

REPORT OF THE MEETING OF THE SUB-COMMITTEE ON STATISTICS*(Madrid, Spain, September 26-27, 2011)***1. Opening, adoption of Agenda and meeting arrangements**

The Sub-Committee on Statistics met at the ICCAT Secretariat (Madrid, Spain) on September 26-27, 2011. The meeting was chaired by Dr. Gerald Scott and Dr. Guillermo Diaz served as rapporteur. The Agenda was accepted and adopted by the Sub-Committee (*Addendum 1 to Appendix 7*).

2. Review of fisheries and biological data submitted during 2011

The Secretariat presented information held in the 2011 Secretariat Report on Research and Statistics related to fisheries and biological data submitted in 2010, including revisions to historical data.

2.1 Task I (nominal catches and fleet characteristics)

Based on the percentage of CPCs that reported data on landings and those that reported data by the deadline, the Sub-Committee recognized that improvements in data reporting had occurred during the past few years. The Sub-Committee therefore requested the Secretariat to prepare some statistics demonstrating the observed improvement in data reporting. The Secretariat also noted an improvement in the reporting of fleet characteristics since 2005. Once again, the Sub-Committee acknowledged the improvement in reporting these data that has traditionally been overlooked by many CPCs and requested the Secretariat to explore the possibility of requesting CPCs the submission of historical fleet characteristic data.

As in previous years, the Sub-Committee once again discussed how to differentiate between non-reporting (no compliance) or the lack of reporting due to no catches. The Sub-Committee discussed the possibility of preparing electronic forms with a default value of 'zero landings' for all species or another suitable alternative, so CPCs only would have to update those species for which they have landings. Although this was viewed as a potential solution, there was some concern about the impact that such approach would have on the ICCAT databases by incorporating very large amounts of observations for 'zero catches'.

The Sub-Committee discussed extensively the deadlines of data reporting requirement. It was noted that the table prepared by the Secretariat that indicated compliance with data submission requirements did not take into consideration the specification of the data needs provided in the species work plans. Therefore, the Sub-Committee requested the Secretariat to review the table based on that information. Furthermore, the Sub-Committee discussed that tables showing compliance with data submission deadlines should only used the July 31 deadline. The Secretariat requested that the species work plans be specific enough with respect to data requests so to facilitate the work of the Secretariat.

The Sub-Committee also noted that although Ghana has reported data prior to the meeting on "Review of Ghanaian Statistics", the Secretariat's table showed that there were some concerns with Ghana's data submission. The Secretariat indicated that Ghana did not use the approved electronic forms for the submission of its data.

The Sub-Committee discussed that reviewing compliance with data submission requirements had resulted in drifting the role of the Sub-Committee from a scientific endeavour toward a role more related to a compliance committee. There was a general agreement that the Sub-Committee should be more involved on reviewing the submitted data for its scientific value for stock assessment purposes instead of only focusing on submission deadlines. The Sub-Committee generally agreed on the need to develop a system to better characterize the quality of the submitted data beyond if they were submitted by the deadline or not and recommended that future work of the Sub-Committee be oriented more toward data quality evaluations.

2.2 Task II (catch & effort and size samples)

Like with Task I data, the Sub-Committee acknowledged the improvements observed in the reporting of Task II data. However, the Secretariat noted that there are still cases when the Catch and Effort data are reported without

reporting effort or with unconventional effort units (e.g., longline effort expressed as number of fishing days). The Secretariat indicated that in these cases the data are still useful because they can be included in the CatDis estimation. However, the Secretariat indicated that in these cases it still follows up with these CPCs to attempt to obtain the correct information.

2.3 Tagging

After the presentation of the received tagging information, the Secretariat clarified that the Moroccan bluefin tuna tagging information was included in the EU Spain data as part of a collaborative project. Uruguay asked the Secretariat about reporting additional tagging information beyond the point of release and recapture such as more detailed information collected by the electronic tags and also maps. Canada informed the Sub-Committee that they have additional tagging information for 2010-2011 that still has to be reported. Similarly, Brazil indicated that it is preparing a comprehensive report with Brazilian tagging activities.

