Indian Ocean Tuna Commission
Commission des Thons de l'Ocean Indien
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GUIDELINES FOR THE REPORTING OF FISHERIES STATISTICS TO THE IOTC

IOTC Secretariat[1], Mahé, Seychelles
January 2014

DISTRIBUTION:
Members of the Commission
Other interested Nations and International Organizations
FAO Fisheries Department
FAO Regional Fishery Officers

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ACRONYMS

AFAD	Anchored Fish Aggregating Device
BY	Bycatch
CE	Catch-and-effort
CPC	Contracting Parties and Co-operating Non Contracting Parties
CPUE	Catch per unit effort
DFAD	Drifting Fish Aggregating Device
DPUE	Discards per unit effort
EEZ	Exclusive Economic Zone
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organization of the United Nations
IOTC	Indian Ocean Tuna Commission
IMO	International Maritime Organization
LOA	Length overall (vessel)
NC	Nominal catch
SF	Size frequency data
UNCLOS	United Nations Convention on the Law of the Sea
UNFSA	United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks

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MAIN PURPOSE OF THE GUIDELINES

The Guidelines for the Reporting of Fisheries Statistics to the IOTC (hereinafter referred to as the Guidelines) are addressed to IOTC Members, Co-operating Non Contracting Parties (CPC's) and other parties having vessels under its flag that fish for species under the IOTC mandate within the IOTC area of competence (IOTC Area). The main objective of the Guidelines is to facilitate the reporting of fisheries data to the IOTC. The Guidelines are based on the IOTC data requirements in place as of December 2013 and will be updated as new data collection measures are implemented or those existing are modified.

Major data categories covered by the Guidelines

Annual catches (IOTC Form 1) which are highly aggregated statistics for each species estimated per fleet, gear and year for a large area. Includes retained catches and discards.

Fishing craft statistics (IOTC Form 2) which refer to the number of crafts operated per fleet, type of ship, ship class size, gear and year.

Catch-and-effort data (IOTC Form 3) which refer to the fine-scale data – usually from logbooks, and reported per fleet, year, gear, type of school, month, grid and species. Information on the use of fish aggregating devices (FADs) and supply vessels[2], operated in support of industrial purse seiners, is also requested.

Length frequency data (IOTC Form 4) which refer to individual body lengths of IOTC species per fleet, year, gear, type of school, month and 5 degrees square areas.

Observer data (IOTC Form 5) which refer to the fine-scale data collected by scientific observers under the IOTC Regional Observer Scheme, and reported by flag, gear type, fishing trip, and 1 degree square area (Trip Reports).

Socio-economic data (IOTC Form 7) which refer to a range of socio-economic indicators (e.g. number of fishermen, fish prices by species, etc.) by IOTC country, year or month for countries having IOTC fisheries in the Indian Ocean.

HOW TO USE THE GUIDELINES

These Guidelines are intended to serve as a reference for the staff responsible for the reporting of fisheries data to the IOTC. If you are familiar with the IOTC data requirements you are invited to download the IOTC Forms from the IOTC Website[3] and move to Table 1 of the Guidelines, using the available links to navigate through the document. Please, note that using the IOTC forms is not obligatory as they are only intended to facilitate the reporting of data to the IOTC. You are invited to use other formats for the reporting of data to the IOTC if this facilitates the reporting of the data requested.

The next two sections of the Guidelines (***IOTC data reporting standards***: pages 3-7) contain the standards for the reporting of data to the IOTC and some of the standards issuing from other international agreements that are relevant for Indian Ocean fisheries. Table 1 presents a summary of the types of fisheries data requested by the IOTC, forms to be used, species groups and management measures involved and deadlines agreed for the reporting of each dataset. Table 2 shows the parties that are

[2] Note that the term support vessel has been used throughout the text to refer to supply vessels even though the IOTC tends to use the term supply vessel. Although in the past these vessels were also used to supply purse seiners at sea with food, crew, and equipment, this is not the case in recent years. At present they assist the purse seiners with which they operate in the search for fish and deployment and monitoring of FADs. Therefore, the term support vessel in considered to be more appropriate to describe the activities of these vessels.

[3] http://www.iotc.org/English/data/dataforms.php

known/presumed to have fisheries for IOTC species in the IOTC Area and the status of implementation by each party of the IOTC Agreement or other international Agreements referred to in this section.

The following section (***Scope: fleets, area, fisheries, species and time periods to be covered:*** pages 8-18) provides information on the type of fleets for which data shall be reported, IOTC Area and areas used for the reporting of catch-and-effort and length frequency data, species under the purview of the IOTC, type of fisheries catching IOTC species and time periods to be considered for the reporting of data to the IOTC.

The following section (***Data sources, data handling and coverage rate:*** pages 19-22) contains information that is used to document the data existing in the IOTC databases, to accompany the reporting of each IOTC dataset, including information about the main data sources, coverage rates and procedures used for the estimation of each data component.

The times agreed for the reporting of each IOTC dataset and the procedures to be followed for reports covering more than one year data are covered in the next section (***Timeliness of data submission and historical revisions to datasets :*** page 22).

The next sections (pages 23-53) contain the types of datasets and the data items to be reported in each case, including estimates of annual catches, fishing craft statistics, catch-and-effort, fish aggregating devices, size frequency, observer trip reports, and socio-economic data. The type of information to be reported under each dataset, the standards applying and the forms to be used for the reporting of annual catches, fishing craft, catch-and-effort, FADs, size frequency, observer trip reports, and socio-economic data are provided in each case. The forms for the reporting of data to the IOTC can be downloaded from the IOTC Website[4].

IOTC DATA REPORTING STANDARDS

Article V, paragraphs 2(a) and 2(d), of the **Agreement for the Establishment of the Indian Ocean Tuna Commission**[5] (the Agreement) establishes the objectives, functions and responsibilities of the Commission. Those include gathering, analysing and disseminating scientific information, catch-and-effort statistics, socio-economic data and other data relevant to the conservation and management of the stocks and to fisheries based on the stocks covered by the Agreement.

In addition, paragraph 1 of Article XI (Information) states that the Members of the Commission shall provide such available and accessible statistical and other data and information as the Commission may require for the purposes of this Agreement, noting that the Commission shall also endeavour to obtain fishing statistics from fishing States or entities which are not Members of the Commission.

Measures adopted by the IOTC calling for the collection and exchange of fisheries data

Since its inception, the IOTC has adopted several measures that call for IOTC CPC's to report fisheries data to the Commission and, where necessary, revised those standards to accommodate requests from the IOTC Scientific Committee; in particular:

- *IOTC Resolution 10/02*[6] *Mandatory statistical requirements for IOTC Members and Cooperating Non-Contracting Parties (CPC's):* Defines IOTC's data reporting procedures for **IOTC SPECIES,** main species of **SHARKS, and non-target, associated and dependent species,** including data on nominal catches, catch-and-effort, and length frequency data. Catch-and-effort data includes data on Fish Aggregating Devices and activities of vessels in support of purse seiners. (Full text is shown in Appendix I.)

[4] *Ibid.* 2

[5] http://www.iotc.org/files/proceedings/misc/ComReportsTexts/IOTC%20Agreement.pdf

[6] Which superseded R08/01 (ibid. R01/05 and R98/01)

- *IOTC Resolution 13/08 Procedures on a **fish aggregating devices** (FADs) management plan, including more detailed specifications of catch reporting from fad sets, and the development of improved FAD designs to reduce the incidence of entanglement of non-target species:* Includes standards for the collection and reporting of data on fishing activities around fish aggregating devices, both drifting and anchored, as undertaken by purse seine and pole-and-line fisheries. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 13/03[7] On the recording of catch and effort data by fishing vessels in the IOTC Area of Competence:* Set minima standards for the collection of operational catch-and-effort data by IOTC CPCs having vessels in the authorized record, and reporting of this information to the IOTC in an aggregated manner. The activities of foreign vessels within the EEZs of IOTC CPCs that are coastal states or Territories in the Indian Ocean, shall also be reported, by flag; the same resolution as that indicated in IOTC Resolution 10/02 for catch-and-effort data applies in this case. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 05/03 Relating to the establishment of an IOTC Programme of Inspection in Port:* Calls for coastal states in the IOTC Area that are IOTC CPCs to report information on the activities of foreign fishing vessels that have landed in their ports, including vessel name, nationality, and catches unloaded during each calendar year. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 05/05 Concerning the conservation of **SHARKS** caught in association with fisheries managed by IOTC:* Calls IOTC CPCs to report data on sharks, as per the IOTC Data Requirements, including all available historical data. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 13/06 On A Scientific And Management Framework On The Conservation Of Shark Species Caught In Association With IOTC Managed Fisheries:* Calls IOTC CPCs to collect and report data on incidental catches of ***OCEANIC WHITETIP SHARKS***. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 12/09 On the conservation of **THRESHER SHARKS** (family Alopiidae) caught in association with fisheries in the IOTC area of competence:* Calls IOTC CPCs to collect and report data on incidental catches of THRESHER SHARKS. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 13/05 On the conservation of **WHALE SHARKS** (Rhincodon typus):* Calls IOTC CPCs having purse seine fisheries to report data on interactions with whale sharks. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Recommendation 05/09 On incidental mortality of **SEABIRDS**[8]:* Calls IOTC CPCs to report data on interactions with seabirds. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 10/06 On reducing the incidental bycatch of **SEABIRDS** in longline fisheries:* Calls for IOTC CPCs having longline fisheries to report data on interactions of longlines with seabirds. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 12/04 On **MARINE TURTLES:*** Calls IOTC CPCs to report data on interactions with marine turtles. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 13/04 On the conservation of **CETACEANS**:* Calls IOTC CPCs to report data on interactions with Cetaceans. *(*Summary of requirements is shown in Appendix II.)
- *IOTC Resolution 11/04 On a Regional OBSERVER SCHEME:* Sets up minimal requirements for data collection both in land and onboard fishing vessels. And provision of data from observer programmes, through observer Trip Reports, at the end of each fishing trip. *(*Summary of requirements is shown in Appendix II.)

[7] Which superseded R12/03; however, India presented an objection to this Resolution and therefore provisions of R12/03 still apply to India.

[8] Both IOTC Recommendation 05/09 and Resolution 10/06 will be superseded by IOTC Resolution 12/06, which enters into force in July 2014

The main types of data requested by the IOTC and the reporting deadlines that apply in each case are summarized in Table 1. In addition to the above measures the Commission adopted in 2012 IOTC Resolution 12/02[9] ***Data confidentiality policy and procedures*** which establishes the criteria that apply to the release of the fisheries data reported to the IOTC. This includes standards for the release of catch, effort, length frequency, observer, and tagging data; and procedures required to obtain data at a scale finer than that agreed by the IOTC. (Full text is shown in Appendix III.)

The Commission monitors compliance of IOTC CPC's and other parties fishing for IOTC species in the IOTC Area through the IOTC Compliance Committee. The IOTC Compliance Committee is responsible for reviewing all aspects of CPCs individual compliance with IOTC Conservation and Management Resolutions in the IOTC Area, and reports directly to the Commission on its deliberations and recommendations[10]. In addition, the IOTC Scientific Committee reviews the status of IOTC fisheries and data requirements for those fisheries as necessary, following recommendations from the Commission or the IOTC Working Parties, in particular the IOTC Working Party on Data Collection and Statistics.

OTHER INTERNATIONAL AGREEMENTS CALLING FOR THE PROVISION OF DATA ON HIGHLY MIGRATORY SPECIES

Both the United Nations Convention on the Law of the Sea (10 December 1982) and the United Nations Fish Stock Agreement (4 August 1995) call for countries having fleets that operate on the high seas to collate fisheries statistics for those fleets and to exchange this information on a regular basis through competent regional organizations. Provisions for data gathering can also be found in the FAO Code of Conduct for Responsible Fisheries (Rome, 1995). The sections of the above texts that relate to the collection and exchange of fisheries data can be found in Appendix IV.

The Accession or Ratification of the UNCLOS and/or the FSA by any State involves the commitment of such State to comply with the provisions of such Agreement, in particular its participation in the work of Regional Fisheries Management Organizations (RFMOs such as the IOTC) and the provision of fisheries data on the basis of the standards agreed by such organizations.

Table 2 (page 6) shows the Parties having/presumed to have fisheries for IOTC species in the IOTC Area. The status of each Party concerning IOTC Membership, the "United Nations Convention on the Law of the Sea" (UNCLOS) and of the "Agreement for the Implementation of the provisions of the Convention relating to the conservation and management of straddling fish stocks and highly migratory fish stocks" (FSA) is also shown.

[9] Which superseded R98/02

[10] IOTC Resolution 10/09 Concerning the functions of the Compliance Committee

Table 1: Types of fisheries statistics requested by the IOTC and reporting deadlines

Dataset	Types of Data	Description	IOTC Form	Species Group	Management Measures /Agreements	Type of Report	Report To / Reporting Deadline
Annual Catches	Nominal Catches NC	Estimates of total annual retained catches in live weight by IOTC Area, species and type of fishery	Form 1RC	IOTC Species	R-10/02	Obligatory	Sec LL: 30/06 (P) LL: 30/12 (F) OT: 30/06 (F)
				Important bycatch	R-10/02; R-05/05; R-13/03	Obligatory	
				Other fish species	R-10/02; R-13/03	Voluntary	
	Discards DI	Estimates of discard levels (dead individuals) in live weight (or number) by IOTC Area, species and type of fishery	Form 1DI	IOTC Species	R-10/02	Obligatory	
				Important bycatch	R-10/02; R-05/05; R-13/03; R-13/06; R12/09; R-13/05	Obligatory	
				Seabirds	R-10/02; R-10/06; R-13/03	Obligatory	SC; LL only As above (NC)
				Marine Turtles	R-10/02; R-12/04; R-13/03	Obligatory	
				Cetaceans	R-10/02; R-13/03; R-13/04	Obligatory	As above (NC)
				Other fish species	R-10/02	Voluntary	Sec
Active crafts	Numbers of Craft FC	Total number of fishing crafts operated by type of fishery, type of craft and craft size by year	Form 2FC	Fisheries targeting IOTC Species or main sharks	FSA-Annex I, Article 4	Voluntary	Sec
Catch-and-effort CE	Surface Fisheries	Catch by species in live weight and fishing effort by type of fishery by 1° grid area and month strata (extrapolated to annual catch)	Form 3CE	IOTC Species	R-10/02	Obligatory	Sec LL: 30/06 (P) LL: 30/12 (F) OT: 30/06 (F)
				Important bycatch	R-10/02; R-05/05; R-13/03	Obligatory	
				Other fish species	R-10/02; R-13/03	Voluntary	
	Longline Fisheries	Catch by species in number or live weight and effort in number of hooks set by 5° grid area and month strata (extrapolated to annual catch)	Form 3CE	IOTC Species	R-10/02	Obligatory	
				Important bycatch	R-10/02; R-05/05; R-13/03	Obligatory	
				Other fish species	R-10/02; R-13/03	Voluntary	
		Catch by species in number or live weight and effort in number of hooks set by 1° grid area and month strata (extrapolated to annual catch)	Form 3CE	IOTC Species	R-10/02	Voluntary	SC Timely*
				Important bycatch	R-10/02; R-05/05; R-13/03	Voluntary	
	Coastal Fisheries	Catch by species and fishing effort by type of fishery and geographic area	Form 3AR	IOTC Species	R-10/02	Obligatory	Sec LL: 30/06 (P) LL: 30/12 (F) OT: 30/06 (F)
				Important bycatch	R-10/02; R-05/05; R-13/03	Obligatory	
				Other fish species	R-10/02; R-13/03	Voluntary	
	Support vessels	Number and characteristics of support (supply) vessels and number of days-at-sea by type of support vessel by 1° grid area and month	Form 3SU	Not applicable	R-10/02	Obligatory	
	FAD	Total number and type of Fish Aggregating Devices (FAD) set by purse seiners and support vessels by quarter by fleet	Form 3FA	Not applicable	R-10/02	Obligatory	
		Total number of visits to FADs. Drifting or Anchored, by type of visit, type of FAD, 1° grid area and month; and total catches of IOTC and bycatch species taken on FADs, by the same resolution		IOTC Species Important bycatch Other species	R-13/08	Obligatory	
Size Data SF	Fish lengths	Length data by species by type of fishery by 5° grid area by month	Form 4SF	IOTC Species	R-10/02	Obligatory	
				Important bycatch	R-05/05; R-13/03	Obligatory	
Scientific Observer Data TR	Surface and Longline fisheries	Trip Reports completed by scientific observers onboard vessels fishing for IOTC species in the IOTC Area , including the observed effort and catch, including incidental catch, by species by fishing trip, 1° grid area and month strata; and details about the type of biological data collected, type of vessel, type of gear, and mitigation measures used during the trip.	Form 5TR	IOTC Species Important bycatch Other species	R-11/04	Obligatory	Sec Within 150 days after observer disembarkation
Socio-Economic Data SE	Fish Prices	Average prices of fish per type of fish product (preservation, processing), weight units, type of currency, month and market	Form 7PR	Main IOTC Species	A-Article5 paragraph 2(d)	Voluntary	Sec
	Country Indicators	Set of indicators per type of indicator and year (e.g. GDP, OECD status, number of fishermen, contribution of fisheries to GDP, etc.)	n/a	Not applicable		na	na
EEZ Catches of foreign fishing fleets CE	EEZ Catches	Catches of foreign fishing vessels licensed to operate within the EEZ of coastal countries in the IOTC Area, by flag country, species, 1° grid (surface) / 5° grid (longline) area, and month. Applies to catches within the EEZ only	Form 3CE	IOTC Species Important bycatch Other species	R-13/03	Obligatory	As above (CE)

Management Measures / Agreements: IOTC Resolution (**R**); IOTC Recommendation (**Rc**); IOTC Agreement (**A**); UN Fish Stocks Agreement (**FSA**)

Report To / Reporting Deadline: Longline fisheries (**LL**) Preliminary statistics (**P**) or Final statistics (**F**); Other fisheries (**OT**)
Shall (reporting is compulsory) /may (reporting is voluntary) be reported to the IOTC through the IOTC Secretariat (**Sec**) or through the Scientific Committee (**SC**)

***** Data for the exclusive use of IOTC scientists, subject to the approval of the data owners and bound by IOTC confidentiality policy (Resolution 98/02); should be provided for scientific use in a timely fashion.

Table 2: Parties having/presumed to have fisheries for IOTC species in the IOTC Area of Competence

	IOTC Code	English name	French name	IOTC status	IOTC EEZ[T1]	UNCLOS	UN FSA[T5]
1.	AUS	Australia	Australie	Member 13/11/1996	Yes	05/10/1994	Ratified 23/12/1999
2.	BHR	Bahrain	Bahreïn		Yes	30/05/1985	NO
3.	BGD	Bangladesh	Bangladesh		Yes	27/07/2001	Ratified 05/11/2012
4.	BLZ	Belize	Belize	Member 15/05/2007	No	13/08/1983	Ratified 14/07/2005
5. 6.	CHN TWN	China Taiwan,China	Chine Taiwan,Chine	Member 14/10/1998	No	07/06/1996	Signatory 06/11/1996
7.	COM	Comoros	Comores	Member 14/08/2001	Yes	21/06/1994	NO
8.	DJI	Djibouti	Djibouti		Yes	08/10/1991	NO
9.	EGY	Egypt	Égypte		Yes	26/08/1983	Signatory 05/12/1995
10.	ERI	Eritrea	Érythrée	Member 09/08/1994	Yes	NO	NO
11.	EUR	European Union	Union européenne	Member 27/10/1995	Yes[T2]	01/04/1998	Ratified 19/12/2003
12.	FRAT	France	France	Member 03/12/1996	Yes	11/04/1996	Ratified 19/12/2003
13.	GIN	Guinea	Guinée	Member 31/01/2005	No	06/09/1985	Accession 16/09/2005
14.	IND	India	Inde	Member 13/03/1995	Yes	29/06/1995	Accession 19/08/2003
15.	IDN	Indonesia	Indonésie	Member 20/06/2007	Yes	03/02/1986	Ratified 28/09/2009
16.	IRN	Iran IR	Iran RI	Member 28/01/2002	Yes	T4	Accession 17/04/1998
17.	IRQ	Iraq	Iraq		Yes	30/07/1985	NO
18.	ISR	Israel	Israël		Yes	NO	Signatory 04/12/1995
19.	JPN	Japan	Japon	Member 26/06/1996	No	20/06/1996	Ratified 07/08/2006
20.	JOR	Jordan	Jordanie		Yes	27/11/1995	NO
21.	KEN	Kenya	Kenya	Member 29/09/2004	Yes	02/03/1989	Accession 13/07/2004
22.	KOR	Republic of Korea	République de Corée	Member 27/03/1996	No	29/01/1996	Ratified 01/02/2008
23.	KWT	Kuwait	Koweït		Yes	02/05/1986	NO
24.	MDG	Madagascar	Madagascar	Member 10/01/1996	Yes	22/08/2001	NO
25.	MYS	Malaysia	Malaisie	Member 22/05/1998	Yes	14/10/1996	NO
26.	MDV	Maldives	Maldives	Member 13/07/2011	Yes	07/09/2000	Ratified 30/12/1998
27.	MUS	Mauritius	Maurice	Member 27/12/1994	Yes	04/11/1994	Accession 25/03/1997
28.	MOZ	Mozambique	Mozambique	Member 13/02/2012	Yes	13/03/1997	Accession 10/12/2008
29.	MYM	Myanmar	Myanmar		Yes	21/05/1996	NO
30.	OMN	Oman	Oman	Member 05/04/2000	Yes	17/08/1989	Accession 14/05/2008
31.	PAK	Pakistan	Pakistan	Member 27/04/1995	Yes	26/02/1997	Signatory 15/02/1996
32.	PHL	Philippines	Philippines	Member 09/01/2004	No	08/05/1984	Signatory 30/08/1996
33.	QAT	Qatar	Qatar		Yes	09/12/2002	NO
34.	SAU	Saudi Arabia	Arabie saoudite		Yes	24/04/1996	NO
35.	SEN	Senegal	Sénégal	Cooperating	No	25/10/1984	Ratified 30/01/1997
36.	SYC	Seychelles	Seychelles	Member 26/07/1995	Yes	16/09/1991	Ratified 20/03/1998
37.	SLE	Sierra Leone	Sierra Leone	Member 01/07/2008	No	12/12/1994	NO
38.	SOM	Somalia	Somalie		Yes	24/07/1989	NO
39.	ZAF	South Africa	Afrique du Sud	Cooperating	Yes	23/12/1997	Accession 14/08/2003
40.	LKA	Sri Lanka	Sri Lanka	Member 13/06/1994	Yes	19/07/1994	Ratified 24/10/1996
41.	SDN	Sudan	Soudan	Member 03/12/1996	Yes	23/01/1985	NO
42.	TZA	Tanzania	Tanzanie	Member 18/04/2007	Yes	30/09/1985	NO
43.	THA	Thailand	Thaïlande	Member 17/03/1997	Yes	10/12/1982	NO
44.	TMP	Timor-Leste	Timor-Leste		Yes	08/01/2013	NO
45.	ARE	United Arab Emirates	Émirats arabes unis		Yes	10/12/1982	NO
46.	GBRT	United Kingdom	Royaume Uni	Member 31/03/1995	Yes	25/07/1997	Ratified 10/12/2001
47.	VUT	Vanuatu	Vanuatu	Member 25/10/2002	No	10/08/1999	Signatory 23/07/1996
48.	YEM	Yemen	Yémen	Member 20/07/2012	Yes	21/07/1987	NO
49.	NEI[T3]	Various flags	Pavillons divers		No	n/a	n/a

UNCLOS: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXI-6-a&chapter=21&lang=en
UN FSA: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXI-7&chapter=21&lang=en

T1 Countries having an Economic Exclusive Zone (EEZ) that lies partially or fully within the IOTC Area of Competence
T2 Reunion's EEZ (EU-France) lies within the IOTC Area of Competence
T3 Includes non-CPC's having IOTC fisheries that are not coastal countries in the IOTC Area (e.g. Equatorial Guinea)
n/a: Not applicable
T4 Notification of non-provisional application under article 7 (1) (b), as of 1 Nov 1994

T5 UN FSA: **Signatory** (willing to be bound by the Convention/Agreement), **Accession** (consent to be bound; applies to UN Members adhering to the Agreement at a later time (non-signatories)), **Ratified** (definitive consent to be bound; applies to signatories of the Agreement)

SCOPE: FLEETS, AREA, FISHERIES, SPECIES AND TIME PERIODS TO BE COVERED

FLEETS

As stated in Article 94 (***Duties of the flag state***) of the **UNCLOS** *"Every state shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag"* and Part V, Article 18 (***Duties of the Flag State***) of the **FSA** *"A State whose vessels fish on the high seas shall take such measures as may be necessary to ensure that vessels flying its flag comply with subregional and regional conservation and management measures and that such vessels do not engage in any activity which undermines the effectiveness of such measures."*

The responsibility for the reporting of fisheries statistics to the IOTC lies with the flag country. Thus, IOTC CPC's and other parties fishing for IOTC species shall report the data requested for all fisheries that operate under their flag.

