Implementation Guidelines on Part B of the Code, the Voluntary Guidelines and the Safety Recommendations

INTERNATIONAL MARITIME ORGANIZATION

Cover photo:
New fishing boats being built in Aceh Besar, Indonesia, as part of the emergency assistance provided by FAO to support the rehabilitation in areas affected by the Indian Ocean Tsunami in 2004.
FAO/Adek Berry

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Preparation of this document

The *Implementation Guidelines on Part B of the Code, the Voluntary Guidelines and the Safety Recommendations (Implementation Guidelines)* contained in this publication are the result of the continuing cooperation between the Food and Agriculture Organization of the United Nations (FAO), the International Labour Organization (ILO) and the International Maritime Organization (IMO), in relation to the safety of fishing vessels.

In 2007, IMO agreed to FAO's proposal for the development of new guidelines to assist competent authorities in the implementation of voluntary FAO/ILO/IMO instruments on the design, construction and equipment of fishing vessels of all types and sizes. The IMO Sub-Committee on Stability and Load Lines and on Fishing Vessels' Safety (SLF) undertook the development of the Implementation Guidelines in collaboration with FAO and ILO. The scope of the work programme of a correspondence group, which was already working on the development of the *FAO/ILO/IMO Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels*, was extended to cover also the development of the Implementation Guidelines.

The Implementation Guidelines were approved by the IMO Maritime Safety Committee (MSC) at its eighty-ninth session (11 to 20 May 2011). Thereafter, the FAO Committee on Fisheries, at its thirtieth session (9 to 13 July 2012), expressed satisfaction that the Implementation Guidelines had been completed. Later, the Governing Body of the ILO approved them at its 316th session in November 2012 as a joint FAO/ILO/IMO publication.

Abstract

The Implementation Guidelines are intended for the attention of maritime, labour and fisheries ministries and any other relevant government ministry as and when it is decided to implement the three FAO/ILO/IMO instruments on the design, construction and equipment of fishing vessels of all types and sizes. Those instruments are *Part B of the Code of Safety for Fishermen and Fishing Vessels*, the *Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels*, and the *Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels*.

While the intention is not to provide a single prescription to improve safety, the Guidelines do seek to raise awareness and offer guidance on a broad range of issues which must be addressed in an effective and holistic manner. In this regard, the cooperation and coordination between maritime, labour and fisheries administrations is important, particularly where the responsibilities for safety of fishing vessels are divided under relevant Acts.

The Implementation Guidelines cover areas such as: development of a safety strategy; legal implications; administrative requirements; capacity-building; training of crew members; enforcement of regulations; and operational safety.

Although the main purpose of the Implementation Guidelines is to assist competent authorities in the implementation of voluntary instruments, it could also be useful when implementing the provisions of the *Cape Town Agreement of 2012 on the Implementation of the Provisions of the 1993 Protocol relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977*.

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Preface

The need to address fishing vessel safety within the United Nations system was recognized as early as the 1950s by the Food and Agriculture Organization of the United Nations (FAO) and as a result of calls by naval architects, the marine community and fishermen; much work was undertaken in the design and safety of fishing vessels, especially smaller vessels. In the 1960s, in cooperation with the International Labour Organization (ILO) and the International Maritime Organization (IMO) and FAO, the Code of Safety for Fishermen and Fishing Vessels (hereinafter referred to as the Code) was developed. The Voluntary Guidelines for the Design and Equipment of Small Fishing Vessels (hereinafter referred to as the Voluntary Guidelines) were completed in 1982.

On adopting the Torremolinos Protocol of 1993 relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977, the Conference recommended that there would be a need to review the Code. Consequently, IMO undertook a review and invited the participation of FAO and ILO, and also decided, at the same time, to review the Voluntary Guidelines.

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

The MSC, at its seventy-ninth session, agreed with the proposal made by FAO to include in the work programme of the Sub-Committee on Stability and Load Lines and on Fishing Vessel Safety (SLF) a new high-priority item on "Safety of small fishing vessels", with the aim to develop safety recommendations for decked fishing vessels of less than 12 m in length and undecked fishing vessels, bearing in mind that the majority of fishing fatalities occur aboard such vessels.

Following completion, the Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels (herein after referred to as the Safety Recommendations) were approved by the MSC, at its eighty-seventh session (12 to 21 May 2010). The Governing Body of the ILO approved the Safety Recommendations at its 309th session, in November 2010. Thereafter, at the Committee on Fisheries at its twenty-ninth session (31 January to 4 February 2011), FAO recommended the early publication of the Safety Recommendations.

In 2007, the ILO adopted the Work in Fishing Convention (No.188) and its accompanying recommendation No.199. These are comprehensive instruments covering many aspects of work on board fishing vessels, including issues such as medical certification, manning, hours of rest, crew accommodation, food and catering, occupational safety and health, medical care at sea, social security and liability for injury and death. They also emphasize the importance of consulting with fishing vessel owners and representatives of fishermen when developing laws, regulations and other measures concerning safety and health in

the fisheries sector. The requirements concerning accommodation, in particular, will have a direct impact on the design and construction of new fishing vessels and on existing vessels where the accommodation is undergoing reconstruction or substantial alteration.

During the development of the Safety Recommendations, it was further recognized that there was a pressing need to provide assistance in their implementation. Consequently, the MSC, at its eighty-third session, approved the development of Guidelines to assist competent authorities in the implementation of the Code, the Voluntary Guidelines, and the Safety Recommendations into their domestic legislation and/or codes of safe practice, or other measures in consultation with all stakeholders in the industry.

FAO held an expert consultation on Best Practices for Safety at Sea in the Fisheries Sector, from 10 to 13 November 2008, with the participation of ILO and IMO, with the objective to develop a draft outline of Guidelines for such best practices. It was emphasized at the expert consultation that guidelines should ensure a holistic approach so that all factors influencing safety are comprehensively covered, and that awareness raising of safety issues should be accorded high-priority. The best practice guidelines would take into account the outcomes of FAO regional meetings on safety at sea, as well as the instruments developed by FAO, ILO and IMO that relate to safety and health in the fisheries sector.

The guidelines contained in this document are intended for the attention of maritime, labour and fisheries ministries and any other relevant government ministry as and when it is decided to implement Part B of the Code and/or the Voluntary Guidelines and/or the Safety Recommendations. While the intention is not to provide a single prescription to improve safety, the Guidelines do seek to raise awareness and offer guidance on a broad range of issues which must be addressed in an effective and holistic manner. Furthermore, it is hoped that they will underline the need to provide an environment within which fishing communities, owners, operators and skippers can make use of the options and tools to improve safety at sea in the fisheries sector.

Consequently, the "Guidelines to assist competent authorities in the implementation of *Part B of the Code of Safety for Fishermen and Fishing Vessels, the Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels, and the Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels" (hereinafter referred to as the Implementation Guidelines) were approved by the MSC at its eighty-ninth session (11 to 20 May 2011). Thereafter, at the Committee on Fisheries at its thirtieth session (9 to 13 July 2012), FAO expressed satisfaction that the Implementation Guidelines had been completed and later, the Governing Body of the ILO approved them at its 316th session in November 2012 as a joint FAO/ILO/IMO publication.

* These are referred to as Part B of the Code, the Voluntary Guidelines and the Safety Recommendations.

Introduction

1 Fishing continues to be recognized as one, if not the most, hazardous occupation in the world. In 1999, it was estimated that there were 24 000 deaths annually, the large majority of these on board small vessels. At the time of the preparation of these Implementation Guidelines, it was also estimated that there were some 4 million fishing vessels operated globally, 1.3 million decked vessels, of which probably 96 percent were less than 24 m in length, and 2.7 million undecked vessels, of which at least 1.7 million were not mechanically powered, indicating the importance of taking action to improve safety of these smaller vessels.

2 The fishing industry is characterized by the lack of a safety culture; there are many factors that have led to this, earnings only linked to the volume of the catch; training, education, poverty, outdated legislation and the perceived high cost of safety in an industry that is suffering declining catch rates and ever increasing higher input costs. The introduction of a regulatory framework is but one of the faucets to inculcate a safety culture; "the most effective and long lasting change will only occur when the industry itself embraces the need for a safety culture that has eluded it for so long".

3 Apart from having in place a regulatory framework, there are other actions that can be considered as part of an overall safety programme. For example, there should be both high-level and community-based safety seminars focussing on safety awareness, the raising of training and educational levels, and addressing minimum levels of manning for different classes and types of fishing vessels.

4 The cooperation and coordination between maritime and fisheries administrations is important, particularly where the responsibilities for safety of fishing vessels are divided under relevant Acts. In addressing stock management issues, decisions made should also consider the possible resultant impact on safety in the fisheries sector.

5 Valuable lessons on how to improve ergonomics can be gained from other sectors and from experts in occupational safety and health and related disciplines. The administration(s) responsible for improving vessel and crew safety should seek, where practicable, to draw upon such knowledge and experience when seeking to improve fishing vessel design and when overseeing installation of new equipment. The importance of making vessels not only safe but also healthy and tolerable for crews should not be overlooked.

6 Therefore, the purpose of these Implementation Guidelines is to assist maritime administrations and/or fisheries ministries to put in place, or refine, a regime that will give effect to Part B of the Code, the Voluntary Guidelines, and the Safety Recommendations, from a practical perspective. In order to ensure a holistic approach, these Implementation Guidelines include subjects such as operational safety and the human element, and the reader's attention is also drawn to the Code of Safety for Fishermen and Fishing Vessels, Part A. These Implementation Guidelines cover such areas as:

.1 development of a safety strategy;

.2 legal implications;

.3 administrative requirements;

.4 capacity building;

.5 training of crew members;

.6 enforcement of regulations; and

.7 operational safety.

7 Any reference in these Implementation Guidelines to "the instruments" means the Code of Safety for Fishermen and Fishing Vessels, Part B, the Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels and the Safety Recommendations for Decked Fishing vessels of Less than 12 metres in Length and Undecked Fishing Vessels.

8 Terms used in these Implementation Guidelines have, in general, the same meaning as those used in the instruments. The following definitions are important for the purpose of these Implementation Guidelines and are included here. Therefore, unless provided otherwise:

8.1 *Approved* means approved by the competent authority.

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

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

8.4 *Existing vessel* is a vessel which is not a new vessel.

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

8.6 *Fishing vessel inspector* means a designated member of the staff of a maritime or fisheries administration regardless of the grade of that person.

8.7 *Inspection of a fishing vessel* means an inspection carried out to ensure compliance with the provisions of the shipping, labour and/or fisheries Acts.

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

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

8.10 *New vessel* is a vessel the keel of which is laid, or which is at a similar stage of construction, on or after the date of adoption of the Instruments set out in chapter 1.

8.11 *Organization* means the International Maritime Organization.

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

8.13 *Recognized Organization* means an organization which meets the relevant conditions set forth by these Implementation Guidelines for the authorization of organizations acting on behalf of the Administration (resolution A.739(18)).

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

8.15 *Surveyor*, in these Implementation Guidelines, means a staff member of a vessel classification society, a person appointed as a non-exclusive surveyor by a classification society, a person appointed by Lloyd's Agent or a person accredited by a professional body as a surveyor of vessels.

8.16 *Unseaworthy vessel* means a vessel whose hull, machinery, equipment or operational safety is substantially less than the provisions of the shipping and/or fisheries Acts in relation to standards of safety construction, safety equipment, equipment and operation of a fishing vessel.

Chapter 1
The instruments

1.1 Purpose

These Implementation Guidelines are intended to assist competent authorities to give effect to the provisions of the instruments (see paragraph 7 of the Introduction).

1.2 Part B of the Code

1.2.1 The purpose of Part B of the Code is to provide information on the design, construction and equipment of fishing vessels with a view to promoting the safety of fishing vessels and safety and health of the crew. The Code is not a substitute for national laws and regulations, nor is it a substitute for the provisions of international instruments in relation to safety of fishing vessels and crew, although it may serve as a guide to those concerned with framing such national laws and regulations. It is voluntary and wider in scope than the 1993 Torremolinos Protocol* and only the minimum requirements to ensure the safety of fishing vessels and safety and health of the crew are given for fishing vessels of 24 m in length and over. Each competent authority should take every possible measure to promote the safety of the vessels concerned.

1.2.2 It may be noted that certain sections of the Part B of the Code make reference to the minimum standards set out in the provisions of the 1993 Torremolinos Protocol. Consequently, where so referenced, these are considered to be the minimum standards acceptable in relation to the classes of vessels, as prescribed in the Protocol, and for the application of Part B of the Code.

1.2.3 Furthermore, it may also be noted, that regional uniform standards or guidelines that have been submitted to IMO as provided for under Article 3, paragraphs (4) and (5) of the Protocol for fishing vessels registered and operating in such regions, prevail over chapters IV, V, VII and IX of Part B of the Code. For all other fishing vessels of 24 m in length and over but less than 45 m in length that are registered in such regions but operate, or are intended for operation outside the region, the provisions of Part B of the Code should be addressed.

1.2.4 In addition, unless otherwise stated, the provisions of Part B of the Code are intended to apply to new decked fishing vessels of 24 m in length and over. However, even where not otherwise stated, the competent authority should also apply these provisions, as far as reasonable and practicable, to existing decked fishing vessels.

1.2.5 The provisions of Part B of the Code do not apply to fishing vessels used for sport or recreation or to processing vessels.

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* Torremolinos Protocol of 1993 relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977.

1.2.6 Where operating experience has clearly shown that departure from the provisions of this part of the Code is justified, or in applying this part of the Code to any other equivalent area of operation for any vessel covered by this part of the Code, the competent authority may permit adequate alterations or substitutions thereof.

1.3 The Voluntary Guidelines

1.3.1 The purpose of the Voluntary Guidelines is to provide information on the design, construction and equipment of small fishing vessels with a view to promoting the safety of the vessel and safety and health of the crew. They are not intended as a substitute for national laws and regulations, but may serve as a guide to those concerned with framing such national laws and regulations. Each competent authority responsible for the safety of fishing vessels should ensure that the provisions of the Voluntary Guidelines are adapted to its specific requirements, having due regard to the size and type of vessels, their intended service and area of operation.

1.3.2 Unless otherwise stated, the provisions of the Voluntary Guidelines are intended to apply to new decked fishing vessels of 12 m in length and over, but less than 24 m in length. Nevertheless, even where not otherwise stated, the competent authority should, as far as reasonable and practical, give consideration to the application of these provisions to existing decked fishing vessels. They do not, however, apply to fishing vessels used for sport or recreation or to processing vessels.

1.4 The Safety Recommendations

1.4.1 The purpose of the Safety Recommendations is to provide information on the design, construction, equipment, training and protection of the crew of small fishing vessels with a view to promoting the safety of the vessel and safety and health of the crew. They are not intended as a substitute for national laws and regulations, but may serve as a guide to those concerned with framing such national laws and regulations. Each competent authority responsible for the safety of vessels should ensure that the provisions of these Safety Recommendations are adapted to its specific requirements, having due regard to the size and type of vessels, their intended service and area of operation. Furthermore, attention is drawn to Part A of the FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels, 2005.

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

1.5 Mandatory and other voluntary instruments

1.5.1 In implementing a safety regime using the above-mentioned instruments, references will be found in them to mandatory and other non-mandatory instruments given in Annex 7, which a competent authority would also need to consider when adopting a holistic approach to fishing vessel safety.

1.5.2 However, it must be understood that the provisions of a Convention, when in force and ratified by the State concerned, take precedence over non-mandatory instruments.

