An Roinn Iompair
Department of Transport

Code of Practice

Design, Construction, Equipment, and Operation of Small Fishing Vessels of less than 15 metres Length overall

Revision 3 – published 01 March 2022 with effect from 01 May 2022

Code of Practice, Design, Construction, Equipment and Operation of Small Fishing Vessels of less than 15 metres in length overall

1 GENERAL

1.1 Foreword

.1 This version of the Code of Practice, Revision 3 dated 1 March 2022, updates and replaces Revision 2 of the Code (dated 20 January 2014), and comes into effect from 1 May 2022. All previous versions of the Code of Practice are hereby withdrawn.

.2 This Code of Practice sets the standards of safety and protection for all persons on board small fishing vessels, of less than 15 metres length overall, which are required to have a sea-fishing boat licence. The Code has been prepared to serve as the relevant Code of Practice for section 4(9)(c) of the *Fisheries (Amendment) Act 2003* (No. 21 of 2003) (as inserted by section 97 of the *Sea-Fisheries and Maritime Jurisdiction Act 2006* (No. 8 of 2006)).

.3 There are many differing designs, materials and methods of construction of small fishing vessels. Equally, methods of fishing, duration of voyages, operating distances and operational procedures also vary greatly.

.4 The Code of Practice, therefore, deals specifically with the vessel construction, its machinery, equipment and stability, and its correct operation, so that safety standards are maintained.

.5 The Code of Practice contains mandatory requirements, in addition to recommendations. Mandatory requirements are described by the use of the words ***shall*** or ***must***, and recommendations are described by the use of the word ***should***.

.6 The Code of Practice contains provisions relating to all fishing vessels of less than 15 metres length overall, i.e., existing vessels and vessels under construction, or yet to be constructed.

.7 In the first version (and Revision 1) of the Code of Practice, the terms “existing fishing vessel” and “new fishing vessel” were used, defined in relation to whether the keel was laid, or lay-up was started, before or after the date of **1st May 2004**. This date was related to the enactment of the *Fisheries (Amendment) Act 2003,* referred to in paragraph 1.1.2.

.8 From Revision 2 – and continuing in this Revision 3 of the Code of Practice – the terms “Pre-2004 fishing vessel” and “Post-2004 fishing vessel” are used with reference to the date of 1st May 2004 (see definitions in section 1.3 below).

.9 In previous versions, up to and including Revision 2, the Code of Practice contained an **Annex 7** (“Post-2004 Fishing Vessel Construction”), which set out provisions relating to the construction of post-2004 fishing vessels.

.10 This present Revision 3 of the Code of Practice incorporates Annex 7 information into the main text of the relevant chapters below, and distinguishes between the different provisions, where necessary, by dividing the chapters into “Part A – Pre-2004 fishing vessels”, “Part B – Post-2004 fishing vessels” and “Part C – all fishing vessels (Pre-2004 and Post-2004)”.

.11 Where a chapter applies entirely to all fishing vessels (i.e., both pre-2004 and post-2004), this is noted in the sub-title of the chapter.

.12 When selecting the materials and equipment to be used in its construction, designers and builders of new vessels should pay special attention to the working conditions to which a vessel will be subjected.

.13 The builder, repairer or owner of a vessel, as appropriate, should take all measures to ensure that a material or appliance fitted in accordance with the requirements of the Code of Practice is suitable for the purpose intended, having regard to its location in the vessel, the area of operation and the weather conditions which may be encountered. In cases of doubt, such judgements should be made after consultation between an Authorised Person appointed by the Marine Survey Office and the builder, repairer or owner.

.14 The Commission of the European Union's general mutual recognition clause applies regarding any requirement for goods or materials to comply with a specified standard and shall be satisfied by compliance with the following:

a. a relevant standard or code of practice of a national standards body or equivalent body of a Member State of the European Union; or

b. any relevant international standard recognised for use in any Member State of the European Union; or

c. a relevant specification acknowledged for use as a standard by a public authority of any Member State of the European Union; or

d. traditional procedures of manufacture of a Member State of the European Union where these are the subject of a written technical description sufficiently detailed to permit the assessment of the goods or materials for the use specified; or

e. a specification sufficiently detailed to permit assessment for goods or materials of an innovative nature (or subject to innovative processes of manufacture such that they cannot comply with a recognised standard or specification) and which fulfil the purpose provided by the specified standard;

f. provided that the proposed standard, code of practice, specification or technical description provides, in use, equivalent levels of safety, suitability and fitness for purpose.

.15 It is important to stress that absolute safety at sea can never be guaranteed. As a consequence, it is strongly recommended that the owner of a vessel should take out a **policy of insurance** for the vessel, as well as for all persons who are part of the vessel's complement from time to time, and Third-Party liability. This should include liability for **damage to property** and/or **injury to third parties**, including particularly in relation to **pollution incidents and salvage**. This cover is widely available in the insurance market. Such insurance should provide cover which is reasonable for claims which might arise. If a policy of insurance is in force, it is recommended that a copy of the certificate of insurance is either displayed or available for inspection.

.16 Masters, owners and crew must comply with any Marine Notices published by the Department of Transport, as they pertain to fishing vessels and crew.

.17 Local rules and regulations, such as port bye-laws or local Marine Notices, should be followed, for example in relation to checklists and procedures for refuelling/bunkering operations of vessels in port.

.18 Vessel physical dimensions and declaration of engine power are for the purposes of this Code of Practice only and are not to be used for registration purposes.

.19 In this Revision 3 of the Code of Practice the term 'survey' continues to be used in place of 'inspection' or 'inspect', as appropriate, compared to Revision 1 and previous versions.

.20 Finally, it is important to emphasise that, while the Code of Practice sets out requirements and recommendations relating to safety on board small fishing vessels, the master has ultimate responsibility for the safety of the vessel and its crew.

1.2 The Department of Transport and Sources of Information

.1 This Code of Practice is published by the Department of Transport and is available to view or download from the Department's website: www.gov.ie/transport.

.2 The Irish Maritime Directorate of the Department of Transport is responsible for maritime safety and emergency response. The Marine Survey Office (MSO) is a division of the Irish Maritime Directorate and is responsible for the implementation of all national and international legislation in relation to the safety of vessels, including the surveys necessary for the certification of those vessels.

.3 Contact details for the Department of Transport head office are as follows:
by post: Department of Transport, Leeson Lane, Dublin 2, D02 TR60, Ireland.
website: www.gov.ie/transport
e-mail: info@transport.gov.ie
telephone: +353 (0)1 670 7444.

.4 Contact details for the Marine Survey Office are as follows:
by post: Marine Survey Office, Department of Transport, Leeson Lane, Dublin 2, D02 TR60, Ireland.
website: via links under "Policies: Transport" and then "Maritime" on www.gov.ie/transport
e-mail: MSO@transport.gov.ie
telephone: +353 (0)1 678 3400.

.5 Further additional information is available on the Department's website – www.gov.ie/transport – notably at the location of the current Marine Notices. If you cannot find the Marine Notice that you are looking for, you can send a request by email to: marinenotices@transport.gov.ie.

.6 Additional useful online sources of information on legislation are the electronic Irish Statute Book website and the EU's legislative website, EUR-Lex.

.7 This Code of Practice is based on the following two publications, which were issued jointly by the Food and Agriculture Organization of the United Nations (FAO), the International Labour Organization (ILO), and the International Maritime Organization (IMO):

a) Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels 2005 (2nd edition 2006); and

b) Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels (2012).

1.3 Definitions

.1 In the Code of Practice:-

"Acceptable Construction Rules" means a single set of construction rules to be used for any one vessel, issued by one of the following:

- A Recognised Classification Society;
- Bord Iascaigh Mhara (BIM – the State Agency responsible for developing the Irish seafood industry);
- the UK Sea Fish Industry Authority (Seafish);
- the Nordic Boat Standard; or
- other such rules acceptable to the Marine Survey Office (MSO).

"Accommodation space" means any non-working space, enclosed on all sides by solid division, provided for the use of persons on board.

"Authorised Person" means a person authorised by the Marine Survey Office for the purpose of surveying vessels for compliance with this Code of Practice and issuing and signing Declarations of Compliance, or a Surveyor of Ships appointed under Section 724 of the Merchant Shipping Act 1894.

"Breadth (B)" means the maximum breadth of the vessel, measured amidships 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 any other material.

"Code" means this Code of Practice.

"Compliance survey" means an in-water survey of the vessel, its machinery, fittings and equipment, by an Authorised Person, to ascertain that the vessel's structure, machinery, equipment and fittings comply with the requirements of the Code, coupled with an out-of-water hull survey.

"ComReg" means the Commission for Communications Regulation (the statutory body responsible for the regulation of the electronic communications sector in Ireland).

"Crew" means a person employed or engaged in any capacity on board the vessel on the business of the vessel and includes the Master.

"Declaration of Compliance" means a declaration that the vessel complies with the Code as prescribed by the Marine Survey Office.

“Decked vessel” means a vessel having a watertight weather deck extending for the entire length of the vessel and which is situated wholly above the waterline in any condition of loading.

"Depth (D)" means the moulded depth amidships:

(a) "The moulded depth" is the vertical distance measured from the keel line to the top of the working deck beam at side. In wood and composite ships, the distance is to be measured from the lower edge of the keel rabbet.
(b) In vessels having rounded gunwales, the moulded depth shall be measured to the point of intersection of the moulded lines of the deck and side shell plating, the lines extending as though the gunwale were of angular design.
(c) Where the working deck is stepped and the raised part of the deck extends over the point at which the depth is to be determined, the moulded depth shall be measured to a line of reference extending from the lower part of the deck along a line parallel with the raised part.

“Department” means the Department of Transport.

“Efficient” in relation to a fitting, piece of equipment or material means that all reasonable and practicable measures have been taken to ensure that it is suitable for the purpose for which it is intended.

“Fishing vessel” means a vessel of less than 15 metres length overall (L_{oa}), which goes to sea to fish for profit and holds a sea-fishing boat licence.

“Freeboard” means the distance measured vertically downwards from the lowest point of the upper edge of the weather deck to the waterline in still water.

“Home base” means the place from which a vessel normally operates.

“Hull survey” means a survey of the hull, underwater fittings and appendages by an Authorised Person.

“Length overall” or “L_{oa}” means the length from the foreside of the foremost fixed permanent structure to the aft side of the aftermost fixed permanent structure of the vessel.

“Machinery space” means the space containing the vessel’s propulsion engine.

“Major structural modifications” means alterations to a vessel or its fishing gear, which affect the stability or freeboard characteristics of the vessel.

“Marine Notice” means a notice described as such and issued by the Department, and which may be amended or replaced from time to time. As a consequence, reference to a particular Marine Notice in the Code can also include any subsequent Marine Notice that may apply, which amends or replaces the named Marine Notice.

“Master”, in relation to a vessel, means the person having, for the time being, the command, or charge, of the vessel.

“Mile” means a nautical mile of 1852 metres.

“Mono-hull vessel” means any vessel with a rigid hull structure which penetrates the surface of the sea over a discrete area, in any normally achievable operating trim or heel angle.

"MSO" means the Marine Survey Office of the Department of Transport.

"Multi-hull vessel" means any vessel with a rigid hull structure which penetrates the surface of the sea over more than one separate or discrete area, in any normally achievable operating trim or heel angle.

"Open boat" means a vessel where water coming onto the vessel normally drains to the bilge.

"Owner" means the registered owner of the vessel at the time of survey. "Owners" should be construed accordingly.

"Post-2004 fishing vessel" means a fishing vessel to which this Code applies, the keel of which was laid, or lay-up was started, on or after 1 May 2004.

"Pre-2004 fishing vessel" means a fishing vessel to which this Code applies, and which is not a post-2004 fishing vessel.

"Recent" with regard to hull surveys means within the previous twelve months, but after the last compliance survey.

"Recess" means an indentation or depression in a deck, and which is surrounded by the deck and has no boundary common with the shell of the vessel.

"Safe haven" means a harbour or shelter of any kind which affords entry, subject to prudence in the weather conditions prevailing, and protection from the force of the weather.

"Sea" means beyond smooth or partially smooth waters as defined in a Marine Notice.

"Skipper" has the same meaning as "Master".

"Survey" means a general or partial survey of a vessel, its machinery, fittings and equipment to ascertain that the arrangements, fittings and equipment, together with their maintenance, are as required by the Code.

"Trawler" means a fishing vessel designed to operate fishing trawls.

"Watertight" means capable of preventing the passage of water in either direction.

"Weather deck" means the main deck which is exposed to the elements.

"Weathertight" means capable of preventing the admission of a significant quantity of water into the vessel when subject to a hose test.

"Working space" means any space on the vessel, apart from accommodation and machinery spaces, to which the crew normally has access in connection with the operation of the vessel.

1.4 Application and Interpretation

1.4.1 Application

.1 This Revision 3 of the Code applies from 1 May 2022 to all fishing vessels of less than 15 metres length overall, which are required to have a sea-fishing boat licence.

.2 The Code applies to mono-hull and multi-hull vessels.

.3 Any fishing vessel holding a Declaration of Compliance issued in accordance with this Code of Practice cannot be used for any other purpose.

.4 It is the responsibility of the owner to ensure that a vessel is properly maintained and surveyed in accordance with the Code.

.5 Any existing Declaration of Compliance certifying that a vessel is in compliance with the requirements of the previous "Revision 2" of this Code remains valid until the expiry of the Declaration made by the Authorised Person, provided that the conditions of this Code continue to be complied with.

.6 The requirements of this Code only consider the operation of fishing vessels when at sea, and therefore vessels issued with a Declaration of Compliance are not considered suitable to be used for overnight crew accommodation in port.

1.4.2 Certification

.1 To be issued with a Declaration of Compliance, a vessel must comply with all the requirements of the Code for the declared operating area, to the satisfaction of the Authorised Person.

1.4.3 Interpretation

.1 The Marine Survey Office is responsible for the technical interpretations of the Code and promulgation of the Code requirements.

1.4.4 Updating of the Code

.1 The Code will be periodically reviewed to take into account experience gained and any new statutory requirements which it might be considered reasonable to apply to vessels operating under the Code.

1.5 Compliance Procedures, Survey, Certification and Maintenance

This section applies to all fishing vessels (pre-2004 and post-2004).

1.5.1 Compliance Survey for first issue of a Declaration of Compliance

.1 The owner of a vessel must arrange for the necessary compliance survey of the arrangements, fittings and equipment to be completed by an Authorised Person.

.2 An Authorised Person must carry out the compliance survey, including a hull survey carried out ashore. The arrangements, fittings and equipment provided on the vessel are to be documented on the Declaration of Compliance. Upon satisfactory completion of the survey verifying that the arrangements, fittings and equipment are in compliance with the Code, and that the vessel, its hull and its machinery are in a sound and well-maintained condition, the Authorised Person must complete a Declaration of Compliance. Both the Authorised Person and the owner must sign the Declaration of Compliance. The Declaration of Compliance is to be kept on board the vessel and is to be available for inspection at all times. One copy is to be sent to the Marine Survey Office and one is to be retained by the Authorised Person.

.3 The Declaration of Compliance shall include detail of the specific area of operation of the vessel. If the vessel is operated in more than one area, then details of these additional areas shall be included. The Declaration of Compliance shall also detail the type or types of fishing activity for which the vessel has been surveyed.

