



Indian Ocean Tuna Commission  
Commission des Thons de l'Océan Indien

iotc ctoi

## Procedures for the implementation of the Indian Ocean Tuna Commission Port State Measures



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## Foreword

*“It is my great pleasure to present in this manual a detailed account of the accomplishments of the IOTC in its role of Regional Fisheries Management Organisation to strengthen Port State Control in the IOTC Area, thus to enhance the fight against IUU fishing in the Indian Ocean region.*

*This manual reinforces my firm belief that the implementation of Port State Measures is an essential tool of an effective RFMO MCS system, without which the management of the tuna resources will be forever compromised.*

*Because of this, through the adoption of several resolutions related to Port State Measures, the Members of the IOTC have recognized since more than 10 years the fundamental role and the effectiveness of Port State Measures to prevent, deter and eliminate illegal, unreported and unregulated fishing.*

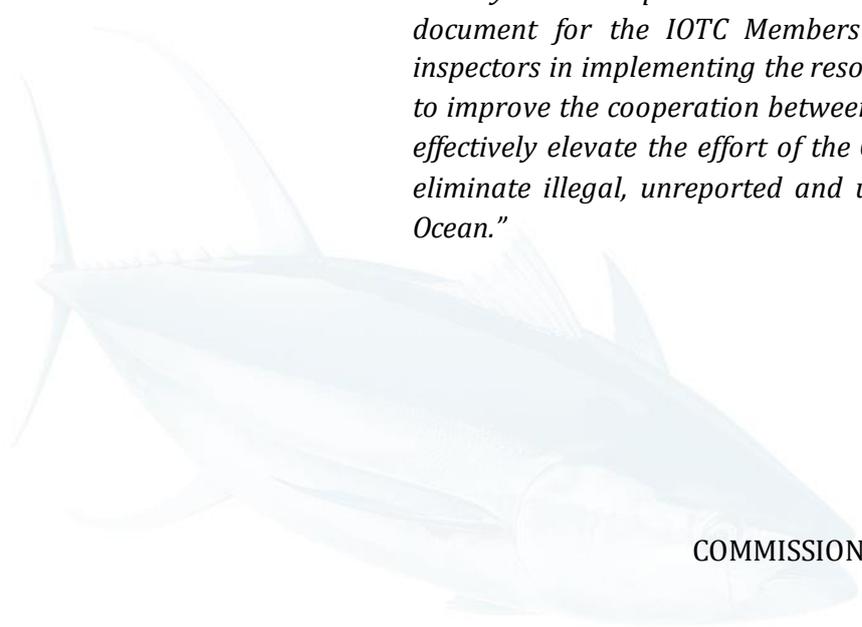
*Following the adoption of the 2009 FAO Port State Measures Agreement, such realisation prompted the IOTC Members to adopt the Port State Measures resolution mirroring the relevant provisions of the FAO PSMA and make them binding to IOTC Members. The adoption of this resolution reflects the determination the IOTC Members to address the problem of IUU fishing in the IOTC Area. The resolution provides the mechanism and drives for regional-based actions on the part of the stakeholders – flag States, coastal States, port States, market States and the industry, all responsible for the better management of the Indian Ocean tuna resource.*

*This manual is a compilation of procedures and recommendations to give effect to the IOTC PSMR whose implementation will strengthen the war against IUU fishing that undermines IOTC Members actions, and will allow the port State to take effective action against the beneficiaries of IUU fishing.*

*It is my sincere hope that this manual will serve as a useful reference document for the IOTC Members and particularly their fisheries inspectors in implementing the resolution – and that it will contribute to improve the cooperation between the IOTC Members – essential to effectively elevate the effort of the Commission to prevent, deter and eliminate illegal, unreported and unregulated fishing in the Indian Ocean.”*

A handwritten signature in blue ink, appearing to read 'R Payet'. The signature is stylized and written in a cursive-like font.

**RONDOLPH PAYET**  
**SECRETAIRE EXECUTIF**  
**COMMISSION DES THONS DE L'OCEAN INDIEN**



## Summary

The objective of this manual is to provide a working document for port State authorities to use in the implementation of the IOTC Resolution 10/11 On Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IOTC PSMR), which entered into force on 1<sup>st</sup> March 2011.

The content is divided into three chapters.

The first chapter summarises the development of port State measures by the international community and the concurrent conservation and management measures developed by the IOTC regarding port State control and the inspection of foreign fishing vessels.

The second chapter addresses the key aspects to include in the training of inspectors to provide them with the theoretical knowledge to implement the port State measures practically and effectively.

The third chapter of the manual provides guides to and checklists for standard operating procedures to implement the measures for vessels from the main fishing sectors likely to be encountered in the Indian Ocean region.

This manual should be viewed as a living document that can be revised and improved by all parties as experience is expanded in the implementation of the IOTC Resolution 10/11 on Port State measures.



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## **Abbreviations and acronyms**

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ACP	African, Caribbean and Pacific
ALC	Automatic Location Device
AREP	Advanced Request to Enter Port
ATF	Authorisation to Fish
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
COFI	FAO Committee on Fisheries
CF	Conversion factor
CPC	Contracting Parties and Cooperating Non-Contracting Parties
DWFN	Distant Water Fisheries Nations
EEZ	Exclusive Economic zone
EIO	Eastern Indian Ocean
ETA	Estimated time of arrival
ETD	Estimated time of departure
EU	European Union
FAD	Fisheries Aggregation Device
FAO	Food and Agriculture Organisation of the United Nations
FER	FINSS Enforcement Report
FMC	Fisheries Monitoring Centre
GGT	Gutted, gilled and tail off
GPS	Global Positioning System
IATTC	The Inter-American Tropical Tuna Commission
ICCAT	The International Commission for the Conservation of Atlantic Tunas
IOC	Indian Ocean Commission
IOTC	Indian Ocean Tuna Commission
IMO	International Maritime Organisation
IPOA	International plan of action
IRCS	International Radio Call Sign
ITU	International Telecommunication Union
IUU	Illegal, unreported and unregulated fishing
MCS	Monitoring, Control and Surveillance
MOU	Memorandum of Understanding
PFD	Personal Flotation Device
PSM	Port State Measures
PSMR	Port State Measures Resolution
RFMO	Regional Fisheries Management Organisation
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNFSA	United Nations Agreement on Straddling and Highly Migratory Fish Stocks (Commonly called the UN Fish Stocks Agreement, or UNSFA)
UNGA	United Nations General Assembly
WIO	Western Indian Ocean
WP	Working Party
VMS	Vessel Monitoring System
WCPFC	The Western and Central Pacific Fisheries Commission

## **Introduction**

The rational and sustainable use of marine living resources has been a topic of international debate for many decades. This has resulted in the negotiation of numerous fisheries agreements by recognised international bodies such as the United Nations General Assembly (UNGA), the Food and Agriculture Organisation of the United Nations (FAO) and Regional Fisheries Management Organisations (RFMOs).

Worldwide efforts to manage fisheries extending across national and international boundaries onto the high seas continue to be undermined by Illegal, Unreported and Unregulated Fishing (IUU). Port State measures have been recognised as one of the most effective means for enhancing compliance in fisheries management, both in terms of cost and also in terms of effectiveness. Inspecting a vessel in port is straightforward, it provides a secure and stable environment for personnel to operate in that eliminates the risks associated with boarding at sea.

The 2009 FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing is the culmination of several decades of broad-based cooperation by the international community, States and RFMOs to combat IUU fishing activities. It was approved as Article XIV by the FAO Conference on 22 November 2009 as an instrument under the FAO Constitution. This Agreement will enter into force and become a legally binding Agreement between signatory states and nations in terms of the United Nations Charter 30 days after the date of the deposit of the twenty-fifth instrument of ratification, acceptance, approval or accession with the Depository, the Director-General of FAO.

Following the approval of the 2009 FAO Agreement on Port State Measures and pending the Agreement coming into force, in 2010 the Indian Ocean Tuna Commission (IOTC) adopted Resolution 10/11 on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IOTC PSMR). The IOTC Resolution mirrors the relevant provisions of the 2009 FAO Agreement on Port State Measures making them mandatory for IOTC Contracting and Cooperating Non Contracting Parties (CPCs) with effect from 1 March 2011. The primary objective of this Resolution is to prevent illegally caught fish from entering international markets through the Commission's ports.



## **CHAPTER 1**

# **Understanding the fisheries management process of the Indian Ocean Tuna Commission, the development of the port State Measures, the fleets and ports involved in the tuna fishery**

## **IOTC organisation and role**

## **Overview of the Indian Ocean tuna fishery**

## **Background to the development of the port State Measures**



This chapter covers two main sections that are intended to provide a foundation for understanding the objectives of port State measures in combatting IUU fishing activities.

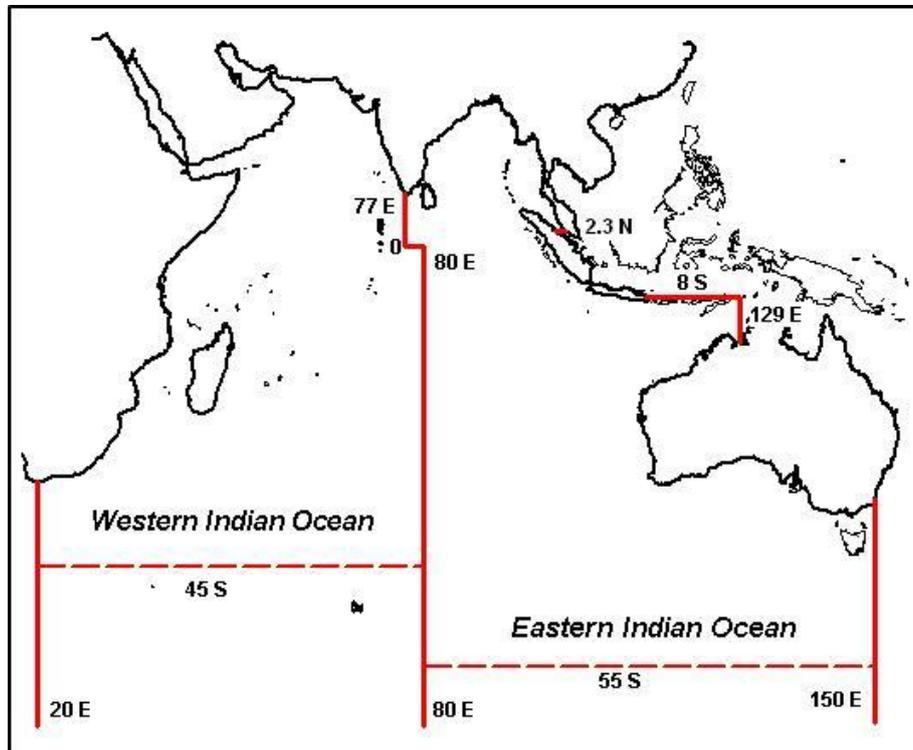
The first section provides a short summary of the organisational structure of the IOTC and its role as a RFMO in managing the tuna fishery in the Indian Ocean region.

The second section provides an introduction and summary of the development of port State measures at the international level and the parallel development of conservation and management measures by the IOTC in its regional capacity leading up to the adoption of Resolution 10/11 to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

It is especially important for port and fisheries authorities to understand the mandate of port States in the implementation of the IOTC conservation and management measures. This chapter aims to provide the references to implement these measures in their port and follow-up with reports and information to that will make these measures effective in the region.

## 1. IOTC organisation and role

The Indian Ocean Tuna Commission (IOTC) was established under Article XIV of the FAO constitution and came into force on 27 March 1996. It is an intergovernmental organisation mandated to manage tuna and tuna-like species in the Indian Ocean and adjacent seas. The area of competence of the IOTC is defined in the IOTC agreement. It is subdivided into a western and an eastern portion, which correspond to FAO statistical areas 51 and 57 respectively, and shown in figure 1.

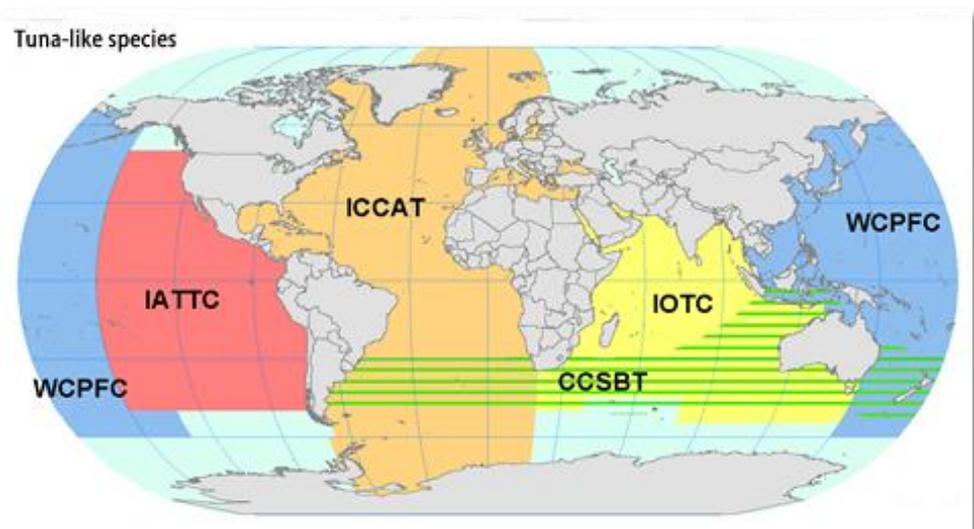


**Figure 1:** Area of competence of the Indian Ocean Tuna Commission (Source: IOTC).

The objectives of the Commission are to promote cooperation among its Members with a view of ensuring, through appropriate management, the conservation and optimum utilization of stocks covered by this Agreement and encouraging sustainable development of fisheries based on such stocks. The IOTC shares these objectives with four other tuna RFMOs covering the ocean regions of the world (Figure 2).

It is important to note that in terms of Port State Control, vessels fishing in regions managed by other RFMOs adjacent to the IOTC area such as the ICCAT, WCPFC, CCSBT and CCAMLR (Figure 2), are also likely to enter ports in the Indian Ocean region to offload their catch.

Cooperation with the members of these organisations will be an essential aspect in implementing the resolution to strengthen the fight against IUU fishing activities at the global level.



**Figure 2:** Five major tuna RFMOs covering the oceanic regions (source EU).

## 1.1 Members and structure

The organisation is open to any Indian Ocean coastal country and to countries or regional economic integration organisations that are members of the United Nations or one of its specialised agencies that are fishing for tunas in the Indian Ocean. The Commission is composed of Contracting Parties and Cooperating Non-Contracting Parties (CPCs). Current Membership [2012] consists of 31 Contracting Parties and two Cooperating Non-Contracting Parties (Table 1).

Table 1 - CPCs of the Indian Ocean Tuna Commission					
Contracting Parties to the Indian Ocean Tuna Commission ( <i>Date of acceptance</i> )					
	Australia	(13 Nov 1996)		Maldives	(13 July 2011)
	Belize	(May 2007)		Mauritius	(27 Dec 1994)
	China	(14 Oct 1998)		Mozambique	(13 Feb 2012)
	Comoros	(14 Aug 2001)		Oman, Sultanate of	(5 April 2000)
	Eritrea	(9 Aug 1994)		Pakistan	(27 Apr 1995)
	European Community	(27 Oct 1995)		Philippines	(9 Jan 2004)
	France (Territories)	(3 Dec 1996)		Seychelles	(26 Jul 1995)
	Guinea	(31 Jan 2005)		Sierra Leone	(01 Jul 2008)
	India	(13 Mar 1995)		Sri Lanka	(13 Jun 1994)
	Indonesia	(09 July 2007)		Sudan	(3 Dec 1996)
	Iran, Islamic Republic of	(28 Jan 2002)		Tanzania	(18 Apr 2007)
	Japan	(26 Jun 1996)		Thailand	(17 Mar 1997)
	Kenya	(29 Sep 2004)		United Kingdom (Territories)	(31 Mar 1995)
	Korea, Republic of	(27 Mar 1996)		Vanuatu	(25 Oct 2002)
	Madagascar	(10 Jan 1996)		Yemen	(20 Jul 2012)
	Malaysia	(22 May 1998)			
Cooperating Non-Contracting Parties to the Indian Ocean Tuna Commission					
	Senegal			South Africa	

## 1.2 The Commission

Representatives of the Contracting Parties make up **the Commission** at its annual meetings and this is the main decision-making body. Subsidiary bodies set up by the Commission analyse different types of data and information. These associated bodies have specific functions and are responsible to the Commission and refer their conclusions and recommendations back to the Commission for final decision-making.

### **1.2.1. Functions and responsibilities**

The main functions of the IOTC are noted in the box 1.

#### **Box 1 | Functions and responsibilities of the Commission**

The Commission has the following functions and responsibilities in accordance with the principles expressed in the relevant provisions of the United Nations Convention on the Law of the Sea and the stocks covered by the IOTC Agreement:

- to keep under review the conditions and trends of the stocks
- to gather, analyse and disseminate scientific information, catch and effort statistics and other data relevant to the conservation and management of the stocks and to fisheries;
- to encourage, recommend, coordinate research and development activities in respect of the stocks and fisheries, including activities connected with transfer of technology, training and enhancement;
- to adopt, on the basis of scientific evidence, conservation and management measures to ensure the conservation of the stocks and to promote the objective of their optimum utilisation
- to keep under review the economic and social aspects of the fisheries bearing in mind, in particular, the interests of developing coastal States.

Other areas of particular interest to the organisation include activities connected with transfer of technology, training and enhancement. In the discharge of all responsibilities, the IOTC will have due regard to the need to ensure the equitable participation of Members of the Commission in the fisheries and the special interests and needs of Members in the region that are developing countries.

### **1.2.2. Management responsibilities and adherence to measures**

In order to encourage its members to take actions, measures passed at IOTC annual meetings are promulgated as either resolutions or recommendations.

Resolutions on conservation and management measures are adopted by a two-thirds majority of members present and voting at the Commission meetings and are binding on the members of the Commission. Exceptions to these conditions are:

- Individual members that register an objection to a decision are not bound by the measure,
- In the event that more than one-third of the members object to a measure, then none of the members are bound by the measure; but this does not preclude any or all of them from giving such a measure effect.

The features of IOTC Resolutions are:

- Binding on CPCs, unless there is an objection;
- Implementations are required at national levels;
- The level of compliance is assessed for each CPCs;
- The level of compliance is indicative of the effectiveness of the Commission.

Recommendations concerning conservation and management of the stocks for furthering the objectives of the Agreement need only to be adopted by a simple majority of its Members present and voting.

IOTC Recommendations are:

- Not binding, may be implemented on a voluntary basis; and
- Transitional.

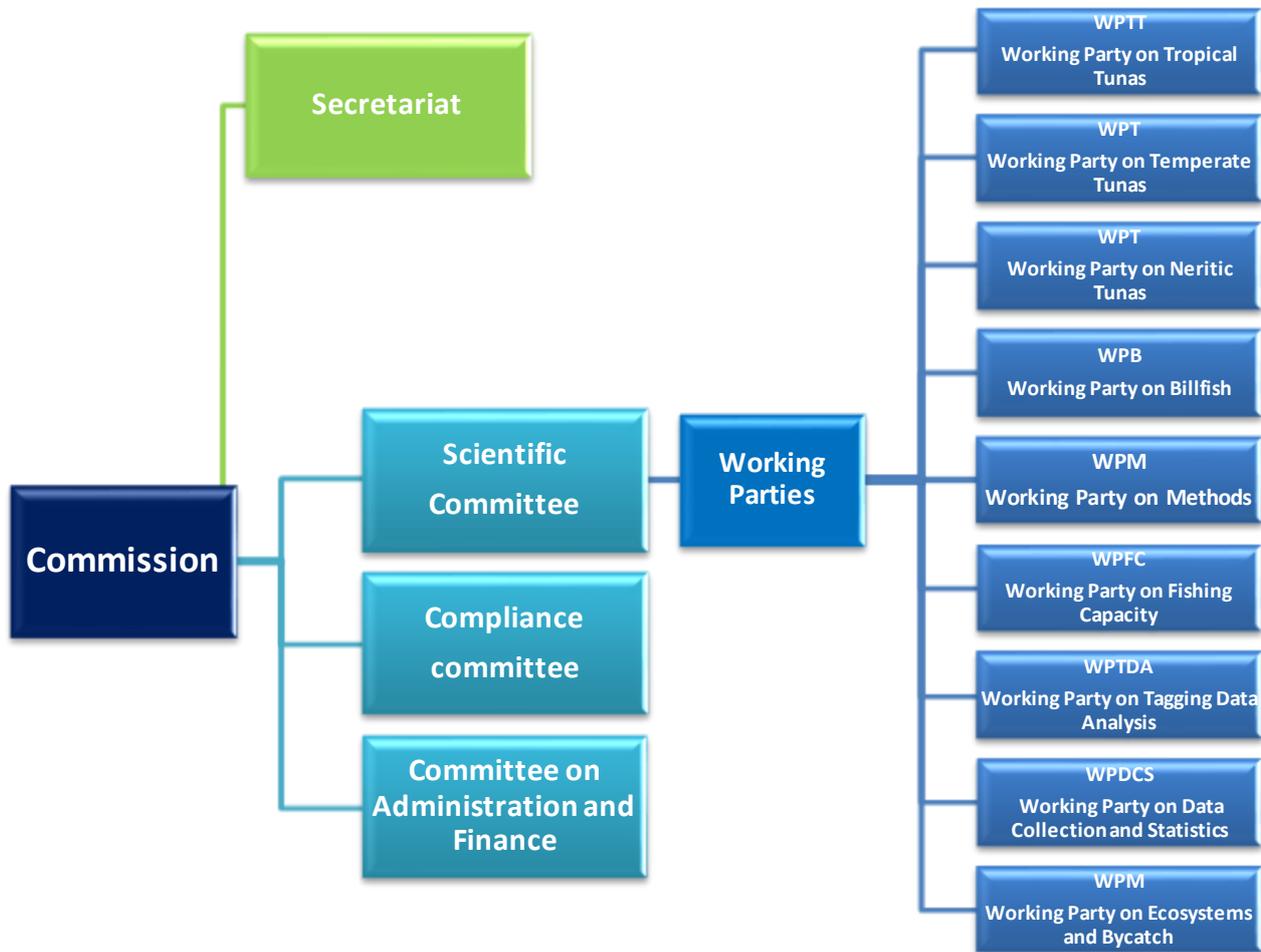
The Members of the Commission are also expected to cooperate in the exchange of information regarding any fishing for stocks covered by the Agreement by nationals of any State or entity that is not a Member of the Commission.

#### **Box 2 | IOTC resolutions and recommendations**

- Resolutions are binding on the Members of the IOTC. It is the responsibility of Members to ensure that action is taken under their national legislation to implement the resolutions,
- Recommendations are not binding but can be implemented on a voluntary basis.

### 1.3. The Committees of the IOTC

To support the works of the Commission, three Committees have been created in the field of science, compliance and administration. With the Secretariat, they constitute the primary structure of the IOTC (figure 3).



**Figure 3: Schematic diagram of the primary structure of the IOTC.**

#### 1.3.1. The Scientific Committee

The Scientific Committee (SC) advises the Commission on research and data collection and, on management issues and the status of stocks (Figure 3). The meetings of the Scientific Committee are held some months prior to the meetings of the Commission. In addition, the Commission has established a number of Working Parties for specific purposes. The most common objective of the Working Parties is to provide the Scientific Committee with analyses of the status of the stocks and possible management actions, while some Working Parties (such as the Working Party on Data Collection and Statistics) were established to analyse and provide recommendations on specific technical problems.

#### Box 3 | The working parties of the IOTC

- WPTT - Working Party on Tropical Tunas
- WPT - Working Party on Neritic Tunas
- WPFC - Working Party on Fishing Capacity
- WPDCS - Working Party on Data Collection and Statistics
- WPT - Working Party on Temperate Tunas
- WPB - Working Party on Billfish
- WPTDA - Working Party on Tagging Data Analysis
- WPM - Working Party on Methods
- WPM - Working Party on Ecosystems and Bycatch

### **1.3.2. The Compliance Committee**

The Compliance Committee (CoC) was formally created in 2002 under resolution 02/03 *Terms of reference for the IOTC Compliance Committee* which was superseded in 2010 at the Fourteenth Session of the Commission by the resolution 10/09 (Figure 3). This body is responsible for reviewing all aspects of IOTC Members and Co-operating non-Contracting Parties individual compliance with IOTC resolutions in the IOTC Area and reports directly to the Commission on its deliberations and recommendations.

A compliance section was created in 2008 to assess and review all compliance aspects related to the implementation of the IOTC Conservation and Management Measures and provide support to Contracting and Cooperating Parties (CPCs) in the implementation of Monitoring, Control and Surveillance (MCS) tools adopted by the IOTC Members: IUU vessel list, authorized & active vessels list, documents on-board, marking of fishing vessels and gears, Vessel Monitoring System, fishing logbooks, regional observers scheme, monitoring at-sea transshipments programme, catch certification/trade documentation scheme.

### **1.3.3. The Committee on administration and finance**

The Standing Committee on Administration and Finance (SCAF) was established by the Commission under the resolution 02/09 in accordance with Article XII.5 of the Agreement.

The Standing Committee advises the Commission on matters of an administrative and financial character as are remitted to it by the Commission and annually examine the operation of the budget for the current year and examine the draft budget for the ensuing year. The Standing Committee prepares a report of each meeting of the Committee for transmission to the Commission.

## **1.4. Mission of the secretariat and strategy of implementation**

The offices of the IOTC Secretariat are located in Victoria, Seychelles. The office started its operations on first of January, 1998. In 2011, the Secretariat was composed of a staff complement of about a dozen people, covering technical and administrative positions. The organogram of the Secretariat is reflected in the figure 4.

The mission of the Secretariat is **to facilitate the processes required to implement the policies and activities of the Commission**, whose goal is to achieve the objectives stated in the IOTC Agreement. In essence, these processes include the acquisition, processing and dissemination of information that constitutes the basis for the Commission's decisions, as well as supporting the actions taken by the Members and Cooperating Parties to implement those decisions effectively.

To facilitate planning, the activities of the Secretariat have been grouped into six major functional areas:

1. Support to scientific activities:

The acquisition and processing of scientific data, as required by the Scientific Committee to conduct stock status analyses. Supply of stock assessment services as required by the working groups.

2. Support to compliance activities:

Maintenance of lists of vessels and compliance databases reporting on compliance by Members. Providing support to Members and Cooperating non-Contracting Parties in the implementation of IOTC Resolutions.

3. Communications and public information:

This function is considered essential in allowing Members and Cooperating Parties to follow the progress of the Commission's work in a transparent way, and to increase the visibility of the Commission's activities to the general public.

4. Support to meetings:

Logistic support in the facilitation of meetings, preparation of reports and maintenance of the meetings calendar.

5. **Information Technology:**

Provide basic computer infrastructure, including maintenance of the network and servers, as well as Internet support.

6. **Administration:**

Financial administration in conjunction with FAO, administration of extra-budgetary funds, travel arrangements, general logistical support to the activities of the technical sections.

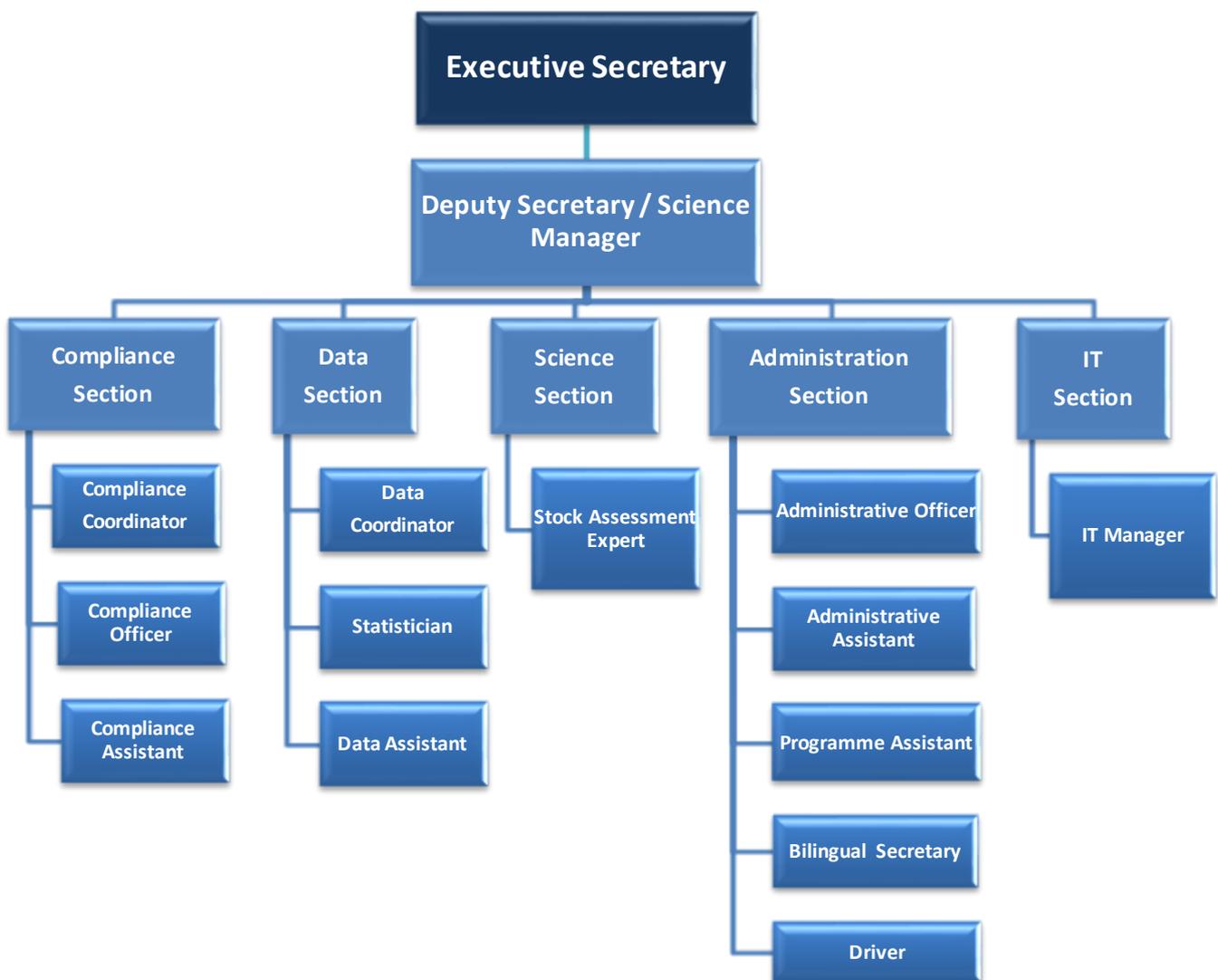
In order to provide support to the scientific activities of the Commission and its subsidiary bodies, the Secretariat is divided into sections composed of staff with similar specialised skills (Figure 4). There is close cooperation between the data section and the science section in the production of datasets and analyses that will assist the Scientific Committee and its Working Parties to formulate its advices to the Commission.

Similarly, the data section and the compliance section cooperate in the maintenance of the databases needed to monitor the effectiveness in the implementation of the measures adopted by the Members.

The Secretariat is also involved in the implementation of projects that further the objectives of the Commission.

With respect to providing public information, the Secretariat has developed a website in which comprehensive information resources converge. The website, which is found under [www.iotc.org](http://www.iotc.org) pools resources such as reports, and databases (complete with web-based query interfaces), in order to provide CPCs with all the information they may use in order to honour their duties under the agreement.

The Secretariat is managed by the Executive Secretary, who is appointed by the Commission.

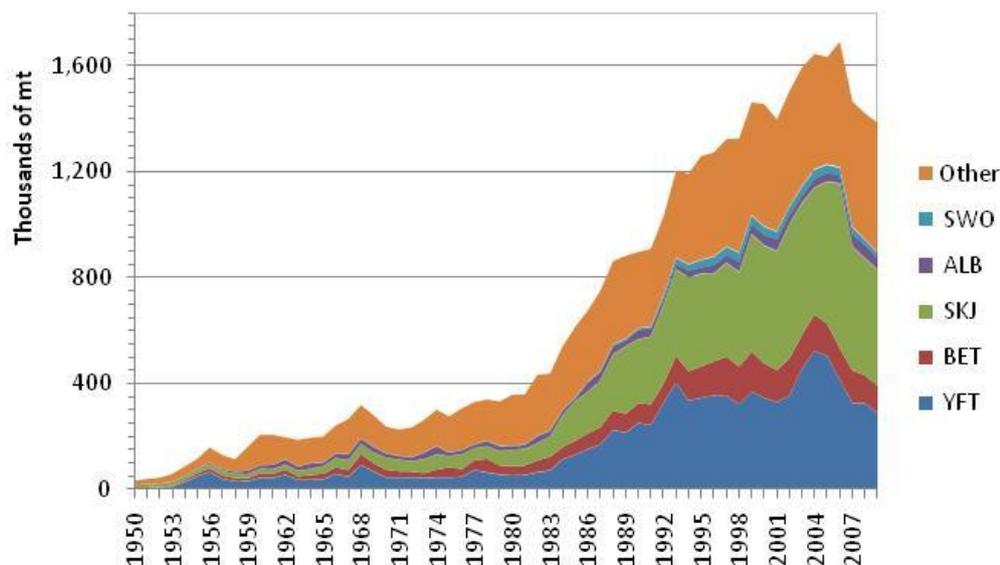


**Figure 4: Organisational structure of the IOTC Secretariat.**

## 2. Overview of the Indian Ocean tuna fishery

### 2.1. The tuna resource

The Indian Ocean tuna fishery is the second largest in the world, with catches estimated at nearly 1.5 million metric tonnes of tuna and tuna-like species annually or approximately 25% of the world tuna catches. The oceanic tunas include skipjack (*Katsuwonus pelamis*), yellowfin (*Thunnus albacares*) and bigeye (*T. obesus*), which are caught by purse seine fisheries, with albacore (*T. alalunga*) and southern bluefin (*T. maccoyii*) which, together with yellowfin and bigeye tuna are caught by longlines. Tuna-like species include principally billfish, with swordfish (*Xiphias gladius*) having the highest catches (Figure 5).



**Figure 5:**  
Total catches (thousands of metric tons) of major IOTC species (YFT: yellowfin tuna, BET: bigeye tuna, SKJ: skipjack tuna, ALB: albacore, SWO: swordfish), and other species.

Catches of IOTC species in the Indian Ocean increased gradually from the early 1950s to the early 1980s, following the arrival of industrial longline fleets in the Indian Ocean and development of artisanal fisheries in some coastal States (Figure 5).

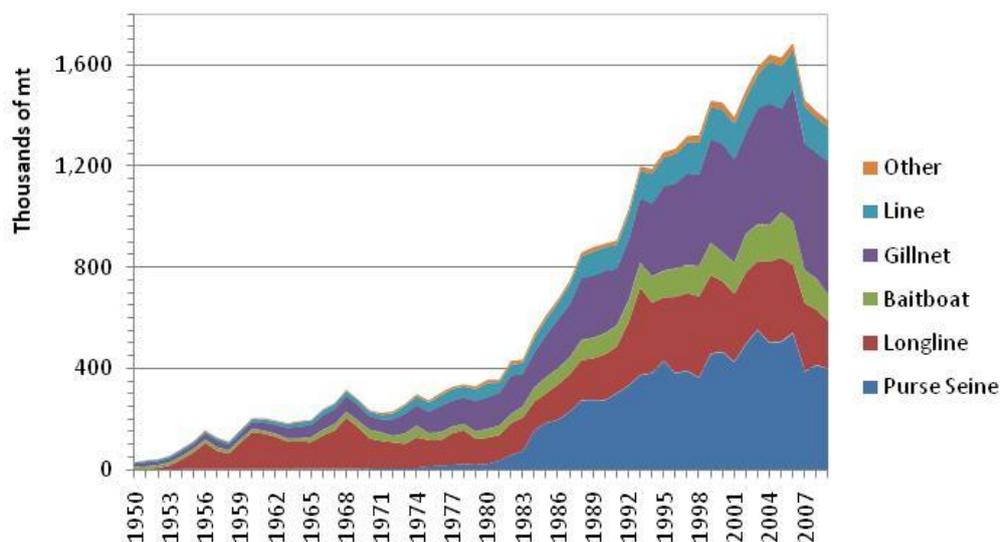
The dramatic increase in the catches recorded thereafter is the consequence of the arrival of industrial purse seine fleets, in particular those from the EU, and the increased activities of longline (since the late 1980s) and gillnet (since the early 1990s) fleets in the Indian Ocean. The catches of IOTC species have dropped in recent years, with catches in 2009 estimated at around 1,400,000 metric tons.

In recent years, as much as 40% of the catches of IOTC species in the Indian Ocean have been taken by industrial purse seine and longline fleets. Tropical tunas dominate the catches, representing around 60% of the total catches of IOTC species in the Indian Ocean (Figure 5).

The Indian Ocean tuna fishery can be categorized into several fleet segments depending of the target species:

- Industrial tuna purse seiners targeting tropical tunas are from the European Union, Seychelles, Iran, Japan, Thailand;
- Industrial coastal purse seiners targeting neritic tuna species are from: Thailand, Malaysia, Indonesia;
- Industrial deep-freezing longliners targeting tuna or swordfish are from Taiwan, Japan, China, India;
- Industrial freezing longliners targeting swordfish are from the European Union and Australia,
- Fresh tuna longliners targeting tropical tunas or swordfish are from Indonesia, Malaysia, European Union and Seychelles.

In the Western Indian Ocean (WIO), the annual catch of oceanic tunas fishery approximates 970,000 tonnes with a processed value of €2-3 billion. Inclusion of “tuna-like” species increases the total catch of this region to one million tonnes. These landings are almost three times greater than those of the Eastern Indian Ocean (EIO) and are associated with the high levels of productivity from upwellings adjacent to the Arabian and Somali coastlines.



**Figure 6:** Total catches (thousands of metric tons) of IOTC species, by type of gear and year (1950-2009).

Indian Ocean tuna and ‘tuna-like’ fisheries are unique for two main reasons:

- catches taken by the artisanal sector are similar in volume to those of the industrial sector; and
- catches taken by the industrial sector are fairly evenly split between longline and purse seine fleets.

This is in contrast to tuna fisheries in both the Pacific and Atlantic Oceans, which are dominated by the industrial sector. The WIO fisheries are estimated to be one of the most valuable in the world (after the WCPFC) and this status reflects two important characteristics:

- the comparatively high value attributed to artisanal catches; and
- that half of the industrial fleet’s catches are taken by longliners for which catch values are considerably greater than for equivalent purse seine catches.

Revenues from the tuna fisheries are generated through inter alia:

- the sale of fishing rights and access to foreign fleets (predominantly DWFNs in the form of fisheries agreements);
- transshipment and associated downstream activities of foreign fleets;
- onshore processing and canning of tuna;
- servicing, refuelling, drydocking,
- landings (and associated activities) of local semi-industrial and industrial enterprises.

Details of vessels authorised to fish and tranship in the IOTC management area can be obtained from the IOTC website, (<http://www.iotc.org>). There are currently 8141 authorized vessels from 30 flags in the IOTC record of authorised vessels (last update: November 11 2012).

## 2.2. Ports supporting the Indian Ocean tuna fishery

### 2.2.1. The flow of tuna catches: in port versus at-sea transshipment

During 2009, as much as 50% (longline) and 80% (purse seine) of the catches of IOTC species were unloaded in foreign ports within the territory of Indian Ocean coastal States.

Most of the catches within this component originate from vessels flagged in DWFNs. The majority of catches of vessels flagged in coastal States of the Indian Ocean are unloaded in ports within the flag States of the vessel (70% and 60% for longline and purse seine, respectively). The reasons for this difference are probably the relatively small size of vessels flagged in coastal States, compared with those flagged in DWFNs, and the lower distance between ports in the region and fishing grounds exploited by vessels of coastal States. In addition, 25% of the catches of longline fleets are transshipped on the high seas, mostly by vessels flagged in distant water fishing nations.

**Box 4 | Flow of tuna catches in the Indian Ocean (Source IOTC 2009)**

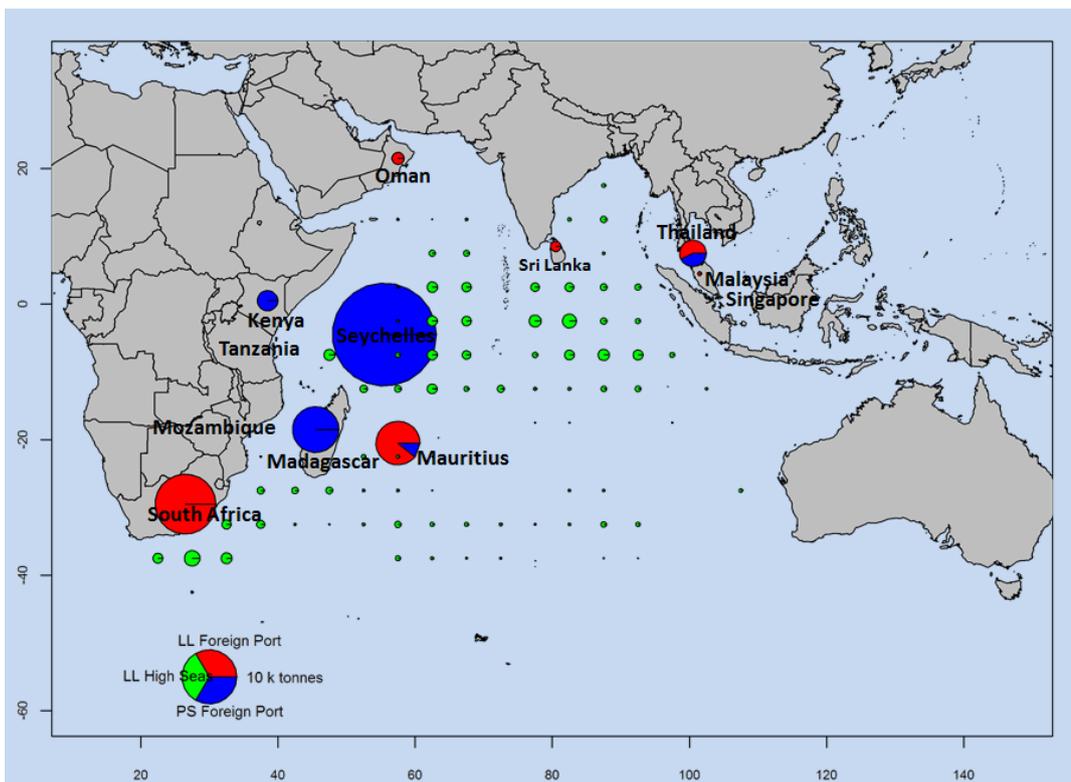
- For purse seiners:
  - All catches are unloaded in port with 80% of the catch unloaded in foreign ports.
- For longliners:
  - 25% of the catch is transshipped at-sea;
  - 50% of the catch is unloaded in foreign ports;
  - 25% of the catch is unloaded in ports within the territory of the flag state of the vessels or, to a lesser extent, in foreign ports outside the Indian Ocean;
  - Longliners from DWFN tend to use foreign ports or transship catch at-sea (≈90%);
  - Longliners from Coastal countries tend to unload catch in ports (≈95%), mostly within their flag states (≈70%).

**2.2.2. Activities in ports**

A number of countries throughout the region have ports frequently utilised for services and off-loading catch (Figure 7 & 8) by foreign fishing vessels with the main countries being:

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Thailand (Phuket)</li> <li>• Seychelles (Victoria)</li> <li>• Mauritius (Port Louis)</li> </ul> | <ul style="list-style-type: none"> <li>• South Africa – (Durban and Cape Town)</li> <li>• Singapore</li> <li>• Madagascar (Antsiranana and Tamatave)</li> </ul> |
|--|---|

Others countries have ports utilised by foreign fishing vessels but to a lesser extent that the previous ports. They are Sri Lanka (Colombo - Mutwal), Oman (Muscat, Shalalah), Malaysia (Penang) and Kenya (Mombasa).

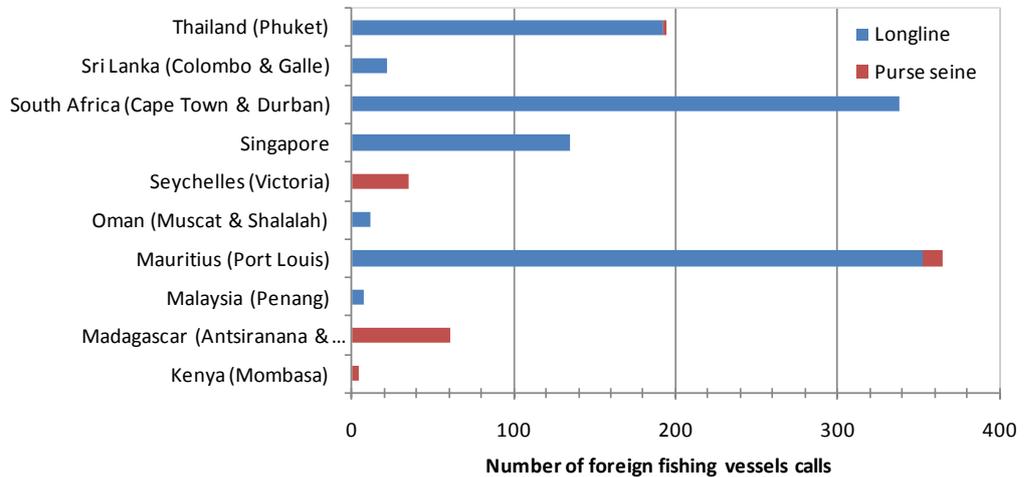


**Figure 7:** Amount of catch unloaded by foreign vessels in ports within the territory of IOTC coastal States and catches transshipped on the high seas by longline vessels under the IOTC Transshipment Programme, during 2009, by type of gear.

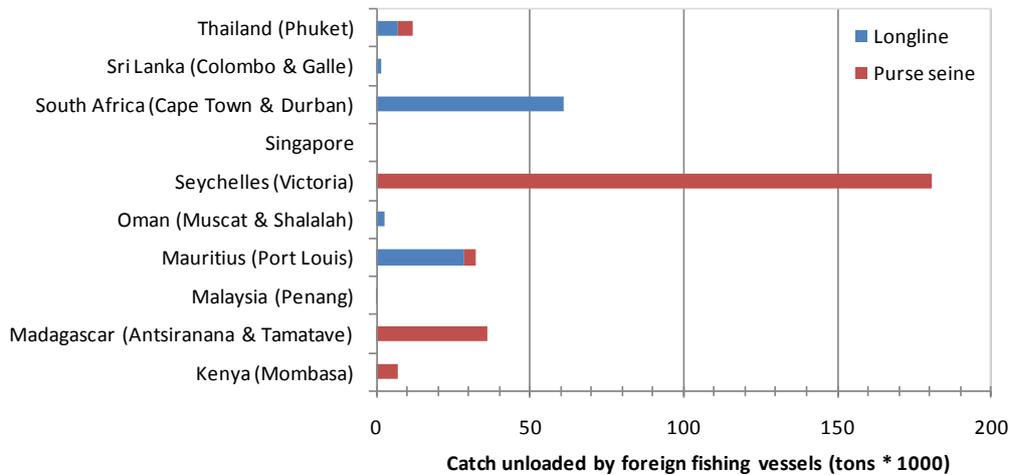
The use of the ports by the foreign fleets in the Indian Ocean follows a specific pattern by type of vessel and gear:

- Tuna purse seiners mostly use Seychelles and Madagascar ports;
- Deep-freezing longliners use South Africa, Mauritius and Singapore ports;
- Freezing longliners (swordfish) use South Africa and Mauritius ports,
- Fresh-tuna longliners use Thailand, Mauritius and, Sri Lanka ports.

Annual number of vessels calling into ports in the Indian Ocean region to unload or tranship catches (Source IOTC 2009).



Catch unloaded by foreign fishing vessels into ports in the Indian Ocean region (Source IOTC 2009).



**Figure 8: Indian Ocean region ports predominantly used for off-loading and port services.**

In terms of the IOTC PSMR (Part 2 Paragraph 5), all CPCs are required to designate and publicize the ports to which vessels may request entry and provide a list of its designated ports to the IOTC Secretariat. Currently, eleven countries are listed as having designated ports. Australia has designated all of its ports and the other ten countries publicise a total of 20 ports. The detailed list of ports as well as name and address of authorities, period of advance notice are available on the IOTC website, <http://www.iotc.org>, link Designated Ports.

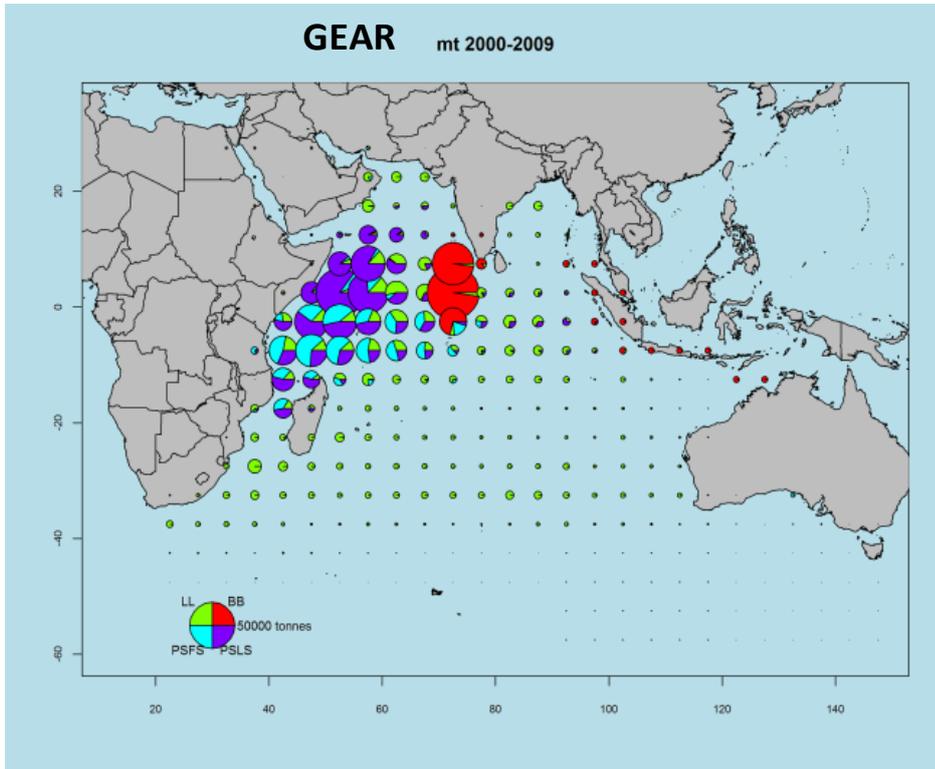
### 2.3. The purse seine fishery

The IOTC currently has 193 authorised purse-seine vessels on its list of which 70 are active. Ten countries and the European Union (EU), as a regional entity, have tuna purse seine vessels registered to fish in the Indian Ocean region. The EU (70% Spanish or French flagged), Seychelles, Iran, Japan and Thailand have larger industrial tuna purse seiners that target tropical tunas.

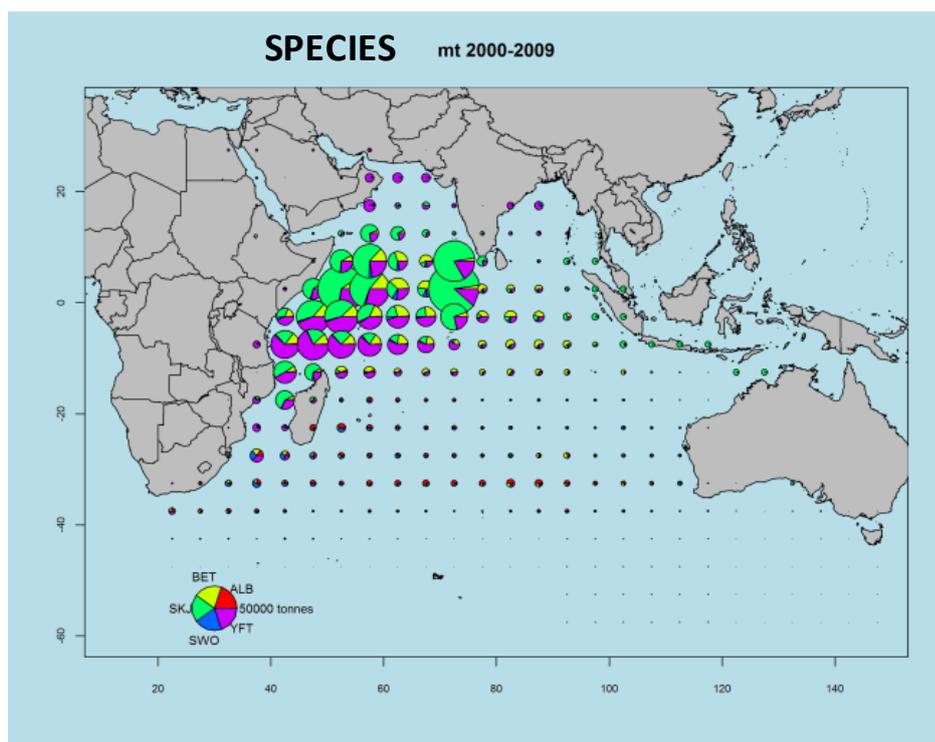
Smaller coastal purse-seiners targeting neritic tuna species are flagged to Thailand, Malaysia and Indonesia with the other vessels flagged by Australia, Korea, Oman, and Philippines. The EU fleet accounts for a third of the overall Indian Ocean catch and two-thirds of the Western Indian Ocean purse seine catch.

The purse seine activity is almost exclusively distributed in the tropical areas of the WIO region (Figure 9 & 10), however there is a noticeable shift in effort in the region corresponding to the seasons:

- 1st Quarter, Central WIO, Seychelles plateau and Northern Mozambique Channel;
- 2nd Quarter, Southern Somali basin and Mozambique Channel;
- 3rd Quarter, Somali basin and Western Seychelles plateau,
- 4th Quarter, Central WIO and Seychelles plateau.



**Figure 9:** Catches of major IOTC species (Tropical tunas, albacore and swordfish) by industrial fleets in the Indian Ocean by type of gear (LL: Longline, BB: Baitboat, PSFS: purse seine free-schools, PSLs: purse seine associated schools) and 5 degrees square area for the period 2000-2009 (Excludes gillnet fisheries).