In addition to the above, IOTC has adopted measures that call coastal states in the IOTC Area that are IOTC CPCs to report information on the activities, including catches and effort, of foreign vessels licensed to operate within their Economic Exclusive Zones[11]. In this regard it is important to note that **countries reporting data on vessels that operate under flags other than their own shall report separate statistics for each flag.** (*e.g.* catches of vessels licensed to operate within their EEZ or those of vessels operating under charter arrangements.)

IOTC AREA OF COMPETENCE

The IOTC Area of Competence is defined in Article 2 of the IOTC Agreement (***Area of Competence***): *"The area of competence of the Commission shall be the Indian Ocean ([…] as shown on the map set out in Annex A to this Agreement) and adjacent seas, north of the Antarctic Convergence, insofar as it is necessary to cover such seas for the purpose of conserving and managing stocks that migrate into or out of the Indian Ocean."*

In 1998, the Commission agreed to modify the boundaries of the IOTC Area[12], as follows:

- The western boundary of the IOTC Area in the south, which the Commission initially set at 30 degrees longitude east and issuing from the coast of South Africa (IOTC Agreement), was extended 10 degrees westward, to 20 degrees longitude east; this was done to ensure the proper management of the area between 20 and 30 degrees East, which initially was not covered by neither the ICCAT or the IOTC Agreements.

- The southern boundary of the IOTC Area was extended southward to the Antarctic Convergence, in order to cover all the range of the temperate tuna species; this involved moving the boundary in the western Indian Ocean up to 45 degrees South, and up to 55 degrees South in the Eastern Indian Ocean.

- The boundary between the western and eastern IOTC Area was changed north to the Equator, to accommodate a request from India for the boundary to coincide with the administrative divisions used in India; therefore, the boundary was moved from the Equator to the North, from 80 to 77 degrees longitude east.

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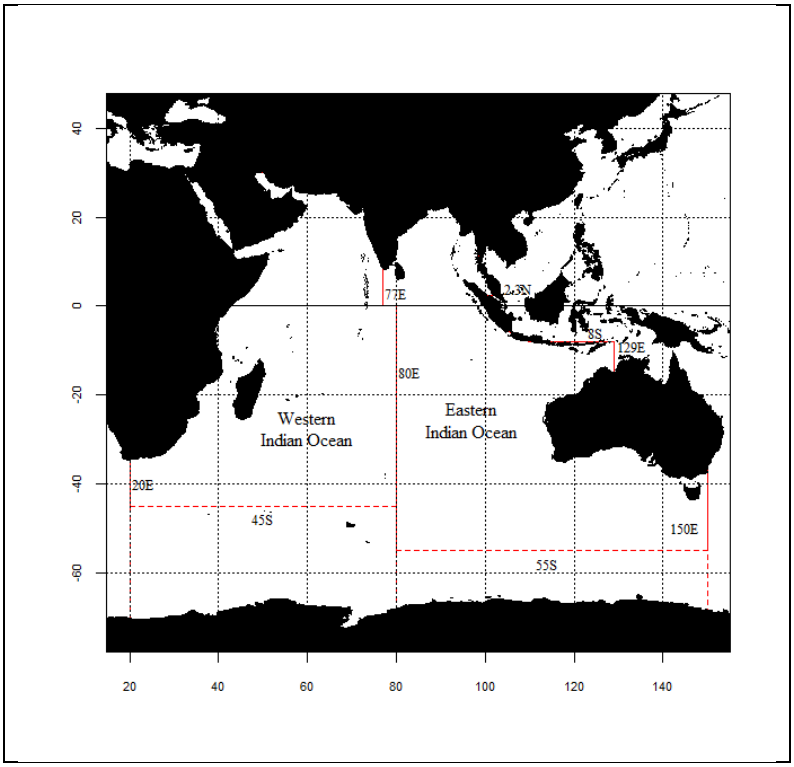
[11] IOTC Resolutions 13/03 & 05/03 (refer to IOTC Data Reporting Standards Section (page 3) and Appendix II for details.

[12] IOTC. Report of the Fourth Session of the Indian Ocean Tuna Commission. Kyoto, Japan 13-16 December 1999. IOTC/S/04/99/R[E]. Victoria, IOTC. 2000. 56 pp.
Paragraph 16 (Page 2) The Commission endorsed the recommendation of the Scientific Committee that the western boundary of the IOTC statistical areas be changed from 30ºE to 20ºE, thus eliminating the gap between the areas covered by IOTC and ICCAT, and that the southern boundary be extended southward to the Antarctic convergence, thus covering the entire range of the temperate tuna species. It also approved the change in the internal boundary dividing the eastern and western Indian Ocean, noting that this boundary had no legal or biological significance, but existed for convenience and because it was advantageous to be able to differentiate catches taken in the two sections of the Indian Ocean.

The IOTC Area is shown in Figure 1 below.

Figure 1: IOTC Area of Competence



IOTC CPC's and other parties cooperating with the IOTC shall report statistics for their fleets operating in the IOTC Area. **Parties reporting statistics from areas other than the IOTC Area shall report such data separately, indicating the area of origin.** (*e.g.* Statistics off South Africa in waters adjacent to the 20 degrees longitude east or those from waters in the southern ocean.)

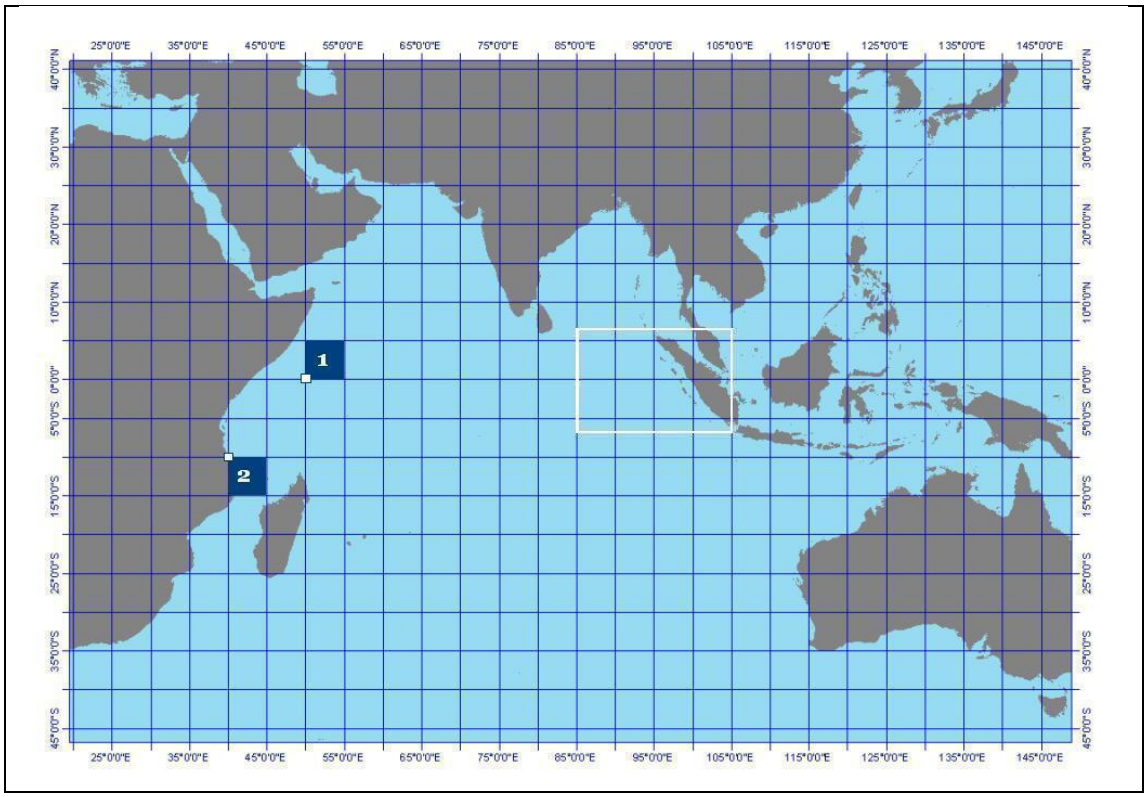
Areas to be used for the provision of catch-and-effort and size frequency data

The standards for the reporting of catch-and-effort and size frequency data are specified in IOTC Resolution 10/02 (***Mandatory statistical requirements*** *for IOTC Members and Cooperating Non-Contracting Parties (CPC's)*):

- *Paragraph 3.* ***Catch-and-effort data***
    a. *Subparagraph (a) For* ***surface fisheries****: catch weight by species and fishing effort* ***shall be provided by 1 ° grid area and month strata****. (…)*
    b. *Subparagraph (b)* ***Longline fisheries****: catch by species, in numbers or weight, and effort as the number of hooks deployed* ***shall be provided by 5 ° grid area and month strata****. (…)*
    c. *Subparagraph (c)* ***Coastal fisheries****: available catch by species, fishing gear and fishing effort shall be submitted frequently and* ***may be provided using an alternative geographical area*** *if it better represents the fishery concerned.*
- *Paragraph 4.* ***Size data****: (…) Length data by species, including the total number of fish measured,* ***shall be submitted by a 5 ° grid area by month****, by gear and fishing mode (…)*
- *Paragraph 5.(b)* ***Number of days at sea by supply vessels by 1 ° grid area and month*** *(…)*

IOTC Standard Grids: IOTC statistics shall be aggregated by using 5° grid areas (Figure 2) or 1°grid areas (an example is shown in Figure 3, page 14).

Figure 2: IOTC 5° grid areas



Each grid in the map is defined through a 7 digits number, as can be seen in the following examples for grids.

Example	7 digits code	Grid Size	Quadrant	Degrees Latitude		Degrees Longitude		
Figure 2 (1)	6100050	6	1	0	0	0	5	0
Figure 2 (2)	6205040	6	2	0	5	0	4	0
Figure 3 (1)	5104088	5	1	0	4	0	8	8
Figure 3 (2)	5200095	5	2	0	0	0	9	5

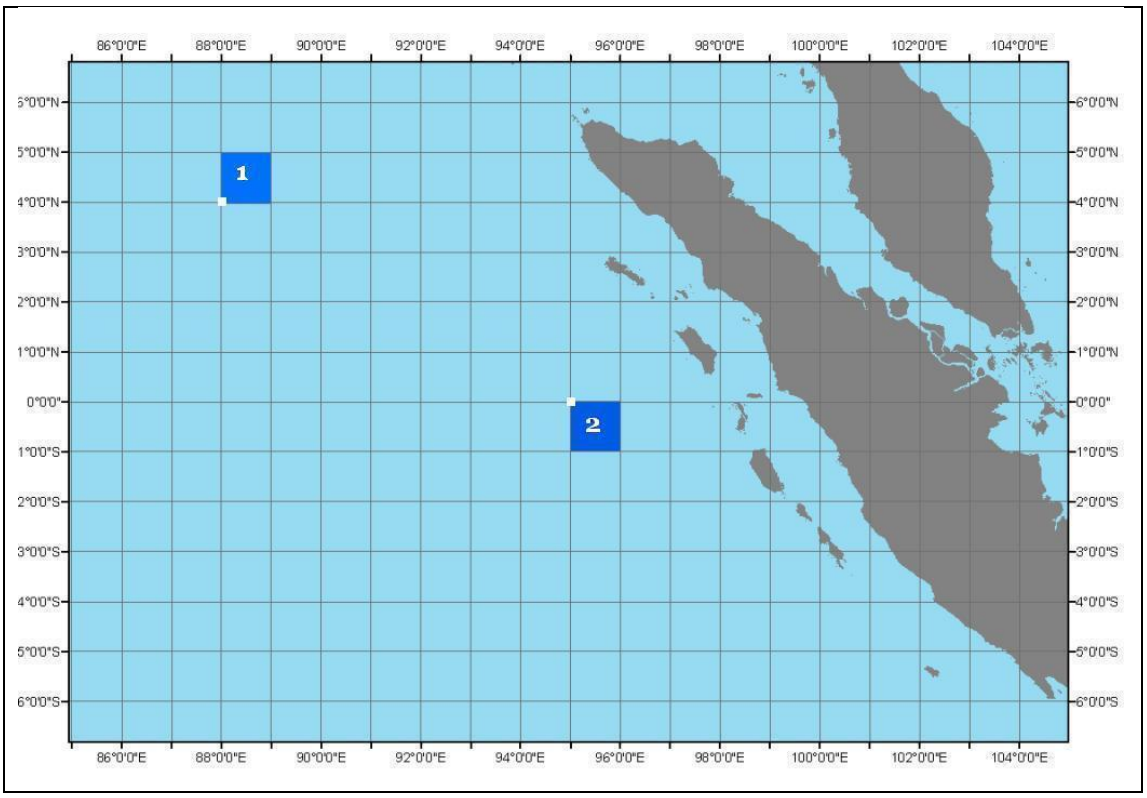
Where:

- Grid size: Size of the square/rectangle used as unit of area. Use the following codes:
  a. **5** to refer to 1° square areas (catch-and-effort surface fleets and support vessels)
  b. **6** to refer to 5° square areas (catch-and-effort longline fleets and size data all fleets)
- Quadrant: Major geographic quadrants divided by the Equator (latitude 0°) and the Greenwich meridian (longitude 0°), as follows:
  a. **1**: Northeast
  b. **2**: Southeast
  c. **3**: Southwest
  d. **4**: Northwest

  In the Indian Ocean, only **1** and **2** will apply

- Latitude / Longitude: Indicate the latitude (two digits) and longitude (three digits) of the corner of the square closest to 0° latitude and 0° longitude (point defined by the white square in each case).

Figure 3: IOTC 1° grid areas (section of the Indian Ocean corresponding to the area defined by the white rectangle shown in figure 2, page 8)

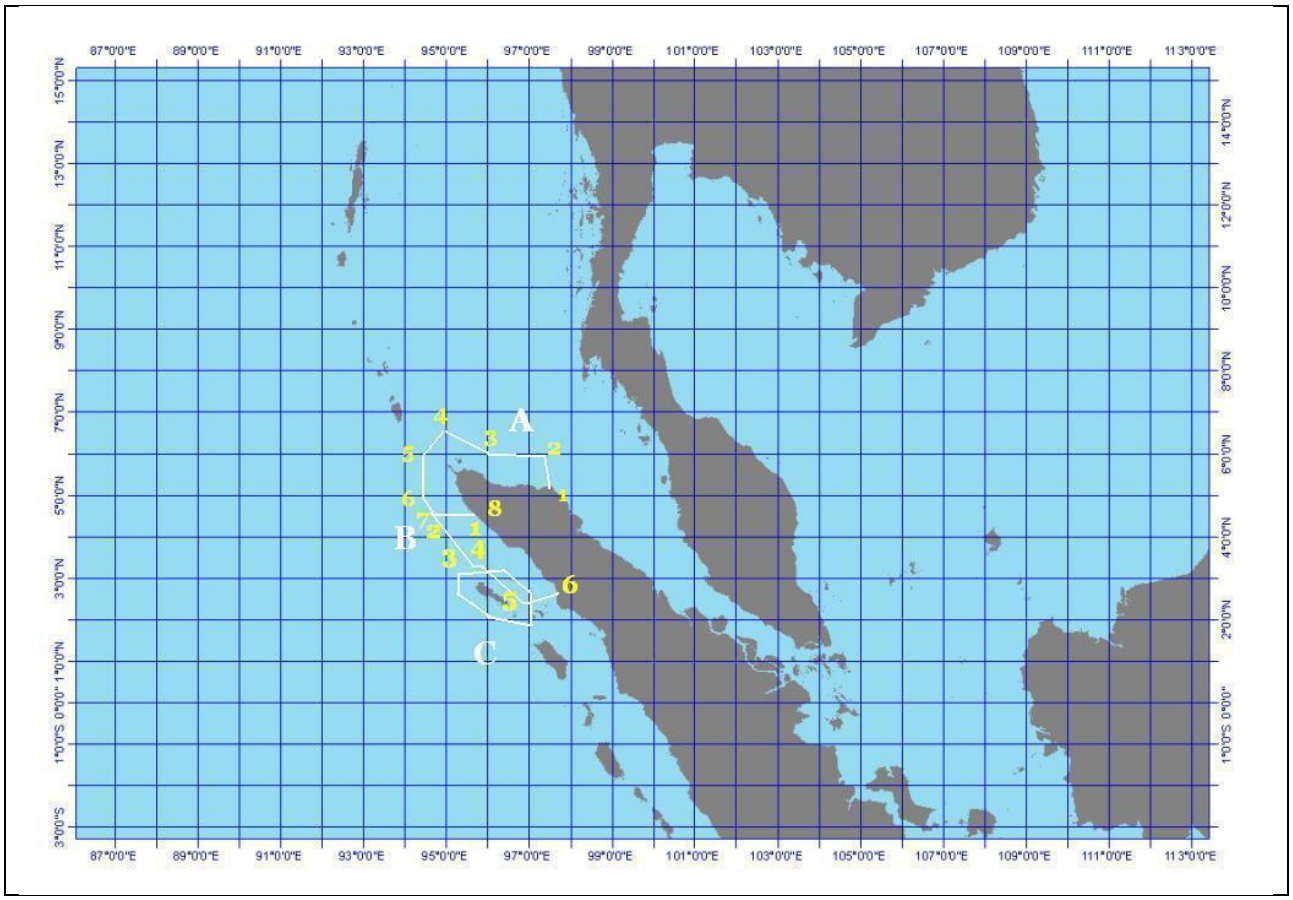


Thus, all catch-and-effort or size frequency sampling events recorded within the areas represented in the previous figures shall be aggregated and recorded under the grids referred to in the above examples (*e.g.* the catch-and-effort corresponding to all longline sets that occurred between 0° North (inclusive) and 5° North (exclusive) and between 50° East (inclusive) and 55° East (exclusive) are to be aggregated under grid 6100050).

Other alternative areas**: Paragraph 3.(c) of IOTC Resolution 10/02 states that alternative areas can be used for** coastal fisheries **if they better represent the fishery concerned. In general,** the areas chosen should be of small size, preferably lower in size than any of the 5° grid areas located at a latitude and longitude similar to that of the area concerned**.**

All points defining each area shall be provided, in sequential order. Example of five hypothetical areas can be seen in Figure 4. The points that define each area are specified in the tables below Figure 4.

Figure 4: Examples of alternative areas (North Sumatra and neighbouring islands)
Note: 1° grid areas are shown for illustrative purposes



As shown through the polygons in the example on Figure 4 areas can have different shapes.

Note that the areas may, in some cases, overlap (as it is the case with areas B and C in the example shown in Figure 4).

In addition, the IOTC uses **other regular areas** that are defined by following the same standards as those used for 1° and 5° square areas:

- Grid size: Size of the square/rectangle used as unit of area. Use the following codes:
    a. **1** to refer to 30° square areas (*e.g.* 1230060 to contain catches/effort between 30°-60° South and 60°-90° East)
    b. **2** to refer to 10° latitude by 20° longitude areas (*e.g.* 2100040 to contain catches/effort between 0°-10° North and 40°-60° East)
    c. **3** to refer to 10° square areas (*e.g.* 3110030 to contain catches/effort between 10°-20° North and 30°-40° East)
    d. **4** to refer to 20° square areas (*e.g.* 4220080 to contain catches/effort between 20°-40° South and 80°-100° East)

The use of areas of small size is recommended over the use of large areas, whenever it is possible.

SPECIES UNDER THE PURVIEW OF THE IOTC

The species covered by the IOTC Agreement are defined in the Article 3 of this Agreement (***Species and stocks***): *"The species covered by this Agreement shall be those set out in Annex B. The term 'stocks' means the populations of such species which are located in the Area or migrate into or out of the Area."*

The Species[13] under the IOTC Mandate are shown in Table 3 below.

Table 3: IOTC Species

	IOTC Code	Species English name	Species French name	Species scientific name
1.	YFT	Yellowfin tuna	Albacore	*Thunnus albacares*
2.	BET	Bigeye tuna	Patudo; Thon obèse	*Thunnus obesus*
3.	SKJ	Skipjack tuna	Listao	*Katsuwonus pelamis*
4.	ALB	Albacore	Germon	*Thunnus alalunga*
5.	SBF	Southern bluefin tuna	Thon rouge du Sud	*Thunnus maccoyii*
6.	SWO	Swordfish	Espadon	*Xiphias gladius*
7.	BLM	Black Marlin	Makaire noir	*Makaira indica*
8.	BUM	Blue Marlin[T1]	Makaire bleu	*Makaira nigricans*
9.	MLS	Striped marlin	Marlin rayé	*Tetrapturus audax*
10.	SFA	Indo-Pacific sailfish	Voilier indo-pacifique	*Istiophorus platypterus*
11.	LOT	Longtail tuna	Thon mignon	*Thunnus tonggol*
12.	KAW	Kawakawa	Thonine orientale	*Euthynnus affinis*
13.	FRI	Frigate tuna	Auxide	*Auxis thazard*
14.	BLT	Bullet tuna	Bonitou	*Auxis rochei*
15.	COM	Narrow-barred Spanish mackerel	Thazard rayé indo-pacifique	*Scomberomorus commerson*
16.	GUT	Indo-Pacific king mackerel	Thazard ponctué indo-pacifique	*Scomberomorus guttatus*

T1 Originally recorded as Indo-Pacific blue marlin (*Makaira mazara*), and distinct from the blue marlin of the Atlantic Ocean, which was recorded as a separate species (*Makaira nigricans*). However, in 2012, the FAO and the tuna RFMO Secretariats decided to merge both species into a single species, blue marlin (*Makaira nigricans*), based on the results of two genetic studies:

- Graves, J. E. and J. R. McDowell (1995). "Inter-ocean genetic divergence of istiophorid billfishes." Marine Biology 122: 193-203.
- Buonaccorsi, V. P., K. S. Reece, et al. (1999). "Geographic distribution of molecular variance within the blue marlin (Makaira nigricans): A hierarchical analysis of allozyme, single-copy nuclear DNA, and mitochondrial DNA markers." Evolution 53(2): 568-579.

In addition to the former species, in 2012 the Commission identified other species, especially species of pelagic sharks which make an important bycatch of IOTC fisheries, and agreed that the data requirements for IOTC species shall also apply to those species. The list of species was subsequently extended in 2013[14]. The complete list of species is presented in Table 4 (other fish species).

The data requirements for IOTC species apply also to the species in Table 4. IOTC CPC's and other parties having fisheries for IOTC species are requested to report statistics **for those species or species groups, as indicated in Table 4. Wherever possible, IOTC CPC's are encouraged to report data by species. The incidental catches of whale sharks, cetaceans, marine turtles, and seabirds shall also be reported as the total number of specimens from each group caught by the fisheries.**

[13] To date, all species on Table 3 are assumed to occur as a single stock in the Indian Ocean .

[14] The list of species can be found in Annex II and III of IOTC Resolution 13/03, which applies to all IOTC CPCs but India; India objected IOTC Resolution 13/03 and therefore Resolution 12/03 still applies to India

Table 4: Species of other MARINE FISH that represent an important bycatch of IOTC fisheries

Cells shaded in grey refer to individual species or species groups for which reporting of fisheries statistics is obligatory, using the same standards as those used for IOTC species (Table 3); vertical bar cells refer to individual species or species groups for which reporting of fisheries statistics is voluntary; white cells refer to individual species or species groups for which reporting of fisheries statistics is encouraged.