1.5.2 Compliance Survey for Renewal of a Declaration of Compliance

.1 Within a 3-month period before the existing Declaration expires, the owner must arrange for a compliance survey, including a hull survey, to be carried out by an Authorised Person. Upon satisfactory completion of the survey verifying that the arrangements, fittings and equipment remain in compliance with the Code and that the vessel, its hull and its machinery are in a sound and well-maintained condition, the Authorised Person must complete a Declaration of Compliance. Both the Authorised Person and the owner must sign the Declaration of Compliance. The Declaration of Compliance is to be kept on board the vessel and is to be available for inspection at all times. One copy is to be sent to the Marine Survey Office and one is to be retained by the Authorised Person.

.2 If a vessel is surveyed up to 3 months after the expiry date of the existing Declaration of Compliance, the renewal Declaration of Compliance will normally be valid for four years from the expiry date. However, if there is evidence that the vessel has been laid up since the existing Declaration of Compliance's expiry date, the renewal Declaration of Compliance may be valid for not more than four years from the date the survey is satisfactorily completed.

1.5.3 Appeal against the Findings of a Survey

.1 If an owner is dissatisfied with the findings of a survey, and agreement cannot be reached with the Authorised Person who carried out the survey, the owner may appeal to the Marine Survey Office to review the findings. At this review, the owner may call a representative or professional adviser to give opinions in support of the argument against the findings of the survey.

1.5.4 Maintaining and Operating a Vessel

.1 A surveyor from the MSO may survey a vessel at any reasonable time.

.2 It is the responsibility of the owner to ensure that, at all times, a vessel is maintained and operated in accordance with the requirements of the Code, along with the arrangements, as documented in the Declaration of Compliance, and any conditions stated on the vessel's Declaration of Compliance. If, for any reason, the vessel does not continue to comply with any of these requirements, the owner must immediately notify the Authorised Person who issued the Declaration of Compliance (or the MSO if the Authorised Person is not available). See also 1.5.5.2 below.

.3 If a vessel suffers a collision, a grounding, a fire or some other event that causes major damage, the owner must immediately notify the Authorised Person who issued the Declaration of Compliance, and the MSO.

.4 The nature and extent of major repairs or major structural modifications must comply with this Code.

.5 Any equipment carried on board a vessel that is in addition to equipment required by this Code must be maintained and serviced in full.

1.5.5 Validity and cancellation of Declaration of Compliance

.1 A **Declaration of Compliance** will normally be valid for not more than four years from the date of completion of a satisfactory survey, subject to an **Intermediate Declaration** from the owner, after two years, that the vessel arrangements, fittings and equipment have been maintained in accordance with the Code. It is recommended that the owner engages an Authorised Person to

carry out a survey and sign the Intermediate Declaration, in addition to the owner's self-declaration.

.2 The validity of a Declaration of Compliance issued under the Code is dependent upon the vessel being maintained, equipped and operated in accordance with the Code. Proposals to change any of the arrangements must be agreed in writing with the Authorised Person who issued the Declaration of Compliance (or the MSO if the Authorised Person is not available) before a change is implemented. Copies of the written agreement detailing change(s) must be appended to the Declaration of Compliance, which is to be retained on board the vessel. (See also 1.5.4.2 above).

.3 The Declaration of Compliance will no longer be valid if modifications are made that have not been agreed by the Authorised Person who issued the Declaration of Compliance (or the MSO if the Authorised Person is not available).

.4 When the vessel is found not to have been maintained, equipped or operated in accordance with the Code, the MSO may withdraw a Declaration of Compliance.

.5 When a vessel is sold, the Declaration of Compliance becomes void.

.6 When a vessel is purchased, the new owner must apply to an Authorised Person for the issue of a new Declaration of Compliance.

.7 The Intermediate Declaration must be signed not less than 21 months, nor more than 27 months, after the initial survey date for the issue of the Declaration of Compliance. A copy of this Intermediate Declaration must be forwarded to the MSO. Failure to comply with this requirement may result in the Declaration of Compliance being cancelled and can be considered as grounds for the surveying of the vessel by the MSO.

2 CONSTRUCTION, STRUCTURAL STRENGTH AND WEATHERTIGHT INTEGRITY

2.1 Part A - Pre-2004 Fishing Vessels

2.1.1 General Requirements

.1 As there are many designs, types and construction methods, it is more difficult to incorporate the standards required for post-2004 fishing vessels into pre-2004 fishing vessels. Therefore, subject to the conditions stated in this chapter, previously existing arrangements for pre-2004 fishing vessels regarding weathertight integrity will be accepted.

.2 The hull structure and machinery should provide the required strength and service for the safe operation of the vessel, in all expected operating conditions, at the required draught and power, in the sea and weather conditions likely to be met. Particular attention should be paid to the intended fishing methods.

.3 The vessel should be designed and constructed in such a manner as to prevent the ready ingress of seawater. The number of openings in the weathertight structure of the vessel must be as few as practicable and be provided with the closing and securing arrangements described below.

2.1.2 Modifications and repairs

.1 When modifications or repairs are carried out to a vessel, the additional or replacement construction materials must be of a similar nature and standard as the original material. Alternative materials must also be compatible with the original hull material.

.2 Vessel owners and/or masters must be aware of the dangers of carrying out modifications to vessels, and note the requirements in section 1.5.5 above.

2.1.3 Construction Materials

.1 Vessels should be constructed of the following materials, or a suitable combination:

a. Wood;
b. Fibre/Glass reinforced plastic (F.R.P.) (G.R.P.);
c. Steel;
d. Aluminium Alloy.

.2 Vessels of construction and materials differing from those listed above will be specially considered, taking into account the nature of the material and soundness of construction.

2.1.4 Structural Strength

.1 A vessel will be considered to be acceptable if the structure, such as the hull, decks and bulkheads, are in a good state of repair, and the vessel and structure is adequate for its intended service. The structure must be sound, watertight and free from significant damage and corrosion.

2.1.5 Decks

.1 Full length and partial weather decks, including shelter decks, must be of sound and weathertight construction, and be of sufficient strength to withstand the sea and weather conditions likely to be encountered.

.2 Recesses in weather decks must be fitted with drainage arrangements so that the deck drains under all normal conditions of trim, and it is recommended that they operate efficiently at a heel of 10°.

2.1.6 Bulkheads

.1 Bulkheads are not a requirement for compliance with the Code, or, if bulkheads are fitted, they are not required to be watertight. However, watertight bulkheads, which comply with the compulsory standards for post-2004 fishing vessels, are recommended (see paragraph 2.2.1.6 below).

.2 If practicable, the requirements for post-2004 fishing vessels should be incorporated when the vessel undergoes major structural work or alterations and, in the case of machinery space bulkheads, when the vessel is re-engined.

2.1.7 Bulkhead Doors

.1 Doors in watertight bulkheads, if fitted, must be of sound construction and be capable of efficient operation, to the standard required for post-2004 fishing vessels (see paragraph 2.2.1.7 below).

2.1.8 Doorways above Weather Deck

.1 Doorways giving access to space below the deck should be fitted with a permanent coaming of 300mm minimum height. Alternatively, a portable coaming may be provided, fixed in guide channels, to give a minimum coaming height of 300mm.

.2 Doors must be of sound construction and be weathertight.

2.1.9 Hatches and Coamings

.1 Where access or loading/unloading hatchways are fitted in the weather deck, raised coamings of substantial construction, and with a minimum height of 300mm, should be provided. If this is not practicable, owing to the operation of fishing gear or working space obstructions, the coaming height may be reduced, or the coaming omitted, provided that the hatch can be secured weathertight.

.2 Hatchways should be as small as possible, subject to the requirements of section 11.7 below (Access and Escape Arrangements).

2.1.10 Weather Deck Hatches

.1 Hatchway covers fitted in the weather deck must be provided with efficient means of weathertight closure.

.2 The securing arrangements may include lashing and eyeplates.

2.1.11 Flush Hatches and Scuttles

.1 Ice scuttles, where fitted, must be of metal construction, with screw or bayonet type clamp fastening, and with the loose cover permanently attached to the structure with chain.

2.1.12 Skylights

.1 Skylights must be of efficient construction. Where the glazing material and its method of fixing is not equivalent in strength to the surrounding structure, portable blanking pieces or plates that can be secured over the glazing must be provided. Portable blanking pieces or plates must be stored in a readily accessible position.

2.1.13 Side Scuttles and Portlights

.1 Side scuttles or portlights fitted below the weathertight deck, and not fitted with an attached deadlight, must be provided with a portable blanking plate, which can be efficiently secured if the glazing breaks. Portable blanking plates must be stored in a readily accessible position.

.2 Glazing material in existing sidelights must be sound and efficiently secured. When the glazing material is damaged it must be blanked off. Replacement material must meet the requirements for post-2004 fishing vessels.

2.1.14 Windows

.1 Windows fitted to spaces above the weather deck, such as a deckhouse or superstructure protecting an opening leading to below the weather deck, must be weathertight.

.2 Windows should not be fitted below the weather deck. Where windows are fitted below the weather deck, they must be of sound construction, provide watertight integrity, and be of strength compatible with their size. In case the glazing breaks, portable blanking plates must be provided, which can be efficiently secured to the window frame, and which are sufficient to cover a total of 50% of the number of windows. Portable blanking plates must be stored in a readily accessible position.

.3 Glazing material in existing windows must be sound and efficiently secured, and glass should be toughened or laminated. When the glazing material is damaged it must be blanked off. Replacement material must meet the requirements for post-2004 fishing vessels.

2.1.15 Ventilators

.1 Ventilators must be efficient.

.2 Ventilators serving spaces below the weathertight deck must be provided with an effective means of weathertight closure.

2.1.16 Exhaust Systems

.1 Engine exhaust systems of the dry or water-injected type, which discharge through the hull below the weathertight deck at the side or stern, should be provided with means of preventing back flooding into the hull or engine through the exhaust system. This may be by system design, or valve, or non-return device.

.2 Existing systems, for pre-2004 fishing vessels, will be accepted, provided that they are of sound construction and that existing hoses are of a suitable material, well supported, free from defects, and contact with combustible materials is avoided.

2.1.17 Air Pipes

.1 Air pipe arrangements will be accepted subject to the following provisions:

a) Air pipes must be of sound construction and operate efficiently.
b) Air pipe tops without a proprietary closing device or fitting, must be fitted with collapsible hose or other effective means of closure.
c) Provision should be made to prevent a vacuum forming in the pipe or tank.
d) Exposed air pipes, in excess of 25mm diameter, serving fuel oil, hydraulic oil, and lubricating oil tanks must be fitted with anti-flash gauze diaphragms.

2.1.18 Sea Inlets and Discharges

.1 Sea inlets and discharges should be fitted with an efficient means of closure. The openings of the inlets and discharges should be fitted with a valve or seacock at the hull connection, which is readily accessible for operation in an emergency. If such valves are inaccessible in an emergency,

they should be fitted with a remote means of operation, i.e. by extended spindle or wire pull device.

.2 Where sea inlet piping systems comprise flexible hose, the connection of the hose to the sea inlet must be of sound and efficient construction.

.3 Openings serving as discharges from engine cooling water, bilge and general service pumps, galley and toilet drains, etc., should be also fitted with an automatic non-return valve adjacent to the closing valve. Alternatively, a screw down non-return type valve may be fitted.

2.1.19 Materials for Valves and Associated Piping - Sea Water Systems

.1 Valves, pipes and fittings serving as sea inlets and discharges attached directly to the hull of the vessel below the load waterline should be of steel, bronze, or other equivalent and compatible material.

.2 Where the sea inlet valve or fitting is connected to the hull by means of a tube or distance piece, the tube or distance piece should be of a material that is compatible with the hull and valve.

.3 Valves, piping and flexible hoses must be of sound and efficient construction and installation. All piping systems must be well supported with pipe clips or mounts and protected against vibration and chafing.

2.2 Part B - Post-2004 fishing vessels

2.2.1 Construction and Structural Strength

.1 Vessels must be constructed of materials in accordance with Acceptable Construction Rules (see definition in section 1.3). These include:

a. Wood;
b. Fibre/Glass Reinforced Plastic;
c. Steel;
d. Aluminium Alloy; or
e. any acceptable combination of these materials.

.2 Proposals to use other materials must be submitted to the MSO.

.3 The structural strength of any vessel must meet the minimum requirements in the following four sub-paragraphs:

Hulls General

.4 Scantlings and construction of the main hull or shell are to be as required by Acceptable Construction Rules.

Decks

.5 A weathertight deck must have positive freeboard throughout the length of the deck in any condition of loading and be of adequate strength to withstand conditions likely to be met in the proposed area of operation. Drainage arrangements must meet the requirements specified for pre-2004 fishing vessels, or the requirements of Acceptable Construction Rules.

Bulkheads

.6 All vessels of L_{oa} ≥ 7 m decked in the forward part must be fitted with a substantially watertight collision bulkhead situated in the fore part of the vessel. Machinery space bulkheads must be fitted to the requirements of Acceptable Construction Rules.

Bulkhead Doors

.7 Vessels of L_{oa} ≥ 7 m must not have doors in watertight bulkheads. In other vessels, doors may be fitted where necessary for the safe operation of the vessel and they must be constructed and permanently attached to the bulkhead in such a manner as to be of equivalent strength to the un-pierced bulkhead, in accordance with Acceptable Construction Rules.

2.2.2 Weathertight Integrity

.1 Openings in the watertight structure of the vessel should be kept to a minimum and designed to prevent the ready ingress of water and comply with the requirements of Acceptable Construction Rules.

Doors

.2 Doors and doorways above and below the weather deck are to meet the requirements of Acceptable Construction Rules. Doorways above the weather deck leading directly to spaces below the deck are to have a minimum coaming height of 300mm.

Hatches and Coamings

.3 Hatchways in weather decks must be fitted with a weathertight closure to the requirements of Acceptable Construction Rules. Weather deck hatch coamings are to have a minimum height of 300mm, except where fishing operations necessitate a reduced height. Flush hatches are to have permanently attached weathertight covers. The minimum clear opening size of any access or escape hatch is to be 500mm x 380mm.

Skylights, Portlights, Windows, etc.

.4 All skylights, portlights, windows, and side scuttles, where fitted to spaces contributing to intact buoyancy, must be to the requirements of Acceptable Construction Rules for height above deck, size, glazing thickness, and frame materials. Windows or portlights must not be fitted below the weather deck.

Ventilators and Air Pipes

.5 The minimum height of any ventilator or air pipe above the weathertight deck is to be not less than 300mm to the lowest part of the gooseneck or bend. Ventilators and air pipes terminating at less than 1.5m height above the weathertight deck must be fitted with a closing device in accordance with Acceptable Construction Rules.

Sea Inlets and Discharges

.6 All inlets and discharges below the weathertight deck must be fitted with a valve and connection, in accordance with the requirements of Acceptable Construction Rules. Valves, which are not easily accessible, must be fitted with a remote means of control operated from above the deck.

2.3 Part C – all fishing vessels (Pre-2004 and Post-2004)

2.3.1 Freeing Ports

.1 In fishing operations, especially when towing, or hove-to when attending to pots or nets, a problem can arise with decked vessels having fixed bulwarks, whereby water is shipped over the bulwark into the enclosed deck. This not only creates uncomfortable working conditions, but more dangerously, can lead to the accumulation of water and consequential down flooding into enclosed or below-deck spaces, and create a detrimental effect on stability by the introduction of "free surface effect" particularly on a large deck area. It is essential, therefore, that means of rapidly clearing entrapped water is fitted in all vessels with fixed bulwarks. At the same time, however, the means of clearing water must not provide easy access for water to enter the enclosed deck.

