



## IOTC CAPACITY BUILDING ACTIVITIES IN SUPPORT OF DEVELOPING COASTAL STATES

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### Purpose

To provide participants to the 18<sup>th</sup> Working Party on Data Collection and Statistics (WPDCS18) with an overview of the activities that, independently or along with other partners, the IOTC Secretariat initiated during the last year in support of developing coastal states, and the main results of those activities.

### Background

Since its inception, the Commission has allocated funds from its regular budget to assist developing coastal CPCs in the Indian Ocean in the implementation of the IOTC data requirements. In addition to the funds allocated by the Commission, the IOTC Secretariat has also secured funding from external sources with funds sourced from third parties that in recent years have been well above those allocated by the Commission.

Since April 2002, the *Overseas Fishery Cooperation Foundation* of Japan (OFCF Japan) has been assisting developing coastal states in the IOTC area of competence with their statistical data collection, processing, and reporting systems, with a view to enhancing the capacity of institutions in those countries and improve their compliance with IOTC requirements for statistics and other scientific data used on the assessments of IOTC species. In recent years, the IOTC has also received substantial funding for capacity building activities from other sources, including the *Bay of Bengal Large Marine Ecosystems Project* (BOBLME), the *IOC-SmartFish* Project and, more recently, the *GEF-Areas Beyond National Jurisdiction Project* (ABNJ) and *EU DG-MARE*.

This document presents the activities undertaken by the IOTC and its partners during the last year (2022) and including, where appropriate, those activities that will extend to 2023 and following years.

### Recommendation

The WPDCS is invited to review the Progress of activities undertaken by the IOTC and its partners and recommend that the IOTC Scientific Committee considers endorsing the future work plan by the IOTC Secretariat. In addition, the WPDCS is invited to consider, where necessary, recommending the implementation of other activities that to its view will lead to improved statistics for IOTC and associated species, including identification of agencies that may be prepared to fund such activities.

The report covers the following areas:

- Introduction
- Summary of countries supported, and activities undertaken in 2022
- Activities planned for 2023 and following years (where applicable)

### Introduction

**Table 1** presents an overview of the data capacity building activities that the IOTC and its partners had planned and implemented during 2022 to assist developing coastal CPCs in the Indian Ocean, by country and type of activity.

During 2022 travel restrictions were gradually lifted in several CPCs, which permitted the Secretariat to resume in-person missions to some coastal countries. These data compliance missions could only be planned from mid-year onwards, hence their number was limited. Nevertheless, the Secretariat was also able to deliver remote assistance (through teleconference) to selected CPCs, also in the context of activities undertaken by the Compliance Section.

Further details on each specific activity can be found further below in this same document.

**Table 1** List of capacity building activities planned or delivered for 2022

Country / CPC	Dates	Executing agencies / staff	Description of activities
Madagascar (remote)	March 2022 <b>COMPLETED</b>	IOTC Data Assistant, IOTC Compliance Expert, Representatives from Madagascar	Support mission led by the Compliance Section of the Secretariat (with participation from the Data Section) to address some of the outstanding issues in terms of data collection and reporting identified for the country.  The activities delivered include: <ul style="list-style-type: none"> <li>• General overview of IOTC</li> <li>• Introduction to the main data collection and reporting requirements</li> <li>• Discussion on the current sampling methodology in Madagascar which is funded by world bank</li> <li>• Discussions on the inconsistencies between various data sources from Madagascar</li> </ul>
Comoros (remote)	March 2022 <b>COMPLETED</b>	IOTC Data Assistant, IOTC Compliance Expert, Representatives from Comoros	Support mission led by the Compliance Section of the Secretariat (with participation from the Data Section) to address some of the outstanding issues in terms of data collection and reporting identified for the country.  The activities delivered include: <ul style="list-style-type: none"> <li>• General overview of IOTC</li> <li>• Introduction to the main data collection and reporting requirements</li> <li>• Discussion on data quality submitted by Comoros</li> <li>• Discussions on the fishery types from Comoros, which are inconsistencies with IOTC database, with the possibility of reviewing past data</li> </ul>
FAO - InfoFish (remote)	September 2022 <b>COMPLETED</b>	IOTC Fishery Officer (data) IOTC Data assistant	<b>FAO Workshop on Fisheries Data Collection and Statistics (Africa, Mediterranean, Middle East)</b> <ul style="list-style-type: none"> <li>• Discussion on various data collection systems in Africa, Mediterranean, and Middle East, including their setbacks and way forward to improve the current state-of-the-art</li> <li>• IOTC data requirements and the capability of the CPCs to report data based on these</li> </ul>
EU (remote)	June 2022 <b>COMPLETED</b>	IOTC Fishery Officer (data)	<b>Annual meeting of the Regional Coordination Group on Large Pelagic (RCGLP)</b> <ul style="list-style-type: none"> <li>• Presentation of the status of data reported to IOTC by EU member fleets for the previous statistical year</li> <li>• Revision of compliance status on data related requirements by CMMs, identifying potential issues and providing support for the improvement of future data submission to the Secretariat</li> </ul>
	September 2022 <b>COMPLETED</b>	IOTC Fishery Officer (data)	<b>EU Liaison Meeting</b> <ul style="list-style-type: none"> <li>• Presentation of the current state of preliminary data reported to IOTC by EU members fleets</li> <li>• Revision of IOTC data requirements, identification of issues and provision of support</li> </ul>