	IOTC Code	Group	Species English name	Species French name	Species scientific name	Gear Types[T1]			
						LL	PS	GI	OT
1.	SSP	Billfish	Shortbill spearfish	*Makaire à rostre court*	*Tetrapturus angustirostris*				
2.	MZZ		Other bony fishes nei	Autres poissons osseux nca	*Osteichthyes*				
3.	BSH	Sharks	Blue shark	Peau bleue	*Prionace glauca*				
4.	POR	Sharks	Porbeagle	Requin-taupe commun	*Lamna nasus*				
5.	OCS	Sharks	Oceanic whitetip shark	Requin océanique	*Carcharhinus longimanus*				
6.	PSK	Sharks	Crocodile shark	Requin crocodile	*Pseudocarcharias kamoharai*				
7.	TIG	Sharks	Tiger shark	Requin tigre commun	*Galeocerdo cuvier*				
8.	WSH	Sharks	Great White shark	Grand requin blanc	*Carcharodon carcharias*				
9.	FAL	Sharks	Silky shark	Requin soyeux	*Carcharhinus falciformis*				
10.	DUS	Sharks	Dusky shark[T3]	Requin de sable	*Carcharhinus obscurus*				
11.	RHN	Sharks	Whale shark	Requin-baleine	*Rhincodon typus*		**T2**	**T2**	
12.	MAK	Sharks	Mako sharks nei	Requins-taupes nca	*Isurus spp.*				
13.	LMA	Sharks	Longfin mako	Petite taupe	*Isurus paucus*				
14.	SMA	Sharks	Shortfin mako	Taupe bleue	*Isurus oxyrinchus*				
15.	SPN	Sharks	Hammerhead sharks nei	Requins-marteaux nca	*Sphyrna spp.*				
16.	SPL	Sharks	Scalloped hammerhead	Requin marteau halicorne	*Sphyrna lewini*				
17.	SPZ	Sharks	Smooth hammerhead	Requin marteau commun	*Sphyrna zygaena*				
18.	THR	Sharks	Thresher sharks nei	Requins renards nca	*Alopias spp.*				
19.	ALV	Sharks	Thresher Shark	Renard	*Alopias vulpinus*				
20.	BTH	Sharks	Bigeye thresher	Renard à gros yeux	*Alopias superciliosus*				
21.	PTH	Sharks	Pelagic Thresher Shark	Renard pélagique	*Alopias pelagicus*				
22.	MAN	Sharks	Mantas and devil rays nei	Mantas et diables de mer nca	*Mobulidae*				
23.	RME	Sharks	Longhorned mobula	Mante diable	*Mobula eregoodootenkee*				
24.	RMJ	Sharks	Spinetail mobula	Mante aiguillat	*Mobula japanica*				
25.	RMO	Sharks	Smoothtail mobula	Mante à queue lisse	*Mobula thurstoni*				
26.	RMB	Sharks	Giant manta	Manta géante	*Manta birostris*				
27.	PSL	Sharks	Pelagic stingray	Pastenague violette	*Pteroplatytrygon violacea*				
28.	RAJ	Sharks	Rays and skates nei	Rajidés nca	*Rajidae*				
29.	SKH	Sharks	Sharks, rays, skates, etc. nei	Requins, raies, etc. nca	*Elasmobranchii*				
30.	TTX	Other	Marine turtles nei	Tortues de mer nca	*Testudinata*	**T2**	**T2**	**T2**	**T2**
31.	MAM	Other	Marine mammals nei	Mammifères marins nca	*Mammalia*	**T2**	**T2**	**T2**	
32.		Other	Seabirds	Oiseaux de mer		**T2**		**T2**	

T1 Longline (LL), purse seine (PS), gillnet (GI); and other gears (OT), including pole-and-line, handline and trolling.

T2 Incidental catches shall be reported as the total number of specimens caught

T3 Dusky sharks are not included in the list of species agreed to by the Commission; however, some longline fleets report high catches of dusky sharks and therefore they have been included in the table

The reporting of statistics by species for species other than those recorded in the preceding tables is also encouraged, especially when the catches of these species represent a significant proportion of the total catches of the fishery concerned. Table 5 (bony fishes), Table 6 (sharks), Table 7 (marine turtles), Table 8 (seabirds), and Table 9 (marine mammals), in Appendix IV, show other species that are incidentally caught in some IOTC fisheries. It is to note that those lists are not exhaustive, containing only those species for which statistics have ever been reported to the IOTC Secretariat (marine fish species), or those occurring in the IOTC Area according to the available literature (marine turtles, marine mammals, and seabirds). The statistics for species of fish other than those in the list shall also be reported, if possible by species.

More information on the species recorded in Tables 3 to 8 can be found in the IOTC species identification cards, which can be downloaded from the IOTC Web Page[15].

Use of aggregates of species: IOTC CPC's are encouraged to report all statistics by species. In the event of statistics not fully available by species, such data shall be aggregated by species group. The use of large aggregates of species (e.g. unidentified tuna and tuna-like species) is not recommended. **The aggregates of species used shall contain the minimum number of species possible. The scientific names of the species making up each aggregate shall also be provided.**

TYPE OF FISHERIES CATCHING IOTC SPECIES

For the purpose of the present Guidelines the IOTC fisheries are defined using the following criteria:

- Scale of the fishery, which depends on the size of the fishing craft involved, its mechanization, and the area fished (Table 10): Fishing crafts are usually classified according to their shape and size; and whether they use an engine for propulsion or not. The area in which fishing vessels operate is generally related with the size of the boat and its mechanization, and may limit to the territorial waters or Economic Exclusive Zone of the flag state, or extend also to adjacent EEZs or the high seas. To date, the Commission has not adopted definitions with regards to the types of fisheries identified in IOTC Measures, in particular industrial surface and longline fisheries *versus* coastal fisheries (also called artisanal fisheries). The following categories are used[16]:
    a. Coastal fisheries: Fisheries carried out by vessels having an overall length of less than 24 meters and which only operate within the EEZ of its flag state. They include the fleets for which the area of operation has been set to EEZ in Table 10.
    b. Surface and longline fisheries: Fisheries carried out by vessels having an overall length of 24 meters or greater; or by vessels having an overall length of less than 24 meters which operate, partially or fully, beyond the EEZ of its flag state. They include the fleets for which the area of operation in Table 10 is different from EEZ.

Table 10: Classification and dimensions of fisheries (Modified from Moreno & Herrera 2013[17])

Type of boat	Boat size	Area of Operation	Fleet
Non-motorised	All	Flag state EEZ only	Artisanal
Motorised outboard	All	Flag state EEZ only	Artisanal
Motorised inboard	<15 m	Flag state EEZ only	Artisanal
Motorised inboard	15-24 m	Flag state EEZ only	Semi-industrial
Motorised inboard	<15 m	Includes other EEZ areas and/or high seas	Semi-industrial
Motorised inboard	15-24 m	Includes other EEZ areas and/or high seas	Industrial
Motorised inboard	≥ 24 m	Anywhere	Industrial

[15] https://www.iotc.org/English/ros.php

[16] IOTC Secretariat (2012). Report on the availability, completeness and quality of Catch data for all fleets in the IOTC database. IOTC–2013–TCAC02–05. Document presented at the Second Technical Committee on Allocation Criteria, Oman, 18–20 February 2013. Box 1: Definition of coastal, surface, and longline fisheries. Page 1.

[17] G. Moreno & Herrera, M. (IOTC Secretariat), 2013. Estimation of fishing capacity by tuna fishing fleets in the Indian Ocean. Report presented at the 16th Session of the Scientific Committee of the Indian Ocean Tuna Commission. Busan, Republic of Korea, 2–6 December 2013. IOTC–2013–SC16–INF04. Table 1, Page 14

- Gear configuration, fishing mode and target species: Fishing gears are usually configured in different ways depending on the type of species targeted.

  Table 11 shows the types of fisheries for which statistics of IOTC species have been made available to date**.**

Table 11: Types of Fisheries for IOTC species

	IOTC Code	Type of Operation	English name	French name
1.	BS	Artisanal	Beach seine	Senne de plage
2.	CN	Artisanal	Cast net	Épervier
3.	DS	Artisanal	Danish seine	Senne danoise
4.	DSD	Artisanal	Demersal Danish seine	Senne danoise démersale
5.	GI	Artisanal	Gillnet	Filet maillant
6.	GIDR	Industrial	Driftnet	Filet dérivant
7.	GIOF	Semi-industrial	Offshore gillnet	Filet maillant hauturier
8.	HL	Artisanal	Handline	Ligne à main
9.	HLPA	Artisanal	Handline on anchored-FAD	Ligne à main sous épave ancrée
10.	DL	Artisanal	Dropline (vertical handline)	Ligne à main vertical
11.	DLLS	Artisanal	Dropline on anchored-FAD	Ligne à main vertical sous épave ancrée
12.	HR	Artisanal	Harpoon	Harpon
13.	LL	Industrial	Drifting longline (over 1800 hooks)	Palangre dérivante (au-dessus de 1800 hameçons)
14.	LLCO	Artisanal	Smalll longline	Petite palangre
15.	LLEX	Industrial	Drifting longline (exploratory)	Palangre dérivante (prospection)
16.	LLFR	Industrial	Drifting longline (up to 1800 hooks)	Palangre dérivante (jusqu'au 1800 hameçons)
17.	LLGI	Semi-industrial	Gillnet/longline	Filet maillant/palangre
18.	LLSI	Semi-industrial	Swordfish longline (semi-industrial)	Palangre à espadon (semi-industrielle)
19.	LLSK	Industrial	Shark longline	Palangre à requins
20.	LLSW	Industrial	Swordfish longline (Florida longline)	Palangre à espadon (palangre Florida)
21.	LLTU	Industrial	Tuna longline	Palangre à thons
22.	LN	Artisanal	Liftnet	Carrelet
23.	LNPA	Artisanal	Liftnet on anchored-FAD	Carrelet sous épave ancrée
24.	PL	Artisanal	Pole and line	Pêche à la Canne
25.	PLIN	Industrial	Industrial pole and line	Pêche à la canne industriel
26.	PLPA	Artisanal	Pole-and-line on anchored-FAD	Pêche à la canne sous épave ancrée
27.	PLFS	Artisanal	Free-school pole-and-line	Pêche à la canne banc libres à thons
28.	PLDF	Artisanal	Dolphin associated school pole-and-line	Pêche à la canne à thons associés avec des dauphins
29.	PLME	Artisanal	Pole and line (mechanized boats)	Pêche à la canne (bateaux motorisés)
30.	PLNM	Artisanal	Pole and line (non-mechanized boats)	Pêche à la canne (bateaux non-motorisés)
31.	PLOF	Semi-industrial	Offshore pole and line	Pêche à la canne (bateaux hauturiers)
32.	PS	Industrial	Tuna purse seine	Senne tournante industrielle à thons
33.	PSFS	Industrial	Free-school tuna purse seine	Senne tournante banc libres à thons
34.	PSLS	Industrial	Log-school tuna purse seine	Senne tournante à thons sous épave

	IOTC Code	Type of Operation	English name	French name
35.	PSSA	Semi-industrial	Coastal purse seine on anchored-FAD	Senne tournante côtière sous épave ancrée
36.	PSSF	Semi-industrial	Free-school coastal purse seine	Senne tournante côtière banc libres à thons
37.	PSRN	Artisanal	Ringnet	Filet tournant
38.	PSRP	Artisanal	Ringnet with anchored-FAD	Filet tournant sous épave ancrée
39.	PSSP	Industrial	Support vessel industrial purse seiner	Bateau auxiliaire, senneur industriel
40.	PSSS	Semi-industrial	Small purse seines	Petites sennes tournantes
41.	SN	Artisanal	Setnet	Filet calé
42.	SP	Artisanal	Sport fishing	Pêche sportive
43.	TL	Artisanal	Trolling	Pêche à la traine
44.	TLME	Artisanal	Trolling (mechanized boats)	Pêche à la traine (bateaux motorisés)
45.	TLNM	Artisanal	Trolling (non-mechanized boats)	Pêche à la traine (bateaux non-motorisés)
46.	TP	Artisanal	Trap	Madragues
47.	TR	Semi-industrial	Trawl	Chaluts

IOTC CPC's and other parties catching IOTC species in the Indian Ocean are requested to report statistics to the IOTC. Two types of fisheries can be identified:

- **Fisheries targeting IOTC species** (IOTC fisheries): Statistics for IOTC species, sharks and other bycatch species of IOTC fisheries shall be reported. Table 12 below lists the species that are the main target of IOTC fisheries.

Table 12: Main species or groups of species that are the target of IOTC Fisheries

	English name	French name
1.	Tropical tunas	Thons tropicaux
2.	Yellowfin tuna	Albacore
3.	Bigeye tuna	Patudo; Thon obèse
4.	Skipjack tuna	Listao
5.	Yellowfin tuna and Bigeye tuna	Albacore et thon obèse
6.	Yellowfin tuna and Skipjack tuna	Albacore et Listao
7.	Albacore and swordfish	Germon et espadon
8.	Albacore	Germon
9.	Swordfish	Espadon
10.	Southern bluefin tuna	Thon rouge du Sud
11.	Marlins and sailfish	Marlins et voilier indo-pacifique
12.	Longtail tuna	Thon mignon
13.	Small tunas (Frigate tuna, bullet tuna, kawakawa)	Thons mineurs (Auxide, Bonitou, thonine orientale)
14.	Narrow-barred Spanish mackerel	Thazard rayé indo-pacifique
15.	Sharks	Requins

- **Fisheries** which, **targeting other species**, catch IOTC species as a bycatch (other fisheries): The statistics of IOTC species shall be reported along with the statistics of target species and other species making up the catches of such fisheries.

Use of **aggregates of fisheries**: IOTC CPC's are encouraged to **report separate statistics for each fishery**. In the event of statistics not fully available by fishery, **the statistics not available by fishery shall be aggregated by group of fisheries.** The use of large aggregates of fisheries (*e.g.* unidentified fisheries) is not recommended. **The aggregates of fisheries used shall contain the minimum number of fisheries possible.** The types of fisheries that make up each aggregate shall also be provided.

TIME PERIOD TO BE COVERED

Statistics should be provided from the first year of operation of each fishery. In the case that fisheries statistics are not available for the entire fishing period, **estimates of total catches should at least be provided for years since 1950**.

DATA SOURCES, DATA HANDLING AND COVERAGE RATE

Paragraph 3.(a) of IOTC Resolution 10/02 (***Mandatory statistical requirements*** *for IOTC Members and Cooperating Non-Contracting Parties (CPC's)*) state the following concerning catch-and-effort data: "(…) *The data shall be extrapolated to the total national monthly catches for each gear.* ***Documents describing the extrapolation procedures (including raising factors corresponding to the logbook coverage) shall also be submitted routinely***."

In addition, the following is stated in Paragraph 4 (Size Data): *"(…)* ***Size sampling shall be run under strict and well described random sampling schemes*** *which are necessary to provide unbiased figures of the sizes taken. […]* ***Length data by species, including the total number of fish measured, shall be submitted*** *by a 5 grid area by month, by gear and fishing mode (…)"*

The following information shall be provided for each fishery:

- **Data source/s**: types of datasets that were used to estimate the statistics that are reported to the IOTC and main sources for those datasets. Table 13 below shows the main types of data and reporting sources for retained catches (RC__), discards (DI__), numbers of fishing crafts (FC__), catch-and-effort (CE__) and size data (SF__).

Table 13: Types of datasets used in the estimation of IOTC statistics and main reporting sources

	IOTC Code	Type(s) of Dataset(s) and reporting source(s)
1.	RCPR	Amounts unloaded / transhipped monitored by the fishing industry (e.g. fishing vessel, canning factory, stevedores, auction hall, processing plants, etc.)
2.	RCCS	Amounts unloaded / transhipped monitored by The Customs
3.	RCPA	Amounts unloaded / transhipped monitored by Port Authorities or other government offices (compliance data)
4.	RCRS	Amounts unloaded / transhipped monitored by staff from research institutions (sampling survey or total enumeration)
5.	RCOB	Amounts unloaded / transhipped monitored by observers (compliance data)
6.	DILG	Discard levels monitored by the vessel skipper / fishing master (Logbook)
7.	DIOB	Discard levels monitored by scientific observers
8.	DIEL	Discard levels monitored through electronic means (e.g. video system, etc.)
9.	FCGV	Number of crafts actually operated monitored by Port Authorities or other government offices (compliance data)
10.	FCRS	Number of crafts actually operated monitored at the landing place by staff from research institutions (research data)
11.	FCRG	Number of crafts registered at the Ministry of Fisheries or other government institutions (Ministry of Transportation, etc.)
12.	CELG	Catch-and-effort Logbooks completed onboard by the captain/fishing master of the ship (detailed data)
13.	CETR	Catch-and-effort Interviews completed at the end of each trip by the captain / fishing master of the ship (aggregated data)
14.	CEOB	Catch-and-effort data collected by scientific observers
15.	CERS	Catch-and-effort data collected at the landing place by staff from research institutions (sampling survey or total enumeration)
16.	CEEL	Catch-and-effort data monitored through electronic means (e.g. video system, etc.)
17.	SFLG	Individual fish lengths /weights monitored by fishermen during the fishing trip (recorded in a logbook)
18.	SFPR	Individual fish lengths /weights monitored at the end of the trip by the fishing industry (e.g. fishing vessel, canning factory, stevedores, auction hall, processing plants, etc.)
19.	SFRS	Individual fish lengths /weights monitored at the landing place by staff from research institutions
20.	SFOB	Individual fish lengths /weights monitored by scientific observers during the fishing trip
21.	SFEL	Individual fish lengths /weights monitored through electronic means (e.g. video system, etc.)

A combination of the datasets on Table 13 would be required for systems using two or more types of datasets from various sources. For instance, the retained catches for a fishery may be estimated by using landing data plus logbook information (e.g. ***RCPR*** plus ***CELG*** from the above table).

- **Estimation method:** the datasets collected for each fishery (Table 13) are used in the estimation of retained catches (RC__), discards (DI__), numbers of fishing crafts (FC__), catch-and-effort (CE__) and size data (SF__). Table 14 lists the most common methods used to estimate catches, effort, crafts and size data for IOTC fisheries.

Table 14: Methods used in the estimation of catches, effort, crafts and size data for IOTC fisheries

	IOTC Code	Estimation Method
1.	RCNO	Retained catches not estimated (reported landings not verified by government staff)
2.	RCTE	Total enumeration of retained catches (no estimation required; landings monitored through/verified by government staff)
3.	RCLG	Retained catches estimated by raising the amounts recorded in the vessel logbooks to the total catches unloaded / transshipped for the trip (or alternative time-area strata)
4.	RCLS	Retained catches estimated by raising the amounts resulting from adjusting the species composition in the logbooks by using the size samples available to the total catches unloaded / transshipped for each trip (or alternative time-area strata)
5.	RCSB	Retained catches not available; RC estimated by using the retained catches available from other years (substitution scheme)
6.	RCES	Retained catches estimated by multiplying average CPUE values obtained through a sample survey (at the landing place) by the total effort recorded in each time-area stratum (total enumeration of effort in time and space; sampling of catches in time and/or space)
7.	RCSS	Retained catches estimated by multiplying average CPUE values obtained through a sample survey (at the landing place) by the total effort estimated for each time-area stratum (sampling of effort in time and/or space; sampling of catches in time and/or space)
8.	DINO	Discard levels not estimated (reported discards not verified by government staff)
9.	DITE	Total enumeration of discards (no estimation required; discards monitored through /verified by observers)
10.	DILG	Discard levels estimated by multiplying average DPUE values obtained from the data reported (not verified by government staff) by the total effort recorded in each time-area stratum (total enumeration of effort)
11.	DILS	Discard levels estimated by multiplying average DPUE values obtained from the data reported (not verified by government staff) by the total effort estimated for each time-area stratum (sampling of effort in time and/or space)
12.	DISB	Discard levels not available; DI estimated by using the discards available from other years (substitution scheme)
13.	DIES	Discard levels estimated by multiplying average DPUE values obtained through a sample survey (at-sea) by the total effort recorded in each time-area stratum (total enumeration of effort in time and space; sampling of discards in time and/or space)
14.	DISS	Discard levels estimated by multiplying average DPUE values obtained through a sample survey (at-sea) by the total effort estimated for each time-area stratum (sampling of effort in time and/or space; sampling of discards in time and/or space)
15.	FCNO	Number of fishing crafts active not estimated (total number of crafts registered for the year used)
16.	FCTE	Total enumeration of fishing crafts operated (no estimation required; number of fishing crafts operated monitored through /verified by government staff)
17.	FCOR	Number of active fishing crafts estimated by multiplying the proportion that the number of fishing crafts operated make out of the total number of crafts registered for the period, obtained through sampling, by the total amount of fishing craft registered for that same period (sampling of number of fishing crafts operated in time and/or space)
18.	FCSS	Number of active fishing crafts estimated by multiplying the average number of fishing crafts operated by time-area stratum, obtained through a sampling survey, by the total number of strata operated (sampling of number of fishing crafts operated in time and/or space)
19.	FCSB	Number of active fishing crafts not available; FC estimated by using the number of crafts available from other years (substitution scheme)
20.	CENO	Catch-and-effort not estimated (reported catch-and-effort not verified by government staff)
21.	CETE	Total enumeration of catch-and-effort (no estimation required; catch-and-effort monitored through/verified by government staff (e.g. observers))
22.	CELS	Catch-and-effort by species adjusted by using the size samples available for each trip (or alternative time-area strata)

	IOTC Code	Estimation Method
23.	CESB	Catch-and-effort not available for the stratum; CE estimated by using the catch-and-effort available in neighboring time-area strata (substitution scheme)
24.	CEES	Catch-and-effort estimated by multiplying average CPUE values obtained through a sample survey (at the landing place) by the total effort recorded in each time-area stratum (total enumeration of effort in time and space; sampling of catches in time and/or space)
25.	CESS	Catch-and-effort estimated by multiplying average CPUE values obtained through a sample survey (at the landing place) by the total effort estimated for each time-area stratum (sampling of effort in time and/or space; sampling of catches in time and/or space)
26.	SFNO	Length / weight frequency data not verified (fish lengths/weights reported by the fishing sector not verified by government staff)
27.	SFTE	Total enumeration of individual fish lengths /weights (no estimation required; fish lengths / weights monitored through/verified by government staff)
28.	SFSP	Length / weight frequency samples not processed (original samples collected by government staff or scientific observers)
29.	SFPR	Length / weight frequency samples raised to represent the catches in the sampling unit (e.g. the fish compartment, the fishing vessel, etc.)
30.	SFRS	Length / weight frequency samples raised to represent the total catches in the stratum (catch-at-size)

- **Coverage rate:** this refers to the proportion that the amount of fish (in number or weight) or fishing effort that is monitored (sampled) makes out of the total (number or weight) of fish or fishing effort estimated in the stratum concerned. In the event that the actual coverage rate cannot be derived for a stratum, the following coverage rates should be used (Table 15).

