

## **BACKGROUND PAPER ON POSSIBLE COMPONENTS FOR REGIONAL VESSEL AND GEAR MARKING SYSTEMS**

Prepared by the Secretariat

### **I. PREPARATION OF THIS DOCUMENT**

1. The Preparatory Conference for the establishment of the Commission for the Conservation and Management of the Highly Migratory Fish Stocks for the Western and Central Pacific (PrepCon) at its fourth session in Nadi (PrepCon IV), Fiji, requested the interim secretariat to prepare a background paper on a regional vessel and gear marking system for consideration at PrepCon V. Accordingly, the interim secretariat has prepared this background paper in consultation with the technical staff of the Fisheries Technology Service (FIIT) of the Fisheries Department of the Food and Agriculture Organization of the United Nations.

2. The background paper presents essential considerations for developing a regional fisheries management organization vessel and gear marking systems and provides proposals for such systems. It should be noted that while the background paper seeks to address as many needs of the PrepCon and eventually the Commission as possible, it has been prepared with the objective that it should also be relevant to the development of regional vessel and gear marking systems in general. The proposals on a regional vessel and a fishing gear marking system are presented herein with the objective of stimulating discussion and in no way precludes improvement of the proposals.

### **II. INTRODUCTION**

3. Vessel and gear marking for rapid identification greatly facilitates MCS activities. For this reason, vessel and gear marking requirements are essential components of an effective monitoring control and surveillance (MCS) system and consequently, sound fisheries management. It is also agreed that rapid identification of vessels will enhance safety at sea and greatly facilitates effective search and rescue operations.

4. Relevant international fisheries instruments such as the *United Nations Agreement for the Implementation of Certain Provisions of the Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (Fish Stocks Agreement), the *FAO Code of Conduct for Responsible Fisheries* (the Code) and the *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas* (Compliance Agreement) require that vessels be marked in a manner that will make them easily identifiable. Only the former two international fisheries instruments require that fishing gear be marked for the same

reason. The requirement in these instruments for vessel and gear marking for easy identification is based on flag state responsibility.

5. Article 18 of the Fish Stocks Agreement provides that the measures to be taken by a State in relation to vessels flying its flag shall include “*requirements for marking of fishing vessels and fishing gear for identification in accordance with uniform and internationally recognizable vessel and gear marking systems, such as the Food and Agriculture Organization of the United Nations Standard Specification for the marking and identification of fishing vessels*”. The significance of vessel identification in particular is underlined further by article 21(11)(f) which provides that concealing the markings, identity or registration of a fishing vessel is a serious violation.

6. The Compliance Agreement in Article III provides, in respect of the requirement for vessel markings, that “*each Party to the Agreement shall ensure that all fishing vessels entitled to fly its flag that it has entered in the record maintained under Article IV are marked in such a way that they can be readily identified in accordance with generally accepted standards, such as the FAO Standard Specifications for the Marking and Identification of Fishing Vessels.*”

7. The Code requires in Article 8.2.3, in respect of markings of fishing vessels that “*[f]ishing vessels authorized to fish on the high seas or in waters under the jurisdiction of a State other than the flag State, should be marked in accordance with uniform and internationally recognizable vessel marking systems such as the FAO Standard Specifications and Guidelines for Marking and Identification of Fishing Vessels*”. In respect of gear markings, Article 8.2.4 requires that “*[f]ishing gear should be marked in accordance with national legislation in order that the owner of the gear can be identified*” and that “*[g]ear marking requirements should take into account uniform and internationally recognizable gear marking systems*”.

8. The *FAO Technical Guidelines on Responsible Fisheries 1, Fishing Operations* (Guidelines on Fishing Operations), reinforces the Code by requiring a State to ensure that vessels entitled to fly its flag are marked in accordance with the Standard Specification and Guidelines approved by the FAO Committee on Fisheries (COFI) at its 18th Session, Rome, 10-14 April 1989 (see Annex II of the Guidelines on Fishing Operations) for adoption on a voluntary basis. The Guidelines on Fishing Operations further provide that national legislation should also contain a requirement for the marking of fishing gear and fishing implements in order to identify the owner of the gear. Such requirements should take into account uniform and internationally recognizable gear marking systems. Nets, lines and other gear anchored in the sea as well as fish aggregating devices and nets, lines or fish aggregating devices which drift in the sea should also carry marks to indicate their position and the extent of the gear. Further details are given in Annex III (“*Standard Specifications for the Marking of Fishing Gear*”) and Annex IV (“*Guidelines for the Application of a Standard System of Lights and shapes for the identification and Location of Fishing Gear*”) of the Guidelines on Fishing Operations.

9. The *International Plan of Action to Prevent, Deter and Eliminate Illegal Unreported and Unregulated Fishing* (IPOA-IUU) adopted under the auspices of FAO is the most recent fisheries international instrument that contains requirements relating to vessel and gear markings. Under the requirement that States should ensure that all fishing by their nationals are authorised, the IPOA-IUU provides that States should ensure that authorised vessels are marked in accordance with internationally recognized standards such as the *FAO Standard Specification and Guidelines for the Marking and Identification of Fishing Vessels*. Vessels’ fishing gear should similarly be marked in accordance with internationally recognized standards (see paragraph 47.8).

10. The *FAO Technical Guidelines for Responsible Fisheries 9, Implementation of the International Plan of Action to Prevent Deter and Eliminate Illegal Unreported and Unregulated Fishing* (IPOA-IUU Guidelines) re-emphasises this requirement. It also encourages States to cooperate with others including through regional fisheries management organizations (RFMOs) to prevent, deter and eliminate IUU fishing.

11. It can be safely deduced from the review of international fisheries instruments mentioned above that the requirements for action on markings of vessels and fishing gear are global in scope and applies also to subregional, regional and global organizations concerned with the conservation of fishery resources and management and development of fisheries. States, within their respective competences and in accordance with international law including within the framework of subregional or regional fisheries conservation and management organizations or arrangements, are required to ensure compliance with and enforcement of conservation and management measures and establish effective mechanisms, as appropriate, to monitor and control the activities of fishing vessels and fishing support vessels.

12. Evidently, the parties to the *Convention for the Conservation and Management of the Highly Migratory Fish Stocks of the Western and Central Pacific Ocean* (the Convention) were mindful of the importance of vessel and gear markings in the Commission's effort in conserving and managing the highly migratory fish stocks of the western and central Pacific Ocean. They were also very well aware of their commitments, binding or otherwise, under the international fisheries instruments reviewed above. In recognition of these needs and requirements, specific reference is made to the need to make recommendations on vessel and gear marking for consideration by the Commission (Article 14 (Functions of the Technical and Compliance Committee) and Annex III, (Terms and conditions for fishing) Article 6(3)). The PrepCon's agreement at its fourth session in Nadi, Fiji to examine the development of vessel and gear marking systems, simply underscores the significance of these systems for sound fisheries management and seeks to implement the obligations of the members of the Commission as stipulated under the Convention.

### III. PROPOSED COMPONENTS FOR A REGIONAL VESSEL AND GEAR MARKING SYSTEM AND CONSIDERATIONS IN DEVELOPING SUCH SYSTEMS

13. The proposals for a regional vessel and gear marking system for consideration by the Preparatory Conference are respectively presented in **Annex A** and **Annex B** to this Background Paper. The proposals were prepared against the following background.

14. An obvious starting point for developing a regional system for vessel and gear marking is the consideration of international commitments and guidelines as set out in legal and voluntary fisheries conservation and management international instruments outlined above. The clear direction stipulated in these international instruments is that vessels and gear should be marked **in accordance with internationally recognized standards or systems**.

15. With respect to vessel markings, the reference to the *FAO Standard Specifications for the Marking and Identification of Fishing Vessels* in international fisheries instruments is overwhelming. Therefore, the use of this international specification as the principal reference document is unavoidable (attached as **Annex C**) and is so used in the preparation of the proposed components for the regional vessel marking system.

16. One internationally recognised national vessel marking system is that which has been developed by Malaysia for vessel marking and identification. This system is part of Malaysia's licensing and registration system that has met ISO 9000 standards (included in **Annex D**). The Malaysian vessel marking system incorporates the use of colour coding, which is linked to a fisheries zoning system (4 zones designated A-B), with a numbering system so that the operational limits of a vessel is quickly ascertained by the zone colour and letter. It should be noted however that Malaysia is not the only country using colour codes for vessel marking as such systems are also in use in, for example, the US particularly in the Fisheries of the Caribbean Gulf and South Atlantic, the Spiny Lobster Fishery of the Gulf of Mexico and South Atlanta and Stone Crab Fishery of the Gulf of Mexico. It should be noted also that the Malaysian marking system applies to fishing gear. The Malaysian system may be worth considering in the development of a vessel and gear marking system, particularly and perhaps initially for developing a national marking system, where there are designated fisheries by species, method of fishing or geographical area. This latter point underscores the importance of ensuring that the Commission has the ability to review and improve the vessel marking system when the need arises and in light of technical advancements in vessel and gear marking or general changes. The proposed components for regional vessel and gear marking systems attempt to cover this concern.

17. With respect to developing a gear marking system, the specification in international circulation and consistently referred to, is the *FAO Recommendations for the Marking of Fishing Gear* (FAO 1991) which forms the basis of the proposal in **Annex III Standard Specifications for the Marking of Fishing Gear in the Guidelines on Fishing Operations**. (see **Annex E**). This specification is used as the principal reference document in developing the proposal for the regional gear marking system. While the primary objective of this Background Paper is to propose a vessel and gear marking system, consideration should also be given to the Rules for the Marking of Nets, Lines and other Gear to Indicate Position (see Appendix 3 of *FAO Recommendations for the Marking of Fishing Gear*) which has been developed into the *Standard System of Lights and shapes for the identification and Location of Fishing Gear* in the *FAO Guidelines on Fishing Operations* (**Annex F**) which, if permitted to be developed for a RFMO in parallel or in the future to complement the gear marking system, would comprehensively address concerns related to the need for fishing gears to be marked. This was also taken into account in developing the attached proposals.

