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**TECHNICAL CONSULTATION
ON THE MARKING OF FISHING GEAR**

Rome, Italy, 5–9 February 2018

DRAFT GUIDELINES

The Technical Consultation is invited to:

Review the draft guidelines as amended by the Secretariat and further develop the text, as appropriate.

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EXPLANATORY NOTE

Secretariat edits of the text of the draft guidelines on the Marking of Fishing Gear

The Secretariat has reviewed the text of the draft guidelines that were developed via the Expert Consultation on the Marking of Fishing Gear convened in Rome from 4 to 7 April, 2016 (the Expert Consultation) and has subsequently made additional technical and non-technical edits to the draft guidelines with the intention to enhance their content. These edits were based upon further consultation with the participants of the Expert Consultation as well as input provided by fishing industry stakeholders and experts, FAO staff with relevant expertise and taking into account the preliminary results of pilot projects facilitated by FAO.

The Secretariat's edits include the following:

- Changed the title of the draft guidelines from 'Draft guidelines for the application of a system on the marking of fishing gear' to 'Draft guidelines on the marking of fishing gear' because the current draft of the guidelines includes proposed guidelines content as well as information concerning their application;
- Removed background information which is now provided in document TCMFG/2018/2;
- Removed the Annexes and are considered in a separate document (TCMFG/2018/4);
- Replaced 'marine' or 'sea' with 'aquatic' in some places since the proposed scope of the guidelines includes inland waters;
- Added additional information related to the use of gear marking as a tool to assist in the prevention of IUU fishing;
- Proposed additional considerations regarding the recovery of lost gear such as the prioritisation of 'ALDFG hotspots' and to encourage the development for recycling infrastructure for the recovered gear;
- More detail added to section dealing with Fish Aggregating Devices (FADs) following feedback from industry experts and preliminary results of FAO pilot projects. This detail specifically addresses issues relating to the use of tracking devices and other actions proposed to facilitate monitoring and fishing management measures. It also deals with potential issues which are specific to FADs such as the frequent exchange of satellite buoys and when they drift into areas where fishing or transmitting is prohibited. This section therefore includes added clarity relating to responsibility, ownership and definitions of a lost or abandoned FAD;
- Several new paragraphs added to Research and Development section due to recognition that this section lacked in detail previously and suggestions received relating to addressing fishing gear throughout its complete life-cycle, mitigating its impact once lost and actions that would assist with monitoring the effectiveness of the draft guidelines;

- Additional paragraph added under ‘Awareness raising, communication and capacity development’ including to address the issue of gear conflict which can be a cause of gear loss;
- Added cross-referencing where appropriate to other parts of the draft guidelines and to other requirements including other relevant instruments such as MARPOL;
- Added clarifying words or sentences when necessary to provide context, specificity or further information;
- Made grammatical and editorial changes; and
- Corrected for consistency in language

All Secretariat edits are presented as tracked changes within Annex I to this document and the Technical Consultation is invited to review the draft guidelines on the marking of fishing gear with these edits included.

Annex I

DRAFT GUIDELINES ON THE MARKING OF FISHING GEAR

Commented [A1]:
Original title was 'Draft guidelines for the application of a system on the marking of fishing gear'