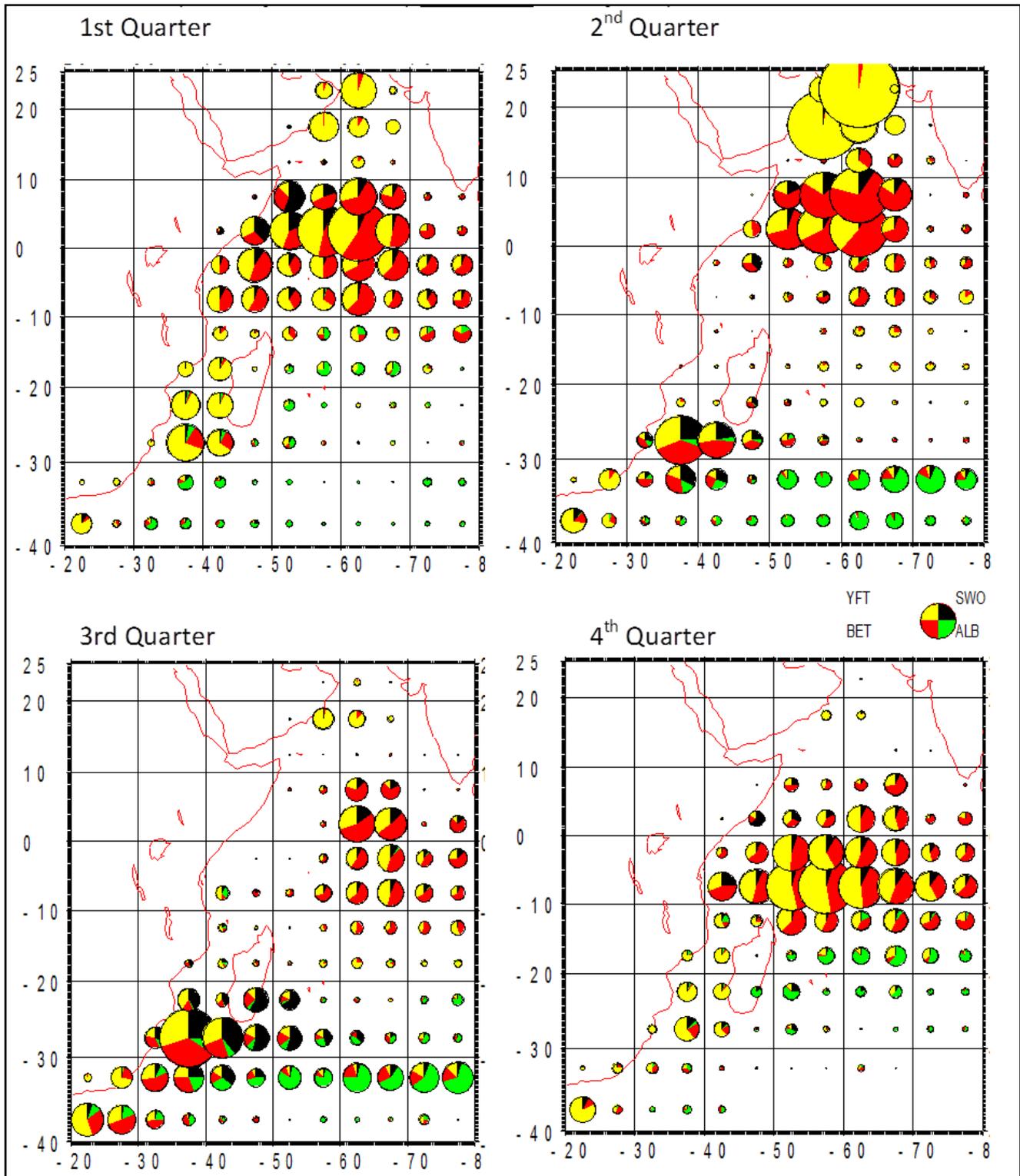


**Figure 10:** Catches of major IOTC species (YFT: yellowfin tuna, BET: bigeye tuna, SKJ: skipjack tuna, ALB: albacore, SWO: swordfish) by industrial fleets in the Indian Ocean by species and 5 degrees square area for the period 2000-2009 (Excludes gillnet fisheries).

## 2.4. The longline fishery

As of November 2012, there was 2232 longline vessels registered on the IOTC record of authorised vessels. The longline fishing is more dispersed ranging over the entire tropical and subtropical areas down to the southern limits of the WIO region.

It is important to note these seasonal shifts (Figure 11), as they provide some indication of where fishing fleets will be at certain times of the year and in which region vessels are likely to tranship or request access to port.



**Figure 11:** Quarterly average catches by longliners during the period 1994-1999 by season (Source: IOTC).

### **3. Background to the development of port State Measures**

#### **3.1. Historical development of the FAO Agreement on Port States Measures**

To implement the IOTC Resolution 10/11 on Port State Measures and understand its content, administrators and operational enforcement personnel must have an overall understanding of the evolution and content of agreements and instruments developed by the UN and FAO on Port State Measures, together with the corresponding IOTC Resolutions that have been developed and promulgated over the years. It is likely that the wording of these agreements will also be used in the national laws of port States governing the landing of foreign vessels in their ports as well as authorisations provided by flag States to their vessels. In this respect, it is important to note the difference between binding and non-binding instruments and the implications of applying the conservation measures when undertaking inspections, communicating information and compiling reports.

Port State Measures (PSM) were first discussed in the UN 1972 Stockholm Conference and the legal foundation began with the 1982 United Nations Convention on the Law of the Sea (UNCLOS) Article 218, which primarily addresses environmental concerns in the context of marine pollution of merchant shipping. The Convention was concluded the 10 of December 1982 and came into force on 16 November 1994, after the 60th nation had signed the treaty, and is the legal cornerstone of many subsequent and related agreements.

Key milestones in the international legal basis for the development of PSM to combat IUU Fishing were the adoption by the FAO Conference of the binding Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas in 1993 (FAO Compliance Agreement) and the Agreement for the Implementation of the Provisions of the United Nations Conventions on the Law of the Sea of 10 December 1982, relating to the Conservation and the Management of Straddling Fish Stocks and Highly Migratory Fish Stocks in 1995 (UN Fish Stocks Agreement or UNFSA).

Subsequently, two non-binding measures aimed at reducing IUU fishing were adopted by the FAO, namely the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU) and the 2005 Model Scheme on Port State Measures (2005 Model Scheme), which eventually culminated in the development of the 2009 FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. This latter Agreement will become legally binding for signatory States and nations in terms of the United Nations Charter when ratified by twenty-five States.

#### **Box 5 | Background and key milestones in the development of Port State Measures**

Key milestones in the international legal basis for the development of PSM to combat IUU Fishing were:

- United Nations Convention on the Law of the Sea (UNCLOS, 1982);
- FAO Compliance Agreement (1993);
- The UN Fish Stocks Agreement (1995);
- The FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (2001);
- Model Scheme on Port State Measures (2005),
- FAO Agreement on Port State Measures to Prevent, Deter and Eliminate IUU Fishing.

##### **3.1.1. FAO Compliance Agreement (1993)**

The FAO Conference at its Twenty-seventh Session (November 1993), through Resolution 15/93, approved the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas for submission to Governments for acceptance. The 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas is a **binding fisheries agreement**. In accordance with Article XI.1, the Agreement **entered into force on 24 April 2003**, date of receipt by the Director General of the twenty-fifth instrument of acceptance. The Agreement was registered with the Secretariat of the United Nations under N<sup>o</sup> 39486 on 1 August 2003.

Its purpose is to provide an instrument for countries to take effective action, consistent with international law, to ensure compliance for the protection of living marine resources on the high seas. The agreement places the onus on flag States to take responsibility for and maintain control over their registered vessels while they are fishing on the high seas.

Article V of the 1993 FAO Compliance Agreement addresses international cooperation. It requires Parties to exchange information concerning vessels reported to have engaged in activities undermining international conservation and management measures (i.e. binding measures put in place by RFMOs). The purpose of this cooperation and exchange of information is to assist flag States to fulfil their obligations under the Agreement.

The 1993 FAO Compliance Agreement also makes provision for international cooperation between parties to the Agreement to exchange information concerning their vessels that have been reported to have engaged in activities that undermine binding measures for conservation and management of marine living resources. Where there are reasonable grounds to believe that a vessel has been engaged in such activities and it voluntarily enters a port, it is binding on that port State to notify the vessel's flag State of these activities. However, no reciprocal obligation is imposed on the flag State to cooperate with the port State to take further investigatory action. This is a weak point in the agreement because it does not recognize fully the sovereignty of the port State. However, there is nothing to prevent any port State from also informing the coastal or small island State where alleged infraction occurred of the event so it can take formal action in accordance with international laws and through regional fisheries management organisations.

Twelve IOTC CPCs have deposited their instruments of acceptance on the corresponding date indicated below (source FAO):

- |                                  |                                     |
|----------------------------------|-------------------------------------|
| • Australia - 19 August 2004     | • Mozambique - 9 January 2009       |
| • Belize - 19 July 2005          | • Oman - 1st July 2008              |
| • European Union - 6 August 1996 | • Republic of Korea - 24 April 2003 |
| • Japan - 20 June 2000           | • Senegal - 8 September 2009        |
| • Madagascar - 26 October 1994   | • Seychelles - 7 April 2000         |
| • Mauritius - 27 March 2003      | • Tanzania - 17 February 1999       |

### **3.1.2. The UN Fish Stocks Agreement (1995)**

The 1995 United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982; relating to the Conservation and the Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (1995 UN Fish Stocks Agreement) **is a binding fisheries agreement that entered into force in December 2001.**

The implementation of the Agreement is intended to bring together coastal States and fishing States that operate on the high seas and calls for more effective enforcement by flag States, port States and coastal States of the conservation and management measures adopted to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks. The agreement also addresses the legal implications concerning the interface between fishing in zones under national jurisdiction and on the high seas.

Article 21 covers some of the legal aspects for subregional and regional fisheries organisations for cooperation in enforcement to deter vessels which have engaged in activities which undermine the effectiveness of or otherwise violate the conservation and management measures established by that organisation and allows a State Party which is a member of such organisation or a participant in such an arrangement to *“authorize its inspectors to board and inspect fishing vessels flying the flag of another State Party to this Agreement, whether or not such State Party is also a member of the organisation or a participant in the arrangement.”*

The agreement encapsulates the core issues concerning the role and functions of regional fisheries management organisations (RFMOs), such as the Indian Ocean Tuna Commission (IOTC) and consolidates some of the provisions of the 1982 UN Convention (UNCLOS) to achieve effective conservation and management of marine resources.

Eighteen IOTC CPCs have deposited their instruments of acceptance on the corresponding date indicated below (as of 07 November 2012, source UN):

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Indonesia - 28 September 2009</li><li>• Mozambique - 10 December 2008</li><li>• Oman - 14 May 2008</li><li>• Republic of Korea - 1 February 2008</li><li>• Japan - 7 August 2006</li><li>• Guinea - 16 September 2005</li><li>• Belize - 14 July 2005</li><li>• Kenya - 13 July 2004</li><li>• European Union - 19 December 2003</li></ul> | <ul style="list-style-type: none"><li>• India - 19 August 2003</li><li>• South Africa - 14 August 2003</li><li>• Australia - 23 December 1999</li><li>• Maldives - 30 December 1998</li><li>• Iran (Islamic Republic of) - 17 April 1998</li><li>• Seychelles - 20 March 1998</li><li>• Mauritius - 25 March 1997</li><li>• Senegal - 30 January 1997</li><li>• Sri Lanka - 24 October 1996</li></ul> |
|--|---|

**Box 6 | UN Fish Stocks State agreement and Port State Measures**

Article 23 of the Agreement covers several essential measures found in the IOTC PSMR that a port State may undertake while a vessel is voluntarily in their port, these are:

- A port State has the right and the duty to take measures, in accordance with international law, to promote the effectiveness of sub regional, regional and global conservation and management measures;
- A port State may, inter alia, inspect documents, fishing gear and catch on board fishing vessels, when such vessels are voluntarily in its ports or at its offshore terminals;
- States may adopt regulations empowering the relevant national authorities to prohibit landings and transshipments where it has been established that the catch has been taken in a manner which undermines the effectiveness of sub regional, regional or global conservation and management measures on the high seas.

**3.1.3. The FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (2001)**

The IPOA-IUU was developed as a voluntary instrument, within the framework of the Code of Conduct for Responsible Fisheries, in response to a call for such action from the Twenty-third Session of the FAO Committee on Fisheries (COFI). The **IPOA-IUU is a voluntary instrument** that applies to all States and entities and to all fishers. These measures focus on all States responsibilities that include, flag State responsibilities, coastal State measures, port State measures, internationally agreed market-related measures, research and regional fisheries management organisations.

The IPOA-IUU addresses many of the port State measures in paragraph 52-64 that became an integral part of the binding 2009 FAO Agreement on Port State Measures. It provides an initial guide on the policy and conditions to be imposed on foreign vessels wishing to access ports for transshipment or landing of catches as well as for refuelling, re-supplying and maintenance. It urges port States to develop and publicize a national strategy for port State controls and also to cooperate with other States to develop compatible measures. It proposes that RFMOs encourage their members to apply transparent and non-discriminatory measures against vessels presumed to be engaged in IUU fishing and communicate this information between port States and the RFMO on a real time basis.

**Box 7 | FAO IPOA IUU and Port State Measures**

Article 62 - States should cooperate, as appropriate, bilaterally, multilaterally and within relevant regional fisheries management organizations, to develop compatible measures for port State control.

The IOTC passed Resolution 01/07 in direct response to the FAO IPOA-IUU to encourage its application and to specify the conditions for identifying and exchanging information on vessels identified as engaged in or supporting IUU fishing. The IPOA-IUU places a strong emphasis on the role of the flag State while clearly recognising the sovereignty of the port State over its ports. There is a presumption that flag States will act upon information concerning IUU fishing by their vessels when this information is provided by port States.

### **3.1.4. Model Scheme on Port State Measures (2005)**

The 2005 FAO Model Scheme on Port State Measures to Combat Illegal, Unreported and Unregulated Fishing (2005 FAO Model Scheme) is a transitory step between the IPOA-IUU and the binding 2009 FAO Port State Measures Agreement. The 2005 Model Scheme on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing was initiated through an Expert Consultation at the FAO headquarters in 2002. The Expert Consultation prepared a draft MoU on Port State Measures to combat IUU fishing, drawing on the principles that contain provisions for ships to be inspected when visiting foreign ports provided in the International Maritime Organisations (IMO) regional Memorandum of Understanding (MoU). The IMO regional MoU in turn originated from the 1982 Paris MoU on port State control. The draft MOU on Port State Measures was endorsed by the FAO Committee on Fisheries (COFI) in 2003, which subsequently tasked a Technical Consultation to develop appropriate principles and guidelines for establishing regional MoU on port State measures in combating IUU fishing.

In 2005 COFI endorsed the report and recommendations from the Technical Consultation, requesting specifically that the measures be promoted in RFMOs for the development or improvement of the port State aspects in regional control schemes. This outcome also mandated the FAO to develop a programme to assist developing countries, with the expressed intention of facilitating the implementation of the Model Scheme. In June 2005, the FAO Council endorsed the COFI report and Model Scheme.

The 2005 FAO Model Scheme draws on the list of offences in the 1995 UN Fish Stocks Agreement, promoting consistency between serious fishing offences and IUU fishing activities. Information exchange underpins effective operations and the primary responsibility for this is placed on the port State.

The 2005 FAO Model Scheme has five technical appendices upon which its operations depend. These focus on:

- Information to be provided in advance by foreign fishing vessel wishing to enter port;
- Port State inspection procedures;
- Results of inspections;
- Training of inspectors;
- Information on port State inspections.

The purpose of the appendices is to promote the uniform and harmonized application of the Scheme amongst countries and assist masters of foreign fishing vessels to comply with the port State measures adopted regionally.

#### **Box 8 | FAO Model Scheme and Port State Measures**

The Model Scheme is a non-binding instrument that was designed to promote and reinforce the implementation of the IPOA-IUU and served as an intermediate step in the development of the binding 2009 FAO Agreement on Port State Measures. It is addressed to all States, fishing entities and RFMOs and its purpose is “to facilitate the implementation of effective action by port States to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing”.

### **3.1.5. The FAO Port State Measures Agreement (2009)**

In the early stage of negotiating the 2005 Model Scheme on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, members of the FAO were not able to reach consensus to adopt a binding international instrument. Subsequently, in the 2006 session of the 1995 UN Fish Stocks Agreement Review Conference, parties to the conference felt that developing an international legally binding instrument on port State measures was a necessary future step to strengthen these measures against “ports of convenience”.

The FAO Committee on Fisheries (COFI) endorsed a timetable to convene an Expert Consultation and a Technical Consultation to prepare a draft legally-binding Instrument on Port State Measures for COFI 2009. The FAO Expert Consultation was convened in Washington, DC, the United States of America in September 2007 and the Technical Consultation on Port State Measures commenced its work in June 2008. Following several sessions of the Technical Consultation an Agreement was concluded and submitted directly to the 2009 session of the FAO Council and Conference. The Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing was subsequently approved by the FAO Conference at its Thirty-sixth Session on 22 November 2009, through Resolution No 12/2009, under Article XIV, paragraph 1 of the FAO Constitution.

Under Article 25, the Agreement was open for signature by all States and regional economic integration organisations at FAO from 22 November 2009 until 21 November 2010. Article 29 of the Agreement provides that it shall enter into force thirty days after the date of deposit with the Director-General of the twenty-fifth instrument of ratification, acceptance, approval or accession in accordance with Article 26 or 27.

The prime objective of the 2009 FAO Port State Measures Agreement (PSMA) is to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing to ensure the long-term conservation and sustainable use of living marine resources and marine ecosystems. The Agreement is the conclusion of port State measures that have been included in instruments (binding and non-binding) since the 1982 United Nations Convention on the Law of the Sea (UNCLOS) and efforts by international organisations to combat IUU fishing. The measures take into account the sovereign right of a port State having full control over access of foreign vessels to its ports. Port State measures can cost effectively detect and react to IUU fishing activities that have taken place out at sea and where MCS efforts are either lacking or difficult and costly to implement.

These measures will be effective against vessels whose flag States are either unwilling or ineffectual in controlling their activities and will support cooperating flag States, who have difficulties in controlling their vessels. The efficient implementation of port State measures and cooperation between States and regional entities will impact directly on the movement and sale of IUU fish caught, making these ventures unprofitable and eventually uneconomic for operators involved in such operations to continue.

The PSMA structured into 10 Parts, 37 Articles and 5 Annexes (box 9).

**Box 9 | Outline of the structure of the 2009 Port State Measures Agreement**

<b>Preamble</b>	<b>Annex A: Information to be provided in advance by vessels requesting port entry</b>
<b>Part 1 General provisions</b>	<b>Annex B: Port State inspection procedures</b>
<b>Part 2 Entry into port</b>	<b>Annex C: Report of the results of port State measures</b>
<b>Part 3 Use of ports</b>	<b>Annex D: Information systems on port State measures</b>
<b>Part 4 Inspection and follow-up actions</b>	<b>Annex E: Guidelines for training of inspectors</b>
<b>Part 5 Role of flag State</b>	
<b>Part 6 Requirements of developing States</b>	
<b>Part 7 Dispute settlement</b>	
<b>Part 8 Non-Parties</b>	
<b>Part 10 Final provisions</b>	

The following IOTC CPCs have deposited their instruments on the dates indicated below (S: Signature; A Accession):

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Australia – 27 April 2010 (S)</li><li>• Mozambique – 4 November 2010 (S)</li><li>• European Union - 22 November 2009 (S)</li><li>• Indonesia – 22 November 2009 (S)</li></ul> | <ul style="list-style-type: none"><li>• Sri Lanka – 20 January 2011 (A)</li><li>• Kenya – 19 November 2010 (S)</li><li>• Sierra Leone – 23 November 2009 (S)</li></ul> |
|---|--|

### 3.2. Review of IOTC Resolutions on Port State Measures to Combat IUU fishing

The IOTC in its capacity as a regional fisheries management organisation recognised, at an early stage, the effectiveness of port State measures to combat IUU fishing and in conjunction with agreements passed by the UN and FAO has adopted measures relating to port State measures and IUU fishing within a series of Resolutions leading up to *Resolution 10/11 on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing* (IOTC PSMR).

In Resolution 99/03 on the elaboration of a control and inspection scheme, the Commission noted that international laws were evolving around international control and inspection processes and tasked the Contracting Parties to submit to the Secretariat proposals and suggestions for future discussion, and the adoption of a control and inspection scheme that would contain all the necessary elements to ensure adequate control and enforcement of management measures for both Contracting and non-Contracting Parties.

In parallel with measures on port inspection, conservation measures were developed relating to, inter alia, vessel documents, logbooks and marking of fishing gear as well as the requirement of CPCs to submit annually a list of its vessels authorised to operate in the IOTC Area. It placed the responsibility on the CPC (flag State) to have effective control over the vessels flying their flag, a key element in all the agreements and instruments aimed at combatting IUU fishing. Resolution 07/02 also makes provision for the IOTC Secretariat to maintain a record of vessels authorised to fish and share this information electronically on the IOTC website. These measures have been significantly strengthened in Resolution 11/03 *on establishing a list of vessels presumed to have carried out illegal, unreported and unregulated fishing in the IOTC area of competence*.

Resolution 01/03 established a scheme to promote compliance by non-contracting party vessels with resolutions of the IOTC, and is an important resolution in that it contains the requirement for CPCs to report details of vessels suspected of “fishing contrary to IOTC conservation or management measures” to the flag State of the vessel and to the “IOTC Secretariat, which, in turn, shall notify the other Contracting Parties”.

The resolution 01/03 also makes it mandatory that if the vessel voluntarily enters a port of a CPC it:

*“shall” be inspected by authorised Contracting Party officials knowledgeable of IOTC measures and shall not be allowed to land or tranship any fish until this inspection has taken place. Such inspections shall include the vessel’s documents, logbooks, fishing gear, catch on board and any other matter relating to the vessel’s activities in the IOTC Area.*

Further provision is made for the sharing of information with the IOTC Secretariat and other Contracting Parties. The aims of these measures were followed up in Resolutions 02/01 (now extant) and superseded by 05/03 culminating in Resolution 10/11 on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

#### **Box 10 | History of development of Port State Measures in IOTC**

- |      |  |
|------|--|
| 2001 | IOTC workshop on an Integrated Control and Inspection Scheme (Yaizu, Japan);   |
| 2001 | Adoption of IOTC Resolution 01/03 establishing a scheme to promote compliance by non-contracting party vessels with resolutions of the IOTC; |
| 2002 | Adoption of IOTC Resolution 02/01 - Relating to the establishment of an IOTC programme of inspection in port;                                |
| 2005 | Adoption of Resolution 05/03 - Relating to the establishment of an IOTC programme of inspection in port;                                     |
| 2009 | Proposal for a Resolution on port State measures to prevent, deter and eliminate illegal, unreported and unregulated fishing;                |
| 2010 | Adoption of Resolution 10/11 - On port State measures to prevent, deter and eliminate illegal, unreported and unregulated fishing.           |

### 3.3. The IOTC Port State Measures Resolution

The IOTC has taken a lead role amongst tuna RFMOs by being the first to adopt measures that are almost identical to the FAO PSMA, but caters for and is immediately binding in the IOTC Area of Competence. As a regional measure, it is more specifically tailored to IOTC CPCs than the global provisions in the FAO Agreement.

#### **Box 11 | IOTC Port State Measures Resolution**

The IOTC Resolution 10/11 on Port State Measures to Prevent, Deter and Eliminate IUU fishing entered into force on 1<sup>st</sup> March 2011. It is a legally binding measure that applies to all IOTC CPCs. The Resolution reflects all the relevant provisions of the 2009 FAO Agreement on Port State Measures making it mandatory to their CPCs to implement these in the region.

To effectively implement the port State measures, CPCs firstly have to fully understand their responsibilities to implement the IOTC PSMR and secondly develop their institutional capacity on the ground and put into place operational systems to implement the measures. The copy of the IOTC Resolution 10/11 on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing is attached in Appendix I.

#### **Box 12 | Structure of the IOTC Port State Measure Resolution**

##### Part 1 - General

- Definitions
- Objective
- Application
- Integration and coordination at the national level

##### Part 2 - Entry into Port

- Designation of ports
- Port State actions prior to entry

##### Part 3 - Use of Ports

- Port State actions prior to inspection and following inspection
- Information and communication provisions

##### Part 4 - Inspections and Follow-Up Actions

- Levels and priorities of inspection
- Conduct of inspections
- Report of the results of inspection;
- Transmittal of inspection results;
- Training of inspectors

##### Part 5- Role of Flag States

##### Part 6 - Requirements of Developing States

##### Part 7 - Duties of the IOTC Secretariat

Note the similar structure of the PSMR and the FAO PSMA (box 9).

#### **3.3.1. The responsibility of the port State in implementing the Resolution 10/11**

Part 1 paragraph 3 of IOTC Resolution 10/11 clearly places the obligation on the port State to implement the Resolution for all foreign vessels entering its ports. It requires the port State to develop policy, legal, institutional and operational aspects at its national level, as well as ensure sufficient human capacity to meet the requirements of the resolution.

#### **Box 13 | Role and responsibility of the port State - application**

##### Part 1 paragraph 3:

“Each CPC shall, in its capacity as a port State, apply this Resolution in respect of vessels not entitled to fly its flag that are seeking entry to its ports or are in one of its ports, except for:

- (a) vessels of a neighbouring State that are engaged in artisanal fishing for subsistence, provided that the port State and the flag State cooperate to ensure that such vessels do not engage in IUU fishing or fishing related activities in support of such fishing; and
- (b) container vessels that are not carrying fish or, if carrying fish, only fish that have been previously landed, provided that there are no clear grounds for suspecting that such vessels have engaged in fishing related activities in support of IUU fishing.”

The Resolution highlights six fundamental aspects that the port State must address:

*a) Integration and coordination at the national level*

The Resolution requires integration and coordination at a national level, and this has implications for a range of aspects that include determining institutional mandates, decision-making procedures and developing human capacity and information systems.

This will require national policies, plans and strategies of CPCs, to the greatest extent possible, to undertake the following actions:

- Integrate or coordinate fisheries related port State measures with the broader system of port State controls. This would include port controls applicable to merchant vessels;
- Integrate port State measures with other measures to combat IUU fishing and related activities, taking into account as appropriate the IPOA-IUU. This would include, for example, VMS and observer programmes;
- Exchange information among relevant national agencies and coordinate their activities.

*b) Designation of ports*

CPCs should designate and publicize the ports to which vessels may request entry in accordance with the Resolution and provide a list of these ports to the IOTC Secretariat before 31 December 2010. This will enable the IOTC to place on its website which ports they have designated. Following this each CPC shall, to the greatest extent possible, ensure that every port designated and publicized has sufficient capacity to conduct inspections pursuant to this Resolution.

*c) Port entry, authorization and denial*

Each CPC will require an advance request from all foreign fishing vessels or vessels associated with fishing that wish to enter their port. The request must provide all the information in accordance with the annexure to the Resolution or any other information that the port State may request.

To provide the State enough time to examine the information in the request it must be submitted at least 24 hours before entering into port, or immediately after the end of the fishing operations if the time to reach the port is less than 24 hours.

In order to ensure a smooth and effective process, upon the request by a vessel for port entry, policy and plans should ensure there are:

- Effective communication procedures that include communication with other CPCs, flag States, IOTC and RFMOs,
- Deterrent measures that can be taken against vessels, persons or organisations that use, or allow to be used, ports where such use has been denied.

*d) Conduct of inspections*

The CPC must ensure that inspections are conducted by qualified persons and provide them with the legal mandate and support to execute their duties. Following each inspection a written report must be completed that includes all the information set out in the relevant annexure. The port State CPC shall then, within three full working days of the completion of the inspection, transmit by electronic means a copy of the inspection report and, upon request, an original or a certified copy thereof, to the master of the inspected vessel, to the flag State and to the IOTC Secretariat.

In addition and where appropriate, the report may also be sent to:

- the flag State of any vessel that transhipped catch to the inspected vessel;
- the relevant CPCs and States, including those States for which there is evidence through inspection that their vessel has engaged in IUU fishing, or fishing related activities in support of such fishing, within waters under their national jurisdiction; and
- the State of which the vessel's master is a national.

The IOTC Secretariat shall without delay transmit the inspection reports to the relevant regional fisheries management organisations, and post the inspection report on the IOTC website.

*e) Training of inspectors*

CPCs should identify the human capacity needed to carry out inspections and plan for appropriate training. Cooperative mechanisms with other CPCs and IOTC for training of inspectors should be considered and the training guidelines in Annex 5 of the resolution should be taken into account.

*f) Port State actions following inspections*

As a policy/planning matter CPCs should identify the type of measures that may be taken following inspections where there are clear grounds for believing that a vessel had engaged in IUU fishing or related activities, in conformity with international law. The port State actions may from the deny of the use of the ports, the impositions of national sanctions on the owner, master and operator of the vessel and ultimately the listing of the vessel on the IOTC IUU list.

**Box 14 | Role and responsibilities of the port State – fundamental implementation aspects**

The implementation of the PSM Resolution requires fundamental aspects that the port State must address:

- Include in national legislation legal requirements of PSM to give mandate to the authorities implementing the measures;
- Set-up institutions and administrative processes in designated ports to assess Advanced Requests to Enter Port;
- Integration and coordination at the national level;
- Designate ports where foreign vessels may land;
- Port entry: authorization and denial;
- Conduct of inspections,
- Training of inspectors to investigate and process requests from vessels, for on-board inspections

### **3.3.2. The responsibility of the flag State in implementing the Resolution 10/11**

The role and responsibilities of the flag State are prescribed in part 6 of Resolution 10/11, paragraph 17.1 to 17.6. In summary, these require:

- Vessels entitled to fly its flag to cooperate with the port State in inspections carried out;
- When there is evidence or suspicion that one of its flagged vessels has been engaged in IUU fishing or fishing related activities, the flag State must request a port State, where the vessel requests to dock, to inspect the vessel or to take any other measures consistent with the Resolution;
- Encourage vessels entitled to fly its flag to land, transship, package and process fish, and use other port services, in ports of States that are acting in accordance with the Resolution;
- CPCs are encouraged to develop fair, transparent and non-discriminatory procedures for identifying any State that may not be acting in accordance with, or in a manner consistent with, this Resolution;
- Following a port State inspection, where a flag State receives an inspection report indicating that its vessel has engaged in IUU fishing or fishing related activities, it shall investigate the matter and take appropriate action in accordance with its laws and regulations, and report to other CPCs, relevant port States and, as appropriate, other relevant States, regional fisheries management organisations on the actions it has taken.
- In a situation where there is cooperation between a flag State and port State for artisanal vessels fishing for subsistence or container vessels not carrying fish or, if carrying fish, only fish that have been previously landed, the flag State must ensure that such vessels do not engage in IUU fishing or fishing related activities in support of such fishing.

To meet these requirements the primary responsibility of the flag State is to have laws and procedures in place that will allow them to exercise effective control over their flag vessels as required in the Resolution. These should include inter alia:

- Registration of all its vessels;
- Issuing conditional licences or authorisation to fish to each vessel wishing to operate outside its national waters that clearly set out:
  - Conditions set by the flag State that conform to the IOTC Resolutions;
  - Specify the area of operation and target species;
  - Requirements for keeping logbooks recording catch and effort and positional information that conform as a minimum to the data recording requirements of the IOTC;
  - Installation and reporting requirements of VMS;
  - Vessel & gear markings,
  - Regular inspections.

**Box 15 | Role and responsibilities of the flag State – fundamental implementation aspects**

The implementation of the PSM Resolution requires fundamental aspects that the flag State must address:

- Ensure its flag State vessels cooperate with the port State;
- Request the port State to inspect its flag vessel when in port and when there is evidence or suspicion of IUU activities;
- Investigate and take action when a vessel has engaged in IUU fishing or fishing related activities following a port State inspection,
- Encourage its flag State vessels to land, transship, package and process fish, and use other port services, in ports of States that are acting in accordance with the Resolution.

**3.3.3. The responsibility of the vessel owner, operator or agent in implementing the Resolution 10/11**

Port State Measures are not only confined to port authorities and flag State authorities, the fishing industry plays an important role in the implementation of the resolution as they can undermine the measures or enhance the effectiveness of the measures. Vessel owners and operators, as well as the agents for vessels in the port are expected to be fully up-to-date with the content and requirements of Resolution 10/11.

In most cases the transmission of documents requesting entry into a port will be through the vessel's agents. The agents are often also best suited to provide translation services during the inspection.

The fishing authorities of a port should identify the key agents dealing with the foreign vessels entering their ports and where possible provide them with the documentation and advise and encourage them to cooperate with the inspection teams.

**Box 16 | Role and responsibilities of the fishing industry**

The implementation of the PSM Resolution requires fundamental aspects that the fishing industry must address:

- Before entering port the master or the agent of the vessel must provide the advance request of entry in port to the Port Authorities;
- In case of authorisation of entry, the master or the agent of the vessel must present the authorisation for entry to the competent port State authorities;
- Cooperate with the Port State during the inspection of the vessel and be aware of the inspection procedures, give inspectors all necessary assistance and information, and to present relevant material and documents.

### **3.3.4. The responsibility of the IOTC Secretariat in implementing the Resolution 10/11**

The IOTC Secretariat is responsible for placing on the IOTC website the following information as it receives it from the CPCs:

- The list of designated ports;
- The prior notification periods established by each CPC;
- The information about the designated competent authority in each port State CPC,
- The blank copy of the IOTC Port inspection report form.

The IOTC Secretariat is also responsible for posting on the secure part of the IOTC website:

- Copies of all port inspection reports transmitted by port State CPCs,
- All forms related to a specific landing or transshipment shall be posted together.

In addition, the Secretariat must, without delay, transmit the inspection reports to the relevant regional fisheries management organisations.

#### **Box 17 | Role and responsibilities of the IOTC Secretariat**

**The implementation of the PSM Resolution requires the IOTC Secretariat:**

- **To post on the IOTC web site:**
  - the list of designated ports,
  - the competent authority in each port State CPC,
  - the prior notification period established by each CPC,
  - the copies of all port inspection reports transmitted by port State CPCs, including all forms related to a specific landing or transshipment
- **To transmit the inspection reports to the relevant RFMOs.**

## **CHAPTER 2**

### **Acquiring the knowledge to implement the IOTC Port State Measures**

**Inspector appointment and training, powers of fisheries inspectors**

**Ethics, confidentiality of information, health and safety on-board**

**Fish and product identification, fishing gear design and specifications**

**Vessel Monitoring Systems**



This chapter provides a theoretical background to the training requirements for inspectors to have a comprehensive understanding of the protocols required to approach vessel personnel and conduct inspections on-board fishing vessel from a range of different nationalities. The tasks on-board require an appreciation for the dangers on-board vessels when executing their functions that require thorough training in health and safety procedures when boarding and conducting inspections on-board. Together with this, they should have a broad understanding of the fisheries, gear and species they are likely to encounter in their field of work.

The first section of this chapter deals with the appointment and ethical protocol expected from inspectors. This is followed by requirements for health and safety training, which should be mandatory for all persons having to conduct on-board inspections.

The following sections covering fishing gear, position recording and VMS serve to provide inspectors with a basis in understanding the fisheries, species caught and fishing gear they are likely to encounter. The powers of an inspector to conduct inspection and collect evidence for further judicial processes are discussed as these should fulfil both national requirements and follow up actions in the event of vessels being inspected and suspected of being involved in IUU fishing.

## **4. Inspector appointment and training**

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The appointment of fisheries inspectors is covered by the relevant section of the national fisheries legislation and therefore inspectors have a legal mandate to enforce these laws. In the implementation of port State measures, the fisheries inspector is a representative of the legal entity and sovereign right of that port State. Their role, as part of the fisheries management authority, is to execute the port State measures on-board foreign fishing vessels entering their designated ports.

Within their State, fisheries inspectors have a number of roles, each of which varies in importance and emphasis according to the country and fishery concerned. In carrying out inspections in its ports the CPC must ensure that inspections are carried out by properly qualified inspectors authorised for that purpose. As mentioned in the annex 5 of the resolution 10/11, the elements of a training programme for port State inspectors should include at least the following areas and are described in the next section:

- Ethics;
- Health, safety and security issues;
- Applicable national laws and regulations, areas of competence and conservation and management resolutions of the IOTC, and applicable international law;
- Collection, evaluation and preservation of evidence;
- General inspection procedures such as report writing and interview techniques;
- Analysis of information, such as logbooks, electronic documentation and vessel history (name, ownership and flag State), required for the validation of information given by the master of the vessel;
- Vessel boarding and inspection, including hold inspections and calculation of vessel hold volumes;
- Verification and validation of information related to landings, transshipments, processing and fish remaining on-board, including utilizing conversion factors for the various species and products;
- Identification of fish species, and the measurement of length and other biological parameters;
- Identification of vessels and gear, and techniques for the inspection and measurement of gear;
- Equipment and operation of VMS and other electronic tracking systems,
- Actions to be taken following an inspection.

### **4.1. Ethics and confidentiality of information**

#### **4.1.1. Professional conduct**

##### **The Spirit of boarding**

Although, there are fully legal grounds for carrying out inspection of fishing vessels in port, the attitude or spirit of the boarding will have a major influence on both the reception on board the fishing vessel, and the results and value of the subsequent inspection. The most important factor for the inspection team is to be even-handed and professional throughout the event. If the master of the fishing vessel feels that he is dealing with professionals, he will be less likely to try to deceive or obstruct the inspectors.

##### **Professionalism**

Fisheries inspectors must always conduct themselves in a courteous, polite and professional manner with all members of the crew, keeping in mind that while you are a fishery inspector, you are also a representative of the fisheries authority and in the case of a foreign vessel, a representative of your country.

It is important to avoid personal involvement in discussions with persons on-board the vessel and to avoid expressing a personal opinion on fisheries regulations, procedures and policies. These can undermine the authority of the inspection team and hence the effectiveness of the inspection process.

It is a common occurrence for the master of foreign vessels to offer some type of gift to officials when boarding their vessels. This often involves the offer of drinks, including alcoholic beverages. Refusal of these can also be perceived as an insult in some cases. States should have clear procedures on how to deal with these occurrences in accordance with their particular customs and culture.

The cultural customs of crews on foreign fishing vessels will vary from country to country and in many instances crews may have been at sea for many months at a time. It is both professional and courteous to respect their customs. A common practice is to remove shoes when entering a wheelhouse or the living quarters on a vessel. It is important to not comment on pets or pictures displayed in the vessel. On some vessels a small shrine may be situated on the bridge or in the chart room, do not tamper with these.

#### **Box 18 | Inspection of fishing vessels – Professional conduct**

1. Smart, uniform dress of inspectors throughout including no smoking or eating while on duty;
2. Efficient embarkation on board inspected vessel;
3. Polite but firm conduct of initial interview of master;
4. Polite but firm treatment of crew members throughout inspection;
5. No sitting down, leaning or slouching during the inspection;
6. A 'matter of fact' but firm approach to the inspection of the vessel. Nothing should be given away until evidence of an offence is firmly established. Questions should be 'open' to crewmembers with all replies accurately noted;
7. Not to accept any beverage for immediate consumption or any alcoholic gifts,
8. Despite insistence on the part of the crew or officers for inspectors to accept gifts of fish or any other type of gift offered during or after the inspection, the inspector must politely refuse these, taking care as far as possible to not cause offense. This latter point is often assisted by a standard notice, letter or card carried by the officer noting that Ministry policy is for fishery officers to 'not accept' any offer of a gift, fish or beverages by the Master or crew. Such acceptance may constitute grounds for dismissal from the Inspection Service.

#### **4.1.2. Uniforms and appearance**

Uniforms are important to identify the inspector as a professional representative of their country and to separate them from other people that may be boarding the vessel such as chandlers, mechanics and technicians, among others. Uniforms therefore should be kept clean, well pressed and neat and worn in full and not in parts. Proper dress uniform consists of pants, shirt, hat, and shoes provided by the fisheries authority.

The most important first action is for the port inspectors to present him/herself to the master of the vessel. Identity cards or badge are to be shown at the outset. The port inspector must ensure that the master and the crew understand that you are a fisheries inspector and that you are on duty, and make sure of your authority in the circumstances. It is important to remember that being "***in the execution of your duty***" implies much more than being on duty. It means that you are authorized in law to conduct the inspection and that you are granted the powers to do what you are doing.

#### **4.1.3. Confidentiality of information**

A code of classification and access to information should be an integral part of fisheries management policies. All information collected on-board a vessel must be treated in the strictest confidence. Do not share any information (especially catch information) with other officials that may be on-board and never discuss particulars of other vessels with any of the personal on-board. Breach of confidentiality of information should be noted in the Code of Conduct for Fishery Inspectors and be subject to disciplinary procedures, including up to dismissal from the service.

## **4.2. Health and safety on-board**

When boarding vessels alongside the quay or in the vicinity of the port, inspectors must be well prepared and anticipate unexpected occurrences. The primary objective of health and safety training is to ensure that inspectors are equipped with the necessary skills and awareness to safely perform their duties. The training aims to cultivate an attitude and commitment to safe working practices that will lead to a heightened awareness of safety issues and thus reduce the risk of accidents and injury while on-board a vessel.

Health and Safety on-board is the responsibility of each individual, not only for personal safety but also for the safety of others and the vessel. It is the duty of all individuals to bring to the attention of the master or the designated on-board Health and Safety Officer any perceived dangers to individuals or the vessel.

There are many aspects to health and safety and knowledge of these is developed with experience at sea. Although vessels are different in design and function, common health and safety risks include:

- Improperly stowed equipment;
- Oil on ladders and decks. This can cause falls and injuries;
- Smoking in unauthorised places. This can cause fires and explosions;
- Incorrect safety clothing, leading to serious personal injury;
- Radiation Hazards (RADHAZ) emitting from radio, radar and laser transmitters. These are normally marked with circles on the deck into which crewmembers should not enter while the transmitter is on,
- Going up the mast without permission. This can result in radiation burns and physical injury from rotating radars.

### **Box 19 | Inspection of fishing vessels - Common risks on-board vessels**

1. Un-safe boarding and danger of falling between quay and vessel;
2. Fish or cartons falling from overhead hoists;
3. Crane hooks swinging overhead;
4. Falling into open hatches;
5. Slippery deck;
6. Cables on the deck snatching up under tension from winches being started up;
7. Poorly stored fishing gear creating hazardous footing on or below decks,
8. Refrigeration gas leakage.

Health and safety training can be viewed in two broad categories; protective clothing and safety procedures.

### **4.2.1. Protective clothing**

Protective clothing helps to prevent injury but does not prevent accidents from happening. These can only be reduced through awareness and an attitude respectful of safe working practices. Protective clothing includes:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Protective boots;</li><li>• Reflective jackets;</li><li>• Freezer suit and gloves,</li></ul> | <ul style="list-style-type: none"><li>• Hard hat;</li><li>• Gloves;</li><li>• Personal Flotation Device (PFD).</li></ul> |
|--|--|

There is always the danger of objects falling or being knocked over when moving around in the narrow confines of a vessel. Boots with steel toecaps and ankle protection and “hard hats” help to prevent injury from these risks. In some harbours it is now mandatory for these items to be worn when working on deck or monitoring off-loading ashore. Good quality safety boots should also have non-slip soles that are not affected by chemicals and assist with traction on wet and slippery decks. However it is essential to respect cultural practices on-board foreign vessels where shoes are not worn on the bridge or in the living quarters.

A safety helmet or “hard hat” must be worn at all times when moving around on the upper deck of a vessel or monitoring off-loading. When going between decks the helmet can be replaced with a soft cap that will assist in protecting your head when moving around narrow passage ways with low bulkheads.

In harbours where fishing vessels do not dock alongside the quay but remain at anchor within port limits, the inspection party will have to embark from a harbour launch. Despite operating in protected conditions, there are dangers similar to boarding at sea. A personal flotation device (PFD) should be worn during the boarding operation and while moving around on the upper deck.

Similar to the requirement for safety boots and hard hats, wearing a reflective jacket is compulsory in many harbours. The reflective jacket assists in making the inspector more visible, especially in low light conditions. It enhances the visibility of the inspector to crane or machinery operators.

Working gloves are useful to protect the hands from sharp objects and also to keep hands clean when inspecting and handling gear on-board.

Freezer suits and gloves are essential for going into freezer holds and handling frozen products. At temperatures below minus 50° C freezer burns can occur instantly from casual brushing against metal items in a freezer hold and longer exposure can have serious long term after effects.

#### **4.2.2. Safe working practices**

Once on-board, an inspector must quickly familiarize himself with the layout of the vessel and potential health and safety risks. A health and safety tour could be conducted by one of the officers, should the inspector consider it necessary. This will be essential on a vessel the inspectors are not familiar with, a reefer for example, where hatches are open and transshipping or brailing operations are on-going overhead.

#### **4.2.3. Procedure for entering enclosed spaces**

A number of dangers exist when entering enclosed spaces and it is essential that inspectors are both aware and trained to undertake inspections in these areas. All inspections of enclosed spaces must have an inspection party of a minimum of two people. Both must be officials of the port State and at no stage should crew members be used as an alternative to accompany a single inspector.

The two main dangers are low oxygen levels and being inadvertently locked in. The atmosphere in enclosed spaces without ventilation can result in low oxygen levels. This is often exacerbated in hot calm conditions. In freezer holds contamination from refrigeration gasses also poses a high risk.

Routine procedures for entering enclosed spaces are:

- Open hatches slowly and make sure the hatch is locked open. Inspectors may want to make special provision for this and one of the inspection party MUST monitor the open hatch at all times;
- All enclosed compartments must be well ventilated before entering;
- Shine a torch into the compartment if there is no lighting, and check for obstructions;
- If it is evident that the compartment has been closed for some time without ventilation (quite likely if there is no lighting), then arrange for the area to be ventilated. In an extreme situation artificial breathing apparatus would have to be used to enter the space,
- In the event of a single inspector going into a compartment, he or she must wear a safety harness and lifeline controlled by the person at the open hatch. Under no circumstances must the inspector monitoring the open hatch or any other person enter the space unless breathing apparatus is available. The lifeline should be used instead.

### **4.3. Fish and product identification**

The four target tuna species in the Indian Ocean region are yellowfin (*Thunnus albacares*), bigeye (*Thunnus obesus*), albacore (*Thunnus alalunga*) and skipjack tuna (*Katsuwonus pelamis*) (Table 2). Southern bluefin tuna (*Thunnus maccoyii*) are caught in southern temperate zone and are managed throughout its distribution by the Commission for the Conservation of Southern Bluefin Tuna.

It is important for port inspectors to be able to identify the main species caught in the Indian Ocean region, both in their whole and processed states.

A complete identification species guide is provided in the port inspector tool kit.

<b>Table 2 - Principal fish species caught in the Indian Ocean region</b>		
<b>FAO Species Code</b>	<b>Common name (English)</b>	<b>Scientific Name</b>
<b>Target species</b>		
<b>YFT</b>	Yellowfin tuna	<i>Thunnus albacares</i>
<b>BET</b>	Bigeye tuna	<i>Thunnus obesus</i>
<b>SBF</b>	Southern bluefin tuna	<i>Thunnus maccoyii</i>
<b>SKJ</b>	Skipjack tuna	<i>Katsuwonus pelamis</i>
<b>ALB</b>	Ablacore or longfin tuna	<i>Thunnus alalunga</i>
<b>Common bycatch species</b>		
<b>KAW</b>	Kawakawa	<i>Euthynnus affinis</i>
<b>SWO</b>	Swordfish	<i>Xiphias gladius</i>
<b>BUM</b>	Blue marlin	<i>Makaira mazara</i>
<b>BLM</b>	Black marlin	<i>Makaira indica</i>
<b>MLS</b>	Striped marlin	<i>Tetrapturus audax</i>
<b>SFA</b>	Sailfish	<i>Istiophorus platypterus</i>
<b>BSH</b>	Blue shark	<i>Prionace glauca</i>
<b>SMA</b>	Shortfin mako shark	<i>Isurus Oxyrinchus</i>
<b>PTH</b>	Pelagic thresher shark	<i>Alopias pelagicus</i>
<b>BTS</b>	Big eye thresher shark	<i>Alopias superciliosus</i>
<b>OCS</b>	Oceanic white tip shark	<i>Carcharhinus longimanus</i>
<b>FAL</b>	Silky shark	<i>Carcharhinus falciformis</i>
<b>TIG</b>	Tiger shark	<i>Galeocerdo cuvier</i>
<b>SPZ</b>	Smooth hammerhead shark	<i>Sphyrna zygaena</i>
<b>DOL</b>	Dorado/dolphinfish	<i>Coryphaena hippurus</i>
<b>LEC</b>	Black escolar/smooth skin oilfish	<i>Lepidocybium flavobrunneum</i>
<b>OIL</b>	Escolar/ rough skin oilfish	<i>Ruvettus prestiosus</i>

Confusion is often caused in the use of different common names of fish species by different nationalities. For example *Thunnus alalunga* are called albacora by Spanish fishermen and *Thunnus albacares* are called albacore by French fishermen (table 3). Port inspectors must crosscheck and verify catches back to their scientific names when conducting inspections, checking logbooks, recording catches and monitoring landings or thansshipments.

Table 3 - Comparative common names of the main species caught in the Indian Ocean region				
Scientific name	Common names			
	English	Japanese	Spanish	French
<i>Thunnus albacares</i>	Yellowfin tuna	Kiwada or maguro	Rabil	Albacore
<i>Thunnus obesus</i>	Bigeye tuna	Mebachi	Patudo	Thon obèse patudo
<i>Thunnus alalunga</i>	Albacore tuna or longfin tuna	Binnaga	Albacora or Atún blanco	Germon
<i>Euthynnus affinis</i>	Kawakawa	Suma	Bacoreta oriental	Thonine
<i>Katsuwonus pelamis</i>	Skipjack tuna	Katsuo	Listado or Barrilete	Boníte à ventre rayé

Identifying fresh species is relatively easy compared to distinguishing frozen or iced fish. Even at small sizes, freshly caught species have distinct coloration, body markings and body morphologies that provide rapid visual keys to positive identification (figure 12, 13). Frozen species are far more difficult to distinguish due to fin damage, discoloration, skin abrasion and distortion or crushing during the storage process.

Even though tuna are easiest to distinguish in fresh condition, misidentifications and lumping of yellowfin, bigeye and longfin commonly occurs in surface fisheries.

The following identity guide (Figure 13) should serve as a “best case” scenario for identifying the tuna target species tuna at all sizes (yellowfin, bigeye, longfin and skipjack). These examples can then be used to help differentiate samples that are in a less optimal condition.



Figure 12: Yellowfin tuna and bigeye tuna in fresh condition.

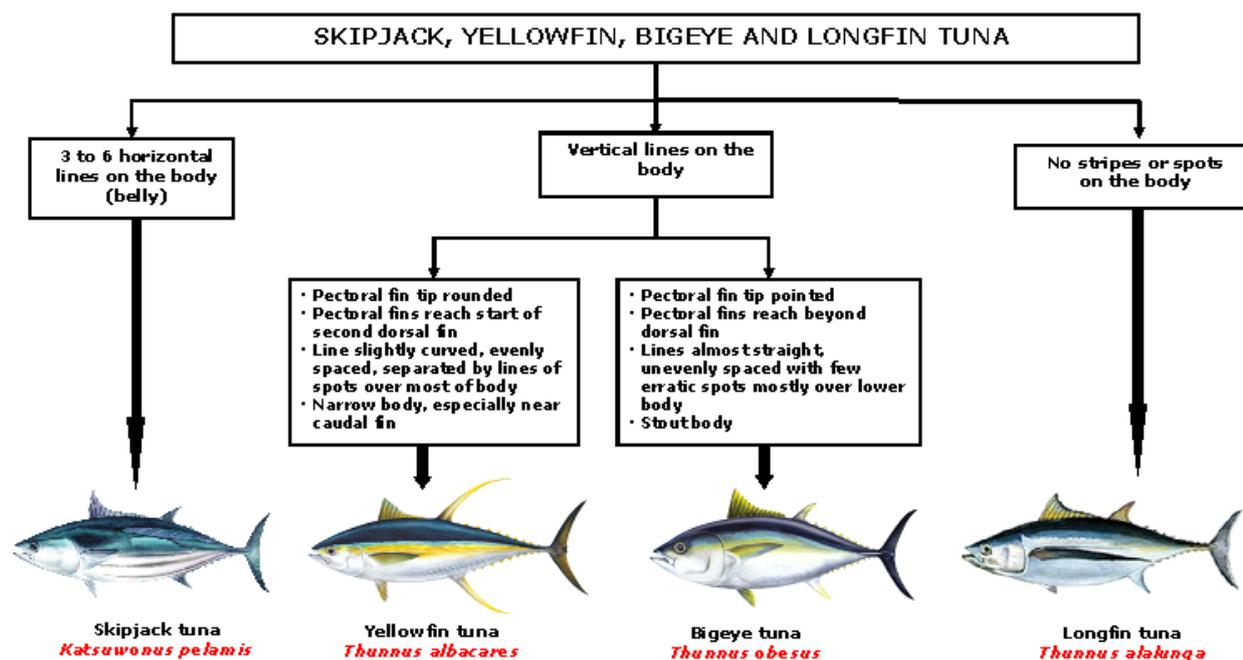


Figure 13: Identification features of the four main tunas species caught by purse seine, pole and line and longline vessels.

### 4.3.1. On-board fish processing and preservation

Processing that entails removing the head, tail and fins makes it difficult to distinguish between the larger tuna species and other diagnostic features are used to identify the species such as stomach lining and trunk shape. Frozen fillets are also difficult to relate to a species without knowledge of the standard processing methods used for the various species. Tables 4, 5 and 6, list the main processing methods and on-board preservation codes used in IOTC statistical data reporting (Source: IOTC secretariat status report 2001 and IOTC 2005 Guidelines for the reporting of fisheries statistics to the IOTC).

Table 4 - Types of on-board fish processing codes used in IOTC		
Code	Processing codes	Images
NO/RND	Unprocessed <i>Small tuna, tuna-like and shark bycatch are commonly not processed</i>	
DR	Dressed <i>(gilled and gutted, headed, tailed and/or fins-off)</i>	
HP	Highly processed <i>(canned tuna, fish loins, fish fillets, fish meat, fish oil, smoked fish, dried fish)</i>	
SF	Fins <i>(sharks)</i>	
PR	Processed (unspecified)	

Table 5 - Types of on-board fish processing codes used in IOTC		
Code	Processing codes	Images
GGT	Bills (if any) gills and fins off, gutted. <i>Tuna specimens usually undergo this form of processing</i>	
HDD	Dressed carcasses with head and fins off and caudal peduncles present.	
PDD	Dressed carcasses with heads, fins and caudal peduncles off. <i>Billfish export, reject and bycatch specimens are usually processed this way as are some shark bycatch specimens</i>	
TAL	Dressed carcasses with heads and fins off and caudal peduncles present. <i>Billfish (mainly sailfish) and bycatch specimens are sometimes processed this way as are some shark bycatch specimens</i>	
DRY	Fish processed and dried on-board (Skipjack, shark).	

Table 6 - Types of on-board fish preservation used in IOTC	
IOTC code	On-board fish preservation description
NO	None
ST	Salt
DR	Dried
SM	Smoked
IC	Ice
BR	Refrigerated brine
RW	Refrigerated sea water
FR	Cold storage (Between 0 and -30 degree)
DF	Cold storage (Below -30 degree)

#### 4.3.2. Conversion factors

It is important to note that reports of catches to RFMOs are normally the live wet weight of the fish as it comes out of the water. Therefore, it is essential that inspectors are able to recognise the processing form by species, note it and convert the weight of the processed fish back to its live wet weight to be able to accurately verify catch reports and logbooks. Failure to do the conversion back to live wet weights and check with the logbook data can result in misreporting of the 'real' fish catches in the area. This is why it is imperative for inspectors to fully understand the importance of converting the processed weight back to live wet weight of fish catches to cross check harvesting levels by species by the vessels.

A conversion factor (or raising factor) is used to calculate the live weight of a fish from its product weight, (live weight is also termed; green weight or nominal weight). Depending of the processing method different conversion factors will be applicable for different products.

##### Box 20 | Determination of conversion factor of a yellow fin tuna

A fresh unprocessed tuna weighs 75 kg. The fish is then processed by cutting out the gills and stomach and the fins and tail are cut off. The processed trunk is then re-weighed and found to be 68.81 kg.

The Conversion Factor (CF) is calculated by dividing the Live Weight (RND) by Processed weight (GGT).

$$CF = \text{Live Weight} / \text{Processed Weight}$$

$$\text{In this example } CF = 75 / 68.81 = 1.0899 \text{ (1.09)}$$

Conversion factors for different tunas, sharks and other bycatch species are shown in Table 7, 8, 9 (Source: IOTC 2005 Biological data on tuna-like species gathered at the IOTC Secretariat: Status Report). These will have to be applied to product weights declared on-board to crosscheck the catch weights reported in daily catch logs.

##### Box 21 | Using conversion factor to calculate live weight

80 tonnes of bigeye tuna are offloaded from a longline vessel.

The vessel log records approximately 88 tonnes.