Tables of contents of the instruments and examples of pertinent mandatory and other voluntary instruments

Table 1 – Contents of Part B of the Code

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Chapter II	Construction, watertight integrity and equipment
Chapter III	Stability and associated seaworthiness
Chapter IV	Machinery and electrical installations and periodically unattended machinery spaces
Part A	General
Part B	Machinery installations
Part C	Electrical installations
Part D	Periodically unattended machinery spaces
Chapter V	Fire protection, fire detection, fire extinction and fire fighting
Part A	General fire protection provisions
Part B	Fire safety measures in vessels of a length of 60 m and over
Part C	Fire safety measures in vessels of 45 m in length and over but less than 60 m
Part D	Fire safety measures in vessels of 24 m in length and over but less than 45 m
Chapter VI	Protection of the crew
Chapter VII	Life-saving appliances and arrangements
Part A	General
Part B	Vessel requirements
Part C	Life-saving appliance requirements
Chapter VIII	Emergency procedures, musters and drills
Chapter IX	Radiocommunications
Part A	General
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Chapter X	Shipborne navigational equipment and arrangements
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Chapter 3	Stability and associated seaworthiness
Chapter 4	Machinery and electrical installations
Part A	General
Part B	Machinery installations
Part C	Electrical installations
Part D	Periodically unattended machinery spaces
Chapter 5	Fire protection, fire detection, fire extinction and fire fighting
Chapter 6	Protection of the crew
Chapter 7	Life-saving appliances and arrangements
Part A	General
Part B	Vessel requirements
Part C	Life-saving appliance requirements
Chapter 8	Emergency procedures, musters and drills
Chapter 9	Radiocommunications
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Table 3 – Contents of the Safety Recommendations

Chapter/Annex	Contents
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Chapter 4	Machinery and electrical installations
Chapter 5	Fire protection and fire fighting
Chapter 6	Protection of the crew
Chapter 7	Life-saving appliances
Chapter 8	Emergency procedures and safety training
Chapter 9	Radio communications
Chapter 10	Navigational equipment
Chapter 11	Crew accommodation
Chapter 12	Manning, training and competence
Annex I	Illustration of terms used in the definitions
Annex II	Recommended construction standards for wooden fishing vessels
Annex III	Recommended construction standards for GRP fishing vessels
Annex IV	Recommended construction standards for steel fishing vessels
Annex V	Recommended construction standards for aluminium fishing vessels
Annex VI	Recommended standards for anchoring and mooring equipment
Annex VII	Guidance on the structural strength of hatch covers
Annex VIII	Guidance on the dimensions of freeing ports
Annex IX	An approximate determination of small vessels' stability by means of a rolling period test
Annex X	Recommended practice on portable fish-hold divisions
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Annex XIII	Guidance on a practical buoyancy test
Annex XIV	Guidance on tools and spares to be carried on board
Annex XV	Guidance on steering gear
Annex XVI	Recommended practice for exhaust systems
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Annex XIX	Guidance on personnel protective equipment
Annex XX	Guidance on the requirements for buoyant apparatus
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Annex XXII	Recommendations for testing lifebuoys and lifejackets
Annex XXIII	Correct securing of hydrostatic release units
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Annex XXV	Guidance on safe operation of winches, line haulers and lifting gear
Annex XXVI	Guidance on the Global Maritime Distress and Safety System (GMDSS)
Annex XXVII	Range of VHF for various transmitting/receiving units
Annex XXVIII	Use of mobile telephones in distress and safety communications
Annex XXIX	Recommended performance standards for radar reflectors
Annex XXX	Equipment required to comply with the Collision Regulations (COLREGS)
Annex XXXI	The International Code of Signals
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Annex XXXIII	Guidance on basic pre-sea safety training
Annex XXXIV	List of pertinent publications

Table 4 – Examples of pertinent mandatory and other voluntary instruments

Mandatory	International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, and Protocol. In part applicable to fishing vessels. (www.imo.org)
Mandatory	International Convention on Maritime Search and Rescue, 1979. (www.imo.org)
Mandatory	Convention on the International Regulations for Preventing Collisions at Sea (COLREGS), 1972. Applicable to all fishing vessels. (www.imo.org)
Mandatory	Torremolinos Protocol of 1993 relating to the Torremolinos International Convention on the Safety of Fishing Vessels, 1977. Not yet in force as at December 2013. (www.imo.org)
Mandatory	International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F), 1995. (www.imo.org)
Mandatory	Work in Fishing Convention No. 188 and Recommendation No. 199, 2007. Not yet in force as at December 2013. (www.ilo.org)
Voluntary	Part A of the Code of Safety for Fishermen and Fishing Vessels.
Voluntary	Document for Guidance on Standards of Training, Certification and Watchkeeping of Fishing Vessel Personnel, 2001. (www.imo.org)
Voluntary	Standard specifications for the marking and identification of fishing vessels, 1989. (www.fao.org)
Voluntary	Code of Conduct for Responsible Fisheries, 1995. (www.fao.org)

Chapter 2
Administrative requirements

2.1 Assessment of national needs

2.1.1 A review of the relevant Act or Acts would identify the various elements that should be covered by an Administration concerned with the safety of fishing vessels. In parallel, an assessment of the fleet should be carried out that would cover all sectors to determine the extent of the requirements of the Administration to implement the provisions of the instruments as and when incorporated in the Act or Acts. In particular, a census of the fishermen should be carried out and their distribution along the coast (beach landing sites, small harbours and ports) mapped from the point of view of safety services and implementation of the provision in legislation.

1.1.2 The servicing sector should also be assessed and that would include, but not necessarily be limited to, the:

.1 shipbuilding/boatbuilding sectors;

.2 training institutions;

.3 existing extension services; and

.4 the role of the Coast Guard.

2.1.3 On the basis of the above-mentioned assessments, the Administration should review its minimum requirements to carry out inspections/surveys on a long-term basis and to plan recruitment and training needs, bearing in mind the need for:

.1 a review of fishing vessel designs and construction methods in the country and the preparation of standards;

.2 broad-based training;

.3 institutional strengthening through the development of a long-term strategy for the training and certification/accreditation of fishing vessel inspectors;

.4 fishing vessel measurement, outline specifications and plans;

.5 preparation of a model law for the incorporation of standards for fishing vessel construction; and

.6 a financial and economic feasibility analysis.

2.1.4 With regard to the parallel exercise to identify provisions in the principal legislation and regulations that need amendment, it is important to consider what should be covered in relation to the provisions of the instrument regarding the construction of fishing vessels and, in particular, to address conditions for watertight integrity and

equipment, stability and associated seaworthiness, machinery and electrical installations, fire protection and fire fighting, protection of the crew, life-saving appliances, emergency procedures and safety training, radio communications, navigational equipment, crew accommodation, manning and training.

2.1.5 Thereafter, how the provisions of the instruments may be adapted to the specific requirements of the competent authority should be examined, having due regard to the size and type of vessels, their intended mode and area of operation, and climatic conditions. For this reason, careful consideration should be given with regard to which of the provisions in the instruments are either necessary or unnecessary in the context of the domestic and high seas fisheries. In addition, particular attention should be paid to a situation where vessels registered and or licensed by the flag State are fishing or intending to fish in the exclusive economic zone of another State where more stringent safety regulations may be in place.

2.2 Communications with industry

2.2.1 It is important and essential for the competent authority to communicate with all stakeholders in the industry on all issues before the introduction of the measures to implement the instruments.

2.2.2 Stakeholders are any person or body that has an involvement in the fishing industry, such as, employer and employee representatives, vessel builders, equipment suppliers, insurers, training institutions, fishermen's cooperatives, fishermen, vessel owners, fishermen's federations, etc.

2.3 Determination of linkages between ministries

2.3.1 In parallel with the process of reviewing, amending existing legislation or preparing new legislation on the basis of the provisions of the instruments, the competent authority should consult with appropriate ministries and apportion responsibilities for the implementation of such legislation.

2.3.2 Thereafter, the ministry elected to play the central role in formulating the measures to give effect to the revised or new legislation, which is often the agency responsible for the safety of vessels, in the context of stability, construction, machinery and electrical equipment, would identify the relevant ministries to consult when considering areas outside of its expertise, e.g. radio communications. Although the relevant ministries would differ in each country, such ministries may include, but not be limited to, communications, equipment standards, training and certification, occupational health and safety, labour, etc. There should be a coordinated approach to setting standards and policies and the implementation of legislation, amended or new, to be promulgated on the basis of the instruments.

2.4 Measures when amending or implementing new safety standards

2.4.1 Consideration should be given to the difficulties that may be encountered by the fishing industry when proposing new measures. This may include measures applicable to existing vessels, and consideration of whether a phasing-in period is necessary for certain requirements. For this reason, it is important and essential for the competent authority to communicate with all stakeholders in the industry on all issues before deciding on measures to implement the provisions of the instruments; however, the standards set should reflect the outcome of the Assessment of National Needs described above, and should not be lower than that of the instruments.

2.4.2 In addition, competent authorities may consider various stimulus packages to ensure early compliance with new measures, such as grants to replace older vessels or equipment, tax incentives, etc.

2.5 The competent authority

2.5.1 The competent authority should ensure that the delegated authority for fishing vessel safety should be comprised of units that are responsible for:

.1 policy and planning;

.2 administration, including internal training and qualification of staff;

.3 vessel registration/licensing to fish;

.4 technical standards;

.5 survey and enforcement;

.6 training, manning, certification, medical and labour standards;

.7 naval architecture/marine engineering;

.8 legal aspects; and

.9 assessment of the requirements for safety equipment and construction materials; the availability of spare parts and service centres.

2.5.2 In many countries, there are no manufacturers that produce safety equipment required when implementing the instruments. Fishing vessels, therefore, carry equipment that is imported. In accepting the use of imported safety equipment, the competent authority should consider the suitability of the equipment against the guidance of the instruments and the availability of spares and replacements, and also service centres.

2.5.3 The same consideration should be given to the materials and other equipment used in building the vessel.

2.6 Registration of fishing vessels

2.6.1 Fishing vessels should be registered as a matter of course and the requirement to do so should be in the principle legislation, as set out in chapter 3. It is recognized, however, that in many countries, emphasis is placed on the license to fish in the case of small fishing vessels rather than the registry process. Nevertheless, in such cases, the licence to fish should contain the same information as required for the registration of a fishing vessel in relation to its particulars and ownership.

2.6.2 The competent authority should ensure that appropriate arrangements are in place to adequately service the need to register a fishing vessel. In this regard, it is noted that often the larger fishing vessels fall under the registrar of ships, while the task for small vessels lies with a fisheries management administration. Administrations should liaise with all stakeholders to ensure that all fishing vessels are registered and/or licensed to fish.

2.6.3 However, notwithstanding where the responsibility lies, the conditions for the registration of a fishing vessel should have a common interpretation and should cover the requirements for new locally built vessels, existing vessels renewing the safety certificate on expiry and imported fishing vessels. Examples of conditions that may be applied are given in Annex 1.

2.7 Casualty/incident investigation

2.7.1 In considering the action required to implement the measures to give effect to the instruments, it is important that a thorough understanding of accidents/incidents and their causes as expanded upon under the heading Development of a Safety Strategy that follows. It being understood that, while these Implementation Guidelines seek to assist competent authorities implementing the instruments, casualty investigation should not be limited to design, construction and equipment issues but take cognizance of other causal factors that fall outside the ambit of these instruments.

2.7.2 Therefore, a "marine accident investigation body" should be established by the competent authority; it would operate independently of the delegated authority for fishing vessel safety.

2.7.3 Furthermore, whereas any marine safety investigation should be separate from, and independent of, any other form of investigation, other government agencies would be required to cooperate with a marine accident investigation body.

2.7.4 The results of investigations should be made public. This is part of the methodology used in heightening safety awareness.

2.8 Development of a safety strategy*

2.8.1 In order to develop a safety strategy, it is imperative to understand and document (as benchmarks) the type and incidence of accidents on board fishing vessels, whether these occur at sea or in port. In this regard, as recommended above, consideration

* This subject is dealt with in great detail within the FAO. (forthcoming). *Fishing operations. 1. Best practices to improve safety at sea in the fisheries sector.* FAO Technical Guidelines for Responsible Fisheries No. 1, Suppl. 3. Rome.

should be given at an early stage to establish a marine accident investigation body. Due consideration should also be given to the structure of the existing fleet and their operational areas, number of fishers, status of available fish resources, the maritime and fisheries legislation and the ability of the competent authority to enforce regulations.

2.8.2 Furthermore, the safety culture in the country and the socio-economic situation of the fishing sector has to be well understood and, in particular, the fishers' perception of safety. Thus, the stakeholders should be consulted and invited to contribute to the development of the safety strategy. The participation of the stakeholders is of utmost importance in order to have transparency in the process and to prepare realistic and attainable objectives in safety at sea.

2.8.3 In addition, because the strategy might have to extend beyond waters under the jurisdiction of a flag State due to subregional, regional and interregional agreements to which the flag State may be a party, the influence of these agreements should also be analysed.

2.8.4 An analysis of the information collected concerning accidents should identify key reasons that may include, among others:

.1 adverse weather;

.2 human element (inexperience, fatigue, poor training);

.3 collision;

.4 grounding;

.5 flooding;

.6 communication failures (ship-to-ship/ship-to-shore);

.7 mechanical defects (deck machinery, gear handling, running gear);

.8 unguarded moving parts of machinery;

.9 fishing operations (gear coming fast, safe retrieval of fishing gear);

.10 working aloft;

.11 lack of, or poorly maintained, survival equipment;

.12 unseaworthiness of the vessel;

.13 fire and failure of fire-fighting equipment;

.14 poor loading/unloading practices and fuel management affecting stability;

.15 operating area and distance from safe haven;

.16 bunkering and storing activities; and

.17 the pressure of fisheries management decisions.

2.8.5 The underlying contributing factors listed above are a direct reflection on the effectiveness/thoroughness of fishing vessel inspection services and owners or requirements for pre-sea training and the implementation of the provisions of the STCW-F Convention in general (notwithstanding that a competent authority may not have ratified that convention).

2.9 Refining the safety strategy

2.9.1 A basic approach, following an understanding of safety issues, would be further consultation with the main stakeholders, it being understood that there would be variations in the composition of the participants (of the stakeholders) depending upon the diversity of the national fleet.

2.9.2 Through such consultations, current impediments to improvements could be highlighted and solutions identified, it being understood that in most cases there would be a need for acceptance of responsibilities by stakeholders, such as, owners, managers, skippers, the authorities delegated by the competent authority (maritime and/or fisheries administration, SAR services and ministries concerned with safety and health issues) and certainly in the case of small-scale fisheries, the local communities.

2.9.3 In parallel, an inventory should be taken with regard to existing services and capabilities within the country and, where appropriate, within a region, for comparison with perceived needs. Such an inventory should provide a comprehensive overview of all aspects of the fisheries sector, including human resources as referred to in attendant chapters to these Implementation Guidelines.

2.9.4 The use of a methodology considering Hazard Analysis or Risk Evaluation should be considered to identify and mitigate potential dangers to fishermen and fishing vessels.

2.10 Procedures for investigating complaints

The competent authority should put in place procedures for responding to complaints concerning issues that are covered by the instruments, such as safety and crew accommodation.

2.11 Special requirements

It is recognized that external assistance may be required in some cases to overcome constraints to the development and implementation of a safety strategy and possibly technical and legal assistance may be required in certain subjects, in particular, in the use of analytical tools developed for a better understanding of safety issues. In this regard, there would be a need to identify sources of such assistance, for example, the technical cooperation programmes of UN agencies or through regional cooperation arrangements.

Chapter 3
Legal implications

3.1 Introduction

3.1.1 At the outset, it should be kept in mind that the instruments are not intended as a substitute for national laws and regulations but may serve as a guide to those concerned with framing such national laws and regulations.

3.1.2 The primary goal of this section of the Implementation Guidelines is to help competent authorities to build their own legislation and regulations or other measures for the safety of fishing vessels, and it is important that these regulations have a sound legal basis. This legislation could be drafted in various ways and at various levels, depending on the constitution and legal system of the country and could be in the form of laws, acts, codes, regulations and schedules. Therefore, the competent authority should liaise with the legal ministry or the state law office to decide how the legislation should be drafted.

3.1.3 Although it may be seen to be outside the ambit of these Implementation Guidelines, competent authorities are reminded of their obligations in terms of mandatory instruments with regard to fishing vessels.

3.2 Application

Unless otherwise stated, the provisions of the instruments are intended to apply to new fishing vessels. Nevertheless, even where not otherwise stated, the competent authority should, as far as reasonable and practical, give consideration to the application of these provisions to existing vessels, including vessels coming on to the register for a first time. They do not, however, apply to vessels used for sport and recreation fishing or to fish processing vessels.

3.3 Existing legislation

3.3.1 In the first instance, it is essential to identify provisions in the principal legislation, be it in the Shipping Act and/or the Fisheries Act or other legislation, for example labour acts and regulations that need amendment and for that purpose propose necessary amendments, or draft new text where no legislation exists related to mandatory instruments to which the State is a Party. This review should also give consideration to the position of the competent authority regarding mandatory instruments concerning the safety of fishing vessels and their operations that are under study with a view to deciding whether or not to ratify.

3.3.2 In carrying out the review of principal legislation, due note should be taken of the assessments carried out under chapter 2, in particular, the outcome of discussions with the industry.

3.3.3 Thereafter, the competent authority should ensure that the provisions of the instruments are adapted to its specific requirements, having due regard to the size and

type of vessels, their intended mode and area of operation, and climatic conditions. For this reason, careful consideration should be given with regard to which of the provisions in the instruments are either necessary or unnecessary, for example in the context of the domestic and high seas fisheries.

3.3.4 Where there are existing standards* related to fishing vessel design, construction, equipment or manning, amendments should be drafted to comply with the instruments.

3.3.5 When the competent authority drafts a new set of rules, or amendments to existing standards, it is important for the competent authority to decide what responsibilities vessel builders and fishing vessel owners should have.