STATEMENT OF PURPOSE

1. These guidelines for the application of a system for the marking of fishing gear are a tool to contribute to sustainable fisheries and to improve the state of the ~~marine~~^{aquatic} environment by combatting Abandoned, Lost or Otherwise Discarded Fishing Gear (ALDFG), and facilitating the identification and recovery of such gear. The guidelines may assist States in meeting their obligations under international law, including relevant international agreements and related governance frameworks, as well as contribute to improved safety at sea by reducing the hazard to navigation caused by ALDFG and helping to identify illegal, unreported and unregulated (IUU) fishing activities.
2. The purpose of these guidelines is to assist States and RFMO/As in developing and applying a system for the marking of fishing gear, that provide:
 - (i) practical means of locating and identifying the ownership of fishing gear;
 - (ii) guiding text on the development of appropriate marking systems;
 - (iii) a framework for undertaking risk assessment to identify the appropriateness or otherwise of implementing a system for marking fishing gear; and
 - (iv) a basis for the preparation of recommendations and regulations designed to minimize the abandonment and discarding of fishing gears.
3. These Guidelines take into account, *inter alia*, the following documents:
 - (i) The Code of Conduct for Responsible Fisheries;
 - (ii) The Report of the 1991 Expert Consultation on the Marking of Fishing Gear (FAO Fisheries Report No. 485, 1993);
 - (iii) The 1993 FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessel (the "Compliance Agreement") that provides for a system for the marking of fishing vessels;
 - (iv) The contents of Annex III (Proposed System for the Marking of Fishing Gear) and Annex IV (Proposal for the Application of a Standard System of Lights and Shapes for the Identification and Location of Fishing Gear) of the FAO Technical Guidelines for Responsible Fisheries. No.1. FAO (1996);
 - (v) MARPOL Annex V, which generally prohibits the discharge of all garbage into the sea, except as provided otherwise in regulations 4, 5, 6 and 7 of the Annex, which are related to food wastes, cargo residues, cleaning agents and additives and animal carcasses, as well as exceptions set out in regulation 7. Unless explicitly provided otherwise, MARPOL Annex V applies to all ships, which means all vessels of any type whatsoever, including fishing vessels, operating in the marine environment;
 - (vi) The 2003 FAO Technical Guidelines for Responsible Fisheries. Fisheries Management - 2. The Ecosystem Approach to Fisheries;
 - (vii) UNGA resolution 60/31, operational paragraphs 77-81, and UNGA resolution 70/75, operational paragraphs 174 and 175;

Commented [A2]:

The term aquatic has replaced the word 'marine' in various places due to the fact that the scope of the guidelines (see section below) includes inland waters

- (viii) The 2009 FAO International Guidelines for the management of Deep-sea Fisheries in the High Seas;
 - (ix) The 2009 FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing;
 - (x) The 2011 FAO International Guidelines on Bycatch Management and Reduction of Discards;
 - (xi) The 2012 Guidelines for the implementation of MARPOL Annex V, adopted by IMO through resolution MEPC 219(63), as amended;
 - (xii) The IMO resolution A.1078(28) that invites governments concerned to implement the IMO Ship Identification Number Scheme; and
 - (xiii) Recommendations made by the Expert Consultation on the Marking of Fishing Gear held on 4-7 April 2016 in Rome.
4. The main text of these guidelines outlines the principles and considerations in developing a system for the marking of fishing gear. The Annexes provide some basic principles to be considered when preparing a risk assessment and technical specifications for gear marking.
 5. These guidelines are to be interpreted and applied in conformity with the relevant rules of international law, as reflected in the United Nations Convention of the Law of the Sea of 10 December 1982 (1982 UN Convention). Nothing in these guidelines prejudices the rights, jurisdiction and duties of States under international law of the sea as reflected in the 1982 UN Convention. In particular, nothing in these guidelines shall be construed to affect the right of States to adopt, maintain or expand more stringent requirements for the marking of fishing gear than those provided for in these guidelines, including such measures adopted pursuant to a decision of a RFMO/A.

SCOPE AND PRINCIPLES

6. These guidelines are voluntary and are intended to be global in scope. They apply to all fishing gear types used in fishing activities in all oceans, seas and inland waters.
7. A system of marking fishing gear should be put in place for all gear types unless the relevant authority deems otherwise, through risk assessment or other appropriate means. The level of complexity of the gear marking should be based upon the necessity and practicality of such a system.
8. A risk assessment can also facilitate prioritization of actions and guide additional phased mitigation approaches. These would be based on the level of severity and likelihood of potential impacts of different fisheries, using the best available information at the time of the assessment.

9. A system for the marking of fishing gear should be designed to take into account the practical requirements of the fishery to which it applies and the responsibilities of the States as flag, coastal, port and market States and, where appropriate, as members of RFBs and RFMO/As.
10. There should be an active, inclusive and informed participation of interested parties, including fishing communities, in the whole decision-making process for the development, implementation and regulation of a gear marking system in a transparent and open manner.
11. The system for the marking of fishing gear should:
 - (i) build on an assessment of risks associated with ALDFG so that gear marking actions are prioritized and proportional with the identified risks, and be designed to mitigate these risks effectively;
 - (ii) provide a simple, pragmatic, affordable and verifiable means of identifying the ownership and position of fishing gear, and its link with the vessel(s), or operator(s) undertaking the fishing operations;
 - (iii) to the extent possible, be compatible with related traceability and certification systems;
 - (iv) be supported by a monitoring process that ensures that the system is responsive to the changing conditions of all stakeholders;
 - (v) aid resource management systems and meet obligations of international conventions;
 - (vi) link, through any authorization to fish, to any vessel(s) or operator(s) engaged in fishing and related operations;
 - (vii) be consistent with MARPOL Annex V and associated guidelines, and contribute to implementing regulation 10.6 relating to reporting requirements; and
 - (viii) ensure employment of methods that do not pose an environmental risk, e.g. plastic pollution.
12. The system of marking of fishing gear should be set out in, or supported by, national and sub-national legislation, and regional legal frameworks as appropriate, without prejudice to existing measures that achieve the same effect.
13. Where the guidelines recommend that a particular mark be fitted on a fishing gear, or other marking specification be complied with, the relevant national authority, RFB or RFMO/A, as appropriate, may allow other mark or marking specification, provided it satisfies the minimum requirements set in these guidelines and further aids in the marking of gear.
14. The risk assessments referred to in this section should address the potential risks to navigation, safety and the environment, and the benefits of having an effective gear marking