2.4 Trade information

The Secretariat summarized the available Trade-based information in 2011 “Secretariat Report on Statistics and Coordination of Research in 2011”. The Sub-Committee discussed that at present, these data are most applicable for compliance related issues, but that historically, at least for some species, data similar to these have been used to estimate unreported catch. Now that a wider array of species is being tracked, especially through the transshipment observer data, these data should be further evaluated for use in verifying catch reports. To do this, a fuller range of conversion factors for product to whole weight would be needed along with careful evaluation to avoid double counting of the same fish and to account for lags between time of capture and market.

2.5 Other relevant statistics

Observer programs

– Discussion relevant to Rec. [10-10]

The Secretariat presented a table summarizing the information received from different CPCs on their national observer programs. **Table 1** compares the reports received against the number of flag-gear combinations from which such reports might be expected under [Rec. 10-10]. At the time of the Sub-Committee meeting, only a low proportion of responses that could have been submitted have yet been received by the Secretariat. This information will be further reviewed by the 2012 SCRS in order to develop its response to the Commission as called for under [Rec. 10-10].

It was recommended that the Secretariat develop a simple form to be filled out by CPCs to better characterize and compare the different observer programs in addition to the table already developed by the Secretariat. This form should promote improved reporting by CPCs regarding the information requested under [Rec. 10-10].

The Sub-Committee interpreted [Rec. 10-10] to mean that reporting requirements of domestic observer coverage only applied to longline, purse seine, and bait boat fisheries.

The Sub-Committee requested those CPCs that have implemented or are experimenting with monitoring schemes alternative to observer programs for vessels less than 15 m (e.g., cameras, etc.) to present such information to the SCRS in 2012.

– Discussion Relevant to Rec. [10-04]

Information was received on the Moroccan observer program on the trap fishery which has 100% observer coverage. This information was referred to the Bluefin species group for preparation of a response to the Commission on this particular recommendation.

3. Updated report on the ICCAT relational database system

The “Secretariat Report on Statistics and Coordination of Research in 2011” provided an update on the ICCAT relational database system. The Sub-Committee acknowledged the progress made on data bases and noted the following.

E-BFT-VMS data

The Sub-Committee indicated that VMS data from Mediterranean purse seines and other vessels fishing for bluefin tuna could be used to identify spawning grounds. However, as previously indicated by the Sub-Committee, the 6 hr time interval between VMS reports does not have enough resolution to be used for more useful scientific purposes, such as evaluation of PS catch-effort patterns. The Sub-Committee recommended that VMS signals should be reported at no more than two hour interval. The Secretariat indicated that the presented data was filtered so data received from vessels docked in a port were not included. The Sub-Committee encouraged the Secretariat to use algorithms that can identify fishing activities from ‘searching times’. It was also noted that the data presented by the Secretariat showed fishing activities in the Black Sea. The Secretariat clarified that these data could correspond to registered bluefin tuna vessels that were fishing for other species such as small pelagic species.

The Sub-Committee briefly discussed the value of requesting VMS data from other ICCAT fisheries and from VMS associated to FADs.

4. National and international statistical activities

The “Secretariat Report on Statistics and Coordination of Research in 2011” summarized the activities undertaken by the Secretariat regarding international statistical activities.

The Sub-Committee encouraged the Secretariat to continue with these efforts.

5. Report on data improvement activities

5.1 ICCAT-Japan Data and Management Improvement Project

Discussion of the JDMIP activities was deferred to Plenary.

5.2 Data Funds from [Res. 03-21] and other ICCAT funds

The Secretariat presented a series of proposed guidelines to standardize the use of and the process to access these funds. In general, the Sub-Committee agreed that some of the guidelines drafted by the Secretariat were not flexible enough to accommodate the needs of the SCRS. The Sub-Committee proposed that the guidelines for use and access to these funds as provided in *Addendum 2 to Appendix 7*, be further considered by Plenary for adoption.