18. Global trends should also be considered in developing regional vessel and gear marking systems. To this end, the trends based on state practice in the central and western Pacific region and globally, were considered in developing the proposals. The basic finding of the analyses of the requirements relating to vessel and gear marking in national legislation of the States in the central and western Pacific Ocean region (the Participants of PrepCon) and that of selected States is that a majority of the States' legislation prescribe specifications for vessel marking consistent with the *FAO Standard Specifications for the Marking and Identification of Fishing Vessels*. While there are many varieties of gear marking systems in use globally, the *FAO Recommendations for the Marking of Fishing Gear* is the main initiative which attempts to create a common system with basic commonalities. It is for this reason that the *FAO recommendations* are used as the principal reference document for the development of a regional fishing gear marking system.

19. The practice of RFMOs and multilateral agreements or arrangements was also looked at. In terms of fishing vessel marking systems, a majority of the agreements and arrangements (e.g. US Treaty) adopt and apply vessel marking systems consistent with the *FAO Standard*

*Specifications for the Marking and Identification of Fishing Vessels* with modifications to reflect the fishery.

20. A regional vessel and gear marking system has to take into account the peculiarities of the regional fisheries. The fisheries of the central and western Pacific Ocean of immediate concern to the Commission by virtue of the Convention is the tuna fisheries (mainly the industrial pole and line, long line and purse seine tuna fisheries).

21. As is evident from the relevant international instruments reviewed above, internationally recognised vessel marking systems and national legislation, a vessel marking system exists and is applied in the context of and in association with a fishing authorisation regime and a vessel registration or record system. In this respect, the Convention requires that a member of the Commission shall ensure that a vessel flying its flag does not fish in the Convention area beyond its national jurisdiction without an authorisation (Article 24). Members of the Commission are also required to maintain a record of fishing vessels authorised to fish in the Convention area beyond its national jurisdiction. The Convention establishes a regional record to which all members of the Commission send information regarding the vessels that are authorised to fish in the Convention area beyond areas under their national jurisdiction. The proposed vessel marking system is designed in this context, in particular that vessels marking requirements shall be met as a condition of an authorisation (licence) and non compliance is an offence which may also be used to deny future issuance of authorisation to the offending fishing operator.

22. Gear marking systems requirements are also operated in association with a fishing authorisation system and as a condition of authorisation. The proposed regional gear marking system is also developed in that context.

23. Above all considerations, Article 6(3) of Annex III of the Convention specifies in clear terms that **“vessels shall be marked and identified in accordance with the FAO Standard Specifications for the Marking and Identification of Fishing Vessels or such alternative standard as may be adopted by the Commission”**. It seems therefore that the choices for a vessel marking system for the Commission would be to either reconfirm that the applicable vessel marking system is the *FAO Standard Specifications for the Marking and Identification of Fishing Vessels* or to develop an alternative. The proposed specifications follows the former option, i.e. that the applicable system is the *FAO Standard Specifications for the Marking and Identification of Fishing Vessels* but also assumes that the members of the Commission would wish to modify it so that it directly applies to the operators of vessels of the members of the Commission.

24. Both proposals are presented in a manner that makes them directives rather than being also descriptive in character as is the case with the *FAO Standard Specifications for the Marking and Identification of Fishing Vessels* and the *FAO Recommendations for the Marking of Fishing Gear*. Although the proposals retain the basic requirements of the FAO systems/recommendations, an attempt is made to also make them relevant for the members of the Commission and the fisheries of the western and central Pacific Ocean.

25. In conclusion, it should be noted as associated issues that vessel and gear marking requirements of other RFMOs are part of their larger MCS and enforcement schemes. Thus, the Commission’s vessel and gear marking system might have to be integrated into the wider MCS and enforcement requirements. Thought should therefore be given at a later stage as to how to incorporate the proposed vessel and gear marking systems into the regional MCS scheme perhaps by reference in the general MCS scheme to the adopted marking systems or by assimilating it into

the MCS scheme itself such as is done in a general way in the Northwest Atlantic Fisheries Organization (NAFO) Conservation and Enforcement Measures. Thought should also be given to the procedures for reviewing, amending or enhancing the adopted systems for marking of vessel and fishing gear, including looking at innovative approaches such as the marking of fishing gear which appears to have been used in contravention of conservation measures in effect under the system of inspection of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR). Above all, the Commission in adopting vessel and gear marking systems should be able to adapt its vessel and gear marking systems to changing circumstances including reflecting advances in technology in vessel and gear marking which do not undermine the objectives for which vessel and gear requirements are established in the first place.

#### IV. REFERENCES

FAO 1985, Report of the Expert Consultation on Fishing Vessel Markings, Halifax, Nova Scotia, Canada, 11-15 March 1985 (FAO Fisheries Report No.343)

FAO 1986, Report of the World Conference on Fisheries. Management and Development, Rome, 16-20 June 1986 (FAO Fisheries Report No.367)

FAO 1989, Report of the Eighteenth Session of the FAO Committee on Fisheries, Rome, 10-14 April 1989 (FAO Fisheries Report No.416). Annex II 2

FAO 1993 Report of the Expert Consultation on the Marking of Fishing Gear, Victoria, British Columbia, Canada 1991, Rome, 1993.

FAO 1993a, Fisheries Report No. 485 Supplement, FAO Recommendations for the Marking of Fishing Gear, Supplement to the Report of the Expert Consultation on the Marking of Fishing Gear, Victoria, British Columbia, Canada 1991, Rome, 1993.

FAO 1995, The Code of Conduct for Responsible Fisheries,

FAO 1996, The FAO Technical Guidelines on Responsible Fisheries, no. 1, Fishing Operations

FAO 2001, The International Plan of Action to Prevent, Deter and Eliminate Illegal Unreported and Unregulated Fishing (IPOA-IUU)

FAO 2002, Technical Guidelines for Responsible Fisheries 9, Implementation of the International Plan of Action to Prevent Deter and Eliminate Illegal Unreported and Unregulated Fishing, Rome 2002

FAO 2003, Recent trends in monitoring control and surveillance systems for capture fisheries, FAO Fisheries Technical Paper 415, Rome 2003

#### **International Fisheries Agreements and instruments**

Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas

An Arrangement Implementing the Nauru Agreement Setting forth Minimum Terms and Conditions of Access to the Fisheries Zones of the Parties

Convention for the Conservation and Management of the Highly Migratory Fish Stocks of the Western and Central Pacific Ocean

Convention on Conduct of Fishing Operations in the North Atlantic

Convention on the Conservation and Management of Fishery Resources in the South East Atlantic Ocean

Convention on the conservation and management of fishery resources in the South-East Atlantic Ocean 20 April 2001

Niue Treaty on Cooperation in Fisheries Surveillance and Law Enforcement in the South Pacific Region

Northwest Atlantic Fisheries Organization Conservation and Enforcement Measures NAFO/FC Doc. 03/1A.

Treaty on Fisheries between the Governments of Certain Pacific Island States and the Government of the United States of America.

The Harmonised Minimum Terms and Conditions for Foreign Fishing Vessel Access (FFC)

The Federated States of Micronesia Arrangement for Regional Fisheries Access

The North East Atlantic Fisheries Commission Recommendation on a Scheme of Control And Enforcement In Respect of Fishing Vessels Fishing in Areas Beyond the Limits of National Fisheries Jurisdiction in the Convention Area, 1 July 1999.

Text of the CCAMLR System of Inspection

United Nations Agreement for the Implementation of Certain Provisions of the Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

**Samples of national legislation reviewed**

*Australia*

Fisheries Management Act 1991 as amended  
Fisheries Management Regulations 1992 as amended

*Canada*

Fisheries Act [R.S. 1985, c. F-14]  
Fishery General Regulations [SOR/93-53]

*European Union*

Commission Regulation (EEC) No 1381/87 of 20 May 1987 establishing detailed rules concerning the marking and documentation of fishing vessels.

*Marshall Islands*

Marine Resources Act 1997

*Mauritius*

The Fisheries and Marine Resources Act 1998

*Namibia*

Marine Resources Act 2000

Marine Resources Regulations 2001

*Solomon Islands*

The Fisheries Act 1998

*Tonga*

Fisheries Management Act 2002

*USA*

Title 50 – Wildlife and Fisheries

Chapter III – International Fishing and related Activities,

Part 285 – Atlantic Tuna Fisheries

Part 300 – International Fishing Regulations

Subpart B High Seas Fisheries

Subpart D South Pacific Tuna Fisheries

Subpart G Antarctic Marine Living Resources

Subpart H Vessels of the United States Fishing in Colombian Treaty Waters

Chapter VI – Fishery Conservation and Management National Oceanic and Atmospheric Administration, Department of Commerce, - Part 600

Part 635 Atlantic Highly Migratory Species

Part 660 Fisheries off West Coast States and in the Western Pacific

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## ANNEX A

### Proposed Specifications for the Marking and Identification of Fishing Vessels [in the Convention Area]

Referring to:

- the objective of the Convention and in particular Articles 10 and 14 and Annex III of the Convention;
- the need to adopt generally recommended international minimum standards for the responsible conduct of fishing operations and, to this end, the utility of adopting internationally recognized vessel marking standards,

the Commission adopts the following specifications:

#### 1. GENERAL PROVISIONS

##### 1.1 Purpose, basis and scope

1.1.1 These specifications, based on the FAO Standard Specifications for the Marking and Identification of Fishing Vessels, the International Telecommunication Union's system for the allocation of signs to countries for ship stations (the International Communication Union Radio Call Signs) and generally accepted design standards for lettering and numbering:

- a) recognizes the utility of the use of an established international system from which the identity and nationality of vessels can be readily determined, irrespective of size and tonnage, and for which a register is maintained;
- b) is without prejudice to international conventions, national or bilateral practices;
- c) is cognizant of the desirability of keeping the costs implementation and maintenance for fishing operations to a minimum;
- d) facilitates search and rescue operations; and,
- e) contribute to sound fisheries management, in particular, responsible fishing operations and safety at sea,

in the Convention Area.

1.1.2 These specifications apply to the operation of fishing vessels of the members of the Commission authorized to fish in the Convention Area beyond the areas of national jurisdiction in accordance with the Convention.

1.1.3 These specifications shall be interpreted and applied in the context of and in a manner consistent with the Convention.

##### 1.2 Definitions

For the purpose of these Specifications:

“Convention” means the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean.