and reporting system established in a fishery. The criteria to be considered when preparing a risk assessment are set out in Annex A.

DEFINITIONS

15. For the purpose of these guidelines:

16. The term ‘fishing gear’ to be marked refers to:

- (i) any physical device or part thereof or combination of items that may be placed on or in the water or on the seabed or bottom substrate with the intended purpose of capturing or controlling for subsequent capture or harvesting, marine or fresh water organisms, in accordance with MARPOL Annex V; and
- (ii) any other type of equipment likely to contribute to the capture of aquatic organisms whether or not it is used in association with a vessel.

Commented [A3]:

Added for clarification because lakes and rivers don't have a sea bed

17. The term “mark” is:

- (i) an identifier, including the types described in Annex B.1, that allows the relevant authority to discern the party ultimately responsible for the deployment of the fishing gear; and / or
- (ii) a means of providing an understanding of the location, scale and nature of fishing gear in the water.

18. The term “fish aggregating device” (FAD) refers to a permanent, semi-permanent or temporary structure or device made from any material, man-made or natural, and used ~~over time~~ to aggregate fish for subsequent capture. FADs can be either anchored (aFADs) or drifting (dFADs).

19. The term “abandoned fishing gear” means fishing gear that is deliberately left at sea in the aquatic environment with no intention by fishers to retrieve it, for whatever reason. This may include situations where any associated tracking device is removed or not working in a dFAD.

Commented [A4]:

Changed to be in line with scope of guideline developed at EC which includes inland waters so the use of the word 'sea' needs to be changed

20. The term “discarded fishing gear” means fishing gear that is deliberately thrown overboard or released without any intention for further control or recovery.

Commented [A5]:

Added specific mention of FADs since they represent a specific case where they could be considered 'abandoned' due to their being no functioning tracking device enabling it to be located

21. The term “lost fishing gear” means fishing gear that is accidentally lost at sea in the aquatic environment.

IMPLEMENTATION OF A GEAR MARKING SYSTEM

22. Gear marking must be considered in the context of broader fisheries management measures which support sustainable fisheries and healthy ocean, including the reduction of ALDFG.

Commented [A6]:

Added to ensure it is recognised that gear marking is not the only measure that should be applied for sustainable fisheries and healthy oceans

22-23. The relevant policy-making authorities, with the participation of interested parties, should decide:

- (i) on the use of a system, if applicable, for the marking of fishing gear;
- (ii) the fisheries, fishing gears, vessels or areas to which the system applies to, and conditions for implementation, or the grant of exemptions from, the agreed system; and
- (iii) reporting procedures, data storage, retrieval and information exchange.

23-24. States should cooperate, either bilaterally or through subregional or regional fishery bodies, including RFMO/As, as appropriate, on the establishment, implementation and harmonization of fishing gear marking schemes as deemed necessary and appropriate.

24-25. The system of marking of fishing gear should be designed to carry sufficient information to achieve its intended benefits as laid out in Paragraph (11). To this end, the system of marking of fishing gear should provide for the components, aspects, requirements and specifications set out in the guidelines, including:

Commented [A7]:

- (i) reporting of ALDFG;
- (ii) reporting of fishing gear found;
- (iii) recovery of ALDFG; and
- (iv) where possible, the safe and environmentally sound disposal of unwanted gear.

25-26. The systems of the marking of fishing gear should be designed to make their implementation as feasible as possible to ensure their adoption.