			for the improvement of data submissions to the Secretariat
<b>Indonesia</b> (In person, Jakarta and Bali)	July 2022 <b>COMPLETED</b>	IOTC SC Chair IOTC Data Coordinator IOTC Fishery Officer (data) IOTC Data Assistant Representatives from: 1. Ministry of Marine Affairs and Fisheries of Indonesia 2. National research institutions 3. IPNLF	Continuation on the previous remote meetings held in 2021, to discuss the current state-of-the-art in terms of re-estimation procedures for Indonesia's annual catches.  The main activities of the missions were: <ul style="list-style-type: none"> <li>Recall the reasons that led the IOTC Scientific Committee to request for a revision of Indonesia's artisanal catches</li> <li>Present the rationale of these re-estimations, including their more recent revisions</li> <li>Present the results of the re-estimations compared to official catch data for the period 2010-2020</li> <li>Discuss about past issues affecting data collection and reporting in Indonesia and how these have been or could be resolved</li> <li>Assess the extent of the improvements in data collection and reporting introduced by the One Data initiative</li> <li>Assess the methodology used to estimate industrial and coastal fisheries catch data</li> </ul>
<b>Oman</b>	October 2022 <b>CANCELLED</b>		Oman declined the request from the Commission for a data support mission to assess the tuna fisheries of Oman which yield substantial increases in yellowfin catches in recent years.  The activities originally proposed for the mission were: <ul style="list-style-type: none"> <li>Improve the understanding of the composition and characteristics of Omani fisheries catching tuna and tuna-like species</li> <li>Assess the status of implementation of the follow-up activities identified by the previous workshop delivered by IOTC and FAO in September 2019</li> <li>Clarify any outstanding aspects of the IOTC data reporting process, and propose potential improvements to increase the efficiency of data reporting to IOTC</li> <li>Understand the factors explaining the recent increasing trends in reported catches of yellowfin tuna, including through review of the tools and methodologies adopted by the Department of Fishery Statistics to produce official catch estimates for all concerned fisheries</li> <li>Identify the type and extent of all scientific information on IOTC species held by national institutions and currently not available to the IOTC Secretariat</li> <li>Assess the potential of setting up sharing agreements between Oman and IOTC regarding the scientific information identified through the previous point</li> </ul>
<b>Indonesia</b> (in person, Jakarta)	November 2022 <b>COMPLETED</b>	IOTC Data Coordinator IOTC Fishery Statistician IOTC Data assistant	Follow-up of the support mission conducted in July to review and assess the progress in the re-estimation procedures proposed by Indonesia for their annual catches

		<p>Representatives from:</p> <ol style="list-style-type: none"> <li>1. Ministry of Marine Affairs and Fisheries of Indonesia</li> <li>2. national research institutions</li> <li>3. IPNLF</li> </ol>	<p>The main activities of the mission were:</p> <ul style="list-style-type: none"> <li>• Review and assess the methodologies leading to the latest catch estimation procedure proposed by Indonesia, which include revisions of catch series from 2010 to 2020, and comparing the results with current data from 1-RC forms and from IOTC re-estimations</li> <li>• Analyse the logbook and port sampling data collected for various Indonesian's fisheries, and assess their level of coverage and suitability for inclusion in the re-estimation procedure</li> <li>• Review the availability of shark data collected for Indonesian coastal fisheries, to corroborate the re-estimated level of catches for all shark species</li> </ul>
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## Funding agencies

The following section includes a description of the main agencies that contributed funds and other support to IOTC data capacity building during 2022 and previous years.

### IOTC

The Indian Ocean Tuna Commission allocates funds from its regular budget to the implementation of capacity building activities in developing coastal states that are IOTC CPCs. Staff of the Data and Statistics Section of the IOTC Secretariat were involved in one or more of the capacity building activities referred to in Table 1.