The live weight is the processed weight multiplied by the conversion or raising factor.

$$\text{Live Weight} = 80 \times 1.09 = 87.2 \text{ tonnes}$$



=



X 1,09

This figure verifies the vessels catch log recorded at 88 tonnes.

Note that for the same species, different conversion factors may also apply. Factors to convert from processed to live weight have been published by the FAO (1992) and ICCAT.

During the unloading process inspectors will mostly encounter processed products and will have to apply the standard conversion or raising factors to calculate the live catch weights to compare to catch data.

<b>Table 7 - Conversion factors and processing code for target species</b>			
<b>Species</b>	<b>Common name</b>	<b>Processing</b>	<b>Raising Factor</b>
YFT	Yellowfin tuna	GGT	1.09
		HDD	1.43
BET	Bigeye tuna	GGT	1.09
		HDD	1.43
SBF	Southern bluefin tuna	GGT	1.15
		HDD	1.43
ALB	Albacore [longfin tuna]	GGT	1.1
SKJ	Skipjack tuna	GGT	1.09

<b>Table 8: Conversion factors and processing code for shark species</b>			
<b>Species</b>	<b>Common name</b>	<b>Processing</b>	<b>Raising Factor</b>
BLS	Black Shark (Silky shark)	HDD	1.33
BSH	Blue shark	HDD	1.33
		GGT	1.13
BTS	Bigeye Thresher shark	GGT	1.13
FAL	Silky shark (black shark)	HDD	1.33
		TAL	1.55
		GGT	1.13
MSK	Mackerel sharks, Porbeagles, White sharks	HDD	1.33
		PDD	1.55
SKH	Sharks nei	TAL	1.55
		GGT	1.13
		HDD	1.33
SPY	Hammerhead sharks	HDD	1.33
THR	Thresher sharks nei	HDD	1.33
TIG	Tiger shark	HDD	1.33

<b>Table 9 - Conversion factors and processing code for bycatch species</b>			
<b>Species</b>	<b>Common name</b>	<b>Processing</b>	<b>Raising Factor</b>
BIL	Billfish	GGT	1.33
		TAL	1.43
BLM	Black Marlin (White marlin; WM)	GGT	1.33
		TAL	1.43
BLZ	Indo-Pacific Blue Marlin (BUM)	GGT	1.13
		TAL	1.43
MLS	Stripped Marlin	GGT	1.13
		TAL	1.2
SFA	Indo-Pacific sailfish	HDD	1.33
		GGT	1.13
		TAL	1.43
LEC	Black Escolar	HDD	1.33
OIL	Oilfish	HDD	1.33
		GGT	1.13
SSD	Shortnose spurdog	HDD	1.33
SSP	Shortbill spearfish	HDD	1.43
SWO	Swordfish	HDD	1.33
		GGT	1.18
		TAL	1.43
WAH	Wahoo	HDD	1.33
		GGT	1.13
BILL	Billfish nei	GGT	1.13
		PDD	1.43
MARL	Marlins nei	GGT	1.13
		TAL	1.43

This table is especially important to enable the inspector to cross check the weight of fins against carcass weights on-board for compliance purposes. It is noted that the IOTC resolution is a bit weak with respect to weights of detached fins and carcasses, but if cleaned up to convert all weights back to live wet weights, this would further reduce the level of shark by catches in the Indian Ocean.

#### **4.4. Fishing gear design and specifications**

Inspectors are likely to encounter a range of different fishing gears during port inspections that include gear not necessarily used within the immediate region. Depending on the vessel type and the fishery it is active in, accessibility to the gear to identify and measure can vary.

Items such as radio buoys, line or net haulers and net drums that are more conspicuous and fixed in place should be easy to access and identify, however much of the gear will be packed away or covered and inspectors may not find these gear components easy to identify or measure.

The advanced request to enter port includes listing the fishing gear on-board. The authorisation to fish issued to the vessel by its flag State or coastal State will also specify the gear type the vessel may use. The inspection team will be required to cross check this information and inspect the gear to verify it is the same as has been authorised and if it has been used recently. Should gear be found that has not been declared or authorised, together with evidence of recent use, it may constitute evidence that the vessel has been engaged in IUU fishing.

##### **4.4.1. Primary fishing gear used in the Indian Ocean region**

Fishing vessels calling ports in the Indian Ocean region can originate from a broad area, both within and outside the Indian Ocean region and having deployed a variety of different fishing gear. However, it is most likely that the majority of the vessels will be from fleets fishing in the IOTC region targeting tuna and tuna like species. The four main industrial fishing gears involved in these fisheries are:

- Purse Seine;
- Pole and Lines;
- Drifting Longlines,
- Driftnets.

Associated gear such as Fish Aggregation Devices (FADs) and sonar buoys will also sometimes be found on both fishing and support vessels.

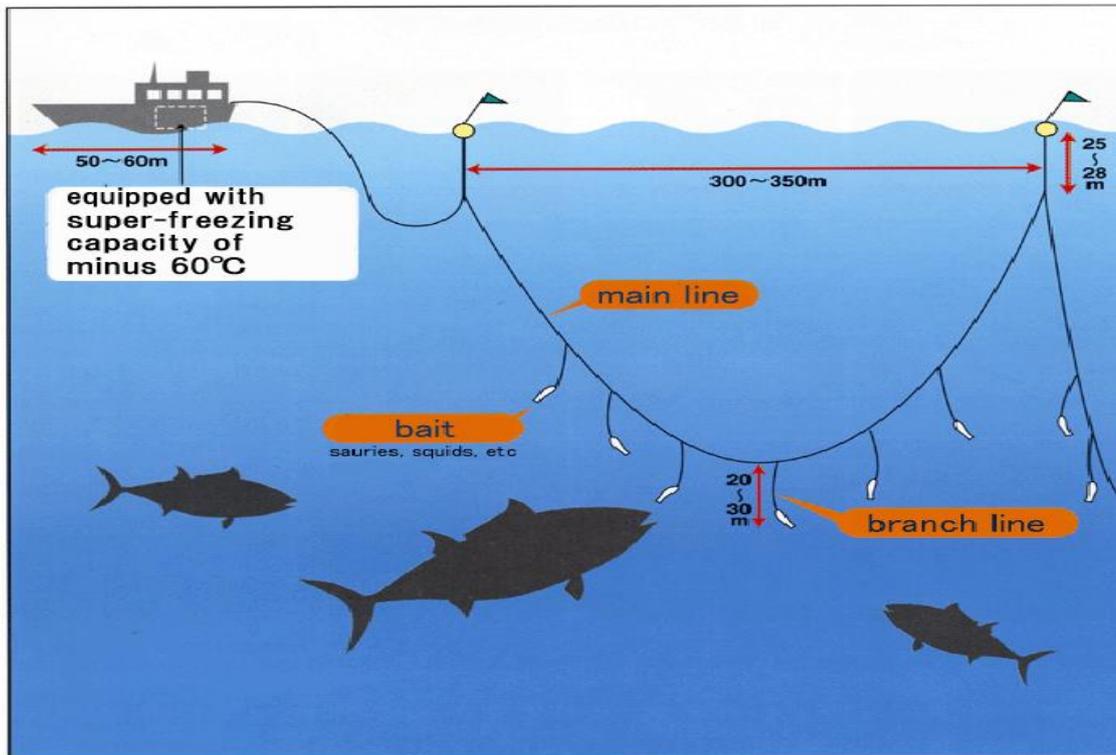
Other fisheries that are regionally based or from areas outside the IOTC region can include:

- Demersal trawl for prawn and finfish;
- Demersal longline;
- Mid-water trawl,
- Demersal gillnets.

Inspectors should have a good understanding of how these gears are used and be able to identify and record the specifications of the different gear components. A detailed description of these fishing gears is provided in the Table 10 and Appendix II.

##### **4.4.2. Pelagic longline**

A drifting longline or pelagic longline consists of a mainline that is held near the surface or at a certain depth by means of regularly spaced surface buoys or floats. Branch lines, (also known as droppers, snoods or ganglions) with baited hooks are suspended from the main line at regular intervals between the buoys. The entire line can extend from 20 to over 120 km.



**Figure 14:**  
Main components of a drifting longline.

#### 4.4.3. Industrial tuna purse-seine

Tuna purse-seining is an active fishing technique that involves surrounding a school of fish close to the surface with a seine a net. The net is then pursed (closed off) along its bottom edge impounding the fish. When the net is hauled back on-board the fish are concentrated into the “bunt” of the net and are then brailled out. The period from deployment of the net until the net is recovered on-board is called a set.

The purse seine net can measure 1500 to 2000 m long and 120 to 250 m deep. The top line is buoyed up to keep the top of the net on the surface and a chain or lead weights are attached to the bottom of the net to weigh it down. Steel rings (purse rings) are attached to the chain and a steel cable (purse line) feeds through the rings. The steel cable can be pulled in to close or “purse” the net from below. When not in use, the net is stacked up on the stern of the vessel ready to be set and is clearly visible. A small, powerful boat (skiff) is used to assist in setting the net around a school of fish and is hauled up astern of the net. A hydraulic power block attached to the end of a long boom is used to haul the net back and restack it in the net bin ready for the next set.



**Figure 15:** Oceanic tuna seiner in fishing operation in the Indian Ocean.

#### **4.4.4. Pole and line**

Pole and line fishing targets surface schools of fish similar to those caught by a purse seine vessel. The gear consists of a pole with a short line attached. Poles are made of wood (including bamboo, also constructed of split cane) and increasingly of fiberglass. In industrial fisheries, "Pole and Line vessels" fishing for tuna can range from 15 to almost 40 meters in length with special arrangement for using as many poles as possible from the side of the boat and for keeping bait on board, in the best condition, if possible alive. The fish holds are divided up into a main central hold and smaller holds or tanks. The main hold is used to preserve the catch and is usually refrigerated on the larger vessels. Smaller vessels may use ice to preserve the catch on shorter trips.



**Figure 16:** Pole and line fishing vessel in fishing operation in the Indian Ocean.

#### **4.4.5. Gillnet**

Driftnets or gillnets consist of a series of net panels that are suspended in the water column. It is a passive method of fishing that does not use bait or actively trap fish. The fish swim into the net and become entangled. Gillnet can be broadly classified into three categories: set nets (anchored), drift nets and trammel nets.

Gillnet are generally made up out of a series of panels with a weighted "footrope" attached along the bottom, and a "headline", to which floats are attached. The relation of floats to the weighted footrope will determine if the net will float or sink.

A trammel net consists of three layers of net. A slack, small mesh, inner panel of netting is sandwiched between two outer layers of netting, which are taut and have a larger mesh size. The inner panel may be made of twisted or monofilament nylon, whilst the outer panels are generally made of twisted nylon filament. Fish are caught by becoming entangled in the different layers.



**Figure 17:** Driftnet of more than 2.5 km onboard a tuna driftnetter operating in the Indian Ocean.



**Figure 18:** Roller / guide used on tuna gillnet vessels.

#### 4.4.6. Vessels with alternative gear

To a large extent the vessel type, construction and layout of fixed gear, such as line or net haulers will provide the first indication of the type of gear most likely to be found on-board. Highly specialised vessels such as purse-seine vessels are unlikely to be able to use alternative gears without significant and clearly visible alterations to the vessel.

In contrast a vessel designed for deploying and hauling longlines can be altered to use gillnets with little visible modification. The vessel can remove the net hauler (an extension to the capstan) and roller and stow these under tarpaulins so that they are not easily visible or recognised. Vessels that were originally designed for trawling can fit equipment for hauling gillnets or using longlines while still having their trawl net and trawl doors on-board. Demersal trawlers for finfish can similarly be altered to target prawn by modifying the nets and footrope without any alteration to its trawl winches or warp drums.

It is important for inspection teams to be able to identify different fishing gears and associate the gear with the equipment used to deploy the gear. Prior to starting the inspection, a checklist can be prepared, based on the information received of what type of gear should be expected. Where reports have been received that the vessel may have been engaged in fishing using unauthorised gear, the inspection team can increase their effort to look for and identify evidence that may support these reports. Table 10 provides a guide that can be prepared during the inspection brief to direct attention to specific areas on-board where the gear components are likely to be found.

Vessel Type	Gear List	Location on-board	
<b>Purse Seine</b>	Purse-seine net	Stacked aft with rings on the port side and floats on the starboard side.	
	Skiff	On stern behind the net.	
	Power block	On hydraulic arm on the port side.	
	Two purse wire winches	These are situated next to each other against the starboard side behind the bridge.	
<b>Longline (Pelagic / tuna)</b>	Main line storage bin	Line type: <ul style="list-style-type: none"> <li>• Braided monofilament</li> <li>• Tarred 4-strand twisted cord</li> </ul> Upper deck behind the bridge. Often covered. The hydraulic system to lay the line attached above the bin.	
	Baskets with branch lines / traces and hooks	Packed either on the upperdeck or near stern, these will be covered to protect from sun or can be in storage compartments. [coiled up and made up of mixture of monofilament, multifilament lines and sekiyama wire]. Check for steel trace on the hook.	 <p>Circle hook    Japan tuna hook    J hook    Teracima hook</p>
	Line hauler	On starboard side of the bridge where the starboard gunwale is cut down.	
	Branch line hauler/coiler	Found on the starboard side next to the line hauler.	
	Line setter	Situated right against the stern gunwale.	
	Line thrower	Situated against stern gunwale to port of the line setter.	

<b>Mono system</b>	Main line drum	Large drum with approximately 6mm diameter monofilament nylon On the hauling deck forad of bridge against port side.[Note these systems don't require separate line hauler].	
	Traces	Stored in large tubs with hooks clipped on around side of tub. Usually monofilament. Packed either on the upperdeck or near stern, these will be covered to protect from sun or can be in storage compartments.	
	Traces on reels	Reels of traces are mounted near the stern.	
<b>Other items to check on-board longliners</b>	Radio buoys	Often stored. (with or without antenna connected) on upper deck directly behind bridge. These must be marked with the vessels number according to IOTC Resolution 01/02.	
	Ridged plastic floats	Stored in a cage usually on the upper deck behind the bridge. These buoys should also all be marked with the vessels number according to IOTC Resolution 01/02.	
	De-hooker & line cutters	Will be packed away with gaffes and harpoons. Often in storage compartment forward of the hauling deck.	
<b>Demersal longliners</b>  <b>Double line and Trot line</b>	Mainline	Thick floating rope 16 to 22 mm diameter. Stored in a large bin usually close to the stern where setting takes place.	
	Ground line of fishing line	These are stored in cases or tubs, approximately 200-meters to a case with 100+ hooks. Stored in compartments close to the stern where setting takes place. May also be found close to the hauling station where lines are repaired and repacked. Trot line sections, 2 to 4 meters long are also stored in tubs or cases but have fewer hooks attached. The hooks are often attached to a single tuna clip in clusters of 3 to 7 hooks.	
	Weights or stones	Average weight is between 5 and 10 kg. These can be round stones tied up in a net bag or cast cylindrical or square concrete weights. Some vessels may also use links of steel chain or cast iron "tear drop" shaped weights.	
	Line hauler	A double line demersal longliner will have a capstan or large rope hauler for the main line and a line hauler for the bottom line situated next to each other in a hauling station on the starboard side forward of the bridge.	
<b>Single or Auto Liner</b>	Magazines	Hooks are attached to a single main line approximately 12mm in diameter. The hooks are suspended from a rail (magazine) with up to 1000 hooks on a magazine. The magazines are stored in a dedicated compartment at the stern.	
	Automatic baiting machine	Found at the setting position at the stern.	
<b>Other longline equipment</b>	Anchors	Single and double line longliners use 40 to 80 kg anchors made out of heavy steel rail often with short steel sections protruding at an angle to facilitate grip on the seabed.	
	Surface buoys	Radio buoys similar to pelagic longliners stored on the upperdeck. Plastic "windy buoys" usually about 60 litres capacity. These may be deflated and stored in compartments below deck to protect them from the sun.	

<b>Gillnet</b>	Gillnet storage	Gillnets are stored in bins similar to a longline. These are situated close to the stern ready for setting.
	Setting roller	A broad roller may be situated across the stern with high rails on the sides to facilitate setting the net.
	Net hauler	A long capstan drum [up to 1-meter long] used to haul the net back is usually positioned on the starboard side forward of the bridge.
	Net channel or guides	A large diameter pipe or open channel running down the starboard side is used to guide the net back to its storage bin near the stern.
<b>Demersal and pelagic (mid-water) trawl for finfish.</b>	Trawl net	The trawl net will be either packed up on the trawl deck just behind the bridge. On smaller or medium size trawlers the net will most likely be rolled up on a net drum. Packed on the deck or rolled up on a net drum, the codend will be most accessible. This will facilitate measuring the codend mesh size if required.
	Ground gear / bobbins and rock-hopper	The heavier ground tackle is often packed on the sides of the trawl deck.
	Warp drums	The two main warp drums are situated on either side of the trawl deck with the warp leading to large rollers suspended above the stern gunwale.
	Trawl doors	When entering port many trawlers bring the trawl doors inboard onto the trawl deck. The door type can assist in distinguishing between a pelagic or demersal trawler.
<b>Demersal trawl prawn</b>	Beam trawls	Smaller nets held open by ridged beams. As several (up to four) can be towed at any one time these are likely to be dismantled and packed away in storage. The ridged beams (up to 3-meters long) will be stacked on the upper deck near the stern.
	Outriggers	A beam trawler is often distinguished by two outriggers used to tow multiple nets. These will be stowed inboard when the vessel enters port and should be clearly visible on the port and starboard sides.
	Conventional trawl for prawn	Some prawn trawlers are modified from conventional demersal trawlers and tow a single net with doors to keep it open. The gear is lighter than for finfish and the codend will have a noticeably smaller mesh.

#### 4.5. Navigation equipment

IOTC CPC's and parties cooperating with the IOTC are required to report catch and effort and areas where catches are taken for their fleets operating in the IOTC Area. Parties reporting catches statistics from areas outside the IOTC area must also report these data separately.

When inspecting catch and navigation logbooks and to accurately record coordinates for catch areas in the port inspection report form, inspectors should have a theoretical understanding of position recording in latitude and longitude and basic navigational terms to allow them to analyse and cross reference and verify recorded positions and areas. This requires a basic understanding of position recording in latitude and longitude and the statistical method for reporting catch areas required by the IOTC. A theoretical description of latitude and longitude and some basic navigation terms are provided in Appendix III.

All vessels inspected will have a suite of electronic navigation and communication systems on-board (Table 11) that should include:

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• GPS;</li> <li>• Echo-sounder;</li> <li>• VHF and HF communication.</li> </ul> | <ul style="list-style-type: none"> <li>• GPS Plotter;</li> <li>• Radar,</li> </ul> |
|--|--|

More advanced communication equipment is likely to include computerised satellite systems, such as Inmarsat and, on purse seine vessels, a range of sophisticated sonar systems and equipment to interrogate sonar buoys on FADs. The basic electronic navigation equipment that is likely to be found on all vessels is listed in table 11. In the event of there being suspicion of a vessel misreporting or falsifying position information, a specialist may be called in to download information from plotters or computerised navigation systems.

Table 11 - Basic navigation and communication equipment likely to be found on the bridge of all vessels	
<p><b>Compasses / magnetic / gyro</b></p>	<p>A compass always point to the north and is used to give direction when steaming from one place to the next. Two main types of compasses can be found on the bridge:</p> <ul style="list-style-type: none"> <li>• The magnetic compass, which is affected by the earth’s magnetic field and is independent of any source of power;</li> <li>• The gyro compass, which is a mechanical compass requiring power to operate.</li> </ul>
<p><b>Auto pilot</b></p> 	<p>The auto pilot is used to steer the vessel on a specified course. The auto pilot electronically reads the compass and controls the rudder.</p>
<p><b>GPS / Plotters</b></p> 	<p><i>GPS</i> (global positioning system) uses satellites to give the precise position of the vessel at all times.</p> <p>Satellites orbiting around the earth are used to determine accurate positions on the earth’s surface using a GPS unit. The GPS units show a position as Latitude and Longitude displayed in “degrees, minutes and points of minutes”.</p> <p>Note: Most GPS units record positions in degrees, minutes <u>and decimal points of minutes</u>. The points of a minute can be calculated back to seconds by multiplying by 60. Alternatively seconds can be converted to decimal points of a minute by dividing the seconds by 60.</p> <p>For example</p> <ul style="list-style-type: none"> <li>• 30” = 30 / 60 = 0.500 of a minute</li> <li>• 20” = 20 / 60 = 0.333 of a minute</li> <li>• 50” = 50 / 60 = 0.833 of a minute</li> </ul>
	<p>A <i>GPS Plotter</i> is an electronic map which can show the track of the vessel and on which a course can be set. It can be connected to the GPS or operate independently using satellites and will also show the position of the vessel at all times.</p> <p>One of the advantages of the plotter is that the vessels tracks can be saved and recalled. These data can also be copied and transferred to other units and be analysed.</p>
<p><b>Radar</b></p> 	<p>Radar uses radio waves to reflect off objects within a specific range around a vessel. Radar can show other boats or the coastline in times of darkness or poor visibility.</p>
<p><b>Echo sounder</b></p> 	<p>An Echo-sounder transmits a sound wave downwards from below the boat and the time it takes for the reflection from the sea bed (echo) to return to the vessel shows the depth of the water. The sound waves also reflect off fish and can assist the skipper to locate fish shoals. The depth on an echo sounder can be recorded in either meters (m) or fathoms (fm) and it is very important to note in which units the depth is being recorded. Remember: 1 fathom = 1.83 m</p> <p>Modern echo sounders also have facilities to integrate the position with depths recorded and these are saved on the system and can be recalled.</p>

<p><b>Radios VHF</b></p>  <p><b>Radio HF</b></p> 	<p>Two types of radios are used:</p> <ol style="list-style-type: none"> <li>1. VHF (Very High Frequency) has limited range used for local communications up to approximately 25 miles.</li> <li>2. MF &amp; HF (Medium &amp; High Frequency) for communication over longer distances over 1000 miles.</li> </ol>
<p>Communication equipment and computerised satellite systems on-board a carrier vessel</p> 	

#### 4.6. Vessel Monitoring Systems

Technology for tracking vehicles and animal using HF radio and radar has been in place for more than twenty years, however tracking of fishing vessels only attracted attention with the advent of satellite technology becoming commercially viable in the mid 1980's. Several countries started implementing VMS on their vessels for Monitoring Control and Surveillance (MCS) in the early 1990's.

A VMS can be viewed as a small "transponder" with a processor unit that will transmit information on the vessels position, course and speed when polled or at pre-determined programmed times.

VMS systems have an important implication for MCS programs when countries include in their legislation that vessels wishing to participate in a fishery have to carry a VMS. The system allows monitoring agencies to track their vessels movements, the areas being fished and importantly can indicate when and where a vessel returns to port. It is important to note that VMS only provides tracking information on compliant vessels carrying the units. Non-licensed vessels and vessels not carrying VMS that are involved in IUU fishing will not be monitored and VMS can therefore not replace conventional MCS measures.

The IOTC Resolution 06/03 (paragraph 1) requires that:

*"Each Contracting Party and Cooperating Non Contracting Party (CPC) shall adopt a satellite-based vessel monitoring system (VMS) for all vessels greater than 15 metres in length overall registered on the IOTC Record of Vessels which operate in the IOTC Area and which fish on the high seas (outside the fisheries jurisdiction of any coastal state) for species covered by the IOTC Agreement by 1 July 2007."*

Paragraph 3 requires that:

*"Information collected shall include:*

- *the vessel identification;*
- *the current geographical position of the vessel (longitude, latitude) with a position error which shall be less than 500 metres, at a confidence level of 99%; and*
- *the date and time (expressed in UTC) of the fixing of the said position of the vessel."*

Inspectors should be familiar with the following when undertaking inspections of VMS Shipboard equipment:

- Understanding of how VMS functions and its purpose;

- Familiarity with the main types of shipboard VMS equipment;
- A general understanding of the different installation options;
- Identifying indicators for any evidence of tampering with the system;
- Identifying any extra peripherals connected to the equipment and, if found, to query the purpose of these.

#### **4.6.1. VMS functions and types**

The preferred communications medium involves the use of satellite systems because the geographic coverage is greater. Satellites are not the only option, however: several tracking applications for land-based vehicles use cellular telephony or high frequency radio. Some of these other communication systems have similar reliability and security as satellite systems, and may be of lower cost, but they have less coverage and have more applications in near shore fisheries or smaller vessels (GSM 6 nm; Coastal AIS: 40 nm).

In a satellite-based system, data reports sent from the vessel are transferred to a satellite and then on to a terrestrial, or “earth”, station. The VMS components on the vessel are termed VMS, or sometimes Automatic Location Communicators (ALC). These minimally include a GPS antenna and receiver, a processing unit, (which may be embedded or user-supplied), and a transmitter and antenna appropriate for the communications that links the vessel via a land earth station to the fisheries monitoring centre (FMC) ashore. The earth station validates and stores the data, and makes them available to the monitoring agency. The fishery monitoring centre retrieves the data and stores them in a database. The identity and location of shipboard VMS units are presented on a map display, comparing vessel positions with features of interest, such as EEZ boundaries and regulated fisheries areas.

VMS can broadly be divided into two broad categories:

- One-way communication, transmitting data only from the unit to the shore station
- Two-way, communication, allowing the shore station to communicate (poll) back to the VMS unit on-board and re-programme the unit remotely to report at more frequent intervals.

The communications system carries position reports and other messages from the shipboard equipment - VMS, through space and surface lines, to the Fishery Monitoring Centre (FMC). Depending on the time interval that positions are transmitted, the information can be analysed to determine the vessel’s course and speed. Advantages of being able to poll the vessel and obtain data at shorter intervals are that more detailed and accurate information on the vessels activities at any time can be obtained. The IOTC Resolution 06/03 (paragraph 5) requires:

*“each CPC shall ensure that the information in paragraph 3 is transmitted to the FMC at least once every 4 hours. Each CPC shall ensure the masters of fishing vessels flying its flag ensure that the satellite tracking device(s) are at all times fully operational.”*

The predominant service providers used for the space segment in most VMS programmes are Argos, Inmarsat-C and D+, and Iridium. Other service providers include Orbcomm and Qualcomm (EutelTRACS in Europe and Boatracs in North America).

#### **Argos**

Argos is a global satellite-based location and data collection system dedicated to studying and protecting our planet's environment. The Argos (CLS) system is carried on polar-orbiting satellites operated by the USA’s National Oceanic and Atmospheric Administration and the CNES (French Space Agency).

The Argos system results from Franco-American cooperation involving: CNES (French Space Agency), NOAA (National Oceanic and Atmospheric Administration), with support from NASA (National Aeronautics and Space Administration), CLS (Collecte Localisation Satellites), operator of the system. In 2006, Eumetsat (European meteorological organisation) joined the Operations Committee.

The polar-orbiting satellites offer good coverage at high latitudes, and process one-way, ship to shore, communications (two-way communications are planned). Argos positions are provided in either of two ways: GPS positions for shipboard units that have an integrated GPS, and positions calculated by measuring

Doppler shift for units both with GPS and those without it. Shipboard equipment for Argos service is manufactured by several companies (Source <http://www.argos-system.org>).



**Figure 19:** Argos satellites constellation and coverage.

**Box 22 | Argos system**

- Six operational satellites : K,L,M,N,N',Metop
- Polar orbit satellites
- 1 orbit is run in around 100 min
- Altitude: 850 kms
- Ground area: 5000 kms diameter
- Average duration of a satellite pass = 10 min

**Inmarsat**

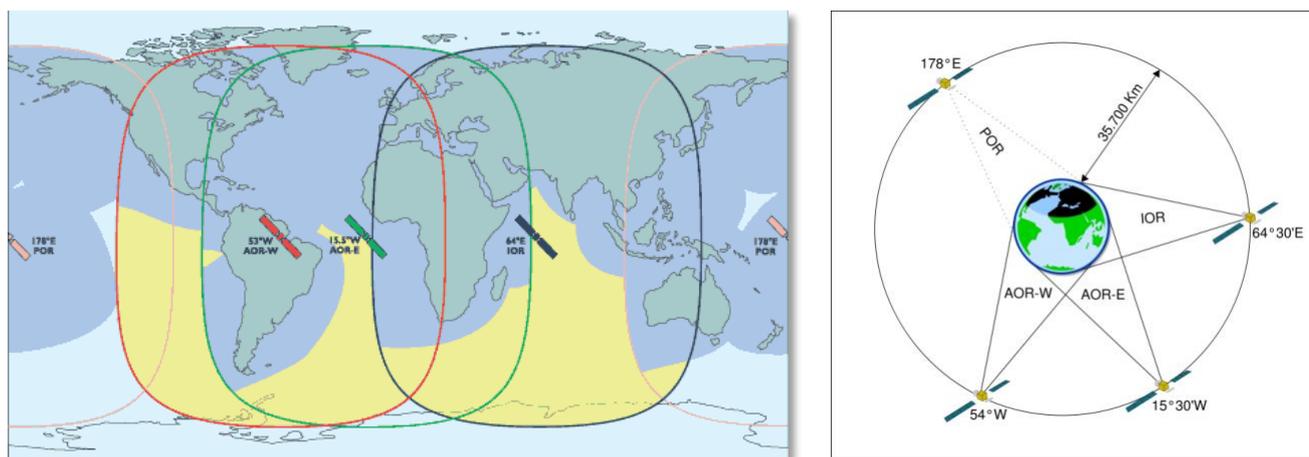
The company was originally founded in 1979 as the International Maritime Satellite Organisation (Inmarsat), a not-for-profit international organisation, set up at the behest of the International Maritime Organisation (IMO), a UN body, for the purpose of establishing a satellite communications network for the maritime community.

Inmarsat C is a cornerstone of the GMDSS supporting 5 out of 9 communication functions defined in the IMO SOLAS Convention, Chapter IV. It is a packet data communication system providing store and forward messaging including e-mailing, distress alerting and distress priority messaging to associated Rescue Coordination Centres, reception of maritime safety information via the International SafetyNET service, data reporting and polling service.

Inmarsat-C and Inmarsat-D+ services use geostationary satellites along the equator, providing almost global two-way coverage. Because of the satellites' equatorial locations, coverage at low latitude is good but may be incomplete at very high latitudes (around 70°). Inmarsat offers several types of communication service, but Inmarsat-C and D+ are most suitable for VMS applications as they are cost-effective for text messages and data packets. Shipboard equipment for Inmarsat-C and D+ service is manufactured by several companies.

**Box 23 | Inmarsat system**

- 4 geostationary satellites at an altitude of 36000 kms
- Alphasat, with a very high bit rate, expected launch in 2012
- Fleetbroadband voice and data simultaneously at a high rate (432 kb/s)

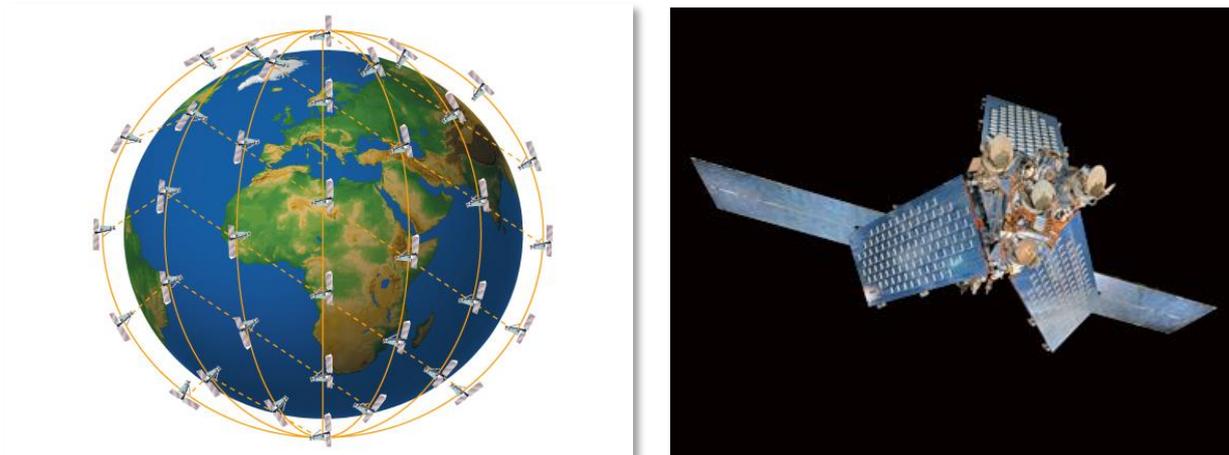


**Figure 20: Inmarsat satellites constellation and coverage.**

### Iridium

The Iridium satellite constellation is a large group of satellites providing voice and data coverage to satellite phones, pagers and integrated transceivers over Earth's entire surface.

The constellation consists of 66 active satellites in orbit, and additional spare satellites to serve in case of failure. Satellites are in low Earth orbit at a height of approximately 781 km and inclination of 86.4°. Orbital velocity of the satellites is approximately 27,000 km/h.



**Figure 21: Iridium satellites constellation and coverage.**

#### Box 24 | Iridium system

- 66 satellites between altitudes of 780 and 800 kms
- 6 orbit plans
- Frequency = Ka and L bands
- The signal is forwarded from 1 satellite to another satellite before to be downloaded and processed at Phoenix in Arizona

### Orbcomm and Qualcomm

The Orbcomm system employs multiple satellites in low earth orbit. The Orbcomm earth stations process global, two-way data communications. Two types of VMS programmes are available from Qualcomm – Boatracs and EutelTRACS. Position reports are provided in either of two ways: GPS positions for shipboard units that have an integrated GPS, and positions calculated by measuring Doppler shift (for units with and without GPS). EutelTRACS covers Europe and adjacent portions of the Atlantic Ocean, the Mediterranean and the Middle East. Boatracs covers eastern North America and adjacent portions of the Atlantic Ocean. The Qualcomm systems provide two-way communications.

#### 4.6.2. VMS identification guide

The following is a guide to assist identifying the VMS systems fitted to tuna fishing vessels during inspections.

*Note the antenna shape as this is fitted above the bridge and must not be confused with other electronic navigation antennae.*

##### Thrane and Thrane 3022D “family”

This includes the re-badged Sailor 3022D or Capsat units and appears to be those most commonly fitted. The Sailor 3022 D unit is an exact unit as the Thrane and Thrane 3022 D, but olive green in colour.

The approximate dimension of the electronics units are 50mm x 180mm x 165mm (H x W x D).



**Figure 22: Thrane and thrane unit and antenna.**

##### Capsat

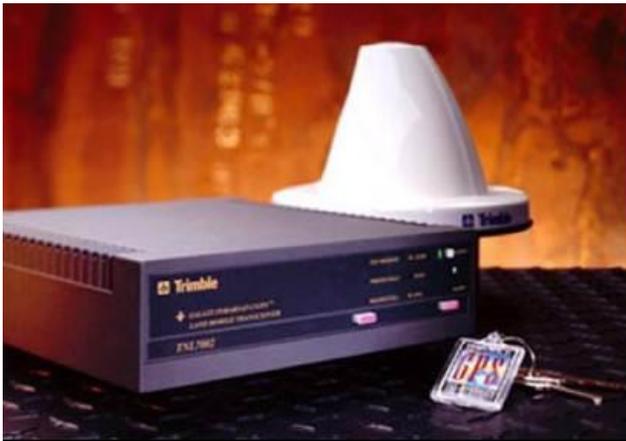
These are compact units with only the LED lights to indicate if the unit has a power supply connected. The approximate dimension of the electronic units are 43mm x 205mm x 200 mm (H x W x D). Dimension Antenna: 400mm x 650mm (H x D). Dimension of Power supply: 164mm x 285mm x 50mm (H x W x D).



**Figure 23: Capsat Unit and antenna.**

### Trimble Galaxy

These units are fitted to many vessels from the fleet of Taiwan. An example of the unit and antenna is shown here. The approximate dimensions are 80 mm x 55 mm x 217 mm.

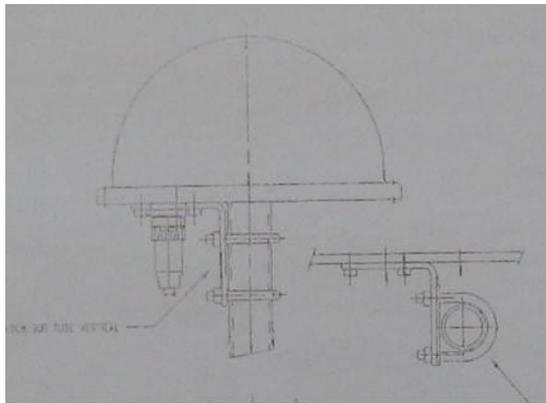


**Figure 24:** Trimble galaxy unit and antenna.

### Argos

The electronic components of this unit are entirely enclosed within the dome shaped “aerial” of the unit. This is mounted externally with a good view of the sky – usually above the bridge. The dome is white, measures 300mm in diameter and 160mm in height and is mounted on top of a pole. The dome will be connected to a junction box that is mounted indoors – usually in the communications area.

Numerous Argos VMS transmitters have been marketed, of different kinds. They are generally sold under a generic name MAR GE (MAR GE RB, MAR GE, MARGE V2, etc.). Most common model that could be found on the field nowadays is the MAR GE V2.



**Figure 25:** Drawing of dome of the Argos MAR G-E unit and picture of dome of Argos MAR GE V2 unit.



**Figure 26:** Junction box for the Argos MAR G E unit and Junction box of a MARGE V2 unit.

Two different VMS units in this photograph (figure 27):

- Thrane and Thrane 3022D INMARSAT
- Junction box for the Argos MAR G-E unit.

This unit will have a dome shape aerial mounted above the bridge. The box visible in this photo is the junction box for power.

Both of these units have small LED Lights to indicate that the units are switched on. However, this does not indicate when precisely the unit is transmitting the VMS data so as to avoid intentional jam of the signal.

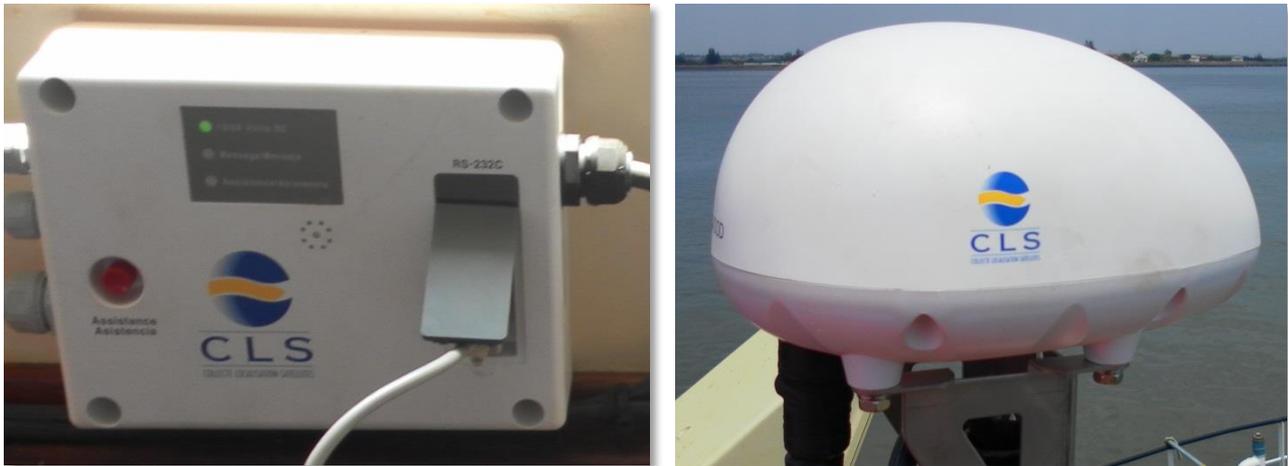


**Figure 27: Two VMS units installed on-board a tuna longliner.**

### **Thorium TST-100(Iridium)**

The Electronic components of this unit are entirely enclosed within the dome shaped “aerial” of the unit. This is mounted externally with a good view of the sky – usually above the bridge.

A junction box is mounted in the cabin so as to allow two-way communications and remote diagnostics thanks to small LED lights.



**Figure 28: Junction box (left) and dome (right) of a Thorium unit.**

#### **4.6.3. Means used by vessel operators to falsify VMS data that could be used by a vessel engaged in IUU fishing**

Physical interfering or ‘tampering’ with the shipboard transponder equipment to falsify information transmitted in order to prevent monitoring and detection of potential infractions can be grouped into the following categories:

- Blocking or interrupting data transmissions;
- Transmission of false data;
- Disruption of power supply;
- Physical removal of transponder,
- Transponder cloning.

#### **Blocking or interrupting data transmissions**

This can involve the covering of the antenna (e.g. with a metal bucket), coating the antenna with metal-based paint and/or disconnection or removal of the antenna cable. If suspected by the FMC and/or the inspector, detailed inspections will be required of the antenna and antenna cable for signs of interference e.g. metal based paint residue around the vicinity of the antenna.

It is difficult to prevent this type of tampering and rigid penalties will only assist. However, the use of security sealed connectors on the antenna cable will make it more difficult to tamper with the connections.

**Transmission of false data**

This is where position reports are input manually and then transmitted. Such overriding of the transponder's internal GPS would have to be done by a programmable GPS unit or computer software that is able to falsely simulate GPS information. Evidence of this will be difficult to detect but more recent transponders or those 'type approved' e.g. as a condition of licence, that are completely sealed and/or are equipped with security seals will make this more difficult.



**Figure 29:** Argos junction box with on/off switch.

**Disruption of power supply**

This involves either turning off the transponder in the usual way or removal of power cables, so again look for evidence of cable interference. Type approving will deter this to some extent by for example, specifying the use of units with an auxiliary battery supply that will continue to transmit even after the primary power source has been interrupted and notify the FMC of the power interruption.



**Figure 30:** Argos junction box switched off.

**Physical removal of transponder**

This literally involves the removal of the transponder from the vessel which may then be placed on another vessel, thus leaving the vessel to go unmonitored.

Looking for signs of removal behind and in the vicinity of the transponder alongside evidence of re-wiring or disconnection of the cable should be undertaken. Type approval of installation procedures which would make removal more difficult, and the use of security seals on both the antenna and transponder with associated fines for such tampering will assist with the detection of this form of tampering. As VMS transponders are assigned to a particular vessel, the vessel registration papers should be carefully examined to verify that they are genuine if such an activity is suspected.

**Transponder cloning**

This involves placing a second transponder on board that is capable of adopting the same behaviour as the approved one but can facilitate the simulation of false positional information. This type of tampering is technically complex and evidence of this is difficult to detect during an inspection. Much of the prevention for this rests with the manufacturer (the use of unique internal identifier known only to the manufacturer and system operator). If any of the above actions are suspected, the equipment suppliers should be

contacted for verification. This can be done with Argos transponders by comparing the Doppler track with the VMS track. Some INMARSAT transponders have a sealed data logger which can also be consulted by the supplier and will normally show any discrepancy between the recorded and reported positions.

#### **4.6.4. On-board inspection of the VMS**

The vessel's notification to enter port requires listing the type of VMS unit installed and the Fisheries Monitoring Centre (FMC) to which it reports. Where possible the inspection teams should obtain the VMS records from the FMC prior to the inspection taking place. Effectively only the land-based national Fisheries Monitoring Centre receiving the VMS information can confirm if the system is operating correctly. However, depending on the preliminary assessment of the VMS information, the inspection team will have to make a decision on whether to undertake a routine inspection or, where falsified VMS information is suspected, a more detailed investigation may be initiated that could also include inviting specialists in the field to accompany the inspection team.

A routine check-list to verify that the VMS equipment meets with the conditions of IOTC Resolution 06/03 is described in the box 25.

##### **Box 25 | Check list for the inspection of VMS**

1. The VMS unit must be installed on vessels above 15 meters LOA;
2. The VMS unit must be sealed (tamper proof) – Verify for evidence of the unit being tampered with, such as broken seals, scratch marks on screws sealing the unit, evidence of the cable junctions being removed;
3. The VMS unit must be switched ON and has reliable power feed and / or internal auxiliary power supplies;
4. The VMS unit must be ON at the time of the inspection;
5. The state of the cables leading into and out of the unit;
6. The routing of the cable can be checked to other units;
7. The condition of the antenna: evidence of paint on the antenna or connectors or evidence of been recently worked on.

#### **4.7. Powers of fisheries inspectors**

A fishery inspector receives his authority by virtue of his appointment as an inspector under the national fisheries legislation. The fishery inspector's authority is exercisable throughout the territory and waters of the country and his powers is generally described in the fisheries legislation, e.g. arrest person; board vessel; inspect fishing vessel, licence, gears, catch; search and seize; enter and inspect premises ashore.

Each authorised inspector must be issued with official documents and identification that provide proof of their appointment and powers as an inspector. The authority assigned to inspectors should allow them, on reasonable suspicion that a vessel has been involved in IUU fishing, to have the power to collect evidence and seize exhibits when necessary.

The results from analysing information in the request to enter port are likely to provide the first indication that the vessel may be implicated in IUU fishing. This will alert the inspection team and possibly guide them to the most probable source of evidence required to confirm or dispute these suspicions. However, it is also possible that verification of documents and gear and catch inspection may reveal evidence of IUU fishing not previously suspected.

##### **4.7.1. Collection of evidence and follow-up actions**

Where there are grounds to suspect a vessel has been engaged in IUU fishing, an important task of the inspection team will be to collect and record evidence to support these suspicions. The evidence will have to be submitted to the IOTC Secretariat and the flag State of the vessel and must be judicially sound. In terms of IOTC Resolution 11/03, *Information on Alleged IUU Fishing Activities*, (Paragraph 2):

*“CPCs shall transmit every year to the Secretary at least 70 days before the Annual Meeting, a list of the vessels presumed to have been carrying out IUU fishing activities in the IOTC area of competence during the current and previous year, accompanied by evidence supporting the presumption of IUU fishing activity. The IOTC Reporting Form for Illegal Activity (Annex I) shall be used.”*

According to the following paragraph (3), this evidence shall be based on information collected from all relevant sources including (Paragraph 3 d):

*“d) Any other information obtained from port States and/or gathered from the fishing grounds that is suitably documented.”*

The evidence must be reported in the prescribed format provided in annex 1 of resolution 11/03 and the inspector must have a sound knowledge on how to recognise, collect, preserve and record evidence that will satisfy the legal processes of the State in which the alleged offence occurred assuming the management authorities or the flag State decide to pursue the case. To preserve evidences, it is important that the rules of evidence are strictly observed according to the legislation of the port State in terms of the way the raw material (film, memory cards, documents, etc...) are handled and stored. The generally accepted steps while preserving evidence are:

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Conduct a visual examination;</li><li>• Assess the scene;</li><li>• Photograph/video evidence;</li><li>• Take notes.</li></ul> | <ul style="list-style-type: none"><li>• Package evidence;</li><li>• Secure evidence;</li><li>• Statement,</li></ul> |
|--|---|

Inspectors may also be required to present themselves as expert witnesses on request from a flag State or where judicial processes are set up for compensation.

**Box 26 | IOTC definition of IUU fishing activities (Resolution 11/03)**

For the purposes of this resolution, fishing vessels are presumed to have carried out illegal, unreported and unregulated fishing activities in the IOTC area of competence, inter alia, when a Contracting Party or Cooperating non-Contracting Party (“CPCs”) presents evidence that such vessels:

- a) Harvest tuna or tuna-like species in the IOTC area of competence and are neither registered on the IOTC Record of Vessels authorised to fish for tuna and tuna-like species in the IOTC area of competence, in accordance with the appropriate Resolution, nor recorded in the Active list of Vessels of IOTC, or
- b) Harvest tuna or tuna-like species in the IOTC area of competence, when their flag State is without sufficient quotas, catch limit or effort allocation under IOTC conservation and management measures where applicable, or
- c) Do not record or report their catches made in the IOTC area of competence in accordance with IOTC reporting requirements, or make false reports, or
- d) Take or land undersized fish in contravention of IOTC conservation measures, or
- e) Fish during closed fishing periods or in closed areas in contravention of IOTC conservation measures, or
- f) Use prohibited fishing gear in contravention of IOTC conservation measures, or
- g) Tranship with, or participate in joint operations such as re-supplying or re-fuelling, vessels included in the IUU Vessels List, or
- h) Harvest tuna or tuna-like species in the waters under the national jurisdiction of a coastal State in the IOTC area of competence without authorisation and/or infringe the coastal State’s laws and regulations, (this is without prejudice to the sovereign rights of coastal States to take measures against such vessels), or
- i) Are without nationality and harvest tuna or tuna-like species in the IOTC area of competence, or
- j) Engage in fishing, including transshipping, re-supplying or re-fuelling, contrary to any other IOTC conservation and management measures.

Every case will be different and the evidence will vary from case to case. Entries in logs, marks on charts, evidence of VMS tampering, computer navigation equipment (on laptops), electronic plotters etc., together with any prohibited species and other catch thought to be caught in contravention of license conditions or management measures will all be considered as evidence. Other evidence available from the FMC may include VMS data (if any) or any other sightings from national sea or air assets as well as another cooperating party. More and more evidence is becoming accepted and admissible in fisheries cases, in some countries photos of illegal activity taken from aircraft that are endorsed by the plane's pilot as having been taken at the time and place specified are admissible evidence.

In support of evidence of IUU fishing, *as a minimum*, the following should be collected:

- Copies, highlighting incorrect entries of:
  - logbooks; navigation; fishing log, processing, freezer and storage logs;
  - inventories of the catch on-board;
  - transshipment declarations of fish either from or to vessels;
  - vessels registration papers;
  - the vessel's flag State authorisations to fish;
  - license and any other documents from other CPCs permitting the vessel to fish in their waters;
  - Vessel drawings showing storage and other schematics,
  - VMS reports.
- Photographic evidence of:
  - navigation plots, navigation logbooks, bridge equipment if required;
  - gear on-board;
  - vessel markings;
  - visible indications of tampering with the VMS unit or antenna;
  - illegal catch,
  - prohibited species.

#### **4.7.2. Expert witnesses, interviewing and communication**

Cameras and video cameras are to be used to photograph marking of the vessels, documents, fishing gear, catch and other working spaces as required. Any significant events during the inspection should be photographed as a basis for later evidence.

Rolls of film or video cassettes/disks are to be labelled and securely stowed by the inspector for later use. Tape recorders may be used for recording interviews with the master or other crew-members. However, it is essential that:

- The master or crew-member is informed that the interview is being tape recorded;
- The master or crew-member is read his/her rights before an interview possibly leading to a prosecution starts;
- There must always be two port inspectors in the interview room;
- The preamble to the interview must contain a clear statement by the interviewing inspector as follows:

*"This is .... [NAME OF THE PORT INSPECTOR].... on board the fishing vessel .... [NAME OF VESSEL].*

*Date is .... [DATE], the time is .... [TIME]..., I am interviewing the master of the vessel .... [NAME]... with regard to ...[NATURE OF THE POSSIBLE VIOLATION]...*

*Mr [NAME OF MASTER] has been read his legal rights and understands them.*

*He is taking part in this interview voluntarily.*

*Also in the room are .. [NAME OF OTHER PORT INSPECTOR AND ANYONE ELSE IN THE ROOM].*

At the end of the interview, the inspector must close the tape with a statement of the time the interview finished. Notes of the main points of the interview are to be recorded in the notebook. Audiocassettes are to be labelled and held in secure storage on completion. The label must state who is participating, date, time, and location.

Interviews of the vessel master and other crew members can be a vital evidence source (assuming that they are voluntary). Aside from dates, times, names, and signatures, other more important guidelines include:

- Was an interpreter requested/provided?
- Were they advised of the suspicions and the consequences?
- Were they aware of the requirements for port State inspections and what their rights are in terms of international agreements?
- Were they permitted to have another crew member or their agent present – this is often useful if there is a significant language barrier?

The original copies of all witness statements signed and in the correct form will be needed. All witness statements must be read, and the following checked:

- Do they prove the charges that have been/will be laid?
- Do they contain inadmissible or unfairly prejudicial statements, (e.g. hearsay)?
- Does the witness refer to the exhibits he is producing?
- Is an additional statement required from the witness to clarify anything or add anything useful?
- Do the statements lay the requisite foundation of fact, (e.g. some Fisheries Acts provide that if an officer suspects any fish to which the charge relates were taken in a particular area of waters and he gives evidence of the grounds on which he so suspects and the court thinks the suspicion reasonable then, in the absence of proof to the contrary, the fish will be deemed to have been so taken). Any notes that have been collected by the inspectors will therefore also be vital.

## **CHAPTER 3**

### **Implementing the IOTC Port State Measures Resolution – from the request to enter port to the final decision of the port State and follow up actions**

**Vessel notification to enter port**

**Standard Operational procedures – on board inspection**

**Monitoring landing and transshipments in port**

**Follow up procedures and information sharing**



**This chapter provides the key procedures and outputs required to implement the IOTC PSMR.**

**Its first section outlines the procedures for analysing advanced requests by a vessel to enter port and includes a risk analysis process that should be followed for each Advanced Request to Enter Port, explaining support documents provided by the IOTC to complete this process. The outcome is also expected to provide a guide to the level of inspection and monitoring to be directed towards vessels granted permission to enter port.**

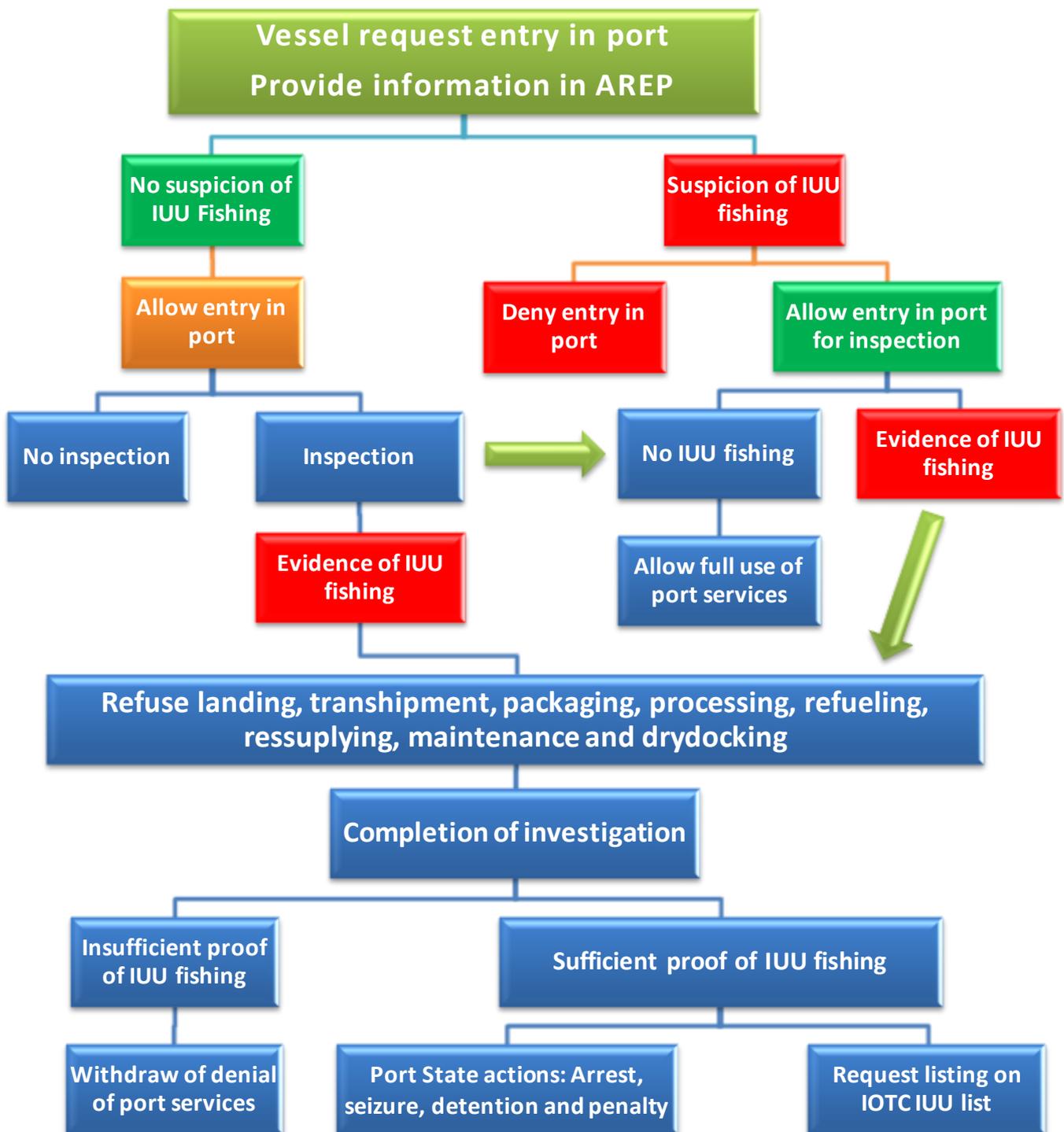
**The second section involves the practical conduct of inspections and monitoring the offloading of catches and is an integral part of implementing the port State measures. Suggested Standard Operating Procedures are provided that aim at co-ordinating procedures in different countries in the region.**

**The last section covers the follow up reporting procedures and dissemination of reports and information to further strengthen the effectiveness of the IOTC PSMR objectives.**

## 5. Vessel advance request to enter port

The “Advanced Request to Enter Port (AREP – annex A of the resolution), is the cornerstone of the IOTC PSMR. It sets up the procedure to research and verify a vessel’s background prior to it entering port and where there are reasonable grounds to suspect that a vessel has been implicated in IUU fishing, it may be denied entry into port.