“deck” means any surface lying in the horizontal plane, including the top of the wheelhouse;

“FAO Standard Specifications for the Marking and Identification of Fishing Vessels” means the Standard Specification and Guidelines approved by the FAO Committee on Fisheries (COFI) at its 18th Session, Rome, 10-14 April 1989;

"vessel" means any vessel intending to fish or engaged in fishing or ancillary activities and authorized by a member of the Commission to fish in the Convention area beyond areas of the member's national jurisdiction, and includes a boat, skiff or craft (including aircraft) carried on board the vessel and required for fishing operations;

“operator” means any person who is in charge of or directs or controls a vessel, or for whose direct economic or financial benefit the vessel is being used, including the master, owner, and charterer;

## **2. REQUIREMENTS AND APPLICATION**

### **2.1 General requirements**

2.1.1 The members of the Commission shall ensure that operators of the vessels:

- (a) subject to these specifications, identify and mark their vessels in accordance with the FAO Standard Specifications for the Marking and Identification of Fishing Vessels;
- (b) are required to mark the vessels for their identification with their International Telecommunication Union Radio Call Signs (IRCS);
- (c) except as provided for in paragraph 2.2.5 below, mark vessels to which an IRCS has not been assigned, with the characters allocated by the International Telecommunication Union (ITU) to the member of the Commission and followed by, as appropriate, the fishing authorization or vessel registration number assigned to the vessel by the member of the Commission. In such cases, a hyphen shall be placed between the nationality identification characters and the licence or registration number identifying the vessel.

2.1.2 In order to avoid confusion with the letters **I** and **O**, members of the Commission shall not allocate the numbers **1** and **0**, as fishing authorization or registration numbers.

2.1.3 The members of the Commission shall ensure that:

- (a) apart from the vessels name or identification mark and the port of registry as may be required by international practice or national legislation, the marking system as specified shall be the only other vessel identification mark consisting of letters and numbers to be painted on the hull or superstructure;
- (b) the requirement for the marking of fishing gear in accordance with these specifications is a condition for authorization to fish in the Convention Area;
- (c) the:
  - (i) non compliance with these specifications;
  - (ii) non marking or wrongful marking of vessel;
  - (iii) deliberate removal of the vessel mark;
  - (iv) the use of a mark allocated to another operator or to another vessel;

is an offence against national legislation; and

- (d) ensure that vessel marking or related offence is as a ground for refusing authorization to fish.

### **2.2 Markings and other technical specifications**

2.2.1 The member of the Commission shall ensure that the Operator displays the markings in the English language prominently at all times:

- a) on the vessel's side or superstructure, port and starboard. Operators may place fixtures that are inclined at an angle to the vessel's side or superstructure provided that the angle of inclination would not prevent sighting of the sign from another vessel or from the air;
- b) on a deck, except as provided for in paragraph 2.2.4 below. Should an awning or other temporary cover be placed so as to obscure the mark on a deck, the awning or cover shall also be marked. These marks should be placed athwartships with the top of the numbers or letters towards the bow.

2.2.2 The member of the Commission shall ensure that that the Operator places the marks:

- a) as high as possible above the waterline on both sides of the vessel and that such parts of the hull as the flare of the bow and the stern are avoided;
- b) in a manner that does not allow the marks to be obscured by the fishing gear whether it is stowed or in use;
- c) so that they are clear of flow from scuppers or overboard discharges including areas which might be prone to damage or discolouration from the catch of certain types of species; and,
- d) so that they do not extend below the waterline.

2.2.3 Undecked vessels shall not be required to display the markings on a horizontal surface. However, operators should be encouraged by the member of the Commission, where practical, to fit a board on which the markings are placed so that they may be clearly seen from the air.

2.2.4 Boats, skiffs and craft carried by the vessel for fishing operations shall bear the same mark as the vessel concerned.

2.2.5 The members of the Commission shall ensure that Operators comply with the technical specifications of letters and numbers in 3.1 and painting in 3.2 of the FAO Standard Specifications for the Marking and Identification of Fishing Vessels with due consideration for the need to reflect proportionality between the size of vessel identification marks and the size of the vessel without compromising the need for ease of identification for responsible fishing operations, safety at sea and viability of search and rescue operations. In particular operators shall, in placing identification marks on the vessel, ensure:

- (a) that block lettering and numbering is used throughout;
- (b) that the width of the letters and numbers is in proportion to the height;
- (c) the height (h) of the letters and numbers is in proportion to the size of the vessel in accordance with the following:
  - (i) for marks to be placed on the hull, superstructure and/or inclined surfaces:

<u>Length of vessel overall (LOA) in meters (m)</u>	<u>Height of letters and numbers in meters (m) is not less than:</u>
25 m and over	1.0 m
20 m but less than 25 m	0.8 m
15 m but less than 20 m	0.6 m
12 m but less than 15 m	0.4 m
5 m but less than 12 m	0.3 m
Under 5 m	0.1 m

- ii) for marks to be placed on deck: the height is not less than 0.3 m for all classes of vessels of 5 m and over;
- (d) that the length of the hyphen is half the height of the letters and numbers;
- (e) the width of the stroke for all letters, numbers and the hyphen is  $\frac{h}{6}$ ;
- (f) the space between letters and/or numbers does not exceed  $\frac{h}{4}$  nor be less than  $\frac{h}{6}$ ;
- (g) the space between adjacent letters having sloping sides does not exceed  $\frac{h}{8}$  nor be less than  $\frac{h}{10}$ ; for example A V.
- (h) that the marks shall be white on a black background, or black on a white background;
- (i) the background shall extend to provide a border around the mark of not less than  $\frac{h}{6}$ ;
- (j) that good quality marine paint is used throughout;

- (k) that the mark meets the requirements of these Specifications where retro-reflective or heat-generating substances are used; and,
- (l) the marks and the background are maintained in good condition at all times.

#### **4. RECORD OF VESSEL MARKS AND FISHING AUTHORISATION NUMBERS**

4.1 The members of the Commission shall:

- (a) in addition to the information required under Annex IV of the Convention, enter the identification marks of vessels or fishing authorization numbers of such vessels into the record of fishing vessels required to be maintained under article 24, paragraph 4 of the Convention.
- (b) provide annually to the Commission, the identification marks of vessels or fishing authorization numbers of such vessels to the Commission and shall promptly notify the Commission of any modification to such information.

#### **5. REVIEW AND AMENDMENT OF SPECIFICATION**

5.1 The Commission shall:

- (a) regularly review the specifications and amend them as appropriate; and
- (b) inform the members of the Commission of amendments to the specifications.

## ANNEX B

### Proposed Specifications for the Marking and Identification of Fishing Gears [in the Convention Area]

Referring to:

- the objective of the Convention and in particular Articles 10 and 14 of the Convention;
- the need to adopt generally recommended international minimum standards for the responsible conduct of fishing operations and, to this end, the utility of adopting internationally recognized fishing gear marking standards,

the Commission adopts the following specifications:

#### 1. GENERAL PROVISIONS

##### 1.1 Purpose, basis and scope

1.1.1 The specifications, based on the FAO Recommendations for the Marking of Fishing Gear, the FAO Standard Specifications for the Marking and Identification of Fishing Vessels, the International Telecommunication Union's system for the allocation of signs to countries for ship stations (the International Communication Union Radio Call Signs) and generally accepted design standards for lettering and numbering:

- (b) recognizes the utility of the use of an established system for fishing gear marking from which the identity of the owner of the fishing gear or operator and vessel can be readily determined;
- (c) is without prejudice to international conventions, national or bilateral practices;
- (d) is cognizant of the desirability of keeping the costs implementation and maintenance for fishing operations to a minimum;
- (e) promotes responsible conduct of fishing operations; and,
- (f) contribute to sound fisheries management and safety at sea,

in the Convention Area.

1.1.2 These specifications apply to the operation of fishing vessels of the members of the Commission authorized to fish in the Convention Area beyond the areas of national jurisdiction in accordance with the Convention.

1.1.3 These specifications shall be interpreted and applied in the context of and in a manner consistent with the Convention.

##### 1.2 Definitions

For the purpose of these Specifications:

“Convention” means the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean.

“FAO Recommendations for the Marking of Fishing Gear” means the Recommendations for the Marking of Fishing Gear contained in FAO Fisheries Report No. 485 Supplement to the Report of the Expert Consultation on the Marking of Fishing Gear, Victoria, British Columbia, Canada, 14-July 1991.

“fishing gear” means any implement used for fishing or is essential to or used in connection with any fishing operation and includes a fish aggregating device (FAD);

“mark” means a unique identifier allocated to each vessel which shall be inscribed, embossed or otherwise displayed on a tag or directly onto the fishing gear or the attachments of fishing gear;

“operator” means any person who is in charge of or directs or controls a fishing vessel, or for whose direct economic or financial benefit a vessel is being used, including the master, owner, and charterer;

“tag” means a device which is attached to the fishing gear to carry the mark;

"vessel" means any vessel intending to fish or engaged in fishing or ancillary activities and authorized by a member of the Commission to fish in the Convention Area beyond areas of the member's national jurisdiction, and

includes a boat, skiff or craft (including aircraft) carried on board the vessel and required for fishing operations;

## **2. REQUIREMENTS AND APPLICATION**

### **2.1 General requirements**

2.1.1 The members of the Commission shall:

- (e) ensure that the requirement for the marking of fishing gear in accordance with these specifications is a condition for authorization to fish in the Convention Area;
- (f) ensure that the:
  - (i) non compliance with these specifications;
  - (ii) non marking or wrongful marking of fishing gear, deliberate removal of a mark and the use of a mark allocated to another operator or to another fishing gear;
  - (iii) deliberate discard or dumping of any fishing gear;
  - (iv) non reporting or providing false information on the use, loss, abandoned or disposed fishing gear; is an offence against national legislation;
- (g) ensure that fishing gear marking or related offence can be used as a ground for refusing authorization to fish;

2.1.2 The members of the Commission shall ensure that operators of the vessels:

- (a) subject to these specifications, identify and mark their fishing gear in accordance with the FAO Recommendations for the Marking of Fishing Gear;
- (b) are required to mark their fishing gear with the nationality identification and fishing authorization mark accorded to the vessel on which or in connection to which the fishing gear shall be used;
- (c) mark their fishing gear in a manner that ensures that the owner or operator or vessel can be identified;
- (d) comply with, in association with these specifications, the FAO Rules for the Marking of Nets, Lines and Other Fishing Gear to Indicate Position contained in Appendix 3 of FAO Recommendations for the Marking of Fishing Gear;
- (e) are required to keep a log of fishing gear location;
- (f) report lost, abandoned or otherwise discarded fishing gear giving details of such fishing gear as well as its last known position;
- (g) recover lost or abandoned fishing gear and report the recovery of such fishing gear, in particular if the fishing gear presents a hazard to the navigation of surface and subsurface vessels, fouls reefs, fouls spawning beds or becomes an impediment to fishing or would continue to ghost fish;
- (h) report fishing gear found in the Convention Area.