5.3 Data recovery activities

The “Secretariat Report on Statistics and Coordination of Research in 2011” described a number of data recovery activities undertaken in this year. The Sub-Committee discussed a number of aspects of these activities, as follows.

The Sub-Committee reviewed the major finding of the intersessional meeting that reviewed the Ghanaian fishery statistics. It was recognized that some segments of the Ghanaian fleet seemed to have been underreporting their catches. The inter-sessional meeting indicated that for 2010 Ghana may have underreported a total of 20,000 t of tropical tunas, all species together. Furthermore, during the yellowfin tuna stock assessment carried out in 2011 it was concluded that the corresponding underreporting yellowfin tuna catch would have an impact on the results of the assessment which would result in a worsening of the estimated stock status. Therefore, the Sub-Committee recognized the need to solve this particular issue with respect the Ghanaian Task I reported data. The Sub-Committee was also concerned about the effect of this underreporting with respect to bigeye tuna.

In the case of bluefin tuna landing updates for Turkey and Algeria, there is no documentation supporting the proposed revisions and these data have not been used in any assessments, yet. Therefore, approval of these revisions is pending upon the receipt of supporting documentation. S. Tome submitted revisions for 2005-2007 for several species. This was a reclassification of landings by species, and the amount of total remained the same. Although documentation supporting the changes has been provided by S. Tome, such document has not yet been

reviewed by the SCRS. Pending this review, the Sub-Committee recommended adoption of these revisions since they identified total landings at species level, compared to the aggregated values previously available. The Sub-Committee requested the Secretariat to contact these CPC to request the missing supporting documents.

[Senegal provided new shark landings data from its artisanal fisheries. However, the Sharks working group has not reviewed these data or the supporting document yet. Pending that review, the Sub-Committee recommended adoption of these revisions as they are at the species level and provide much finer resolution than previously available].

Revisions or new submission

– C&E data

Regarding the updates to the C&E data base, it was questioned if the different flags proposing revisions provided documentation supporting the changes to be made. The Secretariat indicated that, in some cases, the changes corresponded to data that was reported as NEI and then reclassified with a flag. This information is not new, and it has been used in past assessments as NEI (PS and BB only). In the case of Venezuela, the updated data corresponded to data that was resubmitted using the electronic forms. The changes to the Ghanaian data are pending approval by the species group, but these data were used in the most recent yellowfin stock assessment in sensitivity runs. EU-Portugal (mainland) submitted a revision of data (LL) now reported by 1x1, but there is no supporting documentation yet available. The Sub-Committee recommended that this finer-scale data be admitted to the data base, pending adequate documentation. In summary, the revised data submitted by Venezuela, Trinidad Tobago, and EU-Portugal is missing the supporting documentation and, therefore, it cannot be incorporated to the ICCAT database yet, although the Sub-Committee recommended these data revisions be incorporated into the database as soon as adequate documentation is made available.

– CAS or Size data

During the Yellowfin Tuna Stock Assessment Session, Japan submitted revised CAS of YFT-LL for the period 1995-2010. Documentation supporting the review of the data was also provided during the YFT assessment in an SCRS document. The Sub-committee inquired if the newly applied methodology could be extended to other species caught by the Japanese longline fleet and recommended that Japanese scientists consider if the methodology used for yellowfin tuna is also appropriate for other species.

5.4 BFT-E Observer data

These data should be reported by the company in charge of the observer program during the Bluefin Tuna Species Group meeting and as such, was not commented upon by the Sub-Committee.

5.5 Weekly catch reports

The Sub-Committee considered this a compliance issue, although the data may provide some basis for validation of recent year catch for use in projections.

5.6 Transshipment observer data

Transshipment observer data has been used in the past for bigeye tuna to identified IUU. It was noted that the data is reported using a variety of product types (fillet, etc.). The Sub-Committee indicated that there is a need to develop conversion factors and to identify method to avoid double counting the same fish. It was indicated that in the development of such conversion factors it will be necessary to take into consideration that these factors are most probably fleet specific. The Sub-Committee also requested clarification of the different product definition. It was suggested that an analysis of using transshipment data to validate landing and to identify the limitation of these approach should be conducted by the trade specialists.