.2 Means to clear entrapped water may comprise any, or any combination, of the following:

a. Freeing ports with an attached means of closing (provided that the freeing port is only closed during fishing operations).
b. Permanent openings in the bulwarks, such as slots.
c. Apertures in and under bulwark, or stern ramp doors.
d. Deck scuppers, where the discharge is above the load waterline.

.3 The total area of the water freeing arrangements should be a minimum of 3% of the area of the fixed bulwarks enclosing the deck or space under consideration.

.4 Any freeing port, or slot, in the bulwark must have the bottom edge as close to the deck as possible. Freeing ports greater than 230mm in depth and wider than 500mm must be fitted with bars.

.5 Where freeing ports are fitted with hinged flaps or shutters, there must be sufficient clearance to prevent jamming, and the hinges must be fitted with pins of non-corrodible material.

.6 The freeing ports must be arranged throughout the length of the bulwark or well, to give maximum drainage under all normal conditions of trim.

.7 Care must be taken that deck pounds, machinery and net or gear stowage do not impede the free flow of trapped water to the freeing ports or slots.

.8 Lift-up closing appliances fitted to freeing ports must be so arranged that they are secure in the open position and will not float off from the stowed positions.

.9 See also section 13.1.4.2 of **Annex 2** (Guidance on Capsize Safety), regarding freeing ports.

3 STABILITY

3.1 Part A – Pre-2004 fishing vessels

3.1.1 General

.1 Adequate margins of freeboard and stability must be provided for the safe operation of the vessel.

.2 It is the Master's responsibility to ensure that the vessel is operated in accordance with paragraph 3.1.1.1.

3.1.2 Stability Standard

.1 It is strongly recommended that the stability standards described in paragraph 3.2.1.3, below, be applied. If these standards are applied to a pre-2004 fishing vessel, and the vessel complies with the standards, then a roll test as described in Annex 1 shall not be carried out.

.2 Where a pre-2004 fishing vessel does not apply the stability standards described in paragraph 3.2.1.3 below, then the vessel shall be subjected to a roll test as described in Annex 1. The roll test shall be carried out with the vessel in the "normal departure port condition" and a typical "arrive port condition".

.3 The metacentric height, GM, obtained from the roll test shall be at least 10% greater than the minimum metacentric height, GM_{min}, obtained from the following approximate formula:

$$GM_{min} = 0.53 + 2B\left[0.075 - 0.37\left(\frac{f}{B}\right) + 0.82\left(\frac{f}{B}\right)^2 - 0.014\left(\frac{B}{D}\right) - 0.032\left(\frac{l_s}{L}\right)\right]$$

Where:

L	is the length of the vessel on the waterline in maximum load condition (metres);
l_s	is the actual length of enclosed superstructure extending from side to side of the vessel (metres);
B	is the extreme breadth of the vessel on the waterline in maximum load condition (metres);
D	is the depth of the vessel measured vertically amidships from the base line to the top of the upper deck at side (metres);
f	is the smallest freeboard measured vertically from the top of the upper deck at side to the actual waterline (metres).

The formula is applicable for vessels having:

.1 f/B between 0.02 and 0.20;

.2 l_s/L smaller than 0.60;

.3 B/D between 1.75 and 2.15.

For vessels with parameters outside of the above limits, the formula should be applied with special care.

3.1.3 Capsize Safety

.1 The guidance notes for vessel operators, given in Annex 2, including the use of portable fish-hold divisions, must be studied and followed where practicable.

3.1.4 Stability Book

.1 It is recommended that all decked vessels should also have a Stability Information Book.

3.2 Part B – Post-2004 fishing vessels

3.2.1 Stability

.1 It is the responsibility of the builder and designer to ensure that adequate margins of freeboard and stability are provided for the safe operation of the vessel.

.2 All vessels should be provided with a Stability Information Book.

.3 Stability standards to be applied are those of Acceptable Construction Rules (see definition in section 1.3). As an alternative, the stability standards of the "*IMO Code on Intact Stability (1993)*" (also reproduced in Appendix 7 of the "*Code of Safety for Fishermen and Fishing Vessels, 2005 (Part B)*"), or the "*PrEN ISO 12217: Small Craft – Stability and Buoyancy – Methods of Assessment and Categorisation*" may be used.

.4 The master shall take the precautionary measures necessary to maintain the stability of the vessel in accordance with the Stability Information Book supplied.

.5 Those on watch shall strictly observe instructions supplied in the Stability Information Book.

.6 The guidance notes for vessel operators, given in Annex 2, including the use of portable fish-hold divisions, should be studied and followed where practicable.

4 MACHINERY AND ELECTRICAL INSTALLATIONS

4.1 Part A – Pre-2004 fishing vessels

4.1.1 Machinery – General requirements and recommendations

.1 Access for persons to machinery spaces must be arranged clear of any moving or heated surfaces, and the latter must be sufficiently insulated. Effective guards must protect exposed moving parts such as shafts, drive pulleys and belts. Access ladders must be securely fixed to the vessel's permanent structure. Ancillary equipment and piping must be in accordance with the appropriate part of the Code. In particular, care should be exercised when accessing the bilge area when shafts are rotating.

.2 Layout and installation of machinery spaces and propulsion machinery should be designed for safe and efficient operation.

.3 Lighting should be designed to facilitate easy inspection and be unaffected by vibration.

.4 Ventilation should be provided either by mechanical fans or natural vents to meet the air requirements of the propulsion machinery and to prevent build-up of fumes or excessive heat.

.5 Access ladders should be of metal, where practicable.

.6 Floor plates, where fitted, should be non-slip and securely fastened with accessible fasteners.

4.1.2 Propulsion Machinery and Stern Gear

.1 Propulsion engines and associated stern gear must be of a design, type and rating to suit the design and size of the vessel taking account of the vessel's history, operating conditions and area of operation. Inboard-mounted engines should be diesel powered for use with fuel oil having a flash point greater than 60ºC.

.2 Inboard-mounted petrol engines will be accepted, but when such engines are being replaced, the replacements should be suitable marine diesel engines.

.3 Outboard-mounted petrol or gasoline engines will be accepted, provided that the engine is mounted on a substantial transom. A chain for outboard engines should be attached to the vessel. Small vessels should have alternative means of propulsion. It is recommended that the outboard engine be fitted with a kill switch and extendable cord and connected when vessel is underway.

.4 Flexibly mounted engines should be fitted with short flexible connections of an appropriate type, fitted to associated piping and exhaust systems. Flexible sections of piping must be fitted when the engine or systems are repaired or replaced, provided that the existing installation is sound and efficient and is safe in use. Flexible shaft couplings must be in a sound condition and suitable for the power being transmitted.

.5 A vessel fitted with an inboard engine must have adequate means and power for going astern in order to maintain control of the vessel in all foreseeable circumstances.

.6 The propeller shaft and any intermediate shaft, together with the stern tube, bearings and bushes, must be in a sound condition and operate efficiently. Shaft materials and diameter should be

suitable for the power being transmitted. Inboard-mounted stern glands must be accessible for adjustment.

4.1.3 Engine Starting

.1 All propulsion engines, except those engines fitted only with hand starting arrangements, should be provided with a secondary means of starting, where practicable.

4.1.4 Controls and Instruments

.1 The controls and instrumentation systems as fitted will generally be accepted, provided that the systems are in a good state of repair and operate satisfactorily.

.2 Propulsion engines fitted below deck in a machinery space and arranged for remote operation from the wheelhouse or helm position must be provided, on or adjacent to the engine, with arrangements or mechanism for stopping the engine.

.3 High water temperature and low lubricating oil pressure alarms shall be fitted, where practicable.

4.1.5 Steering System

.1 The steering system must operate efficiently and be well maintained. The steering gear, including bearings and rudder stock, must be of sound and efficient construction, and suitable for the size and power of the vessel (see also paragraph 4.1.6.1.5 below).

.2 Vessels fitted with motorised or hand hydraulic, chain, cable, or mechanical steering must be provided with an alternative means of steering, which will operate if the main system fails.

.3 The main control or helm position must be located such that the person operating the steering gear has a clear view for the safe navigation of the vessel.

.4 All parts of mechanical linkages of rod and chain should be accessible with adequate lubrication arrangements provided.

4.1.6 Electrical Installations

4.1.6.1 General

.1 The design and installation of electrical systems shall be such that the risk of fire and electrical shock to operating personnel is minimised.

.2 Detailed guidance on the design and installation of electrical equipment is given in the following documents. Where practicable, these regulations should be followed when rewiring or fitting additional circuits and equipment:

a) The Institution of Electrical Engineers (IEE) Regulations for the Electrical and Electronic Equipment of Ships with Recommended Practice for their Implementation, 6th Edition 1990 and Supplement 1994.
b) Marine Notice No. 58 of 2011 – "Electrical Systems in Small Craft".
c) ISO 10133 - Small Craft Electrical Equipment Extra-low-voltage D.C. Installations.
d) ISO 13297 - Small Craft Electrical Equipment Alternating Current Installations.

.3 Particular attention must be given to protection against water ingress and the effects of vibration.

.4 All circuits must be clearly identified on switchboards and distribution boards, including service, protective device rating, current carrying capacity and voltage values. Differing voltages should not be included in any one distribution board.

.5 All circuits, except the main supply from the battery to the starter motor, and electrically driven steering motors should be provided with electrical protection against overload and short circuit (i.e., fuses or circuit breakers should be installed). Steering motors should have an overload alarm in lieu of overload protection. Short circuit protection should be for not less than twice the total rated current of the steering motors in the circuit protected.

.6 Cables which are not provided with electrical protection should be kept as short as possible and be "short circuit proofed", e.g., single core with an additional insulating sleeve over the insulation of each core. Normal marine cable (e.g., in compliance with BS 6883), which is single core will meet this recommendation without an additional sleeve, since it has both conductor insulation and a sheath.

.7 In the event of failure of engine and charging systems, the battery capacity must be able to supply the emergency lights for at least one hour.

.8 The electrical generating system must have sufficient capacity in normal running conditions to ensure the correct operation of all safety and navigation equipment including navigation and fishing lights, where fitted.

.9 With regard to existing cable installations and to any additional cables fitted:

a) Cables should not be run below floor plate level except where this is necessary for connections to underwater equipment, etc., in which case the cable should be run in conduit.
b) Cables running through machinery spaces should not be secured with plastic clips.
c) Cables running through fish holds should be fitted in conduit and cables should not be secured directly to fuel or oil storage tanks.
d) Cables should be of the correct current carrying capacity for their application.
e) When selecting cables, particular attention should be given to environmental factors such as temperature and contact with substances, e.g., polystyrene, which degrades P.V.C. insulation.

.10 Vessels should be fitted with an adequate cathodic protection system. Anodes should be efficiently connected to the system and the hull, and not painted over.

4.1.6.2 D.C. Systems Up To 24 volts

.1 Systems should be two wire.

.2 Existing earthing systems will be accepted provided that the system is sound and efficient and that no danger to the system or vessel may occur. Hull earth plates, if fitted, must be efficiently connected and not painted over.

.3 Batteries should be fitted in enclosed boxes or trays with covers and provided with sufficient ventilation to open air for the battery type. Battery boxes should be sited clear of heat sources

and the battery installation and ventilation should be in accordance with IEE Regulations and Marine Notice No. 58 of 2011 – "Electrical Systems in Small Craft".

.4 A battery cut-off switch double pole type should be fitted at each battery or bank. Systems such as automatic bilge pumps or alarms for when the vessel is unattended should be connected before the cut-off switch.

4.1.6.3 A.C. Systems

.1 Cables for A.C. systems must be kept separate from D.C. systems and must be run in separate trays and conduits.

.2 Switchgear for A.C. systems must be fitted in switchboards and panels which are separate from those containing D.C. systems. Systems and equipment must be clearly marked.

.3 Switchgear and sockets must be so arranged as to prevent the fitting of low voltage equipment and lamps into high voltage systems.

4.1.7 Pumping and Piping Systems

4.1.7.1 Fuel Oil Installations

.1 Tanks will generally be accepted, provided that they are of sound and efficient construction and safe in operation. Glass contents gauges, where fitted, must have self-closing valves at the base. Metal rods, or slotted covers, must protect sight gauges.

.2 Piping systems should be of sound construction, in a good state of repair and suitable for the service intended. Flexible connections should be of an appropriate armoured fire-resistant metallic hose with screwed fittings and kept as short as practicable.

.3 Where any existing fuel and hydraulic lines are replaced, they shall be constructed out of fire-resistant material.

4.1.7.2 Cooling Water Systems

.1 Provided that the piping and fittings are of sound construction and efficient in operation, the cooling water system fitted in pre-2004 fishing vessels will be accepted until such time as the system is renewed, or the vessel is re-engined, when the following requirements are to be met:

a) Cooling water inlets for main and auxiliary machinery must be kept to a minimum and comply with the requirements of sections 2.1.18 and 2.1.19 above.

b) Sea inlet trunks or boxes built into the hull structure must be of such a design that they remain below the waterline at all normal conditions of trim and heel and must be fitted with arrangements for purging of trapped air.

c) The sea inlet pipe to the propulsion engine must be fitted with an accessible strainer.

d) Where a common sea main supplying a number of services is installed, each branch pipe must be fitted with an easily accessible isolating valve, with open/closed indication.

e) Vessels of 7m L_{oa} and over, with a single sea water cooling supply to the propulsion engine, must be fitted with an additional hose connection with a valve, whereby an

emergency supply of cooling water from a bilge or general service pump may be introduced in the event of blockage of the main sea inlet valve.

.2 Owners and Masters of vessels fitted with Refrigerated Sea Water Systems should ensure that notices are displayed onboard highlighting the dangers of the inhalation of toxic gases from refrigerated seawater. Further information can be found in Marine Notice No. 43 of 2016 – "Fatal Incident Caused by the Inhalation of Toxic Gases Onboard a Fishing Vessel".

4.1.7.3 Bilge Pumping Systems

.1 Vessels must have an efficient bilge pumping arrangement fitted, with the number of pumps as required by paragraph 4.1.7.4.1 below.

.2 Where applicable, each watertight compartment must have a bilge suction and each suction must be fitted with a strum (filter).

.3 Routine cleaning of bilges is recommended.

4.1.7.4 Bilge Pumps

.1 Decked vessels of 7m L_{oa} and over must have 1 hand and 1 power-driven bilge pump fitted. All other vessels must have at least 1 hand bilge pump.

.2 The power-driven pump referred to in paragraph 4.1.7.4.1 may be the general service/deckwash pump, provided that any sea connection to the pump is isolated from the bilge suction main by a switch cock or interlocked valve system, such that sea water cannot drain into the bilge main.

.3 Flexible connections and hoses, where fitted, must be soundly constructed and operate efficiently, and they should be readily accessible.

.4 Where watertight bulkheads are fitted, means should be provided in the piping system to prevent any leakage via the system from compartment to compartment.

.5 Where a deckwash pump is also utilised for bilge suction purposes, means must be provided to prevent flooding of any compartment from the sea inlet via the bilge main.

.6 In all vessels, except where the bilge can be readily seen, an audible and visible bilge level alarm must be fitted to indicate leakage of water into the machinery space. Indication should be at the helm or control position.