### **2.2 Markings and other technical specifications**

2.2.1 The member of the Commission shall ensure that the Operator marks the fishing gear with materials and in a manner and on places on the fishing gear which ensures that the identification mark is easily attachable to the fishing gear, is not easily lost or rendered unrecognizable and does not interfere with the operation of the fishing gear.

2.2.2 In order to avoid confusion with the letters **I** and **O**, members of the Commission shall not allocate the numbers **1** and **0**, as fishing authorization or registration numbers.

2.1.3 The member of the Commission shall ensure that that the Operator marks surround nets:

- (a) at each headline; and
  - (b) on the spar buoys and supplementary buoys if used.
- 2.2.4 The member of the Commission shall ensure that that the Operator places the marks, in respect of boat seines:
- (a) at each end of the headline;
  - (b) on the cod-end.
- 2.2.5 The member of the Commission shall ensure that that the Operator places the marks in respect of drifting long lines:
- (a) on the longline at each end and at 500m intervals;
  - (b) on floats and buoys in accordance with Appendix 1 one of the FAO Recommendations for the Marking of Fishing Gear;
- 2.2.6 The member of the Commission shall ensure that that the Operator places the marks in respect of set longlines:
- (a) on the longline at each end and at 500m intervals;
  - (b) on floats and buoys in accordance with Appendix 1 one of the FAO Recommendations for the Marking of Fishing Gear;
- 2.2.7 The member of the Commission shall, in respect of fishing gear for which specific marking requirements are not provided in these specifications, ensure that that the operator places the marks at the suggested points of marking for such fishing gear in accordance with the FAO Recommendations for the Marking of Fishing Gear.
- 2.2.8 The member of the Commission shall ensure that the operator:
- (a) uses marking implements and materials including tags for fishing gear so that the mark is easily read, deciphered and capable of accepting a variety of printed or embossed data; and,
  - (b) maintains the marks and the background in good condition at all times.

### **3. RECOVERY OF LOST AND ABANDONED FISHING GEAR**

- 3.1 The members of the Commission shall ensure that:
- (a) the owners and operators are properly equipped to recover lost and abandoned fishing gear; and
  - (b) in the event that the operator fails to recover lost or abandoned fishing gear, that the competent authority of the member of the Commission make appropriate arrangements for the recovery of such fishing gear including costs recovery, particular if the fishing gear presents a hazard to the navigation of surface and subsurface vessels, fouls reefs, fouls spawning beds, becomes an impediment to fishing, or would continue to ghost fish

### **4. SALVAGE OF LOST AND ABANDONED FISHING GEAR**

- 4.1 The member of the Commission shall ensure that:
- (a) national legislation concerning salvage provide for fishing gear found or picked up at sea, whether marked or unmarked, to be delivered in the shortest possible time to the competent authority of the member of the Commission responsible for dealing with wrecks;

- (b) operators, whether national or alien, be informed of fishing gear recovered (where appropriately marked), any liens on the fishing gear and the arrangements for them to collect the fishing gear; and,
- (c) its competent authority could recover costs of retrieval of abandoned, lost and found fishing gear including levying a fee for each piece of fishing gear returned to the owners so that the income from such levy may be used to offset the cost of retrieval.

## **5. FISH AGGREGATING DEVICES**

5.1 The member of the Commission shall ensure that the authorization to fish in the Convention Area also include conditions in relation to the deployment of FADs where FADs are used in the fishing operation of the holder of the fishing authorization and that the authorization indicate:

- (a) the type of FAD used;
- (b) the location of the allocated datum geographical position of the FAD; and,
- (c) the fishing activities permitted at the FAD.

## **6. RECORD OF FISHING GEAR MARKS**

6.1 The member of the Commission shall:

- (a) establish a record of fishing gear marking which may be a separate record, linked to or used in association with a national fishing vessel register or record required to be established by the Convention;
- (b) provide annually to the Commission, information of fishing gear markings and shall promptly notify the Commission of any modification to such information.

## **7. REVIEW AND AMENDMENT OF SPECIFICATIONS**

7.1 The Commission shall:

- (a) regularly review the specifications and amend them as appropriate; and
- (b) inform the members of the Commission of amendments to the specifications.

## **ANNEX C**

*(Extracted from the FAO Technical Guidelines on Responsible Fisheries I: Fishing Operations)*

### **Annex II**

#### **The Standard Specifications for the Marking and Identification of Fishing Vessels**

##### **Preparation of this Annex**

This document contains the specifications of a standardized system for the marking and identification of fishing vessels as endorsed by the FAO Committee on Fisheries, Rome, April 1989. Background documents relating to this subject are the Report of the Expert Consultation on Fishing Vessel Markings, Halifax, Nova Scotia, Canada, 11-15 March 1985 (FAO Fisheries Report No.343), the Report of the World Conference on Fisheries. Management and Development, Rome, 16-20 June 1986 (FAO Fisheries Report No.367) and the Report of the Eighteenth Session of the FAO Committee on Fisheries, Rome, 10-14 April 1989 (FAO Fisheries Report No.416).  
Annex II 2

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## FOREWORD

The need for an international standard system for the marking and identification of fishing vessels was included in the Strategy for Fisheries Management and Development approved by the 1984 FAO World Fisheries Conference. An Expert Consultation on the Marking of Fishing Vessels convened by the Government of Canada, in collaboration with FAO, in Halifax, Nova Scotia, Canada, March 1985, elaborated the basis for a standard system. A review of the report of this Expert Consultation by the Sixteenth Session of the FAO Committee on Fisheries resulted in a further Expert Consultation on the Technical Specifications for the Marking of Fishing Vessels convened in Rome, June 1986. The Specifications contained herein were endorsed by the Eighteenth Session of the FAO Committee on Fisheries, Rome, April 1989, for adoption by States on a voluntary basis as a standard system to identify fishing vessels operating, or likely to operate, in waters of States other than those of the flag State. The Director General of FAO has informed the Secretary Generals of the International Maritime Organization (IMO) and the International Telecommunication Union (ITU) of the adoption of these Standard Specifications as an aid to fisheries management and safety at sea.

## 1. GENERAL PROVISIONS

### 1.1 Purpose and scope

- 1.1.1 As an aid to fisheries management and safety at sea, fishing vessels should be appropriately marked for their identification on the basis of the International Telecommunication Union Radio Call Signs (IRCS) system.
- 1.1.2 For the purpose of these Standard Specifications, the use of the word "vessel" 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.

### 1.2 Definitions

For the purpose of these Specifications:

- a) the word "vessel" also includes a boat, skiff or craft (excluding aircraft) carried on board another vessel and required for fishing operations;
- b) a deck is any surface lying in the horizontal plane, including the top of the wheelhouse;
- c) a radio station is one that is assigned an International Telecommunication Union Radio Call Sign.

### **1.3 Basis for the Standard Specifications**

The basis for the Standard Specifications, the IRCS system, meets the following requirements:

- a) the use of an established international system from which the identity and nationality of vessels can be readily determined, irrespective of size and tonnage, and for which a register is maintained;
- b) it is without prejudice to international conventions, national or bilateral practices;
- c) implementation and maintenance will be at minimum cost to governments and vessel owners; and,
- d) it facilitates search and rescue operations.

## **2. BASIC SYSTEM AND APPLICATION**

### **2.1 Basic system**

2.1.1 The Standard Specifications are based on:

- a) the International Telecommunication Union's system for the allocation of signs to countries for ship stations; and,
- b) generally accepted design standards for lettering and numbering.

2.1.2 Vessels shall be marked with their International Telecommunication Union Radio Call Signs (IRCS).

2.1.3 Except as provided for in paragraph 2.2.6 below, vessels to which an IRCS has not been assigned shall be marked with the characters allocated by the, International Telecommunication Union (ITU) to the flag State and followed by, as appropriate, the licence or registration number assigned by the flag State. In such cases, a hyphen shall be placed between the nationality identification characters and the licence or registration number identifying the vessel.

2.1.4 In order to avoid confusion with the letters I and O it is recommended that numbers 1 and 0, which are specifically excluded from the ITU call signs, be avoided by national authorities when allocating licence or registration numbers.

2.1.5 Apart from the vessels name or identification mark and the port of registry required by international practice or national legislation, the marking system as specified shall, in order to avoid confusion, be the only other vessel identification mark consisting of letters and numbers to be painted on the hull or superstructure.

## 2.2 Application

- 2.2.1 The markings shall be prominently displayed at all times:
- a) on the vessel's side or superstructure, port and starboard; fixtures inclined at an angle to the vessel's side or superstructure would be considered as suitable provided that the angle of inclination would not prevent sighting of the sign from another vessel or from the air;
  - b) on a deck, except as provided for in paragraph 2.2.4 below. Should an awning or other temporary cover be placed so as to obscure the mark on a deck, the awning or cover shall also be marked. These marks should be placed athwartships with the top of the numbers or letters towards the bow.
- 2.2.2 Marks should be placed as high as possible above the waterline on both sides. Such parts of the hull as the flare of the bow and the stern shall be avoided.
- 2.2.3 The marks shall:
- a) be so placed that they are not obscured by the fishing gear whether it is stowed or in use;
  - b) be clear of flow from scuppers or overboard discharges including areas which might be prone to damage or discolouration from the catch of certain types of species; and,
  - c) not extend below the waterline.
- 2.2.4 Undecked vessels shall not be required to display the markings on a horizontal surface. However, owners should be encouraged, where practical, to fit a board on which the markings may be clearly seen from the air.
- 2.2.5 Vessels fitted with sails may display the markings on the sail in addition to the hull.
- 2.2.6 Boats, skiffs and craft carried by the vessel for fishing operations shall bear the same mark as the vessel concerned.
- 2.2.7 Examples of the placement of marks are set out in pages 47 to 69 of the FAO publication "The Standard Specifications for the Marking and Identification of Fishing Vessels".

