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## **ACTIVITIES DURING 2015/16 TO STRENGTHEN COOPERATION WITH ICCAT**



CRFM Secretariat  
2016

# **CRFM Technical & Advisory Document - Number 2016 / 04**

## **Activities during 2015/16 to Strengthen Cooperation with ICCAT**

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CRFM Secretariat  
Belize, 2016

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# **CRFM TECHNICAL & ADVISORY DOCUMENT – Number 2016 / 04**

## **Activities during 2015/16 to Strengthen Cooperation with ICCAT**

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## ACRONYMS AND ABBREVIATIONS

|                  |  |
|------------------|--|
| <b>AOTTP</b>     | Atlantic Ocean Tropical Tuna Tagging Program   |
| <b>BMSY</b>      | Biomass at Maximum Sustainable Yield   |
| <b>CARICOM</b>   | Caribbean Community  |
| <b>CARIFICO</b>  | Caribbean Fisheries Co-management project  |
| <b>CAWG</b>      | Convention Amendment Working Group   |
| <b>CCCFP</b>     | Caribbean Community Common Fisheries Policy  |
| <b>CFF</b>       | Caribbean Fisheries Forum  |
| <b>CFO</b>       | Chief Fisheries Officer  |
| <b>CITES</b>     | Convention on International Trade in Endangered Species of Wild Flora and Fauna                                      |
| <b>COC</b>       | Compliance Committee   |
| <b>COP</b>       | Conference of Parties  |
| <b>CPC</b>       | Contracting Party, Cooperating non-Contracting Party, Entity or Fishing Entity                                       |
| <b>CRFM PWG</b>  | Caribbean Regional Fisheries Mechanism Pelagic Fisheries Working Group   |
| <b>DMTWG</b>     | Data and Methods Training Working Group  |
| <b>eBCD</b>      | electronic Bluefin Tuna Catch Documentation programme  |
| <b>EFFDIS</b>    | Estimated overall Atlantic fishing effort by time-area strata  |
| <b>EPBR</b>      | Enhanced Program for Billfish Research   |
| <b>ERA</b>       | Ecological Risk Assessment   |
| <b>EU</b>        | European Union   |
| <b>FAD</b>       | Fish Aggregating Device  |
| <b>FMP</b>       | Fisheries Management Plan  |
| <b>GBYP</b>      | Atlantic Wide Research Programme for Bluefin Tuna  |
| <b>HCR</b>       | Harvest Control Rules  |
| <b>ICCAT</b>     | International Commission for the Conservation of Atlantic Tunas  |
| <b>Ifremer</b>   | Institut français de recherche pour l'exploitation de la mer (French Research Institute for Exploitation of the Sea) |
| <b>IMM</b>       | Integrated Monitoring Measures   |
| <b>IUU</b>       | Illegal, Unreported and Unregulated fishing  |
| <b>JICA</b>      | Japan International Cooperation Agency   |
| <b>LOA</b>       | Length Overall   |
| <b>MAGDELESA</b> | Moored fish AGgregating DEvices in the LESser Antilles project   |
| <b>MCS</b>       | Monitoring, Control and Surveillance   |
| <b>MSE</b>       | Management Strategy Evaluation   |
| <b>MSY</b>       | Maximum Sustainable Yield  |
| <b>OT</b>        | Overseas Territories   |
| <b>PMRRA</b>     | Programme Manager, Research and Resource Assessment  |
| <b>PWG</b>       | Permanent working Group for the Improvement of ICCAT Statistics and Conservation Measures                            |
| <b>RFMO</b>      | Regional Fisheries Management Organization   |
| <b>ROP</b>       | Regional Observer Programme  |
| <b>SCRS</b>      | Standing Committee on Research and Statistics  |
| <b>SMTYP</b>     | Small Tuna Year Program  |
| <b>SRDCP</b>     | Shark Research and Data Collection Program   |
| <b>STACFAD</b>   | Standing Committee on Finance and Administration   |
| <b>SVG</b>       | St. Vincent and the Grenadines   |
| <b>SWGSM</b>     | Standing Group to Enhance Dialogue between Fisheries Scientists and Managers   |
| <b>TAC</b>       | Total Allowable Catch  |

|               |   |
|---------------|---|
| <b>TCI</b>    | Turks and Caicos Islands                                    |
| <b>TOR</b>    | Terms of Reference  |
| <b>TWG</b>    | Technical Working Group                                     |
| <b>UK</b>     | United Kingdom  |
| <b>UN</b>     | United Nations  |
| <b>UNCLOS</b> | United Nations Convention on the Law of the Sea             |
| <b>USA</b>    | United States of America                                    |
| <b>VMS</b>    | Vessel Monitoring System                                    |
| <b>WCF</b>    | Working Capital Fund  |
| <b>WECAFC</b> | Western Central Atlantic Fishery Commission                 |
| <b>WGDAC</b>  | Working Group to Develop Amendments to the ICCAT Convention |
| <b>WGSAM</b>  | Working Group on Stock Assessment Methods                   |

## FOREWORD

Since 1991 regional level participation and representation in meetings of the International Commission for the Conservation of the Atlantic Tunas (ICCAT) and its Standing Committee for Research and Statistics have been facilitated through CARICOM's Observer status and since 2003 through the CRFM. These interactions have contributed to improved understanding of the ICCAT management and scientific processes. Currently several CRFM States are Contracting Parties to the International Convention for the Conservation of Atlantic Tunas, either as independent states (Barbados, Belize, St Vincent and the Grenadines and Trinidad and Tobago) or through UK membership in respect of its Overseas Territories (Anguilla, Montserrat and Turks and Caicos Islands). In addition, both Guyana and Suriname are Non-Contracting Cooperating Parties at the time of writing this report.

Efforts have been made in the past by the CRFM Secretariat to facilitate improved and active participation of CRFM Member States in ICCAT's activities. Non-compliance with ICCAT's statistical and scientific reporting requirements and non-participation or lack of active participation in the ICCAT Meetings remain challenges which impact CRFM Member States' ability to effectively influence ICCAT's decisions and secure the fisheries interests of the respective countries. In light of this situation the 24<sup>th</sup> Meeting of the Executive Committee of the Caribbean Fisheries Forum identified an urgent need for CRFM countries to strengthen their information base to inform more confident presentation of national interests at ICCAT meetings and strengthening of national positions at negotiations. Consequently, the Executive Committee approved a number of management-level and scientific-level priority targets and activities for implementation of the CRFM Pelagic Fisheries Working Group in 2015-2016. The management level targets and activities focused on improved fulfillment of reporting obligations in respect of ICCAT management compliance, review of 1-2 key ICCAT developments and development of regional positions for presentation at the relevant ICCAT meetings, review of ICCAT's arrangements to provide assistance to developing states and CARICOM participation in the ICCAT Commission Meeting. Corresponding scientific level targets and activities focused on improved fulfillment of reporting obligations in respect of tuna and tuna-like fishery statistics; development of sub-regional conversion factors for key commercial tuna species caught by CRFM States and CARICOM participation in the ICCAT Scientific Committee for Research and Statistics (SCRS) Meeting. Participation in the respective ICCAT meetings was to be based on the availability of funds, specific identification and justification of the required support by one or more Member States, as well as availability of a scientific paper for presentation at the SCRS meeting.

This Technical and Advisory Document reports on the CRFM Secretariat's supporting activities and outputs in 2015-2016 in pursuit of the agreed targets in two Parts: Part I (Management Reporting); Part II (Scientific Reporting). Two electronic meetings of the Pelagic Fisheries Working Group were convened in October 2015 and March 2016 to address the ICCAT's management and scientific reporting obligations respectively. The October meeting also addressed recent, key ICCAT developments and ICCAT's assistance to developing countries. On the request and justification of one Contracting Party, the CRFM Secretariat participated in the 24<sup>th</sup> Regular Meeting of the Commission and the respective CRFM report on salient management issues at the meeting is included in this Technical and Advisory Document. Work was also initiated towards development of regional conversion factors for tuna and tuna-like species of interest to CRFM Member States. Arising out of the March 2016 meeting a number of issues was identified for the attention of large pelagic fisheries managers in the 2016/2017 programme year. The March 2016 meeting also identified the need for tutorial sessions to improve knowledge and understanding of the statistical reporting process, and to share best practices in the completion of ICCAT's Task I and Task II Data Forms. The required tutorial sessions were delivered, and the associated reports are also included. Additional efforts aimed at improved data collection and management of FAD fisheries are also documented, as these contribute to improved cooperation in ICCAT's activities.

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# **PART I – MANAGEMENT**

# **CRFM PELAGIC FISHERIES WORKING GROUP (CRFM PWG) REPORT OF FIRST MEETING ON ICCAT (MANAGEMENT)**

*Susan Singh-Renton*

## **1. Opening**

The CRFM Secretariat's Deputy Executive Director, Susan Singh-Renton, chaired the meeting. The Chairperson acknowledged her appreciation of those who made the effort to attend the meeting. She recalled that the general objective of the meeting was to provide necessary technical support for improved participation in ICCAT by the CRFM. Pursuant to a decision by the Forum on agreed management target regarding ICCAT participation, the present meeting was convened to address management-level understanding of ICCAT reporting obligations. In this regard, the Chairperson expressed her disappointment at the low representation of the heads of national fisheries authorities.

## **2. Adoption of Agenda**

In reviewing the agenda, the Chairperson reminded the CRFM PWG of the meeting's specific objectives, which were to provide assistance to countries preparing for the 24<sup>th</sup> Regular Meeting of ICCAT as follows:

- 1) Improve understanding of ICCAT management reporting obligations;
- 2) Improve understanding of the 2015 SCRS recommendations;
- 3) Improve understanding of proposed amendments to the ICCAT Convention and other recent ICCAT management developments;
- 4) Improve understanding of ICCAT's arrangements to provide assistance to developing states.

A new item was proposed and accepted at 7.2, titled 'Preparations for Billfish meeting in Panama'. Later in the meeting, the representative from Jamaica introduced 2 additional items, which were also taken under item 7.

The revised, adopted agenda is provided in Appendix 1.

## **3. Procedural matters**

The Chairperson advised that she would assume responsibility for preparing the report of the meeting. She promised to make an effort to adhere to the allocated time for the meeting.

The various country representatives in attendance were acknowledged. A list of the meeting participants is provided in Appendix 2.

## **4. ICCAT management reporting obligations**

The Chairperson commenced with a review of the ICCAT webpages where the reporting guidelines and reporting forms could be downloaded. She pointed out that ICCAT kept its annual reporting requirements under review, and so it was important for countries to check reporting forms each year to ensure use of the latest reporting form.

The CRFM PWG therefore proceeded to review and discuss ICCAT's 2015 *Guidelines for Submitting Data and Information Required by ICCAT*. The CRFM PWG noted that this was a comprehensive document, providing detailed instructions for preparation of annual reports and compliance tables, as well as submitting information on authorized fishing vessels, access agreements, statistical document programmes, trans-shipment activities, etc. The CRFM PWG gave special attention to those reporting requirements of immediate and direct interest to CRFM Member States. A sample annual report from Barbados was also examined to illustrate.

There were queries regarding the need for Non-Contracting Parties to complete annual reports, and also about the computation of figures in the compliance table. The CRFM PWG noted that if countries were operating commercially important tuna and tuna-like fisheries, then it was in their interest to cooperate fully with ICCAT's reporting requirements including preparation of national annual reports in the required format, and to submit the data and information using the reporting forms provided online. Such cooperation was also prescribed in international law. The CRFM PWG emphasized the need to ensure that all tuna fisheries management efforts were reported to ICCAT. Related to this point and later in the meeting, the CRFM Secretariat's Programme Manager for Research and Resource Assessment urged countries to include mention of the FAD Model logbook and FAD FMP initiatives in their annual reports to ICCAT in 2015-16.

Certain participants indicated that they had some difficulties with understanding the computations used for the Compliance Tables, and other ICCAT reporting forms. It was agreed that specific reporting challenges would be best addressed via follow-up meetings between Secretariat staff and participants of the individual countries.

## **5. ICCAT SCRS 2015 report**

The CRFM Secretariat's Programme Manager for Research and Resource Assessment, Elizabeth Mohammed, delivered a presentation on the salient findings and recommendations of ICCAT's 2015 SCRS meeting.

There was a query concerning the species list proposed for assessment attention by the CRFM PWG during 2016-18, particularly whether it represented the list of 10 species developed by the DMTWG. It was clarified that the list was developed based on ICCAT's plans for 2016-18. Hence, the CRFM PWG would have to compare the two lists to determine where the common priorities lay. The CRFM PWG also reflected on CRFM's efforts to improve FAD fisheries management, noting that a model logbook and draft FAD FMP were available for stakeholder consultation and adoption for usage. It was pointed out that the relevant documents were available on the CRFM website, and could also be sent via email and the CRFM Dgroup, if requested. The meeting was advised to take note of the SCRS findings and recommendations particularly for bigeye tuna that had been assessed in 2015, for anchored FADs that were receiving increasing attention, and for sailfish for which a 2016 assessment was planned. As these areas were receiving ICCAT's attention in 2015-2016, new and amended management recommendations could be expected at the 2015 and 2016 Commission meetings, and so it was important for countries to strengthen their information base to support the anticipated management regulation negotiations.

## **6. Additional ICCAT developments**

### *6.1 Convention amendment*

The Chairperson delivered a PowerPoint presentation to provide the necessary background and update on the activities by ICCAT aimed at informing an amendment of its Convention.

Besides a couple of clarifications on the presentation content itself, there were no substantive queries or discussion. One ICCAT CPC confirmed receiving the ICCAT Convention Amendment Working Group (CAWG) Chairperson's paper intended to inform discussions at the last meeting of the ICCAT CAWG, and the CRFM PWG agreed that this paper would be circulated by email to all participants for further study.

### *6.2 ICCAT provisions for assistance to Developing States*

The Chairperson delivered a PowerPoint presentation to provide the necessary current information and understanding of the various ICCAT's provisions for assistance to Developing States.

The representative from Suriname asked about access to assistance funds by ICCAT Cooperating Parties, and it was confirmed that Cooperating Parties usually had entitlement to forms of assistance as well.

## **7. Any Other Business**

### *7.1 Exchange of any new information on informal ICCAT- related activities linked to IUU fishing concerns*

The Chairperson reminded the CRFM PWG that an ICCAT Chairman's Regional Workshop was held in Panama recently, and so this agenda item was to facilitate any available updates by representatives who attended that meeting.

Of the countries represented, only Barbados confirmed that the CFO had attended the meeting. As the CFO was not in attendance at the present meeting, no update could be provided.

In the meantime, the representative from Jamaica took the opportunity to provide an update on accumulating evidence of illegal fishing activities in Jamaican waters for sharks and other pelagic species. The representative mentioned Venezuelan vessels, and also that 'pieces of longline with dead fish attached to hooks' had been observed by artisanal fishers in association with observations of large fishing vessels offshore.

### *7.2 Preparations for Billfish Meeting in Panama*

The Chairperson advised the CRFM PWG of the proposed WECAFC meeting to discuss billfish conservation and management. The representative from St. Lucia was interested to know if a CRFM regional position was being developed. The Chairperson then attempted to review the purpose of the WECAFC billfish meeting. The CRFM PWG noted its interest in having a regional position developed. In view of that, the Chairperson indicated that a separate meeting would have to be convened to develop the requested regional position, as it would require the attendance of the Director-level representatives who would be authorized to adopt such a position.

### *7.3 Jamaica update*

In addition to the IUU update provided at 7.1, the representative from Jamaica advised the CRFM PWG that Jamaica took a policy decision to develop a pelagic fishery. In this regard, Jamaica intended to contact the CRFM Secretariat and also other CRFM States to seek their support in sharing experiences in pelagic fisheries development and management, including ICCAT experiences. Jamaica was in communication with Grenada about the possibility of having a master fisher from Grenada come to Jamaica to provide training of Jamaican fishers in pelagic fishing operations.

In response, the Chairperson advised the Jamaican representative of the need to ensure that a written pelagic fisheries development plan be prepared in order to guide and manage the process effectively.

### *7.4 Recommendations for meeting improvement*

The representative from Jamaica made the observation that he was unable to identify representatives by country. He also indicated the need to investigate options to identify and facilitate verbal interventions without the person having to start speaking to be acknowledged.

The Chairperson advised that persons were able to edit their names, so that their country names could be included as well. In addition, the Chairperson advised that certain electronic meeting included a 'hand raising' tool, but not GoToMeeting. In the case of GoToMeeting, one option would be for the meeting to agree to use the chat log tool to indicate requests for the floor.

## **8. Adjournment**

The Chairperson asked if there were any final remarks or other inputs.

The CRFM Secretariat's Programme Manager for Research and Resource Assessment took the opportunity to request that countries consider noting the CRFM initiatives for improved FAD fishery management in their national annual reports, particularly the FAD model logbook and FAD FMP. This request was made as the CRFM was not able to produce an annual report in the new format adopted by ICCAT.

The Chairperson then thanked participants for their time, and the meeting was adjourned at approximately 1:10 p.m.

## **Appendix 1: Agenda – CRFM Pelagic Fisheries Working Group First Meeting on ICCAT**

### **CRFM PELAGIC FISHERIES WORKING GROUP (CRFM PWG)**

#### **FIRST MEETING ON ICCAT**

**Electronic Meeting (Via Goto Meeting)**

**29 October 2015**

**Document 1-01: 20 October 2015**

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### **Agenda**

| <b>Item</b> | <b>Title</b>   | <b>Time (Eastern Caribbean Time)</b> |
|-------------|--|--------------------------------------|
| 1           | Opening of meeting   | 10:00 - 10:05 a.m.                   |
| 2           | Adoption of Agenda   | 10:05 - 10:10 a.m.                   |
| 3           | Procedural matters   | 10:10 - 10:15 a.m.                   |
| 4           | ICCAT management reporting obligations   | 10:15 - 11:00 a.m.                   |
| 5           | ICCAT SCRS 2015 report   | 11:00 - 11:45 a.m.                   |
| 6           | Additional ICCAT developments<br>6.1 Convention amendment<br>6.2 ICCAT provisions for assistance to Developing States  | 11:45 a.m. - 12:30 p.m.              |
| 7           | Any Other Business<br>7.1 Exchange of any new information on informal ICCAT- related activities linked to IUU fishing concerns<br>7.2 Billfish Workshop in Panama – exchanges<br>7.3 Jamaica update<br>7.4 Recommendations for meeting improvement | 12:30 - 12:45 p.m.                   |
| 8           | Adjournment  | 12:45 – 12:50 p.m.                   |

**Appendix 2: List of Participants – First CRFM PWG Meeting on ICCAT.**

| <b>Country</b>               | <b>Name of representative</b>                                    | <b>Affiliation</b>                           | <b>Email Address</b>   |
|------------------------------|--|--|--|
| Anguilla                     | Remone Johnson<br><i>Fisheries Officer</i>                       | Department of Fisheries and Marine Resources | <a href="mailto:remone.johnson@gov.ai">remone.johnson@gov.ai</a>   |
|                              | Stuart Wynne<br><i>Acting Director</i>                           | Department of Fisheries and Marine Resources | <a href="mailto:Stuart.Wynne@gov.ai">Stuart.Wynne@gov.ai</a>   |
| Barbados                     | Christopher Parker<br><i>Senior Fisheries Biologist</i>          | Fisheries Division                           | <a href="mailto:fishbarbadosfb@caribsurf.com">fishbarbadosfb@caribsurf.com</a>   |
| Grenada                      | Crafton Isaac<br><i>Fisheries Officer</i>                        | Fisheries Division                           | <a href="mailto:crafton.isaac@gmail.com">crafton.isaac@gmail.com</a>   |
| Guyana                       | Ingrid Peters<br><i>Senior Fisheries Officer</i>                 | Department of Fisheries                      | <a href="mailto:ingridpeters93@gmail.com">ingridpeters93@gmail.com</a>   |
| Jamaica                      | Andre Kong<br><i>Director of Fisheries</i>                       | Fisheries Division                           | <a href="mailto:gakong@moa.gov.jm">gakong@moa.gov.jm</a><br><a href="mailto:andre_kong@yahoo.com">andre_kong@yahoo.com</a> |
| St. Lucia                    | Patricia Hubert-Medar (lead)<br><i>Fisheries Assistant</i>       | Fisheries Division                           | <a href="mailto:patricia.medar@govt.lc">patricia.medar@govt.lc</a>   |
| St. Vincent & the Grenadines | Cheryl Jardine-Jackson<br><i>Senior Fisheries Assistant/Data</i> | Fisheries Division                           | <a href="mailto:cejmespo@yahoo.com">cejmespo@yahoo.com</a>   |
|                              | Shamal Connell<br><i>Senior Fisheries Assistant</i>              | Fisheries Division                           | <a href="mailto:volcanicsoils@hotmail.com">volcanicsoils@hotmail.com</a>   |
| Suriname                     | Tania Tong Sang<br><i>Policy Officer</i>                         | Fisheries Department                         | <a href="mailto:iccatsuriname@gmail.com">iccatsuriname@gmail.com</a>   |
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**CRFM REPORT ON SALIENT ISSUES ADDRESSED AT THE TWENTY- FOURTH  
REGULAR MEETING OF THE INTERNATIONAL COMMISSION FOR CONSERVATION OF  
ATLANTIC TUNAS (ICCAT)**

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**1. Executive Summary**

General

(I) CARICOM countries that were represented by national delegations were: Belize, St. Vincent and the Grenadines and Suriname.