The Sub-Committee was concerned regarding commenting on issues that are related more to compliance than to science being the transshipment data one of them. The Sub-Committee emphasized the need to look at these data as a scientific tool instead of using them to make compliance determinations.

6. Review of publications and data dissemination

The “Secretariat Report on Statistics and Coordination of Research in 2011” provided a summary of publications and data dissemination efforts over this year. The Sub-Committee acknowledged this work and approved the progress made.

6.1 Review of the results of the ICCAT-ALR publication agreement

The Sub-Committee recommended that the ICCAT-*Aquatic Living Resources* publication agreement be continued.

6.2 Development of sharks and other species identification sheets

The Sub-Committee was informed that the shark identification sheets would be available in the coming week. The Sub-Committee applauded the progress made on this topic and remained anxious to view the final product. The Sub-Committee agreed with the recommendation from the Billfish Species Group to develop ID cards for Istiophorids.

7. Review of progress made for a revised ICCAT manual

The Sub-Committee supported the Secretariat’s proposal to contract out the development of the LL gear chapter of the ICCAT manual. The Sub-Committee agreed with the recommendations to update the description of white marlin and spearfishes (RSP, *Tetrapturus georgei*, SPF, *Tetrapturus pfluegeri*) and to expand the description of several shark species to the corresponding chapter.

8. Consideration of recommendations from 2011 inter-sessional meetings

Addendum 4 to Appendix 7 contains the Recommendations from Inter-sessional Meetings referred to the Sub-Committee. Discussion points raised by the Sub-Committee are reported below.

8.1 Recommendations of the Working group on the organization of the SCRS

The Sub-Committee endorsed the recommendations of the working group. The Sub-Committee noted in particular, the following:

– *Increase analytical and data base management support at the Secretariat.*

The recommendations for increased data base, analytical, and by-catch coordination support were endorsed by the Sub-Committee and were recommended to Plenary. These positions should be included in the 2012 Budget of the Secretariat, but because the proposed budget was already circulated in July and only included the by-catch coordinator position, it presents a difficulty. The timing between preparation of the Budget and the identified needs of the SCRS needs to be better coordinated. The Sub-Committee recommended the SCRS Chair and Executive Secretary consult on procedures to avoid such difficulties.

– *Quality assurance and transparency*

The Sub-Committee endorsed the recommendations for use data fund to contract help to develop stock assessment documentation during meetings and to invite experts from other tRFMOs to participate in our stock assessments.

8.2 ICCAT-GBYP Symposium on Trap Fisheries for Bluefin Tuna

The Sub-Committee could not endorse the recommendation to keep traps open after quotas were achieved without further consideration and justification offered by the Bluefin Tuna Species Group.

8.3 Tropical Tuna Species Group Inter-sessional Meeting on the Ghanaian Statistics Analysis (Phase II)

The Sub-Committee endorsed the recommendations of the Ghanaian statistics working group and recommended Plenary to adopt them.

8.4 Atlantic Yellowfin Stock Assessment Sessions

The Sub-Committee discussed and endorsed the recommendation to use market based information to validate logbook catch reports and recommended expanding such approaches to other species, when such information is available.

8.5 Sharks Data Preparatory Meeting for the Application of the Ecological Risk Assessment

The Secretariat indicated that the tagging database was missing a number of shark tagging information from the United States, and they are currently working directly with scientists from this CPC to solve this issue. The Sub-Committee agreed that these data should be acquired as soon as possible and inquired if the reporting of tagging data should still be done through a CPC's tagging correspondents. In response, the Secretariat indicated that there was still a list of tagging correspondents, but it should be reviewed and updated as appropriate with the help of the CPCs.

The Sub-Committee also asked for clarification with respect to the recommendation of exploring methods to estimate shark catches from purse seines fisheries. It was indicated that there are some publications that indicated the existence of shark by-catch in purse seine fisheries, and therefore the need to quantify these catches since the majority of shark catch information is only from longline fisheries. The Sub-Committee recommended that such estimates should be incorporated into the ICCAT data base as soon as possible.