3.4 No legislation

3.4.1 If the competent authority has no existing legislation or regulations concerning fishing vessel safety, it could, on the basis of the various FAO, ILO and IMO instruments and guidelines, draft and build such legislation. First, there should be a primary Act for the legislation and regulations to statute authority for the legislation. Furthermore, there should be a description of the responsibilities of the competent authority and vessel owners, related to the design, construction, equipment, operation, manning and inspection of fishing vessels. Normally the primary objective will place the responsibility for compliance with the legislation on the fishing vessel owner or the skipper or a combination of both.

3.4.2 When the competent authority is drafting legislation, information could be provided by others, particularly where intra-regional cooperation exists. In addition to this, various organizations such as FAO, ILO and IMO would be able to provide information and assistance to the competent authority.

3.4.3 The following scheme may be adopted for drafting, at the national level, harmonized legislative provisions for setting requirements for the construction of fishing vessels, registration and inspection:

.1 permission should be given by the fisheries authorities to contemplate registration/building before application is made to the competent authority;

.2 set out the main requirements for registration and inspection and, in particular, standards for the construction of vessels and restate that no vessel shall be put to sea or be qualified for a licence to fish to be issued in respect of such vessel unless the vessel is constructed in the required manner and is registered and complies with the requirements as set out in the regulations;

.3 state that the standards are not in derogation of standards required to be met under other applicable laws and conventions;

.4 set the scope of the application of the regulations in particular in respect to types/categories of vessels;

* Standard means a regulation, a schedule or a code that gives effect to the instruments or principal legislation.

.5 set out basic definitions;

.6 set out standards that apply generally and standards that are specific to a class or type of vessel to be constructed or in use; and to the subject or activity (i.e. construction, survey, registration, safety equipment, etc.); or

.7 alternatively, set out most standards in schedules under the regulations as rules or by reference to "guidelines, conventions, codes, standards", etc.;

.8 create offences and penalties for breach of standards (noting that the ultimate incentive for meeting standards would be the threat of non-registration and no licence to fish); and

.9 provide for exemption from application of prescribed standards/requirements relating to safety construction, safety equipment and qualifications for vessel/ boatbuilders and fishermen until a specified date. All requests for exemptions should be carefully considered and only granted where compliance is not reasonable or practicable and in no way compromises the safety of the fishermen or vessel.

3.4.4 In the event that there is no requirement in legislation to register small fishing vessels, the requirement for inspection during construction and for seaworthiness should, nevertheless, be included in the regulations of the relevant Act and made a condition for the allocation of a licence to fish.

3.5 Register

3.5.1 The competent authority should keep a record of the vessels that fly its flag or have a register of the vessels and this should be incorporated in the legislation as a requirement. This record or register should be combined with a database of the vessels that are licensed to fish.

3.5.2 Depending on the size of the vessels, area and type of operation, a competent authority could have a requirement to group its fleet into different size categories providing that the standards are no less than given in the relevant instruments. Nevertheless, should the competent authorities chose to differentiate on size, it is important to take into account the international formulae for vessel dimensions and tonnage measurements, and the unified interpretations on how these formulae should be used.

3.6 Safety certificate

3.6.1 The competent authority should ensure that all vessels are inspected by an inspector or surveyor and found fit for intended service prior to the issue of a safety certificate.

3.6.2 Where a safety certificate is not required to be issued, the vessel should be inspected to demonstrate compliance with the standards.

3.6.3 The competent authority may also introduce a system of self-assessment of their vessel(s) by vessel owners that would involve the skipper and crew in an inspection

of a vessel. Such a self-assessment report, signed by an owner and the skipper, would be returned to the government office responsible for the survey/inspection of fishing vessels. Although such a system would remain under the supervision of the competent authority, it would have the added advantage of aiding owners and skippers to meet their responsibilities for compliance with the standards.

3.6.4 A licence to fish should not be issued to a vessel that is not safe.

3.6.5 Examples of a safety certificate and survey checklists are shown in Annexes 2, 3 and 4.

3.7 Safety equipment

The competent authority should have in place a regime for the approval of safety equipment. This may include a domestic approval process, as well as recognition of approval by other flag States and recognized organizations. The approval procedures, including the approved sources, should be available to fishing vessel owners who have the responsibility of only purchasing approved safety equipment.

3.8 Survey resources

It is recognized that many competent authorities may not have the resources or capacity to inspect all of the fishing vessels. An alternative could be that private entities, including recognized organizations and nominated surveyor, on the behalf of the competent authority, carry out surveys and approvals of the vessel and equipment. These entities should be accredited by the competent authority and have been delegated the authority to undertake this work on behalf of the competent authority. Furthermore, the limits of the entities' responsibilities and authority should be stated. The conditions of such an arrangement should be regulated by a written agreement between the competent authority and the entity.

3.9 Exemptions

The competent authority may exempt any vessel engaged solely in fishing near the coast of its country from any of the requirements of the instruments if it considers that the application is unreasonable and impracticable in view of the distance of the vessel's operating area from its base port in its own country, the type of vessel, the weather conditions and the absence of general navigational hazards, provided that it complies with safety requirements which, in the opinion of that competent authority, are adequate for the service for which it is intended and are such as to ensure the overall safety of the vessel and fishermen.

3.10 Special requirements for developing countries

3.10.1 Assistance may be required by developing countries to remove constraints to the development and implementation of the instruments.

3.10.2 It is also recognized that such assistance may extend beyond simply translating the requirement of the instruments into national languages and may also include, *inter alia,* technical and legal assistance.

3.10.3 Such assistance may be available through technical cooperation programmes and regional or subregional cooperative arrangements. Developing countries may seek advice from FAO, ILO, IMO or countries which have already established national laws, at least at the level of international standards, in relation to fishing vessel safety that incorporate the provisions of mandatory instruments and elements of the instruments.

Chapter 4
Capacity building

4.1 Manpower development programmes

4.1.1 Quite clearly, the size of a fishing fleet and the types and sizes of the vessels in the fleet would greatly influence manpower development in each of the sections, such as the fishing industry and the vessel and boatbuilding sector, and may go beyond the remit of maritime and fisheries administrations. Consideration could also be given to the number of foreign registered fishing vessels making use of the coastal State's ports; that may be subject to the port State control regime. It is, therefore, important to accept that cooperation between sections is essential and that it may be prudent to look at the composition of a fleet in line with length or tonnage parameters as set out in other relevant instruments such as the 1993 Torremolinos Protocol, SOLAS and MARPOL.

4.1.2 Given the size and composition of a fleet of fishing vessels, an assessment should be made of the capability of the competent authorities to discharge their administrative and technical responsibilities on a continuing basis and how their strengths may be enhanced and maintained through recruitment and training. In this regard, there would be a need for an understanding of available service facilities, education and training facilities, survey and design offices, as well as, for example, the role of the national Coast Guard with regard to vessel inspection.

4.1.3 Whereas it is difficult to indicate a standard of qualification for all staff concerned, the fundamental requirement is that each grade should be capable of doing the job completely from time of appointment. Given the international nature of the fishing industry, this must involve comparison with similar appointments in the individual's own and other countries in the region and/or where the fleet trades. With these points in mind it may be useful to consider qualification requirements for professional administrators, legal, and survey/technical staff.

4.2 Fleet composition

4.2.1 A complete understanding of the composition of the national fleet of fishing vessels should include, together with the number of crew members:

.1 decked vessels of 24 m in length and over;

.2 decked vessel of 12 m in length and over but less than 24 m in length;

.3 decked vessels of less than 12 m in length;

.4 undecked, mechanically powered vessels of any size; and

.5 undecked vessels of any size that are not mechanically powered.

4.2.2 In each case, the analysis should include the number of vessels in service, under construction as well as foreseen, the size groupings of vessel, vessel type, material of

construction and fishing method, as well as the degree of mechanization. The area of operation should be understood.

4.3 Numbers of crew members

Not all flag States have a requirement for crew members to be registered as such, particularly in artisanal and subsistence fisheries, and for the numbers, age profile and standard of training and education of the industry to be reported. However, it is desirable to have such a record.

4.4 Legal

Due to the complications that could arise due to a mixture of responsibilities assigned to those concerned with fisheries management, maritime matters and occupational safety and health, different specializations may have to be brought together to address legal issues and to ensure compatibility with requirements under, for example shipping and fisheries acts in relation to fishing vessels. It clearly requires the senior legal experts to be well qualified and likely to mean qualification in their own national law and in maritime and fisheries law to at least a master's degree, together with qualifications in international law and considerable experience.

4.5 Survey/inspection services

4.5.1 A requirement in law setting out standards for the design, construction, equipment and operation of fishing vessels, and enforcement of the attendant regulations would call for a process of monitoring, control and certification. In this regard, the competent authority would set the requirements for the inspection of fishing vessels and the qualifications to be held by inspectors, as well as the experience they should have. The competent authority should install an inspection system that would make use of appropriately qualified and experienced inspectors, and/or on a non-exclusive basis, or even delegate surveys/inspections to recognized organizations, private entities or nominated surveyors. If a competent authority elects to have its own exclusive inspection service, the line of command should be clear and each "inspector" should be readily identifiable by post description. In this regard, it may be deemed to be desirable as a consequence of the analysis of the needs, to appoint inspectors with specialization in specific fields; for example, an inspector of hulls, an inspector of machinery or, more generally, a hull and machinery inspector. Although these are discussed in detail in Annex 1, it should be understood that short-term inputs in relation to, for example, naval architecture, could be obtained under contract with a technical/educational institution or specialized individual. The same may be the case for marine engineering, particularly where a high level of expertise is required in the event of investigations into mishaps leading to loss of life and or property.

4.5.2 Where an inspection service already exists, a thorough review should be made of possible needs for in-service training and to identify whether or not there would be a need to introduce a "grandfather" clause in any new regulations to protect the interest of existing (mature) staff of longstanding.

4.6 Infrastructure

4.6.1 Service facilities for the construction and repair of fishing vessels should be analysed in relation to their capability/capacity. In this connection, a survey should be made of the labour force employed in that sector to identify the number of persons employed and to establish the levels of skills available and how these skills are achieved.

4.6.2 It should also be established whether or not an accreditation scheme for fishing vessel builders, particularly small fishing boatbuilders, is in place and if so, how it compares with other industries.

4.7 Survey and design offices

A list should be established of appropriate surveyors, naval architects and marine engineers who are accredited by recognized organizations, insurance underwriters and or the salvage association. This type of information would normally be available from recognized organizations/Chamber of Commerce or Association of Professional Engineers. Note should be made of the familiarity, or otherwise, of these persons with fishing vessels and the fishing industry both from a domestic and international perspective, as appropriate. It may be necessary, however, to extend the investigation to other countries in the subregion.

4.8 Education and training

4.8.1 Local professional engineering bodies should be sourced to obtain information in relation to entry into the various grades of membership (fellow, member, associate member and associate), as well as the educational institutions that issue acceptable awards for entry into such professional bodies.

4.8.2 Information should be obtained from education, training institutions and fisheries extension services in relation to the types of courses that are available (both diploma and non-diploma courses) for each of the following relevant disciplines:

.1 marine engineering;

.2 naval architecture; and

.3 nautical science.

4.8.3 This is likely to be the most organized sector coping, as it does, with a broad range of maritime applications and would include institutional requirements in response to the STCW and the STCW-F Conventions. Thus, such a survey should include universities, technical colleges and fisheries academies.

4.9 Fishing vessel construction

It is likely that training and education would be at the level of polytechnic institutions, trades colleges and, in some cases, training centres sponsored by the industry in cooperation with the Government. In such cases, there would be a need to determine the

"standing" of the qualifications given at completion of courses and to compare these with internationally accepted standards (see also Annex 5). In certain areas where local designs are prevalent, recognition should be given to inherited competencies in the construction of such vessels.

4.10 Fisheries science

The basic reasons to look closely at this section are that safety is considered to be an integral part of fisheries management and to ensure that graduates have a clear understanding of how management decisions based on scientific recommendations might affect safety and health during fishing operations.

4.11 Fishing operations

4.11.1 The scope within this section is wide because it covers fishing vessel management, as well as crew members. With regard to management, it is likely that the technical managers would have similar levels of education as required for surveyors and inspectors, and in the larger companies, they would be considered as marine and engineer superintendents. Others might be considered in the same manner as "works or production managers" in the case of the very large fishing vessels processing the catch on board and have their education and experience based on the food processing industry. In both cases, this is a matter for the company owners to address on the basis of national legislation and should be addressed when developing a strategy for safety at sea.

4.11.2 With regard to crew members, there should be an inventory of all existing training/education institutions in the country and their capabilities in relation to current and future needs. In this regard, it is understandable that with regard to certificates of competence, as may be required by national law, examination is the responsibility of the competent authority. In the case of national planning, administration and curricula development, competent authorities and such training institutions are well served by and may draw on the FAO/ILO/IMO Document for Guidance on Training and Certification of Fishing Vessel Personnel. Of note, however, is the need for an integrated approach involving Government, fishing vessel owners, fishermen's organizations, educational and fisheries research institutions and other bodies having an intimate knowledge of the vocational training of crew members, as well as those concerned with occupational safety and health. Furthermore, special attention would have to be given to developing countries and the role of fisheries extension services.

4.12 Institution building

Every competent authority should have adequate capacity to implement the provisions of the instruments and, taking into account the technological and operational situations of the domestic fishing vessels, should consider introducing the pertinent provisions of the instruments into domestic regulations, in particular:

.1 approval of building of fishing vessels;

.2 approval of equipment;

.3 approval of plans and stability;

.4 issuance of various kinds of certificates;

.5 establishment of construction, machinery and fire-fighting standards, etc.;

.6 registration/licensing of vessels;

.7 establishment of regime and enforcement of safety and hull survey standards;

.8 training of fishermen;

.9 certification of fishermen; and

.10 establishment of medical fitness standards.

Chapter 5

Ensuring compliance with national requirements

5.1 The competent authority should ensure that fishing vessels are built, maintained and manned in accordance with the national requirements. Competent authorities should put in place a regime that ensures that owners and skippers maintain the vessel in a seaworthy condition, during the period of validity of a safety certificate or between surveys.

5.2 Where practicable, prior to the commencement of building, plans and stability calculations should be submitted to the competent authority for approval. The competent authority should refer to the size, length, area of operation, weather conditions, etc., that a vessel will operate in when deciding the degree of detail required in plans and/or stability calculations.

5.3 As appropriate, the hull, machinery, equipment, and radio installations should be surveyed/inspected during construction, on completion and thereafter in such a manner and at such intervals as the competent authority may consider necessary in order to ensure that their condition is in all respects satisfactory.

5.4 The surveys/inspections should be such as to ensure that the arrangements, material and scantlings of the structure, boilers and other pressure vessels and appurtenances, main and auxiliary machinery, electrical installations, as well as crew accommodation, other equipment levels and manning, are in all respects satisfactory for the service for which the fishing vessel is intended.

5.5 As part of the survey/inspection process, consideration should be given to the areas the vessel is allowed to operate in, giving attention to any radio equipment required for that area and the climatic conditions likely to be encountered.

5.6 On satisfactory completion of the survey/inspection, the fishing vessel should be issued with a safety certificate or documentation for a period determined by the competent authority. The competent authority should consider at what vessel length limit safety certificates are issued.

5.7 When the fisheries administration is considering an application for a vessel to be given permission to undertake fishing activities, part of the approval process should require proof that the vessel meets the requirements of the relevant safety legislation.

5.8 It is important that inspectors behave in a professional manner towards the fishermen and the fishing vessel owner and apply the standards in a uniform manner. The competent authority should develop a code of conduct for the inspectors. In this regard, the model given in Annex 6 may be used as a guide.

5.9 The competent authority should have a procedure that describes how complaints and litigation are to be handled, and this procedure should be in accordance with the system for legal complaints and litigation in the country.

5.10 Wherein there is a requirement for the position of a fishing vessel to be monitored either by radio or through the use of satellite systems for fisheries monitoring, control, surveillance and enforcement purposes, inspectors of fishing vessels should be fully aware of the technology adopted by the competent authority and the need to address such instrumentation when inspections are carried out.*

* Refer to the FAO Technical Guidelines for Responsible Fisheries No.1, Fishing Operations and Supplement 1 Vessel Monitoring Systems.

Chapter 6
Operational safety

6.1 Onboard vessel safety management

6.1.1 Fishing varies from simple handline fishing to some very sophisticated trawling operations.

6.1.2 In all facets of its operation, fishing is a very dangerous occupation. Not only is the environment in which fishermen work hostile, the operation itself is fraught with dangers that can only be guarded against by diligent awareness and safe practices.

6.2 Fishing vessel safety management regulations

6.2.1 Fishing vessel safety management regulations should introduce mandatory requirements for owners, managers and skippers that lay a legal basis for the introduction of a safety culture on board.

6.2.2 The regulations should cover, but not be limited to:

.1 definitions;

.2 application;

.3 duties of owners, managers, safety officers and skippers;

.4 personal safety equipment to be provided;

.5 reporting and investigation of accidents;

.6 safe access;

.7 guarding of hatches and openings;

.8 lifting equipment;

.9 electrical equipment;

.10 lighting;

.11 safeguarding of machinery;

.12 safety officers;

.13 safety committees;

.14 record-keeping; and

.15 offences and penalties.

