendations.

Recognizing that the majority of items covered by the Safety Recommendations are within the scope of IMO and noting the different working procedures within the three organizations and also that the SLF Sub-Committee holds regular meetings, it was agreed that:

1. IMO should act as a focal point for coordinating proposed amendments to the Safety Recommendations and, in particular, the IMO Secretariat should undertake to receive any proposed amendments, to distribute them to the organizations and to collate their respective comments;
2. any future joint FAO/ILO/IMO meeting should be held, whenever possible, in conjunction with a meeting of the SLF Sub-Committee; and
3. any proposed amendments should always be subject to the final approval of the appropriate bodies of the three organizations.

Contents

Preparation of this document		iii
Abstract		iv
Preface		ix
Chapter 1	General provisions	1
Chapter 2	Construction, watertight integrity and equipment	7
Chapter 3	Stability and associated seaworthiness	15
Chapter 4	Machinery and electrical installations	25
Chapter 5	Fire protection and fire fighting	37
Chapter 6	Protection of the crew	41
Chapter 7	Life-saving appliances	47
Chapter 8	Emergency procedures and safety training	53
Chapter 9	Radio communications	55
Chapter 10	Navigational equipment	63
Chapter 11	Crew accommodation	65
Chapter 12	Manning, training and competence	69
Annex I	Illustration of terms used in the definitions	71
Annex II	Recommended construction standards for wooden fishing vessels	77
Annex III	Recommended construction standards for GRP fishing vessels	105
Annex IV	Recommended construction standards for steel fishing vessels	125

Annex V	Recommended construction standards for aluminium fishing vessels	131
Annex VI	Recommended standards for anchoring and mooring equipment	137
Annex VII	Guidance on the structural strength of hatch covers	141
Annex VIII	Guidance on the dimensions of freeing ports	143
Annex IX	An approximate determination of small vessels' stability by means of a rolling period test	145
Annex X	Recommended practice on portable fish-hold divisions	147
Annex XI	An example of a stability notice	151
Annex XII	Guidance on additional stability criteria for beam trawlers	153
Annex XIII	Guidance on a practical buoyancy test	155
Annex XIV	Guidance on tools and spares to be carried on board	161
Annex XV	Guidance on steering gear	163
Annex XVI	Recommended practice for exhaust systems	165
Annex XVII	Guidance on the installation of electrical equipment	171
Annex XVIII	Guidance on a basic first aid kit	183
Annex XIX	Guidance on personnel protective equipment	185
Annex XX	Guidance on the requirements for buoyant apparatus	187
Annex XXI	Guidance on the requirements for life-saving equipment	189
Annex XXII	Recommendations for testing lifebuoys and lifejackets	201
Annex XXIII	Correct securing of hydrostatic release units	215
Annex XXIV	Guidance on safety training in emergency procedures	217
Annex XXV	Guidance on safe operation of winches, line haulers and lifting gear	219
Annex XXVI	Guidance on the Global Maritime Distress and Safety System (GMDSS)	223

Annex XXVII	Range of VHF for various transmitting/receiving units	229
Annex XXVIII	Use of mobile telephones in distress and safety communications	231
Annex XXIX	Recommended performance standards for radar reflectors	233
Annex XXX	Equipment required to comply with the Collision Regulations (COLREGS)	235
Annex XXXI	The International Code of Signals	241
Annex XXXII	Distress signals	243
Annex XXXIII	Guidance on basic pre-sea safety training	245
Annex XXXIV	List of pertinent publications	247

Chapter 1

General Provisions

1.1 Purpose and scope

1.1.1 The purpose of the Safety Recommendations is to provide information on the design, construction, equipment, training and protection of the crews of small fishing vessels with a view to promoting the safety of the vessel and safety and health of the crews. They are not intended as a substitute for national laws and regulations but may serve as a guide to those concerned with framing such national laws and regulations. Each competent authority responsible for the safety of vessels should ensure that the provisions of the Safety Recommendations are adapted to its specific requirements, having due regard to the size and type of vessels, their intended service and area of operation. Before doing so, competent authorities should consult with the vessel owners and fishermen, and their representative organizations, and other relevant stakeholders such as vessel designers, builders and equipment manufacturers. When adapting the Safety Recommendations, the competent authority should endeavour to ensure a level of safety at least equivalent to the provision or provisions concerned.

1.1.2 Unless otherwise stated, the provisions of the Safety Recommendations are intended to apply to new decked vessels of less than 12 m in length (L) and new undecked vessels intended to operate at sea. Nevertheless, even where not otherwise stated, the competent authority should as far as reasonable and practical give consideration to the application of these provisions to existing vessels.*

1.1.3 In the Safety Recommendations, the use of the word “sea” includes oceans, rivers, lakes and dams, or any body of water.