### IOTC-OFCF Japan Project<sup>1</sup>

A *Memorandum of Understanding* (MoU) between the IOTC and OFCF Japan was initiated in April 2002 with the purpose of enhancing the capacity of developing coastal states in the Indian Ocean region and improve their fisheries statistical systems. Phases I (April 2002 - March 2007), II (June 2007 - March 2010), III (June 2010 - March 2013), IV (June 2014 - March 2017), V (June 2017 - March 2020), and VI (June 2020 – March 2023) of the Project ran for twenty consecutive years as of today.

A *Letter of Understanding* (LoU) between the IOTC and OFCF Japan for the commencement of a Phase VI was signed in October 2020, including the provision of the OFCF Japan expert to coordinate and lead the activities of the Project with support of staff of the IOTC Secretariat when required.

After a consultation, the IOTC and OFCF Japan agreed to focus its Phase VI activities towards the realization of sustainable utilization of tuna resources, by improving the accuracy of data collection and statistical analysis of the catch and resources of tuna in the Indian Ocean.

The Project has kept the following three main principles since 2002:

- a) The activities undertaken under the Project follow the recommendations of the IOTC Commission and its relevant subsidiary bodies (Working Parties and the Scientific Committee).
- b) There will be no direct financial implications for IOTC Member countries.
- c) The activities of the Project should be directed towards reinforcing the statistical systems of developing countries from the region.

An extension to the LoU was agreed in November 2021 and was effective until March 2022. Thereafter a *Cooperation Agreement* (CA) was signed between FAO and OFCF Japan in September 2022 and is now valid for the next 5 years.

<sup>1</sup> <http://www.iotc.org/data/iotc-ofcf>

While Phase VI of the project commenced in 2020, the Project was not yet able to conduct on-site activities of the coastal member countries due to the impact of the COVID-19 pandemic. For this reason and following the approval of the new CA, the IOTC Secretariat and OFCF Japan formulated an activity plan to support IOTC coastal member countries for the year 2022 and 2023, that include further development of species identification guides and a desk study on the possibility of implementing standardized electronic data collection tools.

## European Commission – DG for Maritime Affairs & Fisheries (DG-MARE)

The mission of the Directorate-General for Maritime Affairs and Fisheries (DG-MARE) is:

*"To develop the potential of the European maritime economy and to secure sustainable fisheries, a stable supply of seafood, healthy seas and prosperous coastal communities – for today's Europeans and for future generations."*

Since 2015, DG-MARE has provided the IOTC Secretariat with capacity building grants to fund projects that foster compliance of Conservation and Management Measures (CMMs), in addition to funding activities that enable assistance for developing coastal states in the IOTC area to improve the implementation of the at-sea observer scheme, compliance with IOTC mandatory data collection and reporting standards, technical assistance support missions to CPCs, as well as support for national fisheries scientists to attend IOTC science meetings.

DG-Mare funding was utilized to support part of the activities conducted in 2022, notably the implementation of the Regional Observer Scheme Pilot Project (i.e., piloting of electronic monitoring systems (EMS), which aims at facilitating improvements in the data collection, reporting and timeliness of observer data to the IOTC Secretariat).

DG-Mare support to IOTC Secretariat is still ongoing, with a new project proposal covering the biennium 2023-2024 and funding available to support the IOTC Science and Compliance committees' programs of work for 24 months.

## ABNJ Project<sup>2</sup>

The Global sustainable fisheries management and biodiversity conservation in the Areas Beyond National Jurisdiction (ABNJ) Program promotes efficient and sustainable management of fisheries resources and biodiversity conservation in the ABNJ.

The phase I of the 5-year ABNJ Program comprises 4 projects. In particular, the Sustainable Management of Tuna Fisheries and Biodiversity Conservation in the ABNJ pilots Rights-Based Management systems and other sustainable fishing practices focuses on the reduction of illegal, unreported, and unregulated (IUU) fishing as well as bycatch and other adverse ecosystem impacts on biodiversity.

The IOTC is among the five tuna regional fisheries management organizations that is receiving support from the ABNJ Project and has been identified as the *executing agency* for the activities under the tuna fisheries component of phase II of the ABNJ project which started in Q4 2022.

## IOC-EU Project EcoFish<sup>3</sup>

The IOC-EU project, through EcoFish, provides support to CPCs to improve their level of compliance with IOTC requirements. Funds are available under this project to support activities common to the Data and Compliance sections of the Secretariat, in particular those focusing on the improvement of data collection through standardized logbook systems.