26-27. Where the marking of fishing gear is required, it should be a condition of any authorization to fish. Where there is no authorization to fish required, a system of marking of fishing gear may be implemented as part of the fisheries management system when deemed both necessary and practical.

~~27-28.~~ _____ An owner (or authorized operator¹) of fishing gear should be allocated a mark or other identifier that would apply to the relevant fishing gear and fishing implements so owned.

~~28-29.~~ _____ When the fishing gear is associated with a registered fishing vessel, if feasible, the mark allocated for the gear and implements should match the vessel registration details (e.g. the port letters and numbers or IMO number², if available).

~~29-30.~~ _____ The relevant 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 rotational or common pool basis. When feasible, such identification marks should be followed by an individual gear identifier, and the owner(s) should keep a log of the physical location of the gear.

~~30-31.~~ _____ In case of a mothership operation, the fishing gear carried by the catcher vessels may carry the fishing gear mark of the mothership.

~~31-32.~~ _____ Marks should be of a type and design approved by the competent authority and fitted in accordance with technical specifications in Annex B.2.

~~32-33.~~ _____ Such marks could be documented in the form of a fishing gear record or through a fishing licensing or authorization system. Information associated with the mark should be recorded and incorporated into the existing fishery licensing system, if applicable.

~~33-34.~~ _____ Further details of the different elements of gear marking are contained in Annex B and C as follows:

- (i) examples of the type of gear marks to identify ownership and other information (Annex B.1);
- (ii) recommendations with regard to where marks should be attached for the various fishing gear (Annex B.2); and
- (iii) guidance for the marking of fishing gear to indicate position (Annex C).

CONTROL AND MONITORING

¹ The skipper/operator of the vessel, or person in charge of the vessel, if different from the owner, or gear operator where no vessel is used, should be considered to be acting for owner.

² According to the provisions of the resolution A.1078 (28) – IMO Ship Identification Number Scheme, adopted on 4 December 2013.

~~34-35.~~ _____ States, and regional and sub-regional fishery bodies, including RFMO/As, 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.

~~35-36.~~ _____ These arrangements should provide for the application of appropriate penalties or sanctions for non-compliance with the various requirements of the fishing gear marking system.

~~36-37.~~ _____ Inspections should be carried out by the relevant authority to verify that owners and operators mark their fishing gear as required.

~~38.~~ Port State inspection of fishing gear should be conducted in accordance with the procedures set out in Annex B, paragraph e) of the FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, including conditions in relation to marking of the fishing gear{

~~37-39.~~ _____ Gear marking should be considered an important mechanism for assisting in the prevention of IUU fishing. Unmarked, or poorly marked fishing gear that cannot be linked to its ownership, or permission to fish in a specific area may indicate IUU fishing operations, enabling appropriate action to be taken by relevant authorities.

Commented [A8]:

Added in recognition that we need to provide more clarity on the IUU benefits

~~38-40.~~ _____ Relevant authorities, in developing mechanisms for the traceability of gear marks, should make appropriate provisions for loss, damage and replacement of individual marks. Where tags are used as a gear mark, in the event of a tag being lost, damaged or illegible, the owner should provide as soon as practicable to the relevant fisheries authority a declaration detailing the circumstances of the loss and requesting provision of new tag(s).

~~39-41.~~ _____ Deployed gear that is found without required marks should be reported to the relevant authority.

REPORTING OF ABANDONED, LOST OR OTHERWISE DISCARDED FISHING GEAR

~~40-42.~~ _____ Recalling the provisions of paragraphs 32 and 34 above, the reporting by fishing operators of ~~the~~ ALDFG to the relevant authority could be one of the conditions of the authorization to fish.

~~41-43.~~ _____ Relevant authorities should establish appropriate reporting regimes. Reports should be made to the flag State, and

where appropriate, to the relevant authority that issued any relevant gear mark, and to the coastal State in whose jurisdiction the loss of the fishing gear occurred.

~~42.44.~~ _____ A record/register of fishing gear reported as being found, lost, abandoned, or otherwise disposed of³ should be maintained by the relevant authority. This record/register should include details of:

- ~~(i)~~ gear ownership, if known or can be identified;
- ~~(ii)~~ (ii) type and characteristics of the fishing gear;
- ~~(iii)~~ (iii) any fishing gear mark(s) and other identifiers;
- ~~(iv)~~ (iv) date, time, position of loss or retrieval, depth of water, etc.;
- ~~(v)~~ (v) reason for loss (if known);
- ~~(vi)~~ (vi) weather conditions; and
- ~~(vii)~~ (vii) any other relevant information including entrapment of endangered, threatened or protected species.