1.1.4 The provisions of the Safety Recommendations do not apply to vessels used for sport or recreation.

1.2 Definitions

For the purpose of the Safety Recommendations, unless expressly provided otherwise, the following definitions apply:

1.2.1 *Amidships*** means the mid-length of LOA.

1.2.2 *Approved* means approved by the competent authority.

1.2.3 *Baseline* is the horizontal line intersecting at amidships the keel line.

1.2.4 *Bow height* is defined as the vertical distance at the forward perpendicular between the waterline corresponding to the maximum permissible draught and the designed trim and the top of the exposed deck at side.

* A vessel of less than 12 m in length (L) could be in excess of 15 m in length overall (LOA). See Annex I.

** The dimensions are illustrated in Annex I.

1.2.5 *Breadth** (*B*) is the maximum breadth of the vessel, measured at maximum beam to the moulded line of the frame in a vessel with a metal shell and to the outer surface of the hull in a vessel with a shell of material other than metal.

1.2.6 *Collision bulkhead* is a watertight bulkhead up to the working deck in the fore part of the vessel as approved by the competent authority.

1.2.7 *Competent authority* is the government of the state whose flag the vessel is entitled to fly. The competent authority may delegate certain of its duties to entities authorized by it and that it deems suitably qualified to undertake those duties.

1.2.8 *Crew* means the skipper and all persons employed or engaged in any capacity on board a vessel on the business of that vessel.

1.2.9 *Cubic Numeral (CuNo)** is the result of multiplying length overall x breadth x depth (LOA x B x D).

1.2.10 *Decked vessel* is a vessel having a fixed watertight deck covering the entire hull above the deepest operating waterline. Where open wells or cockpits are fitted in this deck the vessel is considered a decked vessel if flooding of the well or cockpit will not endanger the vessel.

1.2.11 *Deck erection* is any decked structure on the working deck.

1.2.12 *Deepest operating waterline* is the waterline related to the maximum permissible operating draft.

1.2.13 *Depth (D)** is the moulded depth amidships.

1.2.14 *Design categories*

The categories below indicate sea and wind conditions for which a vessel is assessed by this standard to be suitable, provided the vessel is correctly operated and is operating at a speed appropriate to the prevailing sea state.

.1 Design category A

Category of vessels considered suitable to operate in seas with significant wave heights above 4 m and wind speeds in excess of Beaufort Force 8 (19 m/s), but excluding abnormal conditions, e.g. hurricanes.

.2 Design category B

Category of vessels considered suitable to operate in seas with significant wave heights up to 4 m and winds of Beaufort Force 8 (19 m/s) or less.

.3 Design category C

Category of vessels considered suitable to operate in seas with significant wave heights up to 2 m and a typical steady wind force of Beaufort Force 6 (12 m/s) or less.

* The dimensions are illustrated in Annex I.

.4 Design category D

Category of vessels considered suitable to operate in seas with significant wave heights up to and including 0.30 m with occasional waves of 0.5 m in height, for example from passing vessels, and a typical steady wind force of Beaufort Force 4 (7 m/s) or less.

1.2.15 *Enclosed superstructure* is a superstructure with:

- .1 enclosing bulkheads of efficient construction;
- .2 access openings, if any, in those bulkheads fitted with permanently attached weathertight doors of a strength equivalent to the unpierced structure that can be operated from each side; and
- .3 other openings in sides or ends of the superstructure fitted with efficient weathertight means of closing. A raised quarter-deck is regarded as a superstructure. A bridge or poop should not be regarded as enclosed unless access is provided for the crew to reach machinery and other working spaces inside those superstructures by alternative means that are available at all times when bulkhead openings are closed.

1.2.16 *Existing vessel* is a vessel that is not a new vessel.

1.2.17 *Fishing vessel* (heretoafter referred to as vessel) means any vessel used commercially for catching fish, whales, seals, walrus or other living resources of the sea.

1.2.18 *Forward and after perpendiculars* should be taken at the forward and after ends of the length (L). The forward perpendicular should be coincident with the foreside of the stem on the waterline on which the length is measured.

1.2.19 *Freeboard (f)* is the actual minimum freeboard and, on a decked vessel, is the distance from the underside of the working deck at the side to a waterline, measured perpendicularly to the waterline, plus the minimum thickness of decking. When the working deck is stepped, the lowest line of the deck and the continuation of that line parallel to the upper part of the deck should be taken as the working deck. On an undecked vessel, the freeboard (f) is the distance from the gunwale or a down-flooding opening, whichever is lower, measured perpendicularly to the waterline. A down-flooding opening is an opening in the hull or superstructures that cannot rapidly be closed watertight.

1.2.20 *GRP* means glass reinforced plastic.

1.2.21 *Height of a superstructure or other erection* is the least vertical distance measured at side from the top of the deck beams of a superstructure or an erection to the top of the working deck beams.