4.2 Part B – Post-2004 fishing vessels

4.2.1 Machinery

.1 The layout of engine rooms and propulsion machinery must satisfy the following, and the requirements of Acceptable Construction Rules:

a. Access to be arranged clear of moving parts and heated surfaces.
b. Exposed moving parts such as shafts, pulleys and belts to be fitted with guards.
c. Access ladders are to be of metal.
d. Floor plates are to be non-slip and securely fastened with accessible fasteners.
e. Lighting to be weathertight and vibration proof.

f. Ventilators are to be designed to prevent build-up of excessive heat.
g. Valves and fittings in piping systems to be clearly marked with function.
h. Ease of access is to be provided for all servicing operations.
i. Enclosed engine rooms in vessels of $L_{oa} \geq 7m$ must be provided with an alternative means of escape to the open deck.
j. On decked vessels, with enclosed engine rooms, fuel supply mains are to be capable of being closed from outside the engine room, by means of wire or rod operated valves.

.2 Propulsion engines are to be designed for use with fuel oil having a flash point greater than 60°C. Petrol-driven engines will be acceptable only when mounted as outboards on transoms.

.3 All engines are to be provided with efficient means of control and are to be capable of being started from a dead ship condition.

.4 Inboard engines in open boats must be fitted with a weathertight cover or box.

.5 It is recommended that outboard engines be fitted with a kill switch and extendable cord and connected when vessel is underway.

4.2.2 Piping Systems

.1 Fuel oil and cooling water systems and valves are to be fitted in accordance with Acceptable Construction Rules. Vessels of Loa ≥ 7m are to be fitted with a means of providing an alternative engine cooling water supply in the event of blockage of the engine sea inlet.

.2 Where any existing fuel and hydraulic lines are replaced, they shall be constructed out of fire-resistant material.

.3 Owners and Skippers of vessels fitted with Refrigerated Sea Water Systems should ensure that notices are displayed onboard highlighting the dangers of the inhalation of toxic gases from refrigerated seawater. Further information can be found in Marine Notice No. 43 of 2016 - "Fatal Incident Caused by the Inhalation of Toxic Gases Onboard a Fishing Vessel".

4.2.3 Shafting and Stern Gear

.1 The arrangement, material, and diameter of the propeller shaft and any intermediate shafts are to be in accordance with Acceptable Construction Rules.

4.2.4 Bilge Pumping Systems

.1 All vessels are to have a bilge pumping system in accordance with Acceptable Construction Rules. The number and capacity of bilge pumps are to be a minimum of those required for pre-2004 vessels. Bilge piping minimum diameters are to be as follows:

Bilge main, vessels of $L_{oa} \geq 7$ m - 35 mm inside diameter
Bilge main, vessels of $L_{oa} < 7$ m - 30 mm inside diameter
Branch bilge pipes, all vessels - 30 mm inside diameter

.2 In vessels where the engine is enclosed under the deck, or in open boats, where the bilge space cannot be readily seen, an audible and visual level alarm is to be fitted, with indication at the helm or control position.

4.2.5 Steering Gear

.1 All vessels are to be fitted with an efficient means of steering in accordance with Acceptable Construction Rules. Vessels fitted with mechanical or hydraulic systems must have an alternative emergency means of steering.

.2 In vessels of Loa ≥ 7m, where fitted with an autopilot, it is recommended that an approved watch alarm is incorporated.

.3 The control, or helm, position must be located such that the person operating the steering gear has a clear view for the safe navigation of the vessel.

4.2.6 Electrical Systems

.1 Low voltage direct current systems up to 24v D.C. and A.C. systems must comply with the requirements of Acceptable Construction Rules and with the following regulations:

a. The Institution of Electrical Engineers (IEE) Regulations for the Electrical and Electronic Equipment of Ships with Recommended Practice for their Implementation, 6th Edition 1990 and Supplement 1994.
b. Marine Notice No. 58 of 2011 – "Electrical Systems in Small Craft".
c. ISO 10133 - Small Craft Electrical Equipment Extra-low Voltage DC Installations.
d. ISO 13297 - Small Craft Electrical Equipment Alternating Current Installations.

4.3 Part C – all fishing vessels (Pre-2004 and Post-2004)

4.3.1 Anchors and Cables

4.3.1.1 General

.1 All vessels must have an efficient means of anchoring. The recommendations given in the Anchors and Cables Table at Annex 5 are for a vessel of displacement mono-hull form, which may be expected to ride out storms while at anchor, and when seabed conditions are favourable.

4.3.1.2 Anchors

.1 The anchor sizes shown are for high holding power types (H.H.P).

.2 When a fisher type anchor is provided, the weight given in the table should be increased by 25%, but the diameter of the anchor cable need not be increased.

.3 When a vessel has an unusual hull form and an unusually high windage area, due to its high freeboard or large superstructure, the weight of the anchor should be increased to take account of the increase in wind loading. The diameter of the anchor cable should be appropriate for the increase in weight of the anchor.

.4 The recommended weight of anchors is given in the Table at **Annex 5**.

4.3.1.3 Cables

.1 The length of the anchor cable attached to the anchor should be appropriate to the holding ground and depth of water in the area of the operation of the vessel. (See Table at **Annex 5**).

4.3.1.4 Towline

.1 All vessels must be provided with a means of being towed.

4.3.1.5 Fishing and Handling Equipment

.1 Every vessel provided with winches, tackles and lifting gear must have this equipment efficiently and safely installed, having regard to the intended service of the vessel. All parts of lifting gear and similar equipment, whether fixed or movable, and items used in connection with such equipment, must be of solid construction, designed and built to withstand foreseeable loads. They must be appropriately and suitably secured, supported, or hung in relation to the purposes for which they are intended. There must be easy access for maintenance purposes.

.2 The lifting gear onboard fishing vessels must be inspected by a competent person in accordance with the *Safety, Health and Welfare at Work (General Application) Regulations 2007* (S.I. No. 299 of 2007).

.3 All parts of the running gear, including wires and chains and the like, must be of sufficient strength and safe working load to withstand foreseeable loads. All load-bearing parts must be regularly maintained and inspected for condition.

.4 See also Chapter 6 (Protection of the Crew) regarding protection of personnel, and **Annex 2** (Guidance on Capsize Safety), section 13.1.4.4 regarding vessel operation.

5 FIRE PROTECTION, DETECTION AND EXTINCTION

5.1 Part A – Pre-2004 fishing vessels

5.1.1 Provision for Gas-Extinguishing System

In a vessel with a gas-extinguishing system, the boundary of the machinery space must be able to contain the fire-extinguishing medium, i.e., the space must be capable of being closed down in order that the fire-extinguishing medium cannot penetrate to any other part of the vessel, or outside the vessel. This arrangement includes the closure of ventilation systems and hatchways.

5.1.2 Fire Prevention

.1 Glass portlight and deadlight arrangements, if fitted in the boundaries of machinery spaces, will be accepted if they are in a sound condition but, if damaged, they must be blanked off.

.2 Fire hazardous items, such as petrol tanks and gas containers, must not be stowed in machinery spaces.

.3 Exhaust pipes and ducts must be adequately insulated to avoid igniting combustible materials and must be protected from damage.

.4 Areas surrounding stoves and cooking appliances must be adequately protected with non-combustible materials.

.5 A suitable fire extinguisher must be provided adjacent to any compartment containing a permanent fuel oil tank. Petrol engines must be fitted in an enclosure with a suitable fire-extinguishing system or portable fire extinguisher.

5.2 Part B – Post-2004 fishing vessels

5.2.1 General

.1 In addition to the requirements of Acceptable Construction Rules, vessels must be constructed to avoid the risk of fire occurring and to mitigate the effects of any fire by giving appropriate attention to the choice of materials, equipment, and layout.

5.2.2 Fire Prevention

.1 Fire hazardous materials such as petrol, gas and paint must not be stowed within the boundaries of engine spaces.

.2 Vessels with permanent fuel oil tanks must have a suitable fire extinguisher fitted closely adjacent to the fuel tank compartment and to the engine, whether inboard or outboard.

5.2.3 Furnishing Materials

.1 Only combustion modified high resilience (CMHR) foams must be used in upholstered furniture and mattresses.

5.2.4 Means of Escape

.1 Provision of a ready means of escape is recommended from accessible engine and fuel tank compartments and from those parts of the vessel from which exit may be obstructed if a fire breaks out. Hatches to such escapes must be operable from both sides.

.2 Every vessel of Loa ≥ 7m, with accommodation spaces used for sleeping or rest, which may be subject to a fire risk, must have two means of escape, if practicable. A single means of escape may be acceptable in exceptional cases, such as when that escape is direct to an open deck or when a second means of escape would be considered detrimental to the overall safety of the vessel.

5.3 Part C – all fishing vessels (Pre-2004 and Post-2004)

5.3.1 General

.1 Curtains, or any other suspended textile materials, must not be fitted within 600mm of any open-flame cooking, heating or other appliance.

5.3.2 Emergency Action

.1 A suitable notice, detailing the action to be taken when an alarm is given by the gas detection system, should be displayed prominently in the vessel.

.2 The information given should include the following advice:

a. To be ever alert for gas leakage.
b. When leakage is detected or suspected, to shut off all gas consuming appliances at the main supply from the container(s) and to refrain from smoking until safe to do so.
c. NEVER TO USE NAKED LIGHTS AS A MEANS OF LOCATING GAS LEAKS.

5.3.3 Fire Fighting Appliances

5.3.3.1 General

.1 All fire appliances must be adequate for the expected fire risk. Where appropriate appliances must comply with Directive 2014/90/EU on Marine Equipment, as amended.

.2 Multi-purpose fire extinguishers can deal with both category A fires (involving solid materials) and category B fires (involving liquids or liquefiable solids), and are marked with the multi-purpose rating, e.g., 13A/113B (see paragraphs 5.3.3.2.3, 5.3.3.3.1 and 5.3.3.4.1 below) and 5A/34B (see paragraphs 5.3.3.2.4 and 5.3.3.3.2 below). A wide variety of extinguisher types and sizes are available to meet the fire rating requirements, and advice on suitability should be sought from suppliers.

.3 Fire extinguishers must be regularly serviced as recommended by the manufacturers and be fitted in ready accessible positions, mounted vertically and adequately secured.

.4 The use of halons is prohibited, in accordance with Regulation (EC) No 1005/2009 (as amended) on substances that deplete the ozone layer. New fixed or portable fire extinguishers containing halons must not be used, and existing fixed or portable halon fire extinguishers are to be decommissioned and replaced with halon-free alternatives. The use of CO_2 fire extinguishers in accommodation spaces should be avoided.

.5 Fire buckets may be of metal, plastic or other suitable material and must be sufficiently robust for the intended purpose.

.6 In a decked vessel, an efficient smoke/fire detection system must be fitted in the machinery space at the next renewal survey.

5.3.3.2 Requirements for decked vessels of 9.0m to less than 15.0m Length overall

.1 One jet of water to reach any part of the vessel. This is to be demonstrated using a self-priming hand fire pump fitted above deck level, with the sea suction outside the machinery space. If the self-priming hand pump is also used for bilge pumping duties, a change-over valve must be fitted at the pump position outside the machinery space. One hose with a 10mm spray/jet nozzle must be provided.

.2 In vessels constructed of wood, a CO_2 or water spray fire extinguishing system is to be fitted in the machinery space.

.3 Two portable multi-purpose fire extinguishers with minimum fire rating of 13A/113B, suitable for extinguishing oil-based machinery space fires.

.4 In addition, two portable multi-purpose fire extinguishers with a minimum fire rating of 5A/34B suitable for extinguishing electrical or accommodation fires.

.5 One fire bucket and lanyard.

5.3.3.3 Requirements for decked vessels of 6.0m to less than 9.0m Length overall

.1 Two portable multi-purpose fire extinguishers with a minimum fire rating of 13A/113B, suitable for extinguishing oil-based machinery room fires.

.2 In addition, for a vessel fitted with accommodation spaces, one portable multi-purpose fire extinguisher with a minimum fire rating of 5A/34B, suitable for extinguishing electrical or accommodation fires.

.3 One fire bucket and lanyard.

5.3.3.4 Requirements for decked vessels of less than 6.0m Length overall

.1 One portable multi-purpose fire extinguisher with a minimum fire rating of 13A/113B, suitable for extinguishing oil-based machinery room fires.

.2 One fire bucket and lanyard.

5.3.3.5 Requirements for open boats

.1 One portable multi-purpose fire extinguisher with a minimum fire rating of 13A/113B. When an inboard/outboard engine is fitted, the extinguisher must be suitable for extinguishing oil/petrol-based fires.

.2 One fire bucket and lanyard.

5.3.3.6 Requirements for all vessels

.1 Means of closing all skylights, doorways, vents and funnel openings to machinery spaces and remote controls, operable from outside the machinery space, to fuel tank outlet valves shall be provided.

5.3.4 Open-Flame Gas Appliances (including Gas Refrigerators)

.1 Appliances must not be positioned close to engines and fuel tanks. Selection of open-flame cooking appliances must have due regard to the fire risk involved. The type of equipment should be suitable for marine duty, and manufacturers' fitting and operating instructions must be carefully followed.

.2 All types of stoves and heating appliances must be strongly secured to the surrounding structure. New appliances must conform to the requirements of Regulation (EU) 2016/426 and Marine Notice No. 37 of 2017 – "Use of liquefied petroleum gas (LPG) installations and systems on merchant vessels, fishing vessels, pleasure craft and other marine craft".

.3 In any compartment containing a gas-consuming appliance, safe means for detecting any leakage of gas must be provided, or in any adjoining space or compartment into which the gas may seep. Detectors must be fitted in each compartment in accordance with fitting instructions. The alarm unit, which should incorporate an audible and visible alarm, and the control panel should be fitted outside the space containing the installation. In all cases, arrangements must be such that the detection system can be tested frequently while the vessel is in service.

.4 Liquefied petroleum gas (L.P.G.) systems must comply with Marine Notice No. 37 of 2017. It should be noted that the Marine Notice also contains maintenance and servicing requirements.

5.3.5 Cleanliness and Pollution Prevention

.1 Wherever practicable, provision should be made to retain any oil leakage within the confines of the machinery space using metal drip trays or other adequate means.

.2 Containers carrying petrol for use in outboard engines should be carried in approved containers. The containers must be clearly marked and securely stowed in a protected position on the weather deck.

.3 Any oil spillage within the vessel must be collected and retained on board for discharge to collection facilities ashore.

6 PROTECTION OF THE CREW

This chapter applies to all fishing vessels (pre-2004 and post-2004).

6.1 General

.1 The requirements set out below are generally applicable to the larger vessels covered by this Code, with deckhouses or exposed decks. For smaller vessels, where the same risks to personnel exist, it is recommended that the same measures be applied to the maximum extent practicable.

6.2 Means of access

.1 Safe means of access, appropriate to the vessel, should be provided to reduce the risk while boarding and disembarking the vessel. Consideration should be given to rail openings, non-slip surfaces, hand holds and an indication of the location of approved or recommended boarding points.

6.3 Bulwarks, Guard Rails and Handrails

.1 The perimeter of an exposed deck should be fitted with bulwarks, guard rails or guard wires of sufficient strength and height for the safety of persons on deck; the height of tubular railings and guard wires being not less than 1000mm above the deck (915mm where already fitted), the lower course of rails or wires having a clearance of not more than 230mm, and the remaining courses being evenly spaced, up to a maximum gap of 380mm. Where there would be unreasonable interference with the efficient operation of the vessel, the height may be reduced.