Commented [A9]:

Including the details of ownership would be a critical piece of information to be recorded in a register. This may also facilitate the return of the gear to previous owner

~~43.45.~~ _____ States should provide information about ALDFG available to relevant RFMO/As, other relevant organizations and entities, including stakeholders, as appropriate. Reciprocal arrangements should apply, as appropriate.

RECOVERY OF ABANDONED, LOST OR OTHERWISE DISCARDED FISHING GEAR

~~44.46.~~ _____ Every reasonable effort should be made by the owner/operator of the fishing gear to retrieve lost or abandoned fishing gear. In the event of failure of recovery, it should be reported through the agreed channels to the relevant authority, who should plan for, and implement, cost-effective arrangements for the recovery of lost or abandoned fishing gears.

~~45.47.~~ _____ The recovery of lost, abandoned or otherwise discarded fishing gears should be undertaken with due regard to human safety and the subsequent damage such retrieval may have on the aquatic environment and habitat.

~~46.48.~~ _____ Priority should be given to the retrieval of gear that:

- (i) presents a hazard to the navigation of surface and sub-surface vessels;
- (ii) fouls on critical, vulnerable or otherwise sensitive habitats;
- (iii) poses an entanglement threat to marine wildlife;

³ Includes fishing gear sold or put ashore and destroyed.

- (iv) becomes a hazard or impediment to fishing; or
- (v) has the potential of ghost fishing.

~~47-49.~~ ALDFG may be a danger to navigation; the owner of the gear concerned should immediately warn other vessels in the vicinity, as well as the relevant authority, giving details of the gear and its last known position. The relevant authority should use the most effective means to give a general warning to other vessels.

~~50.~~ States are encouraged to develop communication frameworks to enable the recording and sharing of information on fishing gear loss, where necessary, in order to reduce loss and facilitate recovery of fishing gear. States are further encouraged to develop frameworks to assist fishing vessels in reporting the loss of gear to the flag State, and where appropriate, to the coastal State in whose jurisdiction the loss of the fishing gear occurred. Such frameworks should take into consideration implementation challenges in small scale and artisanal fisheries and recreational operations.

~~48-51.~~ States should make effort to identify ALDFG 'hotspots' that pose an elevated risk to navigation, ghost-fishing or damage to the aquatic environment, and devise strategies for prioritising removal in those areas.

Commented [A10]:

recognising that some areas have a greater problem with ALDFG than others and that such areas are therefore a greater risk in terms of negative impacts

~~49-52.~~ The relevant authority and the fishing industry should encourage owners of the fishing gear to have adequate equipment and training available to facilitate the recovery of ALDFG. Where possible, the owner and the relevant authority should collaborate to enhance recovery efforts. Owners (national or foreign) should be informed of gear recovered (where appropriately marked) so that they can collect the recovered gear for re-use or safe disposal.

~~53.~~ Redundant and unusable gear should be disposed of responsibly on land. States should ensure the provision of adequate port reception facilities for the disposal of fishing gear in accordance with MARPOL Annex V.

~~50-54.~~ States are encouraged to support the development of infrastructure to enable the recycling of recovered ALDFG and end of life fishing gear.

Commented [A11]:

In recognition that circular economy is now considered to be the most sustainable preventative measure for marine debris generally and that such approaches are applicable to fishing gear manufacture and management

COMMERCIAL TRACEABILITY OF FISHING GEAR MARKING

~~54-55.~~ Gear manufacturers and suppliers should be encouraged to facilitate traceability across the supply chain, from production to use and subsequent disposal. Such traceability could include marking with manufacturer name, year of manufacture, type of product and production batch. These marking

systems should be linked to standard record-keeping practices of commercial transactions. Retailers of fishing gear, if different from the manufacturer, should include these batch numbers in their record keeping{

52-56. Fishing companies, including associations promoting the interests of the fishing industry, should consider developing procurement strategies and policies which require their suppliers to operate in conformance with the present guidelines or applicable local legislation to the same effect.

Commented [A12]:

edits made to provide additional guidance on how this process might be managed

53-57. Due consideration should be given to making compliance with these guidelines an integral part of assessments linked with sustainable seafood certification programmes and other sustainability initiatives.