### 3. TECHNICAL SPECIFICATIONS

#### 3.1 Specifications of letters and numbers

3.1.1 Block lettering and numbering shall be used throughout.

3.1.2 The width of the letters and numbers shall be in proportion to the height.

3.1.3 The height (h) of the letters and numbers shall be in proportion to the size of the vessel in accordance with the following:

a) for marks to be placed on the hull, superstructure and/or inclined surfaces:

<u>Length of vessel overall (LOA) in meters (m)</u>	<u>Height of letters and numbers in meters (m) to be not less than:</u>
25 m and over	1.0 m
20 m but less than 25 m	0.8 m
15 m but less than 20 m	0.6 m
12 m but less than 15 m	0.4 m
5 m but less than 12 m	0.3 m
Under 5 m	0.1 m

b) for marks to be placed on deck: the height shall not be less than 0.3 m for all classes of vessels of 5 m and over.

3.1.4 The length of the hyphen shall be half the height of the letters and numbers.

3.1.5 The width of the stroke for all letters, numbers and the hyphen shall be  $\frac{h}{6}$

3.1.6 Spacing:

a) the space between letters and/or numbers shall not exceed  $\frac{h}{4}$  nor be less than  $\frac{h}{6}$

b) the space between adjacent letters having sloping sides shall not exceed  $\frac{h}{8}$  nor be less than  $\frac{h}{10}$   
for example A V.

## 3.2 Painting

- 3.2.1 The marks shall be:
- a) white on a black background; or,
  - b) black on a white background.
- 3.2.2 The background shall extend to provide a border around the mark of not less than  $\frac{h}{6}$
- 3.2.3 Good quality marine paints to be used throughout.
- 3.2.4 The use of retro-reflective or heat-generating substances shall be accepted, provided that the mark meets the requirements of these Standard Specifications.
- 3.2.5 The marks and the background shall be maintained in good condition at all times.

## 4. REGISTRATION OF MARKS

- 4.1 The International Telecommunication Union maintains and updates a worldwide register of International Radio Call Signs that contains details of the nationality of the vessel and its name.
- 4.2 In addition to maintaining a separate register of its vessels., which IRCS have been assigned, the flag State shall also maintain a record of vessels to which it has given a nationality identifier (allocated by the ITU), followed by the hyphen and licence/registration number; such records should include details of the vessels and owners.

## 5. INTERNATIONAL ALLOCATION OF CALL SIGNS

- 5.1 The International Telecommunication Union (ITU) Geneva allocates call signs to countries. These take the form of letters of the alphabet or number and letters, for example:
- one of the sets of call signs allocated to Italy is **LAA-IZZ** inclusive, whereas,
  - one of the sets allocated to Malaysia is **9WA-9WZ** .
- 5.2 These signs allocated by the ITU clearly identify the flag State. The flag State adds further characters to the allocated call sign in order to identify the "radio station" (the vessel). A typical example being JNQK which is a Japanese vessel.
- 5.3 ITU should be contacted for an update of the List of Call Signs.

## ANNEX D

*(Extracted from Recent trends in Monitoring, Control and Surveillance Systems for Capture Fisheries)*

### J3. MALAYSIAN SYSTEM\*

The Malaysian vessel identification system comprises the following:

- a) A three to four letter code and number designating the state, use of vessel and number for the vessel. This is hammered on to the hull of the vessel, e.g. JHF 1 –JH meaning the state of Jahor, F for fisheries, and 1 for the number of the vessel.
- b) The “tin plate” with the Department of Fisheries logo and the signature of the Director General is placed on the inner side of the hull with non-removable nails, currently for vessels above 70 GRT.
- c) The wheelhouse colour for the state of registration, e.g. Johor is blue.
- d) The registration number for the vessel is white with a black background and sized depending on the size of the vessel:

VESSEL SIZE (GRT)	SIZE OF ALPHABET/NUMBERS (INCHES)		
	HEIGHT	WIDTH	THICKNESS
Canoe/skiff with outboard engine	6	4	1.25
<25 GRT with onboard engine	9	6	1.75
25-40 GRT with on board engine	12	8	2.5
>40 GRT	18	12	4

- e) Each vessel (except a canoe/skiff without a wheelhouse) is marked according to its appropriate fishing zone (Zone A, B, C, and C2). The letter is coloured in white with a black, round background and painted on both sides of the wheelhouse. The diameter of the background ranges from 10-22 inches according to vessel size.

Fishing Zones are as follows:

ZONE	GEAR USED	GRT	FISHING AREA
<b>A</b>	Artisanal	-	Free
<b>B</b>	Trawler/P. Seine	<40	>5 nm from shore
<b>C</b>	Trawler/P. Seine	40-69.9	>12 nm from shore
<b>D</b>	Trawler/P. Seine	>70	>30 nm from shore

As trawlers are considered to be “unfriendly” to the environment and resources, their activities are closely monitored by the Department of Fisheries. A special marking was imposed on the vessel for ease in identification. All trawlers are required to have a white diagonal stripe across each side of the wheelhouse.

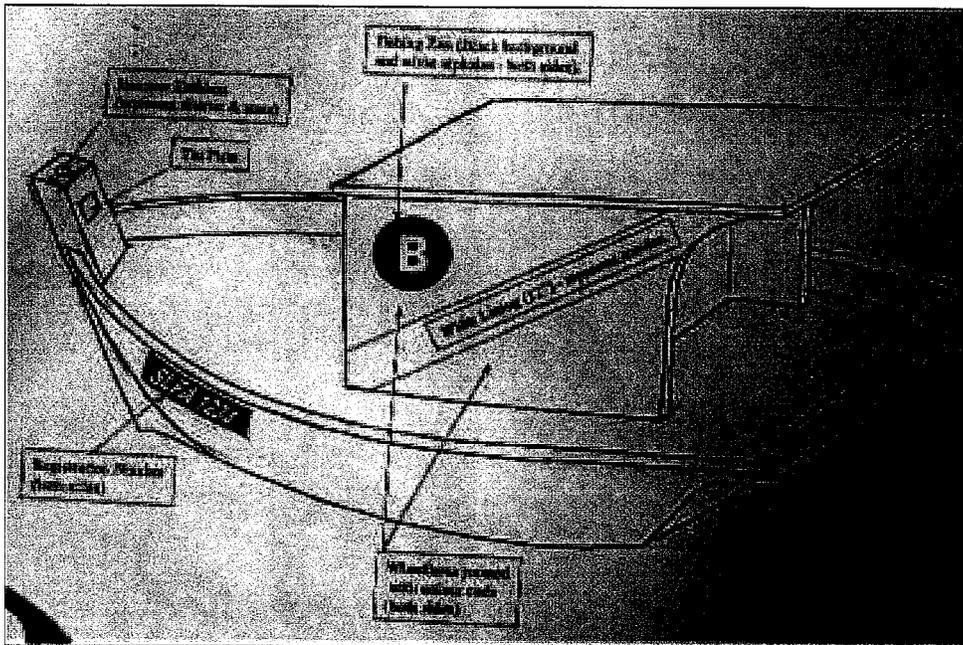
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\* Personal discussions with Mr Salehan, Chief of Fisheries Resource Protection in Malaysia, May 2000.

#### J4. MALAYSIAN EXAMPLES



#### Summary of the Malaysian Vessel Marking System



## **ANNEX E**

### Annex III

*(Extracted from the FAO Technical Guidelines on Responsible Fisheries 1: Fishing Operations)*

#### Proposed System for the Marking of Fishing Gear

#### Preparation of this Annex

This annex contains the specifications of a proposed standardized system for the marking of fishing gear in order to identify the owner.

Background documents relating to the subject are the Reports of the FAO Committee on Fisheries (FAO Fisheries Reports No. 387; 416; 459 and 488), the Report of the Expert Consultation on the Marking of Fishing Gear, Victoria, British Columbia, Canada, 14-19 July 1991 (FAO Fisheries Report No.485), the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, the Agreement for the Implementation of the Provisions of the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks and the Code of Conduct for Responsible Fisheries as adopted by the Conference of FAO on 31 October 1995.

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## A. INTRODUCTION

1. Although the marking of fishing gear in order to identify the owner of the gear has been practised for centuries, there are still no common standards on how to mark fishing gear, what information should be carried by the mark or how the information should be stored and retrieved.
2. At the IMO, the lack of a common system made it difficult to deal with fishing gear in the development of MARPOL 73/781. In order to address the issue, a recommendation on the development of the technology for the marking of fishing gear is included in the IMO Guidelines for the Application of Annex V of MARPOL.
3. The FAO Committee on Fisheries (COFI), at its 18th session in April 1989, "noted, that for the purpose of determining ownership, no international regulations, guidelines or common practices exist for the marking of fishing gear deployed outside national jurisdiction. Some delegations noted the problem as it related to the protection of living marine resources from entanglement in fishing nets and in the case of discarded fishing gear. It was noted that the elaboration of a standard for the marking of fishing gear would be of benefit to coastal States and recommended that further studies be undertaken".
4. Studies were carried out by the FAO with regard to systems used (past and present) as well as to identify available technology and, with the cooperation of the government of Canada, an Expert Consultation on the Marking of Fishing Gear was held in Victoria, British Columbia, Canada, 14-19 July 1991. It was found that whereas the systems varied in detail with the marks taking the form of tokens, multi-coloured twine, patent tags with a bar code to a vessels' radio call sign being used, it was common to have a simple record of the persons to whom the mark had been allocated, irrespective of whether these were individuals, companies or even communities.
5. The report of the Expert Consultation on the Marking of Fishing Gear was submitted to COFI in 1993 at which time, the Committee considered that there would be a need for further study before finalizing the text of a Standard System for the Marking of Fishing Gear.
6. At the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks<sup>2</sup>, which concluded its work in August 1995, it was agreed that there should be "requirements for the marking of fishing vessels and fishing gear for identification in accordance with uniform and internationally recognizable marking

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<sup>1</sup> MARPOL 73/78 the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto

<sup>2</sup> The Conference concluded its work in August 1995 with the adoption of the "Agreement for the Implementation of the United Nations Convention on the Law of the Sea of December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks".