1.2.22 *Keel line** is the line parallel to the slope of keel passing amidships through:

- .1 the top of the keel or line of intersection of the inside of shell plating with the keel where a bar keel extends above that line of a vessel with a metal shell; or

* The dimensions are illustrated in Annex I.

- .2 the rabbet lower line of the keel of a vessel with a shell of wood or a composite material; or
- .3 the intersection of a fair extension of the outside of the shell contour at the bottom with the centreline of a vessel with a shell of material other than wood and metal.

1.2.23 *Least depth** is the depth measured from the keel line to the top of the working deck beam at side. Where the working deck is stepped and the raised part of the deck extends over the point at which the least depth is to be determined, the least depth should be measured to a line of reference extending from the lower part of the deck along a line parallel with the raised part.

1.2.24 *Length (L)** should be taken as 96 percent of the total length on a waterline at 85 percent of the least depth, or as the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that length is greater. In vessels designed with rake of keel, the waterline on which this length is measured should be parallel to the designed waterline.

1.2.25 *Length overall (LOA)** should be taken as the distance in a straight line parallel to the design waterline between the foremost point of the bow and the aftermost point of the stern.

1.2.26 *New vessel* is a vessel the keel of which is laid, or which is at a similar stage of construction, on or after the date of adoption of the present Safety Recommendations.

1.2.27 *Owner* means any person or entity having assumed the responsibility for the operation of the vessel.

1.2.28 *Protocol* means the Torremolinos International Convention for the Safety of Vessels, 1977, as modified by the Torremolinos Protocol of 1993 relating thereto.

1.2.29 *Recognized organization* means an organization which meets the relevant conditions set forth by resolution A.739(18) adopted by IMO.

1.2.30 *Skipper* means the person having command of a vessel.

1.2.31 *Steel or other equivalent material* means steel or any material which, by itself or due to insulation provided, has structural and integrity properties equivalent to steel at the end of the applicable fire exposure to the standard fires test (e.g. aluminium alloy with appropriate insulation).

1.2.32 *Superstructure deck* is that complete or partial deck forming the top of a deck erection situated at a height of not less than 1.8 m above the working deck. Where this height is less than 1.8 m, the top of such deck erection should be treated in the same way as the working deck.

1.2.33 *Undecked* vessel is a vessel which is not a decked vessel.

* The dimensions are illustrated in Annex I.

1.2.34 *Watertight* means capable of preventing the passage of water through the structure in any direction under a head of water for which the surrounding structure is designed.

1.2.35 *Weathertight* means that in any sea conditions water will not penetrate into the vessel.

1.2.36 *Working deck* is generally the lowest complete deck above the deepest operating waterline from which fishing is undertaken. In vessels fitted with two or more complete decks, the competent authority may accept a lower deck as a working deck provided that that deck is situated above the deepest operating waterline.

1.3 Measurements

In the Safety Recommendations measurements are given in the metric system using the following abbreviations:

m	–	metre
cm	–	centimetre
mm	–	millimetre
t	–	tonne (1 000 kg)
kg	–	kilogram
°C	–	degree Celsius
N	–	Newton
kW	–	kilowatt

1.4 Maintenance and surveys

1.4.1 The hull, machinery, equipment and radio installations, as well as crew accommodation, of every vessel should be constructed and installed so as to be capable of being regularly maintained to ensure that they are at all times, in all respects, satisfactory for the vessel's intended service.

1.4.2 Where practicable, before the construction of a vessel, plans of and information concerning the vessel should be submitted to the competent authority for approval.

1.4.3 The competent authority should arrange for appropriate surveys of a vessel during construction and, at regular intervals after completion, to ensure satisfactory condition of the vessel's hull, machinery and equipment, as well as crew accommodation. An appropriate report of each survey should be entered in the record of the vessel.

1.4.4 After any survey has been completed, no change should be made in the structural arrangements, machinery and equipment, as well as crew accommodation, etc., covered by the survey, without the approval of the competent authority.

1.4.5 Documentation relating to the safety of the vessel should cease to be valid upon transfer of the vessel to the flag of another state. New safety documentation should only be issued when the competent authority is fully satisfied that the vessel is in compliance with the requirements of the relevant provisions.

1.4.6 Hull, machinery and equipment should be maintained to a standard acceptable to the competent authority and in accordance with manufacturer's recommendations or those of a recognized organization.

1.5 Equivalents

Where the present provisions require that a particular fitting, material, appliance or apparatus, or type thereof, should be fitted or carried in a vessel, or that any particular provision should be made, the competent authority may allow any other fitting, material, appliance or apparatus, or type thereof, to be fitted or carried, or any other provision to be made in that vessel, if it is satisfied by trial thereof or otherwise that such fitting, material, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by the present Safety Recommendations.