FISH AGGREGATING DEVICES

54-58. The authorization to fish using any form of FAD (anchored or drifting, single or multiple) should be made on the condition that they are marked, applying the same principles as other fishing gear. {

55. ~~For unattended FADs~~ The surface raft structure and subsurface appendage structure of a FAD should both contain a physical unique identification mark. For dFADs, an electronic buoy should be attached to enable ~~that are allowed to drift, in addition to the identifier mark, some means of providing~~ real-time tracking of spatial position. For large-scale off-shore operations, relevant authorities may require the use of satellite buoys on dFADs as a condition of fishing to facilitate global monitoring and fisheries management measures, taking into due consideration the need to prevent leaking of commercially-sensitive information, on the location of the FAD, such as an electronic transponder, where practicable, should be provided. Location information should be provided in near real time to the relevant authority for monitoring purposes. {

Commented [A13]:

Placing greater emphasis on the need for real time reporting but also cautioning that commercially sensitive information is not leaked as per the majority of concerns we have had reported within our pilot project

56-59. In the design of a marking system for FADs, relevant authorities should clearly define (i) when a FAD is considered lost, ~~discarded~~ or abandoned and (ii) the FAD operator, taking into account potential issues such as the frequent exchange of satellite buoys (ownership) attached to a FAD, abandoning of dFADs when they drift into areas where fishing or transmitting is prohibited. Similar to all other fishing gear, abandoning FADs at the end of the fishing seasons or due to distance of ports, should be prohibited.

Commented [A14]:

Based on feedback from industry the definition of ALDFG and FAD operators is considered critical due to the tendency for FADs to drift out of fishing range and into areas where the vessel has no permission to fish or to enter and frequent changes of ownership

57-60. When FADs are lost or abandoned, the relevant authorities should be notified of the last known position for the FAD by the FAD operator. {

~~58-61.~~ Responsibility for the recovery of lost, abandoned or discarded FADs lies with the current FAD operator who has the ability to track the FAD buoy owner, in cooperation with relevant authorities with due regard to other conditions within the guidelines.

Commented [A15]:

To make consistent with previous paragraphs in addressing the complexity of FAD ownership

MARKING THE POSITION OF A GEAR IN THE WATER COLUMN

~~59-62.~~ In order to protect fishers and their gear and to warn other vessels 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.

~~60-63.~~ States should make provisions for the inclusion of the details of the system in training programmes for fishers and other vessel operators.

~~61-64.~~ Where the marking of fishing gear is required, the need to comply with a system of lights and shapes should be a condition of any authorization to fish. Where no authorization to fish is required, a system of marking and lighting of fishing gear may be implemented as part of the fisheries management system when deemed both necessary and practical.

~~62-65.~~ Care should be taken that lights and shapes which indicate the position of fishing gear do not conflict with navigation marks or systems. The system should take into account:

- (i) the provisions of the International Regulations for the Prevention of Collisions at Sea (COLREGS);
- (ii) any local rules, including rules of navigation governing river, lake or coastal waters;
- (iii) regulations pertaining to offshore structures; and
- (iv) systems for the marking of fishing gear for the identification of ownership.

~~63-66.~~ In addition to marks, suitable electronic devices such as beacons and transponders which automatically indicate their position by means of signals relayed through satellites or radio systems may be employed with the approval of any relevant authority. However, due regard should be given to the need and obligation of the relevant authority to ensure that such devices do not conflict with other similar devices employed for navigation and search and rescue purposes.

~~67.~~ In a similar manner, the relevant authority should ensure that signals emitted by such devices fitted to fishing gear do not interfere with internationally allocated radio frequencies.

64-68. Transmittable information from electronic transponders should correspond with other minimum identification requirements in these guidelines and with any additional requirements that may be in place by the relevant authorities.

65-69. Further guidance in marking fishing gear so that its presence and extent in the aquatic environment is obvious to other vessels is provided in Annex C.

RESEARCH AND DEVELOPMENT

70. States, RFMO/As, and other interested parties, should, alone or in cooperation, conduct studies that would facilitate the development and adoption of new technologies and procedures related to the marking of fishing gear, including, *inter alia*, the monitoring and retrieving of ALDFG.

71. States, RFMO/As, and other relevant authorities, should conduct research into strategies which ensure responsible management of fishing gear to minimise its loss throughout its complete lifecycle, which could incorporate gear marking and other relevant tools and management measures.