.2 Sections of rails or wires may be portable, where necessary for the vessel's fishing operations.

.3 Access stairways, ladder ways and passageways must be provided with handrails and grab rails for the safety of the crew.

.4 A pound barrier should be fitted to separate the pot (creel) ropes from the crew, except where pots (creels) are manually launched.

6.4 Safety Harnesses

.1 Safety harnesses provide excellent protection against falling from exposed decks, or into the sea, and they should be carried and worn, particularly in the case of single-person operation.

.2 Efficient means for securing lifelines for the safety harnesses should be provided, to enable crew members to traverse safely the length of the weather deck in bad weather.

.3 However, caution should be exercised so that the operation of Personal Flotation Devices is not impeded (see section 6.6.3 below)

.4 Consideration should be given to the importance of the inspection of safety harnesses

6.5 Surface of Working Decks

.1 Decks to which the crew are expected to have access must be provided with an adequate non-slip surface, or efficient non-slip covering.

.2 Particular attention must be paid to the provision of a non-slip surface to any hatch cover fitted on a working deck.

.3 The exposed bottom boards of open boats must have a non-slip surface.

6.6 Personal Protective Equipment

.1 In accordance with the *Safety, Health and Welfare at Work Act 2005* (No. 10 of 2005), and the *Safety, Health and Welfare at Work (General Application) Regulations, 2007* (S.I. No. 299 of 2007), personal protective equipment shall be provided where safety risks to the crew cannot be avoided, or adequately reduced, by structural or mechanical means via the vessel's layout, structure or machinery.

.2 Personal protective equipment in the form of clothing, or of items worn over clothing, should be in bright colours contrasting with the marine environment and clearly visible.

.3 In accordance with the *Fishing Vessel (Personal Flotation Devices) Regulations, 2001* (S.I. No. 586 of 2001), as amended by S.I. No. 401 of 2018, a suitable Personal Flotation Device (PFD) shall be carried for every person on board, and worn on deck at all times. Guidance on the selection of PFDs for use on-board fishing vessels can be found in Marine Notice No. 39 of 2013 - "Wear a Personal Flotation Device (PFD) and increase your chance of survival in the event of entering water". See also section 7.6.1 below.

6.7 Medical Stores and Medical Advice

.1 All vessels must carry medical stores in accordance with this section.

.2 Depending on the length of trip from the nearest port with adequate medical equipment, vessels are classed in three categories, namely:

Category A - Seagoing or sea-fishing vessels, with no limitation on length of trips.

Category B - Seagoing or sea-fishing vessels making trips of:

- less than 150 nautical miles from the nearest port with adequate medical equipment, and
- less than 175 nautical miles from the nearest port with adequate medical equipment, and which remain continuously within range of the helicopter rescue services.

Category C - Other:

- Harbour vessels, boats and craft staying within 30 nautical miles of the shore, or with no cabin accommodation other than a wheelhouse, and
- lifeboats and liferafts.

.3 The requirements for medical supplies and equipment applicable to the three categories of vessel are detailed in the *European Union (Minimum Safety And Health Requirements For Improved Medical Treatment On Board Vessels) Regulations, 2021* (S.I. No. 591 of 2021), which sets out the minimum safety and health requirements for improved medical treatment on board vessels of all kinds. The owner and master should reference the list of medicines and appropriate dosages, as well as required medical equipment for the type of vessel being used, to ensure compliance with the legislation. This list, along with an appropriate checklist, can be found in Marine Notice No. 60 of 2021 – "Minimum Safety and Health Requirements for Improved Medical Treatment on Board Vessels".

.4 The provision and replenishment of the medical supplies on any vessel is the owner's responsibility. The master is responsible for the use and maintenance of the medical supplies, but he or she may delegate this function to one or more competent members of the crew.

.5 Crew should also be made aware of the assistance available from **MEDICO Cork** as the designated Radio Medical Consultation Centre for Ireland. The unit is available to provide vessels at sea with free medical advice by radio on a 24-hour basis. Further details are provided in Marine Notice No. 60 of 2021.

6.8 Medical Training

.1 The owner of a vessel must also ensure that the master or any other person designated to maintain and use medical supplies aboard the vessel, attends an approved medical training course relating to the category of vessel concerned, and undertakes an approved updated medical training course every five years.

.2 The owner must further ensure that the guide to the use of the medicines, medical equipment and antidotes, set out in Marine Notice No. 60 of 2021 – "Minimum Safety and Health Requirements for Improved Medical Treatment on Board Vessels", is in a language and format understood by a person who is required to attend an approved medical training course.

6.9 Securing of Heavy Items of Equipment and Fishing Gear, etc.

.1 Heavy items of equipment such as batteries, cooking appliances and spare gear must be securely fastened in place, to prevent movement due to motion of the vessel in a seaway.

.2 Stowage lockers containing heavy items must have lids, or doors, with secure fastenings.

.3 See also section 11.13 (Securing of Equipment), and section 13.1.4.3 of **Annex 2** (Guidance on Capsize Safety), regarding stowage.

7 LIFE SAVING APPLIANCES

This chapter applies to all fishing vessels (pre-2004 and post-2004).

7.1 General

.1 Life-saving appliances must be provided in accordance with this Code.

.2 Life-saving appliances must be of types acceptable to the MSO and, where appropriate, must comply with the Marine Equipment Directive (MED): Directive 2014/90/EU, as amended.

7.2 Servicing

.1 Where carried, inflatable liferafts, hydrostatic release units (HRUs) and inflatable life jackets must be serviced in accordance with the manufacturer's recommendations. Additional information on servicing can be found in Marine Notice No. 53 of 2012 – "Servicing of a Vessel's Inflatable Liferafts, Inflatable Lifejackets, Marine Evacuation Systems, Hydrostatic Release Units, Inflated Boats, Rigid and Inflated Rescue Boats".

7.3 Lifejackets

.1 All vessels must carry at least one lifejacket for each person on board (see also paragraph 7.6.1 below).

.2 Lifejackets must be stowed in an easily accessible position.

.3 Lifejackets must be of a MED/SOLAS-approved type[1] and be fitted with a signalling whistle, light, and retro-reflective tape. Lifejacket donning notices should be displayed, where practicable, in the wheelhouse or other prominent positions.

7.4 Carriage of Inflatable Liferafts

.1 The following table sets out the carriage requirements for inflatable liferafts:

Length	No Persons	Plying Limits	Carriage requirement and type required
12m Loa or more but less than 15m Loa	Any number of persons	For All Plying Limits	One or more SOLAS/MED approved liferaft(s) with sufficient capacity to accommodate all on board the fishing vessel (see note 1).
12m Loa or less	More than 4 persons	5 miles or more from safe haven	One or more SOLAS/MED approved liferaft(s) with sufficient capacity to accommodate all on board the fishing vessel.
	Less than 4 persons on board		Non-SOLAS/non-MED or SOLAS/MED liferaft(s) (see notes 2 and 3) with sufficient capacity to accommodate all on board the fishing vessel.
	Less than 4 persons on board	Less than 5 miles from safe haven	Liferaft recommended (See note 4).

[1] SOLAS is the "International Convention for the Safety of Life at Sea (1974)" of the International Maritime Organization. Chapter III of SOLAS includes requirements for life-saving appliances and arrangements, including requirements for life boats, rescue boats and life jackets according to type of ship.

Table Notes:

.1 Compliance with the requirements in Table 1 also satisfy the statutory obligations which apply to fishing vessels of Loa 40 feet or more but less than Loa 15m. Liferafts referred to in Table 1 must be fitted with a Hydrostatic Release Unit and be stowed in a position which is the most practical for quick and easy launching on either side of the vessel. Liferafts must be serviced at an approved liferaft servicing station at intervals not exceeding 12 months. Carriage of Inflatable Liferafts On-Board Small Fishing Vessels of Less Than 15 Metres in Length Overall (Loa).

.2 The Department recognises that the smallest available approved SOLAS/MED inflatable liferafts are for six persons. To ensure an adequate standard of safety, for fishing vessels carrying 4 persons or less and which are operating 5 miles or more from a safe haven, non-SOLAS/non-MED inflatable liferafts of the types listed in Note 3 below are accepted for compliance with this Code. Such liferafts must be fitted with a Hydrostatic Release Unit and be stowed in a position which is the most practical for quick and easy launching on either side of the vessel. Such liferafts must be serviced at an approved liferaft servicing station at intervals not exceeding 12 months.

.3 Refer to Marine Notice No. 33 of 2016 – "Carriage of Inflatable Liferafts On-Board Small Fishing Vessels of Less Than 15 Metres in Length Overall (Loa)".

.4 Fishing vessels operating less than 5 miles from a safe haven and with 4 persons or less onboard, are not required to carry a liferaft for compliance with this Code. The Department strongly recommends that a liferaft is voluntarily carried onboard such vessels. It is also recommended that such voluntarily carried liferafts are of either the SOLAS/MED type or one of the non-SOLAS/non-MED types specified in Note 3 above and that these are serviced at an approved liferaft servicing station at intervals not exceeding 12 months.

7.5 Lifebuoys

.1 All vessels must carry at least two lifebuoys.

.2 One of the lifebuoys must be fitted with 18 metres of buoyant heaving line.

.3 In addition, on vessels of greater than 12m L_{oa}, a combined light and smoke signal must be fitted to one of the lifebuoys.

.4 Lifebuoys must be of an approved type and stowed in readily accessible positions.

.5 Each lifebuoy must be marked with the vessel's Name and Port of Registry.

7.6 Personal Flotation Devices

.1 In accordance with the Fishing Vessel (Personal Flotation Devices) Regulations, 2001 (S.I. No. 586 of 2001), as amended by S.I. No. 401 of 2018, a suitable Personal Flotation Device (PFD) shall be provided for each person on board, and worn on deck at all times. Guidance on the selection of PFDs for use on-board fishing vessels can be found in Marine Notice No. 39 of 2013 - "Wear a Personal Flotation Device (PFD) and increase your chance of survival in the event of entering water". See also section 6.6.3 above.

7.7 Loose Equipment

.1 Where space is restricted in smaller vessels, a portable watertight container should be carried which is capable of stowing the following safety items:-

a. Distress signals;
b. Waterproof torch;
c. Signalling whistle;
d. Compass;
e. First aid kit; and
f. Hand-held radio, if required by paragraph 9.2.3.7 below.

7.8 Distress Signals

.1 In addition to those provided with any liferaft carried, the following distress signals must be carried:

L_{oa} less than 12m	**L_{oa} 12m or more**
6 Red Star Signals	12 Parachute Distress Rocket Signals
Or	
4 Parachute Distress Rocket Signals, 4 Red Hand Flares and 2 Buoyant Orange Smoke Flares may be carried in lieu of 6 Red Star Signals.	

7.9 Means for Recovering Persons from the Water

.1 To aid the recovery of a person from the water, a retrieval system must be provided *or* a system specifically adapted to the vessel, which can accomplish the same function. For example, an overside boarding ladder or scrambling net extending from the weather deck to at least 1000mm below the operational waterline.

.2 While it is desirable to lift a person from the water in a horizontal position, this is considered secondary to the speed of retrieval so that the person does not become hypothermic.

.3 Each vessel must carry a buoyant rescue quoit, fitted with 18 metres of buoyant heaving line.

.4 Additional information regarding these requirements can be found in Marine Notice No. 35 of 2013 – "Man Overboard Recovery Systems on Fishing Vessels".

8 MANNING, TRAINING, CERTIFICATION, EMERGENCY PROCEDURES AND ORGANISATION OF WORKING TIME

This chapter applies to all fishing vessels (pre-2004 and post-2004).

8.1 General

.1 This chapter provides information on manning, safety training and qualifications relating to the operation of small commercial fishing vessels.

.2 Furthermore, this chapter sets out requirements in relation to musters and drills, regarding emergency procedures on vessels, as well as the regulation of work/rest time.

8.2 Safety Training

.1 All persons on board must comply with the *Fishing Vessel (Basic Safety Training) Regulations 2001* (S.I. No. 587 of 2001). It is also required that safety skills and knowledge be updated on a regular basis, and such enhanced safety training as set out in Marine Notice No. 16 of 2014 – "Enhanced Safety Training for Skippers and Crews of Fishing Vessels Less than 15m Length overall", every 5 years.

.2 The master or any other appropriate person on-board tasked with maintaining or using the medical supplies as set out in section 6.7 above, must attend an approved medical training course relating to the category of vessel concerned at least once every five years.

.3 Single-person operation should be restricted to 30 nautical miles from a safe haven.

8.3 Standards of Competence

.1 The owner/operator of a fishing vessel should ensure that all fishers are sufficiently competent to keep a vessel safe at all times.

.2 Certain skills are required to carry out particular jobs, and fishers need to be competent in:

a. operating and maintaining the engine, including ancillary machinery and systems;
b. responding to requests for help in emergencies, and using radios to seek help;
c. navigating or piloting a vessel;
d. manoeuvring a vessel;
e. all crew able to communicate in the English language; and
f. workplace safety.

.3 The level of competence required depends on the area of operation. The further away from a safe haven, or home base, the fishers operate, the more competent across a wider range of skills they will need to be.

8.4 Operation and Maintenance of Propulsion Machinery

.1 The master, or other appropriate person on-board, must be competent to operate and maintain the vessel's main propulsion machinery and ancillary equipment.

8.5 Operation of Radio Equipment

.1 Every vessel must carry at least one person suitably qualified, in accordance with section 9.2.10 (Radio Personnel) below, to operate the radio equipment carried on-board.

8.6 Responsibility of the Owner for Safe Manning of Vessel

.1 It is the owner's responsibility to ensure that the master has, in addition to the certification and competence requirements already detailed in sections 8.2 to 8.5, recent and relevant experience of the type and size of vessel, the machinery on-board, and the type of operation undertaken. The owner must also ensure that there are sufficient qualified crew on-board, having regard to the type and duration of the voyage undertaken.

8.7 Safe Navigational Watch

.1 It is the master's responsibility to ensure that there is, at all times, an alert person with adequate experience in charge of the navigational watch. In making this decision the master should take account of all the factors affecting the safety of the vessel, including:

a. the present and forecast state of the weather, sea state and visibility;
b. the proximity of navigational hazards; and
c. the density of traffic in the area.

8.8 Musters and Drills for Emergency Procedures

.1 The master and crew shall comply with the *Merchant Shipping (Musters) (Fishing Vessels) Regulations, 1993* (S.I. No. 48 of 1993).

.2 The master of a fishing vessel of 12 metres or more in length shall ensure that the crew are instructed, trained and drilled in the use of the life-saving and fire-fighting equipment on the vessel, and that each member of the crew is aware of the location on the vessel of such equipment.

.3 This aforesaid instruction and training shall be given before the vessel commences a voyage with a new crew, or new member of the crew, and thereafter at monthly intervals.

.4 Life-saving and fire-fighting equipment on a fishing vessel of 12 metres or more in length shall be inspected by the master at intervals of not more than one month.

.5 Where necessary, the master of a fishing vessel shall arrange for maintenance or repairs to the life-saving and fire-fighting equipment that is on-board, to be carried out as soon as may be required after an inspection.

.6 Vessels of less than 12 metres in length are recommended to follow the above requirements.