To strengthen these principles, the resolution includes the requirement of CPC’s to designate in advance and publish these designated ports through the IOTC for the conditional use by foreign vessels to land catch or make use of port facilities. Foreign vessels wishing to enter a port must provide information in advance of their estimated time of arrival in accordance with annex-A of the resolution 10/11.



**Figure 31:** The port State process – from the vessel advance request to enter port (AREP) to the port State decision and follow up actions.

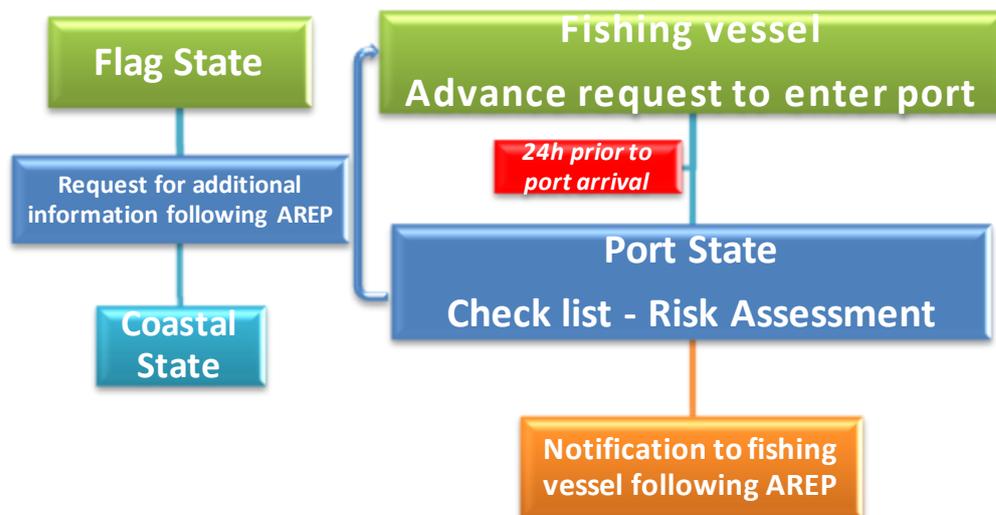
## 5.1. Assessment of vessel request to enter port

The AREP provides the opportunity for port State authorities to verify information provided and examine if the vessel, its owner or master has or may have engaged in IUU fishing. The decision to grant port entry and or access to port services remains the prerogative of the port State.

The basic principles of the IOTC Resolution 10/11 on Port State Measures are:

- “In the exercise of their sovereignty over ports located in their territory, IOTC Members and Cooperating non-Contracting Parties (CPCs) may adopt more stringent measures, in accordance with international law.” Port State sovereignty means that a foreign vessel does not automatically have the right to enter port;
- Under the Resolution, a vessel can enter a port only when it is authorized by the port State. This depends on the outcome of the assessment of the Advanced Request to Enter Port (Annex A of the Resolution),
- It may be denied entry, even for activities unrelated to IUU fishing such as refuelling or resupplying.

Assessment of the AREP by fisheries authorities is therefore one of the most important steps in the implementation of the IOTC-PSMR. The final decision to authorise or deny the entry into its port should be based on a detailed risk analysis and assigning a “risk” factor to each vessel based on the information provided and the results of information provided by the vessel’s flag State or any other fisheries authority or regional management organisation. Keeping in mind due regard for *force majeure* or distress.



**Figure 32:** Vessel advance notification to enter port (AREP) and port State communication process.

Four documents facilitate and formalize the assessment process (all included in the appendixes IV to VIII to these guidelines which is also summarised in Figures 32 and box 27):

- The Advanced Request to Enter Port (AREP);
- The check list - Assessment of advance request of entry in port;
- The request for additional information following a request to enter port, (Resolution 10/11 – Paragraph 7),
- The notification to fishing vessel following a request to enter port (Resolution 10/11 – Paragraph 7).

**Box 27 | Port entry – Requirements and procedures**

- 1 **Vessel** - prior to 24 hours before entering port or ceasing fishing operations:  
(If fishing operations ended less than 24 hours before requested time for entry into port, sufficient time must be given to examine the required information)
  - must request entry to designated port “Advanced Request to Enter Port”;
  - must provide information required.
- 2 **Fisheries/port authorities – Procedures prior to entry**
  - Review information from vessel;
  - May seek other information, e.g. from RFMO (IOTC Form- Request for additional information following a request to enter port, (IOTC Resolution 10/11 – Paragraph 7)
- 3 **Fisheries/port authorities – Decision**  
Notify the vessel of its decision on IOTC Form “Notification to fishing vessel following a request to enter port”, (IOTC Resolution 10/11 – Paragraph 7)
  - Deny entry: entry must be denied where there is sufficient proof of IUU fishing or related activities, including inclusion on an RFMO vessel list, except that:
    - Entry may be allowed: exclusively for inspection and taking other actions as effective as denial of entry in combating IUU fishing and related activities.
  - Authorize entry
- 4 **Entry denied**
  - Communicate denial to vessel or representative.
  - Notify:
    - Flag State;
    - as appropriate coastal States; and
    - IOTC Secretariat (which may inform other RFMOs).
  - Deny use of port, take measures under national law.
- 5 **Entry authorized**  
Communicate authorization to vessel or representative; upon port entry. Vessel or representative must present authorization.
- 6 **Force majeure or distress**  
*May allow* entry for force majeure or distress, exclusively for rendering assistance to persons, ships or aircraft in danger or distress.

It is essential that there is a clear liaison and communications between port authorities, customs, immigration and fisheries authority to ensure that fisheries authority has the control of access or denial of all fishing and carriers vessels which carry fish with the port as the first point of landing and that the vessel must wait outside the port until written notice has been provided by fisheries to the vessel and the appropriate agencies, e.g., port authority, customs and immigration. No port services are to be permitted for the vessel until cleared by fisheries.

In the case of force majeure or distress, fisheries authorities must be contacted immediately on receipt of such notice to a designated port and must be present on docking to verify the force majeure or distress before any port services are provided, including crew exchange, provisioning or repairs, or others related activities to take place in the port.

## **5.2. Risk Assessment processes**

The risk assessment process requires verifying components of the information provided in the AREP and assigning a level of risk to each of these to determine the likelihood of the vessel having been engaged in or associated with IUU fishing. The inspection process on a vessel is a time consuming process and depending on available staff and the number of vessels providing AREPs it may be difficult for the authorities to inspect all the vessels entering their port. To focus the efforts of available manpower where they are likely to be most effective, the risk assessment process is essential to identify high risk vessels where there is suspicion or evidence of implication with IUU fishing.

Criteria to be considered in the AREP that may be cause for suspicion, or require further investigation are *inter alia*:

- Vessel not included in the IOTC list of authorised vessels;
- Vessel on IOTC list of authorised vessels, but it has a record of IUU fishing and does not comply with the Resolution on Registered Vessels respecting actions by the flag State in such a case, e.g., change of beneficial ownership;
- Recent or frequent name changes;
- Recent or frequent flag changes;
- Recent or frequent change of ownership;
- Efforts to communicate with the flag State not successful;
- VMS/AIS records not available;
- Information on the last port call cannot be verified;
- Authorisation to tranship from or to a donor vessel not available,
- Declarations to tranship to or from a donor vessel are not available or incomplete.

The “*Check list: - Assessment of advance request of entry in port,*” (Appendix VI), was designed for internal use by the port State fisheries authority to keep track of the timing of actions and document decisions taken during processing the requests. It also provides the basis for briefing the inspection team and advising them of the level of risk and where special attention needs to be focused during the inspection.

The request for additional information following a request to enter port, (IOTC Resolution 10/11 – Paragraph 7) provides the format for further communication back to the vessel and the flag State, to request additional information for the assessment process (Appendix VIII).

Similarly, where there is no cause for suspicion of a vessel having been engaged in IUU fishing or associated activities, and the vessel is allocated a low risk profile it may only require routine inspection in accordance with paragraph 10.1 of the IOTC-PSMR.

A vessel that would be given a lower risk profile should conform to, and be able to provide verifiable information on:

- Flag State authorization to engage in fishing or fishing related activities;
- Registered on the IOTC positive list of vessels with all details listed;
- Valid and applicable authorization to engage in fishing or fishing related activities required by a coastal State in respect of areas under the national jurisdiction of that State;
- Logbook information indicating that the fish on-board conforms to the applicable authorisation on-board,
- The vessel and owner details are reflected on the IOTC lists.

Following the assessment of the AREP (Figure 33) and depending on the perceived risk, the decision is communicated back to the vessels on the form “*Notification to fishing vessel following a request to enter port*” in accordance with the *IOTC Resolution 10/11 – Paragraph 7*, (Appendix VII).

The risk assessment can lead to three outcomes (figure 33):

- Evidence of IUU fishing:
  - Deny port entry, conditional to a request by the vessel for health and safety of the crew or force majeure that may endanger the vessel and crew;
  - May allow port entry but deny use of port facilities including landing and transhipment;
- No evidence of IUU fishing:
  - Allow port entry for inspection of documents, gear and catch prior to granting permission to off-load its catch or access to port services.

When a vessel is denied permission to enter port the port State authorities must immediately notify the vessel of such decision and communicate the decision to the vessels flag State and the IOTC, as well as other relevant States that may have been influential in the decision.

**Box 28 | Requirement / procedure to be followed by the port State for a vessel denied port entry**

**Mandatory denial of use of port, or exception decision to allow entry for purposes of full port inspection to confirm or deny allegations of IUU fishing history:**

- The vessel is not registered on the IOTC record of authorised or is listed on an RFMO IUU list;
- The vessel does not hold an authorization as required by its flag State;
- The vessel does not hold an authorization required by a coastal State or there is clear evidence that fish was taken contrary to coastal State requirements in respect of areas under its national jurisdiction;
- The vessel has engaged in fishing or fishing related activities contrary to any IOTC resolutions;
- The flag State does not confirm, on request, within a reasonable time that the fish was taken in accordance with RFMO requirements;
- There are reasonable grounds to believe that the vessel was engaged in IUU fishing or related activities, unless the vessel can establish that it was:
  - acting in a manner consistent with relevant IOTC resolutions; or
  - in the case of provision of personnel, fuel, gear and other supplies at sea, the vessel that was provisioned, at the time of provisioning, was a vessel that had not engaged in IUU fishing.

**Exceptions:**

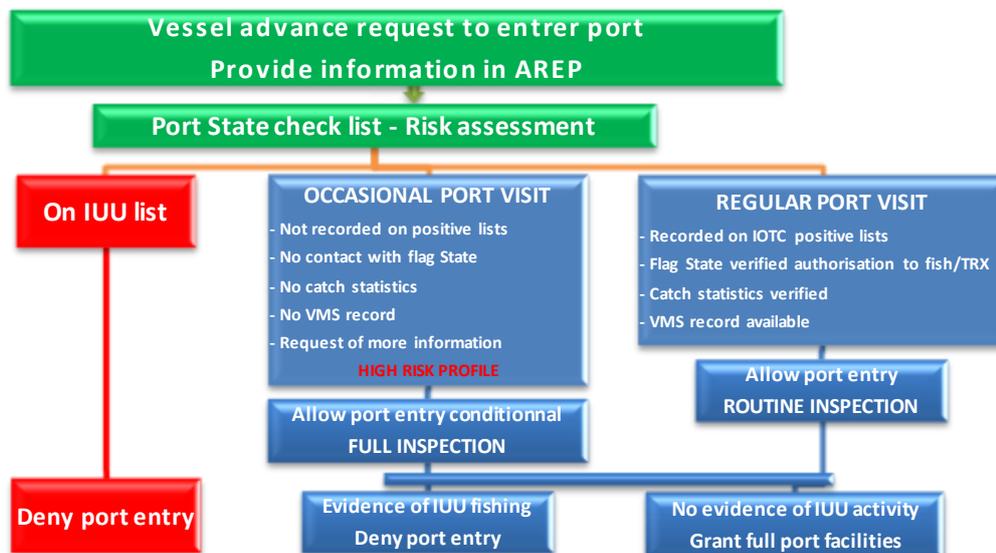
- Port services must not be denied:
  - Where they are essential to the health of the crew or the safety of the vessel, provided that these needs are duly proven; or
  - Where appropriate, for the scrapping of the vessel.

**Action/notification:**

- Prompt notification of the decision to deny use of port must be given to the flag State and and other involved port State agencies and, as appropriate, relevant coastal States, IOTC or other RFMOs and other international organizations;
- Report the IUU activity to the IOTC for inclusion on the IUU list.

**Withdrawal of denial of use of port:**

- Denial of use of port may be withdrawn if there is sufficient proof that the grounds were inadequate or erroneous or no longer apply. Notification of withdrawal must be given to those included in the notification of denied port entry.



**Figure 33: Risk assessment process.**

Following the risk assessment process (Figure 33), and if entry into the port is authorised, recommendations will be made on the inspection to be conducted on-board the vessel, these include inspection of:

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Flag State authorisation to fish;</li><li>• Fishing Logbooks;</li><li>• Fishing gear and associated equipment;</li><li>• Other specified documents or area identified as being important or requiring special attention.</li></ul> | <ul style="list-style-type: none"><li>• Flag State authorisation to tranship;</li><li>• Catch on-board;</li></ul> |
|--|---|

### 5.3. Procedures to access the vessel request to enter port

This section aimed at providing a detailed guide to the process to be followed in the assessment process of the AREP.

#### **A** Name of the fishing vessel

##### **Recommended source of information:**

Search IOTC Online Tools for vessel details [<http://www.iotc.org>], to obtain access to:

- IOTC record of authorised vessels,
- IOTC IUU list.

*Note: vessels from Taiwan Province of China, are not on the IOTC web site, consequently request information from IOTC Secretariat at [authorised.vessels@iotc.org](mailto:authorised.vessels@iotc.org)*

##### **Contact details for IUU lists:**

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• IOTC: <a href="http://www.iotc.org/English/iuu/search.php">http://www.iotc.org/English/iuu/search.php</a></li><li>• CCSBT : <a href="http://www.ccsbt.org/site/authorised_vessels.php">http://www.ccsbt.org/site/authorised_vessels.php</a><br/>(Note this is the site for the positive list. Vessels not on this list that fish for Southern Bluefin tuna are IUU vessels)</li><li>• IATTC: <a href="http://www.iattc.org/VesselRegister/IUU.aspx?Lang=en">http://www.iattc.org/VesselRegister/IUU.aspx?Lang=en</a></li><li>• NEAFC: <a href="http://www.neafc.org/blist">http://www.neafc.org/blist</a></li><li>• COLTO: <a href="http://iuu-vessels.org/iuu">http://iuu-vessels.org/iuu</a> or <a href="http://iuu-vessels.org/iuu/iuu/search">http://iuu-vessels.org/iuu/iuu/search</a><br/>(Maintains a combined list for all RFMOs)</li></ul> | <ul style="list-style-type: none"><li>• ICCAT : <a href="http://www.iccatint/en/IUU.asp">http://www.iccatint/en/IUU.asp</a></li><li>• CCAMLR: <a href="http://www.ccamlr.org/en/compliance/non-contracting-party-iuu-vessel-list">http://www.ccamlr.org/en/compliance/non-contracting-party-iuu-vessel-list</a></li><li>• WCPFC: <a href="http://www.wcpfc.int/vessels#IUU">http://www.wcpfc.int/vessels#IUU</a> or <a href="http://www.wcpfc.int/node/3423">http://www.wcpfc.int/node/3423</a></li><li>• OPRT: <a href="http://www.tuna-org.org/vesselneg.htm">http://www.tuna-org.org/vesselneg.htm</a><br/>(Maintains links to four of the major tuna RFMO's)</li><li>• Norway: <a href="http://www.fiskeridir.no/english/fisheries/norwegian-black-list">http://www.fiskeridir.no/english/fisheries/norwegian-black-list</a><br/>(Maintains a "Black List" of IUU vessels)</li></ul> |
|---|--|

##### **Target information**

Verification of following fields in the request form:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Flag State;</li><li>• International Radio Call Sign;</li><li>• Certificate of registry ID;</li><li>• VMS type and Fisheries Control Centre,</li></ul> | <ul style="list-style-type: none"><li>• Type of vessel;</li><li>• Vessel owner(s);</li><li>• IOTC number;</li><li>• Gear specified in the authorisation to fish.</li></ul> |
|---|--|

History of vessel: IOTC record of authorised vessels will provide details in four categories of information:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Vessel identification;</li><li>• Administrative details,</li></ul> | <ul style="list-style-type: none"><li>• Vessel characteristics;</li><li>• History of the vessel.</li></ul> |
|--|--|

A search for a vessel on the positive list of vessels of an organisation may not give a result. This may be due to the spelling of the vessel name or an administrative reason. It is then advisable to contact the organisation directly with the available information from the AREP.

### **Verification process**

If the vessel is not on IOTC positive list verify if it is present on the positive list of another organisation. Check the following information:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Previous names - in cases where there have been frequent name changes (check all past names against IUU lists);</li><li>• Frequent flag change,</li></ul> | <ul style="list-style-type: none"><li>• Use IMO number (when available) to cross check other lists;</li><li>• Use the vessel's IRCS to search and cross check.</li></ul> |
|---|--|

*Note that an IUU vessel can appear on more than one list*

Where a vessel was previously on an IUU list and has been re-flagged it is essential to contact the flag State for verification of the new registration and to query if they were aware of the vessel's IUU history. It is important to check if there was a change of ownership with the re-flagging or if the previous owners still have shares in the vessel.

Record the response received from the organisation. Should the response still be inconclusive this would indicate a possibility of the vessel having attempted to use a false name. In this instance the flag State should be contacted for comment or further verification of the vessel's credentials. In the event of the flag State not responding it would place such a vessel into a high risk category. Should any of the other information provided in the AREP be found to be incorrect or unverifiable this would be sufficient evidence to refuse port access to the vessel.

#### **Box 29 | Example of change of name of fishing vessel**

For example; an IUU vessel known as Black Moon had previous names Dorita, Eolo, Magnus, Thule and Red Moon. This vessel was listed under different names on different IUU listings. It used a new name "Ina Maka" to gain port entry. However it still displayed the IRCS for the vessel registered as the "Black Moon". (Source COLTO IUU listing).

## **B IMO number**

### **Recommended source of information:**

Fairplay operates a service following receipt of a completed IMO number Request Form. Contact: IHS Fairplay, Lombard House, 3 Princess Way Redhill, Surrey RH1 1UP United Kingdom. International fax: +44 1737 379040. Telephone: +44 1737 379043.

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Web site: <a href="http://www.imonumbers.lrfairplay.com/">http://www.imonumbers.lrfairplay.com/</a></li></ul> | <ul style="list-style-type: none"><li>• Email: <a href="mailto:data-audit@lrfairplay.com">data-audit@lrfairplay.com</a></li></ul> |
|---|---|

### **Target information**

Provide details for verification of following field in the request form:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Port and date of last port call;</li><li>• Current flag State;</li><li>• International Radio Call Sign;</li><li>• Vessel owner(s),</li></ul> | <ul style="list-style-type: none"><li>• Previous name of the vessel;</li><li>• Type of vessel;</li><li>• Vessel contact information;</li><li>• Certificate of registry ID.</li></ul> |
|--|--|

Note: AIS may also provide information of the vessels last port of call and its current location.

IMO number provides information on: the vessel specifications, vessel contact information, flag State, owner's details, history of change of ownership or re-flagging. The IMO number is assigned to the vessel at the time of construction and will not change despite modifications or change of ownership.

### **Verification process**

Cross check details of following field in the request form for verification of:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Port and date of last port call;</li><li>• Current flag State;</li><li>• International Radio Call Sign;</li><li>• Vessel owner(s),</li></ul> | <ul style="list-style-type: none"><li>• Previous name of the vessel;</li><li>• Type of vessel;</li><li>• Vessel contact information;</li><li>• Certificate of registry ID.</li></ul> |
|--|--|

## **C Fishing authorisations**

### **Recommended source of information:**

Communicate with entities that have provided the vessel with authorisation to fish (ATF) and / or tranship (from flag State) or fishing license issued by a coastal State:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Flag State,</li></ul> | <ul style="list-style-type: none"><li>• Coastal State in respect of areas under the national jurisdiction of that State.</li></ul> |
|---|--|

### **Target information**

Request details on authorisation issued to the vessel with respect to:

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Identifier;</li><li>• IRCS;</li><li>• Authorised fishing area;</li><li>• Gear,</li></ul> | <ul style="list-style-type: none"><li>• Issuing authority;</li><li>• Authorised period valid;</li><li>• Authorised target species;</li><li>• VMS records.</li></ul> |
|--|---|

If vessel has fished within the EEZ of another country request details of the authorisation issued by that country and repeat the process.

### **Verification process**

Verify with information provided:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Permit issued by authorised agent;</li><li>• Authorised fishing area compared with where the vessel has reportedly fished;</li><li>• Authorised gear,</li></ul> | <ul style="list-style-type: none"><li>• Validity of permit;</li><li>• Authorised target species;</li><li>• VMS requirements.</li></ul> |
|---|--|

Any discrepancies noted in an ATF would be a cause for suspicion. Should there be suspicion of the validity of the flag State authorisation to fish provided by the vessel in the AREP then contact the relevant authorities of the flag State and request details with respect to:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Identifier;</li><li>• Authorised period valid;</li><li>• Authorised fishing area;</li><li>• Gear,</li></ul> | <ul style="list-style-type: none"><li>• Issuing authority;</li><li>• IRCS;</li><li>• Authorised target species;</li><li>• VMS records.</li></ul> |
|---|--|

## **D Relevant transshipment authorisation(s)**

### **Recommended source of information:**

Verify information regarding the transshipment authorisation issued by the fishing authority of the flag State.

IOTC web site for list of authorised Carrier vessels: <http://www.iotc.org>. Select list of authorised Carrier vessels, Select "Search for carrier vessels only" and select all county flag and all vessel type, then click search".

### **Target information**

Verify vessel details:

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Vessel name;</li><li>• IOTC record number;</li><li>• National Registration number,</li></ul> | <ul style="list-style-type: none"><li>• Authorisation status;</li><li>• Flag State;</li><li>• International radio call sign.</li></ul> |
|--|--|

Verify vessel characteristics:

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Type;</li><li>• Length,</li></ul> | <ul style="list-style-type: none"><li>• Tonnage;</li><li>• Gear used.</li></ul> |
|---|---|

Verify administrative details:

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Owner,</li></ul> | <ul style="list-style-type: none"><li>• Operator.</li></ul> |
|--|---|

Verify vessel history.

**Note:** If the carrier is not listed on the IOTC list, check other RMFO lists of authorised vessels. Carriers pass through other RFMO waters of competence and may be tempted to use the excuse that they are registered in another RFMO and thought they could carry out operations in the IOTC area of competence as well.

### **Verification process**

Verify the validity and the detail of the competent authority issuing the transshipment authorisation. Note if the vessel is included on IOTC list of authorised Carrier vessels

Cross reference and verify information with AREP. Cross check with transshipment authorisation to see whether area of transshipment authorisation matches TRX location. Check dates with transshipment validity.

## **E Transshipment information concerning donor vessels**

### **Recommended source of information:**

Where there is doubt or if the information is not provided by the flag State or copies are not made available with the AREP, request information from the IOTC secretariat ([transshipment@iotc.org](mailto:transshipment@iotc.org)) and check the identity and information with the IOTC observer assigned to the vessel or the IOTC Observer provider.

### **Target information**

The original transshipment authorisation provided to the donor vessels and declarations from both donor and the receiving vessel.

### **Verification process**

In case of carrier vessel calling into port, it is recommended that the port State request the transshipment declarations to:

- Verify that those declarations are on-board the carrier vessel and have been communicated to the IOTC secretariat;
- Verify detail of transshipment declaration, area, species, and that has been signed by the IOTC observer assigned to the vessel.

## **F** Total catch on-board

### **Recommended source of information:**

Information provided in:

- AREP;
- declarations of transshipment by flag State, or
- other sources, e.g., entry/exit systems and radio/internet catch reporting systems if available; VMS/AIS for positions.

### **Target information**

The total quantities of fish on-board per species and product codes.

### **Verification process**

Verify:

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Catch area with authorisations to fish;</li><li>• Verify species match those on the authorisation to fish;</li><li>• For shark fins note % to total weight of shark trunks;</li></ul> | <ul style="list-style-type: none"><li>• Total catch does not exceed allowable catch on authorisation,</li><li>• Check by-catch limit to total weight of target species.</li></ul> |
|---|---|

#### **Box 30 | Risk assessment outcomes**

In summary noting the above procedures, if the vessel is not on an IUU list or there is insufficient suspicion of it being implicated in IUU fishing, then depending on the perceived authenticity of information in the AREP and or prior local history of the vessel, it will be categorised as a high, medium or low risk vessel which should influence the inspection process.

### **5.4. Guide to complete the form “Check list - Assessment of the Advance Request of Entry in Port”**

The table “*Check list - Assessment of Advance Request of Entry in Port*”, provides a checklist for the port State when receiving an AREP. This is designed for internal use by the port State to keep track of the timing of actions and document decisions taken during processing the requests. The table provides the basis for the communication back to the vessel and the flag State, which may request additional information or advise them of the decision to either deny or permit entry into its ports. It will also provide the basis for the briefing of the inspection team advising them of the level of risk and where special attention needs to be focused during the inspection. The check list is available at the appendix VI.

For each field the actions and instructions to complete the form are described.

#### **General completion instructions:**

- Date of actions:
  - Record a date when it was addressed using format DD/MM/YYYY.
  - Where an action took more than one day to complete record the start and end date of the process.
  - Where a request for additional information is made record the date when the request was made, note the means of transmitting the request for information, i.e. fax, email, telephone call. Record the date that a response was received back from the request.
- Potential irregularities, comments, results of actions:
  - Record in free text the result of the research or verification process. Where the information is inconclusive or there is suspicion of falsified or inconclusive information this must be highlighted for further action or investigation.

 <b>CHECK LIST</b> <b>ASSESSMENT OF ADVANCE REQUEST OF ENTRY IN PORT</b>			
<b>Name of officer</b>	Record the name of the fisheries officer	<b>ID</b>	Record the identification number of the fisheries officer
<b>Items/Actions</b>	<b>Date of Action</b>	<b>Potential irregularities/Comments/Results of Actions</b>	
<b>AREP Received</b>	...../...../.....	Record the date and time that the AREP was received. Note:	
<b>Vessel name</b>	Record the name of the vessels	<ul style="list-style-type: none"> <li>By what means it was conveyed, email, fax or hard copy.</li> <li>Did it come direct from the vessel, through an agent or via the vessels fishing authority or any other body.</li> </ul>	
<b>Flag</b>	Record the flag		
<b>IOTC Number</b>	Record the IOTC number		
<input type="checkbox"/> 1 <sup>st</sup> port call <input type="checkbox"/> Occasional <input type="checkbox"/> Regular		Tick the appropriate box (√).	
<b>Port and date of last port call:</b>			
Record the date, and name or code of last port call			
<b>Purpose of call:</b>	<input type="checkbox"/> Landing <input type="checkbox"/> Transshipping <input type="checkbox"/> Packaging <input type="checkbox"/> Processing of fish <input type="checkbox"/> Refueling <input type="checkbox"/> Resupplying <input type="checkbox"/> Maintenance <input type="checkbox"/> Drydocking <input type="checkbox"/> Force majeure		Tick the purpose of the call (√).
<b>Verification on IUU Lists</b> IOTC: <a href="http://www.iotc.org/English/iuu/search.php">www.iotc.org/English/iuu/search.php</a> ICCAT: <a href="http://www.iccat.int/en/IUU.asp">www.iccat.int/en/IUU.asp</a> CCSBT: <a href="http://www.ccsbt.org/site/authorised_vessels.php">www.ccsbt.org/site/authorised_vessels.php</a> (Note this is the site for the positive list. Vessels not on this list that fish for Southern Bluefin tuna are IUU vessels) CCAMLR <a href="http://www.ccamlr.org/en/compliance/non-contracting-party-iuu-vessel-list">www.ccamlr.org/en/compliance/non-contracting-party-iuu-vessel-list</a> IATTC <a href="http://www.iatcc.org/VesselRegister/IUU.aspx?Lang=en">www.iatcc.org/VesselRegister/IUU.aspx?Lang=en</a> WCPFC <a href="http://www.wcpfc.int/vessels#IUU">www.wcpfc.int/vessels#IUU</a> NEAFC <a href="http://www.neafc.org/blist">www.neafc.org/blist</a> COLTO (Maintains a combined list for all RFMO's) <a href="http://iuu-vessels.org/iuu">http://iuu-vessels.org/iuu</a> <a href="http://iuu-vessels.org/iuu/search">http://iuu-vessels.org/iuu/search</a> OPRT (Maintains links to four of the major tuna RFMO's) <a href="http://www.tuna-org.org/vesselneg.htm">www.tuna-org.org/vesselneg.htm</a> Norway (Maintains a "Black List" of IUU vessels) <a href="http://www.fiskeridir.no/english/fisheries/norwegian-black-list">www.fiskeridir.no/english/fisheries/norwegian-black-list</a>	___/___/___	On IUU list: <b>YES</b> <input type="checkbox"/> <b>NO</b> <input type="checkbox"/>	
		Process followed: <ul style="list-style-type: none"> <li>to verify if the name of the vessel is associated with any IUU list,</li> <li>record web sites consulted.</li> </ul> First conduct an electronic search on all available IUU lists using the vessels name, IRCS and IMO number. If the vessel name does not reflect on either the IOTC positive list or any of the IUU lists contact flag State and check if it is on the positive list of another organisation. In terms of IOTC Resolution 10/11 – Paragraph 7, a request for additional information can be sent to either / or both the agent/vessel and flag State. Check if the vessel has any recorded name changes and re-check the previous names for IUU listing. Where a vessel was previously on an IUU list and has been re-flagged it is essential to contact the flag State for verification of the registration and to query if they were aware of the vessels IUU history. It is important to check if there was a change of ownership with the re-flagging or if the previous owners still have shares in the vessel.	
<b>Verification on Positive Lists</b>	___/___/___	On positive list: <b>YES</b> <input type="checkbox"/> <b>NO</b> <input type="checkbox"/>	
		Record YES if it is registered on a recognised positive list. <i>Note: vessels from Taiwan Province of China, are not on the IOTC web site, consequently request information from IOTC Secretariat at <a href="mailto:authorised.vessels@iotc.org">authorised.vessels@iotc.org</a></i>	
<b>In case not on positive lists, contact with (√):</b>  <input type="checkbox"/> flag State <input type="checkbox"/> others _____	___/___/___	When a vessel does not appear on a positive list and is also not recorded on an IUU list then additional information can be requested from the flag State or directly from the vessel or its owners.	
<b>Receipt of response</b>	___/___/___	Comment on response and list if on another positive list or reason provided for it not being listed.	

<b>Flag State Authorization to fish</b>	---/---/---	<p>Verify details on the ATF(s) issued to the vessel (if available). In the event that the vessel has not previously entered the port and there is no prior history of the vessel having been inspected in the port it would be advisable to contact the flag State fishing authorities and request a copy of the authorisation to fish issued to the vessel. The contents of this can be crosschecked with the information provided by the vessel in its AREP.</p> <p>Where the vessel indicated that it was fishing with an fishing license from a coastal State then these documents will also be scrutinised for authenticity.</p> <p>Any discrepancies noted would be a cause for suspicion.</p>
<b>In case not provided, contact with:</b>	--/---/---	<p>If the vessel does not provide a copy of an authorization to fish in the AREP or following a further request to the vessel for this information; then record if contact was attempted or made with the flag State or the authorities of coastal States.</p>
<input type="checkbox"/> flag State <input type="checkbox"/> coastal State		
<b>Receipt of response</b>	--/---/---	<p>Record the main aspects of the response, comments on completeness and timeliness.</p>
<b>Transshipment authorization</b>	---/---/---	<p>Verification of information for transshipment authorizations with the relevant fisheries organisation, flag State or coastal State will follow the same procedure as verifying the ATF. In addition the carrier vessel should be cross checked to see if they appear on the RFMO positive list or IUU list. The carrier should be on the IOTC list of registered vessels to operate in the IOTC Are of Competence.</p>
<b>In case not provided, contact with:</b>	---/---/---	<p>Details of the response received from the organisation must be recorded. Should the response still be inconclusive this would indicate a possibility of the vessel having attempted to use a false name. In this instance the flag State should be contacted for comment or further verification of the vessels credentials. In the event of the flag State not responding it would place such a vessel into a high risk category. Should any of the other information provided in the AREP be found to be incorrect or unverifiable this would be sufficient evidence to refuse port access to the vessel.</p>
<input type="checkbox"/> flag State <input type="checkbox"/> other _____		
<b>Receipt of response</b>	---/---/---	<p>Record the main aspects of the response, comments on completeness (Identifier, issuing authority and validity) and timeliness.</p>
<b>Transshipment information on donors vessels</b>	---/---/---	<p>Verification of information for transshipment on donors vessels: flag, catch area, species The donor vessels should be cross checked to see if they appear on the positive list or IUU list of a relevant fisheries organisation.</p>
<b>Donors vessels not on positive list, contact with:</b>	--/---/---	<p>When a donor vessel does not appear on a positive list and is also not recorded on an IUU list then additional information can be requested from the flag State or directly from the vessel or its owners.</p>
<input type="checkbox"/> flag State <input type="checkbox"/> other _____		
<b>Receipt of response</b>	--/---/---	<p>Record the main aspects of the response, comments on completeness (Identifier, issuing authority and validity) and timeliness.</p>

<p><b>Request of additional information</b></p>	<p>Yes <input type="checkbox"/>          ___/___/____          Response received:          ___/___/____          No <input type="checkbox"/></p>	<p><input type="checkbox"/> Coastal State authorisation to fish (specify):_____</p> <p><input type="checkbox"/> Flag State authorisation to fish</p> <p><input type="checkbox"/> Flag State authorisation to tranship</p> <p><input type="checkbox"/> Fishing logbook from ___/___/____ to ___/___/____</p> <p><input type="checkbox"/> Certificate of registry of the fishing vessel</p> <p><input type="checkbox"/> IOTC transhipment declarations</p> <p><input type="checkbox"/> VMS record from ___/___/____ to ___/___/____</p> <p>Copy of vessel master <input type="checkbox"/> Passport <input type="checkbox"/> National ID</p> <p><input type="checkbox"/> Others documents: (specify):_____</p> <hr/> <p>Tick (√) what information you have requested.</p>
<p><b>Recommendations on port access</b></p>	<p>___/___/____</p>	<p><input type="checkbox"/> Allow entry and use of facilities</p> <p><input type="checkbox"/> Allow entry but no use of port facilities, until cleared by full port inspection (If not cleared deny use of port facilities and proceed with PSM measures to contact flag State and other appropriate coastal States and IOTC Secretariat).</p> <p><input type="checkbox"/> Deny entry</p> <hr/> <p>Tick (√) where appropriate.</p>
<p><b>If entry authorized, recommendations for inspections</b></p>	<p>___/___/____</p>	<p><input type="checkbox"/> Flag State authorisation to fish/TRX authorisation</p> <p><input type="checkbox"/> Flag State authorisation to tranship</p> <p><input type="checkbox"/> Fishing logbook</p> <p><input type="checkbox"/> Others document: _____</p> <p><input type="checkbox"/> Fishing gear and associated equipment</p> <p><input type="checkbox"/> Catch on-board</p> <p><input type="checkbox"/> Others: _____</p> <hr/> <p>Tick (√) where appropriate depending of the inconsistencies found during the assessment of the AREP to provide the basis for the briefing of the inspection team and where special attention needs to be focused during the inspection.</p>

### 5.5. Inspection briefing

As part of the inspectors “Tool Kit” and to assist in preparation for the inspection, a detailed brief should be prepared for the inspection team that will conduct the inspection. This briefing will assist in guiding inspectors to specific areas where there are likely to be discrepancies in the information that was provided in the AREP. Depending on the level of inspection required, *i.e. full inspection including documents, gear and catch* or *routine inspection of documents and monitoring off-loaded catch*, the briefing allows the inspection team to prepare their equipment and entering enclosed or sub-zero temperature compartments during the operation. The brief should include:

- Copies of:
  - Vessel Notification to enter port (AREP);
  - Check list: - Assessment of advance request of entry in port;
  - Request for additional information following a request to enter port, (IOTC Resolution 10/11 – Paragraph 7),
  - Notification to fishing vessel following a request to enter port, (IOTC Resolution 10/11 – Paragraph 7).

- The mandate authorising the inspection, referencing the relevant IOTC resolutions and the country's legislation;
- Summary of investigation from the risk assessment, noting specifically any information that should be verified and receive more attention in the inspection process.
- Copies of transshipment declarations where these are available;
- Copies of VMS/AIS records where these are available;
- List of gear expected to be present on-board;
- List of the product codes and weight of the target and by-catch species that the vessel declared on-board,
- Tables and formulas for calculating volumetric measurements of fish holds.

## **6. Standard Operational Procedures – on board inspection of fishing vessel**

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The essential component in implementing the IOTC-PSMR is the on-board inspection of foreign vessels entering the port (Part-4 of Resolution 10/11), and the essential sub-components of this section require:

- As a minimum, that each CPC carry out inspections on at least 5% of landings or transshipments in its ports during each reporting year;
- These inspections are required to monitor the entire discharge or transshipment and include a cross-check between the quantities by species landed or transshipped with those recorded in the AREP. This information should also be cross checked with the information from the IOTC Observer on the carrier vessel. When the landing or transshipment is completed, the inspector shall verify and note the quantities by species of fish remaining on board;
- As far as possible inspections should make all possible efforts to avoid unduly delaying a vessel and ensure that the vessel suffers the minimum interference and inconvenience and that degradation of the quality of the fish is avoided;
- The port CPC may invite inspectors of other CPCs to accompany their own inspectors and observe the inspection of landings or transshipment operations of fishery resources caught by fishing vessels flying the flag of another CPC.

The resolution requires that the inspection process must conform to minimum standards when being conducted that include:

- Ensure that inspections are carried out by properly qualified inspectors authorized for that purpose;
- Inspectors are required to present to the master of the vessel an appropriate document identifying themselves;
- Inspections must examine all relevant areas of the vessel, the fish on board, the nets and any other gear, equipment, and any document or record on board that is relevant to verifying compliance with relevant conservation and management resolutions;
- Master of the vessel is required to give inspectors all necessary assistance and information, and to present relevant material and documents as may be required, or certified copies thereof;
- If appropriate, invite the flag State of the vessel to participate in the inspection;
- Facilitate communication with the master or senior crew members of the vessel, including where possible and where needed that the inspector is accompanied by an interpreter;
- Ensure that inspections are conducted in a fair, transparent and non-discriminatory manner and do not constitute harassment of any vessel;
- Make allowance for the master to communicate with the authorities of the flag State in conformity with international law.

Note: No port authority or other agency is permitted to authorise the vessel port services until after it has been cleared by the Fisheries Authority in writing. This implies that the Fisheries Authority are part of the first boarding team (with Customs, Immigration, etc.), and must be contacted and present prior to docking of the vessel.

### **6.1. Pre-boarding process**

#### **6.1.1. Selection of fishing vessel and risk assessment**

Following the assessment of the AREP and depending on the perceived risk a final decision is made. Where there is:

- Evidence of IUU fishing, then:
  - Deny port entry, conditional to a request by the vessel for health and safety of the crew or force majeure that may endanger the vessel and crew;
  - May allow port entry but deny use of port facilities including landing and transshipment;

- No evidence of IUU fishing, then:
  - Allow port entry for inspection of documents, gear and catch prior to granting permission to off-load its catch or access to port services.
- Allow port entry under force majeure or distress.

### **High risk**

A high risk vessel will require a full inspection involving:

- Inspection of all documents and cross referencing document information with that provided in the AREP (*vessel registration and safety certificates, authorisation(s) to fish, authorisations for transshipment, transshipment declarations catch logbooks, production logbooks, engineers logbooks*);
- Inspection of gear and recording gear specifications;
- Hold inspection to estimate volume and weight of the catch,, and validate the processed catch for correct packaging identification as well as correct weights,
- Identification of the catch species on-board.

The results of the inspection will determine whether or not to allow the vessel further port facilities. Should the inspection result in any suspicion that the vessel has been engaged in or associated with IUU fishing it can be denied further port services, vessel can be detained and appropriate flag State, coastal States and IOTC Secretariat are so informed. In the event that the results of the inspection are inconclusive the vessel may be requested to provide further information to verify that it has not been associated with IUU fishing activities.

Port services may be suspended until such information is provided. Where the result of the inspection verifies that the catch and fishing methods conform to the conservation measures of the IOTC then it should be granted permission to continue with off-loading its catch and be granted port facilities. It would be expected that if the vessel is given permission to continue to land its catch, the off-loading will be fully monitored to verify catch statistics provided.

### **Medium risk**

A vessel will be classified as medium risk where some of the information provided cannot, with a high level of confidence, be verified or is inconsistent with some information collected in the data search. The inspection process will first address these inconsistencies and could as a result, deny the vessel further access to port facilities. Should the result of the inspection be acceptable, then the vessel will be granted permission to continue with its planned port activities.

Depending on the results from verifying information of the vessel's documents, the inspection process may be extended to include inspection of the gear and catch prior to allowing the off-loading to commence. It would be expected that if given permission to continue to off-load, the vessel's catch will be fully monitored to verify catch statistics.

### **Low risk**

Vessels that have regularly entered the port without any prior record of infringements and where all their information has been verified may be limited to a routine inspection of their documents. Depending on the size of the port and the number of vessels entering it is conceivable that not all these vessels will be fully inspected at each port visit. Depending on the regulations of the port State the landing of the catch may also be monitored.

#### **Box 31 | Risk categories assigned to vessel**

Three risk categories can be assigned to vessels given permission to enter port:

- *High Risk* - Data provided not verified but no record of IUU activity. No prior inspection record;
- *Medium Risk* - Data partially verified but uncertainties still exist;
- *Low Risk* - Data verified and vessel routinely inspected during prior port visits.

Assigning these risk levels assist in determining and planning the operational requirements of the inspection.

### **6.1.2. Preparation for boarding**

The importance of preparations prior to boarding a vessel in port cannot be over-emphasised. All subsequent activities during the inspection will depend on the thoroughness of these checks.

#### **Preparation of documents**

Prior to undertaking the operation the inspection teams should be given a detailed briefing covering all the relevant documents they will be required to check and the report forms that will have to be completed during the inspection.

The document list should include:

- Summary of investigation from the risk assessment, noting specifically any information that should be verified in detail;
- The vessel's details and name of the master and fishing master;
- The mandate authorising the inspection, referencing the relevant IOTC resolutions and the country's legislation;
- Gear to be present on-board;
- List of the product codes and weight of the target and by-catch species that the vessel declared on-board;
- Copies of the inspection reports;
- Notebook for recording additional information;
- Discharge forms,
- Name of observer aboard, if available.

#### **Vessel photographs**

A detailed inventory of digital pictures of vessels is a valuable tool to positively identify vessels and mitigate against IUU vessels changing names and registration numbers. The physical structure of the vessel, relative position of the bridge, rails, equipment and aerial arrays are prime features used to identify a vessel. Detailed pictures of the hull showing physical damage, such as dents or weld marks are unique features that can be used to positively identify a vessel even after modifications and painting. A photographic record should be set up and maintained of all vessels calling into the port and where necessary these can be shared with other port States.

#### **Communication and agent responsibility**

The leader of the inspection team must have a means of communication (mobile phone or radio) to be able to communicate with their office. In the inspection process this will allow for queries on documentation or to get advice on any aspect that may not have been covered in the pre-briefing or analysis of the AREP.

Prior communications with the vessel will, in most cases, be through the vessel's agent. The agent can assist with translations and is most likely to have direct links with the vessel operator and / or owners. The arrangements to undertake the inspection and the presence of the agent during the inspection can facilitate communications and the inspection process. Where there is no one to assist with translation then "translations cards" will have to be used to request the documentation and communicate on the inspection process of gear and catch. This may slow down the process and inspectors need to maintain a strict protocol of being both firm and patient, especially when dealing with a vessel that is undertaking its first port visit.

#### **Inspection protocol**

##### Inspectors' uniforms

Appearance and uniform dress are important aspects when inspecting a vessel. A uniform represents the authority that is necessary for the importance of the inspection process. Inspectors, through the Fisheries Management authority, also represent their State on the vessel. However the practicalities of moving around on the vessel also have to be taken into account. It is conceivable that an inspection team of several persons could be dressed differently. The lead of the inspection team, in a formal uniform to undertake the introductions and document inspection, with assisting members dressed in apparel that will be more suitable for moving around on the vessel to inspect gear. Inspection of refrigerated holds will also require suitable protective clothing.

In all aspects the dress must take into account health and safety standards and the requirement to wear safety boots, hard hats and reflective jackets. Thin working gloves are usefully to both protect the hands from sharp objects and have the added advantage of keeping your hands clean when inspecting and handling gear on-board.

### Introduction protocol

The first introduction to the vessel's personnel and the protocols followed are very important in preparing for the full inspection process. They highlight the importance and significance of the inspection to follow. When first boarding, if not met by an officer or the agent, remain either on the quay side or next to the boarding ramp and wait for a vessel representative to lead you to the bridge. Introductions and presentation of identification must follow irrespective of whether the vessel has been boarded before or the personnel are known. This can have implications should a judicial process follow from any infractions discovered and reported after the inspection. Countries' customs vary with respect to shaking hands and initial address. A cue can be taken from the vessel personnel and on some oriental vessels a polite bow may be the most appropriate. Providing the names and identity of the inspection team should follow the greeting by presentation of official identification cards. As soon as possible ascertain the rank of the officers or crew meeting the team and address them by their rank.

Request a suitable place to work on-board to analyse documents. Larger carrier vessels have a "day-room" for the master that serves as an office and is ideal. Giving consideration to limited space on fishing vessels a suitable work space could be the chart table, radio room or a convenient space on the bridge.

### **Inspection tool-kit**

Inspectors must be equipped with the documents, identification guides and equipment necessary to record details of gear specification and measure gear. A checklist of the inspector's tool-kit for conducting an inspection on-board would include:

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Fisheries inspector ID and/or badge;</li><li>• AREP documents;</li><li>• Fish / Product ID cards;</li><li>• Calculator;</li><li>• Digital camera;</li><li>• Measuring equipment, net measure, callipers and flexible tape;</li></ul> | <ul style="list-style-type: none"><li>• Notebook;</li><li>• Translation cards;</li><li>• Mobile phone / radio;</li><li>• Copies of licences and appropriate regulations;</li><li>• Torch,</li><li>• Protective clothing and gloves.</li></ul> |
|--|---|

### **Inspector notebook**

It is essential that inspectors carry personal notebook at all times and record additional and supporting information resulting from their inspections. Data recorded should as far as possible be cross referenced to the numerical sections of the port inspection report form. A detailed notebook, with clear dates and kept in chronological order can be invaluable for compiling more detailed reports on inspections and may also serve as evidence in a judicial process. When taking digital photographs, it is also important to cross reference them to notes taken at the time.

## **6.2. On-board inspection - Standard Operating Procedures**

### **6.2.1. Requirement of the port State inspection**

The detailed requirement of the port State inspection procedures is included in annex 2 of the resolution. The operating procedure for inspection proposed below is provided as a guide and should be developed, utilised and modified by inspection teams to suit the situation at the time of inspection or depending on the condition on-board. It is divided into two main sections described below.

#### **Inspection of documentation**

The inspection of the documents on board the fishing vessel requires to:

- Verify and cross reference information to that obtained from the analysis of the AREP;
- Verify the information found during the inspection of the documents and with findings from the physical inspection,

- Verify operations and catch details (fishing logbook) with those monitored on-board by observers or logbooks, or during the off loading process.

### **Physical Inspection**

Physical inspection is the “hands on” part of the inspection and includes recording gear specifications and checking on equipment to verify information provided in the documentation and looking for additional components that have not been listed or declared. The process includes:

- Inspecting compartments for gear or equipment or evidence of catch;
- Inspecting bridge equipment for its working order and reliability, e.g., navigation plots, VMS, AIS, computers, etc.;
- Inspecting fish storage holds;
- Identifying fish, weights and products to see if they conform to catch and transshipment documents,
- Monitoring off-loading process.

### **Port Inspection Report Form (Annex C of the IOTC Resolution 10/11)**

The port inspection report form is presented in the appendix IX together with a description of the required information and format for each of the data fields that have to be completed by the inspection team following the inspection of the vessel.

A complementary inspection report form (B) related to compliance with IOTC CMMs has been developed (appendix X) to verify the compliance with technical management measures that apply to fishing vessel fishing for tuna and tuna like species in the IOTC Area.

Resolution 10/11, requires that; “the port State CPC shall, within three full working days of the completion of the inspection, transmit by electronic means a copy of the inspection report and, upon request, an original or a certified copy thereof, to the master of the inspected vessel, to the flag State, to the IOTC Secretariat and, as appropriate, to:

- a) the flag State of any vessel that transhipped catch to the inspected vessel;
- b) the relevant CPCs and States, including those States for which there is evidence through inspection that the vessel has engaged in IUU fishing, or fishing related activities in support of such fishing, within waters under their national jurisdiction; and
- c) the State of which the vessel’s master is a national.

The IOTC Secretariat is also required to “without delay” transmit the inspection reports to the relevant regional fisheries management organisations, and post the inspection report on the IOTC website.

## **6.2.2. Port State inspection - Standard Operating Procedures**

The procedure for carrying out a port inspection of a fishing vessel comprises of several key elements that never change, but the responses of the master or the facts as they are uncovered on-board can lead to a host of unplanned situations. The language cards carry all of the main constituents of an inspection and may be used for reference, but the inspector on-board the fishing vessel will have to exercise sound professional judgement in many cases where situations are not catered for.

The following sections provide a description of the operational steps to be followed, and the actions involved, in undertaking a vessel inspection. For every step, a link is made to the field of the IOTC inspection report required to be completed (blue box; example: 1 to 6).

For every step, the actions must be completed in a formal process and undertaken even if familiar with the vessel.

Support vessels include those vessels that set and recover FADs in the purse seine fishery. They will not have catch or fishing gear on-board, so inspections will only concern licence details, vessel documentation and the status of the vessel on RFMO positive and IUU lists.

**General instruction on the procedure during port inspection**

<b>START</b>	<b>Prior to boarding</b>	Take photographs of the marks of the vessels (stern, broadside and bow), aerial array above the bridge and any flags hoisted.	
	<b>Embarkation on the fishing vessel</b>	Introduce yourself to the master, present professional ID and legal mandate, request cooperation, request AREP and authorisation of entry, provide a short brief on the inspection process.	
	<b>Place to work</b>	Request master to provide a place to work to analyse documents.	
	<b>Vessel details and flag State registration</b>	Verify authenticity/validity of vessel's documents against the specimens / AREP. Cross reference vessel's marks / characteristics with information in the vessel's documents and IOTC RAV.	
	<b>Name, address of owners, beneficial owner, operators</b>	Cross reference to the details provided in the AREP. Verify discrepancies against the IOTC lists of authorised vessels and if available from the IMO number.	
	<b>Name, address of master, fishing master and agent</b>	Request ID of the master, the fishing master and the agent. Cross reference with the information that was provided in the AREP.	
	<b>VMS unit, power and transponder inspection</b>	Check if VMS installed on-board for vessel above 15 meters, tamper proof seals, power supply connections and back-up power, LED lights ON, input cables, antenna.	
	<b>Status in RFMO</b>	Verify status on RFMOs positive list and on the IUU list.	
	<b>PORT INSPECTION PROCEDURES</b>	<b>Authorisation to fish (ATF)</b>	Check ATF from flag State and fishing license from Coastal State: authenticity, validity, area of operation, gear, and against specimens. Verify if there is any modification made on ATF.
		<b>Transshipment authorisations</b>	Verify authenticity, validity and area of operation of the authorisation to tranship.
<b>Transshipment information concerning donors vessels</b>		Review documentation of all transshipments. Verify the status of the donors vessels on the IOTC positive list and the IUU list.	
<b>Evaluation of offloaded catch</b>		Record reported weights to be off-loaded prior to the commencement of the off-loading operation. Cross reference to the estimated weights determined from the estimates made while monitoring the off-loading.	
<b>Catch retained on-board - hold inspection</b>		Request the master to produce the quantity by species retained on-board the vessel. Estimate the catch in the holds.	
<b>Examination of logbooks</b>		Master to produce the fishing, processing, freezer, engineering logs. Cross reference areas of operation detailed in fishing logs to information in AREP and to the authorised areas for fishing.	
<b>Catch Document Schemes and trade information</b>		Cross check declared weight of species on-board with applicable catch document schemes. Weights specified on the catch documents must correlate with the off-loaded weights.	
<b>Fishing gear</b>		Review the information on vessel type and authorised fishing gear provided in AREP and conduct a detailed inspection of the fishing gear on-board. Verify that the gear and gear specification conform to the authorisations issued to the vessel. Search illegal fishing gear.	
<b>Protected and endangered species</b>		Inspect line cutters, de-hookers and dip-nets used to release marine turtles. Check if the vessel has on-board a "tori" bird scaring line. Check for shark fins and determine % of fins. Check for thresher sharks, trunks or fins on board.	
<b>END</b>		<b>Report completion</b>	Inspection team to reconcile the findings of the inspection. Copy of inspection report provided to the master.
	<b>Signatures of the inspection report</b>	Fisheries inspector and master sign the inspection report. Ask the master if there are any complaints.	

**A Prior to boarding**

1 to 6 / 8 to 9

**Action to be taken:**

- Take photographs of the stern, broadside and bow; and of the hull on both sides. If possible, the out board side can often be photographed from a jetty on the opposite side and then zooming in on the hull;
- Take detailed [zoom in] photographs of the aerial array above the bridge and of any flag(s) hoisted,
- Record the name and numbers painted on the bow and stern and any alphanumeric numbering displayed next to the bridge that may include the international radio call sign, fishing licence number, national registration number, port of registry, IMO number.



The inspection report form B on Compliance with IOTC Conservation and Management Measures provides the necessary fields to record the information related to marking of fishing vessel. It allows the inspector to record the marks displayed on the stern, port side and starboard side, for the name, the national registration number and the IRCS of the vessel.

Then it allows the inspector to cross reference the marks displayed with the information of IOTC record of authorised vessels and the documentation verified on-board.