(II) ICCAT continued its efforts to develop a robust, technical approach to management advice and decision-making, resulting in the adoption of a recommendation on the development of Harvest Control Rules (HCRs) and of Management Strategy Evaluation (MSE). The recommendation included key working definitions of specific terms (Harvest Control Rule, Management Strategy Evaluation, target, limit, threshold), and included provisions for a stepwise approach towards application.

(III) ICCAT will undergo a second performance review in 2016.

(IV) ICCAT adopted an earlier agreed document titled ‘ICCAT Criteria for the Allocation of Fishing Possibilities’ as an ICCAT Resolution. This should help to support a more structured approach towards catch allocation negotiations.

(V) ICCAT adopted a resolution to guide application of the ecosystem approach to fisheries management.

(VI) ICCAT adopted a resolution to guide application of the precautionary approach in management decision-making.

Panel 1 (Tropical Tunas)

(VII) The Commission adopted a recommendation for an updated multi-year conservation and management programme for tropical tunas, which provides a suite of measures, including catch limits for bigeye and yellowfin tunas, fishing capacity limitations, FAD fishing restrictions, time-area closures, etc.

(VIII) The Commission adopted a recommendation to establish an Ad Hoc Working Group on FADs, essentially to continue the mandate of the predecessor Working Group that had been established in 2014. The new recommendation also strengthens the provision to ensure an open dialogue among fisheries scientists, managers, industry representatives and other stakeholders.

Panel 2 (northern temperate tunas)

(IX) In view of the quality of the data on north Atlantic albacore, and the need to continue to advance steps towards incorporation of HCR and MSE, the Commission adopted a recommendation, which defined management objectives for the north Atlantic albacore stock, and which included provisions for testing and negotiating a suitable Harvest Control Rule.

Panel 3 (southern temperate tunas)

(X) No new recommendations were formulated in 2015 by this Panel.



Panel 4 (other tuna and tuna-like species)

(XI) The Panel adopted a recommendation for south Atlantic swordfish, which updated and improved the existing 2013 recommendation, and included minimum size regulations similar to those in place for the north Atlantic stock.

(XII) The Panel adopted a recommendation that updated and extended the rebuilding plan for blue and white marlin to 2018. The 2015 recommendation also included provisions for addressing data deficiencies of artisanal fisheries.

(XIII) No management measures were adopted for Atlantic sailfish.

(XIV) The Panel adopted a recommendation on porbeagle shark, which included provisions for: release of live fish; improved recording of discards and releases; review of measures if catches exceeded the 2014 levels; support for research to improve understanding of the species biology and key critical habitats for important life history stages; and review of the recommendation upon completion of the next planned assessment in 2019.

PWG

(XV) The PWG adopted a recommendation to guide the implementation of the electronic Bluefin Tuna Catch Documentation (eBCD) programme, which included provisions for a phased approach and for instances of system failures.

(XVI) The PWG adopted a recommendation to unify reporting deadlines for eastern Atlantic and Mediterranean bluefin tuna and Mediterranean swordfish. The recommendation is simply intended to reduce administrative burdens on the supporting systems.

COC

(XVII) The COC conducted a detailed review of each CPC's state of compliance. CPCs were categorized according to the nature and extent of their non-compliance. By this means, ICCAT's response actions were also similarly categorized.

(XVIII) Those CARICOM States in attendance at the meeting, Belize, and St. Vincent and the Grenadines, provided responses to queries raised.

(XIX) The COC expressed concern about the continued overharvest of marlin by Trinidad and Tobago, and it is expected that a letter of identification will be sent to Trinidad and Tobago early in 2016. This letter will require a written response by Trinidad and Tobago, which should include remedial actions being taken.

(XX) Guyana's and Suriname's statuses as Co-operating Parties to ICCAT were renewed for the year 2016.

(XXI) The COC adopted a resolution on guidelines for the implementation of the Recommendation 11-15 concerning non-fulfilment of data reporting obligations and associated punitive measures. The recommendation included a structured approach for reporting of zero catches, and for managing COC review and decision-making with regard to review of fulfilment of data reporting obligations and application of punitive measures when required.

## **2. Objectives of CRFM/ CARICOM representation**

The objectives of CRFM/ CARICOM representation at the Meeting were:

- (i) To provide representation on behalf of CRFM/ CARICOM;
- (ii) To provide technical support and advice to CRFM/ CARICOM country delegations participating in the Meeting;
- (iii) To provide an annual update to CRFM/ CARICOM countries on ICCAT conservation and management measures and on the implications of these for fisheries development and management planning and decision-making within the CRFM/ CARICOM region.

## **3. Meeting participation**

There are currently 50 Contracting Parties and 4 Cooperating Parties to ICCAT. Of these, 45 Contracting Parties and 2 Cooperating Parties were represented by national delegations at the meeting. Additionally, 6 inter-governmental organizations and 25 non-governmental and civil society organizations were in attendance as observers.

CARICOM was represented in observer capacity by the CRFM Secretariat. The CARICOM delegation participated in the general plenary sessions, as well as the meetings of: species panels 1, 2, 3, and 4, the Standing Committee on Finance and Administration (STACFAD), the Permanent Working Group for the Improvement of ICCAT Statistics and Conservation Measures (PWG), and the Compliance Committee (COC). The CARICOM delegation was able to provide technical support and advice to the CRFM/ CARICOM country delegations, which participated in the Meeting.

At the time of the Meeting, CRFM Member States that were also members of ICCAT were: Barbados, Belize, St. Vincent and the Grenadines, Trinidad and Tobago, Anguilla, Montserrat, and the Turks and Caicos Islands (TCI) (the last three having membership of ICCAT through the Contracting Party status of the UK, acquired in respect of its Overseas Territories (UK OTs)). Also at the time of the Meeting, Guyana and Suriname were Co-operating Parties to ICCAT.

The ICCAT Commission continued to operate four species panels that reviewed species-specific scientific and management advice and had the responsibility for formulating agreed management recommendations for specific fisheries or species. These four species panels were: panel 1 (tropical tunas); panel 2 (northern temperate tunas); panel 3 (southern temperate tunas); panel 4 (swordfish, billfishes, sharks, small tunas, and tuna-like species). Barbados and the UK OTs were not members of any of the 4 species panels in 2015. In 2015, Belize remained a member of all four species panels, while St. Vincent and the Grenadines remained a member of Panels 1, 2 and 4. Trinidad and Tobago remained a member of panels 1 and 4.

Belize, St. Vincent and the Grenadines and Suriname were represented by national delegations, while The UK OT group was represented by a delegation from the UK (Bermuda). Barbados, Trinidad and Tobago, and Guyana did not send national delegations to the Meeting.

#### **4. General plenary meeting – major issues**

##### Review of the Report of the Second Meeting of the Standing Group to Enhance Dialogue between Fisheries Scientists and Managers (SWGSM)

This ICCAT Working Group is intended to facilitate improved understanding of the scientific concepts and process, for better application by managers and hence more efficient use of the available science.

For the second meeting, the dialogue included specific consideration of: the precautionary approach; the development of harvest control rules to incorporate biological, environmental and socio-economic considerations, and; management strategy evaluation. Both the concepts and tools supporting the associated scientific process were addressed. The meeting also examined the usual management reference points used by ICCAT (FMSY and BMSY), and considered whether these should be used as target references or limit references. Managers were urged to identify their objectives clearly, as well as to agree on the specifications of reference points, together with probabilities and timeframes in respect of management performance. In order to initiate active uptake and implementation within the ICCAT system, it was agreed that certain stocks, such as north Atlantic albacore for which the science was most advanced, could serve as suitable pilot stocks for testing and advancing the ideas and processes.

The findings and recommendations of the inter-sessional meeting influenced the formulation and adoption of two recommendations in 2015: Recommendation by ICCAT on the Development of Harvest Control Rules and of Management Strategy Evaluation, and; Recommendation by ICCAT to Establish Harvest Control Rules for the North Atlantic Albacore Stock (details of which are further explained in the section giving the report on Panel 2's activities).

##### Recommendation by ICCAT on the Development of Harvest Control Rules and of Management Strategy Evaluation

This recommendation builds on earlier ICCAT efforts to develop a harmonized and standardized format for presenting stock assessment results to facilitate management decision-making, including: the joint meetings of tuna RFMOs in 2007 and 2009, which agreed on the Kobe Plot (illustrates current biomass and fishing mortality relative to their levels at MSY) and the Strategy Matrix (statistical probability of success associated with several possible management strategies) formats, and which subsequently led to adoption of the 2011 *Recommendation by ICCAT on the Principles of Decision Making for ICCAT Conservation and Management Measures* that took into account stock biomass and fishing statuses; the work of the ICCAT Working Group on Precautionary Approach and the ICCAT Working Group for Stock Assessment Methods, which developed agreed definitions on reference points, and; the work of the present Standing Group that has continued to maintain the dialogue required for improved understanding of the scientific advice and the implications of management choices.

The intent of the 2015 recommendation was to provide first, acceptable key working definitions of specific terms (Harvest Control Rule, Management Strategy Evaluation, as well as target, limit, threshold), and to make provisions for a stepwise approach for progressive incorporation and application by ICCAT of Management Strategy Evaluation (MSE) and Harvest Control Rules (HCRs).

#### **5. Panel 1 – Tropical Tunas**

At the time of the Meeting, 39 States were members of the panel, including the CARICOM countries of Belize, St. Vincent and the Grenadines, and Trinidad and Tobago.

The SCRS Chairman presented the latest statistics and research information, as well as the assessment results and management advice for the tropical tunas: bigeye tuna, yellowfin tuna and skipjack tuna. Regarding these three species, there continued to be uncertainties about several biological parameters (growth, natural mortality, stock structure and movements).

The Atlantic Ocean Tropical Tuna Tagging Program (AOTTP) was able to start in 2015, with a large injection of funds by the EU (80% ~ 13.5 million Euros), and other ICCAT CPCs were expected to contribute the remaining funds. The AOTTP had potential to improve not only the estimation of biological parameters for the tropical tunas, but also improve understanding of the effects of FAD fishing operations, fishing fleet interactions, and the efficiency of management measures.

#### Species Assessments and Management Advice

*Bigeye tuna* - A detailed updated assessment of bigeye tuna was completed in 2015, following the usual reviews of statistics and research updates. For bigeye tuna, the SCRS report noted that fish of age 0 and 1 have gradually increased in proportion in the catches, making up 86% of the catch by number of fish in 2014, and 26% of the catch by weight. A range of gears is used to target bigeye tuna in the Atlantic Ocean, with longline gear still being the dominant gear used and also the gear harvesting the heaviest fish. In recent years (2010-2013), the proportion of bigeye tuna catches taken by purse seiners was higher than in earlier times of the fishery. The 2015 SCRS assessment of bigeye tuna indicated that there was a 70% probability that the species was overfished and some of the assessment models suggested that overfishing was also still taking place. Considering the catch trends in the past few years, the SCRS concluded that the existing management measures (annual TAC of 85,000 mt, and time-area closure) have not allowed the bigeye tuna stock status to be sustained according to the Convention's objectives. Consequently, the SCRS recommended a reduction in the annual TAC, and consideration of measures to reduce mortality on juvenile bigeye tuna, including reduction of FAD fishing mortality.

*Skipjack tuna* - For the most recent assessment of skipjack tuna in 2014, separate western and eastern Atlantic stocks were assumed. The SCRS noted improvements in data quantity and quality available in recent years. Baitboat gear was the most popular gear used to fish for skipjack tuna since the early recorded period of the fishery around 1950. However, since 1991, purse seine gears, mostly using FADs, have been taking significant amounts of skipjack tuna in the eastern Atlantic. The SCRS was unable to complete a traditional assessment for Eastern Atlantic skipjack, but noted that there was no apparent decline in catch rate or average fish weight over time. However, given the present uncertainty of FAD fishing impacts and the fact that increased harvesting of skipjack could impact the status of other schooling tropical tunas caught in association with skipjack, the SCRS advised that catch and fishing effort levels not be increased above recent levels. An assessment of the western Atlantic stock was completed, and indicated that stock to be in a stable condition, i.e. not overfished and no evidence of overfishing. That noted, the SCRS advised that catches should not exceed the MSY level, which was estimated to be 30,000-32,000 mt.

*Yellowfin tuna* – The last detailed assessment of yellowfin tuna was completed in 2011. Three major gears have traditionally been used to harvest yellowfin tuna in the Atlantic Ocean. While usage of longline gear dominated in the early period of the fishery, purse seine gear has gradually emerged as the dominant gear, and the increasing use of purse seine gear with FADs has caused a shift towards a harvest consisting of very young fish (age 0 and 1). The 2011 assessment showed a high probability of yellowfin tuna being overfished at that time. The SCRS further estimated that maintaining the annual TAC at 110,000 mt should facilitate stock recovery consistent with the Convention's objectives (i.e. biomass to increase above MSY level) by 2016 with about 60% probability of success. Hence in 2011, the SCRS recommended maintaining the TAC at 110,000 mt and consideration of measures to reduce the mortality on young fish caused especially by the FAD fisheries. The SCRS will repeat the yellowfin tuna

assessment in 2016 to determine if stock recovery has occurred, and also to determine the impacts of changes in fishing operations and the time/areas closures in effect for FAD fisheries.

#### First Meeting of the Ad Hoc Working Group on FADs

The Panel also considered the report of this meeting, which took place during 11-12 May 2015. The Ad Hoc Working Group tried to address its full range of TORs, which included evaluating the development of FAD fishing operations and FAD technology over time, impacts of FADs on target species mortality, by-catches and surrounding ecological communities, and FAD management and control measures. The Working Group also examined the linkages between evolving FAD fishing operations especially in the eastern Atlantic Ocean and ongoing management concerns about increasing juvenile fishing mortality and associated apparent diminishing statuses of Atlantic tropical tuna stocks. While the Working Group focused heavily on evaluating the usage and impacts of drifting FADs, concern was expressed about the lack of information being supplied about anchored FADs, especially in light of reports of significant marlin catches around anchored FADs in the Caribbean. The Working Group also took note of several stakeholder initiatives to evaluate FAD impacts, improve FAD design for avoiding entanglements, managing entanglements, and improved FAD monitoring and management. In conclusion, the Working Group made a number of recommendations at the scientific and management levels, including, *inter alia*: expansion of the existing scientific networking and collaboration (ICCAT SCRS bodies and other tuna RFMO FAD Working Groups); expanded studies to improve statistics and scientific understanding of FAD fishing operations; and management measures for supporting improved FAD monitoring, control and surveillance.

#### Recommendation by ICCAT to Establish an Ad Hoc Working Group on Fish Aggregating Devices (FADs)

Taking into account the ongoing evolution of FAD usage by the tropical tuna fishing fleets and concerns about their impacts on long term sustainability of the natural resource base, as well as acknowledging the work started by the Ad Hoc Working Group on FADs and the benefits of its collaboration with related ICCAT and other tuna RFMO Working Groups, the Panel formulated an agreed recommendation to establish an Ad Hoc Working Group on FADs to continue and expand the work of its predecessor Working Group of the same name. This recommendation was also adopted by the Commission. It is also important to note that the new recommendation strengthens the provision to ensure an open dialogue among fisheries scientists, managers, industry representatives and other stakeholders.

#### Recommendation by ICCAT on a Multi-Annual Conservation and Management Program for Tropical Tunas

In response to the 2015 assessment of bigeye tuna that produced new information to inform management advice, the Panel formulated a recommendation to update the multi-year conservation and management programme for tropical tunas, which strives to improve the provisions of the related 2014 management recommendation. This recommendation was amended and eventually finalized after prolonged negotiations during the Commission meeting. The new 2015 recommendation included provisions to address various aspects of fishing operations, including: catch limits; quota transfer arrangements; specific arrangements for managing catch underages and overages; trigger actions in the event of TAC and catch limits being exceeded for bigeye tuna and the TAC being exceeded for yellowfin tuna; agreed capacity limits for the developed fisheries and some new fisheries; provisions for managing the FAD fisheries (time/area closure, FAD deployment limit, FAD management plan and logbook requirements, FAD fishery reporting obligations); several provisions for monitoring, control and surveillance (e.g. record of authorized large-scale bigeye tuna fishing vessels, scientific and management observer programmes and associated reporting, port sampling programme, review of trans-shipment monitoring and reporting needs, IUU monitoring and reporting); provisions to improve reporting of data for SCRS

stock assessment purposes; agreement to repeat the bigeye tuna assessment in 2018, and; annexes providing monitoring program guidelines, FAD management plan guide and FAD logbook forms.

## **6. Panel 2 – Temperate Tunas – North**

Twenty-five Contracting Parties were members of Panel 2 at the time of the meeting, including the CARICOM countries of Belize, and St. Vincent and the Grenadines.

The SCRS chairman presented the latest statistics and research information, as well as the assessment results and management advice for north Atlantic albacore, Mediterranean albacore, and northern bluefin tuna (western Atlantic, and eastern Atlantic and Mediterranean stocks).

### Species Assessments and Management Advice

*North Atlantic albacore* - The most recent assessment of north Atlantic albacore was completed in 2013, which showed this stock to be overfished at that time. In 2013, the Panel had agreed to maintain an annual TAC of 28,000 tons for 2014-16, which was estimated to offer a 53% probability of stock recovery to the MSY level by 2019. As recent annual catches had been less than the TAC, this could possibly allow stock recovery in a quicker time period. The SCRS also contributed scientific information to inform development of HCR and MSE.

*Mediterranean Albacore* - An assessment of Mediterranean albacore was attempted in 2010, with the MSY being estimated at 2,124 mt. In view of the limited available data for this stock, it could not be determined with accuracy whether the stock was overfished. Fishing effort was believed to have decreased since the early 2000s, but the SCRS was uncertain whether overfishing was still occurring. As a result, the SCRS had urged the Commission to avoid any increase in catch and fishing effort levels, until countries submitted the full range of their available data. No specific management regulations were in effect.

*Eastern Atlantic and Mediterranean Bluefin tuna* - The assessment of Eastern Atlantic and Mediterranean bluefin tuna stock was last updated in 2014. Depending on the model assumptions, the stock status differed slightly. That noted, there were signs of some stock biomass recovery. There was continuing concern about data limitations which affected data quality up to 2007 in the time series, after which data quality had improved. Stock projections were also affected by several uncertainties, including, *inter alia*, current understanding of the biology and ecology of the stock, speed and magnitude of the increase in spawning stock biomass, IUU fishing activities. In this regard, the SCRS noted the progress of the regional and CPC observer programmes and the Atlantic Wide Research Programme for Bluefin Tuna (GBYP), which were playing crucial roles in providing fishery independent information on stock size, stock structure, etc., and therefore offered good potential to improve the quality of management advice for northern bluefin tuna stocks in the future.

The SCRS considered recovery scenarios for the eastern and Mediterranean bluefin tuna stock associated with various TAC levels, and noted that catches should not exceed the TAC levels agreed by the Commission in 2014 (TAC of 16,142 t for 2015, 19,296 t for 2016 and 23,155 t for 2017). If this would be followed, it was not expected to undermine the current successful course of stock rebuilding, with an associated 60% probability of achieving the Convention's objective by 2022. As the TAC levels had already been established for 2015-2017, no new management recommendations were adopted for this stock in 2015.

*Western Atlantic Bluefin Tuna* - The western Atlantic bluefin tuna stock assessment was last updated in 2014. Depending on two equally plausible stock recruitment scenarios, the stock status ranges from being slightly above the MSY level to being overfished. MSY was estimated to range from 3,050 t to 5,316 t, depending on the assumed recruitment scenario about which there remained scientific uncertainty. After considering new information in 2015, the SCRS did not recommend any changes to the existing management measures, which included an annual TAC of 2,000 mt for 2015 and 2016. In 2016, there should be new data contributions from the GBYP, and hence a full assessment was planned for 2016. No new management recommendations were adopted for this stock in 2015.

#### Recommendation by ICCAT to Establish Harvest Control Rules for the North Atlantic Albacore Stock

During the present Meeting, and in view of the data quality for the north Atlantic albacore stock, the Panel learnt of the SCRS' progress in conducting MSE for the northern albacore stock. In response, the Panel formulated a recommendation, which defined management objectives for the northern albacore stock, and outlined the steps for testing and negotiating a suitable HCR for the stock, including a provision for ensuring dialogue on the issue between fisheries scientists and the managers, possibly through linkage with SWGSM activities. This recommendation was finalized and adopted by the Commission.

### **7. Panel 3 – Temperate Tunas – South**

Fourteen Contracting Parties were members of Panel 3 at the time of the meeting, including the CARICOM country of Belize. The SCRS Chairman presented the latest statistics and research information, as well as the assessment results and management advice for the south Atlantic albacore.

#### Species Assessments and Management Advice

*South Atlantic albacore (south of 5°N)* - The Panel noted that the last stock assessment for this species was completed in 2013 at which time, the fishing mortality and spawning stock biomass were estimated to be close to the levels capable of producing MSY. The SCRS had recommended that a TAC higher than 24,000 mt would offer <50% probability of stock recovery by 2020. Consequently, in 2013, a recommendation was adopted for an annual TAC of 24,000 t for the time period 2014-2016, with specific catch limit and sharing arrangements, and provisions for adjustment of catch allowances depending on fishery performance.

At the present meeting 9 CPCs notified the Panel of their requests for carryover of underages, and these requests were subsequently approved by the Panel in accordance with the existing recommendation. No new proposals/ recommendations were considered by this Panel during the present meeting.