Table 15: Standard coverage rates for IOTC fisheries

	IOTC Code	English Description	French Description
1.	UP	Statistics partially raised; coverage unknown	Données partiellement extrapolées; couverture inconnue
2.	UR	Statistics raised; coverage unknown	Données extrapolées; couverture inconnue
3.	US	Statistics not raised; coverage unknown	Données non extrapolées; couverture inconnue
4.	UT	Total enumeration	Énumération totale
5.	UU	Not sampled	Non-échantillonné
6.	B0	Less than 5% of the boats covered	Moins de 5% des bateaux échantillonnés
7.	B1	Between 5%-9% of the boats covered	Entre 5%-9% des bateaux échantillonnés
8.	B3	Between 10%-29% of the boats covered	Entre 10%-29% des bateaux échantillonnés
9.	B7	Between 30%-69% of the boats covered	Entre 30%-69% des bateaux échantillonnés
10.	B9	70% or more of the boats covered	70% ou plus des bateaux échantillonnés
11.	T0	Less than 5% of the trips covered	Moins de 5% des marées échantillonnées
12.	T1	Between 5%-9% of the trips covered	Entre 5%-9% des marées échantillonnées
13.	T3	Between 10%-29% of the trips covered	Entre 10%-29% des marées échantillonnées
14.	T7	Between 30%-69% of the trips covered	Entre 30%-69% des marées échantillonnées
15.	T9	70% or more of the trips covered	70% ou plus des marées échantillonnées
16.	N0	Less than 5% of the fish sampled (in number)	Moins de 5% des poissons échantillonnés (en nombre)
17.	N1	Between 5%-9% of the fish sampled (in number)	Entre 5%-9% des poissons échantillonnés (en nombre)
18.	N3	Between 10%-29% of the fish sampled (in number)	Entre 10%-29% des poissons échantillonnés (en nombre)
19.	N7	Between 30%-69% of the fish sampled (in number)	Entre 30%-69% des poissons échantillonnés (en nombre)
20.	N9	70% or more of the fish sampled (in number)	70% ou plus des poissons échantillonnés (en nombre)
21.	W0	Less than 5% of the fish sampled (in weight)	Moins de 5% des poissons échantillonnés (en poids)

	IOTC Code	English Description	French Description
22.	W1	Between 5%-9% of the fish sampled (in weight)	Entre 5%-9% des poissons échantillonnés (en poids)
23.	W3	Between 10%-29% of the fish sampled (in weight)	Entre 10%-29% des poissons échantillonnés (en poids)
24.	W7	Between 30%-69% of the fish sampled (in weight)	Entre 30%-69% des poissons échantillonnés (en poids)
25.	W9	70% or more of the fish sampled (in weight)	70% ou plus des poissons échantillonnés (en poids)

It is important to note that, although Table 13 and Table14 contain the majority of data types, reporting sources and estimation methods that are known to the IOTC, they may be not comprehensive enough. Countries using data sources and/or estimation procedures other than those specified on tables 13 and 14 are encouraged to report this information to the Secretariat.

TIMELINESS OF DATA SUBMISSION AND HISTORICAL REVISIONS TO DATASETS

The deadlines for the submission of data to the IOTC Secretariat are specified in paragraph 6 (*Timeliness of data submission to the IOTC Secretariat*) of IOTC Resolution 10/02:

(a) ***Longline fleets*** *operating in the high seas shall provide* ***provisional data for the previous year no later than 30 June***. ***Final data*** *shall be submitted* ***no later than 30 December***.

(b) ***All other fleets*** *(including supply vessels) shall submit their* ***final data for the previous year no later than 30 June***.

(c) In case where the final statistics cannot be submitted by that date, at least preliminary statistics should be provided.(…)

Paragraph 6(c) of IOTC Resolution 10/02 provides also standards for the revision of historical data sets:

(c) (…) ***Beyond a delay of two years, all revisions of historical data should be formally reported and duly justified****. These reports should be made on forms provided by the Secretariat and reviewed by the Scientific Committee. The Scientific Committee will advise the Secretariat if revisions are then accepted for scientific use.*

A template form to accompany the reporting of historical data can be found in Appendix VI.

In addition, **observer trip reports** shall be submitted **within 150 days following disembarkation of the observer**, at the latest.

ESTIMATES OF ANNUAL CATCHES

DEFINITION: The term **Annual catches refers to highly aggregated statistics for each species estimated per fleet, gear and year for a large area** (IOTC Area). These include:

- **Retained catches**: Refers to the part of the catch that is retained on board, expressed in live weight; it includes:
  - Catches of specimens of the **target species**, which are usually stored on the main vessel compartments and sold in the local market or other international markets.
  - **Retained bycatch**, which refers to the incidental catches of specimens of species that are not the target of the fishery but are of commercial value or to the catches of specimens of the target species having poor quality (*e.g.* undersized, spoiled, etc.). Retained bycatch specimens are usually stored on separate compartments onboard and sold in the local markets or used for direct consumption.
- **Discards**: Refers to the part of the bycatch that is not retained on board, expressed in number and/or live weight. It includes:
  - The catches of specimens that are discarded dead due to them not having commercial value: non-commercial species, fish of small size, fish in poor condition, etc.
  - The catches of specimens that are discarded dead due to other reasons: not enough storage on board, gear breakdown, etc.

STANDARDS FOR THE REPORTING OF ANNUAL CATCHES: The standards for the reporting of annual catches to the IOTC are defined in IOTC Resolution 10/02; in addition, other IOTC resolutions include specific requirements for the reporting of data on total catches from the fisheries, including requirements for sharks (05/05, 13/06, 12/09, 13/05), seabirds (05/09, 10/06), marine turtles (12/04), and Cetaceans (13/04). The recommended minima levels of coverage for catch data are specified in IOTC Resolution 11/04 (Regional Observer Scheme). Appendix I and Appendix II contain more information about these requirements.

INFORMATION TO BE REPORTED: The following information shall be reported to the IOTC:

Retained Catches:

IOTC Form: Form 1RC (**http://www.iotc.org/Common/dataforms/Form_1RC.xlt**)

General Information:

- ***Reporting Source***: details about the individual reporting the information and the Institution responsible for the report.
  a. Contact name: Name of the individual reporting the information
  b. Contact e-mail address: E-mail of the individual reporting the information
  c. Contact phone: Phone number of the individual reporting the information
  d. Organization name: Name of the organization responsible for the report
  e. Organization e-mail address: E-mail of the organization responsible for the report
- ***Dataset***: General information about the dataset reported.
  a. Reporting Country: The country reporting the catches
  b. Flag Country: The country for which retained catches are reported
  c. Year: The calendar year the catches were made
  d. Catch units: Retained catches shall be reported in live weight (metric tons)

Data:

- Type of Fishery: The type of fishery for which the retained catches are reported (see available fisheries on Table 11)
- IOTC Area: The IOTC Area in which the catches are taken (as shown in Figure 1)

- Type of data: Type of statistics reported.
    a. Preliminary statistics: The catches were estimated by using some information from the fishery; the catches reported are likely to change in the future as more information become available.
    b. Final statistics: The catches were estimated by using the complete set of data for the fishery and year concerned; the catches reported are unlikely to change in the future.
- Data Sources: The types of information that were used for the estimation of the catches retained on board for the fishery concerned; these are shown on Table 13.
- Data Processing: The type of estimation procedure, as defined in Table 14.
- Coverage: The proportion of the total catches that were monitored (sampled, in number or weight) for the fishery concerned; refer to Table 15 for types of coverage.
- Target species: Main species targeted, as defined in Table 12.
- Catches by species: catches for each species retained on board in live weight by flag, type of fishery and IOTC Area. IOTC CPC's shall provide catches for IOTC species (Table 3) and other species identified by the Commission (Table 4) and are encouraged to provide catches for all other species that are retained on board (Appendix V; Table 5 and Table 6). **The catches of specimens for which only part/s of their bodies are retained on board shall be always reported as retained catches, in live weight**[18].

Discards:

IOTC Form: Form 1DI (**http://www.iotc.org/Common/dataforms/Form_1DI.xlt**)

General Information:

- ***Reporting Source***: details about the individual reporting the information and the Institution responsible for the report.
    a. Contact name: Name of the individual reporting the information
    b. Contact e-mail address: E-mail of the individual reporting the information
    c. Contact phone: Phone number of the individual reporting the information
    d. Organization name: Name of the organization responsible for the report
    e. Organization e-mail address: E-mail of the organization responsible for the report
- ***Dataset***: General information about the dataset reported.
    a. Reporting Country: The country reporting the discards
    b. Flag Country: The country for which discards are reported
    c. Year: The calendar year the discards were made
    d. Catch units: Discard levels may be reported in number or in weight, depending on the species:
        a. The discards of IOTC Species, sharks (excluding whale sharks) and other fish species should be reported by species, if possible in live weight (otherwise in number)
        b. The discards of seabirds, marine turtles, whale sharks and sea mammals should be reported in number, if possible by species

Data:

- Type of Fishery: The type of fishery for which discard levels are reported (see available fisheries on Table 11)
- IOTC Area: The IOTC Area in which the specimens were discarded (as shown in Figure 1)

[18] In the event that shark fins and no carcasses have been retained on board, the live weight of sharks shall be estimated from the available fins, using the conversion factors required.

- Type of data: Type of statistics reported.
    a. Preliminary statistics: The discard levels were estimated by using some information from the fishery; the data reported are likely to change in the future as more information become available.
    b. Final statistics: The discard levels were estimated by using the complete set of data for the fishery and year concerned; the data reported are unlikely to change in the future.
- Data Sources: The types of information that were used for the estimation of discard levels for the fishery concerned; these are shown on Table 13.
- Data Processing: The type of estimation procedure, as defined in Table 14.
- Coverage: The proportion of the total discards that were monitored (sampled, in number or weight) for the fishery concerned; refer to Table 15 for types of coverage.
- Discard levels by species: discard levels for each species in live weight or number by flag, type of fishery and IOTC Area. IOTC CPC's shall provide discard levels for IOTC species (Table 3) and other species identified by the Commission (Table 4). CPC's are also encouraged to provide discard levels for other species not retained on board, including other species of bony fish (Table 5), sharks (Table 6), marine turtles (Table 7), seabirds (Table 8), and marine mammals (Table 9).

FISHING CRAFT STATISTICS

DEFINITION: The term **Fishing Craft refers to highly aggregated statistics per fleet, gear, type/size/range of boat and year for the entire IOTC Area**. These include:

- **Numbers of active fishing crafts targeting IOTC species (or sharks)**: Refers to the total number of fishing crafts that were fishing for IOTC species (Table 3) or other species (Table 4) within the IOTC Area during a calendar year.
- **Numbers of active fishing crafts targeting other species**: Refers to the total number of fishing crafts that, fishing for species other than those referred to above (Appendix V; Table 5 and Table 6), caught IOTC species or main shark species as a bycatch within the IOTC Area during a calendar year.

STANDARDS FOR THE REPORTING OF FISHING CRAFT STATISTICS: Although some standards exist for the reporting of **fishing craft statistics** to the IOTC these do not cover for all the types of fishing crafts described above. Two IOTC Resolutions call for IOTC CPC's to report data on the numbers and/or characteristics of crafts active for the calendar year:

Resolution 10/02 ***Mandatory statistical requirements*** *for IOTC Members and Cooperating Non-Contracting Parties (CPC's):*

> *Paragraph 5. Given that the activities of supply vessels and the use of Fish Aggregating Devices (FAD) are an integral part of the fishing effort exerted by the purse seine fleet, the following data shall be provided:*
>
> *(a) The* ***number and characteristics of supply vessels****: (i) operating under their flag, (ii) assisting purse seine vessels operating under their flag, or (iii) licensed to operate in their exclusive economic zones, and that have been present in the IOTC Area*

Resolution 10/08 ***Concerning a Record of Active Vessels Fishing for Tunas and Swordfish in the IOTC Area:***

> *Paragraph 1. All Contracting Parties and Cooperating non-Contracting Parties (CPCs) with vessels fishing for tunas and swordfish in the IOTC Area of Competence (hereinafter referred to as "the Area"), shall submit to the Secretary by 15 February every year a list of their respective vessels that were active in the Area during the previous year and that are:*
>
> > *(a) larger than 24 metres in length overall, or*
> >
> > *(b) in case of vessels less than 24m, those operating in waters outside the economic exclusive zone of the flag state*

IOTC CPC's shall report the above information to the IOTC. In addition, **IOTC CPC's are encouraged to report the numbers of fishing crafts operated other than those specified above, according to the categories referred to in Definition**.

INFORMATION TO BE REPORTED: The following information shall (should) be reported to the IOTC:

IOTC Form: Form 2FC (**http://www.iotc.org/Common/dataforms/Form_2FC.xlt**)

General Information:

- ***Reporting Source***: details about the individual reporting the information and the Institution responsible for the report.
    a. Contact name: Name of the individual reporting the information
    b. Contact e-mail address: E-mail of the individual reporting the information
    c. Contact phone: Phone number of the individual reporting the information
    d. Organization name: Name of the organization responsible for the report
    e. Organization e-mail address: E-mail of the organization responsible for the report

- ***Dataset***: General information about the dataset reported.
    a. Reporting Country: The country reporting the fishing craft statistics
    b. Flag Country: The country for which the numbers of active fishing crafts are reported
    c. Year: The calendar year of activity

Data:

- Type of Fishery: The type of fishery for which the fishing craft statistics are reported (see available fisheries on Table 11)
- Type of data: Type of statistics reported.
    a. Preliminary statistics: The fishing craft statistics were estimated by using some information from the fishery; the data reported are likely to change in the future as more information become available.
    b. Final statistics: The fishing craft statistics were estimated by using the complete set of data for the fishery and year concerned; the data reported are unlikely to change in the future.
- Data Sources: The types of information that were used for the estimation of fishing craft statistics for the fishery concerned; these are shown on Table 13.
- Data Processing: The type of estimation procedure, as defined in Table 14.
- Coverage: The proportion of fishing crafts monitored (sampled, in number) over the total number of crafts estimated for the fishery concerned; refer to Table 15 for types of coverage.

Table 16: Boat types used in IOTC fisheries

	IOTC Code	English Description	French Description
1.	PSEU	European type industrial purse seiner	Senneur industriel type européen
2.	PSUS	American type industrial purse seiner	Senneur industriel type américain
3.	PSAS	Asian type industrial purse seiner	Senneur industriel type asiatique
4.	PSWD	Wooden coastal purse seiner (small pelagics)	Senneur côtier en bois (petits pélagiques)
5.	PSFG	Fiberglass coastal purse seiner (small pelagics)	Senneur côtier en polyester (petits pélagiques)
6.	LLAS	Asian type steel tuna longliner	Palangrier en acier type asiatique
7.	LLAF	Asian type fiberglass tuna longliner	Palangrier en polyester type asiatique
8.	LLAW	Asian type wooden tuna longliner	Palangrier en bois type asiatique
9.	LLES	European type steel swordfish longliner	Palangrier en acier type européen
10.	PLES	European type steel baitboat	Canneur en acier type européen
11.	PLAW	Asian type wooden baitboat	Canneur en bois type asiatique
12.	MASD	Maldivian Masdhoani	Masdhoani maldivien
13.	VADH	Maldivian Vadhu	Vadhu maldivien
14.	DHOW	Arabian Dhow	Dhow arabe
15.	PIRG	Pirogue	Pirogue
16.	OCAN	Outrigger-Canoe (Madagascar)	Tangon-Canoë (Madagascar)
17.	LAUN	Launch	Chaloupe
18.	RWBO	Rowboat	Bateau à rames
19.	SCHO	Seychelles Schooner	Schooner seychellois
20.	WHAL	Seychelles Whaler	Whaler seychellois
21.	BARQ	Barque (Reunion, Comoros)	Barque (Réunion, Comores)
22.	VEDT	Vedette (Reunion, Comoros)	Vedette (Réunion, Comores)

	IOTC Code	English Description	French Description
23.	SPOR	Sport boat	Bateau sportif
24.	MLIN	Australian minor liner	Minor liner australien
25.	DLIN	Australian drop liner	Drop liner australien
26.	MULT	Fiberglass multipurpose	Bateau polyvalent en polyester
27.	SUPP	Support vessel industrial purse seine	Bateau auxiliaire senneurs industriels
28.	SHAS	Yemeni Shasha	Shasha yéménite
29.	TRSS	Steel stern trawler	Chalutier pêche arrière en acier
30.	TRSW	Wooden stern trawler	Chalutier pêche arrière en bois
31.	TRSF	Fiberglass stern trawler	Chalutier pêche arrière en polyester

- Type of boat, including:
  a. Boat type: **Fishing boats are classified according to their shape and the purpose for which they were built** (*e.g.* boats built to act as stern trawlers, multi-purpose, etc.). A boat that has been classified under a specific type shall not change over time, unless such boat undergoes major structural changes (*e.g.* significant changes in hull shape and / or size and/or material). For instance, the vessel type for stern trawlers whose decks have been modified for longlining or fiberglass longliners that have been modified for squid jigging will remain as beam trawlers and fiberglass longliners, respectively (if those modifications did not imply major changes in boat shape). Table 16 lists several types of boat known to the IOTC. It is important to note that Table 16 does not cover all boat types. Countries using types of boat other than those specified on Table 16 are encouraged to provide this information to the Secretariat.
  b. Boat Mechanization: Table 17 lists the types of boat mechanization used by the IOTC.

Table 17: Types of boat mechanization used in IOTC fisheries

	IOTC Code	English Description	French Description
1.	NO	Non-mechanized boat / gear (man-powered)	Bateau / engin non-mécanisé (actionné par l'homme)
2.	MI	Mechanized inboard boat	Bateau mécanisé inboard
3.	MO	Mechanized outboard boat	Bateau mécanisé hors bord
4.	SL	Sailing boat	Voilier

  c. Onboard fish preservation: Refers to the main type of onboard preservation that is used for specimens of the target species. Table 18 lists the types of onboard preservation known to the IOTC.

Table 18: Types of onboard fish preservation used in IOTC fisheries

	IOTC Code	English Description	French Description
1.	NO	None	Aucune
2.	ST	Salt	Sel
3.	DR	Dried	Séché
4.	SM	Smoked	Fumé
5.	IC	Ice	Glace
6.	BR	Refrigerated brine	Saumure réfrigérée

	IOTC Code	English Description	French Description
7.	RW	Refrigerated sea water	Eau de mer réfrigérée
8.	FR	Cold storage between 0 and -30 degrees	Chambre froide entre 0 et -30 degrés
9.	DF	Cold storage below -30 degrees	Chambre froide en-dessous de -30 degrés

d. Onboard fish processing: Refers to the main type of onboard fish processing that is used for specimens of the target species. Table 19 lists the types of onboard preservation known to the IOTC.

Table 19: Types of onboard fish processing used in IOTC fisheries

	IOTC Code	English Description	French Description
1.	NO	Unprocessed	Non transformé
2.	DR	Dressed (gilled-and-gutted and/or headed and/or tailed and/or fins-off, etc.)	Paré (éviscéré et sans branchies et/ou étêté et/ou sans queue et/ou sans nageoires, etc.)
3.	HP	Highly processed (fish loins, fish fillets, fish meat, fish oil, smoked fish, dried fish, etc.)	Hautement transformé (longes de poissons, filets de poisson, chair de poisson, huile de poisson, poisson fumé, poisson séché, etc.)
4.	SF	Fins (sharks)	Nageoires (requins)
5.	PR	Processed (unspecified)	Transformé (non-spécifié)

- Boat size class and units: Table 20 lists the boat size categories used at the IOTC.

Table 20: Boat size categories used at the IOTC

	IOTC Code	Type of measure	English Description	French Description
1.	L005	Length Overall / Longueur hors-tout	LOA < 5 m	LHT < 5 m
2.	L015	Length Overall / Longueur hors-tout	LOA ≥ 5 m and < 15 m	LHT ≥ 5 m et < 15 m
3.	L024	Length Overall / Longueur hors-tout	LOA ≥ 15 m and < 24 m	LHT ≥ 15 m et < 24 m
4.	L032	Length Overall / Longueur hors-tout	LOA ≥ 24 m and < 32 m	LHT ≥ 24 m et < 32 m
5.	L045	Length Overall / Longueur hors-tout	LOA ≥ 32 m and < 45 m	LHT ≥ 32 m et < 45 m
6.	L060	Length Overall / Longueur hors-tout	LOA ≥ 45 m and < 60 m	LHT ≥ 45 m et < 60 m
7.	L080	Length Overall / Longueur hors-tout	LOA ≥ 60 m and < 80 m	LHT ≥ 60 m et < 80 m
8.	L100	Length Overall / Longueur hors-tout	LOA ≥ 80 m and < 100 m	LHT ≥ 80 m et < 100 m
9.	L120	Length Overall / Longueur hors-tout	LOA ≥ 100 m and < 120 m	LHT ≥ 100 m et < 120 m
10.	L150	Length Overall / Longueur hors-tout	LOA ≥ 120 m	LHT ≥ 120 m
11.	C002	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC < 2 t	CTP < 2 t
12.	C010	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC ≥ 2 t and < 10 t	CTP ≥ 2 t et < 10 t
13.	C050	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC ≥ 10 t and < 50 t	CTP ≥ 10 t et < 50 t
14.	C200	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC ≥ 50 t and < 200 t	CTP ≥ 50 t et < 200 t
15.	C400	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC ≥ 200 t and < 400 t	CTP ≥ 200 t et < 400 t
16.	C800	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC ≥ 400 t and < 800 t	CTP ≥ 400 t et < 800 t
17.	C912	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC ≥ 800 t and < 1200 t	CTP ≥ 800 t et < 1200 t
18.	C916	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC ≥ 1200 t and < 1600 t	CTP ≥ 1200 t et < 1600 t
19.	C920	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC ≥ 1600 t and < 2000 t	CTP ≥ 1600 t et < 2000 t

	IOTC Code	Type of measure	English Description	French Description
20.	C950	Fish Carrying Capacity / Capacité de Transport de Poissons	FCC ≥ 2000 t	CTP ≥ 2000 t
21.	T001	Gross Tonnage / Tonnage brut	GT < 1 t	TB < 1 t
22.	T015	Gross Tonnage / Tonnage brut	GT ≥ 1 t and < 15 t	TB ≥ 1 t et < 15 t
23.	T100	Gross Tonnage / Tonnage brut	GT ≥ 15 t and < 100 t	TB ≥ 15 t et < 100 t
24.	T200	Gross Tonnage / Tonnage brut	GT ≥ 100 t and < 200 t	TB ≥ 100 t et < 200 t
25.	T500	Gross Tonnage / Tonnage brut	GT ≥ 200 t and < 500 t	TB ≥ 200 t et < 500 t
26.	T910	Gross Tonnage / Tonnage brut	GT ≥ 500 t and < 1000 t	TB ≥ 500 t et < 1000 t
27.	T920	Gross Tonnage / Tonnage brut	GT ≥ 1000 t and < 2000 t	TB ≥ 1000 t et < 2000 t
28.	T935	Gross Tonnage / Tonnage brut	GT ≥ 2000 t and < 3500 t	TB ≥ 2000 t et < 3500 t
29.	T950	Gross Tonnage / Tonnage brut	GT ≥ 3500 t and < 5000 t	TB ≥ 3500 t et < 5000 t
30.	T970	Gross Tonnage / Tonnage brut	GT ≥ 5000 t	TB ≥ 5000 t

IOTC CPC's and other parties are encouraged to report vessel size categories in length (length overall; LOA) for their fisheries. Fish carrying capacity, measured in tonnes, or gross tonnage (GT) can be used alternatively in the case that LOA is not available. **IOTC CPC's should make every possible effort to classify their fleets according to the categories recorded in Table 20 and report this information to the Secretariat**. Alternative size categories can be used for fleets for which this information is not available.

- Target species: Main species targeted, as defined in Table 12.
- Number of boats: Total number of fishing crafts operated during the calendar year concerned.

CATCH-AND-EFFORT

DEFINITION: The term catch-and-effort **refers to the fine-scale data – usually from logbooks, and reported per fleet, year, gear- type of school, month, grid and species.** This includes:

- **Surface fisheries**:
  - Purse seine and pole-and-line fisheries: **catch weight by species and fishing effort by fishing mode, 1° grid area and month strata**. In addition:
    - Support vessels: effort data expressed as the **number of days at sea by 1° grid area and month**.
    - Fish Aggregating Devices (FAD): effort data expressed as the **total number of FAD visited per type of FAD, type of visit, 1° grid area and month**.
  - Other fisheries: **catch weight by species and fishing effort by 1° grid area and month strata.**
- **Longline fisheries**: **catch by species, in numbers or weight, and effort as the number of hooks deployed by 5° grid area and month strata**.
- **Coastal fisheries**: available catch by species, fishing gear and fishing effort may be provided using an alternative geographical area if it better represents the fishery concerned.

Catch-and-effort data shall be extrapolated (raised) to the total catches (and effort) for the fishery concerned.

STANDARDS FOR THE REPORTING OF CATCH-AND-EFFORT: The standards for the reporting of catch-and-effort to the IOTC are defined in IOTC Resolution 10/02, which covers all IOTC species and other species identified by the Commission (Table 4), mainly species of pelagic sharks (also indicated in resolutions 05/05, 13/06, 12/09, 13/05), seabirds (05/09, 10/06), marine turtles (12/04), and Cetaceans (13/04); in addition, IOTC Resolution 13/08 sets standards for the reporting of catch-and-effort data on FADs, anchored or drifting, by CPC having purse seine or baitboat fleets. Finally, IOTC Resolution 13/03 calls for coastal countries in the IOTC Area to report the catches of foreign licensed vessels within their EEZs, in an aggregated manner. Appendix I and Appendix II contain more information about these requirements.