8.6 Inter-sessional Meeting of the Sub-Committee on Ecosystems

The Sub-Committee recommended that the Sub-Committee on Ecosystems should continue to develop the protocols for collection of by-catch data.

The Secretariat asked about what species will be considered as "by-catch" for the purpose of reporting. The Sub-Committee on Ecosystems pointed out the lack of consensus on a "by-catch species". The Sub-Committee on Statistics indicated that the focus should be on quantifying the total catch regardless of if a particular species is considered target catch or by-catch.

8.7 GBYP Steering Committee Meeting

It was indicated that in the case of bluefin tuna there is a precedent that requires a minimum of 10% sampling. It was indicated that for some large fisheries a 10% sampling effort might not be necessary and instead of quantity it is more important to obtain representative samples from the different fishery strata.

The Sub-Committee reiterated that there is a need to quantify the quality of the information reported and the quality/representativeness of size samples from different fisheries is a question that fits within this issue. It was commented that a 10% sampling could be adopted as a general rule that could be revised on a fisheries basis. It was also indicated that for the future analysis to better characterize the level of sampling that will provide information to improve management recommendations should be conducted. However, this decision still does not address the problem of assuring that the collected samples are representative.

8.8 2011 Blue Marlin Stock Assessment Session and White Marlin Data Preparatory Meeting

There is information available on marlin by-catch by European purse seine fisheries which could be used to validate the information that has already been reported to ICCAT. It was indicated that using observer data estimates of total marlin by-catch in this fishery have been obtained; however, the estimates have a large level of uncertainty.

The Sub-Committee also indicated that a recommendation emphasizing the need to report live releases could be included to the list of general recommendations.

9. Implication of data deficiencies

9.1 Current data catalogues of major species by stock

The Secretariat presented to the Sub-Committee the updated data catalogues (**Table 2**). The Sub-Committee indicated that cross checking Task I landing with size reports is a good approach to identify data deficiencies.

9.2 Implications of identified deficiencies in future stock assessments

The Sub-Committee agreed that these deficiencies should be discussed by each species group, particularly by those that conducted an assessment in 2011.

9.3 Proposals for data recovery plans and improvement on data collection systems

There was a recommendation of improving data sharing and collection from entities that collect data on Mediterranean albacore. Similarly, there was a proposal to continue with efforts to collect shark historical data.

10. Review of existing data submission formats and procedures

The Sub-Committee discussed the need of forms to submit seabird, sea turtle, other by-catch, and observer data. It is expected that this task will be taken by the by-catch coordinator. The Secretariat indicated that it only received observer data from one CPC. The Sub-Committee recommended that CPCs report observer data to help the Secretariat to develop electronic forms for the submission of this type of data. The Sub-Committee approved the Secretariat's recommendation of adding spearfish to the list of main ICCAT species.

11. Future plans and recommendations

11.1 Infrastructure and technology

The Group acknowledged the important improvements carried out by the Secretariat with respect to infrastructure and related support. It noted that additional improvements to the databases should be pursued.

11.2 Data bases

Documentation of database structures and data quality issues that are not to be addressed in 2011-2012 are a reflection of the Secretariat's increasing work load. It was suggested that if the Secretariat increases accessibility to the data bases, the species working group could do their own data extractions and therefore allowing the Secretariat to focus their effort on other areas. The Secretariat commented that increasing data accessibility and developing the corresponding documentation is a time consuming task and that the current ICCAT schedule does not permit the Secretariat to conduct this type of work. However, the Secretariat is slowly moving into that direction. The Secretariat also indicated that because the data base documentation is not completed it will be difficult for scientists that are not familiarized with the details of the data bases to extract the proper data for particular analysis. This particular situation emphasizes the recommendation of the Sub-Committee on the need to provide more support to the Secretariat in the form of more staff.