.7 Further information on the requirements concerning muster lists and drills in the use of life-saving appliances and fire-fighting appliances can be found in Marine Notice No. 40 of 2018 – "Drills and Musters on all Fishing Vessels/Man Overboard Recovery Systems on Fishing Vessels".

.8 In addition, the necessity to develop contingency plans and procedures, to conduct emergency exercise drills, including preparing for a grounding event or collision incident and unexpected loss of propulsion or electrical power, is highlighted in Marine Notice No. 41 of 2020.

8.9 Organisation of Working Time

.1 The master and owner shall comply, if applicable, with:

a) The *European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 2019* (S.I. No. 672 of 2019) – applicable to registered fishing vessels with one or more crew onboard employed under contract.

b) The *European Union (Workers on Board Seagoing Fishing Vessels) (Organisation of Working Time) (Share Fishermen) Regulations 2020* (S.I. No. 585 of 2020) – applicable to all Irish fishing vessels with where crew is made up entirely of share fishers.

.2 For vessels falling outside the above-mentioned legislation, the requirements of the regulations are recommended to be complied with.

.3 The aforementioned regulations prescribe the maximum hours of work and minimum hours of rest for workers on board sea-going fishing vessels, as well as the requirement for records to be kept of their hours of work or rest.

9 RADIO COMMUNICATIONS

This chapter applies to all fishing vessels (pre-2004 and post-2004).

9.1 Part 1 – General

9.1.1 The Global Maritime Distress and Safety System (GMDSS)

.1 The basic concept of the GMDSS is that search and rescue authorities ashore will be alerted, as well as shipping in the immediate vicinity of the vessel in distress, to a distress incident so that they can assist in a co-ordinated Search and Rescue (SAR) operation with the minimum delay.

.2 The system also provides for urgency and safety communications and the promulgation of maritime safety information (MSI) including navigational and meteorological warnings and forecasts and other urgent safety information to vessels. Every vessel is able, irrespective of the GMDSS Sea Area in which it operates, to perform those radio communication functions which are essential for the safety of the vessel and of other vessels operating in the same locality.

.3 The equipment to be carried depends on the sea area in which vessels operate. There are four sea areas:

a. Sea Area A1 means an area within the coverage of at least one VHF coast station in which continuous alerting by Digital Selective Calling (DSC) is available;
b. Sea Area A2 means an area within the coverage of at least one MF coast station in which continuous alerting by DSC is available;
c. Sea Area A3 means an area within the coverage of a recognized mobile satellite service such as an INMARSAT geostationary satellite system in which continuous alerting is available; and
d. Sea Area A4 means an area outside of sea areas A1, A2 and A3.

9.2 Part 2 – Vessel Requirements

9.2.1 Radio Installations Regulations

.1 Every vessel must comply with the requirements of the *Fishing Vessel (Radio Installations) Regulations, 1998* (S.I. No. 544 of 1998), as amended by the *Fishing Vessel (Radio Installations) (Amendment) Regulations, 2002* (S.I. No. 472 of 2002).

.2 The following sections of this Chapter are an amalgam (abridged and edited for the purposes of this Code) of the radio installations regulations for vessels of **less than 12m L_{oa}**, and for vessels of **L_{oa} greater than or equal to 12m** but less than 17m.

.3 All vessels are required to have on board a ship radio licence issued by the Department for the sea area of operation, installed radiocommunication equipment and to have on board the appropriate radio operator holding the required certificate of competency. Any EPIRB or PLB devices must be registered with the EPIRB and PLB registry. The following legislation applies: the *Wireless Telegraphy (Ship Station Radio Licence) Regulations, 2006* (S.I. No. 414 of 2006) and the *Wireless Telegraphy Act, 1926 (Section 3) (Exemption of 406MHz Personal Locator Beacons) Order, 2010* (S.I. No. 290 of 2010). The Radio Regulations of the International Telecommunications Union (ITU) apply in Ireland and the relevant Articles, Appendices, Resolutions and Recommendations apply on board all Irish vessels.

9.2.2 Functional Requirements

.1 Every fishing vessel, while at sea, shall be capable:

a. of transmitting ship-to-shore alerts;
b. of receiving shore-to-ship distress alerts;
c. of transmitting and receiving ship-to-ship distress alerts;
d. of transmitting and receiving search and rescue co-ordinating communications;
e. of transmitting and receiving on-scene communications;
f. of transmitting and receiving maritime safety information;
g. of transmitting and receiving ship to ship communications.

In addition, vessels of greater than 12 m L_{oa} shall be capable:

h. of transmitting and receiving signals for locating,

as set forth in the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended.

9.2.3 Installation, Location and Control of Radio Equipment

.1 Every vessel shall be provided with radio installations, capable of complying with the functional requirements prescribed by section 9.2.2 above, throughout its intended voyage unless exempted under Regulation 3 of the *Fishing Vessels (Radio Installations) Regulations, 1998* (S.I. No. 544 of 1998).

.2 Where, in the opinion of the Minister, it is feasible to comply with the functional requirements, prescribed by section 9.2.2 above, by means of a fixed installation, every radio installation shall:

a. be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful interaction with other equipment and systems;

b. be so located as to ensure the greatest possible degree of safety and operational availability;

c. be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions; and

d. be clearly marked with the call sign, the ship station identity and other codes as applicable for the use of the radio installation.

.3 In addition, on vessels of **greater than 12 m L_{oa}**, every radio installation shall be provided with reliable, permanently arranged electrical lighting, independent of the main and emergency sources of electrical power, for the adequate illumination of the radio controls and for operating the radio installation.

.4 Control of the VHF radiotelephone channels, required for navigational safety, shall be immediately available in the wheelhouse, convenient to the conning position.

.5 Every radio transmitter and receiver fitted in accordance with the Regulations shall be provided with a suitable antenna or antennas. The antennas shall be so constructed and sited to enable each radio installation to perform effectively its intended communication function.

.6 On vessels of **greater than 12 m L_{oa}**, where wire antennas are provided as part of a radio installation they shall be fitted with suitable insulators and, if suspended between supports liable to whipping, be protected against breakage.

.7 Where, in the opinion of the Minister, it is not feasible to comply with the functional requirements, prescribed by section 9.2.2 above, by means of a fixed installation, every radio installation shall:

a. be an approved portable waterproof transmitter and receiver;
b. be provided with a suitable antenna; and
c. be provided with a fully charged sealed reserve power pack at all times while the vessel is at sea.

9.2.4 Radio Equipment to be Provided for all Sea Areas (including EPIRBs and PLBs)

.1 Every fishing vessel of **less than 12 m L_{oa}** shall be provided with:

a. a VHF radio installation capable of transmitting and receiving radiotelephony on the frequencies 156.300 MHz (channel 6), 156.650 MHz (channel 13), and 156.800 MHz (channel 16); and

b. a satellite emergency position-indicating radio beacon (satellite EPIRB), which shall be:

i. capable of transmitting a distress alert either through the polar orbiting satellite service operating on the 406 MHz and 121.5 MHz bands, or the 1.6 GHz band;
ii. installed in a readily accessible position;
iii. ready to be manually released and capable of being carried by one person into a survival craft;
iv. capable of floating free if the vessel sinks and of being automatically activated when afloat; and
v. capable of being activated manually.

.2 The EPIRB must be correctly programmed, registered and licensed as per Marine Notice No. 8 of 2006 - "Registration and Care of COSPAS-SARSAT 406 MHz EPIRB's Installed on Irish Vessels", and Marine Notice No. 13 of 2012 - "Irish Ship Radio Licence and EPIRB Databases".

.3 Every fishing vessel of **12 m L_{oa} and greater** shall be provided with:

a. a VHF radio installation capable of transmitting and receiving:

i. DSC on the frequency 156.525 MHz (channel 70). It shall be possible to initiate the transmission of distress alerts on channel 70 from the position from which the vessel is normally navigated; and

ii. radiotelephony on the frequencies 156.300 MHz (channel 6), 156.650 MHz (channel 13), and 156.800 MHz (channel 16);

b. a radio installation capable of maintaining a continuous DSC watch on VHF channel 70, which may be separate from, or combined with, that required by sub-paragraph (a)(i);

c. a radar transponder capable of operating in the 9 GHz band, which shall be stowed so that it can be easily utilised. (This may also be fulfilled by the provision of an AIS-SART);

d. a satellite emergency position-indicating radio beacon (satellite EPIRB), which shall be:

i. capable of transmitting a distress alert either through the polar orbiting satellite service operating on the 406 MHz and 121.5 MHz bands;

ii. installed in a readily accessible position;

iii. ready to be manually released and capable of being carried by one person into a survival craft;

iv. capable of floating free if the vessel sinks and of being automatically activated when afloat;

v. capable of being activated manually; and

vi. correctly programmed, registered and licensed as per Marine Notice No. 13 of 2012 - "Irish Ship Radio Licence and EPIRB Databases"; and

e. a receiver capable of receiving International NAVTEX service broadcasts.

.4 An approved Personal Locator Beacon (PLB), capable of transmitting a distress alert on the 406 MHz band, shall be provided for each person on-board and shall be carried by each person on deck at all times. Each PLB should be ready to be manually activated.

.5 Every PLB must be correctly registered with ComReg, as per Marine Notice No. 25 of 2010 "Personal Locator Beacons (PLB) Registry".

9.2.5 Additional Radio Equipment to be Provided for Sea Areas A1 and A2

.1 In addition to meeting the requirements of paragraphs 9.2.4.1 and 9.2.4.2 above, every fishing vessel of **less than 12 m L_{oa}** engaged on voyages beyond Sea Area A1, but remaining within Sea Area A2, shall be provided with:

a. a VHF radio installation capable of transmitting and receiving:

i. DSC on the frequency 156.525 MHz (Channel 70). It shall be possible to initiate the transmission of distress alerts on channel 70 from the position from which the vessel is normally navigated; and

ii. radiotelephony on the frequencies 156.300 MHz (Channel 6), 156.650 MHz (Channel 13), and 156.800 MHz (Channel 16);

b. a radio installation capable of maintaining a continuous DSC watch on VHF channel 70, which may be separate from, or combined with, that required by sub-paragraph (a)(i);

c. an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

i. 2187.5 kHz (assigned frequency) using DSC; and

ii. 2182 kHz using radiotelephony; and

d. a radio installation capable of maintaining a continuous DSC watch on the frequency 2187.5 kHz (assigned frequency) which may be separate from, or combined with, that required by subparagraph (c)(i).

.2 In addition to meeting the requirements of paragraph 9.2.4.3 above, every fishing vessel of **12 m L_{oa} and greater** engaged on occasional voyages beyond Sea Area A1, but remaining within Sea Area A2, shall be provided with:

a. an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

i. 2187.5 kHz (assigned frequency) using DSC; and

ii. 2182 kHz using radiotelephony;

b. a radio installation capable of maintaining a continuous DSC watch on the frequency 2187.5 kHz (assigned frequency) which may be separate from, or combined with, that required by subparagraph (a)(i); and

c. a portable VHF radiotelephone which shall:

i. be waterproof, and capable of transmitting and receiving radiotelephony on the frequencies 156.300 MHz (Channel 6), 156.650 MHz (Channel 13) and 156.800 MHz (Channel 16);

ii. be located in a readily accessible position in the wheelhouse; and

iii. have a fully charged power pack available at all times while the vessel is at sea.

9.2.6 Radio Watches

.1 Every vessel while at sea shall maintain a continuous watch:

a) on VHF channel 16;

b) on VHF DSC channel 70, if the vessel is fitted with a VHF DSC installation; and

c) on the distress and safety DSC frequency 2187.5 kHz (assigned frequency), if the vessel is fitted with an MF DSC radio installation.

.2 Every vessel, while at sea, shall maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the vessel is navigating.

9.2.7 Sources of Energy

.1 There shall be available at all times, while the vessel is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source or sources of energy for the radio installations.

.2 A reserve source, or sources, of energy shall be provided on every vessel complying with the provisions of section 9.2.4 above, to supply radio installations, for the purpose of conducting distress and safety radiocommunications, in the event of failure of the vessel's main source of electrical power. The reserve source, or sources, of energy shall be capable of simultaneously operating the VHF radio installation required by section 9.2.4, and any of the additional loads, mentioned in section 9.2.5 above, for a period of at least six hours.

.3 The reserve source, or sources, of energy shall be independent of the propelling power of the vessel and the vessel's electrical system.

.4 The reserve source, or sources, of energy may be used to supply the electrical lighting required by paragraph 9.2.3.3 above.

.5 Where a reserve source of energy consists of a rechargeable accumulator battery, or batteries:

a. a means of automatically charging such batteries shall be provided which shall be capable of recharging them to minimum capacity requirements within 10 hours; and

b. the capacity of the battery, or batteries, shall be checked, using an appropriate method, at intervals not exceeding 12 months, when the vessel is not at sea.

.6 The siting and installation of accumulator batteries, which provide a reserve source of energy, shall be such as to ensure:

a. the highest degree of service;
b. a reasonable lifetime;
c. reasonable safety;
d. that battery temperatures remain within the manufacturer's specifications, whether under charge or idle;
e. that when fully charged, the batteries will provide at least the minimum required hours of operation under all weather conditions; and
f. that the batteries are situated in the upper part of the vessel.

.7 If an uninterrupted input of information from the vessel's navigational, or other, equipment to a radio installation required by the Radio Regulations is needed to ensure its proper performance, means shall be provided to ensure the continuous supply of such information in the event of failure of the vessel's main or emergency source of electrical power.

.8 For the purpose of calculating the required capacity of the reserve source, or sources, of energy, the following formula is recommended for determining the electrical load to be supplied by the reserve source, or sources, of energy for each radio installation required for distress conditions:

½ of the current consumption necessary for transmission + the current consumption necessary for reception + the current consumption of any additional loads.

9.2.8 Performance Standards

.1 Equipment required to be provided under the Radio Regulations shall conform to appropriate performance specifications set out in the *European Union (Radio Equipment) Regulations 2017* (S.I. No. 248 of 2017) and the *European Union (Marine Equipment) Regulations 2017* (S.I. No. 177 of 2017), as amended.

9.2.9 Serviceability and Maintenance Requirements

.1 Equipment shall be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment.

.2 Where applicable, equipment shall be so constructed and installed that is readily accessible for inspection and on-board maintenance purposes.

.3 Adequate information shall be provided to enable the equipment to be properly operated and maintained.

.4 On every fishing vessel of **12 m L_{oa} and greater**, a member of the crew, nominated by the master shall, while the vessel is at sea, carry out the appropriate tests and checks specified in **Annex 3** (Radio Equipment Tests and Reserve Power Checks). If any of the radio installations required by the Radio Regulations is not in a working order, the master shall be informed and the details recorded in the Radio Log.

9.2.10 Radio Personnel

.1 Every vessel shall carry personnel qualified for distress and safety radio communication purposes as specified in paragraphs .2, .3 and .4 below.

.2 In the case of fishing vessels complying with the requirements of paragraphs 9.2.4.1 above, the personnel shall be holders of at least the Short-Range Certificate of Competency granted by the Department, or an equivalent certificate recognised by the Department as being equivalent.

.3 In the case of fishing vessels complying with the requirements of paragraph 9.2.4.3 above, the personnel shall be holders of at least the Radio Operator's Short-Range Certificate granted by the Department, or an equivalent certificate recognised by the Department as being equivalent.