72. States, RFMO/As, and other relevant parties should conduct research into measures which would reduce the negative impact of fishing gear if lost, for example, biodegradable materials and escape mechanisms for trapped animals.

66-73. RFMO/As should periodically consult their members to collate information and build understanding of ALDFG trends and impacts over time, fishing industry attitudes and behaviour towards fishing gear management measures, as well as to monitor the effectiveness of any measures employed.

Commented [A16]:

Recognition that different stages of the life-cycle of fishing gear represent different levels of risk in terms of loss or abandonment and the need to address the whole life-cycle of the gear for optimum management

Commented [A17]:

Recognition that some amount of gear will always end up lost despite employment of best practice measures so improvements must also be made to mitigating the impacts of gear once lost

Commented [A18]:

Providing recognition of the importance of monitoring the problem of ALDFG as well as measuring the effectiveness of measures put in place to reduce the problem and suggesting that RFMOs may have a particular role to play in collating this information

AWARENESS RAISING, COMMUNICATION AND CAPACITY DEVELOPMENT

~~67-74.~~ _____ States, RFMO/As, and other interested parties, should cooperate to identify and share best practices, collate and share information, as well as coordinate effective communication and training.

~~75.~~ All parties should raise awareness of the problems caused by ALDFG and provide States, relevant stakeholders and the general public a clear purpose and rationale why it is necessary and beneficial to properly mark fishing gear and apply other measures which reduce the risk of ALDFG. This should include raising awareness of MARPOL Annex V regulations on waste management at sea and other relevant instruments.

Commented [A19]:

Edits made to recognise that gear marking is not the only action to take and that additional measures are provided in MARPOL Annex V and may in the future also be provided in other instruments

~~68-76.~~ States, RFMO/As and other relevant parties should encourage, and where possible, facilitate communication between different fishing fleets operating over the same ground to make others aware of passive/set gear and other factors which may increase risk of gear conflict. States, RFMO/As and other parties should also consider segregation of areas by stationary and mobile gear, where appropriate, to reduce gear conflict and gear loss.

Commented [A20]:

Paragraph added to address the specific threat posed by gear conflict which can be a major cause of gear being lost or abandoned.

~~69-77.~~ _____ Constraints to the effective implementation of a system for gear marking should be identified. Adequate education, training and other forms of capacity-development should be provided to fishers, relevant authorities and other interested parties to facilitate the implementation of the gear marking system.

~~70-78.~~ _____ States, RFMO/As and fishing sectors that require additional resources to develop or conduct capacity-development in gear marking should partner or collaborate with appropriate organizations, NGOs, commercial entities or other national governments in order to fully avail of the benefits of the system of gear marking, including, *inter alia*, the monitoring and retrieving of ALDFG.

SPECIAL REQUIREMENTS OF DEVELOPING STATES AND SMALL SCALE FISHERIES

~~71-79.~~ _____ Consideration should be given to enhancing the capacity of developing States to develop and adopt appropriate technology and knowledge in gear marking through financial and technical assistance and cooperation, technology transfer and training, in conformity with international law and FAO Code of Conduct for Responsible Fisheries and its related instruments.

~~72-80.~~ _____ States should give full recognition to the special requirements of developing States and small-scale fisheries in relation to their capacity to implement a system of gear marking consistent with these guidelines,

including the assessment of risk and feasibility. States may, either directly or through international organizations including RFMO/As and other relevant partners, provide assistance to developing States in order to:

- (i) enhance, and where necessary develop, adequate legal and regulatory frameworks for a system of gear marking;
- (ii) strengthen the institutional arrangements and infrastructure needed to ensure effective implementation of a system of gear marking;
- (iii) develop, implement and improve practical and effective control and monitoring systems; and
- (iv) build institutional and human resource capacity.

73-81. Special requirements of least-developed and Small Island Developing States (SIDS) should be recognized. States may, either directly or through FAO, assess the special requirements of these States to implement these guidelines.

74-82. States may cooperate to establish appropriate funding mechanisms to assist developing States to implement these guidelines. These mechanisms may be directed specifically towards developing and enhancing the capacity of the States to implement these guidelines, and may include technical and financial assistance.

ADDITIONAL CONSIDERATIONS

75-83. FAO will, as and to the extent directed by its mandate, promote the use and collect relevant information on global implementation of these guidelines and report this information, as requested, to the FAO Committee on Fisheries.