### **8. Panel 4 – Swordfish, Billfishes, Small Tunas, Tuna-Like Species, Sharks**

Thirty-six Contracting Parties were members of Panel 4 at the time of the meeting, including the CARICOM countries of Belize, St. Vincent and the Grenadines, and Trinidad and Tobago.

#### Species Assessments and Management Advice

The SCRS Chairman presented the results of the latest SCRS assessments of swordfish, the major billfish species (blue marlin, white marlin, sailfish), and several major shark species.

*Mediterranean swordfish* - A detailed assessment of Mediterranean swordfish was completed by the SCRS in 2014. While problems with data introduced uncertainty into the results, the SCRS determined

that Mediterranean swordfish was overfished with its relative biomass being about 30% of the level present in the 1980s, and overfishing was continuing. The SCRS expressed concern about the high proportion of juveniles comprising the catches, and discrepancies between assumed catch and reported catch. In particular, the SCRS noted that the recent management recommendations may have increased the discard levels of young fish, which remained mostly unreported. In addition, there was concern that the level of authorized fishing capacity was higher than the active vessels, and the implications of this warranted further consideration by the Panel. A reduction in juvenile mortality was urgently needed to improve the stock status.

The Panel had adopted a management recommendation in 2013, which made provisions for: fishing vessel authorizations and a fishing permit system; two time period closures (2-month and 1-month closures); gear restrictions (hook size and number, and length of pelagic longlines); improved statistical reporting obligations. In conclusion, the SCRS recommended that the existing recommendation not be changed until data improvements afforded more reliable stock status determination and stock rebuilding needs. In response, the Panel did not consider any new management recommendation in 2015.

*North Atlantic swordfish* - The most recent assessment of north Atlantic swordfish was completed in 2011, and indicated a 90% chance that the stock biomass was at the MSY level or higher. Hence the north Atlantic swordfish stock was considered to be rebuilt. The SCRS also noted that catches in 2012 had exceeded the agreed TAC level. The management measures adopted by the Panel in 2013 would remain in effect until 2016, and so no new recommendation for north Atlantic swordfish was prepared for consideration in 2015.

*South Atlantic swordfish* - The most recent assessment of south Atlantic swordfish was completed in 2013. The results varied slightly depending on the model used, and the SCRS noted considerable uncertainty in the estimations, as well as data gaps and inconsistencies. Using additional information on fish size and harvest levels and making comparisons with north Atlantic swordfish, the SCRS concluded that the stock was not likely overfished. As the SCRS had low confidence in the assessment results generated, the SCRS retained its former recommendation of maintaining the TAC at 15,000 t. In response, the Panel formulated an updated recommendation for south Atlantic swordfish in 2015, which sought to include new provisions to restrict catches of under-sized fish. The size restriction measure was already in place for the north Atlantic stock, and both stocks showed similar dynamics.

*Blue marlin* - The most recent assessment of Atlantic blue marlin was conducted in 2011, and indicated that the stock remained overfished, and that overfishing was continuing. The SCRS noted high uncertainty with regard to data and stock productivity. Concern was also expressed about the increased harvests from non-industrial fisheries and under-reporting by such fisheries. The SCRS further pointed out that such under-reporting of data weakened the effectiveness of existing management measures under the current stock rebuilding plan. In 2012, the Commission had updated its rebuilding plan to include an annual TAC of 2,000 t, additional measures for regulating recreational fishing catch and sale operations, and provisions for improved estimation of live and dead discards. In terms of additional management measures in 2015, the SCRS urged the Commission to consider promoting the use of non-offset circle hooks as research showed these to be effective in reducing billfish mortality, and also to consider ways of reducing billfish mortality by non-industrial fisheries.

*White marlin* - The most recent assessment of Atlantic white marlin was conducted in 2012, and indicated that the stock remained overfished, but overfishing was probably not occurring. However, relative stock biomass remained well below the MSY level. The SCRS noted high uncertainty with regard to estimation of fishing mortality because of suspected under-reporting of catches, and the associated implications for estimating the true trend in relative biomass. The SCRS also noted uncertainty about stock productivity.



The Commission had updated its rebuilding plan in 2012, to include an annual TAC of 400 t, additional measures for regulating recreational fishing catch and sale operations, and provisions for improved estimation of live and dead discards. Similar to the blue marlin, the SCRS expressed concerns about increased harvests by artisanal fisheries and the under-reporting of catches by these fisheries, which added to the uncertainty of SCRS assessments and management advice. Hence, in 2015, the SCRS made similar management recommendations, as for blue marlin, to reduce white marlin mortality by the fisheries concerned.

*Atlantic sailfish* – The most recent assessment of Atlantic sailfish was completed in 2009, and the results indicated that the stock was very likely below the MSY level, with the results for the eastern stock showing a more pessimistic situation. However, the assessment results were associated with considerable uncertainty, and sailfish and spearfish catches were still being combined together for reporting purposes. Notwithstanding, the SCRS was concerned that non-industrial fisheries appeared to take large catches that were not being reported.

In response, the Panel considered and adopted a recommendation to continue and expand the existing marlin stock rebuilding plan, with the addition of provisions for activities supporting review and improvement of artisanal fisheries' sampling programmes. No specific management measures were introduced for sailfish.

*Small Tunas* - There continued to be insufficient data for supporting quantitative stock assessments of these species. However, in 2015, the SCRS was able to complete an Ecological Risk Assessment (ERA) of the tuna longline fishery in the southwest Atlantic Ocean. Three small species were estimated to be highly vulnerable to the effects of fishing: king mackerel, wahoo and Spanish mackerel. The same analysis showed some other species to be at moderate risk: Atlantic black skipjack, frigate tuna, bullet tuna and Atlantic bonito. These species were therefore highlighted as priorities for stock status determination at the earliest opportunity. No management recommendations were prepared for any of the small tuna species in 2015.

*Sharks* - An Ecological Risk Assessment (ERA) had been updated in 2012 for 20 priority shark species using improved available data. The ERA considered stock productivity, as well as vulnerability to capture and mortality by pelagic longline fisheries. The ERA indicated relative levels of vulnerability of the species examined. The following shark species stocks were estimated to have the highest vulnerability to the effects of pelagic longline fishing: bigeye thresher shark, longfin and shortfin mako sharks, porbeagle shark and night shark. Among the species for which data afforded a more quantitative assessment, blue shark (2015 assessments) and shortfin mako (2012 assessments) appeared to be in a relatively healthy state, while the north Atlantic porbeagle stocks were estimated to be overfished (2009 assessments). In response, the Panel then considered management measures to be adopted for porbeagle in 2015.

#### Recommendation by ICCAT for the Conservation of South Atlantic Swordfish

As already noted, the Panel formulated a new recommendation for south Atlantic swordfish in 2015, which updated and improved the existing 2013 recommendation with regard to clarifying catch limits, managing catch limits, and to include minimum size regulations similar to those in place for the north Atlantic stock. This recommendation was subsequently adopted by the Commission.

#### Recommendation by ICCAT to Further Strengthen the Plan to Rebuild Blue Marlin and White Marlin Stocks

As already noted, the Panel formulated a recommendation that updated and extended the rebuilding plan for blue and white marlin to 2018. The extended rebuilding plan included provisions to review and

improve data programmes of artisanal fisheries in preparation for new marlin assessments in 2018. This recommendation was subsequently adopted by the Commission.

#### Recommendation by ICCAT on Porbeagle Caught in Association with ICCAT Fisheries

The Panel considered the best available scientific advice from ICCAT, as well as the scientific advice and management actions adopted by other regional fisheries bodies in the north Atlantic and formulated a recommendation on porbeagle shark. The Recommendation included provisions for: release of live fish; improved data reporting obligations; review of management actions if catches exceeded the recommended limits; support for research projects aimed at improving knowledge of species biology and identification of key critical habitats for important life history stages; and review of the recommendation upon completion of the next planned assessment in 2019. This recommendation was subsequently adopted by the Commission.

### **9. Meeting of the Permanent Working Group for the Improvement of ICCAT Statistics and Conservation Measures (PWG)**

#### General

The ICCAT Secretariat gave its report to the PWG, which provided details of the performance of various statistical and monitoring programmes, such as the Statistical Document and Bluefin Catch Documentation programmes, port inspection programmes, transshipment monitoring, progress of the eBCD, etc. Where there were discrepancies in data submitted from different sources, these were noted in the reports, together with any clarifications provided by the CPCs concerned.

The PWG then reviewed and adopted the Report of the 10<sup>th</sup> Meeting of the Working Group on Integrated Monitoring Measures (IMM), which was held during February 2015, and which considered several proposals: one to establish an ICCAT Observer programme within the Convention Area, in which the observers would address both scientific data collection and compliance tasks; a resolution for a model joint international inspection scheme, and; a recommendation to clarify and amend aspects of ICCAT's Bluefin Catch Documentation programme to facilitate application of the electronic version (i.e. eBCD).

The PWG also reviewed and adopted the Secretariat's report on the ICCAT Regional Observer Programme (ROP) for Transshipment 2014/15, which included provisions for monitoring by observers of at-sea transshipment operations of large-scale tuna longline vessels. The Programme was being funded by the participating States in proportion to their historical catches, including Belize up to April 2015. St. Vincent and the Grenadines (SVG) requested to join the Programme, and SVG at-sea transshipments had begun to benefit from the programme. As a fairer measure of costs, Belize had requested a review of the contribution share scheme for the programme, using present transshipment activity levels instead of historical catches.

As in other years, the PWG reviewed new information about IUU fishing activities in the ICCAT Convention Area. One vessel, 'Southern Star 136', which was previously registered with St. Vincent and the Grenadines and whose owner was believed to reside in Trinidad and Tobago, had been reported by Brazil since 2005 as an IUU fishing vessel. 'Southern Star 136' remained in the 2015 ICCAT list of IUU fishing vessels. The current flag of this vessel was unknown.

#### Recommendation by ICCAT to Clarify and Amend Aspects of ICCAT's Bluefin Tuna Catch Documentation Programme to Facilitate the Application of the eBCD System

The eBCD Technical Working Group (TWG) held three meetings in 2015, once before the 10<sup>th</sup> IMM meeting and twice after that, to resolve remaining technical issues, long-term technical and financing

support, as well as testing and training needs for full and successful implementation of the eBCD. The TWG report was reviewed and adopted by the PWG. Following further discussions on the relevant eBCD recommendation proposed by the IMM, the PWG was able to adopt the recommendation. The agreed recommendation proposed implementation of the eBCD by 1 May 2016, and made provisions for registration of users, access arrangements for ICCAT CPCs, as well as non-CPCs, testing and managing technical difficulties, and continued use of the paper BCD system for special circumstances and also for backup in the event of temporary system failure. This recommendation was subsequently adopted by the Commission.

#### Recommendation by ICCAT Amending Deadlines of Two ICCAT Recommendations

The PWG recognized that as new ICCAT measures were adopted and also as measures were amended to include additional reporting obligations, this resulted in multiple deadlines that sometimes created undue burden on the supporting systems. In consequence, the PWG formulated and agreed on a recommendation to create a single deadline for all data and reporting obligations for the two management measures affected, which were the measures for eastern Atlantic and Mediterranean bluefin tuna (ICCAT Recommendation 14-04) and Mediterranean swordfish (ICCAT recommendation 13-04). This recommendation was subsequently adopted by the Commission.

### **10. Meeting of the Compliance Committee (COC)**

The COC met several times to complete its deliberations and to prepare its 2015 report to the Commission.

As in previous years, the COC reviewed two key documents that provided data and information on CPC compliance: one document consisting of tables of harvest level compliance data against established catch limits and quotas for each CPC, and; a document providing details about each CPC's compliance with all data and information obligations, as stipulated in agreed, active ICCAT measures.

Regarding CARICOM countries that were ICCAT CPCs at the time of the meeting, COC queries included one or more of the following: late receipt of annual reports or parts thereof; late receipt of compliance tables; late or no submission of Task II catch and effort data and size data; continued overharvest of marlin species; late or no response to ICCAT letters of concern/identification; lack of submission of swordfish management plan that was required by the relevant ICCAT recommendation in effect. Those CARICOM States in attendance at the meeting, Belize, and St. Vincent and the Grenadines provided responses to queries raised. Trinidad and Tobago was not in attendance to provide an update on compliance issues raised for that country. The COC expressed continued concern about billfish overharvests by Trinidad and Tobago, and agreed to issue a letter of identification to that country, for which a written response would be required, as well as remedial actions.

The COC also took note of significant billfish catches being taken by Dominica, St. Kitts and Nevis, St. Lucia and Grenada. The representative on behalf of CARICOM took the opportunity to explain CRFM's efforts to promote sustainable management of the still developing FAD fisheries of these countries, particularly, the drafting of a FAD fisheries management plan that was currently being reviewed by the CARICOM countries concerned, development and promotion of a FAD fishery logbook, and the activities of the CRFM PWG to improve understanding of the ICCAT management process. As ICCAT had changed the format of the annual reports to reflect national level performance against all ICCAT standards and measures, CRFM recognized that the general CARICOM report would no longer suffice.

Resolution by ICCAT Establishing Guidelines for the Implementation of the Recommendation 11-15 by ICCAT on Penalties applicable in the Case of Non-Fulfilment of Reporting Obligations

The Committee recalled that ICCAT's recommendation 11-15 made provisions to penalize CPCs for non-reporting of their Task I data, including zero catches, as required, through prohibiting the relevant CPCs from retaining the unreported species in future years until the outstanding data had been reported to the ICCAT Secretariat. The application of Recommendation 11-15 had a trial period, and as it proved useful, the Committee agreed that it should be continued. In this regard, the Committee considered and agreed on a resolution that outlined a specific process (schedule and steps) for managing application of Recommendation 11-15, and also introduced a new process and form for capturing and reflecting zero catches. This recommendation was subsequently adopted by the Commission.

Renewal of Suriname's and Guyana's Co-operating Party status

The COC reviewed the status of cooperation by Suriname and by Guyana. The Cooperating Party statuses for these two countries, as well as for Chinese Taipei and Bolivia, were renewed.

## **11. Standing Committee on Finance and Administration (STACFAD)**

The Administrative and Financial Reports for 2015 were reviewed and adopted. The Committee agreed to incorporate a 6% increase in the budget each year during the period 2016-17.

The Committee noted an improvement in ICCAT's financial situation over the past 10 years, primarily due to improved payment of membership fees, especially arrears, and also improved control of management expenses. This has led to accumulation of a substantial sum in the Working Capital Fund (WCF). In consequence, the Committee considered the demands of various programmes and projects approved by the Commission, and agreed to use specific funds from the Working Capital Fund (WCF) to provide some financial support for the following activities during 2016-17: the eBCD (Electronic Bluefin Catch Document system), AOTTP (Atlantic Ocean Tropical Tuna Tagging Programme), ICCAT's second performance review, SCRS Research Fund, VMS update and data migration, and the Meeting Participation Fund. It was also agreed that in the case of emergencies, the Commission Chairperson, the Chair of STACFAD and the Executive Secretary could approve use of additional funds from the WCF.

The Committee also discussed and developed procedures for election of a new Executive Secretary, but agreed to continue this work in the inter-sessional period. It should be noted that certain ICCAT Contracting and Cooperating Parties had significant arrears with regard to their membership contributions, and there was some support for suspension of voting rights. However, no final decision was taken at the meeting.

## **12. ICCAT assistance to Developing Coastal States**

ICCAT has established several Funds and Programmes (Special Data Fund, Special Meeting Participation Fund, Capacity Building Funds including Special Scientific Capacity Building Fund) that are intended to facilitate financial assistance to ICCAT developing coastal states for a range of purposes, including: capacity building activities linked to supporting the work of the SCRS, such as improvement of statistics, training courses, and SCRS meeting participation, and participation in Commission-level meetings. In 2015, many countries benefited from the Meeting Participation Fund for which expenses totalled €236,459.22. In contrast, there was very limited use of the data and capacity building funds in 2015.

### **13. The Precautionary and Ecosystem Approaches**

#### Resolution by ICCAT Concerning the Application of an Ecosystem Approach to Fisheries Management

The Commission considered a proposal for the application of the ecosystem approach to fisheries management. The proposal pointed out that both UNCLOS and the 1995 Fish Stocks Agreement included provisions for application of the ecosystem approach. Support for such application has been reiterated by the UN General Assembly also. In response to the proposal, the Commission agreed to adopt a resolution, which acknowledged ICCAT's efforts to date with regard to incorporating aspects of the ecosystem approach and made provisions for improving understanding of ecosystem interactions, as well as the need to minimize the negative impacts of fishing activities on the ecosystems concerned.

#### Resolution by ICCAT Concerning the Use of a Precautionary Approach in implementing ICCAT Conservation and Management Measures

The Commission considered a proposal for the application of the precautionary approach by ICCAT. The proposal noted the main elements of the precautionary approach, i.e. required management responses in the face of scientific uncertainty, as well as in the absence of any scientific information. The proposal also highlighted the fact that the precautionary approach was now included in provisions of several international fisheries instruments and agreed, fisheries management standards and procedures produced at the national, regional and international levels. ICCAT itself had begun to incorporate the precautionary approach through two recent resolutions: one aimed at increasing the support and attention to improving the quality of data and scientific information, and; another aimed at defining a structured management approach for addressing the four possible stock state scenarios represented in the agreed Kobe plot.

In response to the proposal, the Commission agreed to adopt a resolution that included a formal provision for the application of all the main elements of the precautionary approach with regard to Article VIII of the ICCAT Convention (the Article that prescribed management actions to be based on scientific advice and to maintain stocks in a stable state). The resolution also included a provision for specific use of limit reference points to guide the precautionary actions, as required.

### **14. ICCAT Convention Amendment**

In response to various actions by ICCAT since 2005 to strengthen its process, including the first independent performance review of ICCAT and activities of the Working Group on the Future of ICCAT, a Working Group to Develop Amendments to the ICCAT Convention (WGDAC) was established in 2012. The WGDAC held three separate meetings (July 2013, May 2014, May 2015) and then met again during the present meeting of the Commission in 2015. Several issues were identified for attention by the WGDAC: treatment of shark species; formulation of recommendations and the use of MSY as the main management reference point; decision-making processes, including enforcement time of recommendations, voting and objection procedures, and dispute resolution; non-party participation, taking into account the status of Chinese Taipei as a fishing entity; incorporation of the precautionary and ecosystem approaches; capacity building; allocation criteria application; transparency of the ICCAT process.

Prior to and during the present Commission meeting, the WGDAC was able to agree on several amendments to the Convention text dealing with most of the issues mentioned earlier. However, the issue of non-party participation remained unresolved, and would have to be addressed at a later date.

## **15. Allocation of Fishing Possibilities**

### Resolution by ICCAT on Criteria for the Allocation of Fishing Possibilities

In 1998, in response to a growing demand for improved transparency and fairness in the establishment of catch quota sharing schemes by ICCAT, a Working Group on Allocation Criteria was established. The Working Group then held four meetings and by the 17<sup>th</sup> Regular Meeting of the Commission in 2001, had developed an agreed suite of criteria to inform catch quota negotiations. This text was titled *ICCAT Criteria for the Allocation of Fishing Possibilities* and was published as Annex 8 of the Report for Biennial Period 2000-01, Part II (2001) – Vol. 1.

During the present meeting, the Commission considered a proposal to convert the agreed text *ICCAT Criteria for the Allocation of Fishing Possibilities* into a formal ICCAT measure in view of its importance to the development of the ICCAT process. In response, the Commission adopted its agreed document titled *ICCAT Criteria for the Allocation of Fishing Possibilities* as an ICCAT Resolution.

## **16. Proposed Second Performance Review of ICCAT**

The first performance review of ICCAT was conducted in 2008. Three major challenges had been identified by this review: (i) lack of compliance with agreed management measures by ICCAT Contracting and Cooperating Parties; (ii) failure by ICCAT Contracting and Cooperating Parties to provide timely and accurate data and to establish Monitoring, Control and Surveillance (MCS) arrangements, as agreed by ICCAT, and; (iii) effectiveness of the Compliance Committee. As expected, the second performance review would examine improvements made by ICCAT in response to the recommendations made during the first review. It was agreed to maintain the same evaluation criteria, as used for the first performance review. Additionally, the second review will compare ICCAT's performance to the performance of other tuna RFMOs, identify best practices of tuna RFMOs, and make recommendations for the way forward.

The Commission considered and agreed on the composition of the Review Panel, the process for selection of reviewers (screening committee and nomination process), as well as the schedule and budget for the activity. Some Contracting Parties emphasized the need for use of independent experts. It is anticipated that the results of the second performance review of ICCAT will be available for consideration by the Commission during its annual meeting in 2016.

## **17. Recommended Follow-up Actions**

- (i) CRFM/ CARICOM States should note the general content of the ICCAT recommendations adopted in 2015, as outlined in the present report. The texts of the adopted recommendations have been circulated together with this report by email to CRFM/CARICOM States for their attention.
- (ii) CRFM/ CARICOM States that are ICCAT CPCs, and which are expecting to receive letters from ICCAT early in 2016 regarding their state of compliance with ICCAT management measures, will need to formulate suitable written responses. These written responses should indicate actions being taken to rectify the problems. The States concerned should also plan to attend the annual Commission and Compliance Committee meetings to provide firsthand the necessary data and information on actions being taken to ensure compliance with ICCAT measures.