6.3 Safety codes

6.3.1 The purpose of a code of safe practices is to bring to the attention of all fishermen and those persons who are concerned with fishing as a means of making a livelihood, a set of standards and norms that should be used to create a safe working environment.

6.3.2 A code of safe practice can be introduced as a mandatory requirement by way of regulation.

6.3.3 A code of safe practices should not be written for the exclusive use of fishing vessel personnel. It is meant for any person who has a function to perform on board a fishing vessel and by those shore-based persons responsible for the management of fishing vessels. The language used in a code should be the everyday terminology used on board, so as to be easily understood, and not be written in legal terminology.

6.3.4 The code should be used as an educational tool. It deals with the fundamentals of safety for fishermen and provides safety principles that should become common knowledge and that should guide practice in the fishing industry.

6.3.5 The code should contain chapters covering:

.1 responsibilities of persons concerned with fishing;

.2 safety of the vessel, maintaining watertight integrity and stability;

.3 safety on deck, gangways, ladders, working with ropes and wires, deck lighting, precautions against falling overboard;

.4 safety during fishing operations, relative to the types of gear used;

.5 safety in machinery areas;

.6 personal safety;

.7 safety training and the maintenance of safety equipment;

.8 emergency training and procedures;

.9 fire precautions;

.10 lifting appliances;

.11 galley safety and food handling; and

.12 health and hygiene.

Chapter 7

Common understanding of the technical provisions and terminology of the instruments

7.1 Interpretation of terms and expressions

7.1.1 *Accepted by the competent authority* may be interpreted as vessel features or equipment which meets the technical requirements and operating experience of the competent authority.

7.1.2 *All reasonable steps* may be interpreted as measures not placing unmanageable constraints on the design, construction, operation or cost of the vessel.

7.1.3 *Alternative arrangements* may be interpreted as alternative vessel features or equipment which meets the technical requirements and operating experience of the competent authority.

7.1.4 *Alternatives acceptable to the competent authority* may be interpreted as vessel features or equipment which meets the technical requirements and operating experience of the competent authority.

7.1.5 *Approved by the competent authority* may be interpreted as vessel features or equipment which meet the technical requirements and operating experience of the competent authority.

7.1.6 *Equivalent measure of safety* may be interpreted as vessel features or equipment as required by the recommendations which meet the technical requirements and operating experience of the competent authority.

7.1.7 *Decked vessel* for the purpose of the instruments: a vessel is only considered to be decked if all of the following requirements are met:

.1 the deck covers the entire hull;

.2 the deck is of watertight construction;

.3 the flooding of any well or cockpit in the deck will not result in flooding of the vessel;

.4 if an enclosed superstructure covers a deck opening the superstructure should be of weathertight construction and have weathertight doors fitted to all access openings;

.5 doors leading to below deck spaces should have sills. For minimum heights, refer to the appropriate instrument;

.6 hatches leading to below deck spaces should have coamings. For minimum heights, refer to the appropriate instrument. Where a lower figure is used, watertight hatch covers of a material other than wood should be fitted; and

.7 on vessels of design categories A, B and C, the covers should be permanently attached and be capable of being closed or battened down.

Where a vessel does not meet all of these requirements, it should be considered as undecked.

7.1.8 *Efficient* may be interpreted as suitable for the intended operation of the vessel.

7.1.9 *Exempt or exempting* may be interpreted as allowing a vessel to be exempt from a requirement of the instruments because they place unreasonable and impractical constraints on the design, construction, operation or cost of the vessel.

7.1.10 *Significant wave height* is the average wave height (trough to crest) of the one-third largest waves. It is possible that waves encountered at sea may be as much as twice the significant wave height.

7.1.11 *Simple construction* may be interpreted as construction making use of simple artisanal (craft-based) materials and construction techniques. Examples may include:

.1 vessels formed from dugout logs;

.2 vessels formed by lashing or tying materials together; and

.3 simple construction methods not represented by the construction standards given in Annexes II, III, IV and V of the Safety Recommendations.

7.1.12 *Operating experience has shown justification* may be interpreted as demonstrated and documented safe operation of a fishing vessel in the conditions encountered in the area administered by the competent authority. The documented period could be five years or more.

7.1.13 *Practicable* may be interpreted as not placing unreasonable and impractical constraints on the design, construction, operation or cost of the vessel.

7.1.14 *Proven historical design* may be interpreted as vessels with a long record of safe operation in the conditions encountered in the area administered by the competent authority.

7.1.15 *Satisfaction of the competent authority* may be interpreted as meeting the established technical requirements and proven operating experience of the administrators and surveyors employed by the competent authority. Competent authorities may wish to have their own interpretation of this term.

7.1.16 *Sufficient strength* may be interpreted as suitable for the intended operation of the vessel and weather/watertight to the required degree. This may be given by the construction standards or be equivalent to the surrounding structure if no other guidance exists.

7.1.17 *Undecked vessel*: refer to "decked vessel".

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

7.1.19 *Weathertight* means that in any sea conditions water will not penetrate into the vessel. Hatches, sidescuttles and windows should be equipped with weathertight closing devices. The same applies for doors and other openings on enclosed superstructures.

7.1.20 *Where appropriate* may be interpreted as measures not placing unreasonable and impractical constraints on the design, construction, operation or cost of the vessel.

Chapter 8
Human element on board

8.1 Human element - introduction

8.1.1 It is often said that over 80% of all accidents are caused by "human error". Human error is not always as a result solely of the actions of the fishermen alone, but may be as a result, in whole or in part, of poor design leading to excessive vibration, heat and noise levels, of poor ergonomic design, of inappropriate equipment, inappropriate working practices, lack of maintenance, fatigue and manning levels, of lack of appropriate training and preventive measures, of lack of awareness, etc. The competent authority should consider these factors when setting standards in design, construction and equipment of fishing vessels, approving plans, setting manning levels and introducing codes of safe practice and occupational health and safety legislation, training standards and safety awareness campaigns.

8.1.2 Considered in its wider sense, the "human element" is addressed in international instruments adopted by FAO, ILO and IMO, either in instruments adopted independently or through codes and other guidance jointly developed by the three Organizations.

8.1.3 Guidance for the implementation of certain human element issues are addressed in Part B of the Code, the Voluntary Guidelines and the Safety Recommendations.

8.1.4 The safety of the fishing vessel itself is perhaps the most important consideration for the safety and health of the crew. The greater part of Part B of the Code, of the Voluntary Guidelines and of the Safety Recommendations relate to the safety of the vessel, fire protection, fire-fighting and life-saving appliances and arrangements.

8.1.5 The three instruments also provide guidance on such issues as protection of the crew and crew accommodation. These issues are also of great importance and require the attention of the competent authority, including fishing vessel inspectors.

8.2 Human factors/ergonomic design

8.2.1 The way in which fishing vessels are designed and built, and even equipped, depends on a variety of factors. The result can be the design and construction of a vessel that takes into account, to the greatest extent possible, the safety and comfort of the crew or, conversely, results in a vessel that may be less habitable and designed and equipped in a manner that unintentionally leads to fatigue, accidents and even illness (and may also lead to conditions that have a negative impact on recruitment and retention).

8.2.2 One of the most obvious considerations is the stability of the vessel. A vessel with poor stability may lead to capsize. On the other hand, a vessel that is unnecessarily "stiff" will be extremely uncomfortable. Another consideration is noise and vibration. Lack of attention to these issues in the design of the vessel and in the selection and installation of equipment can seriously interfere with sleep, thus leading to fatigue, musculo-skeletal problems, loss of hearing and accidents.

8.2.3 Adequately sized accommodation space for sleeping, eating and rest are also important considerations. Part B of the Code, the Voluntary Guidelines and the Safety Recommendations provide guidance on these issues. The competent authority should also ensure that the vessel is built and equipped to the standards set out in the Work in Fishing Convention and Recommendation (see below and Annex 7). If a vessel flies the flag of a State that has ratified the Convention, these standards will be mandatory. Failure to take these standards into account may also make it difficult to re-register the vessel under other flags. The competent authority must ensure that all involved in vessel design and construction are provided with copies of these instruments.

8.2.4 Part B of the Code, the Voluntary Guidelines and the Safety Recommendations also provide guidance concerning the protection of the crew. This includes protection when working on deck and in processing spaces. In addition to the guidance contained in these instruments, and in the ILO Convention and Recommendation, the competent authority should seek to ensure that, to the extent possible, human factor and ergonomic principles are taken into account during the design, construction and equipping of vessels. These should be taken into account early enough in the design stage and should be revisited during vessel construction. A proactive approach would be to seek the views of fishermen on vessels that are similarly designed and equipped even before detailed plans are prepared for a new vessel.

8.2.5 The issues of how to make the best possible living spaces and how to make working spaces, operations and equipment safe and convenient should be addressed at an early stage in the design process by including all stakeholders in the consultation process.

8.2.6 Standards or guidance could be given to designers and builders at the earliest possible stage. Studies could be made of existing vessels to draw "lessons learned" for the building of new vessels. The views of fishing vessel owners and fishermen on how the vessel could be improved to make it more habitable and ergonomic (and perhaps even more productive) could be obtained even before the first study or proposed design is initiated.

8.2.7 Often, competent authorities may not have "in-house" specialization on human factors and ergonomics. Such knowledge can be brought in by liaison with ergonomics experts in occupational safety and health authorities, in classifications societies and by reviewing work already carried out in other countries (see bibliography).

8.3 Decent working conditions

8.3.1 Initiatives to improve safety can often become quite narrowly focused and fail to take a broad look at factors that contribute to safety and health problems. The impact of poor living and working conditions can sometimes be unintentionally neglected when, for example, there is a focus only on specific safety issues.

8.3.2 Though the present publication focuses on the implementation of Part B of the Code, the Voluntary Guidelines and the Safety Recommendations, it is obvious that the role of the competent authority calls for it to take into account other aspects of the human element. FAO, ILO and IMO have produced publications related to this matter, a list of these publications and a summary can be found in Annex 8.

8.3.3 Further guidance on aspects involving the human element is provided in the FAO/ILO/IMO instruments:

Issue	The Code	The Voluntary Guidelines	The Safety Recommendations
Design	Part A, sections II and III Part B, chapters II, III, IV, VI and XI	Chapters II, III, IV, VI and XI	Chapters 2, 3, 4, 6 and 11
Fatigue	Part A, section I and Appendix 2		Chapter 12
Manning			Chapter 12
Training	Part A, section I, chapter 3 Part B, chapter VIII	Chapter VIII	Chapters 8 and12
Awareness	Part A, section I, chapter 3		
Health	Part A, section I, chapter 4		

8.3.4 FAO is currently developing guidelines for best practices to improve safety at sea in the fisheries sector*, which intends to give an umbrella covering all aspects of safety at sea and to inform maritime and fisheries ministries, fisheries resource managers and safety professionals.

8.3.5 The IMO places considerable emphasis on the contribution of the human element to maritime accidents. In this regard, it has adopted the Human element vision, principles and goals for the Organization (resolution A.947(23)).

8.3.6 The "human element vision, principles and goals" in resolution A.947(23) should also be considered by the competent authority or authorities responsible for safety of fishing vessels and fishermen. Their vision, or aim, is "to significantly enhance maritime safety, security and the quality of the marine environment by addressing human element issues to improve performance in the fishing sector".

8.4 Fisheries management and its impact on vessel accommodation

Those involved in and concerned with the design of fishing vessels should inform those concerned with fisheries management about the impact that decisions (such as the decision to restrict a vessel to a certain length or gross tonnage) may have on conditions of the crew and even vessel safety. Consultations and coordination among all concerned may contribute to changing fisheries management decisions that lead to cramped space for crews, unstable vessels and other negative outcomes.

* FAO. (forthcoming). *Fishing operations. 1. Best practices to improve safety at sea in the fisheries sector*. FAO Technical Guidelines for Responsible Fisheries No. 1, Suppl. 3. Rome.

Annex 1

Assessment of needs for fishing vessel survey and inspection services

Introduction

1 This Annex discusses some of the responsibilities of a flag State and offers suggestions concerning how inspections of fishing vessels may be arranged. In this regard, the need for a thorough analysis of the industry is stressed in order to have a clear perspective of the survey and inspection needs in both the short and long term. In particular, suggestions are made in relation to the qualifications and experience that may be set as a requirement for the recruitment of inspectors of fishing vessels.

Part 1
Survey and inspection of fishing vessels

2 One of the basic principles in relation to the building of a fishing vessel is that it should be constructed in a manner that would facilitate regular maintenance, so ensuring that the vessel is at all times and in all respects satisfactory for the intended service of the vessel. In order to ensure that the principle is followed, the competent authority should set requirements for approval of plans prior to construction and for the inspection of a fishing vessel while it is under construction, refit and/or modification, as well as when it is in service.

3 The term "satisfactory" obviously includes safety, living and working conditions both from a construction and operational point of view, and for a common understanding of the term, there has to be a set of standards below which a vessel would have to be classified unsatisfactory. In principle, therefore, satisfactory construction of a fishing vessel and its equipment, as well as continued compliance with the rules and regulations, should be a condition for entering or maintaining a fishing vessel on the register and/or the granting of an authorization to fish. That condition should apply equally to the flag State as well as the owner of a fishing vessel.

4 Since the safety of life and property at sea is paramount, it is evident that the responsibility level for setting regulations for the survey and inspection of fishing vessels is high. Similarly, the level of responsibility that would accrue to an individual inspector is unquestionably high. It should follow that only a suitably qualified person, in all cases, should be allowed to carry out the actual survey or inspection and it must be done with the utmost integrity.

5 While adhering to the above principles, it should also be noted that because surveys and inspections are required for such a variety of reasons, they do not always need the same level of technical knowledge or, for that matter, the same type of person to perform the work.

Fishing vessel survey and inspection services

6 In general, officers of the competent authority should carry out the survey and inspection of fishing vessels in relation to the enforcement of the regulations to the vessel shipping/fisheries act, and grant exemptions when and where applicable. Nevertheless, the competent authority may, however, entrust the work either to surveyors or inspectors nominated for the purpose or to organizations (such as vessel classification societies) recognized by the competent authority.

7 In this regard, it is customary that should a nominated surveyor/inspector or recognized organization determine that the condition of a fishing vessel or its equipment does not correspond substantially with the particulars of the certificate or is such that the fishing vessel is not fit to proceed to sea without danger to the vessel or persons on board, such surveyor/inspector or organization should immediately ensure that corrective action is taken and should in due course notify the competent authority. If such corrective action is not taken by the owner, the certificate should be withdrawn/suspended and the competent authority notified immediately. Inspectors in the employ of a competent authority should have the authority to prevent such vessels from proceeding to sea.

Technical specifications and plans approval

8 Applications for permission to construct a fishing vessel or to substantially modify an existing fishing vessel should be accompanied by appropriate technical specifications and plans. The fishing vessel survey/inspection unit should be satisfied that the specifications and plans conform to acceptable standards and that they are complete enough for the purpose intended before giving approval.

Supervision of a vessel under construction or under refit

9 A programme of inspection should be agreed with the builder and the owner (and with a ship classification surveyor if the vessels is to be built to class) to allow the inspector to follow the construction and to carry out certain tests. Random checks may also be made on levels of humidity in materials and at the work site, as the case may be (wood and GRP), and for evidence of wood decay and quality of welding.

10 It is important that the owner is informed of any recommendations made to the builder for any work in progress that does not meet with the specifications and or statutory regulations.

11 The inspector should supervise the inclining test of the vessel and the rolling test, and the results of these tests should be to the satisfaction of the inspector before sea trials are authorized. This implies that in the case of small fishing vessels, the inspector has a better than elementary knowledge of naval architecture, in relation to stability.

Vessel registration

12 On completion of all trials and inspections, the inspector would measure the vessel in accordance with the requirements of the regulations and ensure that all documentation and certificates that are required for the registration of a vessel are in order for submission to the Registrar of Ships or Fishing Vessels, as the case may be. On

allocation of an official number, the inspector oversees the carving of the number in the main beam and prepares the "Carving Note" (without which the Registrar would not normally finalize the entry in the register).

13 Wherein there is no requirement in national legislation to register a fishing vessel, as may be the case with domestic fleets, particularly of small fishing vessels, there is invariably a requirement for such vessels to have an "authorization to fish", to which conditions and warranties would normally be attached.

14 The inspector should ensure that appropriate documents are available on board the fishing vessel and that the owners and skipper(s) are aware of the schedule of inspections so required for a vessel in service.