- systems, such as the Food and Agriculture Organization of the United Nations Standard Specifications for the Marking and Identification of Fishing Vessels”.
7. The Code of Conduct for Responsible Fisheries (the Code) makes provision for fishing gear to be marked in accordance with national legislation in order that the owner of the gear can be identified. It also provides for the authorization of fishing activities as well as the maintenance of records related to fishing vessels and that these records should include details of the vessels, their ownership and authorizations to fish. In this respect the Compliance Agreement<sup>3</sup>, which is an integral part of the Code, makes important provisions for the maintenance of records in relation to fishing vessels (including details of ownership), as well as the storage, retrieval, and dissemination of data.
  8. These developments, since the 20th. Session of COFI in 1993, made it possible to address the concerns expressed by some COFI members at that time with regard to the apparent additional administrative burdens that might accrue from the adoption of a common system for the marking of fishing gear.
  9. The proposed System for the Marking of Fishing Gear and guidelines for the implementation of the system, as set out in this Annex, take into account inter alia:
    - a) the contents of the report of the Expert Consultation on the Marking of Fishing Gear (FAO Fisheries Report No. 485);
    - b) comments received by FAO following the 20th. Session of COFI ;
    - c) the negotiations at the U.N. Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks;
    - d) discussion on the marking of gear that took place during the elaboration of the Code of Conduct for Responsible Fisheries; and,
    - e) progress made in the preparation of data bases for the implementation of the Compliance Agreement.

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<sup>3</sup> *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*

## **B. PROPOSED SYSTEM FOR THE MARKING OF FISHING GEAR**

### **1. General Provisions**

- 1.1 Except in cases of force majeure or circumstances involving the safety of a vessel or its crew, it should be an offence under national law for any person to deliberately discard or dump any fishing gear or piece thereof into the aquatic environment.
- 1.2 Fishing Gear should be marked in accordance with national legislation in order that the owner of the gear can be identified. Gear marking requirements should take into account uniform and internationally recognizable gear marking systems.
- 1.3 The gear marking system should apply to all types of fishing gear and fishing implements as well as to all fisheries.
- 1.4 The system should provide:
  - a) a simple, workable and enforceable means of identifying the ownership of fishing gear;
  - b) a system that can be universally adopted; and,
  - c) a mechanism as an aid to fisheries management.

### **2. A System for the Marking of Fishing Gear**

- 2.1. The system of marking fishing gear should be set out in national legislation .
- 2.2. The marking of fishing gear should be a condition of an authorization to fish. Whereas such a condition may vary in detail and extent with regard to the different fisheries, the authorization to fish it should, in general, include a requirement for the following information to be given on:
  - a) name and address of person(s) authorized to fish and name of vessel (where relevant);
  - b) gear type;
  - c) expected area of use; and,
  - d) principal target species.
- 2.3 The marking system should be designed, as and where appropriate, to reflect the special requirements of:
  - a) vessels fishing on the high seas;
  - b) vessels fishing in waters of States other than those of the flag State;
  - c) vessels of a coastal State fishing in waters under the jurisdiction of the same State; and,
  - d) owners of fishing gear and implements that are not associated with a fishing vessel.

- 2.4. The actual method or device used to display or carry information set out in paragraph 2.2, hereinafter referred to as the “mark” or “marks”, should be :
- a) simple;
  - b) inexpensive;
  - c) easily manufactured having regard to locally available materials;
  - d) easily read or deciphered;
  - e) able to stay attached;
  - f) durable; and,
  - g) designed so that they do not interfere with the operation and performance of the fishing gear and, in the case of tags, capable of accepting a variety of printed or embossed data.
- 2.5 The “mark” should, as a minimum, give or hold sufficient information through which the name and address of the owner may be traced. FAO Fisheries Report 485 (Supp.) describes types of tags and of the means for the identification of ownership; it being understood that there should be a link in the information chain between the mark and the record of authorization to fish maintained by the State.
- 2.6 The system should also provide for the:
- a) reporting of fishing gear lost, abandoned or otherwise discarded;
  - b) reporting of fishing gear found;
  - c) recovery of lost or abandoned<sup>4</sup> fishing gear; and,
  - d) the disposal of old and unwanted gear.

### **3. Implementation of a Standard System**

- 3.1 The marking of fishing gear should be a condition of the authorization to fish.
- 3.2 States individually or in cooperation with other States, either bilaterally or through subregional or regional fisheries bodies, should decide :
- a) on a system to be adopted;
  - b) the fisheries to be targeted;
  - c) reporting procedures;
  - d) data storage, retrieval and information exchange; and,
  - e) exemptions.
- 3.3 An owner should be allocated a mark or code, that would only apply to all of the fishing gear and fishing implements so owned.
- 3.4 The competent authority may authorize the use of a common mark to a company, organization of fishers or similar entity, if it can be demonstrated that the fishing gear to be marked can be used by more than one group of users or vessels on a

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<sup>4</sup> Abandoned gear as provided for under paragraph 1.1 above.

- rotational or common pool basis. In such cases, the owner(s), identified by the mark, should keep a log of the location of the gear.
- 3.5 In the case of a mothership operation, the fishing gear carried by the catcher vessels may carry the mark of the mothership.
- 3.6 All vessels fishing on the high seas, should use a commonly agreed system for the marking of fishing gear. Since the Compliance Agreement provides for a system for the marking of fishing vessel that would be on the basis of the International Telecommunications Union Radio Call Signs (IRCS) it would be appropriate to use this as the basis for the marking of the fishing gear. For those vessels to which an IRCS has not been assigned, the mark would display or hold information consisting of the characters allocated to a flag State by the ITU, and followed by a hyphen, and as appropriate, the number of registration of the vessel or the number on the authorization to fish. Benefits would also accrue from the adoption of such a system with regard to the maintenance of any records to be kept and the exchange of information that may be required<sup>5</sup>.
- 3.7 Likewise, for fishing vessels authorized to fish in the waters of States other than those of the flag State, the coastal States concerned should accept a marking system for fishing gear of such vessels as described for the high seas in paragraph 3.6 above.
- 3.8 States, regional and subregional fisheries bodies should ensure that control and enforcement of a system for the marking of fishing gear is an integral part of arrangements for the monitoring, control and surveillance of fisheries.
- 3.9 In the event of loss or abandonment of fishing gear, the owner should be required to report the fact to the competent authority.
- 3.10 Every effort should be made by the owner to retrieve lost gear or abandoned gear.
- 3.11 Where gear lost or abandoned, may be a danger to navigation, the owner of the gear concerned<sup>6</sup> should immediately warn other mariners in the vicinity as well as the competent authority, giving details of the gear as well as its last known position.

The competent authority should use the most effective local means to give a general warning to mariners.

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<sup>5</sup> *Gear marks carrying, as a minimum, the IRCS of a vessel would also enable other mariners to identify the flag State and the vessel concerned which would simplify the reporting of lost and abandoned gear.*

<sup>6</sup> *The skipper of a vessel, or person in charge of the vessel, if different from the owner, should be considered to be acting for the owner. The report made on return to harbour should, if practical, be countersigned by the owner.*

- 3.12 The competent authority may impose appropriate penalties on an owner for noncompliance with the system for the marking of gear and fishing implements, including FAD's, in particular, for:
- a) deploying fishing gear without displaying the mark so required as a condition of an authorization to fish;
  - b) deliberate removal of a mark;
  - c) use of a mark allocated to another owner or to other gear; and,
  - d) providing false information on the use, loss, abandonment or disposal of fishing gear.

#### **4. Recovery of Lost and Abandoned Fishing Gear**

- 4.1 The competent authority should ensure that owners of fishing gear have adequate equipment available for the recovery of gear.
- 4.2 In the event of failure of the owner to recover lost and abandoned gear, the competent authority should make appropriate arrangements for its recovery, particularly if the gear:
- a) presents a hazard to the navigation of surface and sub-surface vessels;
  - b) fouls reefs;
  - c) fouls spawning beds;
  - d) becomes an impediment to fishing; or,
  - e) would continue to ghost fish.
- 4.3 The competent authority should encourage the re-use of recovered gear.

#### **5. Salvage of Lost and Abandoned Fishing Gear**

- 5.1 National legislation concerning salvage, should provide for fishing gear found or picked up at sea, whether marked or unmarked, to be delivered in the shortest possible time to the competent authority responsible for dealing with wrecks.
- 5.2 Owners, national or foreign, should be informed of gear recovered (where appropriately marked), any liens on the gear and arrangements for them to collect the gear.
- 5.3 The competent authority may levy a fee for each piece of gear returned to the owners and such income may be used to offset the cost of retrieval.

## **6. Fish Aggregating Devices**

- 6.1 The authorization to fish should also include conditions in relation to the deployment of fish aggregating devices and, in addition to carrying a mark to identify ownership of a FAD, the authorization should relate to the:
- a) type of FAD;
  - b) location of the allocated datum geographical position; and,
  - c) the fishing activities permitted at the FAD.
- 6.2 The responsibility for recovery of drifting FAD's should lie with the owner.
- 6.3 The loss of a FAD (drifting or anchored) should be treated in the same way as lost or abandoned fishing gear.
- 6.4 The competent authority, should take appropriate action in accordance with paragraph 5.2 above in the event of a lost or abandoned FAD considered to be a hazard to navigation.

## **ANNEX F**

*(Extracted from the FAO Technical Guidelines on Responsible Fisheries 1: Fishing Operations)*

### **Annex IV**

**Proposals for the Application of a Standard System of Lights and Shapes for the Identification and Location of Fishing Gear**

#### **Preparation of this Annex**

This annex contains the specifications of a proposed standard system for the identification of types of gear set, where the gear is set and in which direction as well for the location of gear that may be unattended.

Background documents relating to the subject are, the Report of the eighteenth session of the FAO Committee on Fisheries Rome, April 1989 (FAO Fisheries, Report No.416), the Report of the Expert Consultation on the Marking of Fishing Gear, Victoria, British Columbia, Canada, 14-19 July 1991, relevant Reports of the Maritime Safety Committee of the International Maritime Organization and the International Regulations for the Prevention of Collisions at Sea.