- (iii) Countries should take note of funding available from ICCAT to sponsor participation in ICCAT meetings, as well as to assist with data improvement and scientific capacity building activities. Requests would have to be submitted to ICCAT as early as possible.
- (iv) CRFM/ CARICOM States that are ICCAT CPCs would need to prepare fishery development/ management plans for each major regulated ICCAT fish stock being harvested by them. These plans should also include projections concerning fishing effort, and relate these to present fishing effort and harvest levels. Such plans are requested by ICCAT on an annual basis.
- (v) CRFM/CARICOM countries should develop their information/evidence base to inform improved usage of the *ICCAT Criteria for the Allocation of Fishing Possibilities*, which was adopted as an ICCAT Resolution in 2015.

## **REGIONAL EFFORTS IN SUPPORT OF FAD FISHERIES MANAGEMENT**

*Elizabeth Mohammed and Susan Singh-Renton*

### **1. ICCAT's Focus on FAD Fisheries**

FAD fisheries by their very nature, if left unmanaged, could lead to overexploitation of a number of pelagic fish stocks and unsustainability of the respective resources. Increasingly ICCAT has been focusing its attention on FAD fisheries, firstly on drifting FADs utilized by large-scale purse seine fisheries operating in the east Atlantic Ocean and more recently, on anchored FADs utilized by artisanal fisheries in the Caribbean. To strengthen its conservation and management efforts, ICCAT has established an Ad Hoc Working Group on FAD Fisheries, with Terms of Reference that include evaluating the development of FAD fishing operations and FAD technology over time, impacts of FADs on target species mortality, by-catches and surrounding ecological communities, and FAD management and control measures.

Regarding moored FAD fisheries in the Caribbean specifically, the Ad Hoc Working Group, at its first meeting in May 2015, expressed concern about the lack of information being supplied about anchored FADs, especially in light of reports of significant marlin catches around anchored FADs in the Caribbean (ICCAT, 2015a). These concerns have also been documented by the ICCAT's Standing Committee for Research and Statistics (SCRS) based primarily on a recent review of TASK I billfish data (ICCAT, 2015b). The review suggested the potential existence of catches from Caribbean countries that are not reported. Many of such catches were attributed to the development of moored FAD fisheries in several Caribbean countries over the last two decades. Consequently, ICCAT's Enhanced Billfish Research Program plans to investigate possible unreported billfish catches in the Caribbean and to take steps to develop capacity building where feasible in 2016. The SCRS has also expressed concerns about the significant increases in contribution of non-industrial fisheries generally to total harvest of billfishes and has suggested focused efforts to reduce mortality from such fisheries, among other management recommendations for billfish. ICCAT's Compliance Committee has also specifically noted the significant billfish catches being taken by Dominica, St. Kitts and Nevis, St. Lucia and Grenada. The increasing importance of FAD fisheries in the eastern Caribbean, and in other areas, has also been attributed to improved efficiency of artisanal fisheries in catching small tunas (ICCAT, 2015b).

### **2. FAD Fisheries in CRFM Member States**

It has been more than three decades since some CRFM Member States have experimented with development of FAD fisheries. The need to reduce fishing costs, to increase fishing efficiency, to improve fishers' livelihoods as well as national food security and to reduce fishing pressure on over-exploited coastal resources have been the main reasons for development of these fisheries. More recently there have been concerted efforts to develop and manage FAD fisheries in a manner that would facilitate long-term sustainability of the respective resources, through projects funded by the Japan International Cooperation Agency (JICA, 2012), the Moored Fish Aggregating Devices in the Lesser Antilles Project (MAGDELESA Project), research efforts of the Florida Sea Grant (Sidman *et al.*, 2014), regional meetings to discuss FAD fisheries management and to share related best practices (CRFM, 2012, 2013 a and b), efforts of the CRFM to develop a model logbook for FAD fisheries data collection (CRFM, 2015a) as well as a sub-regional FAD fisheries management plan (CRFM, 2015b) and development of a manual of best practices in FAD fisheries through the CRFM/WECAFC/JICA/IFREMER Working Group on Fisheries that use Fish Aggregating Devices (Eugène *et al.*, 2015; Gervain *et al.*, 2015).



### **3. Pilot Project for FAD and associated Pelagic Fishery Resource Development and Management**

Among CRFM Member States, Dominica and Saint Lucia are the lead countries in FAD fisheries development, having participated in a pilot project for FAD and associated Pelagic Fishery Resource Development and Management as part of a study on Formulation of a Master Plan on Sustainable Use of Fisheries Resources and Coastal Community Development in the Caribbean (Master Plan Project – 2009 to 2012). The pilot project focused on (a) improving the capability of FAD and associated pelagic fishery resource management on the part of fisheries officers and fishers/fishers' organizations; and (b) increasing the productive outputs of FAD and associated pelagic fishery resource by developing the skills and capacity to utilize potential species.. The project also initiated work on monitoring of catches of FAD fisheries and introduction of co-management approaches, drafting of appropriate regulations including efforts to introduce licenses to regulate FAD fishing. The reports of this project were disseminated at a regional workshop in 2012 (CRFM, 2012).

### **4. Moored Fish Aggregating Devices in the Lesser Antilles Project**

Since the Master Plan Project there has been a number of initiatives aimed at development, management and research on artisanal, anchored FAD fisheries. Some CRFM Member States (Dominica, Grenada, Haiti, St Kitts and Nevis and St. Vincent and the Grenadines) participated in the Moored Fish Aggregating Devices in the Lesser Antilles Project (MAGDELESA Project) from 2011 to 2014. This Project was implemented by the French Research Institute for Exploitation of the Sea (Ifremer) and focused on examining the scientific information for development of sustainable FAD fisheries, promoting sub-regional cooperation in the sustainable development and management of FAD fishing, sharing related information and experiences, improving the design and construction of FADs, examining fishing strategies, gear selectivity, fish quality, safety and work conditions of FAD fishers and governance of FAD fisheries.

### **5. The CARIFICO Project and Research Efforts of the Florida Sea Grant College Program**

Currently six CRFM Member States, Antigua and Barbuda, Dominica, Saint Lucia, St Kitts and Nevis and St Vincent and the Grenadines are participating in a follow-up, JICA-funded Project – the Caribbean Fisheries Co-management (CARIFICO) Project, being implemented from 2013 to 2018. This project focuses on further development and governance of FAD fisheries in the respective countries, primarily through building capacity of fishers to organize themselves for FAD management. Since its inception there have been two regional workshops to identify management issues concerning FAD fisheries, to share best practices in FAD fisheries management and to identify specific actions for management of FAD fisheries aimed at long-term sustainability of the respective resources (CRFM 2013 a and b). Facilitated through a Memorandum of Understanding with the CRFM, the Florida Sea Grant College Program has also been involved in research FAD fishing operations in Dominica, particularly aimed at improving fishery management performance (Sidman *et al.*, 2014).

### **6. Improving Data Collection on FAD Fisheries – A Model Logbook**

Between 2014 and 2016 the CRFM has also embarked on a number of initiatives to improve data collection and governance of FAD fisheries. The 2014 meeting of its Pelagic Fisheries Working Group discussed the issue of data collection on FAD fisheries to inform management decision-making and

following from these discussions a specific study was conducted to review fisheries data collection systems in selected CRFM Member States and to make recommendations for integrating FAD fisheries into routine operations (Barnwell, 2014).

Building on the experiences of previous projects and mindful that the CARIFICO Project was seeking to integrate data collection into routine operations under its co-management approach for FAD fisheries, the CRFM Secretariat has assisted the CARIFICO Project to develop a model logbook for the FAD fishery (CRFM, 2015a; Mohammed, 2015). The process of development of the model logbook included engagement of the countries involved in the CARIFICO Project to identify key data requirements; consideration of specific data requirements on FAD fisheries recommended by the International Commission for the Conservation of Atlantic Tunas; identification of data requirements to address management decision-making concerning the sustainability, profitability and environmental concerns regarding FAD fisheries; as well as consideration of the utility of the data collected for trip planning and financial record-keeping of fishers. It is expected that the national fisheries authorities of the six countries that are participating in the CARIFICO Project would test and modify the logbook to suit the specific local situations, and also would develop the corresponding computerized database to be able to store and analyze the data collected under the FAD Logbook Programme. Based on the results from testing of the logbook as well as any other data required by managers, boat owners or fishers it may become necessary to revise the model logbook in future and if so, to document the respective process.

## **7. Sub-regional Management Plan for FAD Fisheries in the Eastern Caribbean**

Amidst growing recognition of the need for a harmonized sub-regional approach to the FAD fishery, consistent with one of the main objectives of the Caribbean Community Common Fisheries Policy (CCCFP), and to apply the Ecosystem Approach to Fisheries (EAF) management, a Sub-regional Management Plan for FAD Fisheries in the Eastern Caribbean (FAD Fisheries FMP) was drafted (CRFM, 2015b). This FAD Fisheries FMP draft draws on the outputs of the regional workshops on FAD fisheries, CRFM scientific meetings, and technical reports and outputs produced within the CARIFICO and MAGDELESA projects as well as ICCAT's scientific and management requirements for pelagic fisheries. It aims to assist the concerned stakeholders to: implement an ecosystem-based approach to fisheries management that recognizes the strong links between the coastal and oceanic environments, achieve efficient fishing activities on moored FADs within an economically viable and competitive small-scale fisheries sector, and provide a fair standard of living for those who depend on fish resources exploited on moored FADs. Additionally, the FAD Fisheries FMP: gives a comprehensive description of FAD fisheries in the Caribbean region; outlines the respective management issues and proposes specific management goals, objectives, indicators and reference points; and, highlights key areas of research to be conducted. Currently a stakeholder working document, the FAD Fisheries FMP (CRFM, 2015b) was circulated to CRFM Member States in 2015 to facilitate consultation with the broad range of stakeholders. It is expected that through the CRFM's policy-making process, the FAD Fisheries FMP would be finalized in the near future based on stakeholder inputs, and subsequently endorsed for regional implementation.

## **8. Manual of Best Practices in Fisheries that use FADs**

The CRFM/WECAFC/JICA/IFREMER Working Group on Fisheries that use Fish Aggregating Devices has been mandated to develop a Manual of Best Practices in Fisheries that use FADs. This Manual is intended to guide fishers, managers, scientists and other direct stakeholders on best practices in FAD fisheries management. Production of the Manual was initiated in 2015 under the leadership of the

CRFM (CRFM, 2015c). The Manual is to be published in five volumes addressing interests related to FAD design, construction and deployment, maintaining the quality of FAD-caught fish, fishing and business strategies for sustainable anchored FAD fisheries, safety and working conditions of FAD fishers and governance of FAD fisheries. In 2016 the first two Volumes were produced (Gervain *et al.*, 2016; Eugène *et al.*, 2016) and it is anticipated that the remaining three volumes would be produced by the Working Group in the coming years.

## REFERENCES

- Barnwell, S. 2014. Review of Fisheries Data Collection Systems in Selected CRFM Member States and Recommendations for Integrating FAD Fisheries. *CRFM Technical & Advisory Document*, No. 2014 / 7. 26p.
- CRFM, 2012. Report of the CRFM / JICA Master Plan Dissemination Workshop, 16 – 17 January 2012, St. Lucia. *CRFM Technical & Advisory Document*, No. 2012 / 2. 52p.
- CRFM, 2013a. Report of the CRFM/JICA Fish Aggregating Devices (FAD) Management Workshop for OECS Countries, 13 March 2013, Roseau, Dominica. *CRFM Technical & Advisory Document*, No. 2013/5. 61p.
- CRFM, 2013b. Report of the CRFM- JICA CARIFICO / WECAFC – IFREMER MAGDELESA Workshop on FAD Fishery Management, -9 – 11 December 2013, St Vincent and the Grenadines. *CRFM Technical & Advisory Document*, No. 2013 / 9. 42p.
- CRFM. 2015a. FAD Fishery Model Logbook. CRFM Special Publication No. 4. 21p.
- CRFM. 2015b. 2015 Draft Sub-Regional Management Plan for FAD Fisheries in the Eastern Caribbean (Stakeholder Working Document). CRFM Technical & Advisory Document 2015/ 05. 94p.
- CRFM, 2015c. Report of Write-shop on FAD Fisheries Management. Kingstown, St Vincent and the Grenadines, 23-25 June 2015. CRFM Technical & Advisory Document, No. 2015/ 04. 24p.
- Eugène, S., Andrews, C., Dromer, C., Ishida, M. and Mohammed, E. 2015. Manual of Best Practices in Fisheries that use Moored Fish Aggregating Devices: Maintaining Good Quality of FAD-Caught Fish: From the point of capture to the point of sale. *CRFM Special Publication* No. 6, Vol. II. 21pp.
- Gervain, P., Reynal, L., Defoe, J., Ishida, M. and Mohammed, E. 2015. Manual of Best Practices in Fisheries that use Moored Fish Aggregating Devices: FAD Design, Construction and Deployment. *CRFM Special Publication* No. 6. Vol. I. 55 pp.
- ICCAT. 2015a. Report of the Ad Hoc Working Group on FADs. Report of the Standing Committee for Research and Statistics. SCRS/2015/014. 20 p.
- ICCAT. 2015b. Report of the Standing Committee on Research and Statistics (SCRS). Madrid, Spain. 28 September to 2 October 2015. 348p.
- JICA. 2012. Study on the Formulation of a Master Plan on the Sustainable Use of Fisheries Resource for Coastal Community Development in the Caribbean Final Report March 2012. CRFM/JICA/IC NET Limited RDD JR 12-022. 153p. (plus appendices).
- Mohammed, E. 2015. Developing a Model Logbook for FAD Fisheries in the Eastern Caribbean. *CRFM Technical & Advisory Document*, No. 2015/ 02. 66p.
- Sidman, C., Lorenzen, K., Sebastien, R., Magloire, A., Cruickshank-Howard, J., Hazell, J. and Masters, J. 2014. Towards a Sustainable Caribbean FAD Fishery – An Analysis of Use, Profitability and shared Governance. Florida Sea Grant College Program. University of Florida, Gainesville, Florida. 17 p.

# **PART II - SCIENCE**

# DEVELOPMENT OF SUB-REGIONAL CONVERSION FACTORS FOR KEY COMMERCIAL TUNA SPECIES CAUGHT BY CRFM STATES

Elizabeth Mohammed

## 1. Background

In 2014 the CRFM's Pelagic Fisheries Working Group (CRFM PWG) identified the need to improve the quality of fisheries data that are collected for stock assessment and management, with particular reference to fisheries that use Fish Aggregating Devices (FADs), (CRFM, 2014). The CRFM PWG noted that in several countries fish was processed onboard the fishing vessels while still at sea e.g., gilling, gutting, beheading, finning, so as to meet national and international sanitary and phyto-sanitary requirements. At the point of landing the processed weight of the fish is recorded in the official fisheries statistics, but there is usually no correction of the recorded weight to reflect the corresponding total (round) weight of the landed fish. These data may in turn be used as a proxy for estimating the quantity of fish landed at unrecorded sites and ultimately to estimate the production of the fisheries sector. Such a production figure is more than likely an underestimate of the actual total weight of fish landed. When such data are used in stock assessment models the mortality due to fishing is underestimated, leading to unrealistic predictions about stock status and in turn compromising the quality of management advice provided. As well, underestimating the national production is likely to undermine the relative importance of the sector which could have implications for national planning decision-making as well as the allocation of funds for fisheries management and assessment and could also result in a competitive disadvantage in fisheries negotiations for allocation of shared resources.

The International Commission for the Conservation of Atlantic Tunas (ICCAT) has published factors for converting various forms of dressed or processed weight to round weight as well as other morphometric conversion factors for several species, such as yellowfin tuna, skipjack tuna, bigeye tuna, albacore, swordfish, white marlin, blue marlin, sailfish, longbill spearfish and various species of sharks (See ICCAT's website at <https://www.iccat.int/en> - page on Statistics – Section on Conversion Factors). However, such conversion factors are either not available for many of the large pelagic species exploited in the region e.g. the common dolphinfish, wahoo, king mackerel, blackfin tuna, little tunny and others, or are outdated or likely more relevant to areas outside of the Caribbean. Consequently, the CRFM PWG agreed to derive factors for converting processed lengths and weights of species of interest, to the corresponding total lengths and whole (round) weights. The approach was to be a regional collaborative effort to agree on the species of interest, identify the various forms of at-sea processing and establish and implement a focused data collection programme in collaboration with the industry. It was intended to be a very inexpensive, short term exercise with tremendous long-term benefits in terms of improvement of the quality of catch and effort data reported nationally, regionally and internationally.

## 2. Approach and Preliminary Findings

To initiate the exercise the CRFM Secretariat sought permission from the manager of the National Fisheries Marketing Limited in Kingstown to undertake preliminary data collection between 16 April and 25 May 2015, at the fishing competition associated with the 40<sup>th</sup> Anniversary of Fisherman's Day Celebrations in St Vincent and the Grenadines. Data were collected for 54 fish specimens, comprising mainly the Common Dolphinfish – 44 specimens (*Coryphaena hippurus*); as well as yellowfin tuna - 3 specimens (*Thunnus albacares*); wahoo – 6 specimens (*Acanthocybium solandri*); and skipjack tuna – 1 specimen (*Katsuwonus pelamis*) - using the form at Appendix 1. In addition data were provided for 6 specimens of blackfin tuna (*Thunnus atlanticus*) by a non-commercial fisher (Mr John Renton) who

fished in the waters off Layou. The raw data are provided in Appendix 2. In most cases the sample sizes were too small and the size ranges too constrained to facilitate derivation of reliable conversion factors (yellowfin tuna: 117.4 to 177 cm total length; wahoo: 60.2 to 113.7 cm total length; blackfin tuna: 50.5 to 62.0 cm total length). However, for the Common Dolphinfish preliminary conversion factors were derived (Figure 1) for sizes ranging between 34.6 and 146.8 cm total length (29.2 to 120.5 cm fork length).

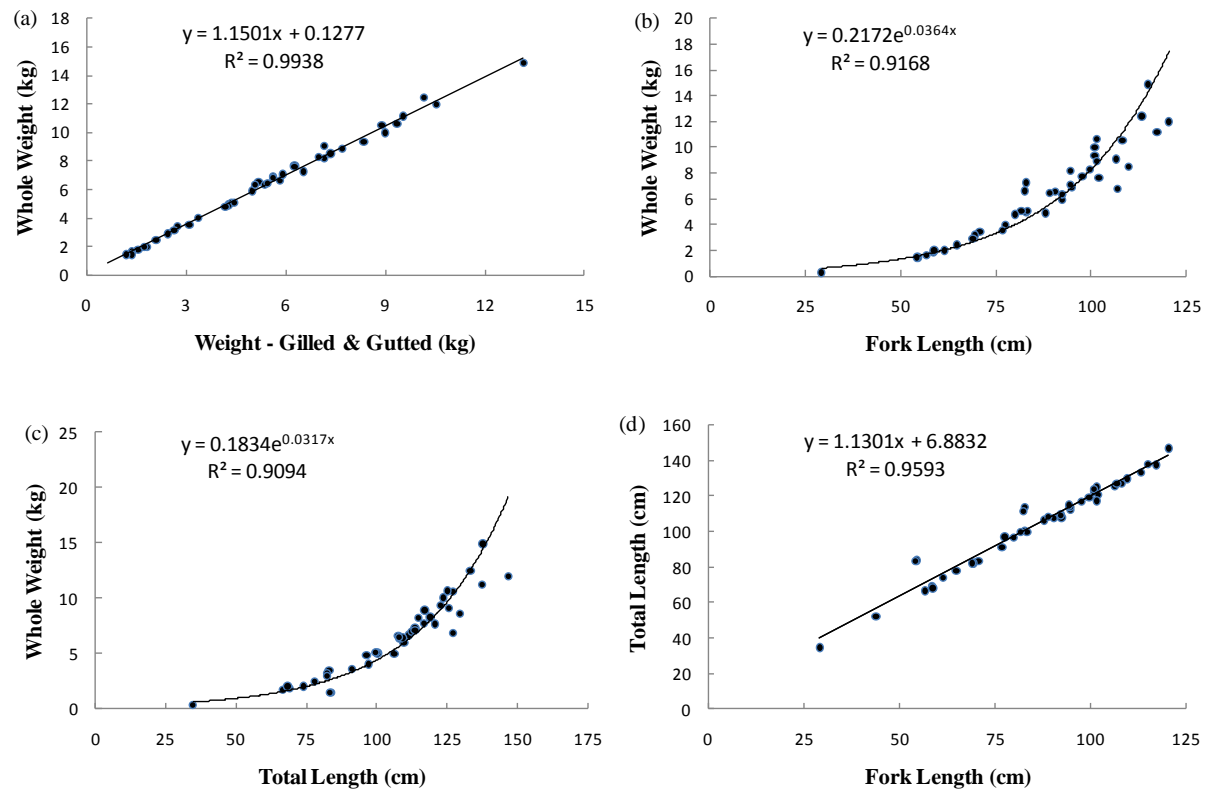


Figure 1 . Common Dolphinfish – preliminary factors for converting (a) gilled and gutted weight to whole (round) weight; (b) fork length (cm) to whole weight (kg); (c) total length (cm) to whole weight (kg); and (d) fork length (cm) to total length (cm) for 44 specimens of combined sexes [(a) is based on 43 specimens as the smallest fish was not processed].

### 3. Recommendations

A concerted effort is required to advance regional efforts towards development of the appropriate conversion factors. The CRFM Secretariat could take a lead role in coordinating the activity among Member States, identifying the species of interest and the various forms of processing in the region, developing the respective forms to standardize data collection and assisting the CRFM PWG with data analysis and reporting. However, the support of the respective Directors of Fisheries and Chief Fisheries Officers is critical if the activity is to be conducted successfully and the outputs utilized effectively. The resulting benefit would be improved quality of fisheries data for assessing the status of the fish stocks as

well as the respective fisheries, and increased reliability in the management advice provided from stock assessments and fisheries analyses.