Supervision of a vessel in service

15 When a vessel is in service, the vessel may be inspected at any time in relation to safety, crew accommodation and manning, as well as at intervals laid down in the regulations for the revalidation of a safety certificate and other periodic inspections. After any inspection has been completed, the inspector would file an appropriate report in the record of the vessel and ensure through subsequent surveys/inspections that no changes have been made in the structural arrangements, machinery, equipment and radio installations, as well as crew accommodation, covered by the survey that have not been approved by the competent authority. Such periodic inspections should include, *inter alia*:

.1 annual safety equipment inspections;

.2 propeller shaft survey/inspection;

.3 periodic survey/inspection of hull and machinery;

.4 special survey/inspection of hull and machinery; and

.5 periodic survey of crew accommodation.

Qualifications and experience

16 For the larger fishing vessels, inspectors should be qualified to degree standard in one of the three professional disciplines of marine engineering, naval architecture or nautical sciences. This should be coupled with service at sea, or in vessel yards, to gain several years' practical experience. Principal inspectors should have considerable experience in the field of survey or inspection and well proven ability. In this area, the requirements of the STCW and the STCW-F Conventions should be recognized. Many inspectors are likely to be drawn from such qualified seafarers and fishermen and, as they will be inspecting and surveying the work of fishermen, should be qualified and have experience equal to or above the level of the most senior fishermen they will meet in the course of their duties.

17 However, given the wide range of fishing vessel types and sizes covered by the instruments, the range of specialization of inspectors will also be wide, particularly in relation to the smaller fishing vessels where the actual requirements would vary greatly

in relation to materials of hull construction. Thus, alternatively, inspectors may have qualifications from an institution recognized by the competent authority in a marine-related field and have specialized training to ensure adequate competence and skill. Such persons may also be a qualified officer of the maritime/fisheries administration with an equivalent level of experience and training for performing surveys/inspections of the relevant operational requirements. It is understood, nevertheless, that in every case, the inspector must have the competence to inspect safety equipment.

18 Whereas the examples given below are for guidance, they are, nevertheless, indicative of the type of structure that would be required for the establishment of a dedicated fishing vessel survey/inspection service. Further guidance in relation to small vessels is given in part 2 below.

19 Flag State inspectors should have the following professional qualifications, wherever possible:

.1 a certificate issued under the relevant provisions of the STCW Convention and the STCW-F Convention, as amended, designating the holder as:

.1 master, qualified to command a vessel of 1,600 gross tonnage or more, meeting the provisions of the Radio Regulations or holding an appropriate certificate related to the GMDSS; or as

.2 chief engineer, qualified to be in charge of machinery installed in a vessel powered by main propulsion machinery of 3,000 kW or more;

.2 a university degree or diploma as a naval architect, mechanical engineer, electrotechnology engineer, or other type of engineer whose professional education relates to the maritime industry; or

.3 not less than five years' service as an officer on board a vessel at sea, as a naval architect or as an engineer in the maritime field; or

.4 a relevant university degree or diploma, augmented by completion of the following IMO model courses: 3.03 (Machinery), 3.04 (Electrical Installations), 3.05 (Fire Appliances and Provisions), 3.06 (Life-Saving Appliances), 3.07 (Hull), and 3.08 (Navigation), and relevant sea service of not less than six months.

20 While the above qualifications are highly desirable, it is recognized that some countries may not have available a sufficient number of individuals so qualified. Competent inspectors may originate from other backgrounds, but all must be grounded in the same basic skills, taught in classrooms and subsequently reinforced in the field under the guidance of a qualified inspector approved by the flag State. The maritime Administration should develop and oversee the curriculum taught and the follow-up training for every inspector. In addition to developing courses specializing in IMO and relevant ILO conventions and in national laws and regulations for shipping, the maritime Administration is responsible for developing a policy to assist its field inspectors.

21 The flag State should ensure that individual inspectors have working knowledge and practical experience in those subject areas pertaining to their normal duties. Additionally, to assist individual inspectors in the conduct of duties outside of their normal assignments, the flag State should ensure ready access to expertise in the following areas, as necessary:

.1 all aspects of the relevant FAO, ILO and IMO conventions and other binding instruments;

.2 all aspects of national laws and regulations of the flag State;

.3 hull fit-up and repair;

.4 all aspects of ship and boatbuilding techniques including safety at work;

.5 non-destructive testing;

.6 vessel construction, subdivision, stability and watertight integrity;

.7 vessel electrical and machinery systems;

.8 load line and tonnage assignment;

.9 safety equipment systems, plans and equipment items;

.10 fire protection construction methods;

.11 navigation and communications equipment;

.12 fishing vessel operations and deck machinery;

.13 safety management systems; and

.14 evaluation of the effects of the human element.

22 During the first six months of employment within the flag State, inspectors should perform tasks under the supervision of an experienced person, in accordance with an approved practical training programme.

23 When inspectors are to be employed for tasks other than those within their field of expertise and experience, they should receive the necessary training and guidance for the new tasks and should perform them for a period of not less than one month, as appropriate, under the supervision of a person with experience in that field.

24 When performing tasks on board vessel, inspectors should carry an identification document issued by the flag State. This document should indicate their authority to conduct specific tasks on behalf of the flag State and likewise indicate any limitations on that authority.

Part 2
Survey and inspection of small decked fishing vessels of less than 15 m in length and undecked fishing vessels

General

25 It should be clearly understood that the actual requirements would vary greatly across the wide range of vessels below 15 m in length. Indeed, there may be a need to set intermediate reference points in assessing the actual requirements for individual flag States. For this reason the fleet analysis is very important because the inspection needs would differ, as would the qualifications and experience of the inspectors as already mentioned in part A.

26 For the purpose of this document, the reference to City and Guilds of London Institute (CIG) certificates given below serves as an example only. Alternatives exist but if they are to be considered, the levels for adoption should not be less than the standard required for the CIG certificates. Such alternatives may include certain correspondence courses that lead to an approved diploma in the survey of small vessels or the survey of fishing vessels. However, higher-level diplomas in marine surveying, which could be a desired qualification for senior officers, cannot be obtained through the City and Guilds of London Institute or the equivalent thereof. Other qualifications so mentioned are specific and are readily compared with the STCW Convention.

27 Therefore, although the examples given below are for guidance, they are, nevertheless, indicative of the type of structure that would be required for the establishment of a dedicated "fishing vessel inspection unit".

Hull inspectors

Wooden construction of decked fishing vessels of less than 12 m in length and undecked vessels

28 If the basic fleet consists of vessels of wooden construction and the vessels are less than 12 m in length, the main qualifications and experience should be related to wooden boat construction and repair, with an understanding of other materials. Thus:

Minimum qualifications

Intermediate Certificate in Wooden Boatbuilding
Level 1 in GRP Boatbuilding
Level 1 in Steel Boatbuilding

Minimum experience

4 years of apprenticeship/vocational college
1 year with Certificate of Service under a master boatbuilder, of which 1 year to be related to GRP and steel vessel construction or hull repairs

GRP construction of decked fishing vessels of less than 12 m in length

29 If the basic fleet consists of vessels of GRP construction and the vessels are less than 12 m in length, the main qualifications and experienced should be related to GRP vessel construction and repair, with an understanding of other materials.

Minimum qualifications

Intermediate Certificate with emphasis on GRP construction

Level 1 in General Construction Methods (wood/steel)

Minimum experience

4 years of apprenticeship/vocational college

3 years with Certificate of Service under a master boatbuilder in GRP construction and repair

1 year with Certificate of Service under a master boatbuilder in the construction and repair of wooden and steel hulls

Steel construction of decked fishing vessels of less than 12 m in length

30 If the basic fleet consists of vessels of steel construction and the vessels are less than 12 m length, the main qualifications and experienced should be related to steel construction and repair. This could include general steel fabrication and repair. There should also be an understanding of other materials, particularly in relation to how other materials can be attached to steel.

Minimum qualifications

Intermediate Certificate in Boatbuilding with emphasis on steel construction

Intermediate Certificate in Welding

Level 1 in General Construction Methods (wood/GRP)

Minimum experience

4 years of apprenticeship/vocational college in steel construction, of which a minimum of 3 years to be spent in steel boatbuilding

1 year under a master boatbuilder in wooden and GRP construction or repair

Hull inspectors for decked fishing vessels of 12 m in length and over but less than 15 m in length

Fishing vessels of wooden construction

31 If the basic fleet consists of vessels of wooden construction and the vessels are less than 15 m in length, such fleets tend to be made of many different types, often using a combination of construction materials. Therefore, although the main qualifications and experience should be related to wooden vessel construction and repair, familiarity with the requirements of classification societies would be an asset.

Minimum qualifications

Final Certificate in Wooden Boatbuilding
Intermediate Certificate in GRP Boatbuilding
Intermediate Certificate in Steel Boatbuilding

Minimum experience

4 years of apprenticeship/vocational college
5 years with Certificate of Service under a master boatbuilder, of which 2 years to be related to GRP and steel vessel construction or hull repairs

Fishing vessels of GRP construction

32 If the basic fleet consists of vessels of GRP construction and the vessels are less than 15 m in length, the main qualifications and experienced should be related to GRP construction and repair. The inspector should also have knowledge of wooden hull construction and be familiar with the requirements of classification societies would be an asset.

Minimum qualifications

Final Certificate with emphasis on GRP construction
Intermediate Certificate/General Construction Methods (wood/steel)

Minimum experience

4 years of apprenticeship/vocational college
3 years with Certificate of Service under a master boatbuilder in GRP construction and repair
2 years with Certificate of Service under a master boatbuilder in the construction **or** repair of wooden and steel hulls

Fishing vessels of steel construction

33 If the basic fleet consists of vessels of steel construction and the vessels are less than 15 m in length, although the emphasis should be placed on knowledge of welding and metallurgy, a fairly wide experience would be required working with other materials, particularly wood. Familiarity with the requirements of classification societies would be an asset.

Minimum qualifications

Final Certificate in Boatbuilding with emphasis on steel construction
Intermediate Certificate in Welding
Intermediate Certificate in General Construction Methods (wood/GRP)

Minimum experience

4 years of apprenticeship/vocational college in steel construction, of which a minimum of 3 years to be spent in steel vessel building

2 years under a master boatbuilder in wooden and GRP construction or repair

Machinery inspectors

Open vessels fitted with outboard engines

34 If the basic fleet is limited to open vessels fitted with outboard engines, the emphasis should be in relation to the different types of outboard engines and steering mechanisms. Practical experience in the "matching" of engine powers to hull forms should be a requirement.

Minimum qualifications

Final Certificate in Automotive Engineering

Level 1 Certificate in Welding

Intermediate Certificate in Automotive Electrics

Minimum experience

4 years of apprenticeship/vocational college

5 years with Certificate of Service as a service engineer and/or with a service facility, of which at least 3 years to be spent on the installation and service of outboard engines (diesel/petrol)

Decked fishing vessels of less than 15 m in length and undecked fishing vessels

35 Where the basic fleet consists of decked fishing vessels of less than 15 m in length and undecked fishing vessels that are fitted with inboard diesel engines, the inspection requirements could be quite demanding. Thus, the inspector should have a strong background in marine engineering.

Minimum qualifications

Second Class Certificate of Competence (motor ship) or equivalent certificate issued by the Navy/Coast Guard (by examination) that includes elementary naval architecture and electro-technology

Appropriate Intermediate Certificate in Welding

Minimum experience

4 years of apprenticeship/vocational college, of which 2 years must meet the requirements for entry into the Merchant Marine/Navy/Coast Guard

Sea service as required for application for examination for the Second Class Certificate (motor ship) or equivalent

Plus a further 3 years in the outfitting, repair and maintenance of marine machinery, including deck machinery

Hull and machinery inspectors

36 Where there is a mix of vessel types, construction materials and complexity of design, the requirements for the recruitment of a hull and machinery inspector must be well balanced between boatbuilding and engineering.

Minimum qualifications

Second Class Certificate of Competency (combined) or equivalent level of certificate issued by the Navy/Coast Guard (by examination) that includes intermediate naval architecture and electro-technology

Intermediate Certificate in Welding

Diploma in fishing vessel construction methods with credits in steel, wood and GRP construction

Minimum experience

4 years of apprenticeship coupled with off-the-job training in marine engineering and ship/boat construction and/or design

5 years of service in the Merchant Marine/Navy/Coast Guard, with not less than 2 years to be at the rank of second engineer or equivalent

3 years as a hull and or machinery inspector or similar experience with an approved company of ship surveyors or as a surveyor of ships or small vessels for an insurance company

Senior hull and machinery inspectors for decked fishing vessels of less than 15 m in length and undecked fishing vessels

37 In the case of large fleets, the inspection service may have to include a mixture of dedicated hull inspectors, machinery inspectors and hull and machinery inspectors. In all probability, the service would have to be managed by a senior hull and machinery inspector. The knowledge and experience required must include maritime law, naval architecture, electro-technology and applied electronics.

Minimum qualifications

First Class Certificate of Competency (motor ship) or equivalent issued by the Navy/Coast Guard (by examination); and

Diploma in naval architecture and electro-technology; or

Professional qualification in ship construction, naval architecture or engineering accepted by a classification society or a Lloyd's Agent for accreditation as a surveyor of ships (hull and machinery).

Desired qualifications

A recognized diploma in ship surveying

Minimum experience

4 years of apprenticeship in an industry accepted for pre-sea practical experience required for entry into the Merchant Marine/Navy/Coast Guard;

7 years of seagoing experience, of which 3 years to be at the rank of not less than second engineer officer or equivalent; or

5 years in the design, construction/repair of ships/fishing vessels, following the award of relevant qualifications; or

3 years as a marine or assistant marine superintendent; and

3 years in the inspection of fishing vessels (hull and machinery) or in the survey of ships (hull and machinery).

General

38 It should also be kept in mind that inspectors of fishing vessels, no matter what their size, should have had at least an introduction to welding that should include:

.1 welding technology;

.2 arc welding inspection and quality control;

.3 fundamentals of visual inspection;

.4 liquid penetrants and magnetic particle inspection; and

.5 weldability of metals, ferrous and non-ferrous.

Annex 2

Example of a safety certificate*

ANNEX 1

TV5/340 B

Port / Hawe No .....

REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF TRANSPORT

REPUBLIEK VAN SUID AFRICA
DEPARTEMENT VAN VERVOER

LOCAL GENERAL SAFETY CERTIFICATE
PLAASLIKEALGEMENE VEILIGHEIDSERTIFIKAAT
(Including, in the case of a licenced small vessel, the Licence)
(Insluitende in geval van 'n gelisensieerde klein vaartuig, die Lisensie.)
MERCHANT SHIPPING ACT, 1951 (NO 57 OF 1951) SECTIONS 68(1), 72a(2), 194(1)
HANDELSKEEPVAARTWET, 1951 (NO 57 VAN 1951) ARTIKELS 68(1), 72a(2), 194(1)

NOTE: One copy of this Certificate shall be displayed in a conspicuous place on the vessel for the information of all on board.
LET WELL: Een afskrif van hierdie Sertifikaat moet vir die inligting van almal aan boord, op 'n opvallende plek op die vaartuig, vertoon word.

PARTICULARS OF VESSEL

Name of vessel: Naam van vaartuig	Port of Registry or operation: Registrasie of bedfryfshawe:	Category: Kategorie:
Name and address of owner: Naam en adres van eienaar:	Official number or registration number: Amptelike of registrasienommer:	Number of crew (including skipper): getal bemanningslede (skipper inbegrepe):
	Description of voyage or operations: Beskrywing van reis of bedrywighede:	
Length: Lengte:		

I, the undersigned, Certify that the above mentioned vessel has been duly inspected in accordance with
Ek, die ondertekende,..... Sertifiseer dat bogenoemde vaartuig behoorlik ondersoek is ooreenkomstig die

the provisions of the Merchant Shipping (National Small Vessel Safety) Regulations, 2007, and the Collision and Distress Regulations, 2005, as far as these provisions apply thereto. The inspections showed that the vessel is constructed and equipped in accordance with the relative Regulations.

bepalings van die Handelskeepvaart (Nationale Klein Vaartuig Veiligheid) Regulasies, 2007, en die Botsing en Noodseineregulalies 2005, vir sover heirdie bepaligs daarop van toepassing is. Die ondersoek het getoon dat die vaartuig gebou en toegerus is ooreenkomstig die betrokke Regulasies.

This certificate will remain in force until the
Hierdie sertifikaat bly van krag tot ..... ……

Issued at Uitgereik	this op hierdie	day of dag van	Signature and designation Handtekening en ampstitel

* It being understood that individual competent authorities using this example may wish to use the same terminology as contained in their national legislation.

Annex 3

Examples of survey checklists*

Hull survey of vessels of less than 15 m in length overall

	Periodical survey	Additional survey			Vessel registration No.	