**Confused marks on the stern of a longliner that need further investigation during the inspection.**

It may be appropriate to ensure that the other agencies involved in port operations are all pre-informed of the fisheries mandate and actions being taken as well as the accompanying and the vessel's agent in case there are queries from the vessel during these pre-boarding activities.

**B Embarkation on the fishing vessel to be inspected**

1 to 6 / 8 to 9

**Action to be taken:**

- Check evidence of hostility on-board before embarking on the vessel;
- If the master is not present you must ask to be taken to the master;
- You must introduce yourself by your name, institution/administration and title “Fishery Inspector of the Republic of ...”;
- You must provide to the master your professional identity card and reference the legal mandate for undertaking the port inspection;
- You must ask for cooperation with the inspection team;
- Request the master to confirm the purpose of the port call and access to the port;
- If not provided previously, request the master to present the authorisation for entry;
- Provide a short brief on the inspection process that will be undertaken and possible consequences if irregularities are found (deny use of ports, port State enforcement actions, request listing on the IOTC IUU vessel list),
- Record in the form the date and time of your arrival on-board.

**Box 32 | Example of possible infractions following embarkation on the fishing vessel**

- No presentation of the authorisation for entry to the master of the vessel upon the vessel's arrival in port – Article 7.2. of IOTC PSMR Resolution,
- Lack of cooperation from the master of the vessel – Article 17.1 of IOTC PSM Resolution  
 If the master does not want to cooperate with the inspection team, you must warn the captain that failure to cooperate with this legal process might result in taking further action against him. You explain that this behaviour constitutes an infraction to the national fisheries legislation and the IOTC PSM Resolution. Then ask again if the master is willing to cooperate. If the reply is still negative the inspection procedure stop. You must inform your fisheries authority and wait further instruction.

*Where a fishing vessel carries an observer on-board, it is in the inspector' interest to request the observer report (if available) and discuss relevant vessel operations (at a suitable place and time) with the observer in order to glean as much detail about the vessel as possible.*

**C Place to work**

**Action to be taken:**

- Request the master to provide a suitable place to work to analyse documents. Taking consideration of limited space this could be the chart table, radio room or a convenient space on the bridge.

**D Vessel details and flag State registration**

**11 to 18**

**Action to be taken:**

- Request the vessel's registration documents, navigation, tonnage and safety certificates and any other available documents that will assist with verifying information in the AREP;
- Verify the authenticity and validity of the documents with the specimens (if available);
- Cross reference the available information with the findings of the pre-assessment of AREP;
- Cross reference the external marks of the vessel against the details of the vessel including vessel name, national registration number, international radio call sign and, if available, the IMO number;
- Cross reference the characteristics of the vessel in the documents against the details of the vessel in the IOTC record of vessels, including length (LOA), gross tonnage (GT), national registration number, and international radio call sign;
- Question any discrepancy and record the answers and any evidence that may arise from the verification process,
- Make copy or take photographs of the documents that contain information different from the external marks or different from the IOTC record of authorised vessels.

*The external marks of the fishing vessel recorded in step A must be verified against the vessel details in the documents on-board and as well against the details recorded in the IOTC list of authorised vessels.*

*Verification must be made against national legislation as well if more specific with regards to mandatory marks to be displayed on the fishing vessel and documents to be present on-board.*

*Any altered, falsified, deleted or concealed marks on the vessel must be corrected and conditional to the departure of the port for the next fishing trip.*

*You can request previous inspection reports that will provide you guidance to the inspection process.*

**Box 33 | Example of possible infraction on vessel details and flag State registration**

- A document of the vessel is not present on board – Article 2.a. of IOTC Resolution 01/02,
- A document of the vessel is not issued by the competent authority of the flag State – Article 2.a. of IOTC Resolution 01/02,
- The external marks of the fishing vessel (name, national registration number, IRCS) are not consistent with the information of the vessel's documents – Article 3. of IOTC Resolution 01/02,
- The external marks of the fishing vessel are altered, falsified, deleted or concealed in such a way that the vessel cannot be really identified – Article 3. of IOTC Resolution 01/02.

**E Name, address, contact of owners, beneficial owner(s) and operators**

**19, 20 and 21**

**Action to be taken:**

- Record the details of the owners, beneficial owner(s) and operators of the vessel (e.g. from the registration and safety documents of the vessel);
- Cross reference these information to the details provided in the AREP;
- Verify discrepancies from details recorded in the IOTC lists of authorised vessels and if available from the IMO number.

The name of the owner(s) can be cross referenced with the owner(s) details from RFMOs IUU list, including past IUU list. The owner having a vessel already placed on a RFMOs IUU list would automatically place the inspected vessel on the high risk level. Cross reference of owner details against RFMOs IUU list could have been concluded in the analysis of the AREP.

**F Name, address and contact of vessel master, fishing master and agent**

22, 23 and 24

**Action to be taken:**

- Request the identification document of the master, the fishing master and the agent. This should be their original passport or international marine identification documents. [Note: Copies are not acceptable], make copy or take picture of the passport or national identity card;
- Request a copy of the crew list;
- Cross reference the details of the master and the information that was provided in the AREP.

**G Vessel monitoring system**

25

**Action to be taken:**

**VMS fitted on-board and functionality**

- Check if the VMS is obligatory (vessel above 15 meters LOA – IOTC Resolution 06/03, or if authorised to fish in the EEZ of a coastal State, check fishing licence or fishing agreement for VMS conditions);
- Request for the master to accompany to verify the on-board VMS installation (junction boxes, antenna, and cables);
- Verify that the system is fitted on-board and check to see if there is one or more VMS unit. Note the make and model;
- Check the VMS unit(s) noting physically: the installation, device is located in a sealed unit and protected by official seals (tamper proof seals), power supply connections and back-up power, LED lights to indicate power supply, any input cables for integrated positioning;
- Check the antenna above the bridge, and any paint residue on the antenna,
- Check cable connection and if possible that it conforms to the aerial cable into the unit.

**VMS failure event**

- Request the captain to provide the last failure events on-board. If VMS failure has occurred, verify that the vessel has communicated to the FMC of the flag State the vessel identification, the date & positions every 4 hours. Record the type of communication (email, fax, telex, telephone),
- Verify that the technical failure has been communicated to the flag State and/or the IOTC Secretariat,
- Verify if the device was repaired or replaced within one month, record the date of repair.

**VMS alteration**

- Check signs of alteration of device on-board: connection of external GPS to the VMS unit, damaged cable, obstruction of GPS signal, power supply not interrupted. Take photography.



**Argos junction box switched off.**

The inspection report form B on compliance with IOTC Conservation and Management Measures provides the necessary fields to record the information related to the VMS. It allows the inspector to record the outcomes of the VMS inspection on the functionality of the device, technical failure and alteration (e.g. antenna, power supply).

Verification must be made against national legislation as well if more specific with regards to the requirements of VMS.

In the event that a CPC has information to suspect that on-board vessel monitoring device(s) have been tampered with, it shall immediately notify the IOTC Secretary and the vessel's Flag State (Article A – annex 1- Resolution 06/03).

**Box 34 | Example of possible infraction on the vessel monitoring system**

- The vessel is above 15 m LOA and no VMS is installed on-board (Article 1. - IOTC resolution 06/03)
- The vessel monitoring device has been tampered with, and /or is not located in a sealed unit and/or is not protected by official seals (article 6 - IOTC Resolution 06/03);
- The antennae connected to the satellite monitoring device(s) is obstructed and/or the power supply of the satellite monitoring device(s) is interrupted (article 7 - IOTC Resolution 06/03).

**H Status in RFMO**

26

**Action to be taken**

- Determine and cross check from the fishing authorisations on-board the status of the vessel in the IOTC (or any other RFMO or regional management area). This information should also correspond to documents issued by the flag State;
- Ask the master if during the current fishing trip he has been fishing in the area of another RFMO (ICCAT, CCAMLR, CCSBT, WCPFC) and there are fishes on-board taken in this area. Note the RFMO area and cross check with fishing positions from the fishing logbook and the navigation logbook;
- If fishing positions are found in the area of competence of a neighbouring RFMO, verify the status of the vessel on the list of authorised vessels of the concerned RFMO,
- Question the master on the reason to why the vessel is not registered with the concerned RFMO and record the answers. Request the master to produce the quantity of fish harvested in the RFMO area and present on-board.

*Information on the status of the vessel should have been concluded in the analysis of the AREP with respect to its status on the positive list or in the IUU list.*

*If there is evidence of fishing activity within the area of a neighbouring RFMO, the EEZ of a coastal State of such RFMO and the vessel is not registered with the RFMO, report the result of the investigation to the concerned RFMO, to the flag State of the vessel, to the coastal State the vessel has been operating in, and to the IOTC Secretariat.*

**Box 35 | Example of possible infraction on the status of the vessel in the RFMO**

- The vessel harvest tuna or tuna-like species in the IOTC area of competence and is not registered on the IOTC Record of Vessels authorised to fish for tuna and tuna-like species in the IOTC area (Resolution 07/02).

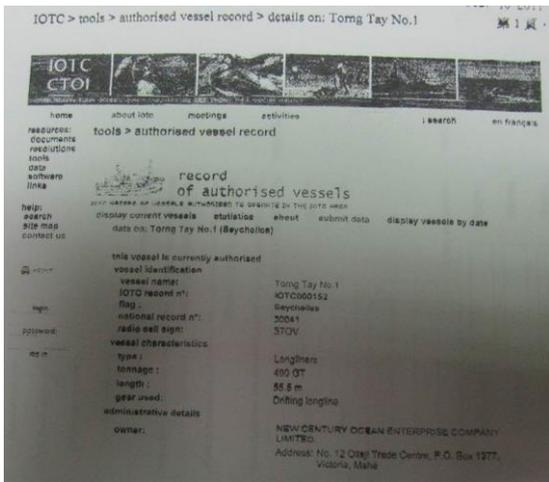
**I Authorisation to fish**

27

**Action to be taken**

Review the authorisations to fish on-board the vessel, noting specifically their period of validity, area of operation and permitted target and by-catch species. These should include:

- Request the master to produce the authorisation to fish (ATF) issued by the vessel's flag State that includes authorisation to fish within RFMOs areas on the high seas;
- Request the master to present the fishing licences issued by the coastal States that have provided the vessel with permission to fish within their EEZ;
- Verify authenticity, validity and area of operation in the ATF and the fishing license. If available, verify authenticity and validity of the documents with the specimens;
- Verify if there is any modification made on the ATF. Modification on the ATF must be certified by the competent authority of the flag State,
- If the vessel has been fishing in the EEZ of the Port State, verify if the conditions of the fishing license are respected: species, fishing gear, catch reports, VMS reports, by-catch / discard restrictions.



If the master is unable to produce a valid ATF or fishing license, his reason for doing so is to be recorded in the notebook.

ATF issued by flag State must be on-board the fishing vessel at the time of the inspection (Resolution 01/02).

If you find any modification on the ATF not certified by the competent authority of the flag State, request the master to explain and record the response in the notebook.

ATF issued by flag State should have "IOTC area" as area of operation. Fishing license issued by Coastal State should have the EEZ as area of operation or part of the EEZ.

For any irregularities detected on the ATF, communicate with the flag State using the form "Request for additional information following a port inspection".

**ATF produced by the master. It is a web print of the IOTC record of authorised vessel of the inspected vessel.**

**Box 36 | Example of possible infraction on authorisation to fish**

- The vessel does not have a valid and applicable authorization to engage in fishing or fishing related activities required by its flag State (Article 2 - Resolution 01/02);
- The vessel does not have a valid and applicable authorization to engage in fishing or fishing related activities required by a coastal State in respect of areas under the national jurisdiction of that State.

**J Transshipment authorisations**

28

**Action to be taken:**

Review documentation of all transshipments, noting specifically authorisations issued by relevant CPCs and fishing authorities to donor or receiving vessels and cross check quantities reportedly transhipped to declarations submitted by the vessels to their fishing authorities and the IOTC and where possible with IOTC observer data (if available).

- Ask the master if the LSTLV has been engaged in transshipment operation(s) at sea (high seas or EEZ of a coastal State) and name of vessel(s) involved. Request position, date, time and quantity of fish. If applicable request the master to produce the IOTC transshipment declaration,
- Request the master to produce the authorisation to transship issued by the vessel's flag State that includes authorisation to transship within RFMOs areas on the high seas and/or issued by the coastal States that have provided the vessel with permission to transship within their EEZ,
- Verify authenticity, validity and area of operation in the authorisation to transship,
- Request the communication logbook to cross reference with the location of transshipment operation(s) and details of receiving vessel and check if there is any communication record with others vessels. Request the master to explain the reasons of the communication (e.g. supplying, fuelling) and verify the status of the vessels on the IOTC positive list and IUU list of RFMOs.

**Box 37 | Example of possible infraction on transshipment authorisation**

- The vessel has engaged in transshipment authorisation without authorisation to transship issued by the flag State or the coastal State,
- The vessel has transhipped with, or participate in joint operations such as re-supplying or re-fuelling, with vessels included in the IUU Vessels List.

Three fundamental rules apply to LSTLVs for transshipment at sea (Articles 11, 12 and 13 - Resolution 12/05):

- LSTLVs are not authorized to tranship at sea, unless they have obtained prior authorization from their flag State.
- To receive the prior authorization to transship, the master and/or owner of the LSTLV must notify the following information to its flag State authorities **at least 24 hours** in advance of an intended transshipment: LSTLV name,

IOTC number, name of the carrier vessel and its IOTC number, product to be transhipped, tonnage, date and location of transhipment, geographic location of the catches;

- The LSTLV concerned shall complete and transmit to its flag State, not later than 15 days after the transhipment, the IOTC transhipment declaration, along with its number in the IOTC Record of Fishing Vessels.

Under article 10 of resolution 12/05, transshipments by LSTLVs in waters under the jurisdiction of the CPCs are subject to prior authorization from the coastal State concerned. If the LSTLV has been transshipping in the EEZ of a coastal State (Catch area), contact the coastal State to confirm that the transhipment was duly authorised.

## **K** Transshipment information concerning donors vessels

28

### **Action to be taken:**

This step applies to receiving vessel. Review the documentation of all transshipments, noting specifically authorisations issued by relevant CPCs and fishing authorities to donor or receiving vessels and cross check quantities reportedly transshipped to declarations submitted by the vessels to their fishing authorities and the IOTC.

- Ask the master if the vessel has been engaged in transhipment operation(s) at sea (high seas or EEZ of a coastal State) and name of vessel(s) involved. Request position, date, time and quantity of fish and if applicable request the master to produce the IOTC transhipment declaration,
- Request the master to see the IOTC observer on-board the carrier vessel and request the IOTC observer to provide the list of LSTLVs that have transhipped to the carrier vessel, including position, date, time and quantity of fish transhipped and any irregularities recorded by the observer,
- Cross reference the information provided by the master of the carrier vessel and the IOTC observer. If there is discrepancies, question the master and record the response in the inspection report and/or the notebook,
- Verify the status of the receiving vessel and the donors vessels on the IOTC positive list and the IUU list, or others RFMOs if necessary, (contact the IOTC secretariat to ascertain the status of the vessels at [transshipment@iotc.org](mailto:transshipment@iotc.org)),
- Verify the transhipment declaration involving the carrier vessel and the donor vessels including if the template comply with the IOTC form of resolution 12/05 and if all transshipment declarations have been submitted to the IOTC secretariat (contact the IOTC secretariat at [transshipment@iotc.org](mailto:transshipment@iotc.org)). Check if the observer has signed the transhipment declarations.

For receiving carrier vessel, the master of the receiving carrier vessel shall complete and transmit the IOTC transhipment declaration to the IOTC Secretariat and the flag CPC of the LSTLV, along with its number in the IOTC Record of Carrier Vessels authorized to receive transhipment in the IOTC area of competence, within **24 hours** of the completion of the transhipment.

If a donor vessel has been fishing in the EEZ of a coastal State (Catch area), contact the coastal State to confirm that the donor vessel was duly authorised to fish.

### **Box 38 | Example of possible infraction on transshipment concerning donors vessels**

- The receiving vessel and/or the LSTLV have engaged in transhipment operations and is/are not registered on the IOTC record of authorised vessels/carrier vessels.

## **L** Evaluation of offloaded catch

30

### **Action to be taken:**

When vessels are given permission to off-load their catch, standard monitoring procedures must be followed for offloading to a shore side facility or transshipments to another vessel.

Quantities and species can be accurately determined using “hook scales” attached to the crane hook and by sub-sampling a representative portion of the fish being off-loaded.

Record reported weights to be off-loaded prior to the commencement of the off-loading operation and compare these to the declared weight of product received either by the carrier vessels or cold

store ashore. Cross reference these to the estimated weights determined from the visual estimates made while monitoring the off-loading process. Any significant discrepancies with respect to total weights or species composition must be immediately noted and queried. Detailed records of responses to these queries must be kept in the notebook.

*Refer to section 6.3 on monitoring of offloading which detail the procedure to monitor landing and transhipment in port.*

**M Catch retained on-board - hold inspection**

**31**

**Action to be taken:**

- Once the landing or transhipment process are finished, request the captain to produce the quantity by species retained on-board the vessel;
- Prior to undertaking hold inspections, review the vessel's layout from its registration documents and these should also be displayed as a safety requirement;
- Note number and relative arrangement of holds and blast freezer and volume of each;
- From the cargo or stowage plan in the document review and ascertain the species and product form and stowage position for catches from different fishing areas;
- Request permission of the master to inspect the catch to verify the quantities declared by the master by conducting inspection of the holds of the vessel. Use the drawings/descriptions of layout of the fishing vessel, identify fish holds and quantity. The master is to be invited to accompany the fisheries inspectors;
- Check for unrecorded 'empty' spaces that may be hidden fish holds. Identify refrigeration system and follow the system;
- Note identifiable products and species visibly stowed,
- A photographic record of the inspection process must be compiled.

*Inspection of the catch retained on board is to be carried out by two fisheries inspectors.*

*When inspecting holds all safety precautions and dress requirements must be strictly adhered to. When entering the hold use the information from the hold dimensions as reference and the reported product in the hold, a rough comparison of expected volumes can be made. Should there be a notable difference in the assessed volume of product in a hold to that reported, it must be noted for further investigation should the vessel be granted permission to off-load.*

*Blast freezers should be inspected following the same approach as for hold inspections.*

*On-board larger carrier vessels the fish from different vessels are often stowed in specific locations and separated by nets. Where accessible the product and species may be ascertained from a visual inspection and sample weights of cartons or processed and packaged fish product taken to ensure that package weights are not under-reported or wrongly identified.*

*On-board purse-seiners the volume of fish held in refrigerated brine can be estimated from visual estimates and known volumes of each well.*

*Inspector must appreciate that a hold inspection cannot always yield detailed and accurate information, but gross discrepancies may be evident that can facilitate focusing monitoring effort during the off-loading process.*



**Inspection of the fish holds of a tuna longliner (Source Mozambique).**

**Action to be taken:**

Request the master to produce the logbooks including fishing, navigation, communication, processing, freezer and the engineering logbooks.

*Two members of the inspection team should accompany crewmembers to retrieve the logbooks when possible. This is to have corroborated evidence in case logbooks are thrown overboard or otherwise damaged or destroyed before inspection.*

*The engineering and the freezer logbooks can provide historical engine usage as well as refrigeration/processing logs, useful if IUU fishing is suspected. You can cross reference freezing events against catch events to verify the consistency between the two processes. The freezer logbook should contain pressure, temperature and electric consumption records. For every freezing event, find catch event in the logbook and record the information. For suspicious freezing events, request the master to explain.*

**Format and information to be recorded**

- Verify IOTC fishing logbook measures for all vessels (Resolution 01/02 and 12/03):
  - The fishing logbook is on-board at the time of the inspection,
  - An original recording of the fishing logbook is on-board for the last 12 months,
  - The logbook has been completed by set and is in date,
  - The logbook includes information on the vessel, the fishing trip, the gear configuration, the vessel operation and catch,
  - The fishing logbook is bound with consecutively numbered pages,
  - The catch is recorded in number & weight / species / set & form of processing,
  - The discard of tuna, tuna-like fish, sharks is recorded in the remarks.
- Verify IOTC fishing logbook measures for longliners (Resolution 12/03):
  - The fishing logbook contains the primary species: SBF, ALB, BET, YFT, SKJ, SWO, BUM, BLM, SFA, MLS,
- Verify IOTC fishing logbook measures for purse seiner (Resolution 12/03):
  - The fishing logbook contains the primary species: ALB, BET, YFT, SKJ,
  - The type of association is recorded (Free school or under FAD),
  - The deployment of FAD is recorded,
- Verify IOTC fishing logbook measures for gillnet vessel (Resolution 12/03):
  - The fishing logbook contains the primary species: SBF, ALB, BET, YFT, SKJ, LOT, FRI, KAW, COM, GUT,
- Verify IOTC fishing logbook measures for pole & line vessel (Resolution 12/03)
  - The fishing logbook contains the primary species: SBF, ALB, BET, YFT, SKJ, FRZ, KAW, COM, LOT.

*The inspection report form B on Compliance with IOTC Conservation and Management Measures provides the necessary fields to record the information related to the logbook. It allows the inspector to record the outcomes of the inspection of the fishing logbook.*

**Catch area and effort**

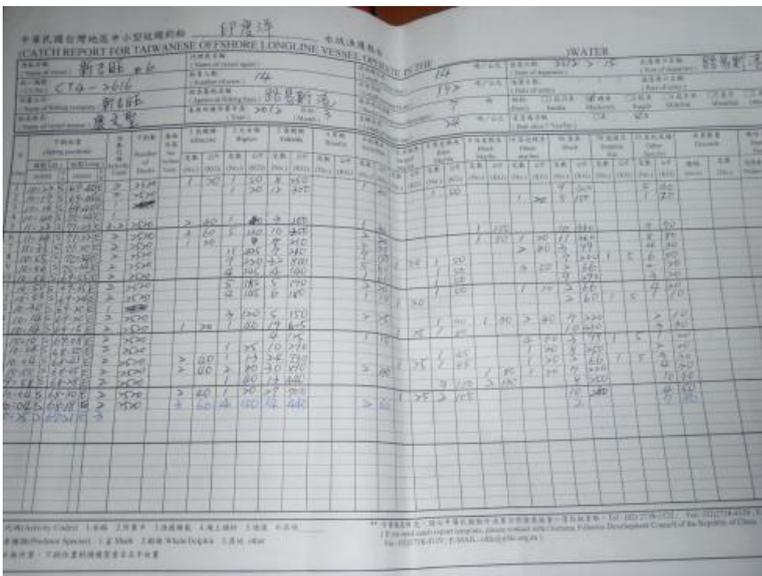
- Review the fishing and navigation logbooks and cross reference the actual areas of operation detailed in the fishing logbook to information provided in AREP and to the authorised areas for fishing:
  - Fishing logbook entry with position in coastal State EEZ must be supported by a fishing license issued by the coastal State (see step H);
  - Fishing logbook entry with position in the high seas must be supported by an authorisation to fish issued by the flag State (see step H);
  - Fishing logbook entry with position in the area of another RFMO, see step G,
- Where possible, review and verify information from electronic records that can include: on-board GPS plotter integrated with computer back-up (i.e. Maxsea), VMS records from flag State and or RFMOs, AIS, NAVTEX.

**Quantity of catch**

- Request the master to produce the fishing masters catch records of the species and the quantity captured during the fishing trip (live weight). Verify that the species and quantities declared correspond to what is recorded in the official fishing logbook;
- Compare those quantities with 1) the estimated quantity found in the holds of the vessel or 2) with the quantity offloaded (Step K) and the catch retained on-board (Step L),
- Any difference between the record of the fishing logbook and the catch, question the master on the reason of such difference.

The reason for catch difference between the fishing logbook and the catch found on-board could be related to under-reporting of catches in the EEZ of a coastal State due to commercial quota limit under a fishing agreement or illegal transshipment at sea of the catches.

All records are to be scrutinised to elicit inconsistencies. The master should be asked open questions as to any inconsistencies in the records and his answers recorded in the inspection report or the notebook. Documents should be photographed or photocopied to serve as evidence.



**Fishing logbook at the IOTC format.**



**Fishing logbook in a calendar format not matching IOTC requirements.**

**Box 39 | Example of possible infraction on fishing logbook**

- The vessel does not record or report their catches made in the IOTC area of competence in accordance with IOTC reporting requirements, or make false reports.

**0 Catch Document Schemes and trade information**

**33 and 34**

**Action to be taken:**

- Cross check the declared weight of specific species on-board with applicable catch document schemes: IOTC Bigeye Tuna Statistical or IOTC Bigeye Tuna Re-export Certificate;
- Verify that the weights specified on the catch documents must correlate with the catch present on-board and/or the off-loaded weights;
- Verify that the IOTC Bigeye Tuna Statistical Document is validated by a government official or other authorized individual or institution of the flag State of the vessel that harvested the tuna (Check IOTC database of institutions and persons authorized to validate IOTC statistical documents, [www.iotc.org](http://www.iotc.org), link [Validation of IOTC statistical documents](#)).

Bigeye tuna caught by purse seiners and pole and line (bait) vessels and destined principally for the canneries in the IOTC Area are not subject to this statistical document requirement. Note that Catch Documentation Schemes exist for ICCAT on big eye tuna and swordfish and for CCSBT for southern blue fin tuna.

**P Fishing gear**

**35 and 36**

**Action to be taken:**

- Review the information on vessel type and authorised fishing gear provided in AREP and conduct a detailed inspection of the fishing gear on-board. Verify that the gear and gear specification conform to the authorisations issued to the vessel (from flag State and/or coastal State if applicable).
- List all gear inspected and take detailed note of quantity and gear, specifications, type and materials [e.g. mesh, hook type etc].
- Inspect gear stowed in compartments and stores, noting:
  - If spare new gear correspond to authorised gear,
  - Possible recently used illegal gear with evidence of recent use. [*Note the smell and any fungal growth that occurs when gear is stowed away wet*].
- Verify IOTC measures on marking of fishing gear for longliners (Resolution 01/02):
  - While inspecting the gear on-board longliner, verify if the fishing gear is marked at day with flag and radar reflector, the fishing gear is marked at night with light buoys, and the buoys are marked with letter/number of vessel identification.
- Verify IOTC measures on marking of FADs for purse seiner (Resolution 01/02):
  - If the vessel carries FADs, request the master to inspect them and verify if they are marked with letter/number of vessel identification.
- Verify IOTC measures on driftnet – all vessels (Resolution 12/12):
  - If you find large-scale driftnets on-board the vessel, ask the master if he has been using the nets on the high seas. Record his answer in the inspection report or the note book;
  - Verify if the gear is stowed in a manner that he cannot be readily used for fishing;
  - In the fishing logbook, verify if there are fishing positions and catches in the high seas.

*The inspection report form B on Compliance with IOTC Conservation and Management Measures provides the necessary fields to record the information related to the fishing gear. It allows the inspector to record the outcomes of the inspection of the fishing gear. In preparation for undertaking the inspection a detailed list of the expected gear should be prepared based on the information provided in the AREP.*

**Box 40 | Example of possible infraction on fishing gear**

- The buoys are not marked with letter/number of vessel identification (LL, GN),
- Fish aggregating device is not marked with the letter/number of vessel identification (PS),
- The vessel uses prohibited fishing gear (e.g. large scale driftnet on the high seas).

**Q Protected and endangered species**

**Inspection report B**

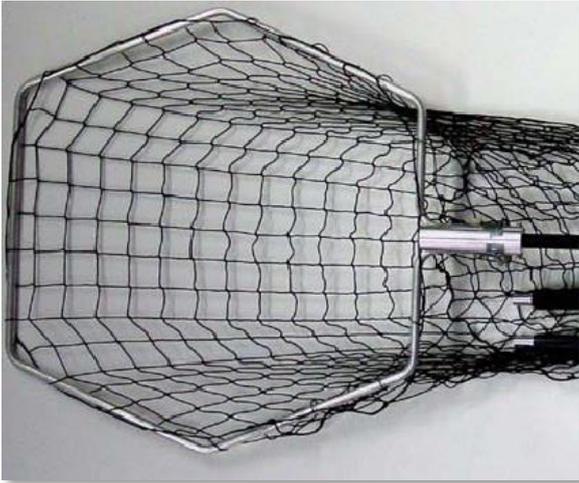
**Action to be taken:**

**Marine turtle**

- Verify IOTC measures for marine Turtles (Resolution 12/04):
  - Ask to the master if he has captured marine turtles and check to see if there are any instances of marine turtle catch recorded in the fishing logbook. Request the master to produce the line cutters, de-hookers and dip-nets used to release marine turtles.



**Long handled device (from top): J-Style de-hooker, line cutter and de-hooker for ingested hooks (Source NOAA).**



**Example of dip-net used to hoist the turtle on board (Source NOAA).**

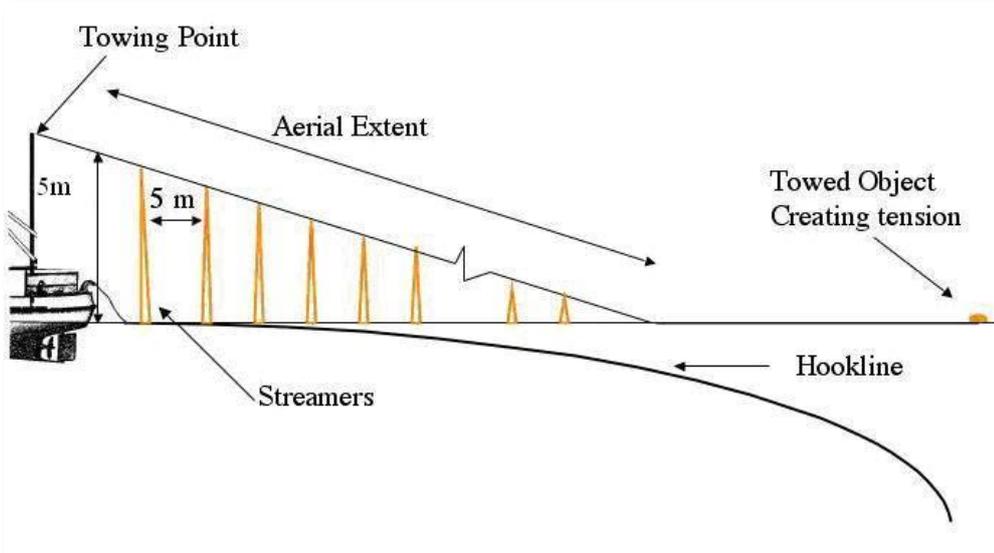


**Hoisting of a turtle in a dip net on-board a tuna longliner (Source NOAA).**

In most of the case you will find long handled de-hooker and line cutter on board large scale tuna vessels. Short handled de-hooker and line cutter are most commonly found on-board smaller vessels.

### Seabird

- Verify IOTC measures for seabird (Resolution 10/06):
  - Ask to the master if he has caught seabirds and what are the two mitigation measures he is using (Night setting with minimum deck lighting, Bird-scaring lines - Tori Lines, Weighted branch lines).
  - Verify if the vessel has on-board a “tori” bird scaring line. Note construction, streamer length and material and spacing and total length. Check to see if a towed object is used. Note if it has been recently used. Cross check with logbook the setting times to note if the vessel is setting during the day or night.
  - Verify if weights are attached to the branch lines and if so the distance from the hook and approximate weight.



Refer to the table 1 and annex 1 of the resolution 12/06 for full specification of seabird mitigation measures.

**Diagram of bird-scaring Streamer Line.**

### Sharks fins

- Verify IOTC measures for sharks (Resolution 05/05):
  - Request the master to produce the total weight of sharks and weight of fins. Cross reference with the quantities recorded in the fishing logbook. Search for shark fins and, if so, determine total weigh and compare to offloaded weight of shark trunks to see if the fins weight does not exceed 5% of the total trunk weights.



**Packed shark fins found on-board a tuna longliner.**



Shark fins can be hidden in any compartments of the vessel: fish holds, crew cabins, engine room, etc. Shark fins can be stored in sacks in the hold and/or dried on deck and then dry stored. Search in area of the vessel where the environment is dry and hot, it is where shark fins are generally dried (engine room and chimney of the vessel).

**Shark fins stored in a wooden box on the upper deck of a tuna longliner.**

### **Thresher sharks**

- Verify IOTC measures for thresher sharks (Resolution 12/09):
  - Ask the master if he has caught thresher sharks and if they have been retained on-board. While inspecting the fish holds, search for thresher sharks, trunk or fins, of the family *Alopiidae*, weight and record the quantity found on board. Take photographs using reference measurements.

*The inspection report form B on Compliance with IOTC Conservation and Management Measures provides the necessary fields to record the information related to protected and endangered species.*

*There are 3 species of thresher sharks: the common thresher shark, the bigeye thresher shark and the pelagic thresher shark. Consult the IOTC guide for identification of sharks to identify which species you have found on-board.*



**Caudal fin of thresher shark found on-board a tuna longliner.**



**Thresher sharks caught by a tuna longliner.**

#### **Box 41 | Example of possible infraction on protected and endangered species**

- The vessel does not carry on-board line cutters and/or de-hookers and/or dip-nets,
- The shark fins weight exceed 5% of the total sharks trunk weights,
- There are thresher sharks on-board the vessel.

**R Report completion**

37, 38 and 39

**Action to be taken:**

Once the various elements of the inspection have been completed, the chief inspector is to convene a meeting of the inspection team to reconcile the findings of the inspection. The most important aspect of this process is to decide whether any infringement of the national fisheries legislation or regulations or of the IOTC resolutions has been discovered.

At the completion of the inspection a preliminary copy of the recorded information should be provided to the vessel's master.

Should there be any discrepancies or apparent infringements these must be clearly listed and cross referenced to both the relevant national and international legal instruments and IOTC Resolutions. Comments and reaction by the vessel master/crew members must be noted.

The chief inspector is to decide whether a suspected violation has been committed. If so, the master is to be read his rights under national law before any questions are asked. It is essential that the master acknowledges that he understands these rights. Use language cards if necessary. This is to be recorded in the inspection report or in the notebook.

Having read the master his rights, the chief inspector is to explain the nature of the violation and request an explanation. Both the questions and the responses are to be recorded in the inspection report or the notebook for future use.

At this stage, the port State has two options available:

- **No offence has been detected, the port State can authorise the vessel to offload the catch and use port facilities.** The chief inspector can inform its national authorities to grant offloading authorisation to the fishing vessel and make the necessary arrangement with the master to monitor the offloading of the catch,
- **An offence has been detected, the chief inspector directs the master not to offload catch or use port facilities** until further advice is received from national authorities. The Chief inspector informs the national authorities who confirm denial of offloading of the catch and use of port facilities. The port State may take further actions against the vessel, owner and master depending of the nature of the offence (arrest, confiscation of catch, gear, order to leave port, etc...). The reaction and behaviour of the master and the crew to this decision should be noted – e.g., co-operative, aggressive, hostile.

Where action is taken to prevent off-loading or the taking of evidence or confiscation of catch and /or gear these must be recorded in detail.

**S Signatures of the inspection report**

39, 41 and 42

**Action to be taken:**

The chief inspector and the master have to sign the inspection report.

Ask the master if there are any complaints at the way in which the inspection was carried out. Any complaint must be written out, signed, dated and stamped with the ship's stamp. Should the master refuse to sign, for any reason, a witness to this must be obtained.

In either case, yes or no, record that the master was asked this question. Thank the master for his co-operation and depart of the vessel.

### 6.3. Monitoring offloading and transshipments in port

Two processes fundamental to the application of the IOTC PSMR are:

- Analysis of the information from the vessels advanced request to enter port (AREP) **and the decision to deny or allow entry into the port,**
- When granted permission to enter port, the port State is responsible for the **inspection of the vessel and monitoring of landing or transhipment** of the catch on-board together with the completion of the port inspection report.

The result of the analysis of the AREP determine whether or not the vessel may enter port and if granted permission to enter port sets up the process for inspection of the catch being offloaded. This is important to validate documented catch and the species composition reported in the vessels logbook(s) and transhipment declarations.

Inspections of fish wells on a purse seiner or refrigerated holds on longline and carrier vessels are difficult to undertake for practical reasons, and highly unlikely to provide accurate information of the weight and species of the fish on-board. Therefore, monitoring the whole offloading or transhipment process is an essential component of the “inspection teams” tasks when implementing port State measures. After the vessel has been offloaded, the holds and storage wells should be inspected to record any remaining fish on-board.

Knowledge of the products and procedures used to offload or tranship the catch from different types of vessels and methods to sample and verify the weight and species composition are important for inspectors to plan ahead and successfully monitor these operations in port.

Subsequently, all the information from the offloading operation is captured in the inspection report (fields 30 and 31) and compared to the information reported in the advanced request to enter port. If, at this stage, there is any evidence that the vessel has engaged in IUU fishing it will be denied further port services.

Essentially, offloading to a shore facility or transhipment to another vessel requires similar monitoring procedures. The main difference is that discharge to a shore facility is likely to provide further opportunity to record the species composition and weight of the catch offloaded. Monitoring transhipment provides less opportunity to weigh fish but does provide means to verify the numbers of fish and identify species thereby highlighting any substantial level of misreporting in logbooks or transhipment declarations.

Offloading can take several hours to more than a day. It is, therefore, a process that will optimally be monitored by a team of inspectors working together in shifts to observe the entire process.



**Figure 34: Cartons and products in a vessel hold.**

#### 6.3.1. Preparation and planning offloading operations

Advanced planning and preparation of documents and equipment are an essential component for successful port State inspections. A detailed check of equipment and documentation should be prepared ahead of time, taking into consideration the vessel type, catch and conditions in the port.

Due regard must be given to the terms of the IOTC PSMR (Paragraph 11.2 (f)), that request CPC when conducting inspections “to make all possible efforts to avoid unduly delaying the vessel and to minimize interference and inconvenience that including any unnecessary presence of inspectors on board, and to avoid action that would adversely affect the quality of the fish on board.”

However, inspectors should not be intimidated by this requirement or subject to pressure from the vessel operators, especially when inspecting vessels categorised as “high risk” from the analysis of the AREP or where inspection of the catch documentation aroused suspicion of possible misreporting.

**Box 42 | Monitoring of landing and transshipment - preparation checklist**

**1. Documentation**

- Cargo manifest / hold plan / well plan
- Catch and product logs

**2. Equipment**

- Clipboard
- Scales
  - Platform
  - Hanging spring scale
- Measuring tape
- Callipers
- Torch
- Camera

**3. Protective Clothing**

- Eye protection
- Hard hat
- Reflective jacket
- Safety boots
- Gloves
- Freezer suit

Working forms for monitoring the offloading include:

- Detailed plan of the vessel and layout of fish wells, freezer holds and working decks;
- Details of species, product and weights to be offloaded;
- Summary of product to be offloaded;
- Destination (factory / cold store / carrier vessel) of product to be offloaded,
- Template of inspection report.

The advanced request to enter port (AREP) requires the vessel to provide information on quantities and species composition of the fish onboard. In addition, after entering port and prior to the vessel commencing with offloading inspectors must be given a copy of the manifest of product to be offloaded. This will also be required by the port authorities and stevedores manning the operation.

To further assist with monitoring, the inspectors should obtain all documentation related to the catch recorded on-board that includes inter alia:

- Vessel catch and refrigeration logbooks from longline vessels;
- Well Loading Form from purse seiner,
- Fish Carrier-Cargo Manifest Form.

Details on the species, product and quantities in freezer holds and fish wells will assist in planning sampling strategies during the operation.

**Monitoring Stations**

Several key positions can be manned to monitor offloading, these are;

- In the fish hold where strings of fish are made up or cargo nets are packed;
- On the deck on a longliner where fish are hoisted out of the hold or where fish are emptied from storage wells on a purse seiner,
- Onshore where the fish are unloaded and packed into cold storage facilities.

Monitoring positions need to provide a clear view of the product being offloaded and facilitate counting the number of units and determine weights and species composition. For both transshipment and offloading to shore, inspectors need to station themselves where they can visually monitor the fish being hoisted out of the hold and for the maximum period that hoists are visible in the air.

The product being offloaded to a shore facility is often weighed and repacked. Monitoring this area, where the hoist is put down and fish are emptied out of the cargo net provides a controlled environment where the fish can be counted, identified and weighed.

### Information and recording

Offloading forms will be designed to capture information continuously throughout the offloading process. Examples of these are provided in (appendix XI). At the completion of the offloading the figures have to be recorded in the port inspection report (fields 30 and 31). A description of the information to be recorded is summarised in the table 12.

<b>Table 12 - IOTC port inspection report - Fields 30 and 31</b>	
<b>Field Number: 30</b>	<b>Evaluation of offloaded catch (quantities)</b>
Species	The fish offloaded will have to be monitored and where necessary sampled to verify the number and weight of each species. The species must be recorded using the ASFIS 3-alpha codes (known as FAO species codes).  For example: <b>YFT</b> for yellowfin tuna ( <i>Thunnus albacares</i> )
Product form	The product form of each species offloaded must be recorded, either processed or not (e.g., skinless, boneless fillets frozen; head off, split salted; whole refrigerated in seawater). The processing codes for different species are provided in the species identification guide.
Catch Area (s)	Inspectors must obtain from the vessel records of the relevant geographical/statistical area where the catch being offloaded was taken. Reference the statistical codes or geographical coordinated used to report catch in the logbook.
Quantities declared	The vessel has to declare the quantities of fish (by species) that it has onboard and the quantities that will be offloaded. This information must be provided to the inspector prior to any product being offloaded and must be entered onto the inspection report.
Quantities offloaded	The inspectors must report the quantity (by species) that they record being offloaded.
Difference between quantity declared and quantity offloaded	The inspectors must determine the difference between the declared quantities to be offloaded and the quantities that they record being offloaded. <i>For example:</i> <i>YFT declared to be offloaded: 65 tonnes.</i> <i>YFT recorded by the inspectors offloaded: 80 tonnes</i> <i>Difference is (80 - 65) equals 15 tonnes more than the declared quantities offloaded.</i>
<b>Field Number: 31</b>	<b>Catch retained on-board (quantities)</b>
Species	The fish retained onboard after offloading must be listed by weight for each species. The species must be recorded using the ASFIS 3-alpha codes.  For example: <b>OIL</b> for Oilfish ( <i>Ruvettus prestiosus</i> )
Product form	The product form of species retained must be recorded, either processed or not ( <i>example WHO for whole frozen fish. GGT for fish with gill, guts and tail removed.</i> Other products could be skinless, boneless fillets frozen; head off, split salted; whole refrigerated in seawater). The processing codes for different species are provided in the species identification guide.
Catch Area (s)	Inspectors must obtain the relevant geographical/statistical area where the catch retained onboard was taken. Reference the statistical codes or geographical coordinates used to report catch statistics.
Quantities declared	The vessel must declare the quantities of fish (by species) that it will retain on-board.
Quantities offloaded	The inspectors must record the total quantities that they monitored being offloaded. Means of estimation must be kept to assist in verification of figures calculated. The inspectors must also report the quantity (by species) that they record retained on-board. This will require a physical inspection of the hold.
Difference between quantity declared and quantity offloaded	The difference between the declared quantities offloaded and retained and the quantities that are monitored being offloaded together with the quantities recorded remaining in the hold. These differences must be recorded.

### 6.3.2. Offloading from tuna longline vessels to shore or transhipping to a carrier vessel

#### Introduction

Longline vessels and smaller transport vessel with fish or processed products often tranship all or part of their catch in port to larger carrier vessels. The procedures and preparation for monitoring transhipments from one vessel to another is essentially the same as for offloading to a factory or cold store ashore.

Large Scale Tuna Longline Vessels, (LSTLV) target larger tuna and swordfish. These fish are processed immediately after being caught and individually deep frozen. Prior to freezing a short rope loop is threaded through the tail to facilitate stinging frozen fish together for offloading in its frozen state.

The fish holds on longliners are packed as the fish are caught and a single holds is likely to contain a mix of fish species and a range of different sizes. This will be reflected during the offloading or transhipment.

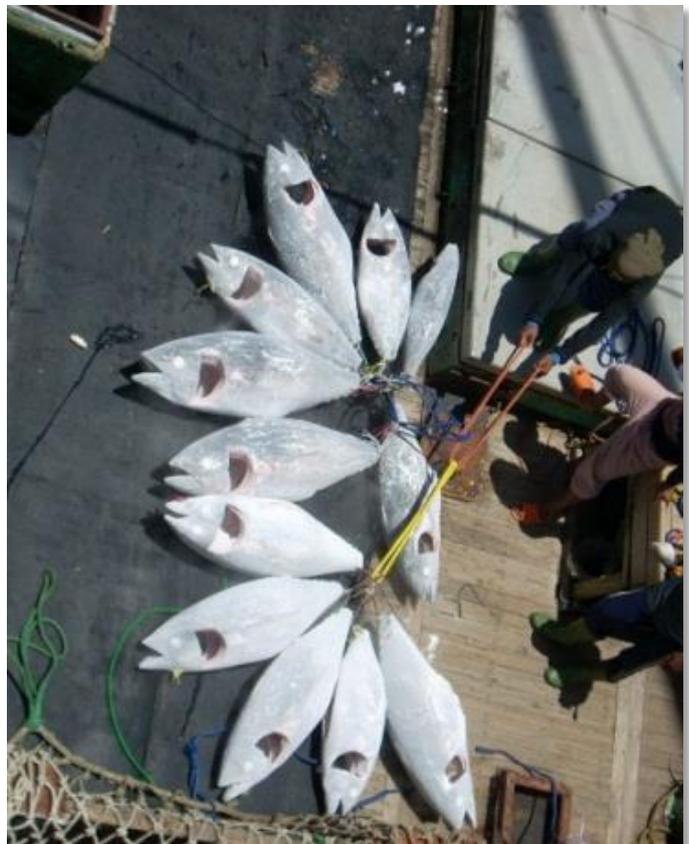


**Figure 35: Direct offloading of tunas.**

Inspectors must request a manifest of the number and species of fish in the hold. Analysis of the number of fish and total weight per species will provide an estimate of the average sizes of the fish. Monitoring strings of individual fish provides the opportunity to count the number of fish being offloaded and species or groups of like species and products can be identified.

Depending on the size of the longline vessel and on the product there are three main methods to offload:

1. Direct transfer: when fish in “strings of individual fish units” are taken from the holds of the fishing vessel using dockside or carrier crane (figure 35).
2. Indirect transfer: where “strings of individual fish units” are first hoisted from fish hold using the fishing vessels gear and then combined into a larger string to be hoisted off the vessel using a crane ashore or on the carrier vessel (figure 36).
3. Indirect method: use a cargo net which is packed on-board the fishing vessel (figure 37).



**Figure 36: Small batches of frozen tunas.**

Vessels with large hatch openings are most likely to hoist directly from their hold to the quayside or a carrier vessel. This is a rapid process that does not provide much opportunity to monitor the number and weight or species of the fish being offloaded.

On vessels where hatches are too small for a direct hoist, fish are first hoisted in small batches onto the deck using the vessels own equipment. This provides a good opportunity to count the number of fish and record species (figure 36). A number of these batches are then combined into a large sting for transfer to shore using the dockside crane or transhipment to a carrier vessel.



**Figure 37: Cargo net.**

Longline vessels may split their catch for offloading. Larger tuna and processed swordfish and by catch such as marlin and shark trunks are offloaded ashore or transhipped in strings of individual units to a carrier vessel. Following this, the small tuna and by catch species are offloaded using a cargo net.

It is more difficult to count and identify fish accurately in the cargo net during a hoist. The inspectors will need to monitor positions either where the net is packed on the fishing vessel, keeping in mind that this may be in the hold of the vessel, or monitor the cargo net being set down ashore, where it can be weighed and unpacked from the net.

Transhipment operations provide fewer opportunities to count and identify species. Inspectors monitoring transhipments must select a position where they can observe the fish being hoisted out of the fishing vessel hold and where the strings of fish are visible in the air for the maximum amount of time. In the time the fish are visible, an accurate estimate of the number of fish as well as the species composition should be determined. Due to the processing method and fish being partially obscured in the hoist, it may not be possible to accurately identify species. In these instances an aggregation of two or more species may be recorded. (for example; yellow fin and bigeye combined).

The larger LSTLVs with high value sashimi grade fish will prefer a direct transfer of fish from the hold of the fishing vessel to the hold of the carrier vessel. This can be a rapid process with individual strings being visible for less than a minute and often the fish are obscured by a mist that surrounds the hoist (figure 38).

Longline vessels offloading in port may also split their catch, with higher valued and larger fish being transhipped in strings to a carrier and following the transhipment the smaller by catch species are offloaded to shore in cargo nets.

Due to practical difficulties to count and identify fish in a cargo net hoist, inspector must monitor from a position either where the cargo net is loaded on-board or offloaded ashore.



**Figure 38: Direct offloading.**



**Figure 39:** Fish being aggregated on the deck of small longline vessel and a combined hoist being transferred to a carrier vessel.

### **Sampling procedures to determine the weight of the fish offloaded or transhipped**

Three basic methods can be used to estimate the weight of fish being offloaded or transhipped from a vessel:

1. Use an independent means of weighing that can include a hook-scale attached to the crane hook to record the total weight of a hoist or have a platform scale or drive-on scale ashore where the entire catch offloaded or transhipped is weighed;
2. Randomly select and weigh samples of individual fish from different species and size categories and raise the number of units counted by the average weights,
3. Use the declared weights and numbers provided by the vessels to calculate an average unit weight per species and raise the number of units counted by these average weights.

The independent assessment and level of accuracy when determining offloaded or transhipped weights will be dependent on the method used. Weights recorded independently by the inspector using a hook scale or weighing selected samples of the fish will be preferable to using only information provided by the vessel. However, there are clear advantages and disadvantages as well as practical implications for using each of these methods.

A hook scale works well in stable condition in port and most carrier vessels use these for their own records. A disadvantage is that if species are mixed then the average weight for a particular species cannot be calculated. However, it is often possible to get accurate weights for like species and in the event of a single species strings an average weight for that species will be obtained. With cooperation from the vessel individual fish can also be weighed on a hook scale.

Sampling individual fish randomly on a species level has the advantage of providing an average size for each of the species. Implemented randomly throughout the offloading or transhipment process, it can also be adapted to accommodate variability in different size classes of a species.

The main disadvantage of this method is the difficulty of weighing large fish (over 50kg) that are also hazardous to handle in their frozen condition. Due regard must also be given to the deterioration of a high value product exposed to high temperatures for any prolonged time.



**Figure 40:** Hook scale.

Using the number and weights declared by the fishing vessel has the least practical implications for handling fish but does not provide a totally independent estimate of weights offloaded or transhipped. It will provide a useful guide to inspectors and together with accurate counts of units transhipped it will highlight any significant discrepancies in declared quantities.



**The string of fish is hoisted out of the fishing vessel hold.**

**The string of fish is positioned on the cargo net.**



**The cargo net is hoisted out of the fishing vessel to the carrier vessel.**



**Figure 41: Photo series depicting an in-port transhipment of tunas.**

**Box 43 | Monitoring of landing or transshipment – using conversion factor**

<i>Summary of observed product offloaded</i>				
<i>Common Name</i>	<i>Scientific name</i>	<i>Average weight (kg)</i>	<i>Total unit count</i>	<i>Calculated weight offloaded</i>
<i>Albacore</i>	<i>Thunnus alalunga</i>	23.62	560	13227
<i>Big eye tuna</i>	<i>Thunnus obesus</i>	55.03	1100	60533
<i>Swordfish</i>	<i>Xiphias gladius</i>	51.00	55	2805
<i>Blue marlin</i>	<i>Makaira nigricans</i>	87.56	30	2626
<i>Sailfish</i>	<i>Istiophorus albicans</i>	13.42	10	134
<i>Blue shark</i>	<i>Prionace glauca</i>	35.00	150	5250
<i>Mako sharks</i>	<i>Isurus spp</i>	17.67	75	1325
<i>Totals offloaded</i>			1980	85901

Total weight of product offloaded (per species); equals average unit weight multiplied by total unit count.

Albacore; 23.62 X 560 = 13227 kg (13.227 tonnes)

The product weights can then be raised using the conversion factor (raising factor) to determine the live weight caught. These weights provide a cross-referenced to the logbook records of live catch weights recorded.

<i>Common Name</i>	<i>Total weight offloaded</i>	<i>Processing Code</i>	<i>Raising Factor</i>	<i>Calculated live weight</i>
<i>Albacore</i>	13227	GGT	1.09	14418
<i>Big eye tuna</i>	60533	GGT	1.09	65981
<i>Swordfish</i>	2805	HDD	1.33	3731
<i>Blue marlin</i>	2626	TAL	1.43	3756
<i>Sailfish</i>	134	TAL	1.43	192
<i>Blue shark</i>	5250	HDD	1.33	6983
<i>Mako sharks</i>	1325	HDD	1.43	1895
<i>Totals</i>	85901			96955

Live weight equals product weight multiplied by the raising factor for the processing code.

Albacore tuna processing code GGT, raising factor 1.09

Recorded albacore product weight offloaded 60533 kg

Live weight: 13227 X 1.09 = 14418 kg (14.42 tonnes)

**Procedures for inspection and monitoring offloading from tuna longliner**

<b>Arrival on the vessel</b>	Introduction and briefing with Master / Fishing Master / Bosun by the inspection team leader and presentation of inspectors' identifications and mandate.
<b>Request for documentation</b>	Inspectors monitoring offloading must request: <ul style="list-style-type: none"> <li>• Confirmation of quantities to be offloaded or transhipped as reported in the AREP,</li> <li>• Fish hold plan showing dimension,</li> <li>• Loading plan showing product location, quantities and species in hold.</li> </ul>
<b>Request details of offloading plan and procedure</b>	Request details of method and procedures that will be followed when offloading out of the hold to shore or during transhipment. <ul style="list-style-type: none"> <li>• Note if fish will be discharged in strings or using a cargo net,</li> <li>• Note if selected products and species will be discharged in different sequences. <i>Example; large tuna in strings, transhipped to a carrier vessel. By-catch offloaded to shore in cargo nets,</i></li> <li>• Discuss option of like-species being offloaded together in single hoists to facilitate recording species composition of the catch.</li> </ul>
<b>Discuss planned sampling of catch for verifying weight and species composition</b>	Discuss need to record sample weights and identify species. Determine where inspection points will be set up and where sampling can be undertaken to cause least disruption to offloading operations. Ask if a hook scale will be used and request its use if available
<b>Inspection of hold before offloading operation</b>	Undertake an advanced inspection of hold and compartments where fish are stored to record to what capacity they are filled and take photographs. At this stage note and record processing state and species that can be identified.
<b>Setup monitoring position(s)</b>	Select a position where the fish being hoisted out of the hold can be observed; counted and species identified. Consideration should be given to manning more than one position to observe offloading process. When selecting positions note health & safety requirements with respect to fish falling from hoists or collapse of the crane. (These often occur) Possible positions; <ul style="list-style-type: none"> <li>• On the deck of the fishing vessel below the shelter deck with full view of the hatch;</li> <li>• On the deck of the carrier vessel where fish can be observed coming out of the longline vessels hold and being lowered into the carriers vessels hold;</li> <li>• On the quayside where the deck is visible and where hoists can be observed in the air and where they will be set down,</li> <li>• In the factory ashore where hoists are set down.</li> </ul> Note: positions should allow opportunity to read hook scale if attached.
<b>Sampling for average weight</b>	<u>Hook Scale attached:</u> record the weight of each hoist. <u>No hook scale attached:</u> at random intervals request a single or number of fish from a hoist to weigh. <ul style="list-style-type: none"> <li>• Random number tables can be computer generated to facilitate these selections;</li> <li>• Weight using a hanging or platform scale depending on what's available and the size of the fish,</li> <li>• Request use of the hook scale for large fish.</li> </ul>
<b>Sampling for species composition</b>	Larger tuna that have been processed in a similar manner may be difficult to identify when together in a hoist. These can be recorded as an aggregation for the different species. <i>Example. YFT and BET mixed.</i> To determine the ratio of the two species request randomly selected hoist to be lowered to the deck and sample for the different species from closer examination of the stomach cavity. The ratio of the species mix can be raised to the total unit counts, however this will only provide a rough indication.