Based on the Secretariat's experience in the pilot exercise documented here, the regional-scale activity could be a low-cost one, requiring minimum equipment (a measuring tape and scale), and supported by fishers and market authorities once there is sufficient awareness-building on the utility of the data being collected. The activity could be integrated into the daily field activities of data collection or extension staff once these persons are appropriately trained. Training of staff in basic biological data collection should not pose a problem as there was already technical staff at the respective Fisheries Divisions who may have already been trained in data collection at various regional workshops and who have participated in previous annual CRFM scientific meetings and so are aware of methods of data collection and analysis.

It is recommended that the report of the proposed regional-scale activity be presented as a scientific research paper at the meeting of the ICCAT's Standing Committee for Research and Statistics. This would be a valuable contribution to the ICCAT Year Research Program for Small Tunas which is focusing on biological data collection and development of conversion factors for a number of small tunas (blackfin tuna, king mackerel, Serra Spanish mackerel and common dolphinfish) in the Caribbean and NW Atlantic region, although the ICCAT sampling stations do not appear to include any of the CRFM Member States.

## REFERENCES

CRFM 2014. Report of Tenth Annual CRFM Scientific Meeting. Kingstown, St. Vincent and the Grenadines, 10-17 June 2014. CRFM Fishery Report - 2014. Volume 1. 179p.

# **Appendix 1: Data Collection Form for Development of Regional Conversion Factors for Pelagic Fish Species of Interest to CRFM Member States**

Date (dd/mm/yy): \_\_\_\_\_

Page No: \_\_\_\_\_

Location of Data Collection: \_\_\_\_\_

Level of Processing: - Gutted (GU); Gilled (GI); Headed (H); Finned (F); Whole (W)

| No. | Species | Sex (female;<br>male) ♀♂ | Total Weight<br>(lbs) | Fork Length<br>(cm) | Total Length<br>(cm) | Level of<br>processing | Processed Wt<br>(lbs) | Additional Notes |
|-----|---------|--------------------------|-----------------------|---------------------|----------------------|------------------------|-----------------------|------------------|
|     |         |                          |                       |                     |                      |                        |                       |                  |
|     |         |                          |                       |                     |                      |                        |                       |                  |
|     |         |                          |                       |                     |                      |                        |                       |                  |
|     |         |                          |                       |                     |                      |                        |                       |                  |
|     |         |                          |                       |                     |                      |                        |                       |                  |
|     |         |                          |                       |                     |                      |                        |                       |                  |
|     |         |                          |                       |                     |                      |                        |                       |                  |
|     |         |                          |                       |                     |                      |                        |                       |                  |
|     |         |                          |                       |                     |                      |                        |                       |                  |



**Appendix 2: Raw Data Collected for Estimation of Conversion Factors between May and June 2015 in St Vincent and the Grenadines.**

| Date<br>(dd/mm/yy) | Location | Specimen<br>No. | Species | Sex<br>(M,F,<br>U) | Total<br>Length<br>(cm) | Fork<br>Length<br>(cm) | Whole<br>Weight<br>(lbs) | Level of<br>processing | Processed<br>Weight<br>(lbs) | Additional Notes                 |
|--------------------|----------|-----------------|---------|--------------------|-------------------------|------------------------|--------------------------|------------------------|------------------------------|----------------------------------|
| 27/4/2014          | KFM      | 1               | DOL     | F                  | 100.2                   | 83.0                   | 11.0                     | GG                     | 9.4                          | Unwashed after gilled and gutted |
| 27/4/2014          | KFM      | 2               | DOL     | F                  | 107.6                   | 90.5                   | 14.4                     | GG                     | 11.4                         | Unwashed after gilled and gutted |
| 27/4/2014          | KFM      | 3               | SKJ     | M                  | 62.3                    | 59.3                   | 10.6                     | GG                     | 9.2                          | Unwashed after gilled and gutted |
| 27/4/2014          | KFM      | 4               | DOL     | U                  | 34.6                    | 29.2                   | 0.6                      | GG                     |                              | Not processed; juvenile          |
| 27/4/2014          | KFM      | 5               | DOL     | M                  | 137.7                   | 115.0                  | 32.8                     | GG                     | 29                           | Unwashed after gilled and gutted |
| 27/4/2014          | KFM      | 6               | WAH     | U                  | 104.4                   | 101.0                  | 13.4                     | GG                     | 12.6                         | Unwashed after gilled and gutted |
| 4/5/2015           | KFM      | 7               | DOL     | F                  | 125.5                   | 106.5                  | 20.0                     | GG                     | 15.8                         |                                  |
| 4/5/2015           | KFM      | 8               | DOL     | M                  | 113.6                   | 82.9                   | 16.0                     | GG                     | 14.4                         |                                  |
| 4/5/2015           | KFM      | 9               | DOL     | F                  | 133.2                   | 113.3                  | 27.4                     | GG                     | 22.4                         |                                  |
| 4/5/2015           | KFM      | 10              | DOL     | M                  | 146.8                   | 120.5                  | 26.4                     | GG                     | 23.2                         |                                  |
| 4/5/2015           | KFM      | 11              | DOL     | F                  | 116.9                   | 97.7                   | 17.0                     | GG                     | 13.8                         |                                  |
| 4/5/2015           | KFM      | 12              | DOL     | F                  | 99.7                    | 83.4                   | 11.2                     | GG                     | 9.6                          |                                  |
| 4/5/2015           | KFM      | 13              | DOL     | F                  | 109.7                   | 92.3                   | 13.0                     | GG                     | 11                           |                                  |
| 4/5/2015           | KFM      | 14              | DOL     | F                  | 83.1                    | 70.8                   | 7.6                      | GG                     | 6                            |                                  |
| 4/5/2015           | KFM      | 15              | WAH     | M                  | 98.0                    | 83.2                   | 10.4                     | GG                     | 9.4                          |                                  |
| 4/5/2015           | KFM      | 16              | WAH     | U                  | 85.3                    | 83.0                   | 7.4                      | GG                     | 6.6                          |                                  |
| 4/5/2015           | KFM      | 17              | DOL     | F                  | 111.5                   | 82.5                   | 14.6                     | GG                     | 12.8                         |                                  |
| 4/5/2015           | KFM      | 18              | DOL     | M                  | 106.2                   | 88.0                   | 10.8                     | GG                     | 9.4                          |                                  |
| 4/5/2015           | KFM      | 19              | DOL     | M                  | 122.7                   | 101.0                  | 20.6                     | GG                     | 18.4                         |                                  |
| 4/5/2015           | KFM      | 20              | DOL     | F                  | 112.2                   | 94.9                   | 15.2                     | GG                     | 12.4                         |                                  |
| 4/5/2015           | KFM      | 21              | DOL     | F                  | 113.6                   | 94.6                   | 15.6                     | GG                     | 13                           |                                  |
| 4/5/2015           | KFM      | 22              | DOL     | F                  | 107.9                   | 92.5                   | 14.0                     | GG                     | 11.8                         |                                  |
| 4/5/2015           | KFM      | 23              | DOL     | F                  | 129.6                   | 109.8                  | 18.8                     | GG                     | 16.2                         |                                  |
| 4/5/2015           | KFM      | 24              | DOL     | M                  | 114.9                   | 94.5                   | 18.0                     | GG                     | 15.8                         | Body was curved when measured    |
| 4/5/2015           | KFM      | 25              | DOL     | F                  | 109.2                   | 92.3                   | 14.0                     | GG                     | 11.2                         |                                  |
| 11/5/2015          | KFM      | 26              | DOL     | M                  | 108.0                   | 89.1                   | 14.2                     | GG                     | 12.0                         |                                  |
| 11/5/2015          | KFM      | 27              | DOL     | F                  | 127.2                   | 108.2                  | 23.2                     | GG                     | 19.6                         |                                  |
| 11/5/2015          | KFM      | 28              | DOL     | U                  | 51.9                    | 43.9                   |                          | GG                     | 1.4                          |                                  |
| 11/5/2015          | KFM      | 29              | DOL     | F                  | 137.5                   | 117.3                  | 24.6                     | GG                     | 21.0                         |                                  |
| 11/5/2015          | KFM      | 30              | DOL     | M                  | 125.0                   | 101.6                  | 23.4                     | GG                     | 20.6                         |                                  |
| 11/5/2015          | KFM      | 31              | DOL     | F                  | 119.0                   | 99.7                   | 18.2                     | GG                     | 15.4                         |                                  |
| 11/5/2015          | KFM      | 32              | YFT     | U                  | 117.4                   | 108.0                  | 52.4                     | HF GG                  | 42.0                         |                                  |
| 11/5/2015          | KFM      | 33              | DOL     | F                  | 97.0                    | 77.6                   | 8.8                      | GG                     | 7.4                          |                                  |
| 11/5/2015          | KFM      | 34              | DOL     | M                  | 123.6                   | 101.0                  | 22.0                     | GG                     | 19.8                         |                                  |
| 11/5/2015          | KFM      | 35              | DOL     | F                  | 120.8                   | 102.0                  | 16.8                     | GG                     | 13.8                         |                                  |
| 11/5/2015          | KFM      | 36              | DOL     | U                  | 69.0                    | 58.6                   | 4.0                      | GG                     | 3.4                          |                                  |
| 18/5/2015          | KFM      | 37              | YFT     | M                  | 177.0                   | 160.0                  | 144.0                    | HF GG                  | 120.0                        |                                  |
| 18/5/2015          | KFM      | 38              | DOL     | F                  | 127.0                   | 107.0                  | 15.0                     | GG                     | 12.4                         |                                  |
| 18/5/2015          | KFM      | 39              | DOL     | F                  | 82.2                    | 69.5                   | 7.0                      | GG                     | 5.8                          |                                  |
| 18/5/2015          | KFM      | 40              | DOL     | M                  | 99.5                    | 81.7                   | 11.2                     | GG                     | 9.8                          |                                  |
| 18/5/2015          | KFM      | 41              | DOL     | F                  | 66.4                    | 56.7                   | 3.6                      | GG                     | 3.0                          |                                  |
| 18/5/2015          | KFM      | 42              | DOL     | F                  | 117.1                   | 101.6                  | 19.6                     | GG                     | 17.0                         |                                  |
| 18/5/2015          | KFM      | 43              | DOL     | F                  | 83.8                    | 54.6                   | 3.2                      | GG                     | 3.0                          |                                  |

| Date<br>(dd/mm/yy)                                     | Location | Specimen<br>No. | Species | Sex<br>(M,F,<br>U) | Total<br>Length<br>(cm) | Fork<br>Length<br>(cm) | Whole<br>Weight<br>(lbs) | Level of<br>processing | Processed<br>Weight<br>(lbs) | Additional Notes                              |
|--|----------|-----------------|---------|--------------------|-------------------------|------------------------|--------------------------|------------------------|------------------------------|---|
| 18/5/2015  | KFM      | 44              | DOL     | M                  | 73.9                    | 61.5                   | 4.4                      | GG                     | 4.0                          |   |
| 18/5/2015  | KFM      | 45              | DOL     | F                  | 91.1                    | 76.9                   | 7.8                      | GG                     | 6.8                          |   |
| 18/5/2015  | KFM      | 46              | DOL     | F                  | 96.4                    | 80.1                   | 10.6                     | GG                     | 9.2                          |   |
| 18/5/2015  | KFM      | 47              | DOL     | F                  | 83.2                    | 54.3                   | 3.2                      | GG                     | 2.6                          |   |
| 18/5/2015  | KFM      | 48              | WAH     | M                  | 113.7                   | 109.1                  | 16.4                     | GG                     | 14.8                         |   |
| 18/5/2015  | KFM      | 49              | WAH     | M                  | 102.5                   | 87.7                   | 11.0                     | GG                     | 10.4                         |   |
| 18/5/2015  | KFM      | 50              | WAH     | U                  | 60.2                    | 83.7                   | 2.4                      | GG                     | 2.2                          |   |
| 18/5/2015  | KFM      | 51              | YFT     | M                  | 126.0                   | 115.0                  | 59.2                     | HF GG                  | 50.8                         | I pectoral fin and pelvic fins still attached |
| 18/5/2015  | KFM      | 52              | DOL     | F                  | 77.7                    | 64.9                   | 5.4                      | GG                     | 4.6                          |   |
| 18/5/2015  | KFM      | 53              | DOL     | F                  | 82.2                    | 69.0                   | 6.4                      | GG                     | 5.4                          |   |
| 18/5/2015  | KFM      | 54              | DOL     | F                  | 68.2                    | 58.8                   | 4.4                      | GG                     | 3.8                          |   |
| 10/5/2015  | LAY      | 55              | BLF     | F                  | 56.0                    | 51.0                   | 5.8                      | GG                     | 4.8                          | fish gonads developed                         |
| 10/5/2015  | LAY      | 56              | BLF     | M                  | 53.0                    | 48.0                   | 4.8                      | GG                     | 3.8                          | fish gonads developed, medium                 |
| 21/6/2015  | LAY      | 57              | BLF     | M                  | 50.5                    | 47.3                   | 5.0                      | GG                     | 4.5                          | fish immature, not running                    |
| 21/6/2015  | LAY      | 58              | BLF     | F                  | 51.5                    | 48.0                   | 5.3                      | GG                     | 4.5                          | fish not mature                               |
| 21/6/2015  | LAY      | 59              | BLF     | M                  | 52.0                    | 48.0                   | 5.5                      | GG                     | 4.5                          | fish not mature                               |
| 21/6/2015  | LAY      | 60              | BLF     | M                  | 62.0                    | 58.5                   | 8.0                      | GG                     | 7.5                          | fish mature but not running                   |
| Note: market scale not functioning properly on 18/5/15 |          |                 |         |                    |                         |                        |                          |                        |                              |   |

## KEY

|     |   |       |                                   |
|-----|---|-------|-----------------------------------|
| KFM | Kingstown Fish Market                             | M     | Male                              |
| LAY | Layou   | F     | Female                            |
| DOL | Common Dolphinfish ( <i>Coryphaena hippurus</i> ) | U     | Unsure                            |
| BLF | Blackfin Tuna ( <i>Thunnus atlanticus</i> )       | GG    | Gilled and gutted                 |
| WAH | Wahoo ( <i>Acanthocybium solandri</i> )           | HF GG | Headed, finned, gilled and gutted |
| YFT | Yellowfin Tuna ( <i>Thunnus albacares</i> )       |       |                                   |
| SKJ | Skipjack Tuna ( <i>Katsuwonus pelamis</i> )       |       |                                   |

## **CRFM PELAGIC FISHERIES WORKING GROUP (CRFM PWG) REPORT OF THE SECOND MEETING ON ICCAT (SCIENTIFIC)**

*Elizabeth Mohammed*

### **1. Opening**

The CRFM Secretariat's Programme Manager, Research and Resource Assessment (PMRRA), Elizabeth Mohammed, opened the meeting at 10:00 a.m. Eastern Caribbean Time. She expressed her appreciation to the members of the CRFM PWG for the time taken to join the meeting which was intended to improve understanding of ICCAT's statistical and scientific reporting requirements pursuant to a decision of the 13<sup>th</sup> Meeting of the Forum concerning technical level activities for improved participation in ICCAT.

### **2. Adoption of Agenda**

The meeting agenda (Appendix 1) was reviewed and there were no changes proposed. The agenda was adopted by Ms Joyce Leslie of Barbados and seconded by Mr Crafton Isaac of Grenada.

### **3. Procedural Matters**

The PMRRA confirmed the list of meeting participants (Appendix 2). It was noted that Mr Jullan Defoe, the designated representative for Dominica and Mr Terrence Holmes and Mr Kerwin Sampson, designated representatives of the Department of Marine Resources and Fisheries in Tobago, were unable to participate in the meeting. She explained the protocols for use of the GoToMeeting facility and reviewed the list of reference documents and links shared prior to the meeting (the list is provided in Appendix 3). The CRFM PWG noted that under the DGroup for the Pelagic Fisheries Working Group a sub-community on ICCAT was created which would be used for future discussions and follow-up concerning statistical and scientific reporting to ICCAT and in particular, use of the respective data forms. All CRFM PWG members would be invited to join the respective DGroup. The CRFM PWG also noted that the Forum would be informed of its deliberations and agreed follow-up action.

The PMRRA recognized the Chair of the CRFM PWG, Mr Derrick Theophille (Dominica) and Vice-Chair, Mr Christopher Parker (Barbados) and noted that both persons were only recently resuming duties following leave. The Chair agreed that the PMRRA would Chair the meeting in his stead. The PMRRA also agreed to assume responsibility for preparation of the meeting report.

### **4. Background Information and Objectives of Meeting**

The Chairperson advised the CRFM PWG of the decisions taken by the 24<sup>th</sup> Meeting of the Executive Committee of the Caribbean Fisheries Forum (CFF) and the 13<sup>th</sup> Meeting of the CFF concerning approved management and technical level activities for the CRFM PWG in PY 2015-2016, aimed at improved participation in ICCAT. She informed the CRFM PWG (technical level) that the First Meeting of the CRFM PWG on ICCAT was convened on 29 October 2015 to address the management level tasks associated with ICCAT reporting obligations and preparations for the 24<sup>th</sup> Regular Meeting of ICCAT. The Chairperson reminded the CRFM PWG of the following approved technical level activities: (a) improved fulfillment of the reporting obligations to ICCAT; (b) development of resident conversion factors for key commercial tuna species; and (c) participation in the ICCAT SCRS meeting. She reiterated

that the general objective of the meeting was to facilitate improved scientific and statistical reporting to ICCAT, while the specific objectives were to:

- (a) improve CRFM Member States' understanding of the ICCAT 2015 SCRS Meeting recommendations;
- (b) improve CRFM Member States' understanding of ICCAT's statistical and scientific reporting requirements; and
- (c) facilitate sharing of best practices among Member States on matters related to statistical and scientific reporting to ICCAT.

The Chairperson noted that active participation of CRFM Member States that are CPCs to the ICCAT (Belize, St Vincent and the Grenadines, Barbados, Trinidad and Tobago, Guyana and Suriname) would contribute significantly to fulfillment of the meeting's objectives. She also advised that sharing of best practices by the ICCAT CPCs and improved understanding of ICCAT's statistical and scientific reporting would especially be useful to those non-CPCs which were officially requested by the ICCAT Secretariat in December 2014 to submit data on their catches of tuna and tuna-like species, as well as shark species, in the format established by its Scientific Committee.

## **5. ICCAT SCRS 2015 Report**

The Chairperson delivered a presentation on the Provisional Report of the 2015 SCRS Meeting which was convened from 28 September to 02 October 2015 in Madrid, Spain. The presentation focused on the executive summaries of species and stock status, management recommendations and concerns; the report of the Small Tunas Species Group Intersession Meeting; the report of the Sub-Committee on Statistics; ICCAT's Special Research Programmes and the SCRS Recommendations as well as species group work plans and scientific meetings for 2016. The presentation is shared on the CRFM PWG DGroup. Noting that the SCRS report was very detailed, the Chairperson recommended that CRFM PWG members read the report to achieve a more comprehensive understanding of ICCAT's scientific activities.

### Status of Stocks

The CRFM PWG noted the status of selected species/stocks assessed by ICCAT, the respective management measures, recommendations and concerns (Appendix 4). Based on the most recent ICCAT SCRS assessments a number of species/stocks were considered overfished and/or experiencing overfishing (e.g., yellowfin tuna, bigeye tuna, albacore (north and south Atlantic stocks), blue marlin, white marlin, sailfish (both east and west Atlantic stocks) and the porbeagle (north-west, south-west and north-east Atlantic stocks). However, several other species/stocks were considered not overfished and not experiencing overfishing (e.g., swordfish (north and south Atlantic stocks), blue shark (north Atlantic stock) and shortfin mako (north and south Atlantic stocks)). The status of small tunas, blue shark (south Atlantic stock) and the skipjack tuna (west Atlantic stock) remain unknown. The bigeye thresher, longfin mako and night shark were considered to be the most vulnerable and to exhibit the lowest productivity among the range of shark species assessed. In 2016 stocks of yellowfin tuna, albacore, sailfish and a number of small tunas (wahoo, king mackerel, Serra Spanish mackerel, Atlantic bonito, bullet tuna, little tunny and frigate tuna) will be assessed while assessments of the shortfin mako and swordfish are planned for 2017.

The Chairperson highlighted ICCAT's growing concerns regarding the lack of data for artisanal fisheries, including FAD fisheries, which impacted the quality of assessments and management recommendations for specific species/stocks (yellowfin tuna, bigeye tuna, billfishes). She advised of the activity to promote reporting of FAD fisheries statistics to ICCAT under the Terms of Reference for the joint WECAFC

Working Group on FAD Fisheries over the 2016 to 2018 biennial period and the proposed listing of the bigeye thresher shark and silky shark under CITES, Appendix II at COP17 later in 2016.

Most of the issues discussed were not technical in nature, except for clarification requested by the participant from Grenada on whether ICCAT's list of shark species extended beyond the bigeye thresher, mako shark and night shark. The Chairperson explained that ICCAT's focus was on these species because of their low productivity and high vulnerability levels, however, ICCAT's list of shark species for statistical and scientific reporting was more extensive, including those sharks species already listed under CITES (oceanic whitetip, scalloped hammerhead, smooth hammerhead and blue shark) as well as those proposed to be listed in 2016 (bigeye thresher, silky shark), among others.