INFORMATION TO BE REPORTED: The following information shall be reported to the IOTC:

Surface and longline fisheries:

IOTC Form: Form 3CE (**http://www.iotc.org/Common/dataforms/Form_3CE.xlt**)

General Information:

- ***Reporting Source***: details about the individual reporting the information and the Institution responsible for the report.
  a. Contact name: Name of the individual reporting the information
  b. Contact e-mail address: E-mail of the individual reporting the information
  c. Contact phone: Phone number of the individual reporting the information
  d. Organization name: Name of the organization responsible for the report
  e. Organization e-mail address: E-mail of the organization responsible for the report
- ***Dataset***: General information about the dataset reported.
  a. Reporting Country: The country reporting the catches
  b. Flag Country: The country for which retained catches are reported
  c. Year: The calendar year the catches were made
  d. Type of Fishery: The type of fishery for which the retained catches are reported (see available fisheries on Table 11)
  e. Target species: Main species targeted, as defined in Table 12.
  f. Effort units: The following effort units shall be used:

a. Surface and coastal fisheries: no measure of effort is specified; Table 21 lists the units of effort that are recommended for each fishery. Other alternative units are also provided in each case.

b. Longline fisheries: number of hooks set

Table 21: Types of effort units recommended for main IOTC fisheries

	Fishery	Effort unit recommended		Alternate effort unit	
		IOTC Code	Description	IOTC Code	Description
1.	Purse seine associated schools	LS	Number of FAD sets	FH	Number of hours fishing
2.	Purse seine free schools	SH	Number of hours searching	FH	Number of hours fishing
3.	Support vessels purse seine	DS	Number of days-at-sea		
4.	Fish aggregating devices	NF	Number of FAD visits		
5.	Longline	HK	Number of hooks set		
6.	Gillnet	LS	Total length of net panels set	FD	Number of fishing days
7.	Pole-and-line	NP	Number of poles used	FD	Number of fishing days
8.	Handline	HK	Number of hooks set	FD	Number of fishing days
9.	Trolling	NL	Number of lines set	FD	Number of fishing days
10.	Trawl	FH	Number of hours fishing	FD	Number of fishing days

g. Catch units: Catches shall be reported in live weight (metric tons) and/or number, depending on the fishery:

a. Surface and coastal fisheries: live weight in tons

b. Longline fisheries: live weight in tons and/or numbers of fish

h. Type of data: Type of statistics reported.

a. Preliminary statistics: The statistics were estimated by using some information from the fishery; the statistics reported are likely to change in the future as more information become available.

b. Final statistics: The statistics were estimated by using the complete set of data for the fishery and year concerned; the statistics reported are unlikely to change in the future.

i. Data Sources: The types of information that were used for the estimation of the catch-and-effort for the fishery concerned; these are shown on Table 13.

j. Data Processing: The type of estimation procedure, as defined in Table 14.

k. Raised: The catch-and-effort data has been raised to the represent the total catches and effort in the year concerned (RS), has been raised but does not represent the total catches and effort in the year concerned (PR) or has not been raised at all (SA).

l. Coverage: The proportion of the total catches (in number or weight)/effort that were monitored for the fishery concerned; refer to Table 15 for types of coverage.

Data:

- Month: The month the catches were made.
- Grid: The grid area the catches were made; refer to standard areas for the reporting of catch-and-effort and size frequency data.
- Estimated: The status of the catch-and-effort data recorded for the stratum:
  a. SS: No or insufficient catch-and-effort data (CE) available in the stratum concerned; the CE data for the stratum was estimated by using data from neighboring time-area strata (substitution scheme). Applies only to raised CE.

b. AV: CE available for the stratum; the CE for the stratum was estimated by using the CE available in the referred stratum. Applies to both raised and non-raised CE (all non-raised CE falls under this category).

- Effort: Total effort exerted (in the units specified on Table 21)
- Catches by species: including:
    a. Retained catches: catches for each species retained on board in live weight and/or number. IOTC CPC's shall provide catches for IOTC species (Table 3) and other species identified by the Commission (Table 4) and are encouraged to provide catches for all other species that are retained on board (Appendix V; Table 5 and Table 6). The catches of specimens for which only part/s of their bodies are retained on board shall be always reported as retained catches, in live weight.
    b. Discard levels: discard levels for each species in live weight or number. IOTC CPC's shall provide discard levels for IOTC species (Table 3) and other species identified by the Commission (Table 4). CPC's are also encouraged to provide discard levels for other species of bony fish (Table 5), sharks (Table 6), marine turtles (Table 7), seabirds (Table 8), and marine mammals (Table 9).

Coastal fisheries:

IOTC Form: Form 3AR (**http://www.iotc.org/Common/dataforms/Form_3AR.xlt**)

General Information: (refer to IOTC Form3CE)

Data: (refer to IOTC Form 3CE)

- Area: The area the catches were made; refer to alternative areas for the reporting of catch-and-effort and size frequency data.

Support vessels:

IOTC Form: Form 3SU (**http://www.iotc.org/Common/dataforms/Form_3SU.xlt**)

General Information:

- ***Reporting Source***: details about the individual reporting the information and the Institution responsible for the report.
    a. Contact name: Name of the individual reporting the information
    b. Contact e-mail address: E-mail of the individual reporting the information
    c. Contact phone: Phone number of the individual reporting the information
    d. Organization name: Name of the organization responsible for the report
    e. Organization e-mail address: E-mail of the organization responsible for the report
- ***Dataset***: General information about the dataset reported.
    a. Reporting Country: The country reporting the effort
    b. Flag Country: The country for which the effort is reported
    c. Year: The calendar year the effort was exerted
    d. Effort units: shall be expressed as number of days-at-sea
    e. Type of data: Type of statistics reported.
        a. Preliminary statistics: The statistics were estimated by using some information from the fishery; the statistics reported are likely to change in the future as more information become available.
        b. Final statistics: The statistics were estimated by using the complete set of data for the fishery and year concerned; the statistics reported are unlikely to change in the future.

f. Data Sources: The types of information that were used for the estimation of the effort for the fishery concerned; these are shown on Table 13.
g. Data Processing: The type of estimation procedure, as defined in Table 14.
h. Raised: The effort data has been raised to the represent the total effort in the year concerned (RS), has been raised but does not represent the total effort in the year concerned (PR) or has not been raised at all (SA).
i. Coverage: The proportion of the total effort that was monitored for the fishery concerned; refer to Table 15 for types of coverage.

Data:

- Month: The month the effort was exerted
- Grid: The 1° grid area where the effort was exerted; refer to standard areas for the reporting of catch-and-effort and size frequency data.
- Estimated: The status of the effort data recorded for the stratum:
    a. SS: No or insufficient effort data available in the stratum concerned; the effort data for the stratum was estimated by using data from neighboring time-area strata (substitution scheme). Applies only to raised effort data.
    b. AV: Effort data available for the stratum; the effort for the stratum was estimated by using the effort data available in the referred stratum. Applies to both raised and non-raised effort data (all non-raised effort fall under this category).
- Effort: Total number of days-at-sea

Fish Aggregating Devices (FAD):

IOTC Form: Form 3FA (**http://www.iotc.org/Common/dataforms/Form_3FA.xlt**)

General Information:

- ***Reporting Source***: details about the individual reporting the information and the Institution responsible for the report.
    a. Contact name: Name of the individual reporting the information.
    b. Contact e-mail address: E-mail of the individual reporting the information.
    c. Contact phone: Phone number of the individual reporting the information.
    d. Organization name: Name of the organization responsible for the report.
    e. Organization e-mail address: E-mail of the organization responsible for the report.
- ***Dataset***: General information about the dataset reported.
    a. Reporting Country: The country reporting the number of FAD visits.
    b. Flag Country: The fishing country for which the number of FAD visits is reported.
    c. Year: The calendar year the number of FAD visits refers to.
    d. Type of Fishery: The type of fishery for which the number of FAD visits are reported (see available fisheries on Table 11); note that FAD data shall be reported for purse seine and pole-and-line fisheries operated on drifting and/or anchored FADs; reporting of this information for other fisheries is encouraged (in particular fisheries using liftnets and handlines around anchored FADs).
    e. Target species: Main species targeted, as defined in Table 12.
    f. Effort units: shall be expressed as number of FAD visits.
    g. Catch units: Catches shall be reported in live weight (metric tons).
    h. Type of data: Type of statistics reported.
        a. Preliminary statistics: The statistics were estimated by using some information from the fishery; the statistics reported are likely to change in the future as more information become available.

b. Final statistics: The statistics were estimated by using the complete set of data for the fishery and year concerned; the statistics reported are unlikely to change in the future.

i. Data Sources: The types of information that were used for the estimation of the number of FAD visits for the fishery concerned; these are shown on Table 13.

j. Data Processing: The type of estimation procedure, as defined in Table 14.

k. Raised: The number of FAD visits data has been raised to the represent the total number of FAD visits in the year concerned (RS), has been raised but does not represent the total number of FAD visits in the year concerned (PR) or has not been raised at all (SA).

l. Coverage: The proportion of the total number of trips that was monitored for FAD visits for the fishery concerned; refer to Table 15 for types of coverage.

Data:

- Month: The month the total number of FAD visits were made.
- Estimated: The status of the effort data recorded for the stratum:
    a. SS: No or insufficient FAD data available in the stratum concerned; the FAD data for the stratum was estimated by using data from neighboring time-area strata (substitution scheme). Applies only to raised FAD data.
    b. AV: FAD data available for the stratum; the FAD data for the stratum was estimated by using the data available in the referred stratum. Applies to both raised and non-raised FAD data (all non-raised FAD data fall under this category).
- Type of FAD: The type of FAD visited; refer to Table 22 for types of FADs.

Table 22: Types of Fish Aggregating Devices used in IOTC fisheries

	IOTC Code	English Description	French Description
1.	LOG	Drifting log or debris NOT located using a tracking system (radio or satellite transmission)	Tronc ou débris flottants NON localisés au moyen d'un système de suivi (radio ou satellite)
2.	LGT	Drifting log or debris located using a tracking system (radio or satellite transmission)	Tronc ou débris flottants localisés au moyen d'un système de suivi (radio ou satellite)
3.	NFD	Drifting raft or FAD with a net NOT located using a tracking system (radio or satellite transmission)	Radeau ou DCP dérivant munis d'un filet NON localisé au moyen d'un système de suivi (radio ou satellite)
4.	NFT	Drifting raft or FAD with a net located using a tracking system (radio or satellite transmission)	Radeau ou DCP dérivant munis d'un filet localisé au moyen d'un système de suivi (radio ou satellite)
5.	FAD	Drifting raft or FAD without a net NOT located using a tracking system (radio or satellite transmission)	Radeau ou DCP dérivant sans filet NON localisé au moyen d'un système de suivi (radio ou satellite)
6.	FDT	Drifting raft or FAD without a net located using a tracking system (radio or satellite transmission)	Radeau ou DCP dérivant sans filet localisé au moyen d'un système de suivi (radio ou satellite)
7.	ANF	Anchored FAD	DCP ancré
8.	DFR	Other drifting objects NOT located using a tracking system (radio or satellite transmission) (e.g. dead animal, etc.)	Autre objet dérivant NON localisé au moyen d'un système de suivi (radio ou satellite) : animal mort, etc.
9.	DRT	Other drifting objects located using a tracking system (radio or satellite transmission) (e.g. dead animal, etc)	Autre objet dérivant localisé au moyen d'un système de suivi (radio ou satellite) : animal mort, etc.

- Type of FAD visit: The type of activity undertaken when visiting the FAD; refer to Table 23 for types of FAD activities.

Table 23: Main types of activity undertaken on Fish Aggregating Devices

	IOTC Code	English Description	French Description
1.	DD	Deployment of drifting FAD	Déploiement d'un DCP dérivant
2.	AD	Deployment of anchored FAD	Déploiement d'un DCP ancré
3.	DH	Retrieval/encounter and hauling of drifting FAD	Récupération/rencontre et remontée d'un DC P dérivant
4.	AH	Revisiting and towing of anchored FAD	Revisite et remorquage d'un DCP ancré
5.	DR	Retrieval of drifting FAD	Récupération d'un DCP dérivant
6.	AR	Revisiting anchored FAD	Revisite d'un DCP ancré
7.	DL	Loss of drifting FAD (tracking signal lost)	Perte d'un DCP dérivant (signal de suivi perdu)
8.	AL	Loss of anchored FAD (detached from anchorage point or damaged heavily)	Perte d'un DCP ancré (détaché de son mouillage ou fortement endommagé)
9.	DI	Retrieval/encounter, hauling, and intervention on electronic equipment of drifting FAD	Récupération/rencontre, remontée et intervention sur l'équipement électronique d'un DCP dérivant

- Effort: Total number of FAD visits by purse seiners, support vessels, baitboats, or boats using other gears operating under the flag of the country reporting the data. Note that this number shall include all of the FADs visited, including visits to FADs set by the same vessel that reports the visit and other types of FAD, as defined in Type of FAD above.
- FAD sets: Indicate the number of FAD visits that ended up in a set; FAD sets can be performed following the retrieval of a FAD, drifting (DH, DR, and DI in Table 23), or anchored (AH and AR in Table 23).
- Catches by species: including:
    a. Retained catches: catches for each species retained on board in live weight and/or number. IOTC CPC's shall provide catches for IOTC species (Table 3) and other species identified by the Commission (Table 4) and are encouraged to provide catches for all other species that are retained on board (Appendix V; Table 5 and Table 6). The catches of specimens for which only part/s of their bodies are retained on board shall be always reported as retained catches, in live weight.
    b. Discard levels: discard levels for each species in live weight or number. IOTC CPC's shall provide discard levels for IOTC species (Table 3, page 16) and other species identified by the Commission (Table 4). IOTC CPC's are encouraged to provide discard levels for other species of bony fish (Table 5), sharks (Table 6), marine turtles (Table 7), seabirds (Table 8), and marine mammals (Table 9).

LENGTH FREQUENCY DATA

DEFINITION: The term length frequency **refers to individual body lengths of IOTC species and main shark species per fleet, year, gear, type of school, month and 5 degrees square areas.**

STANDARDS FOR THE REPORTING OF LENGTH FREQUENCY DATA: The standards for the reporting of length frequency data to the IOTC are defined in IOTC Resolution 10/02, which covers all IOTC species and other species identified by the Commission (Table 4), mainly species of pelagic sharks (also indicated in resolutions 05/05, 13/06, 12/09, 13/05).

INFORMATION TO BE REPORTED: The following information shall be reported to the IOTC:

IOTC Form: Form 4SF (**http://www.iotc.org/Common/dataforms/Form_4SF.xlt**)

General Information:

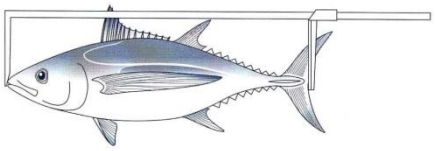
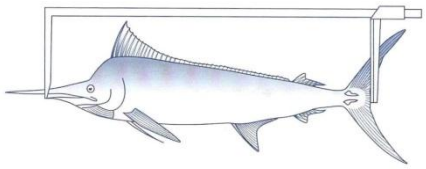
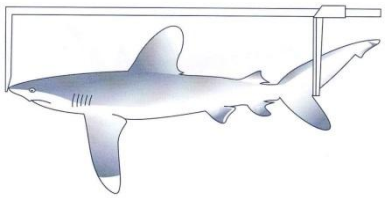
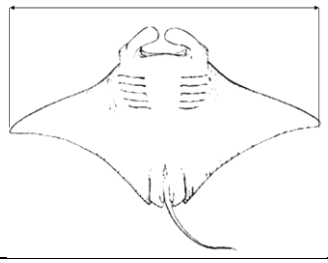
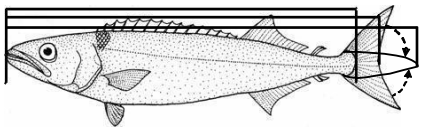
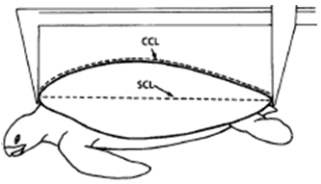
- ***Reporting Source***: details about the individual reporting the information and the Institution responsible for the report.
    a. Contact name: Name of the individual reporting the information
    b. Contact e-mail address: E-mail of the individual reporting the information
    c. Contact phone: Phone number of the individual reporting the information
    d. Organization name: Name of the organization responsible for the report
    e. Organization e-mail address: E-mail of the organization responsible for the report
- ***Dataset***: General information about the dataset reported.
    a. Reporting Country: The country reporting the size data
    b. Flag Country: The country for which size data is reported
    c. Year: The calendar year the size data was collected
    d. Type of Fishery: The type of fishery for which the size data is reported (see available fisheries on Table 11)
    e. Sampled catch: The type of catch sampled:
        a. Retained catch: The sample was taken from the catches retained on board (RC).
        b. Discards: The sample was taken from the catches discarded (DI).
    f. Species: The species for which the size data is reported. IOTC CPC's shall provide size data for IOTC species (Table 3) and main species of sharks (Table 4). IOTC CPC's are encouraged to provide size data for other species of bony fish (Table 5), sharks (Table 6), and marine turtles (Table 7).
    g. Fish measurement details: **Fork lengths, measured straight with a caliper, are recommended over fish weights**. Table 24 shows the type of lengths recommended for each species group.

        The following information shall be recorded:

        a. Measuring tool: The tool used to take the measurement. **The use of callipers (LC) is recommended over other measuring tools**; **measuring boards (LB)** can be used alternatively. **The use of tape measures (LT) is not recommended**. Table 25 lists the type of measurement tools used by the IOTC.
        b. Size interval: Refers to the distance between consecutive size classes. **Intervals of 1 cm** or **1 kg** are recommended for fish that is measured in fork length or live weight, respectively. The intervals recommended for other types of measurements are listed in Table 26.
        c. Measurement unit: **All fish lengths and weights shall be measured to the lowest size interval** (*e.g.* For 1 cm intervals all fish specimens recorded for lengths

ranging from 57 cm (inclusive) to 58 cm (exclusive) shall be recorded under length 57 cm).

Table 24: Types of fish measurement recommended by the IOTC

Species Group	Measuring Tool	Recommended Measurement	Example
Tuna	Calliper	Fork length: Straight distance from the tip of the upper jaw to the fork of the tail	
Billfish	Calliper	Fork length: Straight distance from the tip of the lower jaw to the fork of the tail	
Sharks	Calliper	Fork length: Straight distance from the tip of the upper snout to the fork of the tail	
Rays	Calliper	Depending on the species; the length that applies to manta rays is shown on the right	
Other bonefish	Calliper Measuring board	Depending on the species; Total length: Straight distance from the tip of the upper snout to the end of the tail Standard length: Straight distance from the tip of the snout to the posterior end of the last vertebra Fork length: as above	
Marine turtles	Calliper	Length of the shell	

d. Measurement method**: Straight lengths** shall be taken whenever it is possible. **The use of curved lengths shall be avoided**.

e. Type of measurement: Refers to the type of measurement used to record the fish length or weight. Table 26 lists the main types of measurement used by the IOTC. **Fork lengths are recommended over all other measurement types for IOTC species and sharks**. The way in which the length measurements listed in Table 26 are taken is shown in Table 27.

h. Coverage: The proportion that the total number of fish sampled (or sampled weight) for the species make out of the total number (or weight) of fish caught for that species, for the fishery concerned; refer to Table 15 for types of coverage.

Table 25: Types of measuring tools used at the IOTC

	IOTC Code	English Description	French Description
1.	LC	Length measured using a Caliper	Longueur mesurée avec un pied à coulisse
2.	LB	Length measured using a Measuring board	Longueur mesurée à l'ichthyomètre
3.	LT	Length measured using a Tape measure	Longueur mesurée au mètre ruban
4.	WE	Weight measured using an electronic scale	Poids mesuré à la balance électronique
5.	WC	Weight measured using a supermarket scale	Poids mesuré à la balance commerciale
6.	WB	Weight measured using a spring scale	Poids mesuré au peson

Table 26: Types of measurements used by the IOTC and size intervals recommended

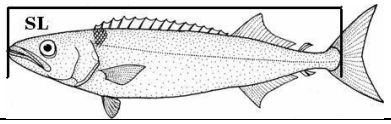
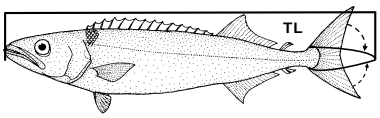
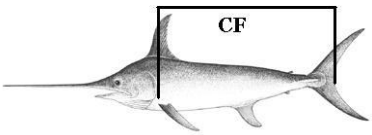
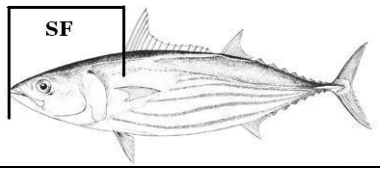
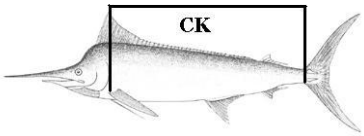
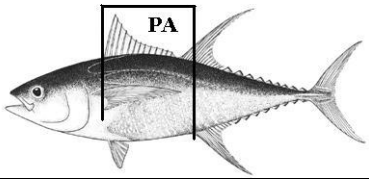
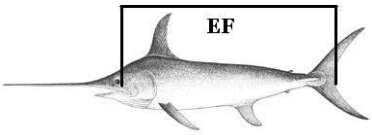
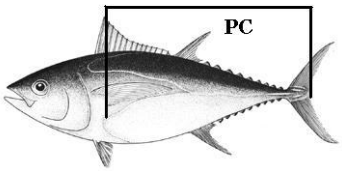
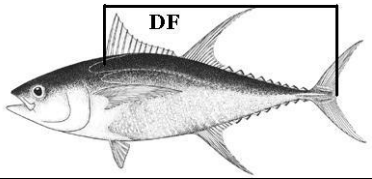
	IOTC Code	English Description	French Description	Recom. Interval
1.	**FL**	**Fork length**	**Longueur à la fourche**	**1 cm**
2.	TL	Total length	Longueur totale	1 cm
3.	SL	Standard length	Longueur standard	1 cm
4.	CF	Cleithrum-fork of the tail length	Longueur opercule-fourche de la queue	1 cm
5.	CK	Cleithrum-keel length	Longueur opercule-carène	1 cm
6.	EF	Eye-fork of the tail length	Longueur œil-fourche de la queue	1 cm
7.	DF	Base first dorsal fin-fork of the tail length	Longueur base de la première nageoire dorsale-fourche de la queue	1 cm
8.	SF	Tip of snout-base first dorsal fin length	Longueur pointe du museau-base de la première nageoire dorsale	0.5 cm
9.	PA	Base pectoral fin-base anal fin length	Longueur base de la nageoire pectorale-base de la nageoire anale	0.5 cm
10.	PC	Base pectoral fin-fork of the tail length	Longueur base de la nageoire pectorale-fourche de la queue	1 cm
11.	RD	Round (whole, live) weight	Poids vif (entier)	1 kg
12.	GG	Gilled-and-gutted (bill off) weight	Poids éviscéré (sans rostre)	1 kg
13.	HD	Headed-and-gutted weight	Poids étêté et éviscéré	0.5 kg
14.	PD	Headed and caudal peduncle-off weight	Poids étêté, éviscéré et sans pédoncule caudal	0.5 kg
15.	HT	Headed and tailed weight	Poids étêté, éviscéré et sans nageoire caudale	0.5 kg

i. Type of data: Type of statistics reported.
   a. Preliminary statistics: The statistics were estimated by using some information from the fishery; the statistics reported are likely to change in the future as more information become available.
   b. Final statistics: The statistics were estimated by using the complete set of data for the fishery and year concerned; the statistics reported are unlikely to change in the future.

j. Data Sources: The types of information that were used for the estimation of the length frequency for the fishery concerned; these are shown on Table 13.

k. Data Processing: The type of estimation procedure, as defined in Table 14.