.4 In the case of fishing vessels complying with the additional requirements of paragraphs 9.2.5.1 and 9.2.5.2 above, the personnel shall be holders of at least the Radio Operator's Long-Range Certificate granted by the Department, or an equivalent certificate recognised by the Department as being equivalent.

9.2.11 Radio Records

.1 On every fishing vessel of **12 m L_{oa} and greater**, a record shall be kept, as specified in **Annex 4** (Radio Log), and as required by the Radio Regulations, of all incidents connected with the radiocommunication service which appear to be of importance to safety of life at sea.

10 NAVIGATION EQUIPMENT, LIGHTS, SHAPES & SOUND SIGNALS

This chapter applies to all fishing vessels (pre-2004 and post-2004).

10.1 General

.1 All fishing vessels must comply with the *International Regulations for Preventing Collisions at Sea* (COLREGS), which are implemented in Irish law by the *Merchant Shipping (Collision Regulations) (Ships and Water Craft on the Water) Order 2012* (S.I. No. 507 of 2012), and the *Signals of Distress (Ships) Rules 2012* (S.I. No.170 of 2012). Further information can be found in Marine Notice No. 06 of 2013.

10.2 Navigation Equipment

.1 All vessels must carry a magnetic compass to provide an accurate course setting. The compass shall be properly adjusted, and its table or curve of residual deviations shall be available at all times.

.2 In vessels equipped with an auto-pilot system actuated by a magnetic sensor that does not indicate the vessel's heading, suitable means should be provided to show this information.

.3 It is recommended that vessels are fitted with radar. It is recommended that the installation should be capable of operating in the 9 GHz frequency band.

.4 If practicable, all vessels should carry an efficient echo sounder.

.5 It is recommended that fishing vessels are fitted with equipment capable of receiving Automatic Identification System (AIS) signals that indicate the position of Aids to Navigation (AtoN) stations.

.6 The visibility from the wheelhouse should be adequate both ahead and astern.

10.3 Navigation Lights

.1 Vessels, which operate only during daylight hours, and in good visibility, are not required to carry navigation lights. However, failure to exhibit navigation lights while underway between sunset and sunrise, or in restricted visibility, would be in contravention of the Collision Regulations, referred to in section 10.1.

10.4 Steaming Lights

.1 All vessels must, subject to paragraphs .2 and .3 below, exhibit the following Steaming Lights:

	less than 12 m L_{oa}	**12 m or more L_{oa}**
	Visibility	*Visibility*
1 Masthead light	2 miles	3 miles
1 Starboard light	1 mile	2 miles
1 Port light	1 mile	2 miles
1 Stern light	2 miles	2 miles

.2 A power-driven vessel of **less than 12 metres L_{oa}** may, in lieu of the above lights, exhibit an all-round white light and sidelights.

.3 A power-driven vessel of **less than 7 metres L_{oa}** with a maximum speed not exceeding 7 knots may, in lieu of the above requirements, exhibit an all-round white light of visibility 2 miles and, if practicable, side lights.

10.5 Fishing Lights

.1 All vessels must exhibit the following Fishing Lights:

a) Trawlers

One all-round green light over one all-round white light, one metre apart; both with a range of visibility of 2 miles.

b) Vessels other than trawlers

One all-round red light over one all-round white light, one metre apart; both with visibility 2 miles.

10.6 Additional Fishing Light

.1 Where there is outlying gear extending more than 150 metres horizontally from the vessel, one all-round white light must be exhibited in the direction of the gear. The light must be visible for at least 2 miles.

10.7 Anchor Light

.1 When at anchor, an all-round white light must be shown where it can best be seen. The light must be visible for at least 2 miles.

10.8 Position of Lights

.1 The masthead light of vessels **12 metres or more L_{oa}** must be exhibited not less than 2.5 metres above the gunwale. However, on vessels **less than 12 metres L_{oa}** the masthead light may be carried less than 2.5 metres above the gunwale, providing there is at least one metre between the sidelights and the mast light.

.2 The lower of the two all-round fishing lights shall be at a height above the sidelights not less than twice the distance between the vertical lights. Sidelights must be positioned above the gunwale so as not to be so low as to be interfered with by deck lights. The stern light must be positioned where it can be clearly seen.

.3 Where an additional all-round white light is fitted to indicate the direction of outlying fishing gear, it must be shown at a horizontal distance of not less than 2 metres, and not more than 6 metres, away from the all-round red and white lights. It must be vertically displayed not higher than the all-round white light, and above the sidelights.

10.9 Day Signals

.1 All vessels must display the following signals:

a) Fishing Signal – Two Black Cones with Apexes together or a basket.
b) Anchor Signal – Single Black Ball.

.2 Where the outlying fishing gear extends more than 150 metres horizontally from the vessel, an additional black cone must be displayed, apex upwards, in the direction of the gear.

.3 The size of the shapes must be commensurate with the size of the vessel.

.4 The shapes and signals must be shown only when the vessel is engaged in fishing and at no other time. It is a contravention of the Collision Regulations to display these signals when not engaged in fishing.

10.10 Sound Signals

.1 All vessels must be provided with the means of making an efficient sound signal. Vessels of **12 metres or more L_{oa}** must be provided with an approved whistle with a frequency between 250 and 700 Hz, which is audible for a distance of 0.5 miles, and a bell with a diameter of at least 200mm.

10.11 Charts and Nautical Publications

.1 Fishers should be aware of the contents of important 'fishing related' Marine Notices, which are a source of valuable safety advice. Copies of individual Marine Notices are available from the Department's Marine Notice webpage, or from the MSO.

.2 In line with the requirements of the *Merchant Shipping (Carriage of Nautical Charts and Publications) Regulations 2021* (S.I. No. 149 of 2021), vessels should carry an up to date copy of the Illustrated Table of Life Saving Signals.

10.12 Signalling Lamp

.1 All vessels should be provided with an efficient signalling lamp, or waterproof torch, suitable for Morse signalling.

10.13 Radar Reflector

.1 All vessels should carry a radar reflector.

10.14 Search Light

.1 Where electrical power supply is provided, and where practicable, all vessels of **7m L_{oa} and over** should carry an efficient fixed and/or portable searchlight suitable for use in man overboard search and recovery operations.

10.15 Navigation Safety

.1 Before departure, Masters must take steps to plan for any intended voyage, including all stages of the voyage, taking into account weather forecasts, tidal information, navigation and pilotage, and any other factor that may affect the safe navigation of their vessel.

.2 The voyage plan shall be from berth to berth, and with contingency plans in place. Further details can be found in Marine Notice No. 41 of 2020.

11 ACCOMMODATION AND WORKING SPACES

This chapter applies to all fishing vessels (pre-2004 and post-2004)

11.1 General

.1 The provisions within this chapter, except for those referred to in paragraph.2 below, represent *recommendations* that owners may wish to use for guidance, when optionally upgrading their vessels.

.2 The following provisions, which are safety-related, *must be complied with*, taking into account the size of the vessel and range of operation:

a. *flooding danger where a toilet is fitted* (section 11.6),
b. *escapes* (section 11.7),
c. *safety ventilation* (section 11.8), and
d. *lighting* (section 11.10).

.3 Accommodation and working spaces should be kept clear and, as far as possible, protected from the sea and provide adequate protection for crew against falls on the vessel or from falling overboard.

11.2 Living Quarters

.1 The location, construction and insulation should provide protection against the sea, weather and excessive heat or cold.

11.3 Sleeping Accommodation

.1 In vessels intended to be at sea regularly for more than 24 hours, a sufficient number of berths should be provided on board.

11.4 Food Preparation

.1 Means for cooking and for supplying hot water should be provided, together with adequate space for the preparation and storage of food. Sufficient ventilation should be provided.

.2 It is extremely important to take appropriate precautions to prevent instances of foodborne illness at sea, such as hygienic cleaning of hands by food handlers.

11.5 Messing Arrangements

.1 Where space permits, facilities should be provided to permit the crew to rest and eat when not working.

11.6 Toilet Facilities

.1 Any toilet which discharges through the side of the vessel must be of an approved commercial marine standard design and quality, with inlet and discharge pipe connections complying with section 2.1.18 above.

.2 When the rim of the toilet is either below, or less than 300mm above, the deepest waterline of the vessel, anti-siphon measures must be provided.

11.7 Access and Escape Arrangements

.1 Routes and exits, which can be used as emergency escape routes, must be unobstructed, easily accessible and lead out as directly as possible to the open deck.

.2 All accommodation and workspaces must normally be provided with an escape, which may be through any hatch, door, window or portlight, which must have minimum clear opening of 500mm x 380mm. The adequacy of escapes must be functionally tested.

.3 Emergency hatches or doors must be capable of easy opening from both the inside and the outside, without the use of keys or tools. The use of a loose handle, hammer or special device kept in a central position, such as the wheelhouse, will be accepted. Emergency exits must not be fitted with padlocks when the vessel is occupied.

.4 Where emergency routes pass through other spaces, the doors or hatches serving those spaces must not be capable of being locked, unless kick panels or other suitable alternative arrangements are provided. In all of these cases, escape routes and exits must be indicated by appropriate permanent signs and be illuminated. See paragraph 11.10.2 below.

.5 In sleeping accommodation, efficient smoke detectors must be provided, as necessary, to give early warning of a fire emergency, which could cut off escape from a space.

.6 Ladders, steps, handgrips and suchlike, necessary for escape, must be fitted.

11.8 Ventilation

.1 Effective means of ventilation must be provided to enclosed spaces, which under normal operating conditions may be entered by persons on board. This is particularly important in sleeping accommodation. In this context it is considered that the hatch will effectively ventilate fish holds.

.2 Mechanical ventilation may be required for safety reasons in accommodation spaces, which are situated completely below the level of the weather deck. As far as practicable, such ventilation arrangements must be designed to provide at least 6 changes of air per hour, when the access openings to the spaces are closed. (see paragraphs 5.3.4.2 and 5.3.4.4 above – L.P.G. installations).

.3 Sanitary spaces should be provided with separate exhausts to the open air.

11.9 Water Services

.1 An adequate supply of cold fresh water, including drinking water, should be provided.

11.10 Lighting

.1 An electric lighting system must be installed, which is capable of supplying adequate light to all enclosed accommodation and working spaces.

.2 Adequate lighting must be provided to illuminate escape routes and life-saving appliance stowage positions. Waterproof torches, appropriately located, will be considered to meet this requirement.

11.11 Temperature

.1 The temperature within accommodation spaces and enclosed work areas should be kept within a comfortable range, having regard to the physical demands placed on the crew and the actual, or potential, weather conditions in the area in which the vessel operates.

11.12 Hand Holds and Grab-rails

.1 Sufficient handholds should be provided, to allow safe movement around the accommodation and working spaces when the vessel is in a seaway.

11.13 Securing of Equipment

.1 See also section 6.9 (Securing of Heavy Items of Equipment and Fishing Gear, etc.) above.

.2 Heavy items of equipment, such as batteries, cooking appliances and spare gear must be securely fastened in place, to prevent movement due to motion of the vessel in a seaway.

.3 Stowage lockers containing heavy items must have lids, or doors, with secure fastenings.

.4 See also section 13.1.4.3 of **Annex 2** (Guidance on Capsize Safety), regarding stowage.

ANNEX 1 – STABILITY (APPLIES TO PRE-2004 FISHING VESSELS)

(Referred to in Chapter 3)

12.1 Determination of vessel's stability by means of rolling period tests

.1 The International Maritime Organization (IMO), recognizing the desirability of supplying to masters of small vessels instructions for a simplified determination of initial stability, developed a standard for the performance of rolling period tests. It was concluded that the rolling period test was a useful means of approximately determining the initial stability of small vessels when it is not practicable to give approved loading conditions or other stability information, or as a supplement to such information. Accordingly, the IMO incorporated this guidance in Annex 3 (previously section 7.6) of the *Code on intact stability for all types of ships covered by IMO instruments (1993)*. The following duplicates this guidance in a form appropriate to small fishing vessels.

.2 Investigations comprising the evaluation of a number of inclining and rolling tests according to various formulae showed that the following formula gave the best results and has the advantage of being the simplest:

$$GM_o = \left(\frac{f \times B}{T_r} \right)^2$$

where:

f	factor for the rolling period (rolling coefficient) as given in paragraph 4;
B	breadth of the vessel in metres;
T_r	time for a full rolling period in seconds (i.e. for one oscillation "to and from" port - starboard - port, or vice versa).

.3 The factor f is of the greatest importance and the data from the above tests were used for assessing the influence of the distribution of the various masses in the whole body of the loaded vessel.

.4 For fishing vessels, the following average values were observed:

	f values (approximate)*
Double-boom shrimp fishing boats	0.95
Deep-sea fishing boats	0.80
Boats with a live fish well	0.60

** The stated values are mean values. Generally, f values observed during the tests were within ± 0.05 of those given above.*

.5 It should be noted that the greater the distance of masses from the rolling axis, the greater the rolling coefficient will be. Therefore, it can be expected that:

a. the rolling coefficient for an unloaded vessel will be higher than that for a loaded vessel; and

b. the rolling coefficient for a vessel carrying a great amount of bunkers and ballast - both groups are usually located in the double bottom, i.e. far away from the rolling axis - will be higher than that of the same vessel having an empty double bottom.

.6 The above recommended rolling coefficients were determined by tests with vessels in port and with their consumable liquids at normal working levels; thus, the influences exerted by the vicinity of the quay, the limited depth of water and the free surfaces of liquids in service tanks are included.

.7 Experiments have shown that the results of the rolling test method get increasingly less reliable the nearer they approach GM values of 0.20 m and below.

.8 For the following reasons, it is not generally recommended that results be obtained from rolling oscillations taken in a seaway:

a. exact coefficients for tests in open waters are not available;

b. the rolling periods observed may not be free oscillations but forced oscillations due to the seaway;

c. frequently, oscillations are either irregular or only regular for too short an interval of time to allow accurate measurements to be observed; and

d. specialised recording equipment is necessary.

.9 However, sometimes it may be desirable to use the vessel's period of roll as a means of approximately judging the stability at sea. If this is done, care should be taken to discard readings, which depart appreciably from the majority of other observations. Forced oscillations corresponding to the sea period and differing from the natural period at which the vessel seems to move should be disregarded. In order to obtain satisfactory results, it may be necessary to select intervals when the sea action is least violent and it may be necessary to discard a considerable number of observations.

.10 In view of the foregoing circumstances, it needs to be recognized that the determination of the stability by means of the rolling test in a seaway should only be regarded as a very approximate estimation.

.11 The determination of the stability can be simplified by giving the master permissible rolling periods, in relation to the draughts, for the appropriate value(s) of f considered necessary.

.12 The initial stability may also be more easily determined graphically by using the sample nomogram (fig.1) as described below:

a. The values for B and f are marked in the relevant scales and connected by a straight line (1). This straight line intersects the vertical line mm at the point M.

b. A second straight line (2) which connects this point M and the point on the T_r scale corresponding with the determined rolling period intersects the GM scale at the requested value.