<b>Monitoring Hoists</b>	<p>Using offloading or transshipment forms, record details of each hoist.</p> <ul style="list-style-type: none"> <li>• Record the date / time of first hoist;</li> <li>• Record for each hoist; the number of fish, species and product;</li> <li>• Record hook scale weight (if attached);</li> <li>• Number each hoist consecutively from the first to the last;</li> <li>• Take photographs of hoists where species are not clearly identified;</li> <li>• Record start and end time of interruptions in the offloading due to meal breaks or technical difficulties,</li> <li>• Record the date / time of the last hoist.</li> </ul>
<b>End of offloading and transshipment operations</b>	<p>Summarise quantities recorded offloaded for:</p> <ul style="list-style-type: none"> <li>• Species;</li> <li>• Processing code;</li> <li>• Apply the raising factor for different processing code,</li> <li>• Request copy of the offloading declaration-form.</li> </ul> <p>Compare the recorded quantities with those declared by the vessel and note difference.</p>
<b>Hold inspection</b>	<p>Request a vessel officer to accompany inspector for an inspection of the hold after offloading operations.</p> <p>Note:</p> <ul style="list-style-type: none"> <li>• hold divisions,</li> <li>• Freezer compartments on level of fishing deck.</li> </ul> <p>Record number, species and weight of fish remaining in the hold.</p> <p>Record how estimates of remaining fish are determined:</p> <ul style="list-style-type: none"> <li>• Visual count,</li> <li>• Fish weighed,</li> <li>• Volume of hold calculated and compared to volume of remaining fish.</li> </ul> <p>Photograph empty hold or remaining fish in hold.</p> <p>Request a declaration from the vessel of the quantity of fish remaining in the hold.</p> <p>Record difference between recorded and declared quantities</p>
<b>Reconciliation</b>	Complete inspection report fields 30 and 31
<b>Debriefing with vessel master / fishing master</b>	Debrief responsible persons on-board and provide copies of recorded quantities monitored, allowing their comments and signatures to be appended.

### 6.3.3. Offloading from purse seine vessels

#### Introduction

Fish caught on purse seine vessels are unlikely to be processed and the main target species and commercial valued by-catch are usually brine frozen in their whole state. At the time of brailing fish are often sorted into size and species classes for brine freezing to meet the market or factory requirements. It is therefore likely that juvenile yellowfin, bigeye and longfin (less than 10kg) will be mixed together with skipjack tuna of the same size. Larger yellowfin tuna and bigeye tuna may be separated and frozen or both species of similar size frozen together.



**Figure 42: Inspection of a fish hold on a purse seiner.**

On industrialized purse seiners, the tunas are preserved in wells of 20 to 40 metric tonnes each, (total 800 to 2 000 metric tonnes) with brine freezing at -20 °C. In smaller artisanal purse seiners, tuna are generally kept in iced seawater.

Prior to offloading, inspectors must request a “well loading plan” with the details of the catch in each well. This will assist in planning their sampling of the fish as wells are emptied.

The placement of the catch in the storage wells below deck should correspond to specific well numbers. Note each well has a designated number preceded with the letter S or P depending on the location on the starboard or port side. Example “P6” would be well No. 6 on the port side.

The recording of the well loading sequence by the inspectors is important for identifying fish species and sizes while offloading or transshipping. The inspector should consult both the fishing master and the chief engineer to obtain this information before they start the operations.

### **Monitoring positions**

The discharge process on a purse seine entails emptying storage wells onto a conveyer that moves the fish to a cargo net to be hoisted ashore or over to a carrier vessel. The fish are often resorted into their species and weight categories at this stage (figure 42).

To record the species and weight being discharged inspectors must position themselves in a location where they can observe the fish being discharged from the fish wells or being loaded into cargo nets for hoisting off the vessel (figure 43).

The monitoring positions must provide a clear view of the fish and allow the following information to be recorded:

- Measuring lengths (figure 43),
- Subsampling fish to determine an average unit weight.



**Figure 43: Monitoring tuna offloading on a purse seiner.**

### **Sampling procedures to determine average weigh of the fish**

An independent verification of the weigh and species composition of the catch offloaded or transhipped is one of the main objectives of the inspection team. Several processes can be followed to obtain these objectives:

- Estimating volume of fish in cubic meters in the fish wells;
- Counting the number of fish offloaded and raising this by an average fish weight,
- Recording the weight of each hoist.

The well plan should provide details of the volume of each well and the well loading plan should also give details of the species and size class of fish in each well. A visual estimation of the level of fish can provide a rough estimation of the weight of fish in the well.

Fish emptied out of a well normally pass on a conveyor belt to where they are packed into a cargo net, (figure 43) for hoisting ashore or over to a receiving vessel. The number of fish can be monitored by either counting all the fish as they pass on the belt for the entire offloading period or estimating the offloading rate (i.e. number per minute by counting all the fish for a set time and multiplying this by the total time that it takes to offload the well.

To obtain an average weigh of the fish from a well, select every nth fish off the belt, record the individual weights using a spring or platform scale (the length of the fish can also be measured at this stage). This process should be repeated several times, especially if there is a noticeable change in size.

Calculate the total weight of the sample by adding all the weights of the fish sampled from the well. The total weight is then divide by the number of fish sampled to obtain an average weigh per fish for that specific well.

**Box 44 | Monitoring of landing and transhipment – calculation of total weight**

**1. Calculation for total number of fish in a well**

Sample count: Forty-five (45) fish counted per minute of belt time. Total belt running time; 15 minutes.

Total number of fish in the well equals; number of fish per minute multiplied by the total belt time to offload a well.

$$\text{Number of fish: } 45 \times 15 = \underline{675 \text{ fish}}$$

**2. Sample and calculation of average weight per fish**

Sample No. (individual fish)	Weight (kilograms)
1	5.6
2	4.8
3	6
4	5.8
5	4.7
Total weight	26.9 kg
No. fish sampled	5
AVG Wt.	Total Wt. / No. fish)
	(26.9 / 5) = <u>5.38 kg</u>

**3. Total weight of fish in the well equals; Total number of fish multiplied by the average fish weight.**

$$\text{In this example: } \underline{675 \times 5.38 = 3631.5 \text{ kg (3.63 tonnes)}}$$

Purse seine operators can only accurately record their total catch at the time of offloading and may also obtain these figures by recording the weighed of each hoist using a hook-scale or a platform scale when the fish are offloaded into the factory.

**Determining the species composition from visual subsampling fish on the conveyor**

The species composition being offloaded or transhipped needs to be verify to crosscheck with the vessels reported catch. Ideally the fish can be separated into the different species categories before being offloaded and the weight of each species recorded as they are hoisted off the vessel. Alternatively, sub-samples of the fish being offloaded must be taken to estimate the ratio of the different the species. This can be done by recording the species for a predetermined time as the fish pass on the conveyor belt or taking random samples of fixed number of fish at regular intervals. This ratio can is then raised to the total time the belt is in operation to empty the well or applied to the total recorded number of fish offloaded.

Otherwise record the species composition for a single hoist and raise the ratio with the number of hoists to empty the well. To improve accuracy the process should be repeated as often as possible.

Other positions to monitor the offloading would be onshore, recording the number of hoists and estimated weight per hoist to calculate the total tonnage offloaded.

**Box 45 | Determine species composition**

For example species observed in a predetermined time:

Species recorded	Sample time	No. counted per spp.	
Start Obs time	10:30	SKJ	45
End Obs time	10:35	YFT	3
Total Obs Time	5 minutes	BET	5
Total Belt time to fill net	15 min	ALB	12

Calculation: Ratio for observed time

Total No. per Spp equals

[Obs No. spp count multiplied by Total belt time] divided by [Obs time]

For example: Total No. SKJ. =  $[45 \times 15] / 5$   
= 135 SKJ

Species sampled	No. counted per spp.	Raised total No. / spp in well
SKJ	45	135
YFT	3	9
BET	5	15
ALB	12	36
<i>Total (check)</i>	<i>65</i>	<i>195</i>

**Procedures for inspection and monitoring offloading from tuna purse seiner**

<b>Arrival on the vessel</b>	Introduction and briefing with Master / Fishing Master / Bosun by the Inspection team leader and presentation of inspectors' identifications and mandate.
<b>Request for documentation</b>	Inspectors monitoring offloading to request: <ul style="list-style-type: none"> <li>• Confirm quantities to be offloaded as reported in the AREP;</li> <li>• Request a "well loading plan";</li> <li>• Note dimensions and well volumes from the well plan;</li> <li>• Note species size and corresponding set numbers loaded in specific wells,</li> <li>• Note condition of fish in wells; brine frozen, chilled sea water.</li> </ul>
<b>Request details of offloading plan and procedure</b>	Request details of method and procedures that will be followed when offloading: <ul style="list-style-type: none"> <li>• Note sequence that wells will be offloaded;</li> <li>• Discuss option of "like-species" being offloaded together.</li> </ul>
<b>Discuss planned sampling of catch for verifying weight and species composition</b>	Discuss need for recording sample weights and species: <ul style="list-style-type: none"> <li>• Determine where these can be undertaken to cause least disruption to offloading operations;</li> <li>• Location where platform scales can be set up and space to measure fish,</li> <li>• Ask if a hook scale will be used and request one if available.</li> </ul>
<b>Inspection of hold before offloading operation</b>	Undertake an advanced inspection of fish wells and record: <ul style="list-style-type: none"> <li>• Estimated volume of fish in each well;</li> <li>• Fish size in each well, for example less than 10kg or more than 40kg,</li> <li>• If possible, note the species mix in a well and take photographs of each well before it is offloaded.</li> </ul>

<b>Setup monitoring position(s)</b>	<p>Setup monitoring position(s) from where the offloading or transshipment will be observed and where sampling will take place. Preferably more than one position should be manned. Select a position where the fish coming out of the well can be monitored.</p> <ul style="list-style-type: none"> <li>• This may be alongside the well as fish are raised from the well to a conveyor;</li> <li>• A position next to the conveyor from wells to loading point for hoisting ashore;</li> <li>• On the quayside where the deck is visible and where hoists can be observed in the air and are set down,</li> <li>• In the factory where hoists are set down.</li> </ul> <p>Consideration should be given to manning more than one position to observe offloading process. Position to sample fish and another to estimate total weight being offloaded. When selecting position note health &amp; safety requirements with respect to fish falling from hoists or collapse of the crane (These often occur).</p>
<b>Sampling for average weight</b>	<p>Depending on the sampling position set up, select fish at random intervals:</p> <ul style="list-style-type: none"> <li>• Random number tables can be computer generated to facilitate these selections;</li> <li>• Weight using a hanging or platform scale depending on what's available and the size of the fish,</li> <li>• Request use of the hook scale for large fish.</li> </ul> <p>The number of fish sampled will be determined by the variability in size (size range) and total estimated number of fish onboard. Smaller fish are often more uniform in size and a smaller subsample can be selected to provide an accurate average weight. For example; selecting 1 fish for every 100.</p>
<b>Sampling for species composition</b>	<p>This can be done by recording the species for a predetermined time as the fish move past or taking random samples of fixed numbers at regular intervals.</p> <p>Optimally if fish are passing on a conveyor belt, request they stop the belt for a short period and sample a length of the belt. Use this ratio raised to the total time that the belt is in operation to empty a well. (See example).</p> <p>Alternatively record the species composition for a single hoist and raise the ratio with the number of hoists to empty the well.</p> <p>To improve accuracy the process should be repeated as often as possible.</p>
<b>Monitoring Hoists</b>	<ul style="list-style-type: none"> <li>• Record the date / time of first hoist;</li> <li>• Record for each hoist; the number of fish, species and product;</li> <li>• Record hook scale weight (if attached);</li> <li>• Number each hoist consecutively from the first to the last;</li> <li>• Record start and end time of interruptions in the offloading due to meal breaks or technical difficulties,</li> <li>• Record the date / time of the last hoist.</li> </ul>
<b>End of offloading and transshipment operations</b>	<p>Summarise quantities recorded offloaded for:</p> <ul style="list-style-type: none"> <li>• Specie;</li> <li>• Processing code (should be 1 for purse seine vessels offloading whole fish);</li> <li>• Apply the raising factor for different processing cod;</li> </ul> <p>Request copy of the offloading declaration-form.</p> <p>Compare the recorded quantities to that declared by the vessel and note difference.</p>
<b>Well inspection</b>	<p>Request a vessel officer to accompany inspector for an inspection of the wells after offloading operations.</p> <p>Note well number and estimate quantities of any fish left in the well.</p> <p>Record how estimates of remaining fish are determined:</p> <ul style="list-style-type: none"> <li>• Visual count;</li> <li>• Fish weighed,</li> <li>• Volume of hold calculated and compared to volume of remaining fish.</li> </ul> <p>Photograph empty wells or remaining fish in hold.</p> <p>Request a declaration from the vessel of the quantity of fish remaining in the hold.</p> <p>Record difference between recorded and declared quantities.</p>
<b>Reconciliation</b>	<p>Complete inspection report fields 30 and 31</p>
<b>Debriefing with master / fishing master</b>	<p>Debrief responsible persons on-board and provide copies of recorded quantities monitored, allowing their comments and signatures to be appended.</p>

### 6.3.4. Offloading from carrier vessels

#### Introduction

The IOTC PSMR includes monitoring offloading or transshipments of carrier vessels, while in port. Carrier vessels can range in size from less than 100 tonnes to over 6000 tonnes that will offload more than 2000 tonnes of fish. Larger carrier vessels can have multiple holds with several deck layers in each hold. Smaller carrier vessels are often converted fishing vessels that enter port to tranship to a larger carrier vessel for transport to international markets.

The major difference between a carrier and fishing vessel is that all the fish on-board have been received from previous transshipments and in their advanced request to enter port (AREP field numbers 20 to 21), detailed information for each transhipment must be recorded.

The objectives in port inspections are to verify the information provided in the AREP and record these results of the inspection in the port inspection report (fields 28 and 29).

Details of the report requirements include:

*(Field 28 - Relevant transhipment authorization(s) that includes;*

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Donor vessel identifier, (for example IOTC No.)</li><li>• Validity of the transhipment authorisation</li></ul> | <ul style="list-style-type: none"><li>• Issuing authority from the vessels flag State</li></ul> |
|--|---|

*(Field 29 - Transhipment information concerning donor vessels) that includes)*

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Donor vessel name</li><li>• ID No.</li><li>• Produce form for each species</li><li>• Quantities</li></ul> | <ul style="list-style-type: none"><li>• Flag State</li><li>• Species transhipped</li><li>• Catch Area</li></ul> |
|---|---|

Essentially discharging fish from a carrier vessel is similar to offloading a fishing vessel with the exception that there are significantly larger quantities of fish. There is also the possibility of catch being offloaded from more than one hold simultaneously so that several positions will have to be manned at one time to monitor the entire operation. The entire operation will require a team of personal working shifts.

Several scenarios that may be encountered when offloading or transhipping between carrier vessels:

- Large multi-hold carrier vessels, offloading to shore that involve several thousand tonnes of fish;
- Small carrier vessel offloading from a single hold, less than 1000 tonnes,
- Carrier vessel transhipping to another carrier vessel.



**Figure 44: Fish from different donor vessels separated in the fish hold of a carrier vessel.**

Smaller carrier vessels transhipping will essentially follow the same monitoring procedure as a longline vessel. Monitoring the offloading of large multi-hold carrier vessels will be a more complex operation and require detailed planning.



The alternative method would be to use the declared weight and numbers and to calculate the average weights and apply this to the number of units on a string to get the weight of the hoist. This method is not an independent estimate of weights and relies on accurate unit counts to verify declared quantities being offloaded or transhipped.

**Box 46 | Calculation of unit trunk weight on a string using a hook scale**

- Record number of fish units,
- Record total weight of the string from the hook scale.

The average weight is equal to the total hook scale weight divided by the count of fish units on the string.

Example:

Number of units	= 34
Hook scale reading	= 1649 kg
Average unit weight	= 1649 / 34
	= <u>48.50 kg</u>

**Procedures for inspection and monitoring offloading from carrier vessel**

<b>Arrival on the carrier vessel</b>	Introduction and briefing with master by the inspection team leader and presentation of inspectors' identifications and mandate.
<b>Request for documentation</b>	Inspectors monitoring offloading must request: <ul style="list-style-type: none"> <li>• Confirm quantities to be offloaded as reported in the AREP;</li> <li>• Cargo manifest and hold plan and dimension, Loading plan showing product location, quantities and species relative to each donor vessel.</li> </ul>
<b>Request details of offloading plan and procedure</b>	Request details of method and procedures that will be followed when offloading. Note sequence of holds to be offloaded, quantities and product origins.
<b>Discuss planned sampling of catch for verifying weight and species composition</b>	Discuss need for recording sample weights and species: <ul style="list-style-type: none"> <li>• Determine where these can be undertaken to cause least disruption to offloading operations and effect on product quality,</li> <li>• Confirm that a hook scale will be used.</li> </ul>
<b>Inspection of hold before offloading operation</b>	Undertake an advanced inspection of hold and compartments where fish are stored to record to what capacity they are filled and take photographs.
<b>Setup monitoring position(s)</b>	Select a position where the fish being hoisted out of the hold can be observed; counted and species identified and the hook scale can be read. Consideration should be given to manning more than one position to observe offloading process. When selecting a position note health & safety requirements with respect to fish falling from hoists or collapse of the crane. (These often occur). Possible positions: <ul style="list-style-type: none"> <li>• On the deck of the carrier being offloaded or transhipping, with full view of the hatch opening;</li> <li>• Note: position must allow opportunity to read hook scale,</li> <li>• Where one carrier is transhipping to another, a position on the receiving vessel can be set up with view of fish from the hold of the donor vessel to the receiving vessel.</li> </ul>
<b>Sampling for average weight</b>	At random intervals request a single or number of fish from a hoist to weigh. <ul style="list-style-type: none"> <li>• Random number tables can be computer generated to facilitate these selections;</li> <li>• Weight using a hanging or platform scale depending on what's available and the size of the fish may be practical in some circumstances,</li> <li>• Request use of the hook scale for weighing samples of large fish.</li> </ul>

<b>Sampling for species composition</b>	<p>The products of several tuna species, (yellowfin and bigeye) are processed in the same manner and it may be difficult to identify between the species when together in a single hoist. These can be recorded as an aggregation for the different species. <i>For example. YFT and BET mixed</i></p> <p>To determine the ratio of the two species selected hoist can be lowered to the deck and inspectors can sample for the different species from closer examination of the trunks.</p>
<b>Monitoring Hoists</b>	<ul style="list-style-type: none"> <li>• Record the date / time of first hoist;</li> <li>• Record for each hoist; the number of fish, species and product;</li> <li>• Record hook scale weight (if attached);</li> <li>• Number each hoist consecutively from the first to the last;</li> <li>• Take photographs of hoists where species are not clearly identified;</li> <li>• Record start and end time of interruptions in offloading or transshipment operations due to meal breaks or technical difficulties.</li> </ul> <p>Record the date / time of the last hoist.</p>
<b>End of offloading and transshipment operations</b>	<p>Summarise quantities recorded offloaded for:</p> <ul style="list-style-type: none"> <li>• Each donor vessel, note:             <ul style="list-style-type: none"> <li>○ Weight per species,</li> <li>○ Processing code.</li> </ul> </li> </ul> <p>Request copy of the total offloading or transshipment declaration-forms. Compare the monitored quantities to that declared by the vessel and note difference.</p>
<b>Hold inspection</b>	<p>Request a vessel officer to accompany inspector for an inspection of the carriers hold after transshipment operations.</p> <p>Note:</p> <ul style="list-style-type: none"> <li>• hold divisions;</li> <li>• Record number, species and weight of fish remaining in the hold;</li> <li>• Record how estimates of remaining fish are determined;             <ul style="list-style-type: none"> <li>○ Visual count,</li> <li>○ Fish weighed,</li> </ul> </li> <li>• Volume of hold calculated and compared to volume of remaining fish.</li> </ul> <p>Photograph empty hold or remaining fish in hold. Request a declaration from the vessel of the quantity of fish remaining in the hold. Record difference between recorded and declared quantities.</p>
<b>Reconciliation</b>	<p>Complete inspection report fields 30 and 31.</p>
<b>Debriefing with vessel master / fishing master</b>	<p>Debrief responsible persons on-board and provide copies of recorded quantities monitored, allowing their comments and signatures to be appended.</p>

### 6.3.5. Sampling forms

Due to the variability and time taken to complete transshipments, detailed data recording forms are required to capture a variety of information during the task. The information recorded is then summed up to produce a collective summary of the quantities and species transhipped that can be used to verify the declared information provided in the AREP and transshipment declarations.

The detailed recording form must provide the freedom to record various levels of information allowing for variations in transshipment methods during a single operation.

Offloading forms are divided into four sections:

- Generic vessel details;
- Detailed observation information;
- Statistical information on:
  - Observed times;
  - Species weights and product codes;
  - Hoist information,
  - Summary of total catch.

The two offloading forms are presented in the appendix XI.

## 6.4. Follow up procedures and information sharing

An integral part of Resolution 10/11 calls for detailed follow-up procedures after inspections have taken place (Figure 47), that include:

- Reporting the results of the inspections;
- Port State actions following inspection and evidence of IUU fishing;
- Information on recourse in the port State depending on the result of the inspection;
- Flag State responsibilities of its vessels if there is suspicion or evidence of IUU fishing.

### 6.4.1. Reporting the results of inspections

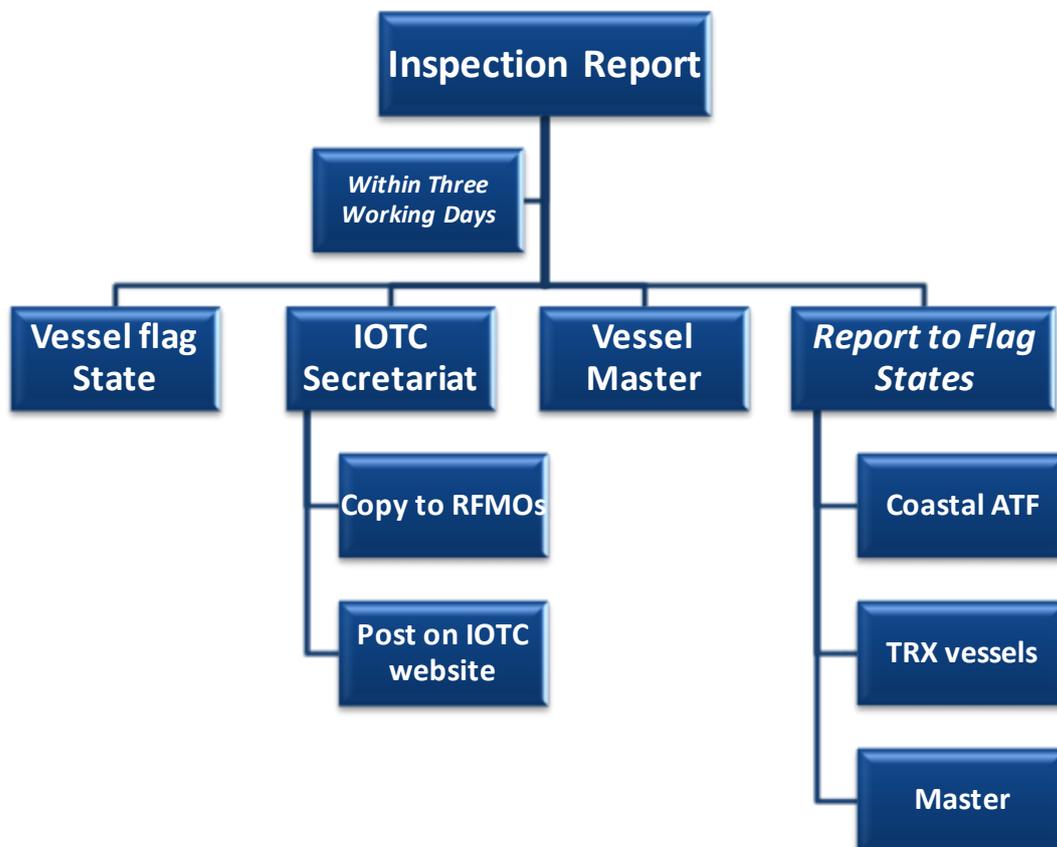
Within three full working days, the CPC is required to complete a report on the results of the inspection that must include, as a minimum standard, all the information set out in Annex 3 of Resolution 10/11 and to transmit these via electronic means, (and if requested, original or certified copies) to:

- the master of the inspected vessel,
- the flag State, and
- the IOTC Secretariat.

If appropriate copies are also transmitted to:

- the flag State of any vessel that transhipped catch to the inspected vessel;
- the relevant CPCs and States, including those States for which there is evidence through inspection that the vessel has engaged in IUU fishing, or fishing related activities in support of such fishing, within waters under their national jurisdiction; and
- the State of which the vessel's master is a national.

The IOTC Secretariat shall without delay transmit the inspection reports to the relevant regional fisheries management organisations, and post the inspection report on the IOTC website.



**Figure 47: Reporting requirements following inspections.**

## **6.4.2. Port State actions following inspection and evidence of IUU fishing**

### **Request for additional information following a port inspection**

When a violation is detected during the inspection process, paragraph 9.1.d. of the PSM Resolution makes provision for the port State to communicate with the flag State of the vessel to confirm that the fish on-board was taken in accordance with applicable requirement of the IOTC and to clarify the situation of the vessel against the alleged violation. To facilitate this process, a specific form has been designed: “*Request for additional information following a port inspection*” (Appendix XII).

The form allows the port State to request information to the flag State on:

- Flag State authorisation to fish;
- Flag State authorisation to tranship;
- Fishing logbook;
- Certificate of registry of the fishing vessel;
- IOTC transshipment declarations (From transshipment operation with donors vessels);
- VMS record, and,
- Any others information/document relevant to the irregularities.

Following the request of the port State, the flag State must respond to the port State within the time period specified by the port State. It should be noted that the IOTC resolution does not define the period of time but only mentioned that the flag State must respond within a “reasonable period of time”. However, in the same context, under UNFSA, where following a boarding and inspection of a vessel, there are clear grounds for believing that the vessel has engaged in any activity contrary to the conservation and management measures of a RFMO, the inspecting State shall promptly notify the flag State of the alleged violation. In such case, article 6 section 21 of UNFSA defines the period of time to 3 working days of the receipt of the notification. When notifying the flag State, it is recommended that the port State set the period of time to 3 working days of the receipt of the notification.

If the flag State does not respond within the period of time specified in the form, the port State may take additional actions against the vessel and deny use of the port for landing, transshipping, packaging, processing, refuelling, resupplying, maintenance and dry-docking in accordance with paragraph 9.1. Those port State actions are described in the following section.

### **Deny the use of ports for landing, transshipping, packaging, processing, refuelling, resupplying, maintenance and dry-docking**

The IOTC Resolution 10/11 Part-4 provides follow-up actions that a port State is required to undertake in the event that a vessel has been found to have engaged in or supported IUU fishing. In summary this requires that where a vessel has been allowed entry into its ports and where any of the following evidence exists:

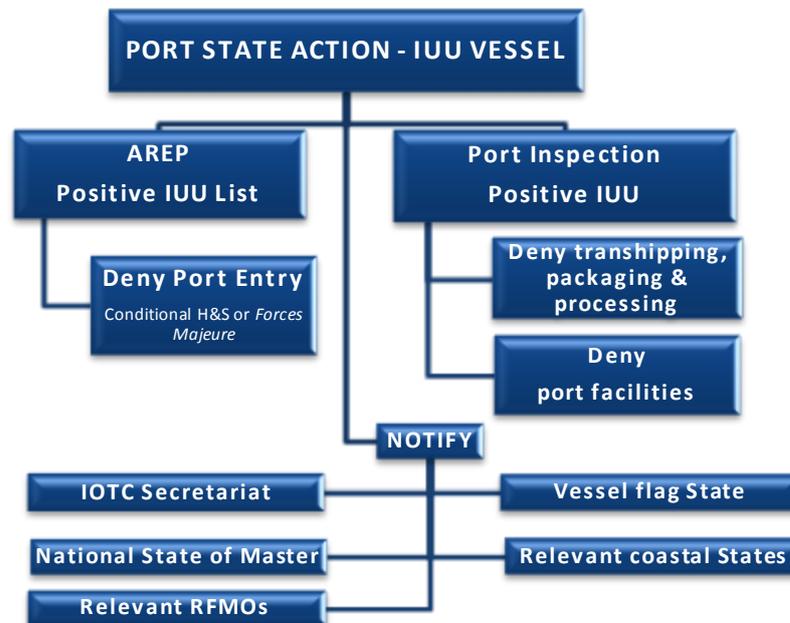
- the vessel does not have a valid and applicable authorization to engage in fishing or fishing related activities required by its flag State;
- the vessel does not have a valid and applicable authorization to engage in fishing or fishing related activities required by a coastal State in respect of areas under the national jurisdiction of that State;
- clear evidence has been received that the fish on board was taken in contravention of applicable requirements of a coastal State in respect of areas under the national jurisdiction of that State;
- the flag State does not confirm within a reasonable period of time, on the request of the port State, that the fish on board was taken in accordance with applicable requirements of a relevant regional fisheries management organisation;
- there are reasonable grounds to believe that the vessel was otherwise engaged in IUU fishing or fishing related activities in support of such fishing, including in support of a vessel that has also been engaged in IUU fishing.

The port State should, in conformity with international law, deny such vessel the use of its ports for landing, transshipping, packaging, and processing of fish and for other port services including, inter alia, refuelling and resupplying, maintenance and dry-docking.

The exceptions to the above action are to allow the use of port services essential to the safety or health of the crew or the safety of the vessel or where appropriate, for the scrapping of the vessel.

When the results of the inspection provide clear evidence that a vessel has engaged in IUU fishing or fishing related activities in support of IUU fishing, the inspecting CPC must first (Figure 48):

- promptly notify the flag State;
- the IOTC Secretariat;
- relevant coastal States;
- relevant regional fisheries management organisations; and
- the master’s national State.



**Figure 48: Port State actions when evidence indicates positive IUU.**

A CPC may also impose additional penalties of its own in conformity with international law or penalties expressly requested or consented to by the flag State of the vessel.

**Port State sanctions: investigation, detainment of individuals, arrest, seizure and detention, bond and sanction/penalty**

Depending on the type and seriousness of the offence and the sanctions established in national legislation for the offence committed, and depending of the nature of the enforcement system (administrative or criminal), the port State CPC may wish to impose additional sanctions on the vessel, owner, master or agent, (these individuals are often defined as ‘the operator’ of the vessel in some legislations). The sanctions can range from the imposition of an administrative or court fine, to the arrest of the offender, detention and seizure and forfeiture of the vessel, the catch, fishing gear and/or equipment used in the commission of the offence.

**Port Inspection:** Foreign vessels are subjected to a port inspection to verify their compliance with both national legislation and with the IOTC conservation and management measures. If at any point during the inspection process anomalies are found in the information provided and there ‘may’ be indication of illegal fishing activities, the port inspection moves to an investigative and evidence gathering phase, (reference Chapter 2, section 4.7).

**Investigation:** When the port inspection has moved to this stage, inspectors must be aware of this and be more meticulous in their work and carefully record their actions, the documents checked and evidence gathered, which may be used to prove the alleged infraction. It is important to remember that the gathering of evidence is to support an ‘alleged’ infraction, it is not yet proven, and consequently, the master and crew must not be treated as offenders, but as “individuals under investigation”. This is the period when the inspectors must check everything and ensure that authorities in higher positions have been informed and are in support of the investigation activities.

After initial analysis of the evidence and discussions with higher authorities and if necessary, prosecutors, a decision is then made to detain the vessel and crew for further investigation. It is not necessary to arrest the master and crew at this point if they remain cooperative, but their passports are removed. During the more intensive investigation phase, it is common practice to remove the crew from the vessel to the quayside under watch of inspectors while the investigation proceeds. This is to preserve any evidence on-board and ensure it is not tampered with or destroyed during the investigation. If required, individual crew can be requested to accompany the investigators during this phase of the investigation.

Depending on the evidence collected and the severity of the alleged infraction, further action may be warranted that will lead to the formal arrest procedures of the master and key crew members. Usually the remainder of the crew are processed by immigration authorities and released or returned to their home ports. The vessel, equipment, fishing gear and catch on-board would then typically be formally seized pending the judicial outcome of the alleged illegal fishing case.

Strict procedures must be followed to secure the vessel, equipment, fishing gear and catches. A common error often made at this point in time is the failure to make a full and detailed inventory of the vessel, equipment, fishing gear and catch on-board. It is strongly recommended that this inventory is done using both video as well as recorded notes for each cabin and the workspace of the vessel. In most cases, the perishable component of the catch is auctioned to reduce storage costs and is sold at as close to market prices as possible. Revenues from this process are placed in a State account until the resolution of the case.

In the event the alleged offences are not proven in the legislative system, the company and operators will be entitled to the return of the vessel, equipment, fishing gear and catches – in the same conditions as when they were detained or seized. If the vessel, equipment, fishing gear or catches have been damaged or are missing, the port State may be liable for counter-prosecution. It is for this reason that very strict and careful procedures must be followed when the decision to seize the vessel and all equipment, fishing gears and catches is made.

#### **a. Penalty**

The port State CPC may impose a fine on the owner and/or the master and/or the agent of the vessel according to the procedure defined in its national legislation. In determining the value of the fine the fisheries authority will take into consideration the following factors:

- the seriousness of the offence;
- the value of the vessel and fishing gear;
- the value of the catch on-board;
- the value of the illegal catch taken if it can be calculated;
- the frequency of violation;
- impact on the environment and,
- cooperation of the offender.

Many national legislations note that *“if the illegal catch taken cannot be calculated, all the catch on-board is assumed to be illegal fish catch”*.

It is recommended that port State CPCs develop a sanctions/penalties schedule to be used as a guide by the prosecuting authority when asking the fisheries authorities for an appropriate level of sanction to meet the offence or the crime. The purpose of a sanctions/penalties schedule is to achieve consistent, fair penalties that are not dependent on which prosecutor happens to be assigned the case or in what part of the country the violations occurred.

#### **b. Arrest**

If the national legislation permits it and depending on the circumstances, a fisheries inspector may arrest the offender on reasonable grounds that an offense has been committed. Before making an arrest, the fisheries inspector must take into consideration that an arrest is not a punishment, and therefore, should not be more aggressive or oppressive than is necessary. The power of arrest must be exercised with caution because the fisheries authority can be held liable for acts of its fishery inspector (which are outside the scope of the inspector’s authority). It is important to ensure that all of the elements necessary for an arrest are established before taking such action against the alleged offender.

It is recommended to strictly observe the basic procedures for arrest of an offender: the fishery inspector must identify himself as a fisheries inspector, clearly state to the suspected offender under which section(s) of the national legislation he is being charged and ensure the suspected offender understands the specific charge. If there is cooperation, the inspector can take possession of the passport of the individual being charged and no use of force is required, including the use of handcuffs. The alleged offender is taken to be formally charged and can be detained under 'house arrest' arranged by the vessel agent at their cost and with the guarantee of their appearance as required in the case.

If the need arises to interrogate the offender, the person should be advised of his rights prior to questioning. Before interrogation, to preserve the admissibility of the statement against the offender in proceeding, the fishery inspector must warn the offender he has the right to remain silent; anything he says can be used as evidence against him; he has the right to have an attorney present before and during the questioning and he has the right, if he can't afford an attorney, to have an attorney appointed at public expense to represent them before and during the questioning. There must always be at least two port inspectors present during any interrogation process.

The main reasons to place a person under arrest after it has been determined that an offense has been committed are to secure or preserve evidence of/or relating to the offense, and, prevent the continuation or repetition of the offense or the commission of another (e.g. assault).

### **c. Seizure and detention**

In case of a seized vessel, the custody may remain with fisheries authority, or some other designated security authority, that will be responsible for maintaining security and a 24/7 watch on the seized vessel. No person shall be allowed to board the seized vessel, except officials from the Port State, the vessel's agent or the legal representative. Two fisheries inspectors shall be placed on-board the seized vessel to ensure that no one leaves or boards the vessel unless authorised in writing and to monitor their activities while on-board.

In case of seizure of catch, fishing gear or other equipment, they shall be tagged with a government seal. The seized items become the responsibility of the fisheries authority and every action must be taken to safeguard them. The custody of the items seized can be assured by off-loading all seized goods and storing them under fisheries authority name at a secured commercial warehouse or on fisheries authority property.

In the case of seizure under the national legislation, the court may order that seized goods, of perishable nature, may be sold on auction at a price nearest or above current price and the revenues from the sale be placed in an escrow account, with interest, until the final resolution of the case. The seized goods and the funds in the escrow account may be forfeited to the Port State on conclusion of the case, but in the interim, their security remains that of the port State.

### **d. Bond**

It is normal to check in the national fisheries legislation if there is an authority or a provision to bond a seized vessel, its equipment and fishing gear as well as handling of perishable goods (e.g. to sell the fish on-board as noted above), and release the vessel, equipment and/or fishing gear (if the fishing gear is legal). If there is suspicion that the vessel release in good faith will not guarantee its return for final violation proceedings, it is recommended that the vessel, equipment and fishing gear remain under seizure until the case is resolved. The same is also applicable for the master and key personnel in the alleged violation. As detailed in UNCLOS, a vessel may be released upon deposit of a reasonable bond or security. However, when contemplating release of the vessel and crew, it should be noted that experience in some developing CPCs are that following negotiations for the release of a vessel and crew by the port State in good faith following the receipt of the bond or Bank Guarantee, immediately on release the good faith agreement is refuted, the Bank Guarantee is not honoured and the charges are then challenged by the alleged violator. The developing port State then has little leverage on the alleged violator, master, operator and the vessel, except to list it as an IUU vessel and seek regional cooperation to detain the vessel and bring it back to the port State for proceedings.

An IOTC developing CPC has two excellent cases of such negotiations made in good faith, one for a longline vessel where the outstanding fine of US\$4.5 million has not yet been paid, and the second for a purse seiner where the Bank Guarantee issued by a national bank of the vessel flag State has not been honoured for the release of the vessel.

The calculation of the value of a bond or Bank Guarantee will be detailed within your national fisheries legislation and will be handled by your administration. A standard for the seriousness of the violation can be

used in this calculation, noting the points above and thus the bond can be set at up to the maximum of the value of the sanctions that may be applied to the vessel.

What is important, and noted once again, is that the vessel is kept safely and securely, so the vessel and everything on it remains in port unaltered. If the catch has been removed it must be prevented from spoiling, as discussed earlier. Remember that a full load of a tuna purse seiner (for the canning industry) or a longliner (sashimi grade tuna) can be worth millions of dollars and the vessel will only lose claim to this permanently if found guilty. Valuation of vessel and catch is generally undertaken by an expert, although an overview of current market price for the main commercial species is recommended.

The resolution 07/01 aims to curb potential illegal fishing behaviour by natural (individuals) or legal persons (companies), by requiring States to effectively subject them to their jurisdiction, and sanction them for proven offences. The resolution calls on all States to investigate allegations and reports of individuals or companies engaging in IUU fishing operations, and if illegal actions are verified, to take appropriate action. Cooperation with other CPCs in the course of investigations is also mandated.

### **Request listing on IOTC IUU list**

Under resolution 11/03 *On Establishing A List Of Vessels Presumed To Have Carried Out Illegal, Unregulated And Unreported Fishing In The IOTC Area*, the port State CPC can request the listing of the vessel on the IOTC IUU list. The reporting process involves the use of the IOTC reporting form for illegal activity (Annexe 1 of Resolution 11/03) accompanied by evidence supporting the presumption of IUU fishing activity.

The reporting form contains 4 sections:

- In section A, information on the detail of the vessel, on the alleged infringement and the actions taken are recorded
- In section B, information of the details IOTC Resolution Elements contravened are recorded, alongside with date, location, source of information. Extra information can be provided in an attachment if necessary;
- In section C, associated documents that are appended are listed (e.g. port inspection report, vessel document, court proceedings, photographs);
- In section D, there are 3 possible choices:
  - Notification to IOTC Secretariat only. No further action is recommended;
  - Notification of illegal activity to IOTC Secretariat. Recommend notification of activity to flag state;
  - Recommended for inclusion on IOTC IUU list.

Note: the IOTC reporting form for illegal activity can be downloaded from the IOTC web site ([www.iotc.org](http://www.iotc.org)) or requested by email to the IOTC Secretariat at [secretariat@iotc.org](mailto:secretariat@iotc.org).

### **Information on recourse in the port State**

In the event of any perceived loss or damage suffered as a consequence of any alleged unlawful action by the CPC in the implementation of the PSMR with respect to:

- Port entry, authorization or denial;
- Use of ports;
- Conduct of inspections;
- Port State actions following inspection,

The CPC must make the relevant information available, upon written request, to the owner, operator, master or a representative of a vessel, as well as information pertaining to the public services or judicial institutions for this purpose and whether there is any right to seek compensation in accordance with its national laws and regulations.

The CPC shall inform the flag State, the owner, operator, master or representative, as appropriate, of the outcome of any such recourse action. Where other Parties, States or international organisations have been informed of prior decision on the four points above, the CPC must inform them of any changes in decision that were made on these.

### **6.4.3. Follow-up Flag State responsibilities**

Where, following port State inspection, a flag State CPC receives an inspection report indicating that there are clear grounds to believe that a vessel entitled to fly its flag has engaged in IUU fishing or fishing related activities in support of such fishing, it shall immediately and fully investigate the matter and shall, upon sufficient evidence, take enforcement action without delay in accordance with its laws and regulations, and including de-listing from the IOTC Record of Authorized Fishing Vessels in accord with its obligation to ensure that it does not register any vessel with such a history unless it has changed beneficial ownership.

Furthermore, an IOTC CPC must report back on the actions it has taken, in its capacity as the flag State, to the other IOTC CPC's port State authorities that were instrumental with inspection and reporting of evidence of IUU fishing or related activities of the vessel.

The flag State is also required to report back on actions it has taken in respect of its flagged vessels to any other relevant States, regional fisheries management organisations and FAO that were party to determine that its vessels have engaged in IUU fishing or fishing related activities in support of such fishing.

### **6.4.4. Duties of the IOTC Secretariat**

The IOTC Secretariat is party to receiving reports from its CPCs' port and flag States on the results of inspections and actions taken against vessels that were determined to have engaged in IUU fishing or fishing related activities in support of such fishing. Information and reports received by the Secretariat will be circulated to CPCs and communicated on to the relevant regional fisheries management organisations.

## **6.5. Information systems on port State measures**

An essential component in the IOTC PSMR is the sharing of information between CPCs in the implementation of the compliance measures of this resolution. This information must cover all associated activities with respect to fishing, transshipment or support of any fishing related activities. Where appropriate, taking into consideration confidentiality of certain information, there is an expectation that relevant information will be shared with other parties to assist them in the implementation of the conservation and management measures of the Resolution.

CPCs are expected to develop systems to capture and retain information that results from the processes of investigating AREPs and the results of inspections of vessels that entered their port. Similarly a CPC should retain detailed records of ATFs (Authorisations to Fish) that it has issued to its flagged vessels for the high seas in accordance with the requirements of regional fisheries management organisations as well as ATFs provided to foreign flagged vessels to fish within their coastal waters. Included in this is the maintenance of VMS records in accordance with the IOTC Resolution 06/03 and their national legislation in the issuance of ATFs. VMS information should, where possible be provided to the fisheries authorities of ports States to assist with processing AREPs.

Each CPC is required to establish a computerized communication to:

- establish, to the extent possible, websites to publicize the list of its ports designated in accordance with point 5.1 and the actions taken in accordance with the relevant provisions of this Conservation and Management Resolution;
- identify, to the greatest extent possible, each inspection report by a unique reference number starting with the 3-alpha code of the port State and identification of the issuing agency;
- utilize, to the extent possible, the international coding system below in the advanced request to enter port and the results of the inspection of a vessel that has been granted permission to enter port and translate any other coding system into the international system.

The international coding system should include:

- countries/territories: ISO-3166 3-alpha Country Code (See appendix XIII);
- species: ASFIS 3-alpha code (known as FAO 3-alpha code) (See appendix XIII));
- vessel types: ISSCFV code (See appendix XIII),
- gear types: ISSCFG code (known as FAO alpha code) (See appendix XIII).

## **Appendix I: IOTC Resolution 10/11 on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing**

### **The Indian Ocean Tuna Commission (IOTC),**

DEEPLY CONCERNED about the continuation of illegal, unreported and unregulated fishing in the IOTC Area and its detrimental effect upon fish stocks, marine ecosystems and the livelihoods of legitimate fishers in particular in Small Island Developing States, and the increasing need for food security in the region,

CONSCIOUS of the role of the port State in the adoption of effective measures to promote the sustainable use and the long-term conservation of living marine resources,

RECOGNIZING that measures to combat illegal, unreported and unregulated fishing should build on the primary responsibility of flag States and use all available jurisdiction in accordance with international law, including port State measures, coastal State measures, market related measures and measures to ensure that nationals do not support or engage in illegal, unreported and unregulated fishing,

RECOGNIZING that port State measures provide a powerful and cost-effective means of preventing, deterring and eliminating illegal, unreported and unregulated fishing,

AWARE of the need for increasing coordination at the regional and interregional levels to combat illegal, unreported and unregulated fishing through port State measures,

RECOGNIZING the need for assistance to developing countries, in particular Small Island Developing States to adopt and implement port State measures,

TAKING NOTE OF the binding Agreement on port State measures to combat IUU fishing which was adopted and opened for signature within the framework of FAO in November 2009, and desiring to implement this Agreement in an efficient manner in the IOTC Area,

BEARING IN MIND that, in the exercise of their sovereignty over ports located in their territory, IOTC Members and Cooperating non-Contracting Parties (CPCs) may adopt more stringent measures, in accordance with international law,

RECALLING the relevant provisions of the United Nations Convention on the Law of the Sea of 10 December 1982, hereinafter referred to as the Convention,

RECALLING the Agreement for the Implementation of the Provisions of the United Nations 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 of 4 December 1995, the Agreement to Promote Compliance with International Conservation and Management Resolutions by Fishing Vessels on the High Seas of 24 November 1993 and the 1995 FAO Code of Conduct for Responsible Fisheries,

ADOPTS, in accordance with the provisions of Article IX, paragraph 1 of the IOTC Agreement, the following:

### **PART 1**

#### **GENERAL PROVISIONS**

1. *Use of terms*

For the purposes of this Resolution:

- (a) "fish" means all species of highly migratory fish stocks covered by the IOTC Agreement;
- (b) "fishing" means searching for, attracting, locating, catching, taking or harvesting fish or any activity which can reasonably be expected to result in the attracting, locating, catching, taking or harvesting of fish;
- (c) "fishing related activities" means any operation in support of, or in preparation for, fishing, including the landing, packaging, processing, transshipping or transporting of fish that have not been previously landed at a port, as well as the provisioning of personnel, fuel, gear and other supplies at sea;
- (d) "illegal, unreported and unregulated fishing" refers to the activities set out in paragraph 1 of the Resolution 2009/03;
- (e) "port" includes offshore terminals and other installations for landing, transshipping, packaging, processing, refueling or resupplying; and
- (f) "vessel" means any vessel, ship of another type or boat used for, equipped to be used for, or intended to be used for, fishing or fishing related activities.

2. *Objective*

The objective of this Resolution is to prevent, deter and eliminate IUU fishing through the implementation of effective port State measures to control the harvest of fish caught in the IOTC Area, and thereby to ensure the long-term conservation and sustainable use of these resources and marine ecosystems.

3. *Application*

3.1 Each CPC shall, in its capacity as a port State, apply this Resolution in respect of vessels not entitled to fly its flag that are seeking entry to its ports or are in one of its ports, except for:

- (a) vessels of a neighbouring State that are engaged in artisanal fishing for subsistence, provided that the port State and the flag State cooperate to ensure that such vessels do not engage in IUU fishing or fishing related activities in support of such fishing; and
- (b) container vessels that are not carrying fish or, if carrying fish, only fish that have been previously landed, provided that there are no clear grounds for suspecting that such vessels have engaged in fishing related activities in support of IUU fishing.

3.2 This Resolution shall be applied in a fair, transparent and non-discriminatory manner, consistent with international law.

4. *Integration and coordination at the national level*

Each CPC shall, to the greatest extent possible:

- (a) integrate or coordinate fisheries related port State measures with the broader system of port State controls;
- (b) integrate port State measures with other measures to prevent, deter and eliminate IUU fishing and fishing related activities in support of such fishing, taking into account as appropriate the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing; and
- (c) take measures to exchange information among relevant national agencies and to coordinate the activities of such agencies in the implementation of this Conservation and Management Resolution.

**PART 2**

**ENTRY INTO PORT**

5. *Designation of ports*

5.1 Each CPC shall designate and publicize the ports to which vessels may request entry pursuant to this Resolution. Each CPC shall provide a list of its designated ports to IOTC Secretariat before 31 December 2010, which shall give it due publicity on the IOTC website.

5.2 Each CPC shall, to the greatest extent possible, ensure that every port designated and publicized in accordance with point 5.1 has sufficient capacity to conduct inspections pursuant to this Resolution.

6. *Advance request for port entry*

6.1 Each CPC shall require the information requested in Annex 1 to be provided before granting entry to a vessel to its port.

6.2 Each CPC shall require the information referred to in point 6.1 to be provided at least 24 hours before entering into port or immediately after the end of the fishing operations, if the time distance to the port is less than 24 hours. For the latter, the port State must have enough time to examine the above mentioned information.

7. *Port entry, authorization or denial*

7.1 After receiving the relevant information required pursuant to section 6, as well as such other information as it may require to determine whether the vessel requesting entry into its port has engaged in IUU fishing or fishing related activities in support of such fishing, each CPC shall decide whether to authorize or deny the entry of the vessel into its port and shall communicate this decision to the vessel or to its representative.

7.2 In the case of authorization of entry, the master of the vessel or the vessel's representative shall be required to present the authorization for entry to the competent authorities of the CPC upon the vessel's arrival at port.

7.3 In the case of denial of entry, each CPC shall communicate its decision taken pursuant to point 7.1, to the flag State of the vessel and, as appropriate and to the extent possible, relevant coastal States and IOTC secretariat. The IOTC Secretariat may, if deemed appropriate to combat IUU fishing at global level, communicate this decision to Secretariats of other RFMO's.

7.4 Without prejudice to point 7.1, when a CPC has sufficient proof that a vessel seeking entry into its port has engaged in IUU fishing or fishing related activities in support of such fishing, in particular the inclusion of a vessel on a list of vessels having engaged in such fishing or fishing related activities adopted by a regional fisheries management organisation in accordance with the rules and procedures of such organisation and in conformity with international law, the CPC shall deny that vessel entry into its ports.

7.5 Notwithstanding points 7.3 and 7.4, a CPC may allow entry into its ports of a vessel referred to in those points exclusively for the purpose of inspecting it and taking other appropriate actions in conformity with international law which are at least as effective as denial of port entry in preventing, deterring and eliminating IUU fishing and fishing related activities in support of such fishing.

7.6 Where a vessel referred to in points 7.4 or 7.5 is in port for any reason, a CPC shall deny such vessel the use of its ports for landing, transshipping, packaging, and processing of fish and for other port services including, *inter alia*, refueling and resupplying, maintenance and drydocking. Points 9.2 and 9.3 of section 9 apply *mutatis mutandis* in such cases. Denial of such use of ports shall be in conformity with international law.

8. *Force majeure or distress*

Nothing in this Resolution affects the entry of vessels to port in accordance with international law for reasons of force majeure or distress, or prevents a port State from permitting entry into port to a vessel exclusively for the purpose of rendering assistance to persons, ships or aircraft in danger or distress.

**PART 3**

**USE OF PORTS**

9. *Use of ports*

9.1 Where a vessel has entered one of its ports, a CPC shall deny, pursuant to its laws and regulations and consistent with international law, including this Conservation and management resolution, that vessel the use of the port for landing, transshipping, packaging and processing of fish that have not been previously landed and for other port services, including, *inter alia*, refueling and resupplying, maintenance and drydocking, if:

- a) the CPC finds that the vessel does not have a valid and applicable authorization to engage in fishing or fishing related activities required by its flag State;
- b) the CPC finds that the vessel does not have a valid and applicable authorization to engage in fishing or fishing related activities required by a coastal State in respect of areas under the national jurisdiction of that State;
- c) the CPC receives clear evidence that the fish on board was taken in contravention of applicable requirements of a coastal State in respect of areas under the national jurisdiction of that State;
- d) the flag State does not confirm within a reasonable period of time, on the request of the port State, that the fish on board was taken in accordance with applicable requirements of a relevant regional fisheries management organisation; or
- e) the CPC has reasonable grounds to believe that the vessel was otherwise engaged in IUU fishing or fishing related activities in support of such fishing, including in support of a vessel referred to in point 7.4, unless the vessel can establish:
  - i. that it was acting in a manner consistent with relevant IOTC resolutions; or
  - ii. in the case of provision of personnel, fuel, gear and other supplies at sea, that the vessel that was provisioned was not, at the time of provisioning, a vessel referred to in point 4 of paragraph 7.

9.2 Notwithstanding point 9.1, a CPC shall not deny a vessel referred to in that point the use of port services:

- a) essential to the safety or health of the crew or the safety of the vessel, provided these needs are duly proven, or
- b) where appropriate, for the scrapping of the vessel.

9.3 Where a CPC has denied the use of its port in accordance with this paragraph, it shall promptly notify the flag State and, as appropriate, relevant coastal States, IOTC or other regional fisheries management organisations and other relevant international organisations of its decision.

9.4 A CPC shall withdraw its denial of the use of its port pursuant to point 9.1 in respect of a vessel only if there is sufficient proof that the grounds on which use was denied were inadequate or erroneous or that such grounds no longer apply.

9.5 Where a CPC has withdrawn its denial pursuant to point 9.4, it shall promptly notify those to whom a notification was issued pursuant to point 9.3.

**INSPECTIONS AND FOLLOW-UP ACTIONS**

10. *Levels and priorities for inspection*
- 10.1 Each CPC shall carry out inspections of at least 5% of landings or transshipments in its ports during each reporting year.
- 10.2 Inspections shall involve the monitoring of the entire discharge or transshipment and include a cross-check between the quantities by species recorded in the prior notice of landing and the quantities by species landed or transhipped. When the landing or transshipment is completed, the inspector shall verify and note the quantities by species of fish remaining on board.
- 10.3 National inspectors shall make all possible efforts to avoid unduly delaying a vessel and ensure that the vessel suffers the minimum interference and inconvenience and that degradation of the quality of the fish is avoided.
- 10.4 The port CPC may invite inspectors of other CPC to accompany their own inspectors and observe the inspection of landings or transshipment operations of fishery resources caught by fishing vessels flying the flag of another CPC.
11. *Conduct of inspections*
- 11.1 Each CPC shall ensure that its inspectors carry out the functions set forth in Annex 2 as a minimum standard.
- 11.2 Each CPC shall, in carrying out inspections in its ports:
- a) ensure that inspections are carried out by properly qualified inspectors authorized for that purpose, having regard in particular to section 14;
  - b) ensure that, prior to an inspection, inspectors are required to present to the master of the vessel an appropriate document identifying the inspectors as such;
  - c) ensure that inspectors examine all relevant areas of the vessel, the fish on board, the nets and any other gear, equipment, and any document or record on board that is relevant to verifying compliance with relevant conservation and management resolutions;
  - d) require the master of the vessel to give inspectors all necessary assistance and information, and to present relevant material and documents as may be required, or certified copies thereof;
  - e) in case of appropriate arrangements with the flag State of the vessel, invite the flag State to participate in the inspection;
  - f) make all possible efforts to avoid unduly delaying the vessel to minimize interference and inconvenience, including any unnecessary presence of inspectors on board, and to avoid action that would adversely affect the quality of the fish on board;
  - g) make all possible efforts to facilitate communication with the master or senior crew members of the vessel, including where possible and where needed that the inspector is accompanied by an interpreter;
  - h) ensure that inspections are conducted in a fair, transparent and non-discriminatory manner and would not constitute harassment of any vessel; and
  - i) not interfere with the master's ability, in conformity with international law, to communicate with the authorities of the flag State.
12. *Results of inspections*
- Each CPC shall, as a minimum standard, include the information set out in Annex 3 in the written report of the results of each inspection.
13. *Transmittal of inspection results*
- 13.1 The port State CPC shall, within three full working days of the completion of the inspection, transmit by electronic means a copy of the inspection report and, upon request, an original or a certified copy thereof, to the master of the inspected vessel, to the flag State, to the IOTC Secretariat and, as appropriate, to:
- a) the flag State of any vessel that transhipped catch to the inspected vessel;
  - b) the relevant CPCs and States, including those States for which there is evidence through inspection that the vessel has engaged in IUU fishing, or fishing related activities in support of such fishing, within waters under their national jurisdiction; and
  - c) the State of which the vessel's master is a national.
- 13.2 The IOTC Secretariat shall without delay transmit the inspection reports to the relevant regional fisheries management organisations, and post the inspection report on the IOTC website.