12. Other matters

12.1 Third Joint Meeting of the Tuna RFMOs (Kobe III)

The SCRS Chair presented to the Sub-Committee information on the last Kobe III meeting held in La Jolla, USA, in July of the present year. The explanation of the Chair focused on the science discussions in the meeting. The discussions focused on the review of past Kobe recommendations on science, the Joint Technical Working Group on By-catch, and specific issues to be considered by the Kobe III participants. The Technical Working Group prepared a work plan that included the harmonization of data collection among tRFMOs, identification guides, and release protocols among tRFMOs and to develop a centralized by-catch data base. The specific science issues that were discussed during the meeting included data confidentiality rules and addressing common issues in RFMO's scientific bodies. The Secretariat indicated that it has already been contacted by the joint

technical working group on by-catch to request information on the ICCAT by-catch metadata base in order to integrate it into a common system (BMIS) and it is pending SCRS approval for this activity. The Sub-Committee recommends Plenary that this activity be conducted as soon as possible.

12.2 Sport fishing information

The Sub-Committee inquired if the Secretariat has received any more information on sport fishing. The Secretariat indicated that some CPCs continue reporting their sport fishing catches which could be reported to the Commission. In addition, the Secretariat indicated that no new questionnaires with sport fishing information have been submitted by any CPC.

In view of this, the Sub-Committee updated a response to the Commission drafted by the 2010 Committee, but which was not taken up by the Commission's Working Group on Sport and Recreational Fishing (*Addendum 4 to Appendix 7*).

13. Adoption of the report and closure

After review by the Sub-Committee, the report was adopted and the meeting was closed on 27 September 2011. The Convener thanked all participants for their work.

Table 1. Metiers for which observer programs might be expected under the definitions of Rec [10-10]. Green shaded cells represent metiers for which reports responsive to Rec [10-10] have been received and reviewed at the Sub-Committee on Statistics meeting in 2011. Blank cells represent metiers for which such reports might be expected based on recent (2000s) reported catches for these flag-gear combinations indicated. Grey cells indicate flag-gear combinations for which no recent (2000s) catches have been reported and therefore such reports are not expected. This information is not necessarily applicable for compliance issues.

Status	Flag	GearGrp				Status	Flag	GearGrp			
		BB	LL	PS				BB	LL	PS	
CP	Algerie					CP	Guinée Conakry				
	Angola						Iceland				
	Barbados						Japan				
	Belize						Korea Rep.				
	Brasil						Libya				
	Canada						Maroc				
	Cape Verde						Mexico				
	China P.R.						Namibia				
	Côte D'Ivoire						Norway				
	Croatia						Panama				
	Egypt						Philippines				
	EU.Bulgaria						Russian Federation				
	EU.Cyprus						S. Tomé e Príncipe				
	EU.Denmark						Senegal				
	EU.España						Sierra Leone				
	EU.Estonia						South Africa				
	EU.France						St. Vincent and Grenadines				
	EU.Germany						Syria Rep.				
	EU.Greece						Trinidad and Tobago				
	EU.Ireland						Tunisie				
	EU.Italy						Turkey				
	EU.Latvia						U.S.A.				
	EU.Lithuania						UK.Bermuda				
	EU.Malta						UK.British Virgin Islands				
	EU.Netherlands						UK.Sta Helena				
	EU.Portugal						UK.Turks and Caicos				
	EU.Sweden						Uruguay				
	EU.United Kingdom						Vanuatu				
	FR.St Pierre et Miquelon						Venezuela				
	Gabon						NCC	Chinese Taipei			
Ghana					Colombia						
Guatemala					Guyana						
Guinea Ecuatorial					Netherlands Antilles						