## Summary of countries and activities planned or undertaken in 2022

Data related capacity building activities delivered by the IOTC Secretariat can be broadly categorized into the following work streams:

- a) Data compliance missions: to foster improvements and facilitate the validation and reporting of core statistical datasets to the IOTC Secretariat (i.e., nominal catches, catch-and-effort, and size data), assess current

<sup>2</sup> <http://www.thegef.org/gef/ABNJ>

<sup>3</sup> <https://ecofish-programme.org/>

shortcomings concerning the collection and management of fisheries data, and agree on a plan of action with the CPC required to deliver improvements on their levels of reporting.

- With the lifting of travel restriction in 2022, on-the-field support mission to CPCs could resume, resulting in two in-person missions delivered to Indonesia, and one planned to Oman, which was eventually declined by the CPC. Furthermore, staff members from the data Section of the IOTC Secretariat engaged in remote meeting and workshops with selected CPCs (e.g., Comoros, Madagascar, March 2022) and participated remotely to annual sessions of the EU Regional Coordination Group on Large Pelagics (RCGLP, June 2022), and Liaison Meeting (September 2022), as well as to the FAO / InfoFish regional workshop on fisheries data collection and statistics (September 2022).
- b) Technical assistance missions: these include capacity building on data collection, support for the development of national fisheries databases and statistical systems, and support to resolve other issues related to fisheries data management at national level.
- In 2022, only two on-the-field support missions could be provided to CPCs (both to Indonesia) although comparable activities and workshops were delivered remotely to selected CPCs (e.g., Comoros and Madagascar).
- c) Support for implementation of the Regional Observer Scheme and implementation of the ROS Pilot Project: ROS-related capacity building activities cover several components, including the further development and improvements of the IOTC ROS electronic tools, as well as studies on the implementation of Electronic Monitoring Systems (EMS) on small-scale fisheries.
- Work on the ROS electronic tools and ROS regional database is currently ongoing, to account for the feedback reported by end-users, as is the work on establishing direct integration mechanisms between ObServe data and the ROS regional database (in collaboration with scientists from IRD).
  - Following a proposal on Minimum standards for the design and implementation of EMS in Indian Ocean tuna fisheries presented at the SC in 2020, the Secretariat has also supported the establishment and delivery of the 1<sup>st</sup> and 2<sup>nd</sup> ad-hoc Working Group on EMS (November 2021 and June 2022, respectively).

## **IOTC data compliance and technical assistance missions**

Data compliance and support missions are conducted by staff from the IOTC Secretariat, with the assistance of staff from the government institutions concerned in each country, and are focused on the following objectives:

- 1) Assess CPC compliance with IOTC Requirements for scientific data, including IOTC species and other bycatch, and provisions for the collection of logbook data, implementation of the IOTC Regional Observer Scheme, and data requirements with regards to FAD management plans.
- 2) Recommend the type of actions that will need to be undertaken to address any issues identified in (1).
- 3) Agree on a Plan of Action to address any issues identified impending compliance with IOTC data related resolutions, including a time frame for the implementation of those actions and the type of indicators to be used in each case to assess progress.

The following data capacity building activities were implemented by the IOTC and its partners in 2022 (up to November 2022), to support priorities identified by the IOTC Working Parties and Scientific Committee.

### **Comoros (data compliance and technical assistance, March 2022)**

A remote meeting was held with Comoros, led by the compliance section to assist Comoros with issues faced, including reporting data based on the requirements of resolutions 15/01 and 15/02. Furthermore, review Comoros fisheries, which conflict the current and past data at the Secretariat.

### **Madagascar (data compliance and technical assistance, March 2022)**

A remote meeting was held with Madagascar, led by the compliance section to improve the compliance level. This includes issues face with data collection and reporting. Review the current sampling project funded by World bank. There were discussions on the inconsistencies in the sampling data over years, and discrepancies in Madagascar data from various sources.

### **Indonesia (data compliance and technical assistance, July and November 2022)**

Staff from the Data Section of the Secretariat, together with representatives from the Ministry of Marine Affairs and Fisheries of Indonesia, national research institutions, IPNLF and the chair of the IOTC Scientific Committee, worked together on the revision and assessments of new proposals for the re-estimation of Indonesia annual catches, based on the previous approach implemented by the Secretariat in agreement with the IOTC Scientific Committee. Discussions focused on the historical reasons for the re-estimation, the implementation details of the re-estimation procedures (including the extent and quality of the available raw data) and on the comparisons between the re-estimations and the official data submitted by Indonesia.

### **Oman (data compliance, September 2022)**

A compliance and support mission to Oman was planned for September 2022, following an explicit request in that sense from the Commission that requested clarifications on the substantial increases in tunas recorded by Omani small-scale handline fisheries in recent years. However, Oman officially declined the offer.