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**A. Introduction**

**B. A Standard System of Lights and Shapes for Fishing Gear and Fishing Implements**

1. General Provisions
2. Technical Provisions
3. Application of a Standard System
4. Technical Specifications

## A. INTRODUCTION

1. In its discussions on the marking of fishing gear at the Eighteenth session of the FAO Committee on Fisheries (COFI), most delegates agreed that there was a need for a review of lights and shapes displayed by vessels engaged in fishing and certain types of fishing gear. The Committee invited the Director-General of FAO to bring this matter to the attention of the International Maritime Organization (IMO), and noted that careful consideration must be given to the costs that any changes may imply.
2. The matter was brought to the attention of IMO where it was referred to its Sub-Committee on Navigation which requested its members to submit comments and proposals on the need to amend Rule 26 of the Collision Regulations. It also took note of the intention of FAO to convene an Expert Consultation on the Marking of Fishing Gear where the identification of ownership of lost, abandoned and unattended fishing gear was to be considered. Since this issue was seen to constitute a hazard to sea mammals and birds as well as to the safety of navigation, the Sub-Committee decided to give consideration to any recommendations resulting from the FAO consultation.
3. The IMO participated in the Expert Consultation for the Marking of Fishing Gear, Victoria, British Columbia, Canada, 14-19 July 1991. The Consultation agreed that in order to protect the fishers and their gear and to warn mariners of the presence of deployed fishing gear, a standard system of lights and shapes would be useful. It was also agreed that the technical specifications of such a system would need to be distributed to all mariners so that all would know and understand the marks, lights, use of radar reflectors and shapes that might be encountered at sea. Such information would need to be included in training programmes not only for fishers but other mariners as well.
4. The IMO reviewed the report of the Expert Consultation on the Marking of Fishing Gear as well as recommendations for amendments to the COLREGS. It agreed with FAO that the optional lights provided for in Section 2 of Annex II to the 1972 Collision Regulations should be mandatory for vessels of 20 metres or more in length when engaged in trawling, whether using demersal or pelagic gear, or when pair trawling. IMO could not agree with the proposal to allow the use of flashing yellow lights shown by purse seiners (described in Section 3 of Annex II of the Collision Regulations), by other vessels engaged in fishing operations when such fishing operations involve extensive alterations of course or speed, or both, and when the vessel concerned is hampered by its gear. It agreed, however, that the marking of fishing gear in order to identify its position in the sea, need not be included in the COLREGS.
5. This Annex has been prepared on the basis of the Report of the Expert Consultation for the Marking of Fishing Gear (FAO Fisheries Report No.485 and its Supplement), and the outcome of discussions at the International Maritime Organization. (IMO).

## **B. A STANDARD SYSTEM OF LIGHTS AND SHAPES FOR FISHING GEAR AND FISHING IMPLEMENTS**

### **1. General Provisions**

- 1.1 In order to protect fishers and their gear and to warn other mariners of the presence of deployed fishing gear, States should make provisions in national legislation for the adoption of a standard system of lights and shapes for the identification of fishing gear and for marking its position in the water.
- 1.2 States should make provisions for the inclusion of the details of the system in training programmes for fishers and other mariners.
- 1.3 The need to comply with a system of lights and shapes related to fishing gear, fishing implements and fishing vessels should be a condition of the authorization to fish.

### **2. Technical Provisions**

- 2.1 The system should take into account:
  - a) the provision of the International Regulations for the Prevention of Collisions at Sea (COLREGS);
  - b) any local rules, including rules of navigation governing river, lake or coastal fisheries;
  - c) regulations pertaining to offshore structures; and,
  - d) systems for the marking of fishing gear for the identification of ownership.
- 2.2 Where practicable, all position indicators attached to fishing gear should:
  - a) be as conspicuous as possible in a clear daytime atmosphere from a distance of at least 2 nautical miles at sea level;
  - b) carry radar reflectors;
  - c) carry lights with characteristics which do not conflict with those of navigational marks and which would be visible on a clear night at a distance of at least 2 nautical miles; and,
  - d) be fitted with a coloured flag or flags of fluorescent material, as an aid to daytime visibility.
- 2.3 Lights and shapes should also indicate the direction and extent of set and drifting gear.
- 2.4 Electronic devices, such as transponders and radio beacons which automatically and continuously indicate their position by means of signals may be used in addition to the lights and shapes. Such devices, however, must not operate at frequencies that would conflict with other devices used for navigation and search and rescue purposes.

### 3. Application of a Standard System

- 3.1 An individual pot, trap, fyke net, stake net and other similar gear, should be marked with a buoy or other device at the surface to indicate its position. Gear set in series, such as a number of pots connected are on line, should be marked at each end with a buoy.
- 3.2 Anchored or drifting fishing gear with the upper continuous edge of the gear at a depth of more than 2 metres below the surface should be marked in the following manner:
- a) fishing gear set below the level of the sea and extending from an anchor or parent vessel, should be marked at both extremities by a spar buoy and at intermediate positions. The distance between the intermediate marks, and between the intermediate marks closest to the extremities and the extremity markers should not exceed one kilometre. In the case of fishing gear attached to a vessel, the extremity of the gear nearest to the vessel need not carry a marker;
  - b) for recognition in daytime, the westernmost end spar buoy of such gear extending horizontally in the sea should be fitted with two flags one above the other or one flag and a radar reflector. The end spar buoy at the most easterly extremity should be fitted with one flag or a radar reflector; and,
  - c) for night time recognition, the most westerly end spar buoy should have two white lights one above the other; the most easterly end spar buoy to have one white light.
- 3.3 Fishing gear set within the upper two metres of the water column, and therefore a hazard to small transiting vessels, should be marked in the following manner:
- a) for day time recognition, the extremities of the gear should have spar buoys carrying top marks consisting of two spherical shapes, one above the other at no more than one metre apart; the diameter of the upper of the two spheres to be smaller but no less than one half the diameter of the lower one;
  - b) for night time recognition, the spar buoys placed at the extremity of the gear should have two yellow lights, one above the other at no less than one metre apart and of different characteristics to lights fitted to intermediate buoys;
  - c) gear extending more than one kilometre should have intermediate buoys placed at distances of not more than one kilometre; intermediate spar buoys should have one spherical shape for day time recognition and one yellow light for night time;
  - d) "gates" should be provided for the free passage of surface vessels. Each side of the gate should be marked by spar buoys; the closest intermediate float should not be more than 10 meters from these spar buoys; and,
  - e) attended gear need not be marked at the extremity attached to a fishing vessel.

- 3.4 The dhan-buoy used with active gear, such as anchor seining, fly dragging and purse seining, should comply with the provisions as set out in paragraph.2.2.
- 3.5 Fish aggregating devices should be marked in the same way as fishing gear and carry means to identify their position by day and by night. As a minimum requirement, they should comply with the provisions set out in paragraph 2.2. The requirements of paragraph 2.4 should apply to the use of electronic devices fitted to FAD's.

#### 4. Technical Specifications

- 4.1 A spar buoy should meet the following specifications:
- a) the pole of a spar buoy extending above the floatation buoy should have a height of at least 2 metres; the height of the spar buoy may be less than 2 metres if an administration is satisfied that the fishing gear so marked would not be a hazard to navigation;
  - b) where radar reflectors are required, they should be fitted at the top of the pole;
  - c) the size of flags should not be less than 25 centimetres in height and 35 centimetres in width<sup>1</sup>; when two flags are required, the distance between them should not be less than 10 centimetres; flags should be made of waterproof material in fluorescent colours;
  - d) lights should be attached to the pole in such a way that they will not be obscured by a flag;
  - e) for shapes that give the appearance of being spherical when viewed from a distance, provided for in paragraph 3.3 c) above, the lower of the spherical shapes and the shape, if only one is fitted, should have a diameter of not less than 30 centimetres, the upper shape should be smaller in diameter but not less than half that of the lower shape; and when two shapes are required, they should not be less than 10 centimetres apart; and,
  - f) intermediate floats should have a diameter of not less than 50 centimetres<sup>2</sup>.

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<sup>1</sup> *Flags should not be too large otherwise they could affect the ability of the spar buoy to remain as upright as possible in strong winds*

<sup>2</sup> *The competent authority should take into account locally available material for the construction of floats and whereas most fishers use a spherical shape, in some parts of the world it is common practice to use pieces of wood bound together; the underlying principle is that they should be visible from a distance*

- 4.2 Radar reflectors should be:
- a) as light as possible;
  - b) octahedral in shape; and,
  - c) of metal plate or wire mesh construction.
- 4.3 Lights should be visible at a distance of at least 2 nautical miles; and preferably of a type that are fitted with sensors that automatically switch the light on at dusk and off at daylight<sup>3</sup>.
- 4.4 Radio Beacons may be of a type that can be attached to the pole of the spar buoy or FAD, if they are of the free floating type, they should be linked to the spar buoy.

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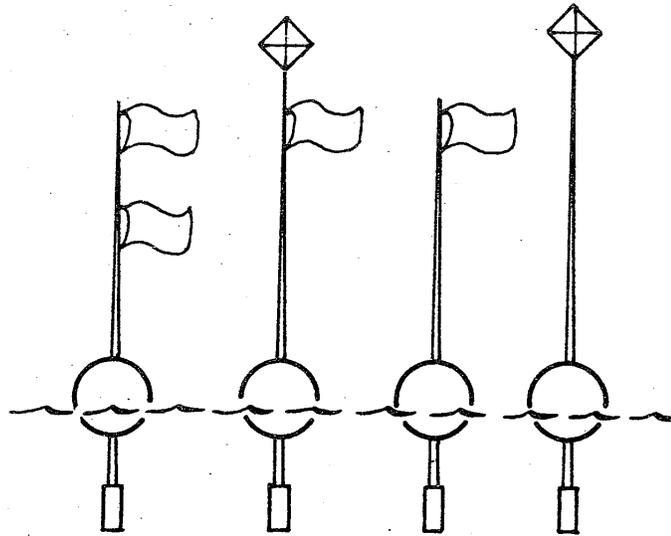
<sup>3</sup> The competent authority should take into consideration local practice since the type of lights available would dictate whether or not these could be attached to the pole of a spar buoy.