14. *Training of inspectors*  
Each CPC shall ensure that its inspectors are properly trained taking into account the guidelines for the training of inspectors in Annex 5. CPC shall seek to cooperate in this regard.
15. *Port State actions following inspection*
- 15.1 Where, following an inspection, there are clear grounds for believing that a vessel has engaged IUU fishing or fishing related activities in support of such fishing, the inspecting CPC shall:
- promptly notify the flag State, the IOTC Secretariat and, as appropriate, relevant coastal States, and other regional fisheries management organisations, and the State of which the vessel's master is a national of its findings; and
  - deny the vessel the use of its port for landing, transshipping, packaging and processing of fish that have not been previously landed and for other port services, including, *inter alia*, refueling and resupplying, maintenance and drydocking, if these actions have not already been taken in respect of the vessel, in a manner consistent with this Conservation and Management Resolution.
- 15.2 Notwithstanding point 15.1, a CPC shall not deny a vessel referred to in that point the use of port services essential for the safety or health of the crew or the safety of the vessel.
- 15.3 Nothing in this Resolution prevents a CPC from taking measures that are in conformity with international law in addition to those specified in points 15.1 and 15.2, including such measures as the flag State of the vessel has expressly requested or to which it has consented.
16. *Information on recourse in the port State*
- 16.1 A CPC shall maintain the relevant information available to the public and provide such information, upon written request, to the owner, operator, master or representative of a vessel with regard to any recourse established in accordance with its national laws and regulations concerning port State measures taken by that CPC pursuant to sections 7, 9, 11 or 15, including information pertaining to the public services or judicial institutions available for this purpose, as well as information on whether there is any right to seek compensation in accordance with its national laws and regulations in the event of any loss or damage suffered as a consequence of any alleged unlawful action by the CPC.
- 16.2 The CPC shall inform the flag State, the owner, operator, master or representative, as appropriate, of the outcome of any such recourse. Where other Parties, States or international organisations have been informed of the prior decision pursuant to sections 7, 9, 11 or 15, the CPC shall inform them of any change in its decision.

## PART 5

### ROLE OF FLAG STATES

17. *Role of CPCs flag States*
- 17.1 Each CPCs shall require the vessels entitled to fly its flag to cooperate with the port State in inspections carried out pursuant to this Resolution.
- 17.2 When a CPC has clear grounds to believe that a vessel entitled to fly its flag has engaged in IUU fishing or fishing related activities in support of such fishing and is seeking entry to or is in the port of another State, it shall, as appropriate, request that State to inspect the vessel or to take other measures consistent with this Resolution.
- 17.3 Each CPC shall encourage vessels entitled to fly its flag to land, transship, package and process fish, and use other port services, in ports of States that are acting in accordance with, or in a manner consistent with this Resolution. CPCs are encouraged to develop fair, transparent and non-discriminatory procedures for identifying any State that may not be acting in accordance with, or in a manner consistent with, this Resolution.
- 17.4 Where, following port State inspection, a flag State CPC receives an inspection report indicating that there are clear grounds to believe that a vessel entitled to fly its flag has engaged in IUU fishing or fishing related activities in support of such fishing, it shall immediately and fully investigate the matter and shall, upon sufficient evidence, take enforcement action without delay in accordance with its laws and regulations.
- 17.5 Each CPC shall, in its capacity as a flag State, report to other CPCs, relevant port States and, as appropriate, other relevant States, regional fisheries management organisations and FAO on actions it has taken in respect of vessels entitled to fly its flag that, as a result of port State measures taken pursuant to this Resolution, have been determined to have engaged in IUU fishing or fishing related activities in support of such fishing.

- 17.6 Each CPC shall ensure that measures applied to vessels entitled to fly its flag are at least as effective in preventing, deterring, and eliminating IUU fishing and fishing related activities in support of such fishing as measures applied to vessels referred to in point 3.1.

**PART 6**

**REQUIREMENTS OF DEVELOPING STATES**

18. *Requirements of developing States*
- 18.1 CPCs shall give full recognition to the special requirements of CPCs developing States in relation to the implementation of this Resolution. To this end, IOTC should provide assistance to CPCs developing States in order to, *inter alia*:
- a) enhance their ability, in particular the least-developed among them and small island developing States, to develop a legal basis and capacity for the implementation of effective port State measures;
  - b) facilitate their participation in any international organisations that promote the effective development and implementation of port State measures; and
  - c) facilitate technical assistance to strengthen the development and implementation of port State measures by them, in coordination with relevant international mechanisms.
- 18.2 IOTC shall give due regard to the special requirements of developing CPCs port States, in particular the least-developed among them and small island developing States, to ensure that a disproportionate burden resulting from the implementation of this Resolution is not transferred directly or indirectly to them. In cases where the transfer of a disproportionate burden has been demonstrated, CPCs shall cooperate to facilitate the implementation by the relevant CPCs developing States of specific obligations under this Resolution.
- 18.3 IOTC shall assess the special requirements of CPCs developing States concerning the implementation of this Resolution.
- 18.4 IOTC CPCs shall cooperate to establish appropriate funding mechanisms to assist CPCs developing States in the implementation of this Resolution. These mechanisms shall, *inter alia*, be directed specifically towards:
- a) developing and enhancing capacity, including for monitoring, control and surveillance and for training at the national and regional levels of port managers, inspectors, and enforcement and legal personnel;
  - b) monitoring, control, surveillance and compliance activities relevant to port State measures, including access to technology and equipment; and
  - c) listing CPCs developing States with the costs involved in any proceedings for the settlement of disputes that result from actions they have taken pursuant to this Resolution.

**PART 7**

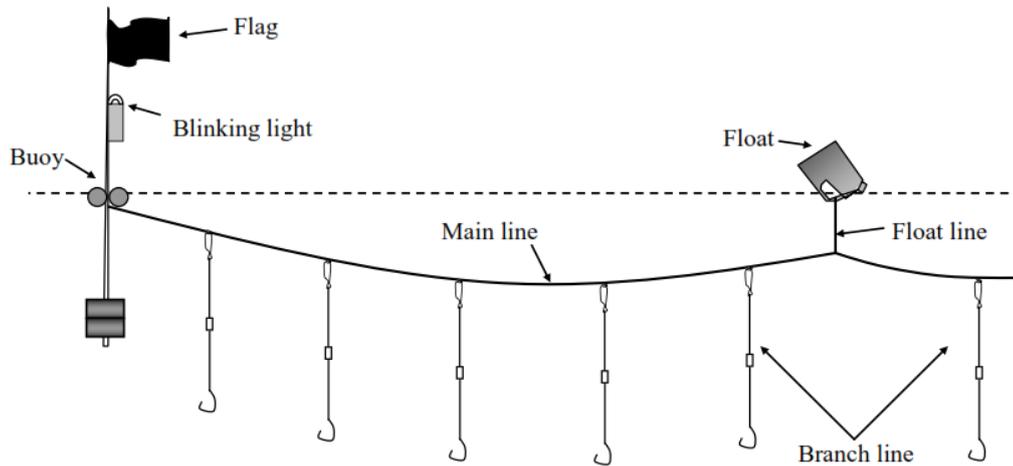
**DUTIES OF THE IOTC SECRETARIAT**

19. *Duties of the IOTC Secretariat*
- 19.1 The IOTC Secretariat shall without delay post on the IOTC website:
- a) the list of designated ports,
  - b) the prior notification periods established by each CPC,
  - c) the information about the designated competent authority in each port State CPC,
  - d) the blank copy of the IOTC Port inspection report form.
- 19.2 The IOTC Secretariat shall without delay post on the secure part of the IOTC website copies of all Port inspection reports transmitted by port State CPCs.
- 19.3 All forms related to a specific landing or transshipment shall be posted together.
- 19.4 The IOTC Secretariat shall without delay transmit the inspection reports to the relevant regional fisheries management organisations.
20. This Resolution enters into force the 01 March 2011 and shall be applied to CPCs' ports within the IOTC area of competence. The CPCs situated outside the IOTC area of competence shall endeavour to apply this Resolution.

## Appendix II: Fishing gear design and specifications that can be encountered in the Indian Ocean region

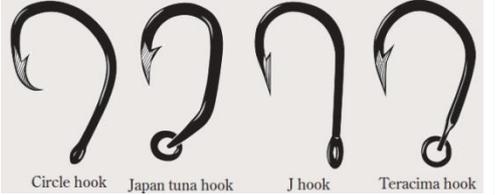
### Pelagic longline

A drifting longline (pelagic longline) consists of a mainline that is held near the surface or at a certain depth by means of regularly spaced surface buoys or floats. Branch lines, (also known as droppers, snoods or ganglions) with baited hooks are suspended from the main line at regular intervals between the buoys. The entire line can extend from 20 to over 120 km.



<p>Mainline</p>	<p>There are two distinct longline systems, separated by the specifications and storage method of the mainline. The first system uses a multi-strand mainline that can consist of tarred rope or braided nylon monofilament. The mainline is stored in large coils or is layered down in a large bin or storage well. A “line hauler” on the starboard side hauls the line. The second system (sometimes termed “Mono” system) uses monofilament nylon mainline approximately 6mm in diameter that is stored on a large drum or reel.</p>	
<p>Branch lines / traces</p>	<p>A typical branch line can vary between 30 m to 50 m in length and are attached to the mainline with a stainless steel tuna clip. Branch lines can be simple with one type of line material between the snap and the hook or they can be more complex with multiple types of line and swivels attached. Multiple materials usually include an initial section of nylon / polyester braid combinations which is then attached to a length of monofilament leading to a hook. Barrel swivels are used to connect sections, some of which may be weighed with lead. On Large Scale Tuna Longline Vessels (LSTLV’s) branch lines are generally prepared in coils and packed into baskets. On vessels using the mono-system the branch lines are generally of a uniform material and these are layered into large rectangular “tubs.” On vessels using shorter longlines the branch lines and buoy lines may be wound up on to large reels one on top of the other.</p>	
<p>Bullet-buoy / Hard-floats / Radio-buoy / light-buoy</p>	<p>Buoys or floats are attached to the main line by buoy-lines at intervals to keep the mainline near the surface. The length of the buoy-lines can also be varied to influence the fishing depth. These include <i>Hardfloats:</i> are made from a rigid plastic and can withstand a high pressure should a large fish pull them under.</p>	

Appendices

	<p><i>Bullet-buoys</i>: are made of a soft polyurethane foam material. Various “Marker-buoys,” <i>GPS beacons</i>, <i>radio buoys</i>, <i>light buoys</i> and <i>radar reflectors</i> (highflyers) are used individually or in combinations to mark the location of the fishing gear and are attached at fixed intervals along the line. These also assist in locating the end of the line if it is accidentally cut or broken.</p>	
Hook types	<p>Different shapes and sizes of hooks are used depending on target species. The most common are the Japanese hook with a ring, circle hooks and “J”-hooks.</p>	
Line setter	<p>A line setter / shooter – is situated on the stern and is used to pull mainline from drum or its storage bin. It deploys the mainline at a consistent speed during setting, (m/s). By varying the line setter speed to the vessels setting speed the depth of the hooks can be controlled.</p>	
Line Hauler	<p>Mainline hauler – uses hydraulic motor to assist with pulling gear on board. Vessels that use a multi-strand rope or braided nylon monofilament mainline that is stored in layers in a large bin or storage well will use a line hauler. The line hauler is generally positioned on the starboard side.</p>	
Branch line hauler/coiler	<p>A branch line hauler/coiler – winds branch lines into tight, consistent coils and assist in quickly recovering and packing branch lines for the next set.</p>	
Bait Casting Machine (BCM)	<p>The bait casting machine is used to cast the bait away from the vessel outside of wake zone. It is generally situated on the stern rail on the port side of the line setter.</p>	

**Industrial tuna purse-seine**

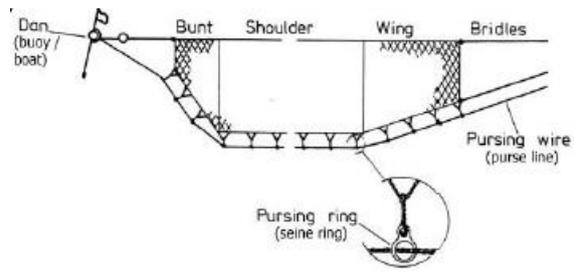
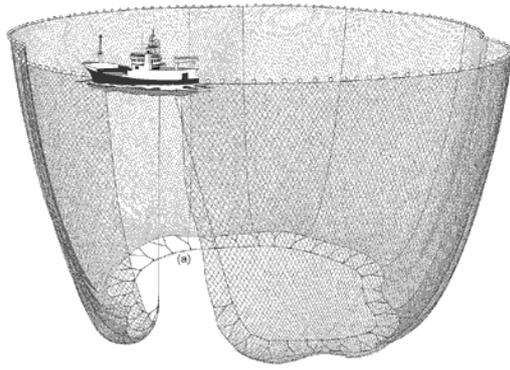
Tuna purse-seining is an active fishing technique that involves surrounding tuna schools with a net, impounding the fish by pursing the net, and drying up the catch by hauling the net back onboard net so that the fish are crowded into the bunt of the net and can then be brailled out. The period from deployment of the net until the net is recovered onboard, is called a set.

Purse Seine: A wall of netting, that can measure 1500 to 2000 m long and 120 to 250 m in depth, equipped with a floatline along the upper edge, to keep the top of the net on the surface and a chain attached to bottom of the net to weigh it down. Steel rings (purse rings) are attached to the chain and a steel cable (purse line) feeds through the rings to enable fisherman to close the net from below.

Purse Line/ cable: The steel cable passing through the purse rings which, when drawn on, cinches (purses) the lower portion of the net closed.

Skiff: Powerful boat of approx. 8 m length and engine of approx. 600 HP, used to assist in setting the net around a school of fish.

**Hauling Device:** A hydraulic power block attached to the end of a boom is used to haul the net back and restack it in the net bin ready for the next set.



Tuna purse-seine gear components

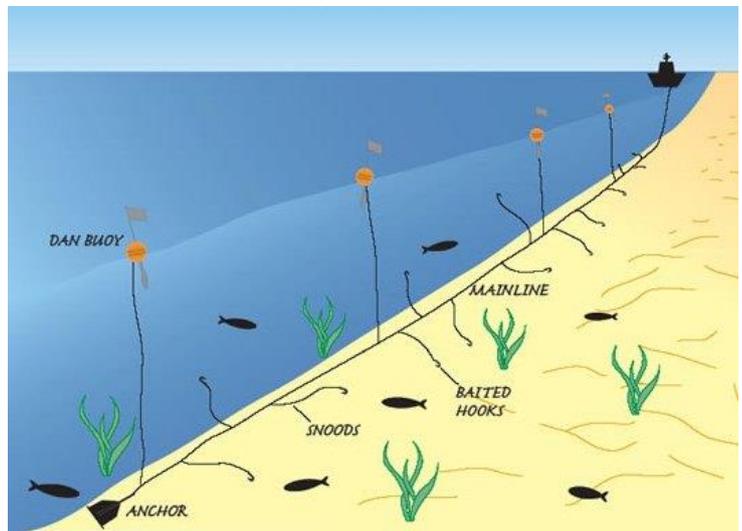
### Demersal longline

Demersal longlining is a passive fishing technique making use of baited hooks to attract and catch fish. Demersal longlines are weighted and set onto or close to the seabed and are anchored at each end.

The lengths of demersal longlines can vary greatly. Inshore artisanal longlines may have only a few hundred hooks and extend less than one kilometre. Larger commercial longliners can set lines over 30 km long with more than 30 000 hooks in depths over 2000m.

A number of variations exist in demersal longline design, and these include:

- Single lines
- Double lines
- Trot lines
- Vertical drop lines



Demersal longline diagram (Source Australia).

#### Single line system

Consists of a single mainline with snood spaces at 1 to 2 meter intervals along its length. Made up out of rope or cord that is normally negatively buoyant. Weights may be attached at intervals along its length to increase its sink rate and hold the line onto the seabed. Modern systems have a lead core integrated into the mainline to increase weight, called integrated weighted lines (or IW lines).

Single line systems can be automated and together with automatic baiting machines a large number of hooks can be set and hauled compared to other systems, and fewer crew are required.

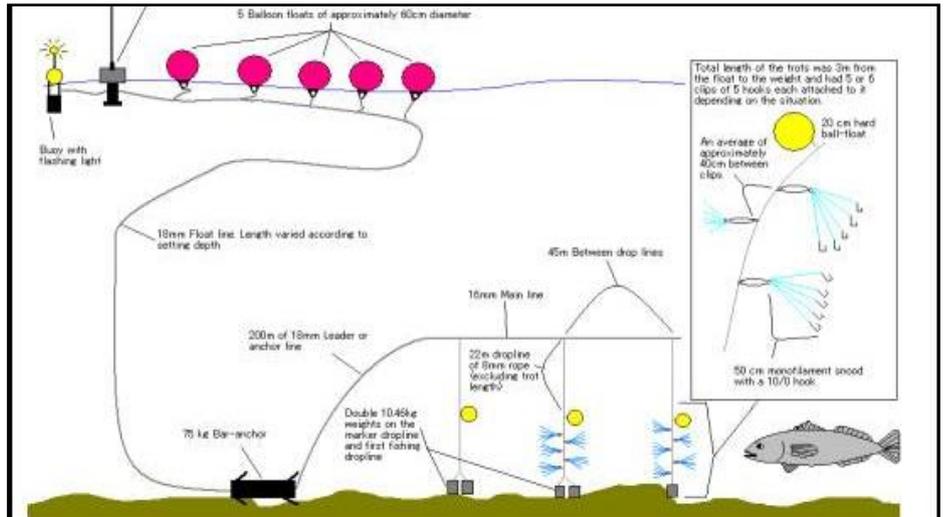
However, single lines are restricted to relatively flat or soft grounds. If the line gets fouled and breaks, it can be hauled from the opposite end.

#### Double Line system

Two lines set together, a floating top line, (mainline) that is connected to a bottom ground / fishing line. Top and bottom lines are connected by droppers (branch lines) at fixed intervals. The bottom line has weights attached to weigh it down with snoods and hooks attached at short intervals between one and 2 meters apart. If the bottom line gets fouled on the seabed and breaks, hauling can continue on the top line and the next dropper will then recover the broken end of the bottom line. Can be set over foul grounds where single lines cannot be used. Double line systems cannot easily be automated and are labour intensive, requiring more crew.

Trot Line system

Modification of the double line system that uses a floating topline and has branch lines of 25 meters long attached at regular intervals of 20 to 50 meters apart. At the end of each branch line a length of hook line is attached with hooks or “trots of hooks’ attached. At the bottom of the hook line a weight is attached to weigh it down. The hooks are therefore set vertically above the seabed. A small high pressure float may be attached above the hook line to tension it vertically. The distance of the hooks off the seabed is determined by the length of the hook line and the spacing of the hooks and normally is not more than 3 to 4 meters. This system can be set over rugged seabed with less chance of being fouled. It is labour intensive and cannot be automated. It allows for the addition of mitigation measures to prevent marine mammal predation.

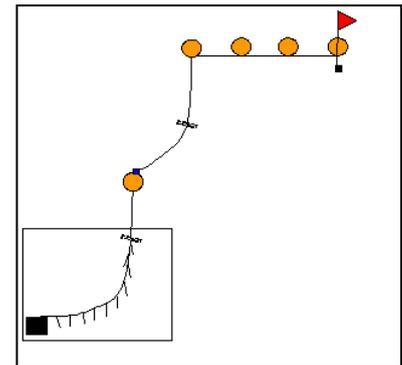


Vertical Droglines

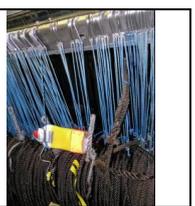
Set vertically with a single weight at the bottom, a series of hooks attached to snoods on the line and a float at the top.

The length is determined by the water depth and the position of hooks by the depth range of the fish being targeted.

Can be set on seamounts or pinnacles or next to steep drop-offs and cliffs where longlines cannot be set.



Demersal longline gear components

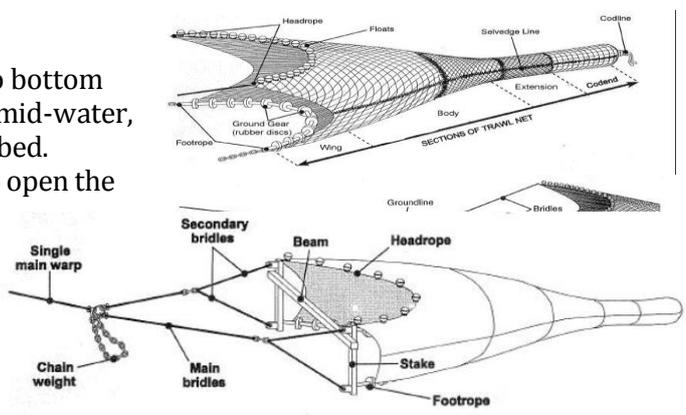
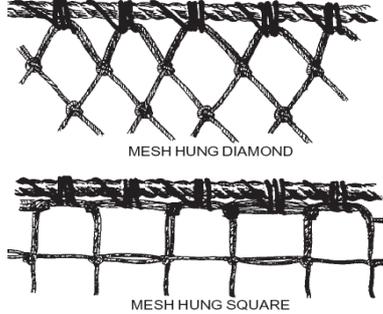
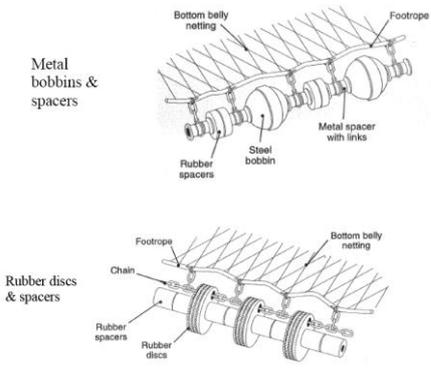
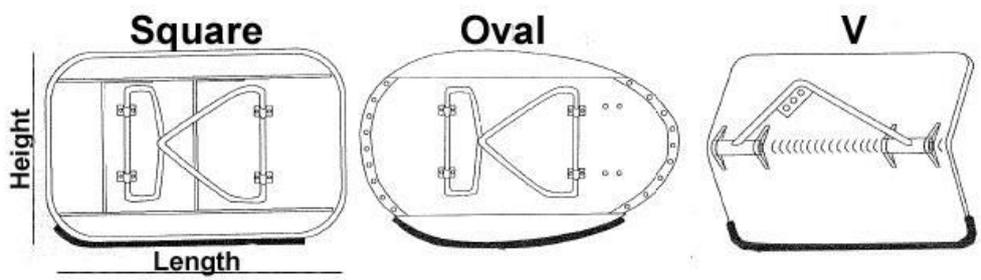
Magazines	Single lines are made up into magazines with up to 1000 hooks. The hooks are hooked into a groove on the magazine and as the line is set they slide off the end and pass through an automatic baiting machine where the hooks pick up bait before entering the water. Magazines are connected to each other during the setting process.	
Pots (baskets) / cases	For double line systems, sections of bottom line are made up into pots, baskets or cases. A single pot holds several sections of bottom line. Snoods and hooks are attached at fixed intervals (0.8 to 1.2 meters apart). Sections of line are joined together with short “strops” and the branch lines that attach the bottom line to the topline and to weights are attached at these junctions. Pots or baskets fit into each other, and are joined together to make up a continuous line during setting	
Branch lines, (Droppers)	Branch lines which connect top and bottom lines are about 25 meters long, and allow the top-line to float free of the bottom. They are attached while the line is being set.	

*Appendices*

Stones	“Stones” are weights attached to the bottom line to weigh it down. Originally round stones were tied up in a piece of old netting and attached to the line with a short strop. Many vessels now use concrete weights (4-6 kg) with a strop cast into the cement.
Snoods	Snoods are short lengths of mono-filament nylon (approx. 1 meter long) attached to the bottom line with the hook at the other end.
Anchors & down-lines	The entire line is anchored at each end using anchors or weights. Anchor lines (or down-lines) connect anchors to marker buoys on the surface.
Buoys / balloons	The buoys on the surface are often called “balloons”. Normally several buoys are attached to each other.
Dan-buoy / Light-buoy / Radio-buoy	A dan-buoy is a buoy with a pole set through the centre; one end of the pole is weighed and the other has a flag and/or light attached to make it more visible.

**Trawl**

Stern Trawler	Deploys and hauls nets over a ramp at the stern of the vessel. Are able to operate in adverse weather and can shoot and haul their net and catch quickly.
Side Trawler	Deploys and hauls nets over the side.
Beam Trawler	Deploys smaller trawls targeting smaller species such as shrimp or prawns. The net is kept open by a solid frame or beam and no doors are required.
Ramp	Angled ramp at stern of a stern trawler for deploying and hauling the net back onto the trawl deck. The photograph also shows the trawl doors. 
Warps	The main cables (steel wire rope) used to tow a trawl.
Warp drums / Trawl winches / Donkey winches	The warps are stored and winched in on the warp-drums, normally one on each side of the trawl deck. Smaller winches on the deck, trawl winches or “donkey winches”, are used to lift and empty the net. 
Net drum	The trawl net is generally longer than the trawl deck and to haul it in and store it, it is rolled up onto a net drum. 
Gantry	A distinguishing structure on a stern trawler. Forms a high bridge across the trawl deck and is used to haul up the cod end to empty it into the ponds.
Top-rope	The top-rope is attached to the top of the net opening.
Foot-rope	The foot-rope is attached to the bottom of the net opening.
Trawl buoys	Trawl buoys are attached to the top-rope to raise it off the bottom and assist in opening the net vertically. 
Cod-end	Bag at the end of a trawl net in which fish collects during a trawl. Usually made up of stronger net material and can be opened at its end to empty out the fish.

<p>Trawl net</p>	<p>The main categories of trawl nets are:</p> <p><b>Bottom trawls (otter trawl):</b> Shaped like a long triangle with the widest part forming the net opening and tapering down to a narrow bag (or “codend”). Towed along the seabed and kept open by two “trawl doors”.</p> <p><b>Mid-water trawls:</b> Similar to bottom trawls but it is towed in the mid-water, between the surface and seabed. Trawl doors are also used to open the net.</p> <p><b>Beam trawls:</b> The net is kept open by a solid bar or beam and no doors are required.</p>  <p>The diagrams show 'SECTIONS OF TRAWL NET' with labels: Headrope, Floats, Solivedge Line, Codline, Extension, Codend, Body, Wing, Ground line (rubber discs), Footrope. The second diagram shows a beam trawl with labels: Single main warp, Chain weight, Main bridle, Secondary bridle, Beam, Headrope, Stake, Footrope, Groundline, and Bridles.</p>
<p>Net</p>	<p>Net mesh size and orientation vary according to the target species and net type. Mesh orientation is normally “diamond” shaped or “square”. Net mesh sizes and orientation also vary within the construction panels of the net. Square mesh panels may be inset to facilitate small fish escaping out of the net as the square mesh maintains its shape while being hauled and the diamond mesh has a tendency to close with the hauling the net.</p>  <p>The diagrams show 'MESH HUNG DIAMOND' and 'MESH HUNG SQUARE' configurations.</p>
<p>Bobbins / Rubber discs / Rock Hopper Gear</p>	<p>Bobbins are steel balls that are sometimes attached to the foot-rope for trawling over rocky grounds. Rubber discs of the same diameter are placed between the bobbins to make up “Rock Hopper” gear.</p>  <p>The diagrams show 'Rock Hopper' gear with labels: Metal bobbins &amp; spacers, Bottom belly netting, Footrope, Metal spacer with links, Steel bobbin, Rubber spacers, Rubber discs, Chain, Rubber spacers, Rubber discs, Bottom belly netting.</p>
<p>Trawl doors</p>	 <p>The diagrams show three types of trawl doors: Square, Oval, and V. The Square door has labels for Height and Length.</p> <p>Two trawl doors are attached to the net opening. The orientation of the doors and water pressure from the flow over the doors causes them to move out perpendicular to the forward movement of the vessel, thus opening the net. Several types exist, including Oval, “V” and Square doors. They are heavily reinforced for towing on the seabed. Pelagic trawls use rectangular hydrodynamic pelagic doors that are lighter in construction, as they do not have contact with the seabed.</p>

## Gillnet

Driftnets or gillnets consist of a series of net panels that are suspended in the water column. It is a passive method of fishing that does not use bait or actively trap fish. The fish swim into the net and become entangled. Gillnets can be broadly classified into several categories: set nets (anchored); trammel nets and drift nets.

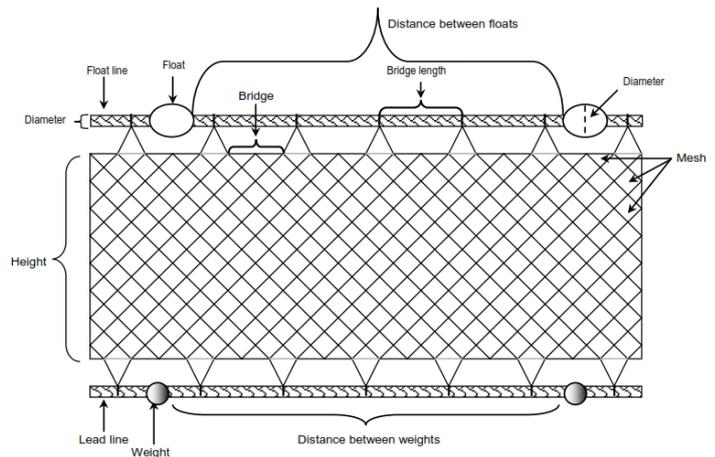
A trammel net consists of three layers of net. A slack, small mesh, inner panel of netting is sandwiched between two outer layers of netting, which are taught and have a larger mesh size. The inner panel may be made of twisted or monofilament nylon, whilst the outer panels are generally made of twisted nylon filament.



Gillnetter operating in the Indian Ocean.

Both trammel and gill nets entangle fish in three different ways. The fish may become wedged, held by the mesh around the body; gilled, caught by the gills; and tangled, held by teeth, spines or other protrusions without necessarily penetrating the mesh. The mesh size of gillnets can be highly effective at selecting or regulating the size of fish caught. Fish that are smaller than the mesh of the net are able to pass through the net unhindered, while those, which are too large to push their heads through the meshes as far as their gills, are also less likely to be caught. Trammel nets also entangle fish in bags or pockets of netting. This occurs when fishes swim through one of the outer panels, hit the inner panel, and are carried through to the other outer panel, which creates a bag or pocket, thereby trapping the fish. Trammel nets are therefore less selective in the size of fish caught.

Gillnets and trammel nets are widely used all over the world, both in inland and in the marine environment, especially with artisanal fisheries. Driftnets were used extensively on the high seas by a number of countries in the 1980's to target tuna. However, they were also associated with high numbers of incidental capture of marine mammals and turtles. The use of drift nets longer than 2.5 kilometres on the high seas was banned by the United Nations in 1991. In 1993, the United Nations banned gillnets in international waters but their use is still permitted at the discretion of the coastal states within their exclusive economic zone. The IOTC has 757 vessels registered to fish with gillnets.



Gillnets are generally made up out of a series of panels with a weighted "footrope" attached along the bottom, and a "headline", to which floats are attached. Panels of net are commercially available in "skeins" and a vessel can easily store a large number these on on-board to make up nets while at sea to replace lost or damaged nets. The headline, (float line) is buoyed using solid foam, oval or cylindrical buoys. The footrope is weighed using lead weights or integrated lead core rope. The relation of floats to the weighted footrope will determine if the net will float or sink.

In shallow water, set nets and trammel nets are anchored to the seabed and the anchor lines determine the vertical orientation, while drift nets are set on or just below the surface and are not anchored and allowed to drift with the currents.

Gillnets are constructed out of both monofilament nylon and multifilament materials. The size of the mesh is determined by stretching the mesh and measuring the distance from knot to knot in either centimetres or millimetres. The spacing between two points where the net is attached to the headline is called the bridge length. The hanging ratio determines the depth and mesh tension on a panel of net. The hanging ratio is

effectively the relation between the length of the net attached to the headline or footrope divided by the maximum length of the net. This can be calculated by dividing the bridge length of a single mesh by its stretched length. The size and spacing of floats on the headline and weight of on the footrope will also vary depending on where the net is to be positioned in the water column. A number of gillnet panels can be made up into a single net and several nets can be connected into a continuous net. Driftnets used on the high seas can extend up to 60 km.

On small boats, gillnets are handled by hand while hydraulic net haulers and/or net drums are used on larger vessels to handle and store nets. To determine catch per unit effort in this fishery observers will be required to record a range of data fields that include information on the specifications of the net, the setting strategy as well as vessel parameters.

A bottom-set gillnet can be defined as a wall of netting with a weighted groundline holding it on the seabed and kept more or less vertical by a floatline.

Alternative terms: Bottom-set nets gillnets, Entangling nets, Trammel nets

Net panel (skein) of net: variable length, depths, mesh sizes and materials obtainable from net manufacturers.

Fleet: Number of net panels connected together. Single working unit that is set and hauled.

Floatline (Top rope): Attached to the top row of meshes and connects net panels into a continuous net (fleet).

Weightline (groundline): Weighted rope attached to the bottom row of meshes connecting fixed number of net panels of a fleet in conjunction with the float line.

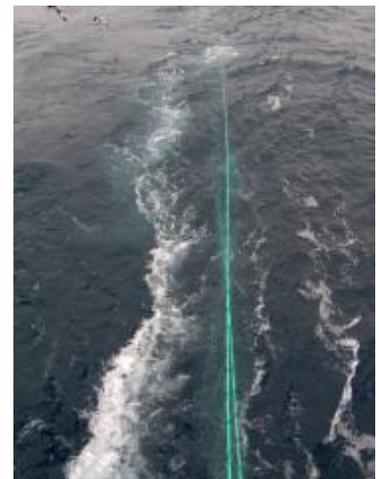
Terminal anchor and buoys: weights: anchor and marker buoys attached to the end of each fleet, (similar or the same as those used to mark the ends of a longline).



Drum or net roller used to haul in the gillnet



Guide to haul a gillnet over the side inboard.



Gillnet being set showing top rope and weighted bottom rope.



Chute or channel used to guides the net from the hauling point to the stern where it is stored ready for deploying.



Chain links used to anchor the net.

### Pole and Line

A pole and line consists of a hooked line attached to a pole. Poles are made of wood (including bamboo, also constructed of split cane) and increasingly of fiberglass. In industrial fisheries, "Pole and Line vessels" fishing for tuna can range from 15 to almost 40 meters in length with special arrangement for using as many poles as possible from the side of the boat and for keeping bait on board, in the best condition, if possible alive. The fish holds are divided up into a main central hold and smaller holds or tanks. The main hold is used to preserve the catch and is usually refrigerated on the larger vessels. Smaller vessels may use ice to preserve the catch on shorter trips.



Pole and line vessel of the fleet of Maldives.

Similar to purse seine operations, the daily activity of pole and line vessels is taken up with searching for fish with actual fishing events taking place over a relatively short period of time. However unlike purse seiners, pole and line vessels also spend a significant amount of time catching live bait. The high seas tuna fishing grounds are often far from the bait fishing grounds, presenting some unique challenges to this fishing technique. Fishing for bait takes place in sheltered waters, targeting sardines, anchovies and small mackerel. This is often done at night and lights are used to attract certain bait species. Underwater lights are also set at times.



Poling with sprays on.

Purse seine nets are normally used to catch the hardier species of bait fish and are deployed by the bait boat, skiffs, or from the beach. Lift nets (boke-ami nets) are used to catch the delicate species of baitfish. These nets are deployed from the side of the bait boat. Bait fish are loaded by scoop nets (dry) or by buckets filled with water (wet) into the bait tanks of circulating sea water.

Methods of searching for tuna are similar to that of purse seiners and entail:

- Acoustic sonar and depth sounders to detect shoals of fish in the immediate vicinity of the vessel and are used to assess the school before setting the net;
- Searching for sea birds associated with tuna;
- Searching for schools of dolphins or other marine mammals,
- Locating or deploying fish aggregation devices, FADs or locating floating objects such as floating tree trunks or dead animals around which schools of fish are likely to aggregate.

Once a school is sighted the vessel approaches at full speed. The sonar indicates whether tuna are present, the size of the fish and the density of the school. The echo sounder indicates the depth of the school. Both devices are monitored closely throughout the operation.

Once the vessel is stationary over the school, the sprayers are turned on. As the school nears the surface, the order is given to commence chumming. The combination of the spray agitating the surface and chum is used to get the fish into a feeding frenzy. Fishing commences when the tuna are observed near or on the surface starting with live bait. Feathered jigs normally replace live bait when a feeding frenzy is induced.

Hooked fish are pulled from the water rapidly and many tons can be landed in a short period of time. A single pole fisherman can comfortably land fish up to 15kg in weight. Poles are often paired for heavier fish.



Poling the tuna into the boat.

Special lines are also strung from the ends of the poles to overhead blocks for more lifting power when large fish are encountered.

When fishing on a FAD, the initial catch normally consists of rainbow runner and dorado. These fish occupy the top layer and have to be landed before the yellowfin and skipjack are caught. At times fishing may be halted before the school is exhausted, and the boat drifts with the school. Various methods are used to encourage more tuna to aggregate under the bait boat before fishing recommences. These include:

- Fishing for short intensive periods.
- Turning on water sprayers and chumming between fishing sessions.
- Drifting day and night.
- Turning on powerful deck lights at night.

Pole and line boats often collaborate with purse seiners. After filling the fish hold they might seek an agreement from a purse seiner, before providing the location of a school.



Catch in the hold of a pole and line vessel.



Catch on the deck of a pole and line vessel.

### Bait Boats

Bait boats working exclusively for a purse seiner do not land their own catch and are paid by the purse seine fishing company. They drift with a school of associated tuna until it is large enough to be commercially viable. Bait boats also deploy FADs on behalf of purse seiners.

The communication between groups of vessels working together can cover hundreds of miles, with the purse seiners providing valuable meteorological information to the smaller and more vulnerable pole and line vessels.

## Appendix III: Navigation, latitude and longitude

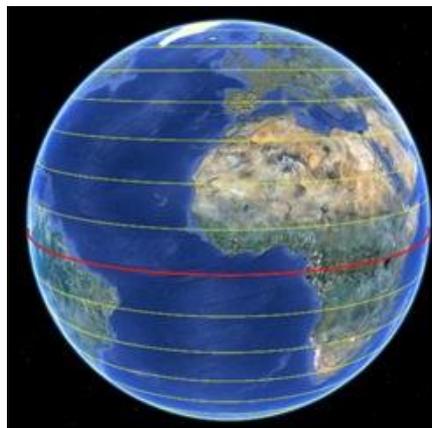
Any position, anywhere on the earth's surface, can be referenced in degrees of Latitude and Longitude. Lines of Latitude are used for measurements north and south of the equator and are represented as horizontal lines running east-to-west (or west to east) on maps. The Equator ( $0^\circ$  Latitude) is a line around the earth that is exactly half way between the North and South poles and divides the earth into the Northern Hemisphere and the Southern Hemisphere. Technically, latitude is an angular measurement in measured degrees (marked with  $^\circ$ ) ranging from  $0^\circ$  at the equator (low latitude) to  $90^\circ$  at the north and south poles. Latitude can never exceed  $90^\circ$  North or South:

- Latitude North of the equator abbreviated symbol (N),
- Latitude south of the equator abbreviated symbol (S).

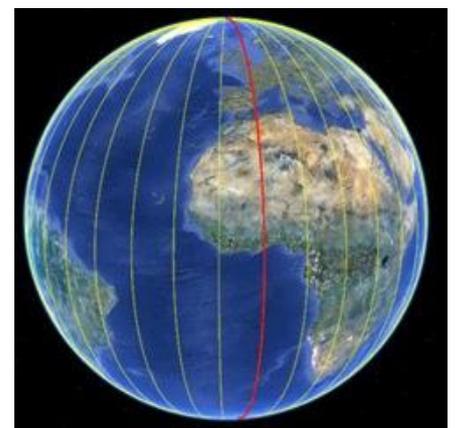
Longitude is used in navigation for east-west measurement. Lines running from north to south on a chart represent constant lines of longitude.

All lines of longitude cross at the poles. "Greenwich" or "Prime" Meridian, is the line of longitude (meridian) that passes through the Royal Observatory, Greenwich, in England. This has been chosen as the  $0^\circ$  Longitude and lines of longitude are measured in degrees East (E) and West (W) of Greenwich to a maximum of  $180^\circ$ . The line of longitude at that position is referred as the  $180^\circ$  longitude or International Date Line. The Greenwich Meridian and  $180^\circ$  line of longitude divides the earth into an Eastern and Western hemispheres.

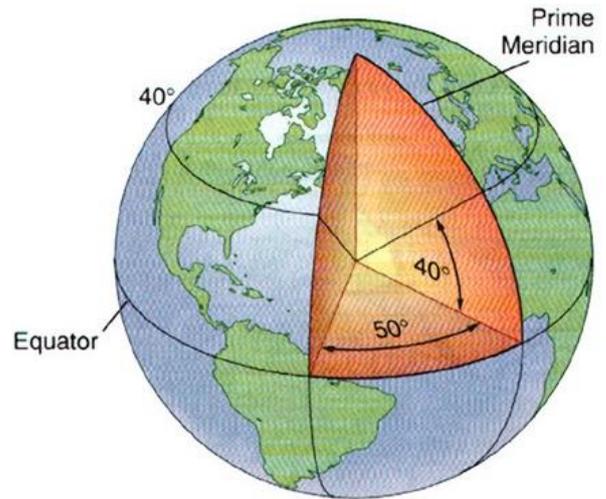
Remember both latitude and longitude are measured in degrees ( $^\circ$ ) and minutes ( $'$ ), and points of minutes, or seconds ( $''$ ). For example:  $34^\circ 21.5274' S$   $018^\circ 30.3789' E$ . The decimal points of minutes can also be converted to seconds by multiplying the decimal point by 60, e.g.  $34^\circ 21'31.644''S$  and  $18^\circ30'22.734''E$  to facilitate plotting on the Mercator projection charts.



Latitude lines.



Longitude lines.



Cutway view of the Earth. The east-west line  $40^\circ$  north of equator is latitude  $40^\circ N$ ; the north-south line  $50^\circ$  west of the prime meridian is longitude  $50^\circ W$

### Navigation charts

A most common mercator projection navigation chart shows a small part of the earth's surface. These navigation charts are orientated so that the top of the chart is always directed towards the North. Lines of latitude and longitude are straight lines with lines of latitude running horizontally across the chart [East - West] and lines of longitude running vertically [North - South]. Lines of latitude and longitude are therefore perpendicular ( $90^\circ$ ) to each other. The units of latitude are shown on the sides of the chart with the latitude increasing towards the poles. Units of longitude are shown along the top and bottom of a chart with the angle increasing to the East or West.



A position on a chart can be determined by drawing a line horizontal to the side of the chart to get the latitude and by drawing a vertical line from the position to the top or bottom of the chart to get the longitude.

**Vessel course and tracks**

The course of a vessel is the direction in degrees towards which it is steering. A course is referenced in the three-figure notation from 000 to 360 degrees and is read off the compass rose that is marked on the chart.

The route or tracks followed by a vessel can be plotted on a chart or recorded on an electronic plotter. Electronic navigation systems allow for tracks to be saved on the unit and often these can be downloaded onto portable storage devices.

An inspector could record a series of positions and re-plot these on a chart to provide verification of a vessel’s movements. Similarly, depending on the system employed on the vessel, its movements could be copied off the plotter or the computer used for navigation. These can then be cross checked to VMS information.

**Speed and distance**

In nautical terms distance is measured in “nautical miles” (nm) and speed in “nautical miles per hour” (knots). One nautical mile equals 1.852 kilometres. By definition one (1) nautical mile is equal to one (1) minute of latitude and can be measured using the latitude scale on the side of the chart. However it is important to note that due to the projection (Mercator projection) of a standard navigational chart, distance **can only be measured from the closest latitude scale and cannot be measured from the longitude scale.**

Theoretically, the shortest distance between any two points on the earth’s surface is the arc of the meridian or angle created by the lines from the two points to the centre of the earth. In the case of straight north-south tracks where the longitude remains the same the distance between two positions can be calculated by determining the difference in latitude (d-lat) in minutes, which is equivalent to the distance in nautical miles.

To accurately calculate the distance between any two positions where there is a difference in both latitude and longitude the calculation is more complex; involving d-lat and d-long formulas.

**A=**             $\text{Sin} (d\text{-lat}/2)^2 + \text{Cos}[\text{start lat}] * \text{Cos} [\text{end lat}] * \text{Sin}(d\text{-long}/2)^2$

**C=**             $2*(\text{atan2}[A^{0.5} , (1-A^{0.5})])$

**Distance**    in Kilometres =  $C*6371$

                  In Nautical miles =  $C* 3440$

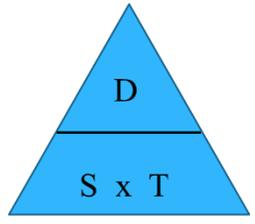
However, this is facilitated on Mercator charts by using a set of dividers and taking the distance between the two points and using the closest latitude scale on the side of the chart which will then provide the distance in nautical miles.

Where;

- d-lat = latitude1 - latitude2
- d-long = longitude1 - longitude 2
- "Sin" and "Cos" are the trigonometric functions sine and cosine
- Atan2 is the trigonometric function arctangent

The distance covered by a vessel, its speed or the time that it will take to travel from one position to another, can be calculated from the (speed time distance) equations.

- Speed             $S= D / T$  nautical miles per hour (knots)
- Time              $T= D / S$  Time in hours and /or/ minutes (hr:min)
- Distance         $D = S \times T$  Nautical miles (nm)



It is unlikely that it will be necessary to calculate accurate distances in a routine inspection. However, if the difference in coordinates of two positions compared to the times recorded indicates that the vessel had to travel at impossible speeds then it would need to be verified.

*For example; a purse-seiner shoots its net in a position  $14^{\circ} 20' S$  and  $080^{\circ} 40'E$  at 1800 and 6-hours later makes a second set in a position  $18^{\circ} 00'S$  and  $081^{\circ} 00'E$  at 2400. The difference in latitude between the two positions is  $3^{\circ} 40'$  which is approximately 220 nautical miles. To cover this distance in six hours the vessel would have travelled at over 36 knots. Is this possible?*

**Time Zones**

A time zone is a region on Earth that has a uniform standard time for legal, commercial, and social purposes. On some vessels all the times relate to the zone time of their flag State or company headquarters.

When inspecting logbooks and fishing event times, check or query the time zone that the vessel was working in and if the vessel changed time during its trip. This would have to be taken into account when comparing fishing times at different positions. Greenwich Mean Time (GMT), now called Coordinated Universal Time (UTC) is the time at the Prime Meridian through Greenwich which establishes a common standard for time of events, e.g. VMS times of positions are in UTC which can then be converted to local time using the time zone calculations.

**Basic nautical terms**

TERM	GENERAL MEANING
Starboard	The right hand side of the vessel when looking forward.
Port	The left hand of the vessel when looking forward.
Forward	The forward part of the vessel (that is, towards the bow).
Aft	The after or rear part of the vessel (that is, towards the stern).
Midships	In the middle section of the vessel. The middle line across the vessels from port to starboard.
Aloft	Usually referring to going up the superstructure or the mast.
Bridge	The compartment or position from which command of the vessel is normally exercised by the master. The bridge provides a clear view ahead and to the side of the vessel and often a 360 degree view.
Deck	Any 'floor' you can walk on inside or outside the vessel. In the open air these are generally referred to as the Upper Deck.
Chart	Is a marine map showing coastline with prominent coastal features that may be used for coastal navigation. A marine chart also shows the depth of water with accurate depth contours used for marine navigation.
Nautical Mile (nm)	A nautical mile by definition is equal to one minute of latitude. In conventional distance this is equal to approximately 2020 yards or 1.85 kilometres. The standard measurement of distance in all sea and air navigation because it is based on latitude. Due to the projection of a Mercator chart distance can be measured on the latitude scale on the side of a chart and should be taken as close as possible to where the distance is being recorded.
Knot (kt)	One Knot = 1 Nautical Mile per hour. It is a speed not a distance.
Gyro Compass	A compass based on a highly stable, true north-seeking gyroscopic wheel. Gives True bearings and courses.
Magnetic Compass	A compass that seeks the Magnetic North Pole. Subject to errors from Variation and Deviation.
Meridian Passage	The instant at which the sun is either due North or South of the vessel (in effect, the vessel's own midday). Using a sextant, the precise latitude of the vessel can be calculated using the Nautical Almanac.
Vessel's Log	An accountable document which is the responsibility of the master. It is a legal document and is evidence in the event of court proceedings. It records all activities of the vessel along with navigational records and calibrations of key equipment. It is an offence to alter or forge Log entries.