Name: _____ District No.: _____
Length overall: _____ m Place of survey: _____
Date of survey: _____ Validity of survey: _____ Meter No.: _____

Hull type:	Wood		Fibre glass		Aluminium		Steel	

No.	Item inspected	Remark				No.	Item inspected	Remark			
1000	Hull	0	1	2	3		Hull	0	1	2	3
1010	Outer shell/planking					1260	Deck crane				
1020	Gel coat					1270	Emergency exit				
1030	Stem					1280	Sole				
1040	Keel					1290	Drain holes				
1050	Bilge keel					1300	Deck				
1060	Stem/wing					1310	Hatches				
1070	Hull weldings					1320	Box covers				
1080	Spikes/fastenings					1330	Freeing ports				
1090	Caulking					1340	Deck frame and stanchions				
1100	Stern box/board					1350	Frames				
1110	Rescue ladder					1360	Divisions/bulkheads				
1120	Rudder					1370	Engine casing				
1130	Rudder stop					1380	Hatch cover and coaming				
1140	Propeller					1390	Means for securing weathertightness				
1150	Axle and bearings					1400	Transom flaps				
1160	Outboard drive					1410	Fastening device/bollards				
1170	Balance flaps					1420	Securing of fishing gear				
1180	Transducer					1430	Air pipes to tanks				
1190	Load lines					1440	Tank filling equipment				
1200	Superstructure					1450	Corrosion				
1210	Bulwark					1460	Engine foundations				
1220	Bulwark planking					1990	Other				
1230	Guard rails/handles										
1240	Ladders										
1250	Mast, boom, goose neck										

Survey results

0 No remarks	1 Rectification: Corrective action within 30 days	2 To be surveyed again before: _____20____	3 Detention

_____
Vessel surveyor

_____
Verification by customer that survey has taken place

Remarks entered into:
Inspection book _____20_____
Book of remarks _____20_____
Computer _____20_____

* It being understood that individual competent authorities using these examples may wish to use the same terminology as contained in their national legislation.

Engine survey of vessels of less than 15 m in length overall

	Periodical survey	Additional survey			Vessel registration No.	

Name: _____ District No.: _____
Length overall: _____ m Place of survey: _____
Date of survey: _____ Validity of survey: _____ Meter No.: _____

No.	Item inspected	Remark				No.	Item inspected	Remark				No.	Item inspected	Remark			
		0	1	2	3			0	1	2	3			0	1	2	3
2000	**Engine**					**2350**	**Cool. water equip**					**2700**	**Aux. engine**				
2010	Eng. accrd. ship reg					2360	Cool. water piping					2710	Auxiliary engine				
2020	Engine is functional					2370	Seaw. piping to eng.					2720	Gauges				
2030	Water leaks					2380	Seawater intake					2730	Oil leaks				
2040	Oil leaks					**2400**	**Seawater/bilges**					**2800**	**Electric equipment**				
2050	Met.: Rpm/lub/heat					2410	Hand pumps qty:					2810	Gen. cond. el equip				
2060	Met:Exh.gas.pr.gear					2420	El. pumps qty:					2820	Gauges, fuse mark.				
2070	Engine controls					2430	Eng. pumps qty:					2830	Generator 1 charg.				
2080	Propeller gear					2440	Bilge piping/valves					2840	Generator 2 charg.				
2090	Engine fastenings					2450	Alarm seawater in engine					2850	Special survey demanded				
2100	Engine pads					2460	Bilge filters					**2900**	**Engine room**				
2110	Flexible junctions					2470	Seaw. pump/deck					2910	El. illumination				
2120	U-joint					2480	Bottom valves					2920	Orderliness				
2130	Steering engine					2490	Seawater piping					2930	Floors/soles				
2200	**Fuel equipment**					**2500**	**Fire/see equipm.**					2940	Servicing arrangement				
2210	Fuel filters					**2550**	**Exhaust piping**					2950	Safety covers				
2220	Fuel piping					2560	Seawater cooling					2960	Side valves				
2230	Fuel separator					2570	Insulation					2990	Other				
2240	Oil tank valves					2580	Position										
2250	Quantity gauges					2600	**Spares and tools**										
2260	Glass valves					2610	Belts										
2270	Quick closing valve					2620	Hoses										
2300	**Air ducts**					2630	Lubrication filter										
2310	Air ducts to engine					2640	Fuel filter										
2320	Air duct closures					2650	Tools										
2330	Height and position																

Survey results

0 No remarks	1 Rectification: Corrective action within 30 days	2 To be surveyed again before: _____20____	3 Detention

_____
Vessel surveyor

_____
Verification by customer that survey has taken place

Remarks entered into:
Inspection book _____20_____
Book of remarks _____20_____
Computer _____20_____

Equipment survey of vessels of less than 15 m in registered length

	Periodical survey	Additional survey		Vessel registration No.	

Name: _____ District No.: _____

Registered length: _____ m Place of survey: _____

Date of survey: _____ Validity of survey: _____ Meter No.: _____

No.	Item inspected	Remark				Date	Type	No.
3100	**Equipment**	0	1	2	3			
3513	Inflatable life raft							
3513	Inflatable life raft							
3519	Release mechanism for life raft							
3510	Immersion suits							
3523	Floatation work suits							
3511	Life jackets							

No.	Item inspected	Date	Qty.	Remark 0	1	2	3	No.	Item inspected	Remark 0	1	2	3
3101	Certificate of Measurem							3430	Torch light				
3202	Magnetic compass							3401	Binoculars				
3206	Medicine chest							3413	National flag				
3204	Fire alarm							3406	Almanac				
3108	Telecomm. equipment							3405	Charts				
3501	Hand flares							3426	Nautical instruments				
3502	Rocket parachutes							3431	Fog signalling apparatus				
3212	Fire extinguishers							3419	Whistle and bell				
3205	Fire-extinguishing syst.							3209	Inspection book				
3302	Markings							3211	Stability information, date:				
3424	Navigation lights							3908	Instruction cards				
3425	Fishing lights							3914	Ventilation				
3515	Fixed painter for life rafts							3904	Stove – fire prot. and fuse				
3516	Inflatable life raft handle							3909	Lavatories				
3303	Safety colour							3706	Watertight door				
3504	Life buoys							3524	Rescue quoit				
1390	Means for securing weathertightness							3990	Other				
3718	Anchor-chain and rope												
3726	Drop anchor												
3702	Net winch safety equipment												
3715	Freeing ports												
3604	Emergency steering												
3712	Fixed rescue ladder												

Survey results

0 No remarks	1 Rectification: Corrective action within 30 days	2 To be surveyed again before: _____20____	3 Detention

_____

Vessel surveyor

_____

Verification by customer that survey has taken place

Remarks entered into:

Inspection book _____20_____

Book of remarks _____20_____

Computer _____20_____

Explanatory Notes for survey report

Generally, there are four options in giving a remark when filling out the survey report of the Icelandic Maritime Administration, notably 0, 1, 2 or 3. Remarks are given by putting an "X" in the relevant column for a specific item number.

A shaded box for a certain item number means that a remark is not allowed with regard to that particular item number. E.g., for item number 3204, remark 1 is not allowed.

No.	Item inspected	0	1	2	3
3204	Fire alarm				

If a certain item number is not relevant, e.g. due to the type and use of the boat in question, it should be indicated by putting a "-" in the column for remark 0.

- Definition of remarks:

Remark	Definition	
0	The item in question is in good working condition, as required in accordance with the relevant regulation, does not require repair / renewal / rectification.	
1	The item in question is not fully functional, as required in accordance with the relevant regulation, requires repair / renewal / rectification – does not constitute a hazard for vessel / crew.	Corrective action within 30 days by owner.
2	The item in question is not in good working condition or fully as required in accordance with the relevant regulation, requires repair / renewal / rectification, is not fully functional but in working order – does not constitute a hazard for vessel / crew.	To be repaired, rectified and surveyed again after a maximum of three months.
3	The item in question is not in good working condition or as required in accordance with the relevant regulation, requires repair / renewal / rectification, is not functional or a limited functionality – is hazardous for vessel / crew.	Detained.

Annex 4

Example of an inspection checklist

Example of inspection checklist with explanatory notes for vessels of design categories C & D of up to 7 m LOA

(Note: Numbering and annexes refer to the Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels)

CHAPTER 1 – GENERAL PROVISIONS					Remarks/ Notes
1.1	**Purpose and scope**				
	Is the vessel covered by the scope of the recommendations?				
1.2.14	In which design category is the vessel assessed to be operating in?				
	Design category C		**OR** Design category D		

CHAPTER 2 – CONSTRUCTION, WATERTIGHT INTEGRITY AND EQUIPMENT					
Part 1	**General**				
	Are the general requirements met?				
2.2	**Construction, material and structure**				
	What is hull construction material?		Superstructure?		
2.2.1	Is the construction of the hull and other structures sufficient to withstand all conditions of intended service? Note: See Annexes II, III, IV and V.				
2.3	**Inlets and discharges**				
2.3.1	Are sea inlets fitted with valves?				
2.3.2	Are discharges passing through the hull fitted with non-return valves?				
2.3.6	Are penetrations prone to damage protected?				
2.4	**Drainage of partial decks**				
2.4.1	Are partial decks adequately drained?				
2.5	**Securing of heavy items**				
2.5.1	Are heavy items of equipment secured in position?				
2.6	**Anchor and mooring equipment**				
2.6.1	Is anchor and mooring equipment designed for quick and safe operation?				
	List size and weight of anchor and mooring equipment:				
	Is anchor and mooring equipment suitably sized?				
	Note: See Annex VI.				
Part 3	**Decked vessels**				
2.7	**Construction**				
	Are bulkheads fitted?		How many?		
	Is a collision bulkhead fitted?				
2.9	**Weathertight doors**				
2.9.1	Are openings in superstructures fitted with weathertight doors?				
2.9.2	Are sills in doorways and companionways at least 380 mm in height?				
2.9.3	Note: Heights may be reduced to 150 mm. And in design category D to 50 mm.				
2.10	**Hatchways**				
2.10.1	Are hatch coamings on the deck at least 300 mm in height?				
2.10.2	Note: Coamings may be reduced or omitted.				
2.10.3	Are covers fitted with clamping and gaskets? Note: Design category C only.				
	Note: See Annex VII.				
2.12	**Other deck openings**				
2.12.1	Note: If essential for fishing operations, flush deck covers may be fitted. These should be capable of being closed watertight.				

CHAPTER 2 – CONSTRUCTION, WATERTIGHT INTEGRITY AND EQUIPMENT		
2.13	**Ventilators**	
2.13.1	Are coamings of ventilators at least 450 mm? Note: This may be reduced.	
2.14	**Air pipes**	
2.14.2	Is the height of air pipes at least 450 mm? Note: This may be reduced provided a non-return arrangement is fitted.	
2.17	**Freeing ports**	
2.17.1	Are freeing ports fitted? Note: Closing devices should not be lockable.	
2.17.3	Are freeing ports sufficient to drain water from exposed deck?	
	Note: See Annex VIII.	
2.18.1	See 2.6.	

CHAPTER 3 – STABILITY AND ASSOCIATED SEAWORTHINESS		
3.1	**General**	
	Are the general requirements met?	
3.2, 3.3, 3.4	**Stability criteria**	
	Which stability criterion is to be applied to the vessel?	
	Does vessel meet the applicable stability criterion?	
	Note: See Annex XII.	
3.7	**Particular fishing methods**	
3.7.1	Is the vessel engaged in fishing methods where additional forces are imposed on during fishing operations?	
	Does the vessel meet the increased stability criterion?	
3.10	**Inclining test for decked vessels**	
	Is an inclining test required?	
3.11	**Built-in buoyancy for undecked vessels**	
3.11.1	Is vessel fitted with buoyancy compartments?	
	Are compartments filled with solid buoyancy material?	
	Is buoyancy demonstrated by a calculation and/or by a practical test?	
	Note: See Annex XIII.	
3.12	**Stability information**	
3.12.1	Is stability information available to the skipper?	
3.12.2	Is stability information posted on board?	

CHAPTER 4 – MACHINERY AND ELECTRICAL INSTALLATIONS				
4.1	**General**			
	Are the general requirements met?			
4.1.8	Are sufficient tools and parts carried as follows?			
Spare Parts	Motor:	Outboard	Inboard	
Manual for engine and other major equipment		X	X	
Parts for waterpump (impeller, gasket, etc.)		X	X	
Sparkplug		X		
Shearpin for propeller		X		
Split pins for propeller nuts		X		
Starting rope		X		
Propeller		X		
Stern gland packing			X	
Belts for alternators and pumps			X	
Lub oil filter			X	
Fuel oil filter (or cartridge) and filter spanner			X	
Water repellent oil/spray		X	X	
Engine oil, gear oil and grease			X	
Bolts, nuts, washers, screws, hoses and clamps to suit		X	X	
Glues, electrical tape, electrical wire, electrical connectors		X	X	

CHAPTER 4 – MACHINERY AND ELECTRICAL INSTALLATIONS					
Ropes and twine of varying types and diameters			X	X	
Bulbs and fuses for lights including navigation and torches			X	X	
Spare batteries for torches, radio equipment, etc.			X	X	
Parts for bilge pump(s).			X	X	
Tools		Motor:	Outboard	Inboard	
Spanners			X	X	
Socket set				X	
Adjustable spanners				X	
Spark plug spanner			X		
Pliers			X	X	
Screwdrivers			X	X	
Knife			X	X	
Multitester				X	
Hydrometer				X	
Hammer				X	
Wire cutters				X	
Hacksaw and spare blades				X	
Cold chisel				X	
Pipe wrench				X	
Torch			X	X	
Bailer			X	X	
4.2	**Propulsion machinery and stern gear**				
	How many engines are fitted?				
	What is installed power of engine(s)?				
	Is engine inboard or outboard?				
	Is engine petrol or diesel? Note: Diesel is recommended for inboards.				
4.2.5	Is there a means of securing the outboard engine to the transom?				
	For outboard engines over 15 kW is there a well draining overboard?				
	Is there an alternative means of propulsion such as oars, paddles or sails?				
4.3	**Shaft and propeller**				
4.3.2	Does the shaft diameter meet the requirements?				
4.4	**Engine starting**				
	Note: Not required for engines with hand starting.				
4.6	**Steering gear**				
4.6.3	Does the vessel have an alternative means of steering? Note: This may be a steering oar.				
	Note: See Annex XV.				
4.7	**Pumping and piping systems**				
4.7.1	Is a level gauge fitted on the fuel tank(s)?				
	Are both filling and air pipes fitted on the fuel tank(s)?				
	Is a valve fitted on the fuel line? Note: This should be fitted on the tank and be closable from outside the engine room.				
	Is the tank fitted with a drain valve?				
4.7.4	Is the portable petrol tank(s) for the outboard motor secured in place?				
4.7.5	How many cooling water inlets for machinery are there? Note: Preferred is one on either side of the hull or just one.				
	Is a strainer fitted after the sea inlet valve?				
	Are branch pipes fitted with isolating valves?				
4.7.6	Is a bilge pumping arrangement fitted? Note: Required for decked vessels.				
4.7.8	Where no pumps are fitted is there a means of manual bailing? Notes: 1) Applies to undecked vessels; 2) This may be a bucket, bailer or hand pump?				
4.7.9	Is a hand bilge pump fitted? Note: Decked vessels require at least one hand bilge pump.				

CHAPTER 4 – MACHINERY AND ELECTRICAL INSTALLATIONS		
4.7.15	**Exhaust systems**	
	See also Annex XVI.	
	Are exhausts discharging through the hull fitted with a non-return device?	
	Is a part of exhaust pipes at least 350 mm above waterline?	
	Are exhaust outlets at least 100 mm above the load waterline?	
4.8	**Ventilation of engine room**	
4.8.1	Are engine air intakes of adequate size? Note: See manufacturer's specifications.	
4.10	**Emergency source of electrical power**	
4.10.1	Is an emergency battery fitted? Notes: Required – 1) To supply emergency lights, radio and navigation lights for at least three hours; 2) For vessels operating more than 20 nautical miles from a safe haven.	
4.12	**Electrical systems**	
4.12.7	Are batteries fitted in enclosed boxes with covers, and sufficient ventilation? Note: Batteries in accommodation should be sealed and ventilated to open air.	
4.12.8	Is battery or bank fitted with isolation switch?	
4.12.9	Is there a means of checking the charge of the batteries?	
4.12.10	Are batteries secured to avoid movement due to motion of the vessel?	
4.12.12	Are the batteries used for engine starting separate from the batteries used for other services? Note: Starter batteries should be capable of starting the engine at least 6 times without recharging.	
	Note: See Annex XVII.	

CHAPTER 5 – FIRE PROTECTION AND FIRE FIGHTING					
Part 1	**General**				
	Are the general requirements met?				
5.7	**Number of fire-fighting appliances – undecked vessels**				
	Are the required fire-fighting appliances supplied/fitted?				
	Propulsion	No engine	Outboard	Inboard	
	Fire extinguisher	0	0	1 [c)]	
	Fire bucket or bailer	0 [a)]	1 [b)]	1 [b)]	
	a) Not required where other water container (e.g. bailer) is carried. b) Not required where two or more extinguishers are carried. c) The smallest vessels may be exempt from this requirement.				
5.8	**Number of fire-fighting appliances – decked vessels**				
5.8.1	Are two fire extinguishers fitted? Notes: 1) One should be located near the machinery space; 2) If two fire extinguishers are provided, a bucket for fire fighting should also be carried.				
5.8.2	Note: Vessels with outboard engines may have only one fire extinguisher.				