### **Regional Observer Scheme pilot project**

Resolution 16/04 *On the implementation of a pilot project for in view of promoting the Regional Observer Scheme of IOTC* ("ROS pilot project") includes several work streams with capacity building aspects of relevance to the IOTC.

In particular, the ROS pilot project has provisions for:

- the delivery of a complete training package for observer coordinators and scientific observers alike, whose implementation was awarded to *CapMarine* in 2019
- the trial of Electronic Monitoring Systems for the collection of ROS data onboard small-scale fisheries
- the development and implementation of electronic tools to support ROS data collection, analysis, and reporting

Details on the status of implementation, the objectives achieved and the capacity building activities with a focus on data collection and reporting delivered by the IOTC Secretariat under these three components of the ROS are included in [IOTC-2022-WPDCS18-10](#) – "*Updates on the implementation of the IOTC Regional Observer Scheme and its pilot project*".

### **Activities planned for 2023**

Below is a provisional, non-exhaustive list of the capacity building activities planned for 2023.

Several of these activities were originally planned for 2022 and previous years but had to be postponed due to unforeseen circumstances that include the limited resources available at the IOTC Secretariat, delays in securing funding for the activities, and travel restrictions caused by the insurgence of the CoViD-19 pandemic.

### **IOTC Data Compliance and Support Missions**

The IOTC Secretariat is strongly committed to deliver Data Compliance and Support missions in 2023, to improve the overall levels of data compliance of CPCs in the IOTC region and follow-up to the ongoing and persistent issues with non-reporting (or incomplete reporting) of several mandatory IOTC datasets.

These missions also aim at providing an assessment of the status of national data collection and reporting systems, and to identify needs common to coastal CPCs that would benefit from the inclusion in the WPDCS programme of work.

According to the current WPDCS programme of work, priorities are given to the following activities and CPCs:

1. **Indonesia, Kenya, Somalia, Pakistan, Sri Lanka and I.R Iran**, to assist in the implementation of data collection and sampling activities
2. **Indonesia, Pakistan, India, Sri Lanka and Somalia**, to improve compliance level with IOTC data collection and reporting requirements
3. **I.R. Iran and Pakistan**, to verify and resolve potential issues with double counting of nominal catches

4. **Oman**, to better understand the factors driving the recent increases in reported catches from their handline fishery
5. **Pakistan** and **Sri Lanka**, to further assess the potential of alternative data collection mechanisms currently implemented in some of their fisheries
6. **Bangladesh, Somalia, and Yemen** to support the development of data collection and reporting capacity at national level.

Funds from the EU project (2023-2024) are also available to specifically support the following:

1. Improved data collection and reporting of artisanal fisheries data
2. Improved time series of catches and other scientific data for science and management purposes
3. Reconstruction of historical catch series for CPCs with persistent data quality issues: Pakistan, Tanzania, Comoros, Mozambique
4. Improved data collection, reporting and management of Regional Observer Scheme data at national and regional levels

Additionally, the Compliance Committee forwarded to the WPDCS the request from CPCs that the Secretariat deliver remote / in-person workshops focusing on the compilation of statistical data submissions, which should also be considered in the work plan for the next biennium.

### **Regional Observer Scheme pilot project:**

#### **ROS e-tools training workshops and further ROS developments**

Support for the adoption of the IOTC ROS e-tools is expected to continue during 2023 through activities that include remote / in-person training workshops preliminary to the further roll-out of the ROS electronic tools in two or more countries participating to the ROS Pilot Project training programme.

Side activities stemming from these workshops will include additional end-user testing of the e-collection interface and of the national database components (where applicable) as well as evaluation of the quality of ROS data prior to their submission to the IOTC Secretariat.

For those CPCs that already have legacy observer data collection systems in place (e.g., Mauritius, Seychelles) additional data integration activities are expected to continue to guarantee that all available information is properly and automatically shared with the IOTC Secretariat. Work on the implementation of a direct *ObServe*-to-ROS data exchange protocol is also under way, involving mostly resources from the IOTC Secretariat and IRD.

#### **ROS e-monitoring pilot project**

Following the initial batch of installation of EMS equipment on-board of selected vessels during Q4 2021 and 2022, the activities on this component of the ROS Pilot Project planned for 2023 will focus on:

- 1) Finalization of the installation of EMS equipment on the remaining vessels
- 2) Further training of land-based observers in the collection, collation, and analysis of EMS data
- 3) Liaising with the Services Provider to progress on the definition of data exchange workflows between EM systems and the ROS electronic tools, to ensure timely, accurate and comprehensive ROS data submissions to the IOTC Secretariat