#### Report of the Small Tunas Species Group Inter-sessional Meeting – 10 to 13 June 2015, Madrid

The CRFM PWG noted that this meeting focused on (a) identifying information gaps and uncertainties in data; (2) analysing existing small tuna data (Task I and Task II); (3) analyzing the range of biological and life history studies conducted for use in future evaluations; (4) developing a strategy to obtain information required to facilitate stock assessments; and (5) discussing appropriate approaches to be adopted for future assessment of small tunas. The CRFM PWG also noted that the Group provided several recommendations for its 2016 work plan, including: extension of the species description chapter of the ICCAT Manual to include wahoo, Serra Spanish mackerel, West African Spanish mackerel and dolphinfish and update of the chapter for other species (last updated in 2006); continued work on data recovery and the inventory process for small tuna tagging data; improving statistical and biological data and information on stock structure of small tuna populations through national analysis of historical fisheries indicators, improvements in Task II data, preparation of a meta-database for small tunas to facilitate identification and application of appropriate stock assessment methods for each priority species; encouraging studies on stock structure and species distribution and collaboration with other RFMOs to improve and exchange basic fisheries data; recovery of historical statistical and biological data in the main fishing areas with focus on priority species such as blackfin tuna, king mackerel, Serra Spanish mackerel and dolphinfish – a major activity under the ICCAT Small Tunas Year Program. An inter-sessional meeting is planned for 2016 to complete the meta-database for small tunas (documenting available biological and fishery information), identify and apply appropriate stock assessment methods for each high priority species/stock and conduct an Ecological Risk Assessment for the north Atlantic small tunas.

The Chairperson encouraged participation of CPCs in ICCAT's Scientific Meetings, and in particular those meetings that focus on small tuna species. She recalled the discussions at the 29 October 2015 CRFM PWG Meeting concerning ICCAT's funding assistance to Developing States to attend its meetings. The CRFM PWG noted the negligible participation of CPCs in ICCAT's scientific meetings to date. Trinidad and Tobago was the only CPC which participated in an SCRS meeting, facilitated through national funding, sometime in the past. The lead representative of Belize advised that Belize was without the in-house scientific expertise to participate effectively in the SCRS meetings.

#### Report of the Meeting of the Sub-Committee on Statistics – 21 to 22 September 2015, Madrid

In addition to noting the report of this meeting, the CRFM PWG was also advised to familiarize itself with the ICCAT's Science Strategic Plan for 2015 to 2020. Regarding the Sub-Committee's meeting, matters related to the submission of data to ICCAT, including the approved electronic forms for submission, data submission deadlines, protocol for reporting zero catches, filtering protocols for identifying valid submissions and changes in ICCAT's coding system were noted. The work of the Sub-Committee on development and revision of biometric relationships and other conversion factors was also highlighted. The CRFM PWG noted the Committee's 2014 recommendation for development of web-based training videos regarding ICCAT's adopted reporting obligations and proper utilization of

electronic forms, as well as intentions to host a series of related regional workshops beginning in early 2015, and its efforts to develop inventories of artisanal fisheries - focused mainly on West African fisheries so far, with need to address other regions, such as the Caribbean. The Sub-Committee's 2016 work plan included continued work on development of database applications, capacity-building for maintenance of ICCAT's databases; update of the hardware and software for Vessel Monitoring Systems. The Sub-Committee also requires the cooperation of national scientists to review the results of newly estimated overall Atlantic fishing effort by time-area strata (EFFDIS) to ensure accuracy and the ICCAT Secretariat and the USA to fully integrate USA and ICCAT tagging databases.

The CRFM PWG noted ICCAT's conditions for establishing the validity of statistical reports submitted according to specific protocols. The Chairperson stressed the need to ensure that the most updated ICCAT data reporting forms (which include updated codes, instructions and filters) were used, instructions properly followed in the completion of such forms and adherence to the respective deadlines for their submission. She reminded the CRFM PWG that ICCAT's data reporting forms were updated annually based on recommendations of the SCRS, as approved by the Commission. The Chairperson also advised the CRFM PWG to update the list of their official Statistical Correspondents to ICCAT if necessary, since the name of the official Statistical Correspondent was proposed as one of the filters for screening data submissions. Reference was also made to ICCAT's training videos on completion of statistical forms. However, since none of the participants were aware of these videos *the Chairperson agreed that the CRFM Secretariat would engage the ICCAT Secretariat to seek further information.*

The lead participant of Saint Lucia expressed concern regarding the recommendation to have the designated statistical correspondent be included among ICCAT's filters for assessing validity of statistical reports since such correspondents may go on leave. She requested the CRFM Secretariat's views on the matter. The Chairperson explained that as a management body the Commission was free to institute whatever protocols it agreed upon for screening of incoming data and information. Furthermore, countries could designate more than one statistical correspondent to avoid such problems. The CRFM PWG noted, through interventions of Dominica and the lead participant of Trinidad and Tobago, that in the past the designation of Statistical Correspondents was not as formal a process as it is now. Questions arose regarding the mode of communication of this information to ICCAT and whether there were specific forms to be completed. The ICCAT CPCs were not aware of any forms for communicating the names of the Statistical Correspondents. The lead representative for Trinidad and Tobago confirmed that the name of the Statistical Correspondents could be communicated to ICCAT via email but that such communication must be from someone in authority within the organization, such as the Director of Fisheries or the Permanent Secretary of the respective Ministry. The Chairperson suggested that members of the CRFM PWG review Appendix 10 of the SCRS Report – containing the list of Statistical and Tagging Correspondents and by Country, and formally advise the ICCAT Secretariat of any changes or additions.

#### Special Research Programs

The CRFM PWG noted ICCAT's various research programs of relevance to CRFM Member States. These programs include the Enhanced Program for Billfish Research (EPBR) in existence since 1986, the Small Tuna Year Program (SMTYP) scheduled to begin in 2015, the Shark Research and Data Collection Program (SRDCP) scheduled to begin soon and the Atlantic Ocean Tropical Tuna Tagging Program (AOTTP) which began in 2015. The details of these programs are in the SCRS Report as well as on ICCAT's website. The Chair advised that with respect to the EPBR funds were budgeted for at-sea sampling in Barbados and Trinidad.

Clarification was sought on the mechanisms for participation of non-CPCs in ICCAT's Special Research Programmes. The lead participant of Saint Lucia questioned the benefits to non-CPCs who provided data

to ICCAT, noting that they were not considered to participate in its Research Programs. The Chairperson reminded the participant of a past opportunity to participate in ICCAT's Tuna Tagging Programme. However, although Saint Lucia had communicated its interest in that Programme to ICCAT, no response was received. The Chair explained that whereas in the past the ICCAT Secretariat maintained regular and direct communication with the CRFM Secretariat on matters related to research and management, the level of communication has not been the same in recent years. She surmised that this situation was likely due to changes in the Chairmanship of various ICCAT Species Groups and Committees as well as the inability of the CRFM Secretariat to maintain a continuous presence at relevant ICCAT meetings. As a consequence there was greater reliance on the sharing of information by CRFM Member States that are ICCAT CPCs to improve knowledge and understanding of the ICCAT's activities (both scientific and management). The CRFM PWG noted that there was need to improve the communication between the ICCAT and CRFM Secretariat's to the extent possible, considering that the CRFM is an Observer to ICCAT.

#### Species Groups' and WGSAM Work Plans for 2016

The CRFM PWG noted the planned activities of the Working Groups on Tropical Tunas, Albacore, Atlantic Swordfish, Billfish and Sharks, as well as the Working Group on Stock Assessment Methods (WGSAM), which were listed in the SCRS report. Some key activities of the Species Working Groups included: assessment of yellowfin tuna stocks (Tropical Tunas); work on Management Strategy Evaluation frameworks (Tropical Tunas and Albacore); update of Atlantic swordfish stock structure information and preparations for the 2017 assessment; species-specific data collection and reconstruction of historical and missing data for blue and white marlin from all artisanal fisheries in the Convention Area (Billfish); preparations for the Atlantic-wide sailfish assessment which include estimation of catches from artisanal fleets where there are known gaps, standardizing CPUEs for relevant stocks and countries and genetic analyses to ascertain stock structure (Billfish). The Sharks Working Group would be focusing on preparing information for assessment (the WGSAM is expected to develop guidelines and criteria for evaluating plausibility of model scenarios and model diagnostics), convening various inter-sessional meetings and finalizing the activities of the SRDCP for Year 2. Some of the main activities of the WGSAM in 2016 would include presentation of the utility and benefits of various management approaches to the Standing Working Group to Enhance Dialogue between Fisheries Scientists and Managers (to facilitate adoption of the approaches); analyzing ways to facilitate dialogue with the Commission concerning the concepts associated with various management approaches and continuing work on how best to incorporate spatially changing oceanographic, environmental conditions and climate change into the assessment process.

#### Scientific Meetings Scheduled for 2016

The CRFM PWG was advised of the following scientific meetings scheduled for 2016: (1) Working Group on Stock Assessment Methods (15 to 19 February); (2) Yellowfin tuna data preparation (7 to 11 March); (3) Ad Hoc Working Group on FADs (14 to 16 March); (4) Standing Committee on Ecosystems and the Small Tunas Species Working Group (4 to 8 April); (5) Sharks Species Working Group (25 to 29 April); (6) Atlantic Albacore stock assessment (28 April to 06 May); (7) Sailfish data preparation and stock assessment (30 May to 03 June); (8) Yellowfin tuna stock assessment (27 to 30 June); (9) Bluefin tuna data preparation (25 to 29 July); (10) All Species Groups (26 to 30 September); and (11) SCRS Plenary (03 to 07 October). Where possible, the CRFM PWG was encouraged to provide the necessary data to ICCAT to facilitate the assessments and seek support to participate in the respective meetings, reference being made to the funding opportunities identified at the 29 October 2015 meeting of the CRFM PWG (management level).

The lead representative of Saint Lucia queried whether the benefits to ICCAT CPCs for submission of statistical data could also be extended to non-CPCs that submit data. *The Chairperson explained that in*

***order to secure direct and full benefits from ICCAT, countries would have to consider becoming CPCs and this was a matter for the attention of managers.*** The secondary participant of Belize noted that data collection was an expensive exercise, while the Dominica representative expressed concern that non-CPCs may submit data but do not have a seat at the table in decision-making and the Grenada representative surmised that non-CPCs are also subject to ICCAT's management recommendations and sanctions. The lead participant of Trinidad and Tobago explained that the pressure to participate in ICCAT is likely due to the high value of the species/fisheries while the secondary Belize representative questioned the utility of data received from the Caribbean in ICCAT's management decision-making.

Based on the interventions of the lead representatives of Trinidad and Tobago, Barbados and the Deputy Executive Director of the CRFM Secretariat (Dr Susan Singh-Renton), the CRFM PWG noted that submission of statistics contributed to:

- (a) overall conservation and management efforts and in particular improved quality of stock assessments/best scientific information and more reliable management advice that ultimately benefits all countries fishing the respective resources;
- (b) strengthened negotiation positions of CPCs during quota assignment, since quota amounts are usually informed by the historical data of countries;
- (c) increased awareness that a country is a tuna fishing country with a history of fishing such species in the Convention Area through inclusion in ICCAT's international records; and
- (d) ICCAT's consideration of data on catches of tuna and tuna-like species in the Convention Area (including those of non-CPCs) in assignment of TACs or quotas.

The DED also explained that non-CPCs may also be expected to comply with management measures because of the need to cooperate with international law and that in some cases the implications of non-compliance may extend to trade in the relevant or other species. She also stressed the need to report accurate catches and avoid under-estimation.

***A number of other issues were discussed which are also best resolved at the management level of the CRFM PWG.*** These issues all pointed to the need for high level discussion and decision-making concerning national interactions with ICCAT. The main issues were as follows:

1. Implications associated with submission of data to ICCAT - Both the Saint Lucia and Dominica representatives noted that submission of data may not always be to a country's advantage. The DED advised that countries pay attention to ICCAT's use of their data and the respective management recommendations and through their annual reports promote better understanding of the national situation and interests. She noted that lack of communication was the greatest weakness contributing to countries attracting negative attention from ICCAT.
2. Representation of non-CPCs at ICCAT meetings – The lead participant of Saint Lucia rationalized that such representation was necessary since these countries were also impacted by ICCAT's management decisions. There was a misunderstanding on the part of Saint Lucia and Dominica that the CRFM Secretariat acts as representative of non-CPCs at the ICCAT Commission meetings. The Chairperson clarified that the CRFM Secretariat is an Observer to ICCAT and therefore is not a recognized negotiator. The lead participant of Trinidad and Tobago confirmed that at the ICCAT Commission meetings Observers may be allowed to contribute to the negotiation discussions after all CPCs have given their inputs and that contributions of Observers may or may not be taken into consideration in the decision-making process.
3. Representation of CPCs at Commission Meetings – The Chairperson made reference to discussions of the 13<sup>th</sup> Meeting of the Forum concerning representation at international meetings and development of a document outlining possible options. She noted one possible option whereby a CPC may be officially delegated the respective authority to represent another CPC that is unable to attend the meeting. The lead participant of Belize noted that he was not aware of such



an option within the ICCAT system. He advised that CPCs that are unable to participate in the Commission meetings could formally communicate their concerns directly to the ICCAT Secretariat which would forward such information to the Commission and reflected in the records of the meeting. He also reminded the CRFM PWG of the ICCAT meeting participation fund through which CPCs could obtain assistance to participate in the Commission and SCRS meetings and indicated that Belize currently utilizes this fund to participate in ICCAT Commission meetings.

4. The costs and benefits of becoming an ICCAT CPC: The lead participant of Barbados noted the need to consider the costs and benefits to participation in ICCAT. Although there were high costs associated with participation in ICCAT Commission and Scientific meetings she noted ICCAT's recent attempts to convene meetings within the Caribbean region and to assist with funding for participation. She expressed the need for greater discussion and interest in continuing this initiative. As well, she advised that participation in the Commission meetings afforded CPCs the opportunity to seek the interest of their fishing sector through negotiation of national quotas and to improve ICCAT's knowledge and understanding of the national importance of artisanal fisheries. Such understanding could afford exemption of artisanal fisheries from stringent management measures that may be more relevant to activities of large scale fishing vessels.

## **6. ICCAT Statistical and Scientific Reporting**

The Chairperson began with a review of the ICCAT Circulars pertaining to ICCAT reporting requirements for 2016 (ICCAT Circular #407/2016) and ICCAT's request for statistics (Task I and Task II) on Atlantic tunas and sharks in the Convention Area (ICCAT Circular #1104/2016 ). Circular #407/2016 provided the links on ICCAT's website for accessing both the management related and statistical and scientific reporting requirements based on measures adopted at the 2015 Commission meeting, advised on updates of reporting forms and provided the online link for accessing guidelines for submitting data and information. Circular #1104/2016 focused on statistical and scientific reporting and provided details on the key data and information requirements, deadline dates, data coverage and formats as well as general procedures. The Chairperson stressed the need for meeting participants to keep abreast of developments in ICCAT through regular visit to the ICCAT website, particularly in respect of statistical and scientific reporting and the respective data reporting forms.

The CRFM PWG noted that the CRFM Secretariat previously submitted Annual Reports to ICCAT documenting information on fisheries, research, statistics and management for tuna and tuna-like species of some CRFM Member States that were not ICCAT CPCs. However, due to changes in ICCAT's reporting structures which require detailed information at the national level, to which the CRFM Secretariat is not privy, a decision was taken to discontinue the submission of such reports. The Chairperson showed the detailed reporting structure of Annual Reports, with specific focus on *Section 2: Research and Statistics* to promote a better understanding of the situation.

The Chairperson also conducted a cursory review of the documents at the online links shared in ICCAT Circulars #407/2016 and #1104/2016 as well as the link to the ICCAT Manual from which the respective reporting forms could also be accessed. She explained that species identification sheets were also available on ICCAT's website which could be used as a training tool for data collectors and noted that current conversion factors for small tuna species were outdated. A cursory review of the ST01FC (Task I –Fishery Characteristics) and ST01NC (Task I – Nominal Catch) data forms was conducted to demonstrate some of the data types required and the structure of the forms (main data input sections, updated codes, instructions for completion and filters for assessing the validity of reports). The Chairperson explained that given the extensive nature of ICCAT's reporting requirements the purpose of

the meeting was to increase awareness of the various reporting requirements and data forms. She proposed that detailed discussions of the forms could be the subject of future meetings.

The CRFM PWG agreed that separate meetings would be convened to discuss the ICCAT data forms in detail. The Chairperson also advised of utility of the DGroup to address specific difficulties in completion of the data forms and expressed reliance on the experience and inputs of CRFM Member States that were ICCAT CPCs to provide advice to assist in resolving such difficulties. The CRFM PWG agreed that both options would be used to facilitate improved understanding of ICCAT's reporting requirements.

## **7. CRFM Statistical and Scientific Reporting to ICCAT**

Based on data published in the ICCAT 2015 SCRS Report all CRFM Member States that were ICCAT CPCs submitted data to ICCAT. Dominica, Grenada and Saint Lucia, non-CPCs, have a history of submission of data to ICCAT but in recent years only Saint Lucia has continued its reporting.

The lead participant of Belize noted ICCAT's efforts to streamline reporting, given expressed concerns of its CPCs concerning the onerous reporting requirements, and advised that countries read and follow the detailed instructions for completing the forms in a step by step manner. He also advised that all catch data from the previous year should be collected from the tuna fishing vessels prior to completion of the Task I and Task II data forms. He explained that this action was necessary to avoid lengthy delays in sourcing missing information once data entry into the forms had commenced. He noted that the reporting deadline (July 31) allows sufficient time for completion of the data submission forms because the data to be reported was for the previous calendar year. The lead participant of Trinidad and Tobago explained that she may take up to one month to collate and complete the forms for Task I and Task II data.

Due to the number of data forms to be completed, the lead participant of Belize advised that a planned approach to submission of the respective data cognizant of the respective deadlines be instituted to avoid late submission of data which attracts the attention of ICCAT's Compliance Committee. In this respect, the Chairperson drew attention to ICCAT Resolution 15/09: Resolution by ICCAT Establishing Guidelines for the Implementation of the Recommendation 15-09 [Rec. 11-15] by ICCAT on Penalties Applicable in the Case of Non-Fulfillment of Reporting Obligations. She also emphasized the need to capture data for all fleets that target tuna and tuna-like species (artisanal, recreational, high seas) and to allow sufficient time for data compilation, collation, cleaning and estimation of total landings in the required ICCAT data categories. The participant from Dominica also stressed the need to devote sufficient time to data preparation and cleaning.

The CRFM PWG agreed on the way forward to improve knowledge on ICCAT's statistical reporting requirements. Tutorials would be convened on completion of ICCAT's Task I and Task II data forms, using the GoToMeeting Facility. The lead participant of Trinidad and Tobago agreed to deliver the tutorials, which were proposed to be convened in two separate sessions focused on Task I and Task II data forms in mid-April and end-April 2016 respectively. The final dates for the tutorials were to be confirmed. Following the tutorials the DGroup would be used as a forum for discussing and addressing any specific problems countries may have with completion of the respective data forms. To assist with data cleaning, the representative of Dominica and lead representative of the Turks and Caicos Islands agreed to run a tutorial on the use of the R-Statistical software for this purpose, using the GoToMeeting facility. The date of this tutorial was to be confirmed but it was noted that data-cleaning was an exercise which should precede completion of the data forms.

## **8. Any Other Business**

There were no items proposed under this Agenda Item.

## **9. Adjournment**

The Chairperson thanked the participants for attending and actively engaging in the discussions at the meeting. She extended her gratitude to the lead participant of Trinidad and Tobago for agreeing to conduct tutorials to assist in improving the understanding of ICCAT's statistical and scientific reporting requirements and to the participants of Dominica and Turks and Caicos Islands for agreeing to conduct a tutorial on the use of the R-Statistical Software for data cleaning. She noted that she would await further information as to the proposed dates and times for the tutorials.

The meeting was adjourned at 12:30 p.m.