CHAPTER 6 – PROTECTION OF THE CREW				
6.1	**General protective measures**			
	Are the general requirements met?			
6.2	**Deck openings and doors**			
	Are the requirements met?			
6.3	**Bulwarks, rails and guards**			
6.3.1	Are bulwarks, guard rails or gunwales fitted? Note: These should be 1 m unless this would interfere with fishing operations.			
6.10	**Medical services**			
6.10.1	Are medical supplies, equipment and instructions provided?			
Basic first-aid kit		Essential	Recommended	
Bandage, band aids, sterile dressings		X		
Sterile gauze, adhesive tape		X		
Scissors		X		
Safety pins		X		

CHAPTER 6 – PROTECTION OF THE CREW				
Antiseptic cream		X		
Tweezers		X		
Liquid antiseptic			X	
Painkilling tablets			X	
Sunscreen			X	
Eyewash			X	
First Aid Book			X	
6.10.2	Are medical guide and instructions provided?			
6.10.4	Are instructions, including medical contact details, provided? Note: To enable the crew to consult with medical services ashore.			
6.11.10	Is a sun and weather shelter provided? Note: The shelter may also be used to collect rainwater or as an emergency sail.			

CHAPTER 7 – LIFE-SAVING APPLIANCES					
Part 1	**General**				
	Are the general requirements met?				
7.12	**Recommendations for design categories**				
	Are the required life-saving appliances supplied/fitted?				
Distance from safe haven:		≤ 5 nm	≤ 20 nm	≤ 100 nm	
Life raft				C▪ D■	
Buoyant apparatus			C1▪ D♣		
Life jacket•		C•D♦♣	C♦ D♦♣	C1♦ D♦♣	
Distress signals: 2 hand flares		C D	C D	C D	
Handrails or capsize rope		C D	C D	C D	
Whistle, mirror and torch		C D	C D	C D	
Means of recovering persons from the water		C D	C D	C D	
Wheelhouse top painted in visible colour and with identification marks		C D	C D	C D	
▪ The life raft may be substituted with a buoyant apparatus. ▪ Recommended. • For every person on board. • Life jacket may be substituted with a personal floatation device.					
7.11.4	Is a handrail or capsize rope fitted? Note: To allow persons to hold on to capsized vessel?				

CHAPTER 9 – RADIO COMMUNICATIONS		
Part 1	**General**	
	Are the general requirements met?	
9.9	**Equipment requirement for design categories C & D**	
	Is the required radio communications equipment supplied/fitted?	
	VHF or handheld VHF	
	Mobile (cellular) telephone. Note: In lieu of other requirements but only where local circumstances justify and for vessels exclusively within the coverage of a mobile telephone network.	
	Radio receiver to receive weather forecasts.	
	Note: See Annex XXVI.	

CHAPTER 10 – NAVIGATIONAL EQUIPMENT		
10.1	**Navigational equipment**	
10.1.1	Is a compass fitted? Note: This may be handheld.	
10.1.5	Is a means for determining the depth of water fitted?	
10.1.6	Is a radar reflector fitted?	
	Note: See Annex XXIX.	
10.3	**Signalling equipment and navigation lights**	
10.3.1	Does the vessel comply with the requirements of the International Regulations for Preventing Collisions at Sea?	

CHAPTER 10 – NAVIGATIONAL EQUIPMENT		
	Note: See Annex XXX Rule 23 (d).	
	What lights and equipment are fitted?	
10.5.1	Does deck lighting impair the visibility of navigation and signal lights required in 10.3?	

Notes/recommendations

1		
2		
3		
4		
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7		
8		
9		
10		
11		
12		

Signature	Date of inspection	

Annex 5

Vessel and boatbuilding sectors

Introduction

1 This Annex addresses factors that often have an adverse effect on safety construction and quality in general and presents arguments for the need to have a common approach to accreditation of boatbuilders. It also considers contractual arrangements between a buyer and a builder, as well as the obligations of a builder. In particular, proposals are made for the assessment of training needs within the boatbuilding sector.

Builders

2 The larger steels hulled vessels are usually constructed in reasonable to excellent vessel building facilities and in most cases national rules and regulations draw on the construction standards developed by vessel classification societies. Furthermore, many of these larger fishing vessels are built to classifications standards and enter into class. Consequently, in order for the vessel builders to comply with the standards so set, these vessel builders have to put in place related standards of training of the workforce.

3 Unfortunately, the same cannot be said for the small fishing vessels where the building facilities vary greatly from beach and backyard sites to well-appointed workshops; likewise, the standards of construction vary. A common issue is that there are few, if any, associations of boatbuilders that require or encourage the membership to follow recognized business practices and to meet acceptable technical standards for the design and construction of small fishing vessels. In addition, few if any of the small fishing vessel builders are members of professional engineering institutions or, for that matter, members of Chambers of Commerce. As a consequence, there are, in many instances, no formal contracts between the builder and the buyer and no drawings or specifications are available for scrutiny by fishing vessel inspection services. Thus, when a request for registration is received on completion of a vessel, it is a case of *fait accompli*. This would not be the case if a fishing vessel were to be built under the supervision of a vessel classification society, whether or not it is the intention for the vessel to enter into class on completion.

4 There is also no requirement in national legislation in many developing countries for a boatbuilder or boatbuilding company to be accredited by a government body or a government-approved non-governmental institution. Furthermore, there is no common approach to the approval of a boatbuilder by a competent authority and the instructions to fisheries officers and maritime authorities, as the case may be, are often too vague.

5 A more reasoned approach is obviously required if standards of safety construction of fishing vessels are to be improved through the application of the provisions of the instruments developed by FAO/ILO/IMO. Boatbuilders must also meet acceptable standards and that means a structured approach to training, better business practices, more informed government officers and compliance by the industry as a whole.

Contractual arrangements

6 Safety construction may also be improved through a more formal agreement between the buyer and a builder. Such contracts should reflect the requirements in regulations to the shipping/fisheries act, as the case may be, in relation to the procedures to be followed by both parties to the contract, a key point being that no construction should commence prior to the approval of the competent authority. In relation to the construction and final presentation of the complete vessel for registration, the interests of the buyer should be assured through a commitment by the builder to performance control by inspectors of the competent authority and any surveyor who may be appointed by the buyer.

Assessment

7 If standards of construction are to be improved and if there is to be an obligation in law for fishing vessel builders to comply, a system of technical education and training has to be in place. To do this, however, a complete assessment of the long-term needs must be carried out nationally and the results collated and analysed, possibly with the needs of a subregion in mind. The influence of vessel classification societies should also be assessed because they place demands on vessel and boatbuilders to meet levels of skills that a society requires of the trades involved. Some classification societies actually test individuals, usually on site, and issue clearance for the individuals to carry out certain tasks.

8 However, even if a vessel is not built to class or maintained in class, an inspector may rule that a boatbuilder or repairer does not have the expertise to carry out certain types of work and, in an extreme case, the boatbuilder may have to look elsewhere, even abroad, for assistance.

9 It is fairly clear that the scope of the assessment procedure would be quite wide and, although the tendency may be to investigate forms of institutional training, it should be borne in mind that traditional forms of training, such as apprenticeship schemes, must not be discounted.

Training*

10 Traditionally, vessel and boatbuilders have adopted apprenticeship schemes, often coupled with "off-the-job" classroom instruction leading to diploma and degree levels. This is common in the so-called shipbuilding sector, which also builds reasonably large fishing vessels, and the products of the training schemes often lead to persons who have the experience and qualifications looked for by the ship classification societies and competent authorities in relation to meeting their needs for fishing vessel inspectors, as indicated in Annex 1.

* The European Federation of National Engineering Associations (FEANI) maintains an index of courses at higher education institutions in its member countries. These courses are recognized by FEANI as fulfilling the education requirements for the EUR ING title. The index also contains brief descriptions of the education systems of these countries. The index contains approximately 14,000 engineering courses, each of which details its title, award and duration, and can be viewed on the FEANI web site (www.feani.org).

11 However, this is not always the case in the small-scale fisheries sector where skills are often passed on through family members and formal instruction is less common. Furthermore, although wooden hulls may remain the backbone of the small fishing vessel sector, the use of other materials, such as GRP, aluminium and other composite materials, is now widespread, all placing additional calls for training within the sector and for being able to retain the title of accredited boatbuilder.

12 Therefore, if boatbuilders are expected to meet better standards of construction and equipment (including servicing), it is reasonably clear that in the long term, training would have to be more structured and the needs determined when developing the safety strategy, as set out in chapter 2. In general, however, instruction should be available in:

.1 woodworking skills, including knowledge of suitable boatbuilding timbers, their treatment and storage;

.2 GRP construction including building conditions and storage and safe disposal of materials;

.3 steel construction skills, material selection, welding and testing; and

.4 aluminium construction skills, material composition, welding and inspection/ testing.

13 Due to varied materials and the latest developments in materials used in vessel construction, special attention should be given to training. Nevertheless, the objective should be to ensure that the needs of the competent authority and the boatbuilding industry are satisfied. In particular, training programmes should cover, *inter alia*:

.1 welding,* steel and aluminium;

.2 GRP and FRP; and

.3 timber.

14 At the technical level, the training should be designed to provide for those involved in overseeing welding operations/quality control (and fishing vessel inspectors) who need a practical working knowledge of welding.

15 Courses should be available to provide either a generalized background – or to target specific areas related to welding.

16 The European Federation of National Engineering Associations (FEANI) maintains an index of courses at higher education institutions in its member countries.

Curriculum development

17 In order to assess whether or not training can be obtained nationally or within a region or subregion, an understanding of the kind of training that is needed for each of the trades may require an exercise to be carried out in relation to curriculum development once the training needs mentioned above have been determined.

* www.welding.org

Accreditation

18 Some of the reasons for the lack of a formal approach to the accreditation of boatbuilders, as opposed to large vessel builders, are mentioned in the background above. For example, if, as mentioned earlier, a vessel were to be built under the supervision of a ship classification society, a certain seal of approval may be seen to accrue to the builder. In much the same way, when a request for approval to build a fishing vessel or significantly modify an existing vessel is submitted to a competent authority and where the proposed builder is so mentioned, subsequent approval for the work to be carried out may imply that the builder is competent.

19 One approach would be for competent authorities to maintain a record of boatbuilders that have been "approved" by the process mentioned above. Thereafter, the assessment of an inspection carried out, whether for new construction or refit and modification, would be entered in the record. The information contained in the record of "approved" boatbuilders may also be shared within a subregion.

20 Given the introduction of standards for the construction and survey of small fishing vessels, there should be no need for a "grandfather clause" because any boatbuilder involved in carrying out work on a fishing vessel to which the standards apply would have to be "approved" through the inspection process or otherwise rejected.

21 Recalling that any standards of construction so adopted would also apply to vessels imported, there could be an argument to partition the record to list the builders of imported vessels, but not to assign a seal of "approval" as such to the builder. It would, however, imply that the vessel met with the prescribed standards.

22 It should also be kept in mind that the approach to accreditation could be linked to requirements for inspectors of fishing vessels and, in particular, small fishing vessels because the assessment, as required for inspectors, would overlap with the assessment for boatbuilders as the former may be drawn from the ranks of the latter.

23 The purpose of welding skills training should be to teach the welding techniques and manipulative skills required for each major welding process. Technique should be stressed because the trainees must be able to meet the welding performance required by the competent authority. Consequently, less time would be allocated to theory.

Annex 6

Code for the conduct of an inspector of small fishing vessels

Introduction

1 This Annex gives guidance in relation to the conduct of a person authorized to carry out an inspection of a fishing vessel of less than 24 m in length. It offers a set of basic principles that could be given legal substance as and when a fishing vessel inspection service is determined to be necessary.

Due diligence

2 With regard to all stakeholders, there must be a clear understanding that diligence has to be exercised by the owner and or managers of a fishing vessel in relation to its maintenance and manning and to ensure that it is in a seaworthy condition when it puts to sea. A repairer, employed by the owner, must also exercise due diligence and, notwithstanding pressure by the owner, carry out repairs in a sound and proper manner. Persons authorized to inspect fishing vessels, on the other hand, have to be diligent at all times in the discharge of their duties in order to ensure that they would not be held negligent.

3 Whereas this proposed code of conduct is intended to give guidance to inspectors of small fishing vessels of less than 24 m in length, the general principles can be applied to the inspection of larger fishing vessels.

Basic principles

4 No local fishing vessel should be used for fishing or related activities unless there is in existence a valid certificate of seaworthiness issued in respect of that vessel.

5 The competent authority may at any time and without notice cause any fishing vessel to be inspected for the purpose of determining whether the vessel is seaworthy and fit for the purpose of fishing.

6 Any person authorized by the competent authority to inspect a small fishing vessel for seaworthiness should have appropriate qualifications and experience.

7 No person authorized by the competent authority to inspect a small fishing vessel should discriminate in form or in fact against classes of fishing vessels, ports of operation or builders of fishing vessels.

Ethics

8 Such persons so authorized by the competent authority to survey/inspect a fishing vessel for seaworthiness should demonstrate a high level of personal and professional integrity.

9 In the exercise of professional skills, such persons so authorized by the competent authority to inspect a small fishing vessel must recognize that meeting the demands of the fishing industry requires ability and commitment, often without regard for personal convenience. They must be diligent in the performance of their work on behalf of the competent authority.

Code of conduct for the inspection of a small fishing vessel

10 The purpose is to provide that all fishing vessels are built, maintained and operated in accordance with minimum acceptable standards.

11 Also, the purpose is to provide that the survey/inspection of a fishing vessel is conducted in a professional manner, consistent with high standards of integrity and fairness.

Conduct of inspections

12 It is recommended that a *fishing vessel inspector* be issued with a document of authority to inspect a fishing vessel.

13 Any inspection of an existing fishing vessel should be carried out in the presence of the skipper and or owner.

14 In the case of a fishing vessel under construction, the inspection should be carried out in the presence of the builder. The buyer should be advised when an inspection is planned in order that he or she may also be present.

15 In scheduling inspections, the *fishing vessel inspector* should take care to ensure that satisfaction and/or dissatisfaction is expressed at key stages of construction. In particular, dissatisfaction should be expressed as soon as the fishing vessel inspector has any doubt in order to avoid the builder continuing with work that might have to be undone at a later stage and to avoid dispute between builder and buyer.

16 When a *fishing vessel inspector* lacks the required expertise for a particular inspection, he or she can be assisted by any person with the required expertise and acceptable to the competent authority.

17 The *fishing vessel inspector* and any person assisting should have no commercial interest in the vessels under inspection.

18 In the event that *fishing vessel inspectors* attend the technical trials of a vessel and/or an inclining experiment or any other test, they should not assume command of the vessel.

19 Where a *fishing vessel inspector* is not totally satisfied with the state of a fishing vessel that is otherwise seaworthy, conditions may be entered in the record of the fishing vessel requiring the owners to take action within a limited time frame but not later than the next scheduled periodic survey.

20 Wherein a fishing vessel is deficient and the deficiency cannot be put right at the place of inspection, a *fishing vessel inspector*, having considered prevailing weather conditions, may allow the fishing vessel to proceed, providing the deficiency is not clearly hazardous to the safety of the vessel, its crew and the environment, to another place where the deficiency can be rectified, subject to any appropriate conditions determined by him or her as a consequence of the inspection.

21 Where, following any inspection, the vessel is found to be not seaworthy or is not fit for the purpose of fishing, a *fishing vessel inspector*, without delay, should recommend that the certificate of seaworthiness issued in respect of that vessel be withdrawn and the vessel prevented from going to sea.

Issue of certificates

22 A *fishing vessel inspector* should make a report of all inspections made and should give his or her signature in recommending that a certificate may be issued. Likewise, his or her signature should be given and the reasons so stated if the issue of a certificate is not recommended.

23 A *fishing vessel inspector* may be called upon to investigate the loss or destruction of a vessel, or its decommissioning as a fishing vessel, and may be required to recover the certificate of registration issued in respect of that vessel.

Advice given by the inspector

24 A *fishing vessel inspector* may be consulted from time to time by boatbuilders, boat repairers, fishermen and/or owners of fishing vessels and may give technical advice in this respect with regard to an Act, its regulations and schedules. Due diligence must be exercised and the limitations of the fishing vessel inspector should be recognized and, where doubt exists, the request should be referred to a more competent person.

25 Where advice is given in relation to types of vessels, machinery and equipment, a *fishing vessel inspector* should not have a financial interest in the business of the manufacturer(s) so recommended.