Table 27: Length measurement used by the IOTC

IOTC Code	Description	Example	IOTC Code	Description	Example
SL	Tip of snout-posterior end of last vertebra[T1]		TL	Tip of snout- tip of the longer lobe of the caudal fin[T2]	
CF	Cleithrum-fork of the tail length		SF	Tip of snout-base first dorsal fin length	
CK	Cleithrum-keel length		PA	Base pectoral fin-base anal fin length	
EF	Eye-fork of the tail length		PC	Base pectoral fin-fork of the tail length	
DF	Base first dorsal fin-fork of the tail length		FL	Tip of snout-fork of the tail length	See Table 24 (Tuna, Billfish, Shark)

T1 Or posterior end of midlateral portion of the hypural plate
T2 Usually measured with the lobes compressed along the midline

Data:

- Month: The month the sample was taken.
- Grid: The 5 grid area (or alternative area for coastal fisheries) the size data was collected; refer to standard areas for the reporting of catch-and-effort and size frequency data.
- Estimated: The status of the size data recorded for the stratum:
    a. SS: No or insufficient samples available in the stratum concerned; the size frequency data for the stratum was estimated by using data from neighboring time-area strata (substitution scheme). Applies only to raised size frequency data (catch-at-size).
    b. AV: Samples available for the stratum; the size frequency data (SF) for the stratum was estimated by using the samples available in the referred stratum. Applies to both raised and non-raised SF (raw samples; all non-raised SF fall under this category).
- Size class: The length /weight of the specimen, measured to the lowest measurement unit (*e.g.* if the interval used is 1 cm, all measurements between 57 cm (inclusive) and 58 cm (exclusive) shall be recorded under size class 57).
- Number of specimens: Total number of specimens measured.

SCIENTIFIC OBSERVER DATA

DEFINITION: The term sci**entific observer data refers to the Trip Report summary that scientific observers have to send to the IOTC Secretariat no later than 150 days following disembarkation from the vessel that was monitored.** It includes information on the activities of vessels in the IOTC Record of Authorized Vessels, for which at least 5% of the fishing activities shall be covered.

Observer Trip Reports shall contain unraised data, aggregated by fishing trip, month, and 1 degree square grid.

STANDARDS FOR THE REPORTING OF SCIENTIFIC OBSERVER DATA: The standards for the reporting of scientific observer data to the IOTC are defined in IOTC Resolution 11/04, and the IOTC Observer Manual[19].

INFORMATION TO BE REPORTED: The following information shall be reported to the IOTC:

IOTC Form: Form 5TR (**http://www.iotc.org/Common/dataforms/Form_5TR.xlt**)

General Information:

- ***Reporting Source***: details about the individual reporting the information and the Institution responsible for the report.
    a. Contact name: Name of the individual reporting the information
    b. Contact e-mail address: E-mail of the individual reporting the information
    c. Contact phone: Phone number of the individual reporting the information
    d. Organization name: Name of the organization responsible for the report
    e. Organization e-mail address: E-mail of the organization responsible for the report
- ***Trip summary:*** Brief outline of the work carried out, including any specific tasks undertaken that are additional to those specific in the IOTC Scientific Observer Manual. Including:
    a. Remarks on operational issues
    b. Remarks on observer tasks
    c. Remarks on observer logbook forms
- ***Scientific Observer Details***: Details about the observer that collected the information and the fishing vessel observed.
    a. Observer Name: Name of the scientific observer(s) that collected the data onboard the fishing vessel.
    b. Observer Nationality: The country of the observer.
    c. IOTC Certification Number: The observer ID, as per the IOTC Observer Accreditation Scheme.
    d. Boarding: The GMT date (YYYY-MM-DD) and time (HH:MM) observation of the fishing trip started. Note that this refers to the time the observer boarded the fishing boat to start monitoring of the fishing operations irrespective of the time the vessel started the fishing trip (e.g. following a transshipment event or departure from port).
    e. Boarding location: If the fishing vessel was boarded in port the name of the port and geographical coordinates (±DD:MM:SS Latitude (+ for North; - for South) and DDD:MM:SS Longitude) corresponding to the port; if the vessel was boarded at sea just record at-sea plus the geographical coordinates corresponding to the location the observer boarded the fishing ship.
    f. Disembarkation: The GMT date (YYYY-MM-DD) and time (HH:MM) observation of the fishing trip ended. Note that this refers to the time the observer stopped monitoring of the

[19] http://www.iotc.org/files/proceedings/2010/wros/IOTC-2010-WROS-06%20Draft%20Obs%20Manual(July2010).pdf

fishing trip and abandoned ship, irrespective of the time the fishing vessel ended the fishing trip (e.g. port call or transshipment).

g. Disembarkation location: If the fishing vessel was disembarked in port the name of the port and geographical coordinates (±DD:MM:SS Latitude (+ for North; - for South) and DDD:MM:SS Longitude) corresponding to the port; if the vessel was disembarked at sea just record at-sea plus the geographical coordinates corresponding to the location the observer disembarked.

h. Remarks: Any additional information worth noting concerning the observer and boarding and disembarking arrangements.

Vessel Details: Details about the fishing vessel observed.

- ***Vessel identification and dimensions:***
  a. Vessel Name: The name of the fishing vessel observed
  b. IOTC Registration Number: The IOTC Record Number as per the IOTC Record of Authorized Vessels.
  c. Flag State: The country of registration of the vessel.
  d. Radio Call Sign: The International Radio Call Sign, as per the IMO (International Maritime Organization) and International Telecommunication Union (ITU) standards[20].
  e. Port of Registration: The name and geographical coordinates (±DD:MM:SS Latitude (+ for North; - for South) and DDD:MM:SS Longitude) corresponding to the port of registration of the vessel (also called home port), as per the vessel documents.
  f. Vessel type: Refer to Table 16. It is important to note that table 16 does not cover all boat types. Countries using types of boat other than those specified on table 16 are encouraged to provide this information to the Secretariat.
  g. Main fishing gear: The gear that was used as primary gear during the trip (see available fisheries on Table 11).
  h. Vessel owner: The name of the company or individual owner of the vessel.
  i. Vessel charterer: If the vessel operated under a charter arrangement, the name of the company or individual charterer of the vessel.
  j. Gross tonnage (GT): Overall internal volume of the ship, as per the IMO International Convention on Tonnage Measurement of Ships[21] (London, 23 June 1969).
  k. Length overall (LOA): The maximum length of a vessel's hull measured parallel to the waterline, in meters.
  l. Blast freezer capacity: The volume of catch that can be blast frozen prior to storage, expressed in cubic meters (m^3).
  m. Fish storage capacity: The total volume of fish that can be stored on the vessel, expressed in cubic meters (m^3).
- ***Vessel electronic equipment:***
  a. Onboard electronic equipment type1: Onboard acoustic equipment (Sonar [AES]; Eco-Sounder [AEE]); Position fixing equipment, such as global positioning systems (PFE); Vessel Monitoring System (VMS); Radars (RAD); Communications equipment (CEQ); Plotters (PLO).
  b. Onboard electronic equipment Make1: The make of the electronic equipment 1.
  c. Onboard electronic equipment Model1: The model of the electronic equipment 1.
  d. Onboard electronic equipment number of unit available1: The number of operational equipment available of the above make and model.

[20] http://www.fact-index.com/i/in/international_callsign_allocations.html
[21] http://www.admiraltylawguide.com/conven/tonnage1969.html

e. Onboard electronic equipment Power1: The power of the electronic equipment 1, measured in Kilohertz (kHz), Megahertz (MHz), or other units, depending on the type of equipment.

f. Onboard electronic equipment type2-type15: as n.-r. above, one for each piece of equipment.

g. Remarks: Any additional information worth noting concerning the electronic equipment of the ship.

Cruise itinerary[22]: Details about the fishing trip.

a. Date of departure/start: The GMT date (YYYY-MM-DD) and time (HH:MM) the fishing vessel started the trip that is being observed, i.e. the date in which the fishing vessels sailed back to the fishing grounds from port or a transshipment location.

b. Departure location: If the fishing vessel departed from port the name of the port and geographical coordinates (DD:MM:SS Latitude (+ for North; - for South) and DDD:MM:SS Longitude) corresponding to the port; if the vessel started a new trip at sea following a transshipment just record at-sea plus the geographical coordinates corresponding to the location the trip started.

c. Arrival on fishing ground: The GMT date (YYYY-MM-DD) and time (HH:MM) the vessel arrived on the fishing ground.

d. Start fishing: The GMT date (YYYY-MM-DD) and time (HH:MM) of the start of the first fishing event for the trip.

e. End fishing: The GMT date (YYYY-MM-DD) and time (HH:MM) of the end of the last fishing event for the trip.

f. Departure from fishing ground: The GMT date (YYYY-MM-DD) and time (HH:MM) the vessel left the fishing ground to sail back to port or a transshipment location.

g. Date of return/end: The GMT date (YYYY-MM-DD) and time (HH:MM) the fishing vessel ended the trip that is being observed, i.e. the date in which the fishing vessel arrived back in port or to a transshipment location.

h. Arrival location: If the fishing vessel arrived in port the name of the port and geographical coordinates (±DD:MM:SS Latitude (+ for North; - for South) and DDD:MM:SS Longitude) corresponding to the port; if the vessel arrived to the transshipment location just record at-sea plus the geographical coordinates corresponding to the location the transshipment started.

i. Remarks: Any additional information worth noting concerning the cruise itinerary.

Fishing operations: Details about the fishing trip, including the catches of target species and other species

- ***Summary:***

a. Total number of days in the fishing area: The total number of days the fishing vessel spent on the fishing area.

b. Total number of days fished: The total number of days where one or more fishing events were recorded, regardless of whether they were successful or not.

c. Number of days lost: The number of days lost due to meteorological conditions, breakdowns, accidents, or other, as applicable.

d. Number of days sailing or searching for fish: The number of days spent to and fro the fishing grounds plus the number of days searching for fish (excludes days lost and days fished).

e. Target species: Main species targeted, as defined in Table 12.

[22] Note that information on the end of the fishing, departure from fishing ground, date of return and arrival location may not be available to the observer, as he may depart from the ship prior to the end of the fishing trip; in this case the information shall be completed later, on completion of the fishing trip.

Table 28: Main species or groups of species that are used as bait in IOTC Fisheries

	IOTC Code	Species English name	Species French name	Species scientific name
1.	SQU	Various squids nei	Calmars, encornets nca	*Loliginidae, Ommastrephidae*
2.	CLP	Herrings, sardines nei	Harengs, sardines nca	*Clupeidae*
3.	MAX	Mackerels nei	Maquereaux nca	*Scombridae*
4.	RSA	Japanese scad	Comète japonaise	*Decapterus maruadsi*
5.	BSH	Blue shark	Peau bleue	*Prionace glauca*
6.	SAX	Sauries nei	Balaous, bananes de mer nca	*Scomberesocidae*
7.	JAX	Jack and horse mackerels nei	Chinchards noirs nca	*Trachurus spp*
8.	RAG	Indian mackerel	Maquereau des Indes	*Rastrelliger kanagurta*
9.	MSB	River sardine		*Mesobola brevianalis*
10.	CHP	South American pilchard	Pilchard sudaméricain	*Sardinops sagax*
11.	OMZ	Squids nei	Encornets nca	*Ommastrephidae*
12.	MIL	Milkfish	Chano	*Chanos chanos*
13.	BSR	Brazilian sardinella	Sardinelle de Brésil	*Sardinella brasiliensis*
14.	ENR	Anchovies nei	Anchois nca	*Engraulis spp*
15.	JAN	Japanese anchovy	Anchois japonais	*Engraulis japonicus*
16.	SRH	Silver-stripe round herring	Hareng gracile	*Spratelloides gracilis*
17.	PIL	European pilchard(=Sardine)	Sardine commune	*Sardina pilchardus*
18.	JAA	Blue jack mackerel	Chinchard du large	*Trachurus picturatus*
19.	SAA	Round sardinella	Allache	*Sardinella aurita*
20.	SAE	Madeiran sardinella	Grande allache	*Sardinella maderensis*
21.	MAC	Atlantic mackerel	Maquereau commun	*Scomber scombrus*
22.	CJX	Fusiliers nei	Fusiliers nca	*Caesionidae*
23.	APO	Cardinal fishes, etc. nei	Apogonidés nca	*Apogonidae*
24.	SPD	Delicate round herring	Hareng rond	*Spratelloides delicatulus*
25.	SIL	Silversides(=Sand smelts) nei	Athérinidés nca	*Atherinidae*
26.	BOG	Bogue	Bogue	*Boops boops*
27.	BOC	Boarfish	Sanglier	*Capros aper*
28.	SNS	Longspine snipefish	Bécasse de mer	*Macroramphosus scolopax*
29.	MAS	Chub mackerel	Maquereau espagnol	*Scomber japonicus*
30.	MSD	Mackerel scad	Comète maquereau	*Decapterus macarellus*
31.	BIS	Bigeye scad	Sélar coulisou	*Selar crumenophthalmus*
32.	SAP	Pacific saury	Balaou du Japon	*Cololabis saira*
33.		Miscellaneous marine species nei	Espèces marines nca	

f. Total number of fishing events: The total number of sets/fishing events for the fishing trip.

g. Number of gear deployed: Total number of hooks (line gears)/poles (pole-and-line)/net panels (gillnet)/nets[23] (purse seine) deployed during the trip.

h. Number of gear lost: Total number of hooks (all line gears, including pole-and-line/net panels (gillnet and purse seine) lost during the trip.

i. Total number of fishing events observed: The total number of fishing events monitored by the observer.

j. Total number of fishing gear/effort observed: Total number of hooks (line gears)/poles (pole-and-line)/net panels (gillnet)/nets[24] (purse seine) monitored by the observer.

k. Type of bait used1: The type of bait used, including live bait (BLI); chopped up bait (BCP); frozen bait (BFR); thawed bait (BTW); or other (BOT, specify).

l. Bait species1: Record the species or group of species which was used as bait, as defined in Table 28; or add a new species, where required.

m. Bait ratio1: Record the contribution (expressed as %) of this type of bait and species to the total amount of bait used during the trip.

n. Type of bait used2-3: as l.-m. above, one for each type of bait.

o. Remarks: Any additional information worth noting concerning the summary of the fishing operations.

- ***Gear Description: Longline***

a. Type of longline: Type of longline used during the trip, including large-scale drifting longline for tunas (LLTU; more than 1800 hooks); medium-scale drifting longline for tuna (LLFR; 1000-1800 hooks); medium-scale Florida longline for swordfish (LLSW); medium-scale longline for swordfish (LLSI); medium-scale longline for sharks (LLSK); small-scale drifting longline used in combination with gillnets (LLGI; up to 1000 hooks); exploratory longline (LLEX).

b. Line setter Make: The make of the line setter, if available (NONE if not available)

c. Line setter Model: The model of the line setter, if available (blank if not available)

d. Bait casting machine Make: The make of the bait casting machine, if available (NONE if not available)

e. Bait casting machine Model: The model of the bait casting machine, if available (blank if not available)

f. Line hauler Make: The make of the line hauler, if available (NONE if not available)

g. Line hauler Model: The model of the line hauler, if available (blank if not available)

h. Mainline material: The material the mainline is made of, as defined in Table 29.

Table 29: Types of line used in longline fisheries*

	IOTC Code	English Description	French Description
1.	MNL	Monofilament line	Ligne monofilament
2.	GLW	Galvanized wire	Câble galvanisé
3.	SSW	Stainless steel wire	Câble en acier inoxydable
4.	TR3	3 strand tarred rope (red or black)	Cordage goudronné à trois torons (rouge ou noir)
5.	BRL	Braided line	Ligne tressée
6.	SKW	Sekiyama wire	Fil Sekiyama

* http://www.spc.int/DigitalLibrary/Doc/FAME/Manuals/Beverly_09_LLTerminalGear.pdf

[23] Refers to the number of sets.

[24] *Ditto* 22

i. Mainline length: Total length of the mainline stored onboard, in meters (m).
j. Mainline diameter: Diameter of the mainline, in millimeters (mm).
k. Branch line storage: Type of storage used for the branch lines, including basket (BAS); tub (TUB); or reel (REL).
l. Number of hooks per storage unit: The number of hooks per storage unit, as defined above.
m. Type of hook and size1-3: The type of hooks used, as defined in Table 30.

Table 30: Types of hook shapes and sizes used in longline fisheries*

	IOTC Code	English Description	French Description
1.	C11	Circle hooks 11/0	Hameçons autoferrants 11/0
2.	C12	Circle hooks 12/0	Hameçons autoferrants 12/0
3.	C13	Circle hooks 13/0	Hameçons autoferrants 13/0
4.	C14	Circle hooks 14/0	Hameçons autoferrants 14/0
5.	C15	Circle hooks 15/0	Hameçons autoferrants 15/0
6.	C16	Circle hooks 16/0	Hameçons autoferrants 16/0
7.	C18	Circle hooks 18/0	Hameçons autoferrants 18/0
8.	H32	Japan tuna hooks 3.2	Hameçons à thons japonais 3.2
9.	H34	Japan tuna hooks 3.4	Hameçons à thons japonais 3.4
10.	H36	Japan tuna hooks 3.6	Hameçons à thons japonais 3.6
11.	H38	Japan tuna hooks 3.8	Hameçons à thons japonais 3.8
12.	H40	Japan tuna hooks 4.0	Hameçons à thons japonais 4.0
13.	H42	Japan tuna hooks 4.2	Hameçons à thons japonais 4.2
14.	J08	J Hooks 8/0	Hameçons en J 8/0
15.	J09	J Hooks 9/0	Hameçons en J 9/0
16.	J10	J Hooks 10/0	Hameçons en J 10/0
17.	J12	J Hooks 12/0	Hameçons en J 12/0
18.	S01	Spanish hooks 1	Hameçons espagnols 1
19.	S02	Spanish hooks 2	Hameçons espagnols 2
20.	S03	Spanish hooks 3	Hameçons espagnols 3
21.	S04	Spanish hooks 4	Hameçons espagnols 4
22.	T32	Teracima hooks 3.2 sun	Hameçons Teracima 3.2 sun
23.	T34	Teracima hooks 3.4 sun	Hameçons Teracima 3.4 sun
24.	T36	Teracima hooks 3.6 sun	Hameçons Teracima 3.6 sun
25.	T38	Teracima hooks 3.8 sun	Hameçons Teracima 3.8 sun

* http://www.spc.int/DigitalLibrary/Doc/FAME/Manuals/Beverly_09_LLTerminalGear.pdf

n. Branch line material1: The material(s) the branch line is made of, as defined in Table 29.
o. Branch line diameter1: Diameter of the branch line1, in millimeters (mm).
p. Branch line material2-4: as ee.-ff. above, one for each type of branch line.
q. Branch line diameter2-4: Diameter of the branch-line2-4, in millimeters (mm)

r. Leader material1: The material(s) the leader is made of, as defined in Table 29.
s. Leader diameter1: Diameter of the leader1, in millimeters (mm).
t. Leader material2-4: as hh.-ii. above, one for each type of leader.
u. Leader diameter2-4: Diameter of the leader2-4, in millimeters (mm).
v. Fish refrigeration and storage method1-4: Types of refrigeration and fish storage methods used onboard, as defined in Table 18.
w. Remarks: Any additional information worth noting concerning the description of the longline.

- ***Gear Description: Purse seine***
  a. Maximum net length: The maximum length of the net, in meters (m), as provided by the net maker.
  b. Maximum net depth: The maximum depth of the net, in meters (m), as provided by the net maker.
  c. Stretched mesh size: The maximum size of the mesh when stretched, in millimeters (mm)
  d. Power block Make: The make of the power block.
  e. Power block Model: The model of the power block.
  f. Purse winch Make: The make of the purse winch.
  g. Purse winch Model: The model of the purse winch.
  h. Name of support vessel1: The name of the support vessel that assist the purse seiner, if any (NONE if none).
  i. Name of the support vessel2-3: As h. above, one per support vessel.
  j. Type of buoy1: Type of buoy used to track FADs, including radio-tracking (BRA); satellite tracking without fish detection equipment (BSA); satellite tracking with fish detection equipment (BSF); or other type (BOT; specify).
  k. Number of Buoy1 at sea: The total number of buoys of Type1, as defined above, that were at sea when the observer boarded the fishing vessel.
  l. Number of Buoy1 on board: The total number of buoys of Type1, as defined above, that were stored on the fishing vessel when the observer boarded it.
  m. Type of buoy2-4: As j.-l. above, one per type of buoy.
  n. Remarks: Any additional information worth noting concerning the description of the purse seine.
- ***Gear Description: Pole-and-line***
  a. Maximum number of operational poles: The maximum number of poles that can be operated from the baitboat, considering the size of the boat and the crew available.
  b. Total volume of bait tanks: The total volume of the tanks used to keep the live bait, in cubic meters (m^3).
  c. Automatic poling: Poling is mechanized (PME); or not (PNO).
  d. Remarks: Any additional information worth noting concerning the description of the pole-and-line.
- ***Gear Description: Gillnet/Trammel nets***
  a. Total number of net panels onboard: Total number of net panels stored on board for the trip, at the time of departure.
  b. Total length of the net panels: Total length of all net panels stored on board for the trip, at the time of departure, in meters (m).
  c. Stretched mesh size1-5: Size of the mesh when stretched, in millimeters (mm); if the size of the mesh is different across one or more of the net panels record the size of each.
  d. Hanging ratio: The ratio between the length of the float line and the length of the stretched mesh hanging on the float line.
  e. Maximal deployable net length per day: The maximal length of net that can be deployed during a day, in meters.

f. Type of net deployment: The net is anchored (NAN); or left drifting (NDR).
g. Depth of net deployment: The net is set on the surface (NSU); sub-surface (NSS); or at the bottom (NBO).
h. Net drum/hauler Make: The make of the net drum/hauler, where available (NONE if not available).
i. Net drum/hauler Model: The model of the net drum/hauler, as above (leave it blank if not applicable).
j. Net setting strategy: Encircling gillnets (GEN); or non-encircling (GIL).
k. Remarks: Any additional information worth noting concerning the description of the gillnet/trammel net.

- ***Catch details (all marine fish species) per calendar months***
  a. Year
  b. Month
  c. IOTC 1°*1° Grid: The IOTC code used to define the 1°*1° Grid for which the catch-and-effort data has been recorded. Refer to page 13 for details.
  d. Gear type: See available fisheries on Table 11.
  e. Effort: Total amount of effort exerted, as per the units recommended in Table 21.
  f. Species: The species for which catches are recorded; refer to Table 3 (IOTC species), Table 4 (other species identified by the Commission), Table 5 (other species of bony fish), and Table 6 (other species of sharks); or add new species, as required.
  g. Fish processing code: The type of fish processing for which the weight of the fish is recorded, as defined in Table 26.
  h. Type of catch: The type of catch recorded:
     a. Retained catch: The catches recorded refer to fish that was retained on board (RC), expressed in kilograms.
     b. Discards: The catches recorded refer to fish species that were discarded, and may be expressed in number (DN), or kilograms (DK). And the reason why the specimens were discarded, as defined in Table 31.
  i. Remarks: Any additional information worth noting concerning retained catches and discards.

Table 31: Reason for catches to be discarded following a set and likely fate of the specimens discarded

	IOTC Code	English Description	French Description
1.	SD	Fish of no commercial value due to being of small size; released dead or in very poor condition (dead or unlikely to survive).	Poisson sans valeur commerciale car trop petit ; rejeté mort ou en très mauvais état (mort ou survie peu probable)
2.	SA	Fish of no commercial value due to being of small size; released alive, in good condition (likely to survive).	Poisson sans valeur commerciale car trop petit ; rejeté vivant, en bon état (survie probable)
3.	UD	Unwanted species (e.g. with no commercial value or other than target species); released dead or in very poor condition (dead or unlikely to survive).	Espèce non désirée (ex. sans valeur commerciale ou non-cible) ; poisson rejeté mort ou en très mauvais état (mort ou survie peu probable)
4.	UA	Unwanted species (e.g. with no commercial value or other than target species); released alive, in good condition (likely to survive).	Espèce non désirée (ex. sans valeur commerciale ou non-cible) ; poisson rejeté vivant, en bon état (survie probable)
5.	PC	Fish in very poor condition (e.g. fish spoiled due to gear breakdown or malfunction, depredation, or other reasons)	Poisson en très mauvais état (ex. du fait d'une panne d'engin, de la prédation…)
6.	BA	Fish discarded due to a retention ban on the species (IOTC or flag state measures); released alive, in good condition (likely to survive).	Poisson rejeté du fait d'une interdiction de rétention à bord de l'espèce (mesures CTOI ou de l'État du pavillon) ; rejeté vivant, en bon état (survie probable)
7.	BD	Fish discarded due to a retention ban on the	Poisson rejeté du fait d'une interdiction de rétention à bord

		species (IOTC or flag state measures); released dead or in very poor condition (dead or unlikely to survive).	de l'espèce (mesures CTOI ou de l'État du pavillon) ; rejeté mort ou en très mauvais état (mort ou survie peu probable)

Summary of meteorological details: Description of the predominant weather and sea conditions during the trip. Note specifically adverse conditions that affected the fishing operations.