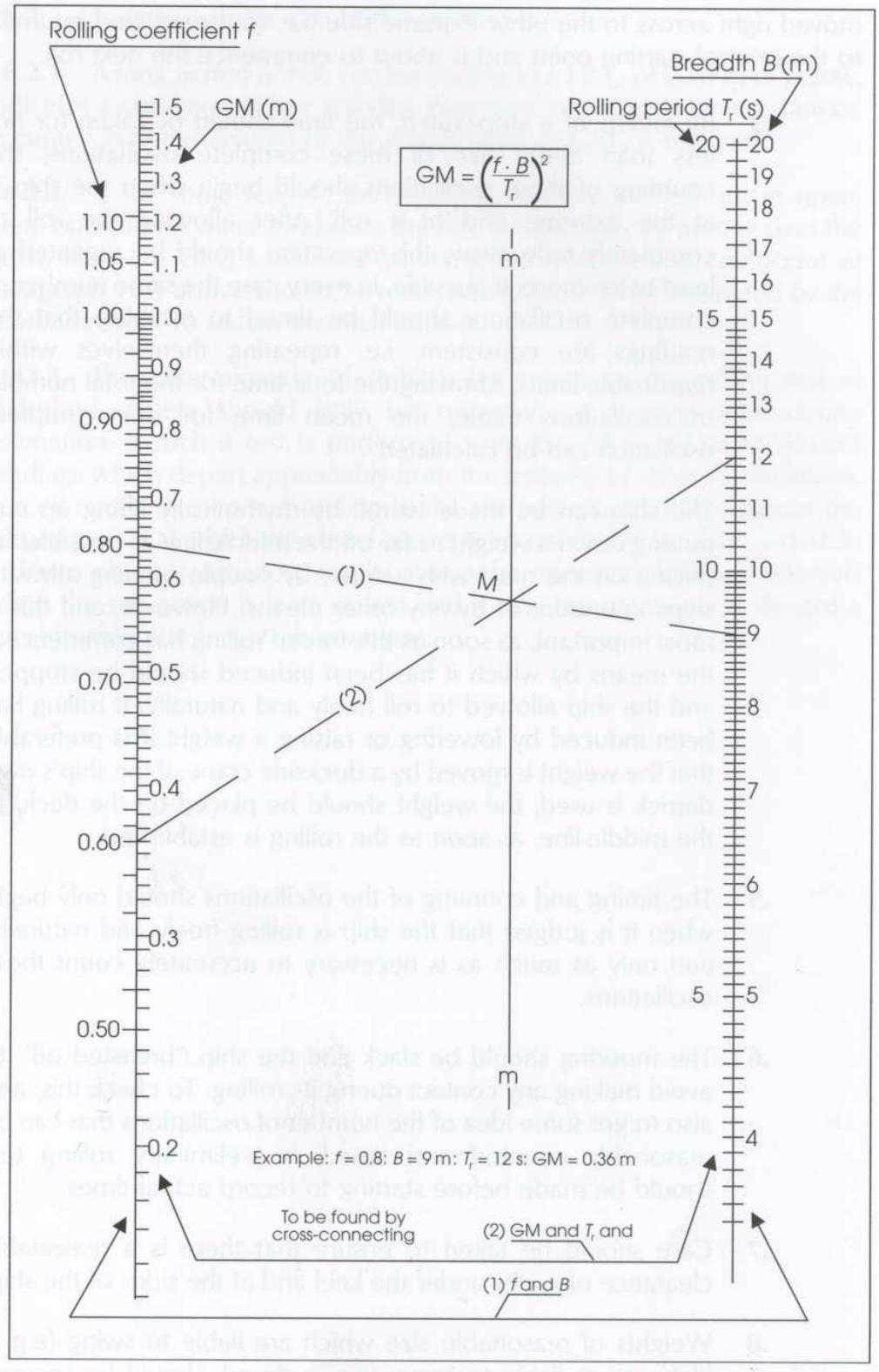

Fig.1

12.2 Recommendations on procedures for the conduct of rolling tests

12.2.1 The rolling period required is the time for one complete oscillation of the vessel and to ensure the most accurate results in obtaining this value the following precautions should be observed.

.1 The test should be conducted with the vessel in harbour, in smooth water with the minimum interference from the wind and tide.

.2 Starting with the vessel at the extreme end of a roll to one side (say port) and the vessel about to move towards the upright, one complete oscillation will have been made when the vessel has moved right across to the other extreme side (i.e. starboard) and returned to the original starting point and is about to commence the next roll.

.3 By means of a stop-watch, the time should be taken for not less than about five complete oscillations. Counting of the oscillations should begin when the vessel is at the extreme end of a roll. After allowing the roll to completely fade away, this operation should be repeated at least twice more. If possible, in every case the same number of complete oscillations should be timed to establish that the readings are consistent, i.e. repeating themselves within reasonable limits. Knowing the total time for the total number of oscillations made, the mean time for one complete oscillation can be calculated.

.4 The vessel can be made to roll by rhythmically lifting up and putting down a weight as far off the centreline as possible; by pulling on the mast with a rope; by people running athwartships in unison; or by any other means. However, and this is most important, as soon as this forced rolling has commenced, the means by which it has been induced should be stopped and the vessel allowed to roll freely and naturally. If rolling has been induced by lowering or raising a weight it is preferable that the weight is moved by a dockside crane. If the vessel's own derrick is used, the weight should be placed on the deck, at the centreline, as soon as the rolling is established.

.5 The timing and counting of the oscillations should only begin when it is judged that the vessel is rolling freely and naturally, and only as much as is necessary to accurately count these oscillations.

.6 The mooring should be slack and the vessel breasted off to avoid making any contact with the wharf or any other structure during its rolling. To check this, and to get some idea of the number of oscillations that can be reasonably counted and timed, a preliminary rolling test should be made before starting to record actual times.

.7 Care should be taken to ensure that there is a reasonable clearance of water under the keel and at the sides of the vessel.

.8 Weights of reasonable size which are liable to swing (e.g. a lifeboat), or liable to move (e.g. a drum), should be secured against such movement. The free surface effects of slack tanks should be kept as small as is practicable during the test.

12.2.2 Limitations on the use of this method

.1 A long period of roll, corresponding to a GM_o of 0.20 m or below, indicates a condition of low stability. However, under such circumstances, accuracy in determination of the actual value of GM_o is reduced.

.2 If, for some reason, these rolling tests are carried out in open, deep but smooth waters, inducing the roll, for example, by putting over the helm, then the GM_o calculated by using the method and coefficient of paragraph 1 above should be reduced by a figure to be estimated by the Administration to obtain the final answer.

.3 The determination of stability by means of the rolling test in disturbed waters should only be regarded as a very approximate estimation. If such a test is performed, care should be taken to discard readings, which depart appreciably from the majority of other observations. Forced oscillations corresponding to the sea period and differing from the natural period at which the vessel seems to move should be disregarded. In order to obtain satisfactory results, it may be necessary to select intervals when the sea action is least violent and it may be necessary to discard a considerable number of observations.

ANNEX 2 – STABILITY GUIDANCE NOTES FOR VESSEL OPERATORS

Applies to all fishing vessels (Pre-2004 and Post-2004)

(Referred to in Chapters 2, 3, 4, 6 and 11)

13.1 Guidance on Capsize Safety

13.1.1 Actions in Port

.1 It is important to ensure that the vessel is in as near an upright position as practicable prior to departure.

13.1.2 Reducing Top Weight

.1 It is prudent to identify any items fitted or stowed high on the vessel which are redundant and therefore can be removed ashore. Anything, which can be moved, should be stowed somewhere lower.

.2 "High" in this context means above main deck or thwart level. Pay particular attention to masts and gantries, and deckhouse tops and contents, particularly in the case of spare fishing gear which can be heavy.

.3 Removing top weight ashore always has two beneficial effects. The first is to increase freeboard, thus helping to protect against shipping water and increasing the range of positive stability. It also lowers the centre of gravity, increasing both upright statical stability, and its positive range. This is particularly important for open boats.

13.1.3 Vessel Modifications

.1 Vessel owners and/or masters must be aware of the dangers of carrying out modifications to vessels, and note the requirements in section 1.5.5 above.

.2 Never fit any ballast to a vessel in an attempt to improve statical stability, without professional advice from a fully qualified naval architect. This is because one effect of adding ballast is to reduce freeboard. Its effect on stability is therefore uncertain without proper investigation.

.3 If a vessel regularly rolls too quickly, or alternatively to unusually large angles in a seaway, investigate fitting or increasing the area of bilge keels (rolling chocks), but take special care with their attachment to the hull.

.4 If heavy items can be positioned, at the same height, either on the centreline or equally distributed at the boat's sides, then rolling will normally be reduced with such items at the sides.

.5 Measures to limit roll are particularly important for open boats, or those of low freeboard, to limit the potential for shipping water and swamping.

.6 Never remove any ballast in an attempt to improve the rolling behaviour of a stiff vessel (that is a boat with high initial stability, and therefore a short roll period), without the express professional advice of a fully qualified naval architect.

.7 Investigate the possibilities for increasing reserve buoyancy; both to limit the chance of capsize for decked vessels, and to increase the survivability of open boats in the event of swamping.

13.1.4 Actions at Sea

13.1.4.1 Watertight Integrity

.1 Whenever practicable, especially during bad weather or when undertaking fishing operations, care should be taken to maintain watertight integrity. For instance, it is prudent to close and secure hatch covers, companionways etc., and to keep wheelhouse doors and windows closed whenever possible. Any hatch required to be opened at sea should be opened for as short a time as practicable. However, vessel operators should take care not to close ventilators to engine compartments or accommodation spaces, except when necessary in emergency situations.

13.1.4.2 Freeing Ports (See also: Chapter 2, section 2.3)

.1 Operators of decked vessels must ensure that freeing ports are of adequate dimensions and are correctly positioned so that they drain any water from the deck quickly and effectively. If fitted with flaps or slides, these should be regularly maintained and lubricated, and secured open at sea, if appropriate. Chapter 2 (section 2.3) gives technical advice on this subject.

.2 Care should be taken to ensure that freeing ports are not obstructed by fishing gear, catch, etc., and that deck pound arrangements do not have the potential to trap water on deck.

13.1.4.3 Stowage

.1 As little equipment as possible should be stowed at any time on the deck or in any other high location, i.e. in deckhouses, forecastles, etc.

.2 Where practicable, on decked boats, spare fishing gear, fuel, water, ice and boxes - should be securely stowed below deck, as should the catch, as soon as possible after taking it on board.

.3 All stowage must be secure. Care should be taken that fishing gear, catch, ice or boxes, cannot shift as a result of vessel motion.

.4 The catch should be properly secured against shifting, which could cause dangerous trim or heel of the vessel. The scantlings of portable fish-hold divisions, if fitted, should be to the satisfaction of the Authorised Person.

13.1.4.4 Vessel Operation

.1 When working with gear such as trawls or dredges, arrange the towing blocks or other attachment to the vessel, as low as possible and near to the centreline.

.2 If towed gear comes fast on a seabed or other obstruction - reduce engine power immediately.

.3 If possible, handle heavy lifts, such as those generated by fastened fishing gear, near the vessel's centreline at bow or stern.

.4 Remember that the lives of the crew and the vessel are always more valuable than fishing gear or lost time. If in any doubt, run off or cut-away fastened gear, buoy off, and return later with assistance for retrieval.

.5 Do not lift pots (creels), nets, cod ends, etc. from unnecessarily high points, as any suspended load acts from the point of suspension.

.6 It is advisable to avoid operating a vessel with a list.

.7 Vessels engaged in bulk fishing are frequently loaded such that the reserves of stability and freeboard remaining may be small with consequent danger to crew and the vessel itself. Maintenance of adequate freeboard in all parts of the vessel is an important feature of safe operation. When a vessel designed for a particular mode of fishing is altered to suit a different method with new arrangements and stowage of catch, the stability and freeboard should be verified for suitability. Safe limits of loading should be made available to masters in a readily understandable form.

ANNEX 3 – RADIO EQUIPMENT TESTS

(Referred to in Chapter 9)

Radio tests should be noted in the RADIO LOG – see Annex 4.

14.1 Radio Equipment Tests and Reserve Power Checks

14.1.1 Daily

.1 The proper functioning of the Digital Selective Calling (DSC) facilities shall be tested at least once daily without radiation of signals, by use of the means provided by the equipment.

.2 Batteries providing a source of energy for any part of the radio installations shall be tested daily and, where necessary, brought up to the fully charged condition.

.3 Where the reserve source of energy is not a battery (for example, a motor generator), the reserve source of energy shall be tested daily.

14.1.2 Weekly

.1 The proper operation of the DSC facilities shall be tested at least once each week by means of a test call, when within communication range of a coast radio station fitted with DSC equipment.

.2 Where a ship has been out of communication range of a coast radio station fitted with DSC equipment for a period of longer than one week, a test call shall be made on the first occasion that the ship is within communication range of such a coast radio station.

14.1.3 Monthly

.1 Each EPIRB and satellite EPIRB shall be tested at least once each month to determine its capability to operate properly using the means provided on the device and without using the satellite system.

.2 Each search and rescue radar transponder shall be checked at least once each month for security and signs of damage.

.3 Each survival craft two-way VHF equipment shall be tested at least once each month on a frequency other than 156.800 MHz (VHF channel 16).

.4 A check shall be made at least once each month on the security and condition of all batteries providing a source of energy for any part of a radio installation. The battery connections and compartment shall also be checked.

ANNEX 4 – RADIO LOG

(Referred to in Chapter 9)

.1 The following shall be recorded in the Radio Log:

a. the time and source of each communication relating to distress, urgency and safety traffic and a summary of its contents;

b. the occurrence and approximate time of important service incidents; and

c. the position of the vessel at, at least, one given time each day.

.2 The recording shall be made during or as soon as practicable after the event concerned.

ANNEX 5 - ANCHORS AND CABLES

(Referred to in Chapter 4)

Table of Requirements

LxBxD	Total weight of Anchors (kg)	Number of Anchors	Length of cable(m)		Diameter of chain (mm)	Diameter of rope (mm)
			Minimum Chain (m)	Total Length (m)		
10	9	1	4	25	5	10
15	12	1	5	30	5	12
20	14	1	6	30	6	15
25	17	1	7	35	6	15
35	20	1	8	35	8	18
50	24	1	9	40	8	18
70	29	2	10	45	8	20
90	33	2	12	50	10	20
110	36	2	15	55	10	25
150	42	2	20	60	10	25
200	48	2	25	65	12	30
250	54	2	30	70	12	35
300	60	2	35	75	12	40
350	65	2	40	80	12	40

Notes

(i) L = Length overall in metres

B = Beam in Metres (Maximum -Outside planking or plating)

D = Depth in Metres (Maximum -Deck at side to top of keel)

Example:

GRP Potter:- L = 11.34 m; Beam = 4.08 m; Depth = 2.12 m

11.34 x 4.08 x 2.12 = 98.08;

Therefore, using Table, requirement is Total anchor weight of 34 kg (1 anchor 20 kg and 1 anchor 14 kg).

Minimum length of anchor chain 15 metres of 10 mm dia, plus 38 metres of 25 mm dia nylon rope. Length of anchor cable is subject to depth of water.

(ii) Chain cable diameter is given for short link chain. Chain cable should be sized in accordance with EN 24/565:1989 (Covering I.S.O. 4565:1986 and covered by BS 7160:1990 Anchor chains for Small Craft) or equivalent.

(iii) The rope diameter given is for nylon construction, when rope of differing construction is provided, the breaking load should not be less than that of the nylon rope specified in the table.

(iv) Where stud link chain cable is used, the diameter may be 1.5 mm less than the tabular diameter stated.

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