26 A *fishing vessel inspector* should not give technical advice that is inconsistent with the approved safety construction standards and safety equipment standards, set out in the regulations and or schedules to the appropriate Act.

Litigation

27 Unless there are provisions in national law stating otherwise, a *fishing vessel inspector* may be called as a "Witness of Fact" or as an "Expert Witness". Since oral examination is the only means by which the testimony and the bona fides of the witness

can be challenged without resorting to endless correspondence, the fishing vessel inspector must demonstrate:

.1 knowledge;

.2 integrity;

.3 rationality;

.4 communicability; and

.5 decisiveness.

28 A witness may be required to submit written reports. Thus a fishing vessel inspector must be able to prepare such reports in a concise and accurate manner and should not use terms that may convey more than one meaning. Similarly, photographic evidence must be composed in such a manner that it is aligned with and clearly illustrates the point or points so stressed in the report.

29 Where national law provides for the "Doctrine of Privilege" and in the event that legal proceedings could arise or be imminent, a fishing vessel inspector so concerned in the matter may submit a report to legal counsel (to the agency responsible for inspections of fishing vessels) for the purpose of receiving legal advice

Annex 7

Examples of relevant international agreements, both binding and voluntary

1 The following examples of international conventions and other legal instruments, agreements or arrangements having a bearing on those engaged in fishing and the design and construction of vessels, as well as their operations, are also supported by many resolutions and recommendations.

Standard specifications for the marking and identification of fishing vessels (FAO, 1989) (voluntary)

2 The purpose is to provide an aid to fisheries management and safety at sea through the marking of fishing vessels for their identification on the basis of the International Radio Call Signs (IRCS) system. The said marks should be visible on both sides of a vessel (hull or sail as the case may be) and on a horizontal surface. The word "vessel" in the specifications refers to any vessel intending to fish or engaged in fishing or ancillary activities operating, or likely to operate, in waters of States other than those of the flag State.

Code of Conduct for Responsible Fisheries (FAO, 1995) (voluntary)

3 One of the objectives of the Code is to ensure the long-term sustainability of living marine resources so that these can be harvested by generations to come, thus making a substantial contribution to world food security and employment opportunities. Article 8 of the Code of Conduct (see Annex 1) further develops the provision regarding fishing operations.

Convention on the International Regulations for Preventing Collisions at Sea (COLREGs), 1972

4 The Convention establishes principles and rules concerning lights and shapes to be displayed by vessels, as well as establishing traffic rules at sea.

International Convention for the Safety of Life at Sea (SOLAS), 1974, and Protocols

5 The Convention promotes safety at sea by establishing a common agreement, uniform principles and rules. Whereas the regulations do not apply to fishing vessels, unless expressly provided otherwise, chapter V (Safety of navigation) has to be addressed in the case of fishing vessels (except for those navigating the Great Lakes of North America and their connecting and tributary waters as far east as the lower exit of the St Lambert Lock at Montreal in the Province of Quebec, Canada).

International Convention on Maritime Search and Rescue, 1979

6 The Convention establishes an international maritime search and rescue (SAR) plan covering the needs for vessel reporting systems, SAR services and the rescue of persons in distress at sea.

Torremolinos International Convention on the Safety of Fishing Vessels, 1977, and the Torremolinos Protocol of 1993 relating thereto (not in force)*

7 These provide uniform principles and rules concerning construction, equipment, stability, radio communications and other safety aspects of fishing vessels.

Code of Safety for Fishermen and Fishing Vessels, Part A, 2005 (voluntary)

8 The purpose of Part A of the Code is to provide information with a view to promoting the safety and health of crew members on board fishing vessels. It may also serve as a guide for those concerned with framing measures for the improvement of safety and health on board fishing vessels but it is not a substitute for national laws and regulations. It addresses decked and undecked fishing vessels of all sizes and recognizes the important role of fisheries management in relation to fishing vessel and crew safety. Part A of the Code is amply supported by 20 relevant appendixes with regard to operational safety and health.

International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F), 1995

9 In establishing, by common agreement, international standards of training, certification and watchkeeping for personnel on board fishing vessels, the Convention desires to help promote the safety of life at sea and the protection of the marine environment. It makes provisions for personnel serving on fishing vessels of 24 m in length and above, for skippers and officers in charge of a navigational watch and for chief and second engineer officers where the main propulsion machinery of a fishing vessel is 750 kW or more.

10 The International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (1995) complements the Torremolinos Protocol by setting the regulatory framework for the training and certification of fishing vessel personnel.

11 The STCW-F Convention addresses training and certification standards for skippers and watchkeepers on fishing vessels of more than 24 m, for engineers on vessels with propulsion machinery of more than 750 kW and for crew in charge of radio communication. Importantly, it also requires basic (pre-sea) safety training for all fishing vessel personnel.

* The "Cape Town Agreement of 2012 on the Implementation of the Provisions of the 1993 Torremolinos Protocol relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977" replaces and supersedes the 1993 Torremolinos Protocol.

12 The Convention embraces the concept of competency-based training but does not deal with manning levels. While the Convention specifically relates to large fishing vessels, the IMO encourages national competent authorities to address the training and certification standards for crews of smaller vessels through relevant domestic laws.

13 Training is an obvious essential factor for improving safety. Training includes not only training that should take place before the fishermen step aboard the vessel, but also awareness training, life-saving and fire drills, and training focused on the particular equipment and operations on a specific vessel. As noted above, the basic international standard for the training of fishermen is the IMO's International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel, 1995, which provides international standards for such training.

Document for Guidance on Training and Certification of Fishing Vessel Personnel (voluntary)

14 This makes provisions for the training of personnel serving on fishing vessels of all sizes.

15 FAO, ILO and IMO have also prepared the Document for Guidance on Training and Certification of Fishing Vessel Personnel, which covers training and certification of crew members on small and large fishing vessels and fishing on an industrial scale. It is intended to provide guidance for those developing, establishing or reviewing national training schemes for training and certification programmes for crew members. The IMO has also developed several "model courses" to assist in the implementation of the STCW-F Convention.

International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)

16 Detailed regulations covering the various sources of pollution are contained in five annexes to the Convention. Annex V (Prevention of pollution by garbage from vessels) has a bearing on safety at sea, whether or not the garbage comes from a vessel or a fishing vessel. In the case of fishing vessels, accidentally lost, discarded and otherwise abandoned fishing gear may be a hazard to the safety of navigation.

International Convention on Tonnage Measurement of Ships, 1969

17 This Convention applies to vessels of 24 m in length and over.

18 The Convention provides for gross and net tonnages, both of which are calculated independently. The rules apply to all ships built on or after 18 July 1982 – the date of entry into force – while ships built before that date were allowed to retain their existing tonnage for 12 years after entry into force, or until 18 July 1994.

19 Gross tonnage forms the basis for manning regulations, safety rules and registration fees.

20 Both gross and net tonnages are used to calculate port dues.

Work in Fishing Convention (No. 188) and Recommendation (No. 199)

21 The Work in Fishing Convention (No. 188) addresses living and working conditions on board fishing vessels. The Convention is flexible, so that it is relevant to all types of commercial fishing and can be implemented by governments around the world, whatever their particular circumstances. Convention No. 188 has the objective to ensure that fishermen have decent conditions of work on board fishing vessels with regard to minimum requirements for work on board; conditions of service; accommodation and food; occupational safety and health protection; medical care; and social security.

22 The Convention addresses the following subject areas:

.1 the responsibilities of fishing vessel owners and skippers for the safety of the fishermen on board and the safety of the vessels;

.2 minimum age for work on board fishing vessels and for assignment to certain types of activities;

.3 medical examination and certification required for work on fishing vessels, with the possibility of exceptions for smaller vessels or those at sea for short periods;

.4 manning and hours of rest;

.5 crew lists;

.6 fishermens' work agreements;

.7 repatriation;

.8 recruitment and placement of fishermen, and use of private employment agencies;

.9 payment of fishermen;

.10 onboard accommodation and food;

.11 medical care at sea;

.12 occupational safety and health;

.13 social security; and

.14 protection in the case of work-related sickness, injury or death.

23 The Convention is supplemented by the Work in Fishing Recommendation, 2007 (No. 199), which provides additional guidance.

24 Those involved in the design and construction of fishing vessels (including fishing vessel owners) should in particular be familiar with Part V of the Convention (Articles 24 to 28), which concerns Accommodation and Food, and the related (mandatory) Annex III.* Annex III provides, *inter alia*, in the section entitled "Planning and control", that the competent authority shall satisfy itself that, on every occasion when a vessel is newly constructed or the crew accommodation of a vessel has been reconstructed, such vessel complies with the requirements of the Annex (which contains design and construction standards concerning: headroom; noise and vibration; ventilation; heating and air conditioning: lighting; sleeping rooms (size, equipment); persons per sleeping room; mess rooms; tubs, showers, toilets and washbasins; facilities for sick and injured fishers; recreational facilities; galley and food storage facilities; food and potable water; and clean and habitable conditions). For vessels of 24 m in length and over, detailed plans and information concerning accommodation shall be required to be submitted for approval to the competent authority, or an entity authorized by it. Furthermore, for vessels of 24 m in length and over, the competent authority is to inspect the accommodation for compliance with the requirements of the Convention on every occasion when the crew accommodation of the fishing vessel has been reconstructed or substantially altered, and when the vessel changes the flag it flies to the flag of the State. The competent authority may carry out additional inspections of crew accommodation at its discretion.

25 Other parts of the Convention, for example, those provisions concerning medical care on board, also will have an impact on the equipping of vessels (e.g. with medical supplies, communications equipment, etc.).

26 Even if a State has not ratified the Convention, it should be taken into account in order to ensure vessels have no difficulty operating in foreign waters, visiting foreign ports or being, at some future date, sold abroad and/or registered in other States.

* Note that paragraph 2 of Annex III includes a "grandfather clause" for vessels whose construction has begun prior to the Convention entering into force for the flag State (see paragraphs 1 and 2 for the precise text).

Annex 8

Annotated list of pertinent publications

FAO (www.fao.org)

FAO Technical Guidelines for Responsible Fisheries – Fishing Operations

The technical guidelines are given in support of the implementation of the Code of Conduct for Responsible Fisheries in relation to fishing operations. They are addressed to States, international organizations, fisheries management bodies, owners, managers and charterers of vessels, and fishermen and their organizations.

FAO Safety at sea as an integral part of fisheries management

This document provides a comprehensive overview of sea safety issues, and concludes that safety at sea should be integrated into fisheries management.

Report of the FAO/SPC regional expert consultation on sea safety in small vessels. Suva, Fiji, 9 to 13 February 2004

The Consultation was held in Suva from 9 to 13 February 2004. Discussions focused, in particular, on the significance of good sea accident data, mandatory requirements for vessel registration, vessel inspection and crew certification, enforcement of regulations in remote locations and training requirements for improving safety on small fishing vessels. This report lists a number of recommendations together with considerations relating to their implementation.

Aspects of sea safety in the fisheries of Pacific Island countries

This publication is the report of a survey of fisheries-related sea safety in the Pacific Islands region undertaken by FAO in 2003. It is intended to assist in sensitizing fisheries managers that sea safety is a legitimate and important objective of fisheries management, to focus more attention on small vessel safety and to lead to improved systems for recording/analysing sea accident data and making use of the results. It may also serve as a discussion document at any future meeting attended by motivated people from several relevant disciplines, focused on challenging issues, oriented to small vessels, having the objective of producing results with a positive effect on regional and national sea safety programmes.

Sub-Regional Workshop on Artisanal Safety at Sea, Banjul, the Gambia, 26 to 28 September 1994

A subregional workshop organized by the Integrated Development of Artisanal Fisheries in West Africa (IDAF) on safety at sea was held in Banjul, the Gambia from 26 to 28 September 1994. The objectives of the workshop were: to review the results of the national accidents survey; to identify the fundamental problems and examine information on the status of safety at sea activities in the different countries; and to prepare a draft proposal for a subregional project on safety at sea.

Safety Guide for Small Fishing Boats

The purpose of this safety guide is to present simple measures to ensure that new boats will satisfy internationally accepted safety standards. The guide deals mainly with small boats of less than 15 m in length, which, from experience, are most prone to accidents.

Final report of the project TCPproject/RLA/0069 Development of standards for the construction and inspection of small fishing vessels

The principal objectives of this FAO project were the practice and enforcement of prescribed standards for the construction of small fishing vessels through:

.1 ammendments to Fisheries Regulations of countries of the Organization of Eastern Caribbean States (OECS) and Barbados;

.2 an authorized system for the inspection of fishing vessels; and

.3 upgrading the technical skills of boatbuilders and inspectors.

ILO (www.ilo.org)

The majority of the publications mentioned below are available on the ILO web site, in particular at http://www.ilo.org/public/english/protection/safework/index.htm.

Guidelines on occupational safety and health management systems (ILO-OSH 2001)

The guidelines aim to contribute to the protection of workers from hazards and to the elimination of work-related injuries, ill-health, diseases, incidents and deaths. They provide guidance for the national and enterprise level, and can be used to establish the framework for occupational safety and health management systems.

Risks and dangers in small-scale fisheries: An overview. By M. Ben-Yami. Working paper

The working paper provides a comprehensive overview of the risks and dangers in small-scale and artisanal fisheries, including working conditions, safety approaches in developed and developing countries, accidents associated with the marine environment, navigation and fishing operations, and problems associated with boat design and construction, as well as other risks and dangers.

Other ILO codes of practice of possible interest to the fishing sector as a whole and in part to fishing activities:

Safety and health in ports, 2005

Ambient factors in the workplace, 2001

HIV/AIDS and the world of work, 2001

Technical and ethical guidelines for workers' health surveillance, 1998

Recording and notification of occupational accidents and diseases, 1996

Safety in the use of chemicals at work, 1993

Safety in the use of asbestos, 1984

Protection of workers against noise and vibration in the working environment, 1977

Safety and health in vessel building and vessel repairing, 1974

SafeWork training manuals

ILO's SafeWork has prepared a number of documents that could be used as teaching manuals and/or as teachers' guides for occupational safety and health courses organized by employers, workers' organizations or educational institutions. Though not specifically aimed at the fishing sector as a whole, these documents may be very useful for addressing such issues as noise and vibration, ergonomics, controlling hazards and AIDS.

Ergonomic checkpoints

A collection of practical, easy-to-use ergonomic solutions for improving working conditions, this fully illustrated easy-to-use manual is an extremely useful tool for everyone who wants to improve working conditions for better safety, health and efficiency. Each of the 128 checkpoints has been developed to help the user look at various workplaces and identify practical solutions which can be made applicable under local conditions. This manual has been developed jointly with the International Ergonomics Association, 1996.

International Hazard Datasheets on Occupation, Diver, Indigenous Fishers

The International Hazard Datasheets on Occupations is a multipurpose information resource containing information on the hazards, risks and notions of prevention related to a specific occupation. These datasheets are intended for those professionally concerned with health and safety at work including: occupational physicians and nurses, safety engineers, hygienists, education and information specialists, inspectors, employers' representatives, workers' representatives, safety officers and other competent persons.

WHO (www.who.int/en/org)

International Medical Guide for Vessels

Guide to Vessel Sanitation (as amended)

Others

European Union Council Directive 92/29/EEC on minimum safety and health requirements for improved medical treatment on board vessels

IEC Publication 60079

Nordic Boat Standard, 1991. (www.sigling.is)

Possible Framework for a Model Maritime Administration. Hubbard and Hope.

Maritime Occupational Safety Regulations, 1994. Chapters I & IV. (www.samsa.org.za)

Code of Safe Working Practice for Fishing Vessel. (www.samsa.org.za)

The FAO/ILO/IMO Implementation Guidelines are intended for the attention of maritime, labour and fisheries ministries and any other relevant government ministry as and when it is decided to implement the three FAO/ILO/IMO instruments on the design, construction and equipment of fishing vessels of all types and sizes. Those instruments are Part B of the Code of Safety for Fishermen and Fishing Vessels, the Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels, and the Safety Recommendations for Decked Fishing Vessels of Less than 12 metres in Length and Undecked Fishing Vessels. While the intention is not to provide a single prescription to improve safety, the Guidelines do seek to raise awareness and offer guidance on a broad range of issues which must be addressed in an effective and holistic manner. In this regard, the cooperation and coordination between maritime, labour and fisheries administrations is important, particularly where the responsibilities for safety of fishing vessels are divided under relevant Acts. The Implementation Guidelines cover areas such as: development of a safety strategy; legal implications; administrative requirements; capacity-building; training of crew members; enforcement of regulations; and operational safety. Although the main purpose of the Implementation Guidelines is to assist competent authorities in the implementation of voluntary instruments, it could also be useful when implementing the provisions of the Cape Town Agreement of 2012 on the Implementation of the Provisions of the 1993 Protocol relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977.

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