Summary of fishing strategy: Description of the fishing methods and strategy. Description of the use of FADs and electronic aids to locate or determine areas fished.

Summary of incidental catches:

- ***Mitigation measures***
    a. Operating area: Indicate if the vessel operated south of 25°S (YES) or no (NOT).
    b. Mitigation measure1-4: Indicate the mitigation measures used during the trip, including: night setting with minimum deck lighting (NS); bird-scaring/Tori lines (TL); line weighting (LW); other (OT, specify).
    c. Number of sets on where the Tori lines were deployed: indicate the number of sets on which tori lines were deployed on the boat (0 if none).
    d. Percentage of sets on which tori lines were used (0 if none).
    e. Tori lines design: Tori lines were constructed according to the guidelines recommended by the IOTC (YES); or not (NOT).
    f. Remarks: Any additional information worth noting concerning mitigation measures (e.g. construction, streamer length and material, aerial extent and effectiveness of the tori lines)
- ***Incidental catches of seabirds, marine turtles, and marine mammals***
    a. Year
    b. Month
    c. IOTC 1°*1° Grid: The IOTC code used to define the 1°*1° Grid for which the incidental catches are recorded. Refer to page 13 for details.
    d. Gear type: See available fisheries on Table 11.
    e. Effort: Total amount of effort exerted, as per the units recommended in Table 21.
    f. Species: The species for which incidental catches are recorded; refer to Table 7 (marine turtles), Table 8 (seabirds), Table 9 (marine mammals); or add new species, as required.
    g. Number of specimens caught and its fate: indicate the number of specimens caught that were released alive (UA); and dead (UD).
    h. Remarks: Any additional information worth noting concerning the incidental catches recorded for each species.

Other data collected:

- ***Depredation:***
    a. Number of sets with observed depredation: indicate the number of sets on which depredation was observed (0 if none).
    b. Percentage of sets on which depredation was observed (0 if none).
    c. Percentage of catch damaged to depredation for predated species1-5 (0 if none)
    d. Likely depredation: fish loss was attributed to depredation but depredation was not actually observed (YES); or not (NOT)
    e. Predator species1-5: Species that were observed preying on the catches, including sharks (Table 4 and Table 6), marine mammals (Table 9).
    f. Remarks: Any additional information worth noting concerning depredation of catches by marine fauna.
- ***Tag release information***
    a. Species released1: The species for which tag release data are recorded; refer to Table 3 (IOTC species), Table 4 (other species identified by the Commission), Table 5 (other species of bony fish), and Table 6 (other species of sharks); or add new species, as required.

b. Tag type1: The type of tag used, including: conventional (spaghetti) tags (TS); pop-up tags (TP); archival tags (TA); or other (TO; specify)
c. Number of specimens tagged1: The number of specimens tagged of species1 using type of tag1.
d. Remarks: Any additional information worth noting concerning tag release1.
e. Species released2-5: As a.-d. above, one per species and type of tag, where required.

- ***Tag recovery information***
  a. Species recovered1: The species for which a tag has been recovered; refer to Table 3 (IOTC species), Table 4 (other species identified by the Commission), Table 5 (other species of bony fish), and Table 6 (other species of sharks); or add new species, as required.
  b. Tag number1: The complete tag identification number.
  c. Fish length1: The length of the fish at recovery, in centimeters (cm).
  d. Length type1: The type of length measurement recorded, as defined in Table 26.
  e. Fish weight1: The weight of the fish, in kilograms (kg).
  f. Weight type1: The type of weight measurement recorded, as defined in Table 26.
  g. Latitude of recovery1: Latitude of recovery expressed as ±DD:MM:SS (+ for North; - for South).
  h. Longitude of recovery1: Longitude of recovery expressed as DDD:MM:SS
  i. Name of the finder1: The name of the person that recovered the tag.
  j. Remarks1: Any additional information worth noting concerning tag recovery1 (e.g. full label on tag, tag type)
  f. Species recovered2-5: As a.-j. above, one per tag recovery, where required.
- ***Biological data collection summary***
  a. Species sampled1: The species for which a biological sample was taken; refer to Table 3 (IOTC species), Table 4 (other species identified by the Commission), Table 5 (other species of bony fish), Table 6 (other species of sharks), Table 7 (marine turtles), Table 8 (seabirds), Table 9 (marine mammals); or add new species, as required.
  b. Total number of individuals sampled1
  c. Number of individuals measured for length1 (0 if none)
  d. Number of individuals weighed1 (0 if none)
  e. Number of individuals sexed1 (0 if none)
  f. Number of individuals for which the maturity sage was recorded1 (0 if none)
  g. Number of individuals for which otoliths were collected1 (0 if none)
  h. Number of individuals for which other types of samples were collected1 (specify in remarks; 0 if none)
  i. Number of specimens for which the carcass was retained1 (0 if none).
  j. Location for the samples to be sent/stored1: Name of the place where the biological samples collected for this species will be sent, if any (NONE if no samples were retained for further distribution).
  k. Remarks1: Any additional information worth noting concerning the collection of biological samples.
  g. Species sampled2-5: As a.-k. above, one per species sampled, where required.
  l. Biological sub-sampling methodologies: Description of the sub-sampling methodologies used during the trip.

Lost fishing gear: Additional information on lost fishing gear, such as length of line lost, amount of net, and other gear such as floats.

Vessel sightings: Indicate if sightings of other fishing or support vessels occurred during the trip.

General comments: Description on any fishing activities or incidences that are not referred to in the previous sections and are worth noting.

SOCIO-ECONOMIC DATA

DEFINITION: The term socio-economic data refers to a range of socio-economic indicators by IOTC country, year or month for countries having IOTC fisheries in the Indian Ocean. These include:

- **Fish market prices:** Or the average prices that the different types of fish products fetch in the market**.**
- **Country indicators:** Or the average values of other socio-economic indicators in the country, as GDP, *per caput* GNP, World Bank classification (level of income), OECD status, number of fishermen, contribution of fisheries to GDP, etc.

STANDARDS FOR THE REPORTING OF SOCIO-ECONOMIC DATA: Article V, Paragraph 2 subparagraph (b) of the IOTC Agreement (Objectives, Functions and Responsibilities of the Commission) states:

> *"2. In order to achieve these objectives, the Commission shall have 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:"*
>
> > ***"(d)** to keep under review the economic and social aspects of the fisheries based on the stocks covered by this Agreement bearing in mind, in particular, the interests of developing coastal states;"*

To date, the IOTC has not adopted standards for the reporting of **socio-economic data**. However, the **IOTC Scientific Committee**, at its 10th Session (2008), recommended that the IOTC Secretariat **compile** as much **information** as possible on the **market prices** of tropical tunas, temperate tunas and swordfish and, to the extent possible, other **IOTC species** and main **shark species**.

INFORMATION TO BE PROVIDED: Countries are invited to provide the following information:

Fish market prices:

IOTC Form: Form 7PR (**http://www.iotc.org/Common/dataforms/Form_7PR.xlt**)

General Information:

- ***Reporting Source***: details about the individual reporting the information and the Institution responsible for the report.
    a. Contact name: Name of the individual reporting the information
    b. Contact e-mail address: E-mail of the individual reporting the information
    c. Contact phone: Phone number of the individual reporting the information
    d. Organization name: Name of the organization responsible for the report
    e. Organization e-mail address: E-mail of the organization responsible for the report
- ***Dataset***: General information about the dataset reported.
    a. Reporting Country: The country reporting the fish prices
    b. Year: The calendar year the fish prices refer to
    c. Fleet origin: The fleet that caught the specimens for which prices are reported
    d. Ocean: The ocean in which the specimens whose prices are reported were caught
    e. Type of product: The type of product for which prices are reported. Table 32 lists the main types of fish product used by the IOTC
    f. Fish processing: The type of fish processing for which prices are reported. Applies only to fresh or frozen products. Table 33 lists the main types of fish processing known to the IOTC.
    g. Fish preservation: The way the product is preserved. Applies only to fresh or frozen products. Table 34 lists the main types of fish preservation known to the IOTC.
    h. Product pricing location: The location where the price value of the fish product is assigned. Table 35 lists the main types of fish destination known to the IOTC.

Table 32: Types of fish products known to the IOTC

	IOTC Code	English Description	French Description
1.	FR	Fresh fish	Poisson frais
2.	FB	Frozen fish	Poisson congelé
3.	CA	Canned fish	Poisson en conserve
4.	ST	Salted fish	Poisson salé
5.	SK	Smoked fish	Poisson fumé
6.	DR	Dried fish	Poisson séché
7.	FF	Fish fillets	Poisson en filets
8.	RE	Fish roe (fish gonads or eggs)	Laitance de poisson (ovaires/œufs de poisson)
9.	PC	Precooked fish	Poisson précuit
10.	FO	Fish oil	Huile de poisson
11.	FM	Fish meal	Farine de poisson
12.	SL	Sashimi low quality	Sashimi de qualité inférieure
13.	SH	Sashimi high quality	Sashimi de qualité supérieure
14.	SF	Shark fins	Ailerons de requin
15.	UN	Not specified or other products	Non-spécifié ou autres produits

Table 33: Types of fish processing known to the IOTC

	IOTC Code	English Description	French Description
1.	RD	None; Round (whole, live)	Aucune; entier
2.	GG	Gilled-and-gutted (bill off)	Eviscéré (sans rostre)
3.	HD	Headed-and-gutted	Etêté et éviscéré
4.	PD	Headed and caudal peduncle-off	Etêté, éviscéré et sans pédoncule caudal
5.	HT	Headed and tailed	Etêté, éviscéré et sans nageoire caudale
6.	FL	Fish loins	Longes de poisson

Table 34: Types of fish preservation known to the IOTC

	IOTC Code	English Description	French Description
1.	IC	Ice	Glace
2.	CL	Cold storage between 0°and -30°	Stockage réfrigéré entre 0°et -30°
3.	DF	Cold storage below -30°	Stockage réfrigéré au-dessous de -30°
4.	BR	Brine	Saumure
5.	RW	Refrigerated sea-water	Eau de mer réfrigérée
6.	NO	None	Aucune

Table 35: Types of fish pricing locations known to the IOTC

	IOTC Code	English Description	French Description
1.	BO	Fishing boat	Bateau de pêche
2.	MK	Fish market / auction hall	Marché au poisson / Criée
3.	PR	Fish processing plant	Usine de transformation du poisson
4.	ST	Retail store	Magasin de détail

i. Product destination: The destination of fresh or frozen fish products. Table 36 lists the main types of fish destination known to the IOTC.

Table 36: Types of fish destination known to the IOTC

	IOTC Code	English Description	French Description
1.	LM	Domestic market	Marché intérieur
2.	FM	Foreign market (export)	Marché extérieur (exportation)

j. Destination market: The name of the market of destination of the fish products (e.g. Tsuji market in Japan).

Data:

- Month: The month the average price value refers to.
- Species: The species for which average price values are reported. IOTC CPC's are invited to provide price data for IOTC species (Table 3) and main species of sharks (Table 4).
- Size category: The commercial category the average price value refers to. Table 37 lists the main types of commercial categories known to the IOTC.

Table 37: Commercial size categories known to the IOTC

	IOTC Code	English Description	French Description
1.	KL12	Weight under 1.2 kilograms	Poids inférieur à 1,2 kilogramme
2.	KL15	Weight under 1.5 kilograms	Poids inférieur à 1,5 kilogramme
3.	KL18	Weight under 1.8 kilograms	Poids inférieur à 1,8 kilogramme
4.	KL03	Weight under 3 kilograms	Poids inférieur à 3 kilogrammes
5.	KL05	Weight under 5 kilograms	Poids inférieur à 5 kilogrammes
6.	K1G2	Weight over 1.2 kilograms	Poids supérieur à 1,2 kilogramme
7.	K1G5	Weight over 1.5 kilograms	Poids supérieur à 1,5 kilogramme
8.	K1G8	Weight over 1.8 kilograms	Poids supérieur à 1,8 kilogramme
9.	K003	Weight over 3 kilograms	Poids supérieur à 3 kilogrammes
10.	K005	Weight over 5 kilograms	Poids supérieur à 5 kilogrammes
11.	K010	Weight over 10 kilograms	Poids supérieur à 10 kilogrammes
12.	K015	Weight over 15 kilograms	Poids supérieur à 15 kilogrammes
13.	K030	Weight over 30 kilograms	Poids supérieur à 30 kilogrammes
14.	KALL	All weights	Tous les poids

- Price: The average price value of the fish product concerned.
- Weight units: The units of weight used.
- Currency: The currency used (e.g. Euro, US$, Thai Baht, UK Pound, Malay Ringgit, etc.)

Country indicators: At present country indicators are compiled by the IOTC Secretariat from the sources available.

APPENDIX I

RESOLUTION 10/02
MANDATORY STATISTICAL REQUIREMENTS FOR IOTC MEMBERS AND COOPERATING NON-CONTRACTING PARTIES (CPC'S)

The Indian Ocean Tuna Commission (IOTC)

GIVEN that the Agreement for the implementation of the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA) encourages coastal States and fishing States on the high seas to collect and share, in a timely manner, complete and accurate data concerning fishing activities on, inter alia, vessel position, catch of target and non-target species and fishing effort.

NOTING that the United Nations Food and Agricultural Organisation (FAO) Code of Conduct for Responsible Fishing provides that States should compile fishery-related and other supporting scientific data relating to fish stocks covered by subregional or regional fisheries management organizations and provide them in a timely manner to the organization.

RECALLING the commitment made by members under Article V of the IOTC Agreement to keep under review the conditions and trends of the stocks and 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 based on the stocks covered by the Agreement.

COGNISANT that the above commitment can only be achieved when members meet the requirements of Article XI of the IOTC Agreement i.e. to provide statistical and other data and information to minimum specifications and in a timely manner.

ACKNOWLEDGING that the IOTC Scientific Committee has repeatedly stressed the importance of the timeliness of data submissions.

GIVEN that the activities of supply vessels and the use of Fish Aggregating Devices (FAD) are an integral part of the fishing effort exerted by the purse seine fleet.

CONSIDERING the provisions set forth in *Resolution 08/01* on *mandatory statistical requirements for IOTC Members and Cooperating non-Contracting parties (CPC's)*, adopted by the Commission in 2008;

CONSIDERING the deliberations of the 12th Session of the IOTC Scientific Committee held in Victoria, Seychelles from 30 November to 4 December 2009

RESOLVES in accordance with paragraph 1 of Article IX of the IOTC Agreement, that:

1. CPC's shall provide the following information to the IOTC Secretariat according to the timelines specified in paragraph 6:

2. Nominal catch data:
Estimates of the total annual catch by species and gear for all species under the IOTC mandate.

3. Catch and effort data:

(a) **For surface fisheries:** catch weight by species and fishing effort shall be provided by 1° grid area and month strata. Purse seine fishery data shall be stratified by fishing mode (e.g. free swimming schools or schools in association with floating objects). The data shall be extrapolated to the total national monthly catches for each gear. Documents describing the extrapolation procedures (including raising factors corresponding to the logbook coverage) shall also be submitted routinely.

(b) **Longline fisheries:** catch by species, in numbers or weight, and effort as the number of hooks deployed shall be provided by 5° grid area and month strata. Documents describing the extrapolation procedures (including raising factors corresponding to the logbook coverage) shall also be submitted routinely. For the work of relevant working parties under the IOTC Scientific Committee, longline data should be of a resolution of 1° grid area and month or finer. These data would be for the exclusive use of IOTC scientists, subject to the approval of the data owners and IOTC Resolution 98/02 Data confidentiality policy and procedures (Resolution 98/02), and should be provided for scientific use in a timely fashion.

(c) **For coastal fisheries:** available catch by species, fishing gear and fishing effort shall be submitted frequently and may be provided using an alternative geographical area if it better represents the fishery concerned.

These provisions, applicable to tuna and tuna-like species, shall also be applicable to the most commonly caught shark species and, where possible, to the less common shark species. CPC's are also encouraged to record and provide data on species other than sharks and tunas taken as bycatch.

4. Size data:

Size data shall be provided for all gears and for all species covered by the IOTC mandate according to the guidelines set out by the IOTC Scientific Committee. Size sampling shall be run under strict and well described random sampling schemes which are necessary to provide unbiased figures of the sizes taken. Sampling coverage shall be set to at least one fish measured by ton caught, by species and type of fishery, with samples being representative of all the periods and areas fished. Alternatively, size data for longline fleets may be provided as part of the Regional Observer Scheme where such fleets have at least 5% observer coverage of all fishing operations. Length data by species, including the total number of fish measured, shall be submitted by a 5° grid area by month, by gear and fishing mode (e.g. free swimming schools or schools in association with floating objects for the purse seiners). Documents covering sampling and raising procedures shall also be provided, by species and type of fishery.

5. Given that the activities of supply vessels and the use of **Fish Aggregating Devices** (FAD) are an integral part of the fishing effort exerted by the purse seine fleet, the following data shall be provided:

(a) The number and characteristics of supply vessels: (i) operating under their flag, (ii) assisting purse seine vessels operating under their flag, or (iii) licensed to operate in their exclusive economic zones, and that have been present in the IOTC Area.

(b) Number of days at sea by supply vessels by 1° grid area and month to be reported by the flag state of the supply vessel.

(c) The total number and type of FADs set by the supply vessel and purse seine fleet per quarter. Types of FADs are defined as 1) drifting log or debris, 2) drifting

raft or fad with a net, 3) drifting raft or fad without a net, 4) other (e.g. Payao, dead animal etc). All types monitored by a tracking system.

These data would be for the exclusive use of IOTC scientists, subject to the approval of the data owners and Resolution 98/02 *Data confidentiality policy and procedures*, and should be provided in a timely fashion.

6. Timeliness of data submission to the IOTC Secretariat:

(a) Longline fleets operating in the high seas shall provide provisional data for the previous year no later than 30 June. Final data shall be submitted no later than 30 December.

(b) All other fleets (including supply vessels) shall submit their final data for the previous year no later than 30 June.

(c) In case where the final statistics cannot be submitted by that date, at least preliminary statistics should be provided. Beyond a delay of two years, all revisions of historical data should be formally reported and duly justified. These reports should be made on forms provided by the Secretariat and reviewed by the Scientific Committee. The Scientific Committee will advise the Secretariat if revisions are then accepted for scientific use.

7. This Resolution supersedes Resolution 08/01 on *Mandatory statistical requirements for IOTC Members and Cooperating non-Contracting parties (CPC's)*

APPENDIX II

SUMMARY OF DATA REQUIREMENTS INCLUDED IN IOTC RESOLUTIONS OTHER THAN RESOLUTION 10/02

Resolution 13/08 Procedures on a **fish aggregating devices** (FADs) management plan, including more detailed specifications of catch reporting from FAD sets, and the development of improved FAD designs to reduce the incidence of entanglement of non-target species.

- Paragraph 1: This Resolution shall apply to CPCs having purse seine vessels and bait boats fishing on Fish Aggregating Devices (FADs), for the purpose of aggregating tuna target species, in the IOTC area of competence.
- Paragraph 2: (…) For the purpose of this Resolution, the term Fish Aggregating Device means drifting (DFAD) or anchored floating or submerged objects (AFAD) deployed for the purpose of aggregating target tuna species.
- Paragraph 4: Starting in 2015, CPCs shall submit the data elements prescribed in **Annex I and II** to the Commission, consistent with the IOTC standards for the provision of catch and effort data, and these data shall be made available for analysis to the IOTC Scientific Committee on the aggregation level set by Resolution 10/02 (or any subsequent superseding Resolution), and under the confidentiality rules set by Resolution 12/02 (or any subsequent superseding Resolution).
- Annex I Guidelines for preparation of drifting fish aggregating device (DFAD) management plans

  DFAD logbook: catch reporting from DFAD sets (consistent with the Standards for the provision of Catch-and-effort Data) set out in Resolution 13/03), including:

  a) Any visit on a DFAD*.
  b) For each visit on a DFAD, whether followed or not by a set,
     i. position,
     ii. date,
     iii. DFAD identifier (i.e., D FAD Marking or beacon ID or any information allowing to identify the owner),
     iv. DFAD type (drifting natural FAD, drifting artificial FAD),
     v. DFAD design characteristics (dimension and material of the floating part and of the underwater hanging structure),
     vi. type of the visit (deployment, hauling, retrieving, loss, intervention on electronic equipment).
  c) If the visit is followed by a set, the results of the set in terms of catch and bycatch.

  * Other FADs encountered at–sea should be monitored in accordance with each CPC's domestic regulations.
- Annex II Guidelines for preparation of anchored fish aggregating device (AFAD) management plans

  AFAD logbook: Catch reporting from AFAD sets (consistent with the Standards for the provision of Catch-and-effort Data) set out in Resolution 13/03), including:

  a) Any visit in an AFAD.
  b) For each visit on a AFAD, whether followed or not by a set or other fishing activities, the,
     i. position;
     ii. date;
     iii. AFAD identifier (i.e., FAD Marking or beacon ID or any information allowing to identify the owner).
  c) If the visit is followed by a set or other fishing activities, the results of the set in terms of catch and bycatch.

Resolution 13/03 On the recording of **catch and effort** data by fishing vessels in the IOTC Area of Competence

- Paragraph 2: The measure shall apply to all purse seine, longline, gillnet, pole and line, handline and trolling fishing vessels over 24 metres length overall and those under 24 metres if they fish outside the EEZs of their flag States within the IOTC area of competence. (…)
- Paragraph 9: The logbook shall be completed by the Master of the fishing vessel and submitted to the flag State administration, as well as to the coastal State administration where the vessel has fished in that coastal State's EEZ. Only the part of the logbook corresponding to the activity deployed in the coastal State EEZ shall be provided to the coastal State administration where the vessel has fished in that coastal States EEZ.
- Paragraph 10: **The Flag State and the States which receive this information shall provide all the data for any given year to the IOTC Secretariat by June 30th of the following year on an aggregated basis**. The confidentiality rules set out in Resolution 12/02 *Data Confidentiality Policy and Procedures* for fine–scale data shall apply.

Resolution 05/05 Concerning the conservation of **SHARKS** caught in association with fisheries managed by IOTC

- Paragraph 1: Contracting Parties, Cooperating non-Contracting Parties (CPCs) shall annually report data for catches of sharks, in accordance with IOTC data reporting procedures, including available historical data.

Resolution 13/06 On A Scientific And Management Framework On The Conservation Of Shark Species Caught In Association With IOTC Managed Fisheries

- Paragraph 5: CPCs shall encourage their fishers to record incidental catches as well as live releases of **OCEANIC WHITETIP SHARKS**. These data shall be kept at the IOTC Secretariat.

Resolution 12/09 On the conservation of **THRESHER SHARKS** (family Alopiidae) caught in association with fisheries in the IOTC area of competence

- Paragraph 4: CPCs shall encourage their fishers to record and report incidental catches as well as live releases. These data will be then kept at the IOTC Secretariat.
- Paragraph 8: The Contracting Parties, Cooperating Non-Contracting Parties, especially those directing fishing activities for sharks, shall submit data for sharks, as required by IOTC data reporting procedures.