## Appendix 1: Agenda – CRFM Pelagic Fisheries Working Group Second Meeting on ICCAT

### CRFM PELAGIC FISHERIES WORKING GROUP (CRFM PWG)

#### SECOND MEETING ON ICCAT

Electronic Meeting (Via Goto Meeting)

18 March 2016

Document 1-01: 12 March 2016

#### Agenda

| Item | Title   | Time (Eastern Caribbean Time) |
|------|---|-------------------------------|
| 1    | Opening of meeting  | 10:00 - 10:05 a.m.            |
| 2    | Adoption of Agenda  | 10:05 - 10:10 a.m.            |
| 3    | Procedural matters  | 10:10 - 10:15 a.m.            |
| 4    | Background Information and Objectives of Meeting  | 10:15 – 10:25 a.m.            |
| 5    | ICCAT SCRS 2015 Report – Some Highlights  | 10:25 - 10:45 a.m.            |
| 6    | ICCAT Statistical and Scientific Reporting<br>(a) ICCAT Circular #407/2016 – <i>ICCAT Reporting Requirements 2016</i><br>(b) ICCAT Circular #1104/2016 – <i>Request for Statistics (Task I and Task II) on Atlantic Tunas and Sharks in the Convention Area</i><br>(c) General and Specific Reporting Requirements - <u>(scientific and statistical reporting) - <a href="https://www.iccat.int/en/submitSTATreq.htm">https://www.iccat.int/en/submitSTATreq.htm</a></u><br>(d) Guidelines for submitting data and information required by ICCAT<br><u><a href="http://iccat.int/Documents/Comply/Guidelines_ENG.pdf">http://iccat.int/Documents/Comply/Guidelines_ENG.pdf</a></u><br>(e) ICCAT Manual - <u><a href="https://www.iccat.int/en/ICCATManual.asp?mld=5">https://www.iccat.int/en/ICCATManual.asp?mld=5</a></u><br>(f) ICCAT Statistical Reporting Forms – ST01-T1FC; ST02-T1NC | 10:45 - 11:45 a.m.            |
| 7    | CRFM Member States Statistical and Scientific Reporting to ICCAT<br>(a) Current Situation in Member States<br>(b) Sharing of best practices by ICCAT CPCs<br>(c) The Way Forward for improved reporting to ICCAT  | 11:45 a.m. – 12:45 p.m.       |
| 8    | Any Other Business  | 12:45 - 12:55 p.m.            |
| 9    | Adjournment   | 12:55 – 1:00 p.m.             |

## Appendix 2: List of Participants – Second CRFM PWG Meeting on ICCAT.

| Country                      | Name of representative  | Affiliation  | Email Address  |
|------------------------------|---|--|--|
| Barbados                     | Christopher Parker<br><i>Senior Fisheries Biologist</i>   | Fisheries Division                                   | <a href="mailto:fishbarbadosfb@caribsurf.com">fishbarbadosfb@caribsurf.com</a>     |
|                              | Joyce Leslie (lead)<br><i>Deputy Chief Fisheries Officer</i>                                    | Fisheries Division                                   | <a href="mailto:joyce.leslie27@gmail.com">joyce.leslie27@gmail.com</a>             |
| Belize                       | Robert Robinson (lead)<br><i>Deputy Director</i>  | Belize High Seas Fisheries Unit, Ministry of Finance | <a href="mailto:deputydirector.bhsfu@gmail.com">deputydirector.bhsfu@gmail.com</a> |
|                              | Ramon Carcamo<br><i>Senior Fisheries Officer</i>  | Fisheries Division                                   | <a href="mailto:ramalive@yahoo.com">ramalive@yahoo.com</a>                         |
| Dominica                     | Derrick Theophille<br><i>Fisheries Officer</i>  | Fisheries Division                                   | <a href="mailto:derkjt@gmail.com">derkjt@gmail.com</a>                             |
| Grenada                      | Crafton Isaac<br><i>Fisheries Officer</i>   | Fisheries Division                                   | <a href="mailto:crafton.isaac@gmail.com">crafton.isaac@gmail.com</a>               |
|                              | Cherene Bowen<br><i>Data Clerk Supervisor</i>   | Fisheries Division                                   | <a href="mailto:cherene.bowen@yahoo.com">cherene.bowen@yahoo.com</a>               |
| Guyana                       | Ingrid Peters<br><i>Senior Fisheries Officer</i>  | Department of Fisheries                              | <a href="mailto:ingridpeters93@gmail.com">ingridpeters93@gmail.com</a>             |
|                              | Seion Richardson<br><i>Fisheries Officer</i>  | Department of Fisheries                              | <a href="mailto:Seion_richardson2000@yahoo.com">Seion_richardson2000@yahoo.com</a> |
| St. Kitts & Nevis            | Nikita Browne<br><i>GIS and Oceanography Officer</i>  | Department of Marine Resources                       | <a href="mailto:nikkita.browne@yahoo.com">nikkita.browne@yahoo.com</a>             |
| St. Lucia                    | Patricia Hubert-Medar (lead)<br><i>Fisheries Assistant</i>                                      | Fisheries Division                                   | <a href="mailto:patricia.medar@govt.lc">patricia.medar@govt.lc</a>                 |
|                              | Allena Joseph<br><i>Fisheries Officer</i>   | Fisheries Division                                   | <a href="mailto:allena.joseph@govt.lc">allena.joseph@govt.lc</a>                   |
| St. Vincent & the Grenadines | Kris Isaacs<br><i>Senior Fisheries Officer</i>  | Fisheries Division                                   | <a href="mailto:Kris.isaacs@yahoo.com">Kris.isaacs@yahoo.com</a>                   |
|                              | Cheryl Jardine-Jackson<br><i>Senior Fisheries Assistant/Data</i>                                | Fisheries Division                                   | <a href="mailto:cejmespo@yahoo.com">cejmespo@yahoo.com</a>                         |
| Suriname                     | Tania Tong Sang<br><i>Policy Officer</i>  | Fisheries Department                                 | <a href="mailto:iccatsuriname@gmail.com">iccatsuriname@gmail.com</a>               |
| Trinidad & Tobago            | Louanna Martin (lead)<br><i>Fisheries Officer</i>   | Fisheries Division                                   | <a href="mailto:lmartin@gov.tt">lmartin@gov.tt</a>                                 |
|                              | Michele Picou-Gill<br><i>Fisheries Officer</i>  | Fisheries Division                                   | <a href="mailto:mmjgill@gmail.com">mmjgill@gmail.com</a>                           |
| Turks & Caicos Islands       | John Claydon<br><i>Director</i>   | Department of Environment and Maritime Affairs       | <a href="mailto:Jclaydon@gov.tc">Jclaydon@gov.tc</a>                               |
|                              | Alexander McLeod<br><i>Environmental Officer</i>  | Department of Environment and Maritime Affairs       | <a href="mailto:armcleod649@gmail.com">armcleod649@gmail.com</a>                   |
| CRFM                         | Elizabeth Mohammed<br><i>Programme Manager, Research and Resource Assessment</i>                | Secretariat  | <a href="mailto:elizabeth.mohammed@crfm.int">elizabeth.mohammed@crfm.int</a>       |
|                              | Susan Singh-Renton – specific intervention at Agenda Item 5<br><i>Deputy Executive Director</i> | Secretariat  | <a href="mailto:susan.singhrenton@crfm.int">susan.singhrenton@crfm.int</a>         |

### **Appendix 3: List of Documents and Web-Links Shared – Second CRFM PWG Meeting on ICCAT**

- ICCAT Website – [www.iccat.int](http://www.iccat.int)
- ICCAT SCRS 2015 Meeting Report -  
[https://www.iccat.int/Documents/Meetings/SCRS2015/SCRS\\_PROV\\_ENG.pdf](https://www.iccat.int/Documents/Meetings/SCRS2015/SCRS_PROV_ENG.pdf)
- Summary Table on 2015 Species/Stock Status, Management Measures and Recommendations
- ICCAT Circular #407/2016 – ICCAT Reporting Requirements 2016
- ICCAT Circular #1104/2016 – Request for Statistics (Task I and Task II) on Atlantic Tunas and Sharks in the ICCAT Convention Area
- 2016 Guidelines for submitting data and information required by ICCAT -  
[http://iccat.int/Documents/Comply/Guidelines\\_ENG.pdf](http://iccat.int/Documents/Comply/Guidelines_ENG.pdf)
- ICCAT Circular #8240/2015 – Recommendations and Resolutions Adopted at the 24<sup>th</sup> Regular Meeting of the Commission – Note Recs 15-01 (YFT, BET), 15-05 (BUM, WHM); 15-09 (Penalties for non-reporting)
- Updated ICCAT reporting forms – CP01-VessLst; ST01-T1FC; ST02-T1NC
- ICCAT Statistical and Scientific Reporting Requirements (includes data forms) -  
<https://www.iccat.int/en/submitSTATreq.htm>
- ICCAT Manual - <https://www.iccat.int/en/ICCATManual.asp?mld=5>

## Appendix 4: Summary of Selected Species/Stock Status and Management Measures, Recommendations and Concerns

(Source: ICCAT SCRS 2015 Meeting Report)

| Species/Stock   | Last Assessed | Stock Status  | Current management measures   | Management Recommendations/Concerns   |
|---|---------------|---|---|---|
| Yellowfin tuna<br>( <i>Thunnus albacares</i> )<br>Atlantic-wide stock | 2011          | MSY = 144,600 t (114,200 – 155,100 t)<br>2014 Yield = 103,400 t<br>$B_{2010}/B_{msy} = 0.85$ (0.61 – 1.12)<br>$F_{2010}/F_{msy} = 0.87$ (0.68 – 1.40)<br>Overfished = yes<br>Overfishing = no   | Rec 14-01:<br><ul style="list-style-type: none"> <li>Time-area closure for surface FAD fishing;</li> <li>TAC = 110,000t;</li> <li>a specific authorization of vessels <math>\geq 20m</math> LoA to fish for tropical tunas;</li> <li>specific limits on # of longline and/or purse seine boats for a # of fleets</li> </ul>   | Concerns: increased catches around FADs could have negative impacts on productivity of yellowfin and bigeye tuna fisheries and other by-catch species;<br><br>Recommendations:<br><ul style="list-style-type: none"> <li>measures to reduce FAD-related mortality and other fishing mortality on small yellowfin and bigeye tuna in order to increase long term sustainable yield;</li> <li>conduct stock assessment of YFT in 2016</li> <li>for BET - 30% probability that at current TAC stock would recover by 2028; recommend a reduction in the TAC for CPCs for higher probability of stock recovery in a shorter period</li> </ul> |
| Bigeye tuna<br>( <i>Thunnus obesus</i> )<br>Atlantic-wide stock       | 2015          | MSY = 78,824 t (67,725 – 85,009 t)<br>2014 Yield = 72,585 t<br>$B_{2014}/B_{msy} = 0.67$ (0.48 – 1.20)<br>$F_{2014}/F_{msy} = 1.28$ (0.62 – 1.85)<br>Overfished = yes<br>Overfishing = yes  | Rec 14-01:<br><ul style="list-style-type: none"> <li>TAC (2012 to 2015) = 85,000t</li> <li>Effort restriction - # of vessels specified to ICCAT in 2005;</li> <li>Specific # of longline and purse seine boats;</li> <li>no fishing with natural or artificial floating objects Jan-Feb in area encompassed by the African coast 10°S, 5°E and 5°W (in force since Jan 2013)</li> </ul> |   |
| Skipjack tuna<br>( <i>Katsuwonus pelamis</i> )<br>West Atlantic Stock | 2014          | MSY = around 30,000 – 32,000 t<br>2014 Yield = 26,317 t<br>Current replacement yield = somewhat below 32,000 t<br>$B_{2013}/B_{msy}$ = probably close to 1.3<br>Overfished = no definitive statement given<br>Overfishing = no definitive statement given         | No management measures in place for West Atlantic stock   | Concerns: uncertainties of under-reporting and impacts on perception of stock status;<br><br>Recommendations: catches should not be allowed to exceed MSY   |
| Skipjack tuna<br>( <i>Katsuwonus pelamis</i> )<br>East Atlantic Stock | 2014          | MSY = probably higher than previous estimates (143,000 – 170,000)<br>2014 Yield = 206,234 t<br>Current replacement yield = unknown<br>$B_{2013}/B_{msy}$ = likely $>1$<br>$F_{2013}/F_{msy}$ = likely $<1$<br>Overfished = not likely<br>Overfishing = not likely | Rec 14-01: moratorium on FADs along African coast   | Concerns: increasing harvest and effort for skipjack could impact other species caught in same fisheries<br><br>Recommendations: pending submission of additional data on FADs and from Tropical Tuna Tagging programme – catch and effort levels should not exceed levels in recent years  |
| Albacore<br>( <i>Thunnus alalunga</i> )<br>North Atlantic Stock       | 2013          | MSY = 31,680 t<br>2014 Yield = 26,539 t<br>2011 Yield = 20,039 t<br>$SSB_{msy} = 81,110t$<br>$F_{msy} = 0.1486$<br>$SSB_{curr}/SSB_{msy} = 0.94$ (0.74 – 1.14)<br>$F_{curr}/F_{msy} = 0.72$ (0.55 – 0.89)<br>Overfished = yes<br>Overfishing = no                 | <ul style="list-style-type: none"> <li>Rec 13-05: TAC = 28,000t (each year from 2014 to 2016);</li> <li>Rec 98-08: Effort limit - # vessels to 1993 to 1995 average</li> </ul>  | Concerns: several provisions under Rec 13-05 allow catch to exceed the established TAC level<br><br>Recommendations:<br><ul style="list-style-type: none"> <li>Available projections under alternative HCRs for certain levels of stock recovery, at certain time frames and probabilities consistent with Rec 11-13, which Commission could consider;</li> <li>note at current TAC there is a 53% probability that stock would rebuild by 2019.</li> <li></li> </ul>   |

| Species/Stock   | Last Assessed | Stock Status   | Current management measures   | Management Recommendations/Concerns  |
|---|---------------|--|---|--|
| Albacore<br>( <i>Thunnus alalunga</i> )<br>South Atlantic Stock       | 2013          | MSY = 25,228 t (19,109 – 28,360 t)<br>2014 Yield = 13,681 t<br>2011 Yield = 24,129 t<br>$B_{msy} = 216,807$ (88,380 – 595,953 t)<br>$F_{msy} = 0.176$ (0.063 – 0.481)<br>$B_{2012}/B_{msy} = 0.92$ (0.71 – 1.26)<br>$F_{2011}/F_{msy} = 1.04$ (0.38 – 1.32)<br>Overfished = yes<br>Overfishing = yes | Rec 13-06:<br>TAC = 24,000t (each year from 2014 to 2016)   | Concerns: considerable uncertainty about stock status and the effect of catch limits on probability of stock rebuilding<br><br>Recommendations:<br><ul style="list-style-type: none"> <li>At current TAC probability of being in green status (<math>F &lt; F_{msy}</math> and <math>B &gt; B_{msy}</math>) would exceed 50% only after 2020;</li> <li>With catch around 20,000 t probability of 50% exceeded by 2015 and 60% exceeded by 2018;</li> <li>Lower catch levels would increase probability of recovery in those time frames;</li> <li>Commission to consider alternative HCRs</li> </ul> |
| Blue marlin<br>( <i>Makaira nigricans</i> )<br>Atlantic stock         | 2011          | MSY = 2,837 t (2,343 – 3,331 t)<br>2014 Yield = 1,981 t<br>$SSB_{2009}/SSB_{msy} = 0.67$ (0.53 – 0.81)<br>$F_{2009}/F_{msy} = 1.63$ (1.11 – 2.16)<br>Overfished = yes<br>Overfishing = yes   | <ul style="list-style-type: none"> <li>Rec 06-09: annual harvest by pelagic LL and purse seines retained for landing must not exceed 50% of 1996 or 1999 landings levels, whichever is greater;</li> <li>Rec 12-04: Reduce total harvest to 2,000 t in 2013, 2014, 2015</li> </ul>                        | Concerns:<br><ul style="list-style-type: none"> <li>significant increases in contribution of non-industrial fisheries to total harvest;</li> <li>these fisheries not fully accounted for in ICCAT database;</li> <li>data limitations preclude analysis of effectiveness of current measures;</li> <li>misidentification of spearfishes in white marlin catches</li> </ul>   |
| White marlin<br>( <i>Tetrapturus albidus</i> )<br>Atlantic stock      | 2012          | MSY = 874 – 1604 t<br>2014 Yield = 361 t<br>$B_{2010}/B_{msy} = 0.50$ (0.42 – 0.60)<br>$SSB_{2010}/SSB_{msy} = 0.322$ (0.23 – 0.41)<br>$F_{2010}/F_{msy} = 0.99$ (0.75 – 1.27); 0.72 (0.51 – 0.93)<br>Overfished = yes<br>Overfishing = Not likely   | <ul style="list-style-type: none"> <li>Rec 06-09: annual harvest by pelagic LL and purse seines retained for landing must not exceed 33% of 1996 or 199 landings levels, whichever is greater;</li> <li>Rec 12-04: Reduce total harvest to 400 t in 2013, 2014 and 2015</li> </ul>                        | Recommendations:<br><ul style="list-style-type: none"> <li>adoption of measures to reduce mortality, such as mandated use of non-offset circle hooks;</li> <li>consider actions to reduce mortality in non-industrial fisheries</li> </ul>   |
| Sailfish<br>( <i>Istiophorus albicans</i> )<br>Western Atlantic Stock | 2009          | MSY = 600 – 1,100 t<br>2014 Catches (prov) = 666 t<br>$B_{2007}/B_{msy} =$ possibly <1.0<br>$F_{2007}/F_{msy} =$ possibly > 1.0<br>Overfished = possibly<br>Overfishing = possibly   | No ICCAT management measures/regulations in effect<br>Some countries have established domestic regulations e.g. release from longline vessels, minimum size restriction, circle hooks and catch and release in sport fisheries  | Concerns: incomplete reporting of catches, especially in recent years – uncertainty in stock assessments<br><br>Recommendations:<br><ul style="list-style-type: none"> <li>all countries landing or having dead discards report to ICCAT;</li> <li>catches should not exceed current levels;</li> <li>adoption of measures to reduce mortality, such as mandated use of non-offset circle hooks;</li> <li>consider actions to reduce mortality in non-industrial fisheries</li> </ul>  |
| Sailfish<br>( <i>Istiophorus albicans</i> )<br>East Atlantic Stock    | 2009          | MSY = 1,250 – 1,950 t<br>2014 Catches (prov) = 786 t<br>$B_{2007}/B_{msy} =$ Likely < 1.0<br>$F_{2007}/F_{msy} =$ Likely > 1.0<br>Overfished = Likely<br>Overfishing = Likely  |   |  |
| Swordfish<br>( <i>Xiphias gladius</i> )<br>North Atlantic Stock       | 2013          | MSY = 13,660 t<br>2014 Yield = 10,801 t<br>2011 Yield = 12,834 t<br>$B_{msy} = 65,060$ (54,450 – 76,700)<br>$F_{msy} = 0.21$ (0.17 – 0.26)<br>$B_{2011}/B_{msy} = 1.14$ (1.05 – 1.24)<br>$F_{2011}/F_{msy} = 0.82$ (0.73 – 0.91)<br>Overfished = no<br>Overfishing = no                              | <ul style="list-style-type: none"> <li>Rec 13-02: establishes a 3-year management plan for the stock; country specific TACs;</li> <li>TAC = 13,700 t (instituted in 2010);</li> <li>Minimum size: 125 cm LJFL with 15% tolerance or 119 cm LJFL with zero tolerance and evaluation of discards</li> </ul> | Note: current TAC has 83% prob. of maintaining stock in rebuilt condition by 2021; TACs up to 14,300 t would still have >50% prob. of maintaining stock in rebuilt condition by 2021 but will result in greater biomass declines – need better direction from Commission on what constitutes “high probability”  |



| Species/Stock  | Last Assessed  | Stock Status   | Current management measures  | Management Recommendations/Concerns  |
|--|--|--|--|--|
| Swordfish<br>( <i>Xiphias gladius</i> )<br>South Atlantic<br>Stock | 2013   | MSY = unknown<br>2014 Yield = 9,885 t<br>2011 Yield = 11,055 t<br>$B_{msy}$ = unknown<br>$F_{msy}$ = unknown<br>$B_{2011}/B_{msy}$ = unknown but likely > 1<br>$F_{2011}/F_{msy}$ = unknown but likely < 1<br>Overfished = no<br>Overfishing = no  | <ul style="list-style-type: none"> <li>Rec 13-03: establishes a 3-year management plan for the stock; country specific TACs;</li> <li><u>TAC = 15,000 t</u> (instituted in 2010);</li> <li>Minimum size: 125 cm LJFL with 15% tolerance or 119 cm LJFL with zero tolerance and evaluation of discards</li> </ul> | Concerns: data quality results in high uncertainty in stock status; insufficient confidence in assessment results to justify change in TAC.  |
| Small Tunas  | 2015<br>Ecological Risk Analysis (ERA) for longline fishery in SW Atlantic   | <i>Scomberomous cavalla</i> , <i>Acanthocybium solandri</i> and <i>S. brasiliensis</i> are of high risk and hence priority for assessment; Medium risk species such as <i>Sarda sarda</i> , <i>Auxis rochei</i> , <i>A. thazard</i> and <i>Euthynnus alletteratus</i> also identified for assessment.  | No regulations;  | <ul style="list-style-type: none"> <li>Work being conducted to develop indicators that could be used to provide management advice;</li> <li>Also SMTYP and tropical tunas tagging programme could contribute to biological data requirements for assessments</li> </ul>  |
| Sharks   | 2015 – Blue shark (N & S Atlantic);<br>2012 – Shortfin mako;<br>2009 – Porbeagle;<br>2012 – ERA for 16 species (20 stocks) | <p>Blue shark (North Atlantic): not likely overfished; not likely experiencing overfishing</p> <p>Blue shark (South Atlantic): undetermined</p> <p>Shortfin mako (North &amp; South Atlantic): not overfished; not experiencing overfishing</p> <p>Porbeagle (NW Atl, SW Atl and NE Atl): overfished; not experiencing overfishing</p> <p>Stocks with <u>lowest productivity</u> were:<br/>Bigeye thresher*<br/>Sandbar<br/>Longfin mako*<br/>Night shark*<br/>Silky Shark (South Atlantic)</p> <p><u>Most vulnerable stocks:</u><br/>Bigeye thresher*<br/>Shortfin mako and Longfin mako*<br/>Porbeagle<br/>Night Sharks*</p> | <p>Submission of shark data to ICCAT is mandatory<br/>Data required on discards – dead or alive and from all ICCAT fisheries (incl recreational and artisanal; purse seines, gillnets, artisanal fisheries; entanglement in FADs)</p> <p>N and S Atl Shortfin mako: Recs 04-10; 07-06; 10-06</p>                 | <p>Recommends:</p> <ul style="list-style-type: none"> <li>precautionary management for stocks with greatest vulnerability and conservation concerns and with little data and high uncertainty in assessment;</li> <li>recent catch levels (2009 to 2013) of S Atl Blue shark should not be increased;</li> <li>catch levels of shortfin mako (N Atl and S Atl stocks) should not be increased with respect to 2006 – 2010 levels until more reliable assessments available;</li> <li>collaborate with other RFMOs and countries for recovery of N Atl porbeagle;</li> <li>collaborate with ABNJ for assessment of S Atl porbeagle; catches of porbeagle should not exceed current catches; prevent new targeted fisheries;</li> <li>encourage release of porbeagles retrieved alive, report all catches and harmonize data collection</li> </ul> |

## **CRFM PELAGIC FISHERIES WORKING GROUP (CRFM PWG): REPORT OF E-TUTORIAL SESSIONS ON COMPLETION OF ICCAT TASK I AND TASK II DATA FORMS**

*Derrick Theophille and Pamela Gibson*

The Second Meeting of the CRFM Pelagic Fisheries Working Group (CRFM PWG) on ICCAT (convened electronically on 18 March 2016), following a cursory review of the ICCAT Task I and Task II forms, agreed that a separate meeting should be convened to review and discuss these forms in detail. The CRFM PWG also agreed to use the DGroup to address specific difficulties in the completion of data forms.