**Appendix IV: Form – Advance Request for Port Entry (Annex A of resolution 10/11)**

ADVANCE REQUEST FOR PORT ENTRY									
1. Intended port of call			<input type="checkbox"/> (Enter port name) <input type="checkbox"/> (Enter port name) <input type="checkbox"/> Other						
2. Port State			(Enter port State name)						
3. Estimated date and time of arrival			_____/_____/_____ H__mn						
4. Purpose(s)		<input type="checkbox"/> Landing <input type="checkbox"/> Transshipping <input type="checkbox"/> Packaging <input type="checkbox"/> Processing of fish <input type="checkbox"/> Refueling <input type="checkbox"/> Resupplying <input type="checkbox"/> Maintenance <input type="checkbox"/> Drydocking <input type="checkbox"/> Force majeure							
5. Port and date of last port call			_____/_____/_____						
6. Name of the vessel				7. Flag State					
8. Type of vessel				9. IRCS					
10. Vessel contact information									
11. Vessel owner(s)									
12. Certificate of registry ID				13. IMO ID					
14. External ID				15. IOTC ID					
16. VMS		<input type="checkbox"/> No <input type="checkbox"/> Yes: National <input type="checkbox"/> Yes RFMO(s)			Type:				
17. Vessel dimensions		Length		Beam		Draft			
18. Vessel master name and nationality									
19. Relevant fishing authorization(s)									
Identifier	Issued by	Validity	Fishing area(s)	Species	Gear				
20. Relevant transshipment authorization(s)									
Identifier		Issued by			Validity				
21. Transshipment information concerning donor vessels									
Date	Location	Name	Flag State	ID number	Species	Product form	Catch area	Quantity	
22. Total catch onboard							23. Catch to be offloaded		
Species		Product form	Catch area	Quantity		Quantity			

**Appendix V: Data field descriptions and guide to complete the advance request to enter port (Annex A of resolution 10/11)**

Field No.	Data field	Field Description
1	Intended port of call	Record the name or code of the port where the vessel is requesting entry in free text format. Example <i>Mombasa</i>
2	Port State	Record the name of the port State using the ISO 3166 3-alpha country/territory codes. For example; <b>MOZ</b> (for Mozambique)
3	Estimated date and time of arrival	Record the expected date and time that the vessel will arrive at the port limits. The vessel may have to request permission or request a pilot from the port authorities to enter the port. Use: Date / Time format YYYY MM DD / HH MM Example: <b>2012 11 25 / 23 30</b>
4	Purpose(s)	Record all the reasons for the vessel requesting port access: Transshipping, Packaging, Processing of fish, Refuelling, Resupplying, Maintenance, Dry-docking. Commonly accepted codes can be used. Example: <b>LAN</b> ; <b>TRX</b> for landing and transshipping
5	Port and date of last port call	Record in free text the name or the code of the last port visited by the vessel and record the date of the last port call using the date format YYYYMMDD. Example; <b>Durban 2012 07 23</b>
6	Name of the vessel	Free text: Record the full name of the vessel as registered in relevant documents of the flag State. Example: <b>Koryo Maru -11</b>
7	Flag State	Record the name of the flag State where the vessel is registered using the ISO 3166 3-alpha country/territory codes. Example: <b>NZL</b> (for New Zealand)
8	Type of vessel	Record using ISSCFV codes (also known as FAO vessel type codes). Example <b>PS</b> (for purse seine), <b>LL</b> (for long liner)
9	International Radio Call Sign	Record the "Individual radio call sign of the vessel) assigned by their national licensing authorities Example: <b>TTFC, MD66G, UDSF, CHDS</b>
10	Vessel contact information	Free text: Record the means to communicate with the vessel either directly and / or via the vessel's agent. This is essential for port State authorities to respond to the vessels request. Contact details can include; INMARSAT, fax, email, mobile phone Example: Agent - <b>Mr Adams +3482456321</b> Vessel No.s <b>Tel 81-3-5473-0513, Fax 81-3-5473-0523</b> <b>Email ujc@unitedjpn.co.jp</b>
11	Vessel owner(s)	Free text: Record the full details of the owner of the vessel together with the owners contact details. Example: <b>Owner: Wang Tat Corporation Pte Ltd,</b> <b>Address: 27-4,4-chome Shinbashi, Minato-ku, Tokyo Japan</b> <b>TEL: 03-5473-0513 FAX: 03-5473-0523</b> <b>EMAIL: ujc@unitedjpn.co.jp</b>
12	Certificate of registry ID	Record the numeric or alpha-numeric identification of the vessel's registry as issued by the flag State. Example: <b>FRA000854430</b>
13	IMO ship ID, if available	Record (if available) the vessels International Maritime Organisation / Lloyds Register identification number for vessels. The IMO ship identification number is made of the three letters "IMO" followed by the seven-digit number Example: <b>IMO1234567</b>
14	External ID, if available	Record in free text <u>Vessel Name and Port of registry</u> ; which is international practice and in most cases a national requirement. The vessel name will be displayed on the bow and the vessel name and port of registry will be displayed on the stern. Example: <b>SEIWA / Panama</b> <u>IRCS</u> ( <i>International Telecommunication Union Radio Call Signs</i> ); should be displayed on both port and starboard sides of vessels superstructure or side of the vessel. For vessels over 25m the height of the letters must be at least 1m and approx. 16cm thick. The lettering must be either white on a black background or black on a white background. IRCS can be in the form of letters of the alphabet. Example: <b>JAAL</b>

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14	External ID, if available (Continued)	Or where the ITU (International Telecommunication Union) assigned to a country “national identifier” this can be displayed in combination with a flag States licence or registration number. In this case the national identifier will be separated from the other characters by a hyphen. For example: <b>9WA-9WZ</b> (ITU allocated set of numbers allocated to Malaysia) <u>Licence or registration number assigned by the flag State.</u> A flag State can also assign registration and licence number to identify its vessels. These can be in the form of letters of the alphabet or registration numbers and letters designated to a fishing sector. Example: <b>ST473-LT</b> (Registration number is ST473 and fishing sector line and tuna)
15	IOTC ID	Record the IOTC number by which the vessel is registered / authorised by IOTC For example; <b>IOTC008614</b>
16	VMS	Record if the vessel has a VMS fitted; <u>Yes: National</u> - Record if it reports to its flag State in terms of the flag State authorisation issued to the vessel <u>Yes: RFMO(s)</u> if the VMS information reports to the RFMO either directly or via its flag State Example: <b>NO YES - National Yes - RFMO</b>
	Type	Record in free text the type of VMS. Example: <b>INMARSAT-C Argos Euteltracs</b>
17	Vessel dimensions	Record in free text and numerically. This is standard information required to enter most ports for berthing and the vessel must provide its dimensions as stated on its registration document for. Example: <b>LOA - 54 m Beam- 12 m Draft- 6.5 m</b>
18	Vessel master name and nationality	Record in free text the name of the Master / Skipper / Captain of the vessel. (or <i>in absentia</i> the person onboard who has legal responsibility). The nationality of the Fishing Master according to their passport details must be recorded. <i>Note that a vessel may record the Captains details where these positions are filled by two persons.</i>
19	Relevant fishing authorization (s)	There are two categories of fishing authorization: <ul style="list-style-type: none"> <li>• Compulsory ATF from its flag State to fish on the high seas and within the area of a RFMO.</li> <li>• Fishing license that the vessel may have applied for from coastal States to fish within their EEZ (<i>Exclusive Economic Zones</i>).</li> </ul> Record details for each of the fishing authorization that corresponds to the areas, catch and gear on-board with respect to: identifier number, issuing authority, validity, fishing areas, species and gear. The vessel must have a valid (in-date) authorisations
	Identifier	Record the numeric or alpha-numeric identification of the authorisation to fish (fishing license / permit / authorisation). Example: (Japan) <b>Licence Number T1599</b> (Seychelles) <b>SC2011_14</b>
	Issued by	Record in free text the name of the relevant authority / agency / government department from flag State or coastal State issuing the fishing license / permit / authorisation. For example: <b>Director of Fisheries Management Division, Fisheries Agency, Ministry of Agriculture Forestry and Fisheries, Government of Japan</b>
	Validity	Record the date the authorisation to fish will <u>expire</u> . Use date format YYYY MM DD Example: <b>2017 07 31</b>
	Fishing area(s)	Record in free text <u>The flag State ATF</u> provided to the vessel should state in which RFMO and FAO Statistical areas where the vessel is authorised to operate. Record in free text Example 1: <b>Atlantic Ocean / Indian Ocean / Eastern Pacific Ocean</b> Example 2: <b>Indian Ocean (FAO Areas 51 &amp; 57)</b> <u>Coastal State ATF</u> can <u>only</u> give permission for the vessel to operate within its EEZ. Conditions may also apply with respect to the distance it can fish from the coast or where there are fisheries exclusion zones. Example: <b>Tanzanian EEZ</b> (Not closer than 12 nautical miles from the coast).
	Species	Record the details of the fish species that each authorisation to fish lists as target species. <i>Note these may be broadly stated as a group of species</i> Record in free text Example; <b>Tuna &amp; Tuna-like Spp. (Excluding Bluefin Tuna)</b>
	Gear	Record in free text or the ISSCFG code (also known as FAO gear codes) for the gear authorised / licensed to be used by the vessel. Example; <b>Longline or (LL)</b> <i>Note any other gear found on-board, which is not specified may be deemed IUU gear.</i>

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20	Relevant transshipment authorization (s)	Record details for each authorisation to tranship fish, corresponding to the fish that the vessel has on-board, which includes: <ul style="list-style-type: none"> <li>• identifier of each authorisation,</li> <li>• details of the issuing authority, and the</li> <li>• validity of the authorisation.</li> </ul>
	Identifier	Record the numeric or alpha-numeric identification of the transshipment license / permit / authorisation. Record transshipment unique identifier.
	Issued by	Record in free text the name of the relevant authority / agency / government department from flag State, coastal State or RFMO issuing the transshipment license / permit / authorisation. For example: <b>Tsuyoshi ONODERA, Far Seas Fisheries Division, Fisheries Agency of JAPAN</b>
	Validity	Record the <u>start and end date</u> during which the vessel may tranship. Format: Issued DD MM YYYY Expire DD MM YYYY.
21	Transshipment information concerning donor vessels	This item of the form should be filled when the vessel requesting entry into port took onboard catches from donor vessel(s) during transshipment operations.
	Date	Record date of transshipment. Format: DD MM YYYY. Example: <b>21 10 2012</b>
	Location	Record position (Latitude and Longitude or port) where transshipments took place Format; Position - Latitude DD MM (N or S) / Longitude DDD MM (E or W) or name of the port in free text. Example: Position; <b>05° 45' S / 067° 15' E</b> Port <b>Cape Town</b>
	Name	Record in free text the full name of donor vessel from which fish were received Example: <b>CHIYO MARU NO.18</b>
	Flag State	Record the donor vessels flag State. Use the ISO 3166 3-alpha country/territory codes Example: <b>MOZ</b> (for Mozambique)
	ID number	Record the IOTC Identity number of the donor vessel from which fish were received. Should these vessels not be on the IOTC positive list but be reflected on another RFMO listing then record these numbers. Should the vessel not be listed by a fisheries management organisation, record their IRCS or national registration number and / or IMO number if <u>available</u> . The object is to be able to positively identify the vessel. For example: IOTC No. <b>IOTC001635</b> ICCAT No. <b>AT000JPN00091</b> IRCS No. <b>JAAL</b>
	Species	Record the full list of species and products transhipped. Use FAO Species codes For example: <b>YFT</b> for Yellowfin tuna <b>SKJ</b> for Skipjack tuna
	Product form	Record the condition or production state of the catch as offloaded from the donor vessel; either processed or not. Use FAO production codes or the "Guidelines for the reporting of fisheries statistics to the IOTC (Table 19)". For example: <b>NO - Unprocessed</b> <b>DR - Dressed (gilled-and-gutted and/or headed and/or tailed and/or fins-off, etc.)</b> (Where possible cross reference the product code to its Conversion Factor. These are provided in the Species Identification section of the manual)
	Catch area	Record relevant geographical / statistical area where the catch was taken by the donor vessel. This should include as a minimum the FAO Statistical Subdivision and or Subareas. For example: <b>IOTC FAO 51 - EEZ MOZ or HS (high seas)</b> <b>ICCAT FAO 47 - HS</b> <b>CCAMLR ASD 58.4.2 - SSRUA</b>
	Quantity	Record the total quantity of fish offloaded from each donor vessel. Record weights in kilograms (Kg).
22	Total catch on-board	Record the total catch / product that is onboard when the vessel will enter the port. Detail to include: Species, Product form, Catch area and Quantity.
	Species	Record a full list of the species onboard. Use FAO Species codes Example: <b>YFT</b> for Yellowfin tuna <b>BET</b> for Bigeye tuna
	Product form	See product codes for transshipment
	Catch area	See position / area recording for transshipment
	Quantity	Record the weight for each species and product. Record weights in kilograms (Kg).
23	Catch to be offloaded	Record details and quantity of the catch that will be offloaded while in port. (If any)

**Appendix VI: Check List - Assessment of the Advance Request of Entry in Port**

 <b>CHECK LIST</b> <b>ASSESSMENT OF ADVANCE REQUEST OF ENTRY IN PORT</b>		
Name of officer		ID
Items/Actions	Date of Action	Potential irregularities/Comments/Results of Actions
AREP Received	...../...../.....	
Vessel name		
Flag		
IOTC Number		
<input type="checkbox"/> 1 <sup>st</sup> port call <input type="checkbox"/> Occasional <input type="checkbox"/> Regular		
Port and date of last port call:		
<b>Purpose of call:</b> <input type="checkbox"/> Landing <input type="checkbox"/> Transshipping <input type="checkbox"/> Packaging <input type="checkbox"/> Processing of fish <input type="checkbox"/> Refueling <input type="checkbox"/> Resupplying <input type="checkbox"/> Maintenance <input type="checkbox"/> Drydocking <input type="checkbox"/> Force majeure		
<b>Verification on IUU Lists</b> <i>(IOTC, ICCAT, CCSBT, IATTC, WCPFC, COLTO, NAFO, OPRT, EU, NORWAY)</i>	___/___/_____	On IUU list : Y <input type="checkbox"/> N <input type="checkbox"/>
<b>Verification on Positive Lists</b>	___/___/_____	On positive list : Y <input type="checkbox"/> N <input type="checkbox"/>
<b>In case not on positive lists, contact with:</b> <input type="checkbox"/> flag State <input type="checkbox"/> others _____	___/___/_____	
<b>Receipt of response</b>	___/___/_____	
<b>Flag State Authorization to fish</b> <b>In case not provided, contact with:</b> <input type="checkbox"/> flag State <input type="checkbox"/> coastal State	___/___/_____	
<b>Transshipment Authorization</b> <b>In case not provided, contact with:</b> <input type="checkbox"/> flag State <input type="checkbox"/> others _____	___/___/_____	
<b>Receipt of response</b>	___/___/_____	
<b>Transshipment information on donors vessels</b> <b>Donors vessels not on positive list, contact with:</b> <input type="checkbox"/> flag State <input type="checkbox"/> others _____	___/___/_____	
<b>Receipt of response</b>	___/___/_____	

<p><b>Request of additional information</b></p>	<p>Yes <input type="checkbox"/>          ___/___/___</p> <p>Response received:          ___/___/___</p> <p>No <input type="checkbox"/></p>	<p><input type="checkbox"/> Coastal State authorisation to fish          (specify):_____</p> <p><input type="checkbox"/> Flag State authorisation to fish</p> <p><input type="checkbox"/> Flag State authorisation to tranship</p> <p><input type="checkbox"/> Fishing logbook</p> <p><input type="checkbox"/> Certificate of registry of the fishing vessel</p> <p><input type="checkbox"/> IOTC transhipment declarations</p> <p><input type="checkbox"/> VMS record from ___/___/___ to ___/___/___</p> <p>Vessel master <input type="checkbox"/> Passport <input type="checkbox"/> National ID Card</p> <p><input type="checkbox"/> Others document:          (specify):_____</p>
<p><b>Recommendations</b></p>	<p>___/___/___</p>	<p><input type="checkbox"/> Allow entry and use of facilities</p> <p><input type="checkbox"/> Allow entry but no use of port facilities</p> <p><input type="checkbox"/> Deny entry</p>
<p><b>If entry authorized, recommendations for inspections</b></p>	<p>___/___/___</p>	<p><input type="checkbox"/> Flag State authorisation to fish/TRX authorisation</p> <p><input type="checkbox"/> Flag State authorisation to tranship</p> <p><input type="checkbox"/> Fishing logbook</p> <p><input type="checkbox"/> Others document on-board</p> <p><input type="checkbox"/> Fishing gear and associated equipment</p> <p><input type="checkbox"/> Others document:          _____</p> <p><input type="checkbox"/> Catch on-board</p> <p><input type="checkbox"/> Others:          _____</p>

**Appendix VII: Notification to fishing vessel following a request to enter port**

 iotc ctqi	<h2 style="margin: 0;">NOTIFICATION TO FISHING VESSEL FOLLOWING A REQUEST TO ENTER PORT</h2> <p style="margin: 0;">(IOTC Resolution 10/11 - Paragraph 7)</p>
--	--

Date: \_\_\_\_\_

**FROM:**

<b>Port State Name</b>	
<b>Competent authority</b>	

**TO:**

<b>Vessel representative</b>	
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INFORMATION ON FISHING VESSEL REQUESTING ENTRY IN PORT			
<b>AREP Received</b>		<b>Port of call</b>	
<b>Estimated date and time of arrival</b>	____/____/____	____ H ____ mn	
<b>Name of vessel</b>		<b>Flag of vessel</b>	<b>IRCS</b>
<b>IOTC Number</b>		<b>Certificate of registry ID</b>	

PORT STATE DECISION
<p><b>The following decision has been taken with regards to the request you have submitted to enter the port of _____</b></p> <p><input type="checkbox"/> Port entry authorised</p> <p><input type="checkbox"/> Port entry authorised - Use of port facilities denied</p> <p><input type="checkbox"/> Port entry denied for the following reasons:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Fishing vessel on IUU list</li> <li><input type="checkbox"/> Fishing vessel not authorised by flag State</li> <li><input type="checkbox"/> Fishing vessel not on the positive of the RFMO: _____</li> <li><input type="checkbox"/> Other: _____</li> </ul>

Name of officer	Date and signature	Official stamp

Transmitted to:	
<input type="checkbox"/> Customs: _____ <input type="checkbox"/> Immigration: _____ <input type="checkbox"/> Other Port Authority: _____ <input type="checkbox"/> Others: _____	<input type="checkbox"/> Flag State: _____ <input type="checkbox"/> Coastal State: _____ <input type="checkbox"/> RFO/RFMO: _____

**Appendix VIII: Request for additional information following a request to enter port**

 iotc ctoi	<h2 style="margin: 0;">REQUEST FOR ADDITIONAL INFORMATION FOLLOWING A REQUEST TO ENTER PORT</h2> <p style="margin: 0;">(IOTC Resolution 10/11 - Paragraph 7)</p>
--	--

Date: \_\_\_/\_\_\_/\_\_\_

**FROM:**

<b>Port State Name</b>	
<b>Competent authority</b>	

**TO:**

<b>Flag State Name</b>	
<b>Competent authority</b>	

INFORMATION ON FISHING VESSEL REQUESTING ENTRY IN PORT				
<b>AREP Received</b>		<b>Port of call</b>		
<b>Estimated date and time of arrival</b>	____/____/____	____ H ____ mn		
<b>Name of vessel</b>		<b>Flag of vessel</b>		<b>IRCS</b>
<b>IOTC Number</b>		<b>Certificate of registry ID</b>		

REQUEST FOR ADDITIONAL INFORMATION
<p><b>You are requested to provide the following documents as complementary information the request to enter the port of _____</b></p>
<p><input type="checkbox"/> Coastal State authorisation to fish (<i>specify</i>): _____</p> <p><input type="checkbox"/> Flag State authorisation to fish <span style="margin-left: 150px;"><input type="checkbox"/> Flag State authorisation to tranship</span></p> <p><input type="checkbox"/> Fishing logbook <span style="margin-left: 150px;"><input type="checkbox"/> Certificate of registry of the fishing vessel</span></p> <p><input type="checkbox"/> IOTC transhipment declarations (<i>From transhipment operation with donors vessels</i>)</p> <p><input type="checkbox"/> VMS record from ___/___/___ to ___/___/___ (<i>To be requested to the flag State/coastal State</i>)</p> <p>Copy of the vessel master <input type="checkbox"/> Passport <input type="checkbox"/> National ID Card</p> <p><input type="checkbox"/> Others document: (<i>specify</i>): _____</p> <p>_____</p>

Name of officer	Date and signature	Official stamp

Transmitted to:	
<input type="checkbox"/> Customs: _____ <input type="checkbox"/> Immigration: _____ <input type="checkbox"/> Other Port Authority: _____ <input type="checkbox"/> Others: _____	<input type="checkbox"/> Flag State: _____ <input type="checkbox"/> Coastal State: _____ <input type="checkbox"/> RFO/RFMO: _____

**Appendix IX: Data field descriptions and guide to complete the port inspection report form (Annex A)**

		<b>PORT INSPECTION REPORT FORM</b>				<b>1. Inspection report no</b>		<b>2. Port State</b>						
<b>3. Inspecting authority</b>														
<b>4. Name and ID of principal inspector</b>						<b>5. Port of inspection</b>								
<b>6. Commencement of inspection</b>						<b>7. Completion of inspection</b>								
Y		M		D		HH		Y		M		D		HH
<b>8. Advance notification received</b> Y <input type="checkbox"/> N <input type="checkbox"/>			<b>9. Purpose(s)</b> (√)		<input type="checkbox"/> Landing <input type="checkbox"/> Transshipping <input type="checkbox"/> Packaging <input type="checkbox"/> Processing <input type="checkbox"/> Refueling <input type="checkbox"/> Resupplying <input type="checkbox"/> Maintenance <input type="checkbox"/> Drydocking <input type="checkbox"/> Others									
<b>10. Last port call</b>		Port name			State			Date						
								Y		M		D		
<b>11. Vessel name</b>					<b>12. Flag State</b>			<b>13. Type of vessel</b>						
<b>14. IRCS</b>		<b>15. Certificate of Registry ID</b>		<b>16. IMO ship ID</b>		<b>17. External ID</b>		<b>18. Port of Registry</b>						
<b>19. Name, address &amp; contact of the vessel owner(s)</b>				<b>20. Name, address &amp; contact of the beneficial owner(s) (if different from vessel owner)</b>				<b>21. Name, address &amp; contact of the operator(s) (if different from vessel owner)</b>						
<b>22. Vessel master name and nationality</b>				<b>23. Fishing master name and nationality</b>				<b>24. Vessel agent</b>						
<b>25. VMS</b>		N <input type="checkbox"/> Y National <input type="checkbox"/> Y RFMOs <input type="checkbox"/>		Type:		<input type="checkbox"/> Argos <input type="checkbox"/> Inmarsat <input type="checkbox"/> Iridium <input type="checkbox"/> Others :								
<b>26. Status in IOTC, including any IUU vessel listing</b>														
Vessel identifier		RFMO		Flag State status				Vessel on authorized list		Vessel on IUU list				
								Y <input type="checkbox"/> N <input type="checkbox"/>		Y <input type="checkbox"/> N <input type="checkbox"/>				
<b>27. Relevant fishing authorization(s)</b>														
Vessel identifier		Issued by		Validity		Fishing area(s)			Species		Gear			
<b>28. Relevant transshipment authorization(s)</b>														
Vessel identifier				Issued by				Validity						
<b>29. Transshipment information concerning donor vessels</b>														
Vessel name		Flag State		ID no		Species		Product form		Catch area(s)		Quantity		
<b>30. Evaluation of offloaded catch (quantity)</b>														
Species	Product form	Catch area(s)		Quantity declared		Quantity offloaded		Difference between quantity declared and quantity determined						
<b>31. Catch retained onboard (quantity)</b>														
Species	Product form	Catch area(s)		Quantity declared		Quantity retained		Difference between quantity declared and quantity determined						

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<b>32. Examination of logbook(s) and other documentation</b>		<b>Y</b> <input type="checkbox"/> <b>N</b> <input type="checkbox"/>	<b>Comments</b>
<b>33. Compliance with applicable catch documentation scheme(s)</b>		<b>Y</b> <input type="checkbox"/> <b>N</b> <input type="checkbox"/>	<b>Comments</b>
<b>34. Compliance with applicable trade information scheme(s)</b>		<b>Y</b> <input type="checkbox"/> <b>N</b> <input type="checkbox"/>	<b>Comments</b>
<b>35. Type of gear used</b>		<b>36. Gear examined in accordance with paragraph e) of Annex 2</b>	<b>Y</b> <input type="checkbox"/> <b>N</b> <input type="checkbox"/>
<b>Comments</b>			
<b>37. Findings by inspector(s)</b>			
<b>38. Apparent infringement(s) noted including reference to relevant legal instrument(s)</b>			
<b>39. Comments by the master</b>			
<b>40. Action taken</b>			
<b>DATE AND SIGNATURE OF THE FISHERIES INSPECTOR(S)</b>		<b>DATE AND SIGNATURE OF THE CAPTAIN</b>	

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Field No.	Data Field Description	Field Information
1.	Inspection report No	Serial number of the report: [Country code]/[Port Code]/[0001]/[Year]. Example: MOZ/BEW/0001/2013.
2	Port State	Name or code of the port State.
3	Inspecting authority	Name of the port State authority/agency/government department deploying the inspector(s).
4	Name and ID of principal inspector	Name of the inspector if alone, or the inspector leading (senior) the inspection team. ID - the identification number (card) of the inspector should be added.
5	Port of inspection	Name or code of the port where the inspection takes place.
6	Commencement of inspection	Date and hour the inspection procedure started (date format: YYYYMMDD, and hour format HH).
7	Completion of inspection	Date and hour the inspection procedure ended. (date format: YYYYMMDD and hour format HH).
8	Advance notification received	Was advanced notice to enter port received; Y <input type="checkbox"/> N <input type="checkbox"/>
9	Purpose(s)	What are the purpose(s) for entering port? Include one or several of those categories below: Landing, Transshipping, Packaging, Processing, Refuelling, Resupplying, Maintenance, Drydocking, Others
10	Last port call Port name State Date	Free text. Name or code of the port the vessel last entered. ISO 3166 3-alpha country/territory codes. Example: MOZ = Mozambique. Date format: YYYYMMDD
11	Vessel name	Free text. Name of the vessel as registered in relevant flag State documents.
12	Flag State	ISO 3166 3-alpha country/territory codes  Example: NZL for New Zealand.
13	Type of vessel	International Standard Statistical Classification of Fishery Vessels (ISSCFV) codes, also known as FAO vessel type codes  Example:, TO = trawler, LL = longliner.
14	IRCS	Vessel's international radio call sign (IRCS)  Example: TTFC, MD66G, UDSF, CHDS.
15	Certificate of Registry ID	Numeric or alphanumeric identification of the vessel's registry as issued by the flag State.
16	IMO ship ID	IMO/Lloyds Register identification number for vessels. "IMO" followed by the seven-digit number. Example: <b>IMO1234567</b>
17	External ID	Record in free text <u>Vessel Name and Port of registry:</u>  For example: <b>SEIWA Panama</b>  <u>IRCS</u> ( <i>International Telecommunication Union Radio Call Signs</i> ); IRCS can be in the form of letters of the alphabet.  For example: <b>JAAL</b>  <u>National Identifier</u> this can be displayed in combination with a flag State's licence or registration number.  For example: <b>9WA-9WZ</b> (ITU allocated set of numbers allocated to Malaysia) <u>Licence or registration number assigned by the flag State.</u>  For example: <b>ST473-LT</b>
18	Port of Registry	Free text. Name or code of the port where the vessel is registered.
19	Name, address & contact of the vessel owner(s)	Free text. Name of individual(s) or company(ies) that own the vessel.
20	Name, address & contact of the beneficial owner(s) (if different from vessel owner)	Free text. Name of individual owner(s) controlling financially the owner company(ies), or holding company effectively controlling the ownership of the vessel.
21	Name, address & contact of the operator(s) (if different from vessel owner)	Free text. Name of individual(s) or company(ies) controlling the operational decisions of the vessel's activity.

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22	Vessel master name and nationality	Free text. Name of vessel's master/skipper/captain (or person with legal responsibility onboard).
23	Fishing master name and nationality	Free text. Name of the person responsible for the fisheries operations, if different from the master.
24	Vessel agent	Free text. Name of individual(s) or company(ies) representing vessel's interests, based in the port State or not. Such representation may or may not include legal accountability or liability.
25	VMS	Answer " <b>No</b> " if the vessel has no vessel monitoring system (VMS) equipment installed on-board Answer " <b>Yes: National</b> " if VMS equipment is installed on-board under vessel's flag State requirements; Answer " <b>Yes: RFMOs</b> " if VMS equipment is installed on-board under RFMO requirements.
26	Status in IOTC, including any IUU vessel listing	Should be filled if the vessel was operated in the area of competence of any RFMO. <ul style="list-style-type: none"> <li>• <u>Vessel identifier</u> - Numeric or alphanumeric identification of the vessel issued by RFMO if available.</li> <li>• <u>RFMO</u> Free text. Name of the RFMO(s).</li> <li>• <u>Flag State status</u>- Free text. Membership status of the vessel's flag State in the RFMO(s). "<b>CP</b>" for Contracting Party, "<b>Coop NCP</b>" for Cooperative Non-Contracting Party or "<b>NCP</b>" for Non-Contracting Party.</li> <li>• <u>Vessel on authorized list</u> - Is the vessel on an authorized vessel list issued by the RFMO(s) to operate in its area of competence? <b>Yes or No</b>.</li> <li>• <u>Vessel on IUU list</u> - Is the vessel on an IUU vessel list issued by the RFMO(s)? <b>Yes or No</b>.</li> </ul>
27	Relevant fishing authorization(s) <ul style="list-style-type: none"> <li>• <i>Vessel identifier</i></li> <li>• <i>Issued by</i></li> <li>• <i>Validity Fishing area(s)</i></li> <li>• <i>Species</i></li> <li>• <i>Gear</i></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Vessel Identifier</u> - Numeric or alphanumeric identification of the fishing license/permit/authorisation.</li> <li>• <u>Issued by</u> - Name of the relevant authority/agency/government department from flag State, coastal State and/or RFMO issuing the fishing license/permit/authorisation.</li> <li>• <u>Validity</u> - Date by which the fishing license/permit/authorisation will expire (date format: <b>YYYYMMDD</b>).</li> <li>• <u>Fishing area(s)</u> - Relevant geographical/statistical area where the vessel is authorised to operate (<i>e.g. FAO 77, NAFO 3M, ICES 11b</i>).</li> <li>• <u>Species</u> - ASFIS 3-alpha codes (also known as FAO species codes) (e.g., <b>WHB</b> for blue whiting, <b>SKA</b> for skates, <b>WRF</b> for wreckfish).</li> <li>• <u>Gear</u> - ISSCFG code (also known as FAO gear codes) for the gear authorised/licensed to be used by the vessel (e.g. <b>OTB</b> for bottom otter trawl).</li> </ul>
28	Relevant transshipment authorization(s) <ul style="list-style-type: none"> <li>• <i>Vessel identifier</i></li> <li>• <i>Issued by</i></li> <li>• <i>Validity</i></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Identifier</u> - Numeric or alphanumeric identification of the transshipment license/permit/authorisation.</li> <li>• <u>Issued by</u> - Name of the relevant authority/agency/government department from flag State, coastal State or RFMO issuing the transshipment license/permit/authorisation.</li> <li>• <u>Validity</u> - Date by which the transshipment license / permit / authorisation will expire. Date format <b>YYYYMMDD</b>.</li> </ul>
29	Transshipment information concerning donor vessels <ul style="list-style-type: none"> <li>• <i>Vessel name</i></li> <li>• <i>Flag State</i></li> <li>• <i>ID no</i></li> <li>• <i>Species</i></li> <li>• <i>Product form</i></li> <li>• <i>Catch area(s)</i></li> <li>• <i>Quantity</i></li> </ul>	This portion of the report should be filled in if the vessel unloaded catch from donor vessel(s) during transshipment operations. <ul style="list-style-type: none"> <li>• <u>Vessel Name</u> - Free text. Name of the donor vessel.</li> <li>• <u>Flag State</u> - ISO 3166 3-alpha country/territory code of the donor vessel's flag State.</li> <li>• <u>ID number</u> - Identification of the donor vessel (IRCS or IMO number).</li> <li>• <u>Species</u> - ASFIS 3-alpha codes (also known as FAO species codes) for the species offloaded by the donor vessel.</li> <li>• <u>Product form</u> - Condition of the catch as offloaded from the donor vessel, either processed or not (e.g., whole frozen; headed and gutted, tail off refrigerated).</li> <li>• <u>Catch area</u> - Relevant geographical/statistical area where the catch was taken by the donor vessel (e.g., US GOA 630, CCAMLR 48.6).</li> <li>• <u>Quantity</u> - Quantity of offloaded catch from the donor vessel, in MT or kg. If other units are used, they should be clearly identified.</li> </ul>

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30	<p>Evaluation of offloaded catch (quantity)</p> <ul style="list-style-type: none"> <li>• <i>Species</i></li> <li>• <i>Product form</i></li> <li>• <i>Catch area(s)</i></li> <li>• <i>Quantity declared</i></li> <li>• <i>Quantity offloaded</i></li> <li>• <i>Difference between quantity declared and quantity determined</i></li> </ul>	<p><u>Species</u> - ASFIS 3-alpha codes (also known as FAO species codes) for all species offloaded.</p> <p><u>Product form</u> - Condition of the offloaded catch, either processed or not (e.g., skinless, boneless fillets frozen; head off, split salted; whole refrigerated in seawater).</p> <p><u>Catch area(s)</u> - Relevant geographical area where offloaded catch was taken.</p> <p><u>Quantity declared</u> - Quantity of offloaded catch as declared by the master in the Advance Notification in MT or kg. If other units are used, they should be clearly identified.</p> <p><u>Quantity offloaded</u> - Quantity of effectively offloaded catch as determined by inspectors, in MT or kg. If other units are used, they should be clearly identified.</p> <p><u>Difference between quantity declared and quantity determined</u>, if any in kg. If other units are used, they should be clearly identified.</p>
31	<p>Catch retained onboard (quantity)</p> <ul style="list-style-type: none"> <li>• <i>Species</i></li> <li>• <i>Product form</i></li> <li>• <i>Catch area(s)</i></li> <li>• <i>Quantity declared</i></li> <li>• <i>Quantity offloaded</i></li> <li>• <i>Difference between quantity declared and quantity determined</i></li> </ul>	<p><u>Species</u> - ASFIS 3-alpha codes (also known as FAO species codes) for all species offloaded.</p> <p><u>Product form</u> - Condition of the offloaded catch, either processed or not (See product form for field 30).</p> <p><u>Catch area(s)</u> - Relevant geographical area where offloaded catch was taken.</p> <p><u>Quantity declared</u> - Quantity of offloaded catch as declared by the master in the Advance Notification in MT or kg. If other units are used, they should be clearly identified.</p> <p><u>Quantity offloaded</u> - Quantity of effectively offloaded catch as determined by inspectors, in MT or kg. If other units are used, they should be clearly identified.</p> <p><u>Difference between quantity declared and quantity determined</u>, if any in kg.</p>
32	<p>Examination of logbook(s) and other documentation</p>	<p><b>Yes or No</b>, depending on whether the logbooks were examined. Free text for comments by the inspector(s).</p>
33	<p>Compliance with applicable catch documentation scheme(s)</p>	<p><b>Yes or No</b>, depending on whether the vessel's is compliant with relevant catch documentation schemes. Free text for comments by the inspector(s).</p>
34	<p>Compliance with applicable trade information scheme(s)</p>	<p><b>Yes or No</b>, depending on whether the vessel is compliant with relevant catch documentation schemes. Free text for comments by the inspector(s).</p>
35	<p>Type of gear used</p>	<p>Free text. Name (or description) of gear found onboard by the inspector(s). ISSCFG code (also known as FAO gear codes) may be used.</p>
36	<p>Gear examined in accordance with paragraph e) of Annex 2</p>	<p>Yes or no depending on whether the inspector(s) examined gear(s) following the procedure established in Annex B. Free text for comments by the inspector(s).</p>
37	<p>Findings by inspector(s)</p>	<p>Free text. Description of all relevant facts and findings as determined by the inspector(s) during the inspection.</p>
38	<p>Apparent infringement(s) noted including reference to relevant legal instrument(s)</p>	<p>Free text. Description of violation(s) found as perceived by inspector(s). Clear mention of the relevant legal instrument (e.g., Article 19 d) of the NEAFC Scheme of Control and Enforcement.</p>
39	<p>Comments by the master</p>	<p>Free text. Any comments by the master regarding the development of the inspection, the inspectors' findings or the infringements alleged.</p>
40	<p>Action taken</p>	<p>Free text. Description by the inspector(s) of all action taken as a follow-up to the inspection (e.g., catch apprehension, gear retention, legal prosecution, fine imposed).</p>
	<p>Date and signature of the fisheries inspector(s)</p>	
	<p>Date and signature of the captain</p>	<p>By signing the report, the master acknowledges only receipt of his report copy. Such signature does not represent in any way an acceptance of guilt when apparent infringements were detected by inspector(s).</p>

**Appendix X: Port inspection report form (B)**

**Compliance with IOTC Conservation and Management Measures**

<b>Fishing logbook(s)</b>		<i>Resolution 01/02 Relating to Control of Fishing Activities</i>			
Fishing logbook is onboard	<input type="checkbox"/> Y <input type="checkbox"/> N	Original recording of fishing logbook is onboard for the last 12 months	<input type="checkbox"/> Y <input type="checkbox"/> N		
Has been filled by the captain / set	<input type="checkbox"/> Y <input type="checkbox"/> N	Includes information on	<input type="checkbox"/> Vessel <input type="checkbox"/> trip <input type="checkbox"/> gear configuration <input type="checkbox"/> vessel operation & catch	Fishing logbook is bound	<input type="checkbox"/> Y <input type="checkbox"/> N
Logbook data was provided by the fishing master to the flag State administration <input type="checkbox"/> Y <input type="checkbox"/> N and to the coastal State administration <input type="checkbox"/> Y <input type="checkbox"/> N (where the vessel has fished in that coastal State's EEZ)					
<b>Longliners</b>		<i>Resolution 12-03 On The Recording Of Catch And Effort By Fishing Vessels</i>			
Logbook contains the primary species	SBF <input type="checkbox"/> ALB <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> SKJ <input type="checkbox"/> SWO <input type="checkbox"/> BUM <input type="checkbox"/> BLM <input type="checkbox"/> SFA <input type="checkbox"/> MLS <input type="checkbox"/>				
Catch recorded in number & weight / species / set & form of processing	<input type="checkbox"/> Y <input type="checkbox"/> N	Discard of tuna, tuna-like fish, sharks recorded in remarks			<input type="checkbox"/> Y <input type="checkbox"/> N
<b>Purse seiner</b>		<i>Resolution 12-03 On The Recording Of Catch And Effort By Fishing Vessels</i>			
Logbook contains the primary species	ALB <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> SKJ <input type="checkbox"/>		The type of association is recorded		<input type="checkbox"/> Y <input type="checkbox"/> N
Deployment of FAD is recorded	<input type="checkbox"/> Y <input type="checkbox"/> N	Catch is recorded in weight / species / set & form of processing	<input type="checkbox"/> Y <input type="checkbox"/> N	Discard of tuna, tuna-like fish, sharks recorded in remarks	<input type="checkbox"/> Y <input type="checkbox"/> N
<b>Gillnet</b>		<i>Resolution 12-03 On The Recording Of Catch And Effort By Fishing Vessels</i>			
Logbook contains the primary species	SBF <input type="checkbox"/> ALB <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> SKJ <input type="checkbox"/> LOT <input type="checkbox"/> FRI <input type="checkbox"/> KAW <input type="checkbox"/> COM <input type="checkbox"/> GUT <input type="checkbox"/>				
Catch is recorded in weight / species / set & form of processing	<input type="checkbox"/> Y <input type="checkbox"/> N	Discard of tuna, tuna-like fish, sharks recorded in remarks			<input type="checkbox"/> Y <input type="checkbox"/> N
<b>Pole and line</b>		<i>Resolution 12-03 On The Recording Of Catch And Effort By Fishing Vessels</i>			
Logbook contains the primary species	SBF <input type="checkbox"/> ALB <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> SKJ <input type="checkbox"/> FRZ <input type="checkbox"/> KAW <input type="checkbox"/> COM <input type="checkbox"/> LOT <input type="checkbox"/>				
Catch recorded in number & weight / species / set & form of processing	<input type="checkbox"/> Y <input type="checkbox"/> N	Discard of tuna, tuna-like fish, sharks recorded in remarks			<input type="checkbox"/> Y <input type="checkbox"/> N

<b>Documents onboard</b>		<i>Resolution 01/02 Relating to Control of Fishing Activities</i>			
Certificate of registration onboard	<input type="checkbox"/> Y <input type="checkbox"/> N	Issued by competent authority	<input type="checkbox"/> Y <input type="checkbox"/> N	ID no.:	
Documents show	<input type="checkbox"/> Vessel name <input type="checkbox"/> Port & registration number <input type="checkbox"/> IRCS <input type="checkbox"/> Name/addresses of owner <input type="checkbox"/> Length of vessel <input type="checkbox"/> <input type="checkbox"/> Name & addresses of charter <input type="checkbox"/> Engine power <input type="checkbox"/>				

<b>Marking of fishing gears (Longliners)</b>		<i>Resolution 01/02 Relating to Control of Fishing Activities</i>			
Fishing gear marked at day with flag and radar reflector	<input type="checkbox"/> Y <input type="checkbox"/> N	Fishing gear marked at night with light buoys	<input type="checkbox"/> Y <input type="checkbox"/> N	Buoys marked with letter/number of vessel identification	<input type="checkbox"/> Y <input type="checkbox"/> N
<b>Driftnets (All vessels)</b>		<i>Resolution 12/12 To prohibit the use of large-scale driftnets on the high seas in the IOTC area</i>			
The vessel is found operating on the high seas in the IOTC Area and is configured to use large-scale driftnets	<input type="checkbox"/> Y <input type="checkbox"/> N		Position of the vessel:		
The driftnets and related fishing equipment are stowed / secured in such a manner that they are not readily available to be used for fishing					<input type="checkbox"/> Y <input type="checkbox"/> N
<b>Marking of FADs (Purse Seiner)</b>		<i>Resolution 01/02 Relating to Control of Fishing Activities</i>			
The vessel carries FADs?	<input type="checkbox"/> Y <input type="checkbox"/> N	FADs are marked with letter/number of vessel identification			<input type="checkbox"/> Y <input type="checkbox"/> N

<b>Marking of fishing vessel</b>		<i>Resolution 01/02 Relating to Control of Fishing Activities</i>			
Identification marks on the fishing vessel	<input type="checkbox"/> National registration number <input type="checkbox"/> Fishing licence <input type="checkbox"/> IRCS <input type="checkbox"/> Vessel name <input type="checkbox"/> Port of registration				
	<input type="checkbox"/> Other mark (specify):				
<b>Type of marking</b>	<b>Marking on vessel</b>			<b>Same as IOTC Record</b>	
Vessel name				Stern	<input type="checkbox"/> Y <input type="checkbox"/> N
				Port Side	<input type="checkbox"/> Y <input type="checkbox"/> N
				Starboard Side	<input type="checkbox"/> Y <input type="checkbox"/> N
National registration number				Port Side	<input type="checkbox"/> Y <input type="checkbox"/> N
				Starboard Side	<input type="checkbox"/> Y <input type="checkbox"/> N
IRCS				Port Side	<input type="checkbox"/> Y <input type="checkbox"/> N
				Starboard Side	<input type="checkbox"/> Y <input type="checkbox"/> N
Other mark (specify):				Stern	<input type="checkbox"/> Y <input type="checkbox"/> N
				Port Side	<input type="checkbox"/> Y <input type="checkbox"/> N
				Starboard Side	<input type="checkbox"/> Y <input type="checkbox"/> N

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<b>Vessel Monitoring System</b>		<b>Resolution 06/03 On establishing a vessel monitoring system programme</b>					
VMS device is installed onboard the fishing vessel	Y <input type="checkbox"/> N <input type="checkbox"/>	The positions of the FV are received by the national FMC	Y <input type="checkbox"/> N <input type="checkbox"/>	The device is located in a sealed unit and protected by official seals	Y <input type="checkbox"/> N <input type="checkbox"/>		
The antennae connected to the satellite monitoring device(s) are not obstructed	Y <input type="checkbox"/> N <input type="checkbox"/>			The power supply of the satellite monitoring device(s) is not interrupted		Y <input type="checkbox"/> N <input type="checkbox"/>	
Vessel monitoring device(s) are not removed from the vessel	Y <input type="checkbox"/> N <input type="checkbox"/>	The technical failure has been communicated to the flag State and/or the Secretariat		Y <input type="checkbox"/> N <input type="checkbox"/>	Date:		
If technical failure, the vessel has communicated to the FMC of the flag State the vessel identification, the date & positions every 4 hours			Y <input type="checkbox"/> N <input type="checkbox"/>	By email <input type="checkbox"/>	facsimile <input type="checkbox"/>	telex <input type="checkbox"/>	
If technical failure, the device was repaired or replaced within one month			Y <input type="checkbox"/> N <input type="checkbox"/>	Date of repair:			

<b>Marine Turtles (all vessels)</b>		<b>Resolution 12/04 On marine turtles</b>					
The logbook contains information on incidental catches of marine turtles (details on species, location of capture, conditions, actions taken on board and location of release)						Y <input type="checkbox"/> N <input type="checkbox"/>	
The vessel carries line cutters	Y <input type="checkbox"/> N <input type="checkbox"/>	The vessel carries de-hookers	Y <input type="checkbox"/> N <input type="checkbox"/>	The vessel is using whole finfish bait	Y <input type="checkbox"/> N <input type="checkbox"/>	The vessel carries dip-nets	Y <input type="checkbox"/> N <input type="checkbox"/>
<b>Sharks fins (all vessels)</b>		<b>Resolution 05/05 - Concerning the conservation of sharks caught in association with fisheries managed by IOTC</b>					
Shark on board are fully utilised (carcass and fins present on board)	Y <input type="checkbox"/> N <input type="checkbox"/>	Fins onboard total not more than 5% of the weight of sharks onboard		Y <input type="checkbox"/> N <input type="checkbox"/>	Weight of shark (kg):	Weight of fins (kg):	%

<b>Thresher sharks (all vessels)</b>		<b>Resolution 12/09 On the Conservation of Thresher Sharks</b>					
The fishing vessel has thresher sharks of the family <i>Alopiidae</i> on board		Y <input type="checkbox"/> N <input type="checkbox"/>	Quantity onboard	PTH		BTH	ALV

<b>Sea birds (Longliners)</b>		<b>Resolution 10/06 On Reducing the Incidental Bycatch of Seabirds in Longline Fisheries</b>					
For vessels fishing south of 25°S the longline vessel use at least two mitigation measures		<input type="checkbox"/> Night setting with minimum deck lighting <input type="checkbox"/> Bird-scaring lines (Tori Lines) <input type="checkbox"/> Weighted branch lines					
<b>Conformity of mitigation measures to the minimum technical standards</b>		<b>(Annex 1 of Resolution 10/06)</b>					
The vessel has not set line between nautical dawn & before nautical dusk.		Y <input type="checkbox"/> N <input type="checkbox"/>	Bird-scaring line was deployed during longline setting to deter birds from approaching branch line			Y <input type="checkbox"/> N <input type="checkbox"/>	
The deck was lighted at a minimum		<input type="checkbox"/>					
<b>Area and period of closure (All vessels)</b>		<b>Resolution 12/13 For the Conservation and Management of Tropical Tunas Stocks in the IOTC</b>					
The longline vessel has been fishing in the area 0° - 10° North - 40° and 60° East from 0000 hours on 1 February to 2400 hours on 1 March		Y <input type="checkbox"/> N <input type="checkbox"/>	Date(s) and position(s) of the vessel:				
The purse seine vessel has been fishing in the area 0° - 10° North - 40° and 60° East from 0000 hours on 1 November to 2400 hours on 1 December		Y <input type="checkbox"/> N <input type="checkbox"/>	Date(s) and position(s) of the vessel:				

<b>Data buoys (All vessels)</b>		<b>Resolution 11/02 On the prohibition of fishing on data buoys</b>			
The FV has fished intentionally within 1 nautical mile of or interacted with a data buoy		Y <input type="checkbox"/> N <input type="checkbox"/>	Date(s) and position(s) of the vessel:		
The FV has taken on board a data buoy while engaged in fishing in the IOTC Area of competence		Y <input type="checkbox"/> N <input type="checkbox"/>	Date(s) and position(s) of the vessel:		



Field No.	OFFLOADING MONITORING FORM A - Field Descriptions	
<b>The offloading FORM A is designed to record a comprehensive summary of the recorded information for the entire offloading or transshipment operation. It includes the totals of all the species and quantities recorded in FORM B.</b>		
1	Inspection report no.	Depending on the fisheries authority administrative processes and information filing; each inspection should be allocated a <b>unique "Inspection report number"</b> that will facilitate filing and future referencing.
2	Port State	Record the ISO-3166 3-alpha Country Code. (Reference Appendix XIII)
<b>General information</b>		
3	Inspector Name and ID	Record the inspector(s) name(s) that monitor the offloading or transshipment process.
4	Inspecting Authority	Record the full formal details of the Inspecting Authority
5	Port of inspection	Record in free text the port name and include the port code where available.
6	Vessel Name	Record the vessels name in full, including any alpha or numeric suffixes. <i>For example; Fukuseki Maru No.7</i>
7	Vessel Type	Record the fishing vessel code (FAO-3alpha code). (Reference Appendix XIII) <i>For example; LP (for a pole and line vessel)</i>
8	IOTC No.	Record the vessels IOTC number
9	IRCS	Record the vessels International Radio Call Sign.
10	Documents received	Tick the corresponding box for all documents received from the vessel prior to the off-loading.
	• Hold layout plan	Plan of the hold showing where the product is stowed. This may also correspond to different catch areas and ATFs that have been issued to the vessel. Carrier Vessels often separate the product received from different vessels or companies with a net and this is reflected in the hold plan with reference to the origin of the fish.
	• Cargo manifest	A carrier vessel should be able to provide a cargo manifest that lists all the product it has onboard and the component that it will offload. The cargo manifest will provide details of the origin of the product as well as its intended destination.
	• Catch Declarations	Fishing vessels must provide documentation on their total catch onboard.
	• Offloading Declaration	The offloading declaration should provide advances information on the catch description / species and products to be offloaded or transhipped. Such a declaration will be applicable to both a carrier and fishing vessel. A final declaration for the product offloaded or transhipped will be drawn up after the operation.
<b>Summary of Operations</b>		
11	Operation	Record the date and time that the offloading / transshipment operation <u>start</u> and the date and time that the operation is <u>completed</u> .
12	Observed	Record the <u>start</u> and <u>end</u> dates and times that the offloading or transshipment are directly monitored. Where the operations are not continuously monitored these dates and times must be recorded for each monitoring period.
13	Interruption times	Record in hours the total time that operations were interrupted for any reason. Interruption time can include time lost to: <ul style="list-style-type: none"> <li>• Equipment failure,</li> <li>• Pause for meals,</li> <li>• Overnight break.</li> </ul> <i>For example:</i> 30 min interruption to replace hook scale 1 hr 30 min (1:30) interruption for meals Total interruption time 2 hours (2:00) <p>The time from the start to the end of operations minus the interruption time is equal to the actual offloading or transshipment time where fish products are being moved.</p>

Appendices

<b>14</b>	Percentage offloading monitored	<p>Record the percentage of the actual operation time that was monitored. This is equal to the total time of the operations monitored by the inspectors divided by the total offloading or transshipment time.</p> <p><i>For example;</i>  <i>Total time of operations monitored; 8 hours and 20 minutes (08:20)</i>  <i>Total operational time (excluding interruption time) 12 hours and 40 min</i>  <i>Percentage of operation monitored is; 08:20 / 12:40</i>  <i>Equals 65.79%</i></p>
<b>Destination Details</b>		<p>Record the total quantities offloaded and / or transhipped.            Note a proportion of the catch may be transhipped and another part of the catch offloaded ashore.</p>
<b>15</b>	Onshore / Total quantity	Record in free text the factory name or facility ashore that is receiving the fish together with the total weight of the product that is offloaded to that facility.
<b>16</b>	Carrier vessel / Total quantity	Record in free text the name of the carrier vessel receiving the fish and the total weight of the products transhipped to the carrier vessel.
<b>Summary of products offloaded</b>		<p>Summary of the combined species, number per species and total weight per species for the entire offloading or transshipment. These will be a summary of all the data collected on the <b>OFFLOADING MONITORING FORM B</b></p>
<b>17</b>	Species	<p>Record the ASFIS 3-alpha codes for each species.  <i>For example; YFT</i></p>
<b>18</b>	Product	<p>Record the relevant product code. Note that there may be more than one produce for a single species.  <i>For example; Swordfish (SWO) corresponding products may include;</i></p> <ul style="list-style-type: none"> <li>• <i>WHO for whole fish</i></li> <li>• <i>TAL Dressed carcass with head and fins off and caudal peduncle present.</i></li> </ul>
<b>19</b>	Number of fish	Record the total number of units recorded for each species
<b>20</b>	Average weight of fish	<p>Record the average weight for each species / product unit.            Various methods may be used to calculate an average unit weight.</p> <ul style="list-style-type: none"> <li>• The most accurate will be to take random samples and independently weigh these.</li> <li>• A single hoist with a number of units can be weighed and divided by the number of units.</li> <li>• The declared catch number and weight can be used to calculate an average weight.</li> </ul> <p><i>For example; Total weigh of SWO to be offloaded is 8.5-tons.</i>  <i>Number of units listed 145.</i>  <i>Average weight is 8500 divided by 145</i>  <i>Equals 58.6 kg</i></p>
<b>21</b>	Total weight of fish	<p>Record the total weight of product per species offloaded or transhipped.            The average unit weights multiplied by the total number of units monitored is used to obtain the total weight.</p>



Field No.	OFFLOADING MONITORING FORM B - Field Descriptions	
<p>The offloading monitoring FORM B is designed to record detailed information for the time that inspectors are monitoring landing or transshipment operations. It aims to capture accurate information for each hoist of fish offloaded from the vessel. These are “real time” data collection forms and additional pages are added as required. The headers (Fields 1 and 2) must be completed for each page.</p>		
1	Inspection report No	The Inspection Report No. must correspond to the <b>OFFLOADING MONITORING FORM A.</b>
2	Form No. ____ of ____	<p>Multiple forms will be required to monitor the entire offloading operation and each form should be numbered and reflect the total number of pages completed.  <i>For example: 3 of 12 would indicate that this is the third page out of a total of 12 pages used to monitor the offloading process.</i>                      Should there be a break in the sequence of pages when reviewing the data at a later stage then authorities would be aware of the missing pages</p>
3	Period Start:	Record the day / month year and time for the start of each monitoring period. Note these may correspond to scheduled interruptions in the offloading operations for overnight or meal breaks. Format: <i>dd/mm/yyyy hh:mm.</i>
4	Period End:	Record the day / month year and time that the monitoring observation stopped. Format: <i>dd/mm/yyyy hh:mm.</i>
5	Interrupted:	<p>Tick the box to record YES if interruptions occurred or NO if none occurred. The interruptions recorded reflect those that may occur during the monitoring period recorded in fields 3 and 4.                      An interruption in the offloading process may be for equipment failure or routine breaks for meals. Some offloading operations may take place over several days with overnight breaks in the process.</p>
6	No. of Interruptions	If there were interruptions in the monitoring process record the number of interruptions
7	Total Time Interruptions	Record in hours the total interruption times.
8	Type of operation:	Tick the relevant box if the vessel is landing ashore or transshipping or if both.
	Number of fish per string / hoist	In this section the details of each hoist of fish off the vessel are recorded.
9	Hoist No.	Start number sequence from the first hoist observed for each monitoring period corresponding to the start and end times for the monitoring period recorded in (3) (4) above.
10	Spp.	<p>For each hoist record the species codes for the species of fish in the hoist. Note it may not be possible to always record specific species and aggregations of mixed species may be recorded.  <i>For example;</i>  <b>“mixed” SJK, ALB</b> (for a mix of small skipjack tuna and longfin tuna in a single hoist)  <b>“mixed” LEK, OIL</b> (for mixture of escolar and rough skin oilfish)</p>
11	Prod	Record the product codes for each of the species
12	Total No.	Estimate the total number of units in the hoist.
13	Hook Scale Weight	When a “Hook Scale” is attached to the crane hook then record the total weight of the hoist



## Appendix XIII: Codes for countries, fishing gears, fishing vessels and IOTC species

### Countries/territories codes (ISO-3166 3-alpha Country Code)

Country Name	ISO ALPHA-3 Code	Country Name	ISO ALPHA-3 Code
Australia	AUS	Korea, Republic of	KOR
Belize	BLZ	Madagascar	MDG
British Indian Ocean Territory	IOT	Malaysia	MYS
China	CHN	Maldives	MDV
Comoros	COM	Mauritius	MUS
Eritrea	ERI	Mozambique	MOZ
European Union		Oman	OMN
France	FRA	Pakistan	PAK
Italia	ITA	Philippines	PHL
Portugal	PRT	Senegal	SEN
Spain	ESP	Seychelles	SYC
United Kingdom	GBR	Sierra Leone	SLE
France (Territories)	FRA	South Africa	ZAF
Guinea	GIN	Sri Lanka	LKA
India	IND	Sudan	SDN
Indonesia	IDN	Tanzania, United Republic of	TZA
Iran, Islamic Republic of	IRN	Thailand	THA
Japan	JPN	Vanuatu	VUT
Kenya	KEN	Yemen	YEM

### Gear codes

Gear Code	Gear Type (EN)	Gear Code	Gear Type (EN)
BB	Pole and lines	LLHA	Longline and hand line
BBLI	Pole and Line, Hand Line, Troll line	LLLI	Longline and line
BBTR	Pole and Line, Troll line	LLPS	Drifting longline and purse seine and trap
FLL	Fresh Longline	LLTR	Longline and Troll line
GILL	Gill nets	LLTW	Longline and Trawl
HABB	Hand line and pole and line	PS	Purse seines
HAND	Hand line	PSS	Coastal purse seine
HOOK	Pole and Line, Hand Line, Longline, Troll line	SJIG	Squid Jigger
LINE	Line	SUPP	Supply Vessel Purse Seiners
LISJ	Line and squid jigging	TRAP	Traps
LL	Drifting longline	TRAW	Bottom and/or midwater trawls
LLBH	Pole and Line, Hand Line, Longline	TROL	Troll line
LLF	Set longline	UNCL	Unknown
LLGI	Longline and Gill nets		

### Vessel codes

Vessel Code	Vessel Type (EN)	Vessel Code	Vessel Type (EN)
BB	Pole and Line vessels	MU	Multipurpose
CF	Cargo Freezer	PS	Purse seiners
GI	Gill Netters	RT	Research-Training
LB	Longliners-Pole and Line vessels	SP	Supply vessel (purse seiners)
LC	Longliners and Carrier vessels	TW	Trawlers
LI	Line vessels	UN	Unknown
LL	Longliners		

**IOTC species codes**

The table below shows the official alphanumeric codes (also called "3-alpha") for the species under the mandate of the IOTC. The English and Scientific names are taken from the FAO taxonomy.

<b>Code</b>	<b>English Name</b>	<b>Scientific Name</b>
ALB	Albacore tuna	<i>Thunnus alalunga</i>
BET	Bigeye tuna	<i>Thunnus obesus</i>
BFT	Bluefin tuna	<i>Thunnus thynnus thynnus</i>
BIL	Marlins, sailfishes, spear fish	<i>Xiphoidei NEI*</i>
BIP	Indo-Pacific Bonito	<i>Sarda orientalis</i>
BLM	Black Marlin	<i>Makaira indica</i>
BLT	Bullet tuna	<i>Auxis rochei</i>
BLZ	Indo-Pacific Blue Marlin	<i>Makaira mazara</i>
COM	Narrow barred Spanish Mackerel	<i>Scomberomorus commersoni</i>
DOT	Dogtooth tuna	<i>Gymnosarda unicolor</i>
FRI	Frigate tuna	<i>Auxis thazard</i>
FRZ	Frigate and Bullet tunas	<i>Auxis spp.</i>
GUT	Indo-Pacific king mackerel	<i>Scomberomorus guttatus</i>
KAW	Kawakawa	<i>Euthynnus affinis</i>
KGX	Seerfishes NEI*	<i>Scomberini NEI*</i>
LOT	Longtail tuna	<i>Thunnus tonggol</i>
MAR	Marlines NEI*	
MLS	Striped Marlin	<i>Tetrapturus audax</i>
OBL	Billfishes, unclassified	
OTH	Others NEI*	<i>Scomberidae and Xiphoidei</i>
RSK	Requiem sharks	<i>Carcharinidae</i>
SBF	Southern Bluefin tuna	<i>Thunnus maccoyii</i>
SFA	Indo-Pacific Sailfish	<i>Istiophorus platypterus</i>
SHK	Shark	
SKJ	Skipjack	<i>Katsuwonus pelamis</i>
SSP	Short-billed spearfish	<i>Tetrapterus angustirostris</i>
STS	Streaked seerfish	<i>Scomberomorus lineolatus</i>
SWO	Swordfish	<i>Xiphias gladius</i>
TUN	Tunas and Bonitos NEI*	<i>Thunnini and Sardini NEI*</i>
WAH	Wahoo	<i>Acanthocybium solandri</i>
YFT	Yellowfin tuna	<i>Thunnus albacares</i>

\*NEI: not elsewhere included