Resolution 13/05 On the conservation of **WHALE SHARKS** (Rhincodon typus)

- Paragraph 3: CPCs shall require that, in the event that a whale shark is unintentionally encircled in the purse seine net, the master of the vessel shall:
    b. report the incident to the relevant authority of the flag State, with the following information:
        i. the number of individuals;
        ii. a short description of the interaction, including details of how and why the interaction occurred, if possible;
        iii. the location of the encirclement;
        iv. the steps taken to ensure safe release;
        v. an assessment of the life status of the animal on release, including whether the whale shark was released alive but subsequently died.
- Paragraph 4: CPCs using other gear types fishing for tuna and tuna-like species associated with a whale shark shall report all interactions with whale sharks to the relevant authority of the flag State and include all the information outlined in paragraph 3b(i–v).
- Paragraph 7: CPCs shall report the information and data collected under paragraph 3(b) and paragraph 4 through logbooks, or when an observer is onboard through observer programs, and

provide to the IOTC Secretariat by 30 June of the following year and according to the timelines specified in Resolution 10/02 (or any subsequent revision).

Recommendation 05/09 On incidental mortality of **SEABIRDS**

- Paragraph 2: CPCs should be encouraged to collect and voluntarily provide Scientific Committee with all available information on interactions with seabirds, including incidental catches in all fisheries under the purview of IOTC.

Resolution 10/06 On reducing the incidental bycatch of **SEABIRDS** in longline fisheries

- Paragraph 7: CPCs shall provide to the Commission, as part of their annual reports, all available information on interactions with seabirds, including bycatch by fishing vessels carrying their flag or authorised to fish by them. This is to including details of species where available to enable the Scientific Committee to annually estimate seabird mortality in all fisheries within the IOTC area of competence.

Resolution 12/04 On **MARINE TURTLES**

- Paragraph 3: CPCs shall collect (including through logbooks and observer programs) and provide to the IOTC Secretariat no later than 30 June of the following year in accordance with Resolution 10/02 (or any subsequent revision), all data on their vessels' interactions with marine turtles. The data shall include the level of logbook or observer coverage and an estimation of total mortality of marine turtles incidentally caught in their fisheries.

Resolution 13/04 On the conservation of **CETACEANS**

- Paragraph 3: CPCs shall require that, in the event that a Cetacean is unintentionally encircled in the purse seine net, the master of the vessel shall:
    b. report the incident to the relevant authority of the flag State, with the following information:
        i. the number of individuals;
        ii. a short description of the interaction, including details of how and why the interaction occurred, if possible;
        iii. the location of the encirclement;
        iv. the steps taken to ensure safe release;
        v. an assessment of the life status of the animal on release, including whether the cetacean was released alive but subsequently died.
- Paragraph 4: CPCs using other gear types fishing for tuna and tuna-like species associated with cetaceans shall report all interactions with cetaceans to the relevant authority of the flag State and include all the information outlined in paragraph 3b(i–v).
- Paragraph 7: CPCs shall report the information and data collected under paragraph 3(b) and paragraph 4 through logbooks, or when an observer is onboard through observer programs, and provide to the IOTC Secretariat by 30 June of the following year and according to the timelines specified in Resolution 10/02 (or any subsequent revision).

Resolution 11/04 On a Regional **OBSERVER SCHEME**

- Paragraph 9: CPCs shall provide to the Executive Secretary and the Scientific Committee annually a report of the number of vessels monitored and the coverage achieved by gear type in accordance with the provisions of this Resolution.
- Paragraph 11: (…) The CPCs shall send within 150 days at the latest each report, as far as continuous flow of report from observer placed on the longline fleet is ensured, which is recommended to be provided with 1°x1° format to the Executive Secretary, who shall make the report available to the Scientific Committee upon request (…)

APPENDIX III

RESOLUTION 12/02
DATA CONFIDENTIALITY POLICY AND PROCEDURES

The Indian Ocean Tuna Commission (IOTC),

RECOGNISING the need for confidentiality at the commercial and organisational levels for data submitted to the IOTC;

CONSIDERING the provisions set forth in Resolution 10/02 *mandatory statistical requirements for IOTC Members and Cooperating Non-Contracting Parties (CPCs)*;

CONSIDERING the provisions set forth in Resolution 11/04 *on a regional observer scheme*;

ADOPTS in accordance with paragraph 1 of Article IX of the IOTC Agreement, that:

1. The following policy and procedures on confidentiality of data will apply:

DATA SUBMITTED TO THE IOTC SECRETARIAT

2. The policy for releasing catch-and-effort, length-frequency and observer data will be as follows:

Standard stratification

a) Catch-and-effort and length-frequency data grouped by 5° longitude by 5° latitude by month for longline and 1° longitude by 1° latitude by month for surface fisheries stratified by fishing nation are considered to be in the public domain, provided that the catch of no individual vessel can be identified within a time/area stratum. In cases when an individual vessel can be identified, the data will be aggregated by time, area or flag to preclude such identification, and will then be in the public domain.

Finer level stratification

b) Catch-and-effort and length-frequency data grouped at a finer level of time-area stratification will only be released with written authorisation from the sources of the data. Each data release will require the specific permission of the IOTC Executive Secretary;

c) Observer data grouped by 1° longitude by 1° latitude for surface fisheries and by 5° longitude by 5° latitude for longline, stratified by month and by fishing nation are considered to be in the public domain, provided that the activities /catch of no individual vessel can be identified within a time/area stratum;

d) A Working Party will specify the reasons for which the data are required;

e) Individuals requesting the data are required to provide a description of the research project, including the objectives, methodology and intentions for publication. Prior to publication, the manuscript should be cleared by the IOTC Executive Secretary. The data are released only for use in the specified research project and the data must be destroyed upon completion of the project. However, with authorisation from the sources of the data, catch-and-effort and length-frequency data may be released for

long-term usage for research purposes, and in such cases the data need not be destroyed;

f) The identity of individual vessels will be hidden in fine-level data unless the individual requesting this information can justify its necessity;

g) Both IOTC Working Parties and individuals requesting data shall provide a report of the results of the research project to the IOTC for subsequent forwarding to the sources of the data.

3. The policy for releasing tagging data will be as follows:

a) Detailed tagging and recovery data are considered to be in the public domain, with the exception of any vessel names or identifiers and detailed information about the person who recovered the tag (name and address), however, requests for tagging data should be made to the IOTC Executive Secretary through the application form provided at **Annex I**.

PROCEDURES FOR THE SAFEGUARD OF RECORDS

4. Procedures for safeguarding records and databases will be as follows:

a) Access to logbook-level information or detailed observer data will be restricted to IOTC staff requiring these records for their official duties. Each staff member having access to these records will be required to sign an attestation recognising the restrictions on the use and disclosure of the information;

b) Logbook and observer records will be kept locked, under the specific responsibility of the Data Manager. These sheets will only be released to authorised IOTC personnel for the purpose of data input, editing or verification. Copies of these records will be authorised only for legitimate purposes and will be subjected to the same restrictions on access and storage as the originals;

c) Databases will be encrypted to preclude access by unauthorised persons. Full access to the database will be restricted to the Data Manager and to senior IOTC staff requiring access to these data for official purposes, under the authority of the IOTC Executive Secretary. Staff entrusted with data input, editing and verification will be provided with access to those functions and data sets required for their work.

DATA SUBMITTED TO IOTC WORKING PARTIES AND THE IOTC SCIENTIFIC COMMITTEE

5. Data submitted to IOTC Working Parties and the IOTC Scientific Committee will be retained by the IOTC Secretariat or made available for other analyses only with the permission of the source.

6. The above rules of confidentiality will apply to all members of IOTC Working Parties and the IOTC Scientific Committee.

7. This Resolution supersedes Resolution 98/02 *Data Confidentiality Policy and Procedures*.

APPENDIX IV

OTHER INTERNATIONAL AGREEMENTS

UNCLOS: United Nations Convention on the Law of the Sea of 10 December 1982

Article 119: Conservation of the living resources of the high seas

"2. Available scientific information, ***catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be contributed and exchanged on a regular basis through competent international organizations****, whether subregional, regional or global, where appropriate and with participation by all States concerned."*

UN Fish Stocks Agreement (FSA): 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 (New York, 24 July-4 August 1995)

Annex I: Standard Requirements for the Collection and Sharing of Data

Article 1: General Principles

"1. The timely collection, compilation and analysis of data are fundamental to the effective conservation and management of straddling fish stocks and highly migratory fish stocks. To this end, ***data from fisheries for these stocks on the high seas and those in areas under national jurisdiction are required and should be collected and compiled*** *in such a way as to enable statistically meaningful analysis for the purposes of fishery resource conservation and management.* ***These data include catch and fishing effort statistics and other fishery-related information, such as vessel-related and other data for standardizing fishing effort. Data collected should also include information on non-target and associated or dependent species.*** *All data should be verified to ensure accuracy. Confidentiality of non-aggregated data shall be maintained. The dissemination of such data shall be subject to the terms on which they have been provided."*

Article 2: Principles of data collection, compilation and exchange

Article 3: Basic fishery data

The types of fisheries data that need to be collected and compiled are covered in Articles 2 and 3 of the FSA.

Article 5: Reporting

A ***State shall ensure that vessels flying its flag send*** *to its national fisheries administration and, where agreed,* ***to the relevant subregional or regional fisheries management organization or arrangement, logbook data on catch and effort, including data on fishing operations on the high seas, at sufficiently frequent intervals to meet*** *national requirements and regional and* ***international obligations****.*

FAO Code of Conduct for Responsible Fisheries (Rome, 1995):

7.4 Data gathering and management advice

"7.4.4 States should ensure that timely, complete and reliable statistics on catch and fishing effort are collected and maintained in accordance with applicable international standards and practices and in sufficient detail to allow sound statistical analysis. Such data should be updated regularly and verified through an appropriate system. States should compile and disseminate such data in a manner consistent with any applicable confidentiality requirements"

"7.4.6 States should compile fishery-related and other supporting scientific data relating to fish stocks covered by sub-regional and regional fisheries management organizations or arrangements in an internationally agreed format and provide them in a timely manner to the organization or arrangement."

"7.4.7 Sub-regional or regional fisheries management organizations or arrangements should compile data and make them available, in a manner consistent with any applicable confidentiality requirements, in a timely manner and in an agreed format to all members of these organizations and other interested parties in accordance with agreed procedures."

APPENDIX V

OTHER SPECIES CAUGHT IN IOTC FISHERIES

Table 5: Other bony fish species that may be caught incidentally on IOTC fisheries

	IOTC Code	Species English name	Species French name	Species scientific name
1.	BAU	Australian bonito	Bonite bagnard	*Sarda australis*
2.	BAR	Barracudas	Brochets de mer	*Sphyraena spp*
3.	ESCL	Black escolar	Escolier noir	*Lepidocybium flavobrunneum*
4.	MAA	Blue mackerel	Maquereau tacheté	*Scomber australasicus*
5.	BUK	Butterfly kingfish	Thon papillon	*Gasterochisma melampus*
6.	DOL	Common dolphinfish	Coryphène commune	*Coryphaena hippurus*
7.	DOT	Dogtooth tuna	Bonite à gros yeux	*Gymnosarda unicolor*
8.	DBM	Double-lined mackerel	Thazard-kusara	*Grammatorcynus bilineatus*
9.	AMB	Greater amberjack	Sériole couronnée	*Seriola dumerili*
10.	RAG	Indian mackerel	Maquereau des Indes	*Rastrelliger kanagurta*
11.	KAK	Kanadi kingfish	Thazard kanadi	*Scomberomorus plurilineatus*
12.	KOS	Korean seerfish	Thazard coréen	*Scomberomorus koreanus*
13.	SPF	Longbill spearfish	Makaire à rostre	*Tetrapturus pfluegeri*
14.	OIL	Oilfish	Rouvet	*Ruvettus pretiosus*
15.	LAG	Opah	Opah	*Lampris guttatus*
16.	SAP	Pacific saury	Saurie	*Cololabis saira*
17.	BRA	Pomfrets nei	Castagnoles	*Brama spp*
18.	CFW	Pompano dolphinfish	Dorade	*Coryphaena equiselis*
19.	RRU	Rainbow runner	Comète saumon	*Elagatis bipinnulata*
20.	SSP	Short-billed spearfish	Makaire à rostre court	*Tetrapturus angustirostris*
21.	STS	Streaked seerfish	Thazard cirrus	*Scomberomorus lineolatus*
22.	BIP	Striped bonito	Bonite orientale	*Sarda orientalis*
23.	WAH	Wahoo	Thazard bâtard	*Acanthocybium solandri*

Table 6: Other species of sharks that may be caught incidentally on IOTC fisheries

	IOTC Code	Species English name	Species French name	Species scientific name
1.	OXY	Angular rough shark	Centrine commune	*Oxynotus centrina*
2.	MTM	Arabian smooth-hound	Emissole d'Arabie	*Mustelus mosis*
3.	SHBC	Banded cat shark	Holbiche des plages	*Halaelurus lineatus*
4.	ODH	Bigeye sand tiger shark	Requin noronhai	*Odontaspis noronhai*
5.	BLR	Blacktip reef shark	Requin pointes noires	*Carcharhinus melanopterus*
6.	CCL	Blacktip shark	Requin bordé	*Carcharhinus limbatus*
7.	NTC	Broadnose sevengill shark	Platnez	*Notorynchus cepedianus*
8.	BRO	Copper shark	Requin cuivre	*Carcharhinus brachyurus*
9.	CCG	Galapagos shark	Requin des Galapagos	*Carcharhinus galapagensis*
10.	ORR	Grey bambooshark	Requin-chabot gris	*Chiloscyllium griseum*
11.	AML	Grey Reef Shark	Requin dagsit	*Carcharhinus amblyrhynchos*
12.	CCM	Hardnose shark	Requin nez rude	*Carcharhinus macloti*
13.	SCK	Kitefin shark	Squale liche	*Dalatias licha*
14.	CPU	Little gulper shark	Petit squale-chagrin	*Centrophorus uyato*
15.	CYT	Ornate dogfish	Aiguillat élégant	*Centroscyllium ornatum*
16.	CCP	Sandbar shark	Requin gris	*Carcharhinus plumbeus*
17.	DOP	Shortnose spurdog	Aiguillat nez court	*Squalus megalops*
18.	ALS	Silvertip shark	Requin pointe blanche	*Carcharhinus albimarginatus*
19.	ORI	Slender bambooshark	Requin-chabot élégant	*Chiloscyllium indicum*
20.	CLD	Sliteye shark	Requin sagrin	*Loxodon macrorhinus*
22.	CEM	Smallfin gulper shark	Squale-chagrin cagaou	*Centrophorus moluccensis*
23.	SMD	Smooth-hound	Emissole lisse	*Mustelus mustelus*
24.	SLA	Spadenose shark	Requin épée	*Scoliodon laticaudus*
25.	SKPN	Spinner Shark	Requin tisserand	*Carcharhinus brevipinna*
26.	CCQ	Spot-tail shark	Requin queue tachet	*Carcharhinus sorrah*
27.	ORZ	Tawny nurse shark	Requin nourrice fauve	*Nebrius ferrugineus*
28.	GAG	Tope shark	Requin-hâ	*Galeorhinus galeus*
29.	SSQ	Velvet dogfish	Squale-grogneur velouté	*Zameus squamulosus*
30.	CCD	Whitecheek shark	Requin joues blanches	*Carcharhinus dussumieri*
31.	RHA	White-eyed shark	Requin museau pointu	*Rhizoprionodon acutus*
32.	OSF	Zebra shark	Requin zèbre	*Stegostoma fasciatum*
33.	HXT	Sharpnose sevengill shark	Requin perlon	*Heptranchias perlo*
34.	SBL	Bluntnose sixgill shark	Requin griset	*Hexanchus griseus*
35.	HXN	Bigeyed sixgill shark	Requin vache	*Hexanchus nakamurai*

Table 7: Species of MARINE TURTLES that may be caught incidentally on IOTC fisheries

	IOTC Code	Species English name	Species French name	Species scientific name
1.	FBT	Flatback turtle	Tortue plate	*Natator depressus*
2.	TUG	Green turtle	Tortue verte	*Chelonia mydas*
3.	TTH	Hawksbill turtle	Tortue caret	*Eretmochelys imbricata*
4.	DKK	Leatherback turtle	Tortue luth	*Dermochelys coriacea*
5.	TTL	Loggerhead turtle	Caouane	*Caretta caretta*
6.	LKV	Olive ridley turtle	Tortue olivâtre	*Lepidochelys olivacea*

Table 8: Species of SEABIRDS that may be caught incidentally on IOTC fisheries

	IOTC Code	Species English name	Species French name	Species scientific name
1.	DAM	Amsterdam Albatross	Albatros d'Amsterdam	*Diomedea amsterdamensis*
2.	DQS	Antipodean Albatross	Albatros des Antipodes	*Diomedea antipodensis*
3.	DCR	Atlantic Yellow-nosed Albatross	Albatros atlantique à nez jaune	*Thalassarche chlororhynchos*
4.	DIM	Black-browed Albatross	Albatros à sourcils noirs	*Thalassarche melanophrys*
5.	DIB	Buller's Albatross	Albatros de Buller	*Thalassarche bulleri*
6.	TQW	Campbell Albatross	Albatros de l'île Campbell	*Thalassarche impavida*
7.	DER	Chatham Albatross	Albatros des Chatham	*Thalassarche eremite*
8.	DIC	Grey-headed Albatross	Albatros à tête grise	*Thalassarche chrysostoma*
9.	TQH	Indian Yellow-nosed Albatross	Albatros indien à nez jaune	*Thalassarche carteri*
10.	PHE	Light-mantled Albatross	Albatros fuligineux	*Phoebetria palpebrata*
11.	MAH	Northern Giant Petrel	Pétrel de Hall	*Macronectes halli*
12.	DIQ	Northern Royal Albatross	Albatros royal du nord	*Diomedea sanfordi*
13.	DKS	Salvin's Albatross	Albatros de Salvin	*Thalassarche salvini*
14.	PFT	Short-tailed Shearwater	Puffin à bec grêle	*Puffinus tenuirostris*
15.	DCU	Shy Albatross	Albatros timide	*Thalassarche cauta*
16.	PHU	Sooty Albatross	Albatros brun	*Phoebetria fusca*
17.	PFG	Sooty Shearwater	Puffin fuligineux	*Puffinus griseus*
18.	MAI	Southern Giant Petrel	Pétrel géant	*Macronectes giganteus*
19.	DIP	Southern Royal Albatross	Albatros royal	*Diomedea epomophora*
20.	DBN	Tristan Albatross	Albatros de Tristan	*Diomedea dabbenena*
21.	DIX	Wandering Albatross	Albatros hurleur	*Diomedea exulans*
22.	PCW	Westland Petrel	Pétrel de Westland	*Procellaria westlandica*
23.	TWD	White-capped Albatross	Albatros à cape blanche	*Thalassarche steadi*
24.	PRO	White-chinned Petrel	Puffin à menton blanc	*Procellaria aequinoctialis*

Table 9: Species of sea mammals that occur within the IOTC Area of Competence

	IOTC Code	Species English name	Species French name	Species scientific name
1.	BDW	Andrews' beaked whale	Baleine à bec de Bowdoin	*Mesoplodon bowdoini*
2.	BAW	Arnoux's beaked whale	Berardien d'Arnoux	*Berardius arnuxii*
3.	BBW	Blainville's beaked whale	Baleine à bec de Blainville	*Mesoplodon densirostris*
4.	BLW	Blue whale	Rorqual bleu	*Balaenoptera musculus*
5.	DBO	Bottlenose dolphin	Grand dauphin	*Tursiops truncatus*
6.	BRW	Bryde's whale	Rorqual de Bryde	*Balaenoptera edeni*
7.	CMD	Commerson's dolphin	Dauphin de Commerson	*Cephalorhynchus commersonii*
8.	DCO	Common dolphin	Dauphin commun	*Delphinus delphis*
9.	BCW	Cuvier's beaked whale	Ziphius	*Ziphius cavirostris*
10.	DDU	Dusky dolphin	Dauphin sombre	*Lagenorhynchus obscurus*
11.	DWW	Dwarf sperm whale	Cachalot nain	*Kogia simus*
12.	FAW	False killer whale	Faux-orque	*Pseudorca crassidens*
13.	FIW	Fin whale	Rorqual commun	*Balaenoptera physalus*
14.	PFI	Finless porpoise	Marsouin aptère	*Neophocaena phocaenoides*
15.	FRD	Fraser's dolphin	Dauphin de Fraser	*Lagenodelphis hosei*
16.	TGW	Ginkgo-toothed beaked whale	Baleine à bec de Nishiwaki	*Mesoplodon ginkgodens*
17.	BYW	Gray's beaked whale	Baleine à bec de Gray	*Mesoplodon grayi*
18.	BHW	Hector's beaked whale	Baleine à bec d'Hector	*Mesoplodon hectori*
19.	HRD	Hourglass dolphin	Dauphin crucigére	*Lagenorhynchus cruciger*
20.	HUW	Humpback whale	Baleine à bosse	*Megaptera novaeangliae*
21.	DHI	Indo-Pacific hump-backed dolphin	Dauphin à bosse de l'Indopacifique	*Sousa chinensis*
22.	IRD	Irrawaddy dolphin	Orcelle	*Orcaella brevirostris*
23.	KIW	Killer whale	Orque	*Orcinus orca*
24.	PIW	Long-finned pilot whale	Globicéphale commun	*Globicephala melas*
25.	BNW	Longman's beaked whale	Baleine à bec de Longman	*Mesoplodon pacificus*
26.	MIW	Minke whale	Petit rorqual	*Balaenoptera acutorostrata*
27.	DPN	Pantropical spotted dolphin	Dauphin tacheté pantropical	*Stenella attenuata*
28.	KPW	Pygmy killer whale	Orque pygmée	*Feresa attenuata*
29.	CPM	Pygmy right whale	Baleine pygmée	*Caperea marginata*
30.	PYW	Pygmy sperm whale	Cachalot pygmée	*Kogia breviceps*
31.	DRR	Risso's dolphin	Grampus	*Grampus griseus*
32.	RTD	Rough-toothed dolphin	Sténo	*Steno bredanensis*
33.	BSW	Sherpherd's beaked whale	Tasmacète	*Tasmacetus shepherdi*
34.	SHW	Short-finned pilot whale	Globicéphale tropical	*Globicephala macrorhynchus*
35.	SRW	Southern bottlenose whale	Hyperoodon austral	*Hyperoodon planifrons*
36.	EUA	Southern right whale	Baleine australe	*Eubalaena australis*
37.	RSW	Southern right whale dolphin	Dauphin aptère austral	*Lissodelphis peronii*
38.	SPP	Spectacled porpoise	Marsouin de Lahille	*Australophocaena dioptrica*
39.	SPW	Sperm whale	Cachalot	*Physeter catodon*
40.	DSI	Spinner dolphin	Dauphin longirostre	*Stenella longirostris*
41.	TSW	Strap-toothed whale	Baleine à bec de Layard	*Mesoplodon layardii*
42.	DST	Striped dolphin	Dauphin bleu et blanc	*Stenella coeruleoalba*

APPENDIX VI

IOTC FORM TO ACCOMPANY DATA ISSUING FROM RECENT REVIEWS TO HISTORICAL DATA SERIES

Complete the form below if the nominal catch, bycatch, discard, catch-and-effort or size frequency data series for your country have been revised recently and that review involved changes to the values recorded beyond a delay of two years:

- **Type of data**: input the type/s of data for which new historical data series have been provided:
  - **Nominal catch**: input NC if the nominal catch series have been revised.
  - **Bycatch levels**: input BY if the series of bycatch levels have been revised.
  - **Discards**: input DI if the series of discard levels have been revised.
  - **Catch-and-effort**: input CE if the catch-and-effort series have been revised.
  - **Size frequency**: input SF if the size frequency data series have been revised.
- **Period reviewed**: Indicate from which year ('**From Year'**) to which year ('**To Year'**) the data series concerned have been revised; use more than one row if the review covered different periods (e.g. one row for 1975-1980 and another for 1997-2006 if the reviews covered those periods).
- **Reason changes**: Tick '**New data'** if the values in the data series concerned changed because new data was compiled for the period; tick '**New Estim**' if those values changed because of changes in the estimation procedure; tick both cells if the changes are a consequence of the two above.
- **Significant changes**: Tick '**Yes**' if the values in the data series concerned, by species or total, for one or more of the years reviewed, have changed 20% or more from their original values; otherwise tick '**No**'.
- **Remarks**: If the changes in the data series are significant explain briefly the reasons behind them.

Type of Data	Period reviewed		Reason changes		Significant Changes		Remarks
	From Year	To Year	New data	New estim	Yes	No	