The recommended follow-up meeting was completed in two tutorial sessions convened electronically on 15 April and 06 May 2016 to examine the ICCAT Task I [ST01FC - Fleet Characteristics; and ST01NC - Nominal Catches] and Task II [ST03-T2CE – Catch and Effort; and ST04-T2SZ - Size Sampling (Tunas and Sharks)] forms, respectively.

### **Session 1 - 15 April 2016**

#### **1. Opening**

The Chair of the Pelagic Fisheries Working Group (CRFM PWG) and Fisheries Officer, Commonwealth of Dominica, Derrick Theophille, opened the meeting at 10:05 a.m., Eastern Caribbean Time, and welcomed all to the very important training session. A full list of participants is given at Appendix 1.

#### **2. Adoption of the Agenda**

The draft agenda for the session was reviewed. There were no additions to or deletions from the Agenda, however, it was suggested by the trainer, Louanna Martin, Fisheries Officer, Trinidad and Tobago, that discussion be held in concert with the explanation of the forms, as outlined in Agenda Item 4. The trainer also suggested that fifty minutes be allotted to the first part of Agenda Item 4, pertaining to fleet characteristics and forty minutes to the second part, pertaining to nominal catches. These suggestions were agreed to.

A motion to adopt the Agenda was moved by Tobago and seconded by Dominica (Chair). The Agenda is given at Appendix 2A.

#### **3. Procedural Matters**

The Chair indicated that he will serve as rapporteur for the session.

The CRFM Secretariat's Programme Manager, Research and Resource Assessment (PMRRA), Elizabeth Mohammed, gave an overview of the GoToMeeting facility employed for the session. She also informed the meeting that the session was being recorded.

#### **4. Completion of ICCAT's Task I Data Forms**

After a brief introduction, the trainer, Louanna Martin, proceeded to explain the workings of the Task I data forms; first for fleet characteristics (ST01-T1FC), and then nominal catches (ST02-T1NC). The

forms were divided into two broad sections – a header section and a details section for reporting statistical data. The trainer pointed out that the forms were sometimes updated and urged users to review the forms as soon as they became available (usually at the end of one year for the next year; e.g. end of 2015 for 2016) so as to determine if any changes were made from the previous year’s iteration and if any new data/information was required in order to complete the forms. The trainer then reviewed the general instructions for filling out the forms and also pointed to where further clarifications to the form requirements could be accessed. Examples were given based on Trinidad and Tobago’s experience with the older versions of the forms.

The trainer reiterated that the forms were occasionally revised by ICCAT and therefore persons tasked with filling the forms needed to be vigilant to always utilize the most recent version. Also, it was mentioned that no field on the forms should be left blank, except if it did not apply to the country or fishery in question. ICCAT standard codes, as given in the Codes Worksheet, should be used as far as possible. However, if there was no suitable code and “Others” was selected for a particular field, explicit descriptions about this choice should be provided in the “Notes” section.

The form allowed for preliminary or final versions of data to be reported. The trainer recommended that the ‘Preliminary’ option be selected as this choice allowed for the information to be changed over a three-year period. After the three-year period, changes could only be made via a scientific paper, which must be vetted by the SCRS. Changed data could either be full or partial revisions. The trainer highlighted the importance of the *Notes* section of the forms, which could be used to further explain the fishery, if it did not conform neatly with ICCAT’s pre-specified categories or definitions, or for specifying units of measurements not listed on the form.

The trainer drew the participants’ attention to the ‘Secretariat Only’ section of the form, and noted that this section indicated how ICCAT was monitoring countries’ compliance with the reporting requirements, by recording the date reported. The trainer also explained how the ‘Filter criteria for acceptance/rejection of data reported’ worked, and noted that while this section was completed by ICCAT it provided useful information that helped countries to know if they were meeting the relevant criterion.

Comprehensive explanations on how the ‘details section’ of the form was to be completed were provided, with previously completed forms based on Trinidad and Tobago experience used as illustrations.

*Registering of vessels with ICCAT:* In response to a question pertaining to the registering of vessels with ICCAT, the trainer said that vessels needed to be registered with ICCAT in cases where they were larger than 20 meters Length Over All (LOA) or the vessel was authorized to catch and land certain important species. The list of these vessels should be submitted to ICCAT annually by the country. ICCAT would then create a list of authorized vessels, with each vessel being assigned an ICCAT serial number.

The second form for Task I, nominal catches (ST02-T1NC) was explained. Although both Task I forms were used for different information, the header section was fairly similar. The major difference, though, was that the nominal catches form could account for data spanning multiple years.

The trainer remarked that the species list was revised last year, with some species of sharks having been removed; while this year many other species, such as flyingfish and jacks were added.

*Reporting of zero catches:* In response to a query regarding the inclusion of zero values for catches of species, the trainer explained that a few years ago, ICCAT had adopted a recommendation which stated that species reported on in the past should continue to be reported about on future forms. This was to provide consistency with the reporting country and to leave the possibility open that the species may be

caught again in the future. Failure to consistently report could result in a ban from landing that species. The trainer advised that a zero should be placed for the landed value for the species if it was not caught for that period.

*Nominal versus Estimated Catches:* A question was raised concerning whether the nominal or estimated catches needed to be submitted. The trainer clarified that estimated catches needed to be supplied; however, if only sampled information was available, this needed to be mentioned in the notes section.

*Deadline for submission of completed forms to ICCAT:* In response to a question about the deadline for completed forms to be submitted to ICCAT, the trainer informed that the reporting deadline was 31<sup>st</sup> July.

The PMRRA remarked that the information presented was comprehensive and a lot to process and reiterated the need for persons responsible for completing the forms to familiarize themselves with the data requirements, the codes for the various fleets, species, gears, etc., and to determine how their specific fishery data could best be matched with the ICCAT codes, etc.

*Use of DGroup for follow-up discussions:* The PMRRA added that participants were likely to have further questions following this session as well as the second session and reminded participants that the Dgroup could be used to help countries ask and find answers to questions pertaining to the forms. She urged participants who may not have done so yet to join the DGroup.

## **5. Any Other Business**

There were no items proposed under this Agenda Item.

## **6. Adjournment**

The session was adjourned at 11:37 a.m., Eastern Caribbean Time.

## **Session 2 – 06 May 2016**

### **1. Opening**

The session was called to order by the Chair of the Pelagic Fisheries Working Group (CRFM PWG) and Fisheries Officer, Commonwealth of Dominica, Derrick Theophille at 10:07 a.m., Eastern Caribbean Time. The Chair welcomed back participants to the second session. The list of participants is given at Appendix 1.

### **2. Adoption of the Agenda**

The draft agenda for the session was reviewed. As with the previous session, it was agreed that the same format (discussion be held in concert with the explanation of the forms as outlined in Agenda Item 4) and similar time allotments (40-45 minutes for each form) would be followed.

It was suggested that items on the Scientific Issue of the CRFM Newsletter and a call to CPCs to submit articles related to the subject of the tutorials sessions be included under Any Other Business.

A motion to adopt the amended Agenda was moved by St. Lucia and seconded by Dominica (Chair). The Agenda is given at Appendix 2A.

### **3. Procedural Matters**

The CRFM Secretariat's Programme Manager, Research and Resource Assessment (PMRRA), Elizabeth Mohammed, reminded participants that GoToMeeting facility was being used for the session and advised of the usual procedures regarding use of the facility. She indicated that the session was being recorded and the rapporteur will have access to the recording to aid in the preparation of the meeting report.

The Chair indicated that he will also serve as rapporteur for the session.

### **4. Completion of ICCAT's Task II Data Forms**

After brief greetings, the trainer, Louanna Martin, proceeded to explain the Task II data forms, first for Catch and Effort (ST03-T2CE) and then Size Sampling (Tunas and Sharks) (ST04-T2SZ). The trainer began by noting that no issues had been raised for the Task I forms on the Dgroup, so it was assumed that these forms did not give users too much trouble or were fairly well understood. The format of the Task II forms was similar to the Task I forms, with a header section and a details section. The header section was very similar to that of the Task I form so this was not looked at in detail. However, the data coverage and years of data coverage were pointed out and explained. The catch could be recorded in weight or number of fish. It was noted that the effort multiplier could be used for recording larger values of effort. As indicated previously, the "Notes" section could be used for further clarification on the information entered.

The data captured on the Catch and Effort form was disaggregated by month and gear.

*The level of detail in reporting by non-CPCs to ICCAT:* A query was raised regarding the need for this level of detail to be reported by non-CPCs – was it really necessary? In addressing this query, the meeting was reminded that the tutorial was intended only to share information, to improve knowledge and understanding about the ICCAT data forms and to provide guidance for their proper completion. The types of reports completed and submitted to ICCAT was a management decision for non-CPCs.

*Fishing areas:* Concerning the fishing areas, the trainer said that previously this was reported in a very general way – e.g. Atlantic, Caribbean Sea, etc. However, being aware that ICCAT required that data for the longliners be reported by 5-degree squares, over time Trinidad and Tobago built this into their system by demarcating 5-degree by 5-degree grids on the map and requesting fishers to specify where the fishing activity was conducted. By default, 5 by 5-degree squares were to be used for longliners.

*Fishing effort:* Regarding effort, the trainer pointed out that it was mandatory to include some measure of effort. The default measure of effort for longlines was number of hooks. A question arose as to the format of responses, but the trainer responded that the data format was not rigid, so long as every field was properly filled. It was also possible for countries to copy their database into the spreadsheets.

*Species and species codes:* Another question arose as to the lack of codes for certain species in the forms. The trainer was not completely sure as to the rationale but speculated that some species were probably dropped if they were deemed less important by the ICCAT scientists. The PMRRA mentioned that at the last SCRS meeting that some species codes were removed and others were reinstated.

*Species reported historically:* Again it was reiterated that species reported historically should be retained in the reporting forms, even if the catch was zero. However, the need for entering zeroes was not as burdensome in the Task II forms. The Task I forms would be used for that purpose.

The trainer mentioned that she had never had a need to complete the Size Sampling form (ST04-T2SZ). However, the form did not differ too much from how the other forms worked except that it had a different filter, which indicated that for class sizes with zero catches, reporting was optional. The data captured on this form will be for one calendar year. The trainer drew attention to two fields requesting time period – time period in which the catch was taken and time period in which the sample was taken and as an example said that the catch could be taken in one month and sampled in a next month.

*Recording of level of processing:* There was some discussion about the how the level of processing that may have taken place prior to sampling may be recorded. It was noted that the processed state and conversion factors used for species can be mentioned in the notes section, as this type of information was not available for entry elsewhere on the forms.

*Reporting on size class data:* In response to a query, St. Vincent and the Grenadines and Belize informed that they reported on class size data. The Belize representative also expressed his appreciation of the tutorial since he had been experiencing some difficulties with the particular form. He said that the guidance provided during the session would help him to complete the form.

The Chair also expressed gratitude to the trainer, Ms. Louanna Martin, for taking time out to lead two very informative and useful tutorial sessions.

*Monitoring and evaluation of uptake of training:* The PMRRA once again reminded participants that the DGroup had been set up and it can be utilized to discuss the forms and their uses or any issues that may arise from that use. The PMRRA added that the DGroup was a good way to assess the impact of the tutorial - were people interested; were they engaging meaningfully to better understand the reporting requirements; were countries considering reporting their data to ICCAT, etc. The PMRRA alluded to the possibility of an impact assessment of the training and noted that when there were requests for additional training, it would be useful to be able to demonstrate how the previous training was being used. She also requested that countries inform the Secretariat when they submit data forms to ICCAT so as to contribute to its monitoring and evaluation of use of the training.

## **5. Any Other Business**

### *Scientific Issue of the CRFM Newsletter*

The PMRRA informed the participants that the CRFM had a newsletter, with two issues per year - a management issue and a scientific issue. The management issue was usually released earlier; however, publication of both issues often suffered delays. The scientific issue was usually released in June but had come out in August and even as late as November due mainly to late submission of articles by persons involved in scientific research.

The PMRRA said that this year there was a lot of focus on ICCAT, especially in regard to statistical reporting by CPCs and, as such, the Secretariat wanted to do a spread in the newsletter that looked at the ICCAT CPC's experience (challenges with the data requirements and completing the forms, how they were overcome, etc.) in this regard. The PMRRA advised that Belize and Trinidad and Tobago had committed to submitting articles as a means of assisting and educating other non-CPCs on their

experiences with ICCAT. The PMRRA used the opportunity to ask if St Vincent and the Grenadines would also be willing to do an article. The SVG representatives agreed to contribute an article. The deadline of 16 May 2016 for the submission of articles was noted, but the PMRRA agreed to extend this by a week for SVG.

The PMRRA also expressed sincere thanks to the trainer for delivery of well-prepared, interesting and informative tutorials. The trainer responded that it was her pleasure and noted that delivering the sessions had also helped her to understand the forms and the data requirements better.

## **6. Adjournment**

The meeting was adjourned at 12:03 p.m., Eastern Caribbean Time.

**Appendix 1: List of Participants: E-Tutorial Sessions on Completion of ICCAT Task I and Task II Data Forms**

| Country                        | Name of Representative   | Affiliation  | Email Address  | Session on 15 April | Session on 06 May |
|--------------------------------|--|--|--|---------------------|-------------------|
| Belize                         | Mr. Robert Robinson<br><i>Deputy Director</i>  | Belize High Seas Fisheries Unit, Ministry of Finance | <a href="mailto:deputydirector.bhsfu@gmail.com">deputydirector.bhsfu@gmail.com</a> | Y                   | Y                 |
| Dominica                       | Mr. Derrick Theophille<br><i>Fisheries Officer</i>                                   | Fisheries Division                                   | <a href="mailto:derkjt@gmail.com">derkjt@gmail.com</a>                             | Y                   | Y                 |
| Grenada                        | Ms. Cherene Bowen<br><i>Data Clerk Supervisor</i>                                    | Fisheries Division                                   | <a href="mailto:cherene.bowen@yahoo.com">cherene.bowen@yahoo.com</a>               | Y                   | Y                 |
| Guyana                         | Ms. Ingrid Peters<br><i>Senior Fisheries Officer</i>                                 | Department of Fisheries                              | <a href="mailto:ingridpeters93@gmail.com">ingridpeters93@gmail.com</a>             | Y                   | N                 |
| Jamaica                        | Ms. Anginette Murray<br><i>Marine Researcher/Analyst</i>                             | Fisheries Division                                   | <a href="mailto:anginettetmurray@gmail.com">anginettetmurray@gmail.com</a>         | Y                   | Y                 |
| St. Kitts & Nevis              | Ms. Nikkita Browne<br><i>GIS and Oceanography Officer</i>                            | Department of Marine Resources                       | <a href="mailto:nikkita.browne@yahoo.com">nikkita.browne@yahoo.com</a>             | Y                   | Y                 |
| St. Lucia                      | Ms. Patricia Hubert-Medar<br><i>Fisheries Assistant</i>                              | Department of Fisheries                              | <a href="mailto:patricia.medar@govt.lc">patricia.medar@govt.lc</a>                 | Y                   | Y                 |
|                                | Ms. Cherian Leon<br><i>Statistical Assistant</i>                                     | Department of Fisheries                              | <a href="mailto:cherian.leon@govt.lc">cherian.leon@govt.lc</a>                     | Y                   | Y                 |
| St. Vincent and the Grenadines | Mr. Kris Isaacs<br><i>Senior Fisheries Officer</i>                                   | Fisheries Division                                   | <a href="mailto:kris.isaacs@yahoo.com">kris.isaacs@yahoo.com</a>                   | Y                   | Y                 |
|                                | Ms. Cheryl Jardine-Jackson<br><i>Senior Fisheries Assistant/Data</i>                 | Fisheries Division                                   | <a href="mailto:cejmespo@yahoo.com">cejmespo@yahoo.com</a>                         | Y                   | Y                 |
| Suriname                       | Ms. Tania Tong Sang<br><i>Policy Officer</i>   | Fisheries Department                                 | <a href="mailto:iccatsuriname@gmail.com">iccatsuriname@gmail.com</a>               | Y                   | Y                 |
| Trinidad                       | Ms. Louanna Martin (Trainer)<br><i>Fisheries Officer</i>                             | Fisheries Division                                   | <a href="mailto:lmartin@gov.tt">lmartin@gov.tt</a>                                 | Y                   | Y                 |
|                                | Ms. Janelle Daniel<br><i>Fisheries Researcher</i>                                    | Fisheries Division                                   | <a href="mailto:janelledaniel@gmail.com">janelledaniel@gmail.com</a>               | Y                   | Y                 |
| Tobago                         | Ms Ruth Redman<br><i>Fisheries Development Officer</i>                               | Department of Marine Resources and Fisheries         | <a href="mailto:emlyn24@hotmail.com">emlyn24@hotmail.com</a>                       | Y                   | N                 |
| CRFM Secretariat               | Ms. Elizabeth Mohammed<br><i>Programme Manager, Research and Resource Assessment</i> | Secretariat  | <a href="mailto:elizabeth.mohammed@crfm.int">elizabeth.mohammed@crfm.int</a>       | Y                   | Y                 |



**Appendix 2A: Agenda: First E-Tutorial Session on Completion of ICCAT Task I and Task II Data Forms**

**CRFM PELAGIC FISHERIES WORKING GROUP (CRFM PWG)**

**FIRST E-TUTORIAL SESSION ON COMPLETION OF ICCAT TASK I AND TASK II  
DATA FORMS**

**Electronic Tutorial (Via Goto Meeting)**

**15 April 2016**

**Document 1-01: 13 April 2016**

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**Agenda**

| <b>Item</b> | <b>Title</b>  | <b>Time (Eastern<br/>Caribbean Time)</b> |
|-------------|---|--|
| 1           | Opening of meeting  | 10:00 - 10:05 a.m.                       |
| 2           | Adoption of Agenda  | 10:05 - 10:10 a.m.                       |
| 3           | Procedural matters  | 10:10 - 10:15 a.m.                       |
| 4           | Completion of ICCAT's Task I Data Forms<br>(a) Fleet Characteristics – ST01-T1FC<br>(b) Discussion - form ST01-T1FC<br>(c) Nominal Catches – ST02-T1NC<br>(d) Discussion – form ST02-T1NC | 10:15 - 11:50 a.m.                       |
| 5           | Any Other Business  | 11:50 - 11:55 p.m.                       |
| 6           | Adjournment   | 11:55 – 12:00 p.m.                       |

**Appendix 2B: Agenda: Second E-Tutorial Session on Completion of ICCAT Task I and Task II Data Forms**

**CRFM PELAGIC FISHERIES WORKING GROUP (CRFM PWG)**  
**SECOND E-TUTORIAL SESSION ON COMPLETION OF ICCAT TASK I AND**  
**TASK II DATA FORMS**

**Electronic Tutorial (Via Goto Meeting)**

**06 May 2016**

**Document 1-01: 03 May 2016**

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**Agenda**

| <b>Item</b> | <b>Title</b>   | <b>Time (Eastern Caribbean Time)</b> |
|-------------|--|--------------------------------------|
| 1           | Opening of meeting   | 10:00 - 10:05 a.m.                   |
| 2           | Adoption of Agenda   | 10:05 - 10:10 a.m.                   |
| 3           | Procedural matters   | 10:10 - 10:15 a.m.                   |
| 4           | Completion of ICCAT's Task II Data Forms<br>(e) Catch and Effort – ST03-T2CE<br>(f) Discussion - form ST03-T2CE<br>(g) Size Sampling (Tunas and Sharks) – ST04-T2SZ<br>(h) Discussion – form ST04-T2SZ | 10:15 - 11:50 a.m.                   |
| 5           | Any Other Business<br>(a) Call to ICCAT CPCs to deliver articles related to reporting for the CRFM Newsletter  | 11:50 - 11:55 p.m.                   |
| 6           | Adjournment  | 11:55 – 12:00 p.m.                   |

The CRFM is an inter-governmental organization whose mission is to “Promote and facilitate the responsible utilization of the region’s fisheries and other aquatic resources for the economic and social benefits of the current and future population of the region”. The CRFM consists of three bodies – the Ministerial Council, the Caribbean Fisheries Forum and the CRFM Secretariat. CRFM members are Anguilla, Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago and the Turks and Caicos Islands.

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