Appendix 1

Examples of  
Lights, Shapes and Acoustic Devices

Use flags for gear that drifts and is set below the upper 2m in the water column.

See Para 3.2 b )



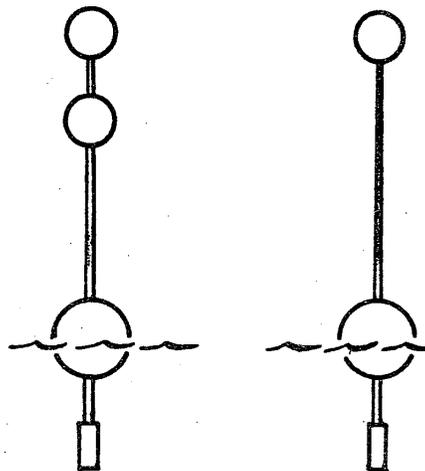
Spar Buoy

Use spherical shapes when drifting gear is set in the upper 2m of the water column.

See Para 3.3 a ) and c )

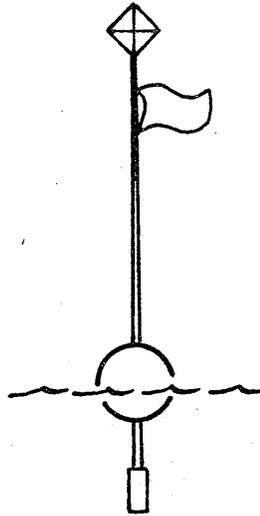
End Buoy

Intermediate Buoy

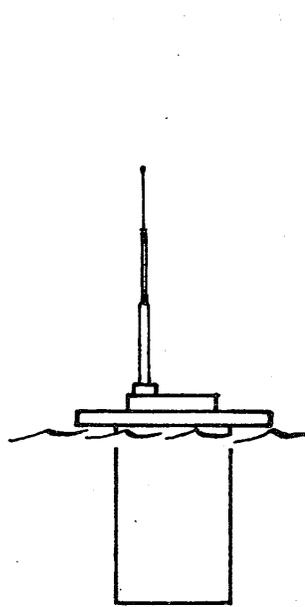


Spar Buoy

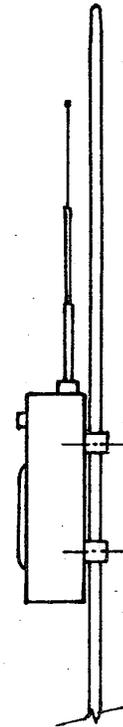
Dhan buoy as used with active gear such as anchor seining, fly dragging and purse seining.



**Dhan Buoy**



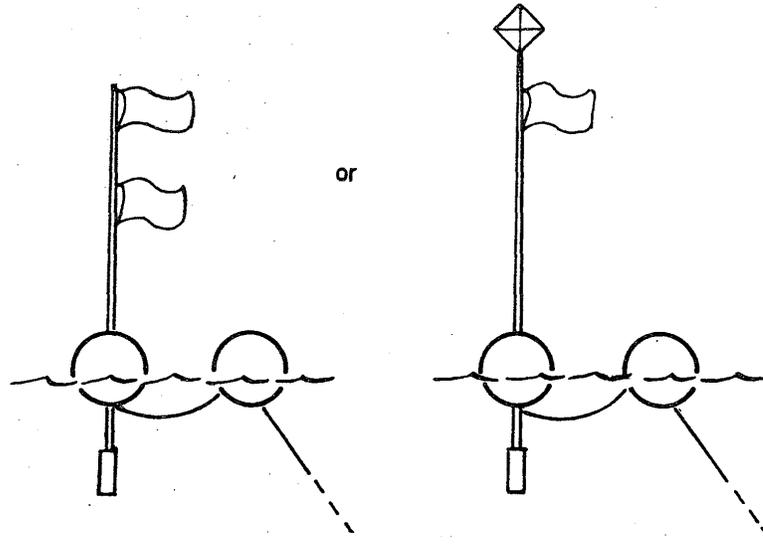
**Floating**



**Fixed to spar buoy**

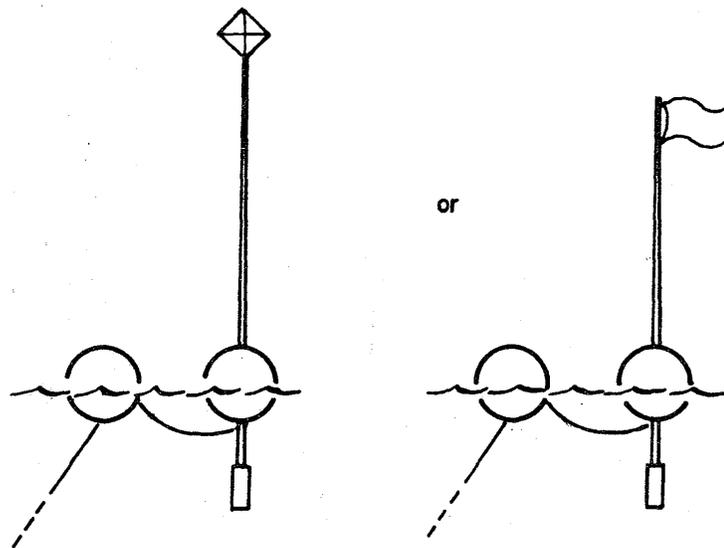
**Radio Beacon**

Spar buoy indicating fishing gear lying to the East of the buoy.

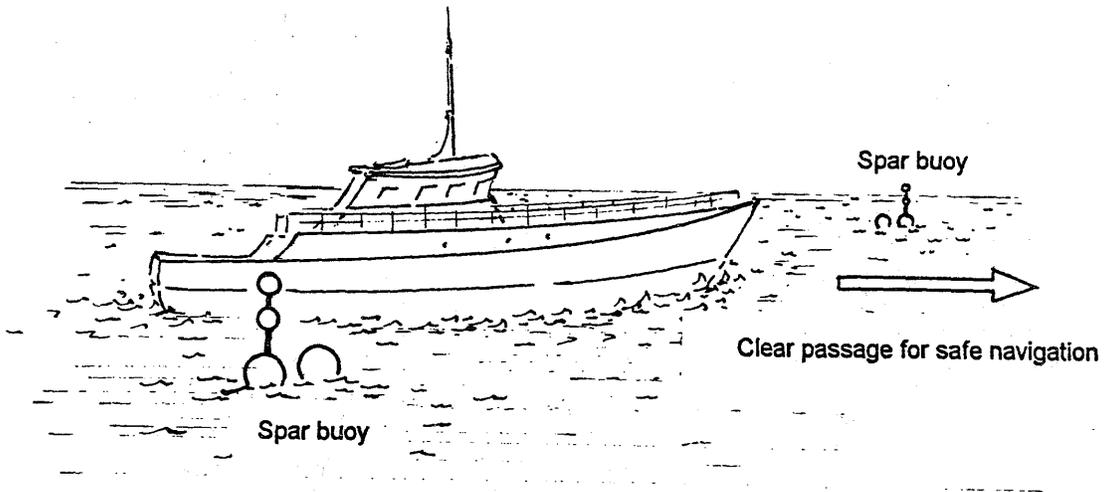


**Fishing Gear Set  
Below the Upper 2m of the Water Column**

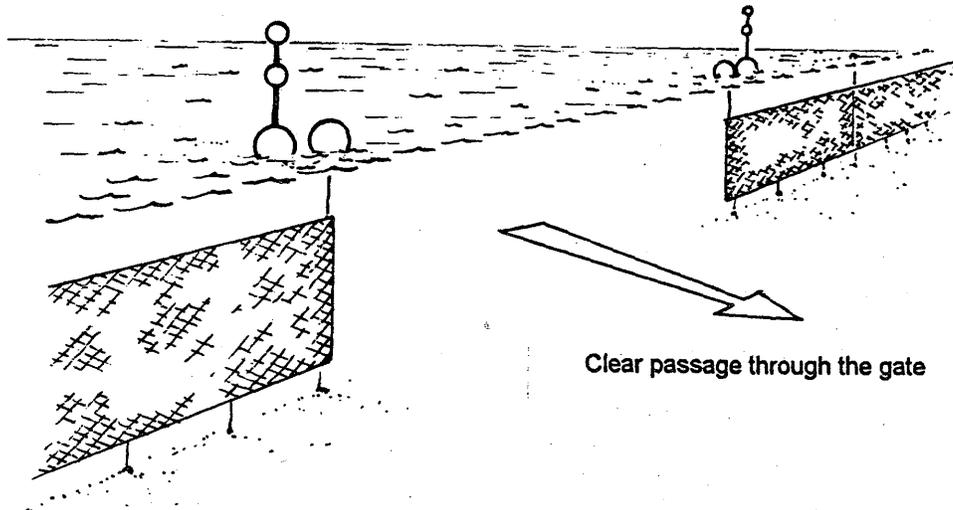
Spar buoy indicating fishing gear lying to the West of the buoy.



**Fishing Gear Set  
Below the Upper 2m in the Water Column**

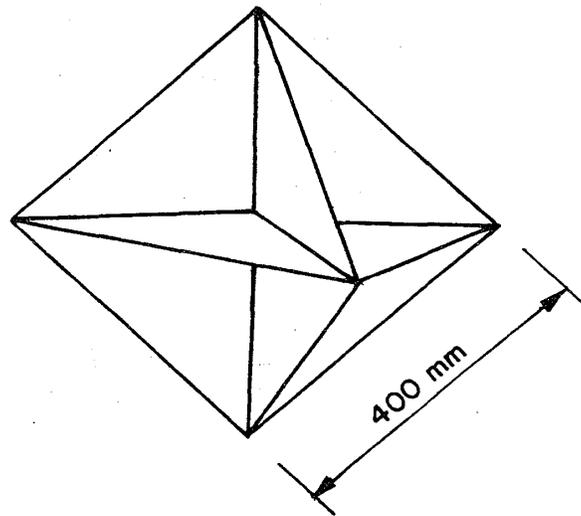


**Gate in Gear Set  
in Upper 2m of the Water Column**



**Gate in Gear Set  
in Upper 2m of the Water Column**

Aluminium plate or wire mesh is suitable. To provide a good target, the reflector should be a reasonable size; however if too large, the windage effect could cause the buoy to heel excessively.



**Radar Reflectors**