SUB COM STATS

30 CP	Venezuela	LL	T1	192	24	25	35	23	51	84	86	2	2	4	73	101	68	60	45	74	11	7	9	30	12	25	29	46	48	15	19	5	8	16	34	0,23%	96,81%	30																									
30 CP	Venezuela	LL	T2																									28	11																																		
31 CP	U.S.A.	RR	T1																									6	11	5	21	16	2	22	6	25	61	53	68	76	32	67																					
31 CP	U.S.A.	RR	T2																									6	14																																		
32 CP	Mexico	LL	T1																									6	14																																		
32 CP	Mexico	LL	T2																									28	11																																		
33 CP	Senegal	GN	T1																									28	11																																		
33 CP	Senegal	GN	T2																									28	11																																		
34 CP	Vanuatu	LL	T1																									35	29	14																																	
34 CP	Vanuatu	LL	T2																									26	17%	97,54%	34																																
35 NCO	Cuba	UN	T1																									23	27	16	50	86	7	7	7	7																											
35 NCO	Cuba	UN	T2																									26	0,17%	97,71%	35																																
36 CP	Côte D'Ivoire	LL	T1																									25	30																																		
36 CP	Côte D'Ivoire	LL	T2																									25	0,16%	97,88%	36																																
37 CP	Barbados	LL	T1																									33	16	16	12	13	19	10	19	24	39	34	23	36	17	13																					
37 CP	Barbados	LL	T2																									22	0,15%	98,02%	37																																
38 NCO	Liberia	UN	T1																									5	38	34	53																																
38 NCO	Liberia	UN	T2																									24	16	30	19	35	3	7	14	26	28	28	28	28	28																						
39 CP	EU.Portugal	HL	T1																									6	7	10	5	7	10	15	45	11	20	23																									
39 CP	EU.Portugal	HL	T2																									21	0,14%	98,30%	39																																
40 NCO	Grenada	UN	T1																									56	5	1	2	3	13																														
40 NCO	Grenada	UN	T2																									4	15	15	42	84																															
41 CP	St. Vincent and	LL	T1																									22	22	7	7	7																															
41 CP	St. Vincent and	LL	T2																									20	0,13%	98,56%	41																																
42 CP	EU.France	PS	T1																									30	28																																		
42 CP	EU.France	PS	T2																									0	1																																		
43 CP	Panama	LL	T1																									17																																			
43 CP	Panama	LL	T2																									17	0,11%	98,80%	43																																
44 CP	Philippines	LL	T1																									1	4	44	5																																
44 CP	Philippines	LL	T2																									8	22	28																																	
45 CP	Maroc	PS	T1																									14	4	3	8	5	7	98	10	10	11	22	9	1	1	1																					
45 CP	Maroc	PS	T2																									14	0,09%	98,99%	45																																
46 CP	U.S.A.	TW	T1																									9	42	24	16	24	25	20	8	6	8	11	3	4	6	8																					
46 CP	U.S.A.	TW	T2																									13	0,08%	99,07%	46																																
47 NCO	Cuba	LL	T1																									278	227	254	410	206	162	636	910	832	87	47																									
47 NCO	Cuba	LL	T2																									10	3	3	2	2																															
48 NCO	Seychelles	LL	T1																									10																																			
48 NCO	Seychelles	LL	T2																									10	0,06%	99,21%	48																																
49 CP	Venezuela	GN	T1																									2	5	2	2	5	9	9	11	9	30	21	14	9	9	16	7	7	7	11	6	5	7														
49 CP	Venezuela	GN	T2																									9																																			
50 CP	EU.Ireland	LL	T1																									9																																			
50 CP	EU.Ireland	LL	T2																									9	0,06%	99,33%	50																																
51 CP	U.S.A.	UN	T1																									25	12	3	17	23	22																														
51 CP	U.S.A.	UN	T2																									26	12	9	4	1	2	8	5	7	11	8	9	9	7	7																					
52 CP	Maroc	TP	T1																									1																																			
52 CP	Maroc	TP	T2																									3	5	1	3	34	5	21	2	11	12	7	5	2	13	3	7	4	7	3																	
53 CP	EU.Portugal	UN	T1																									5	4	3																																	
53 CP	EU.Portugal	UN	T2																									6																																			
53 CP	Senegal	HL	T1																									1																																			
53 CP	Senegal	HL	T2																									1	6	6																																	
53 CP	Senegal	TR	T1																									6																																			
53 CP	Senegal	TR	T2																									6	0,04%	99,56%	53																																
56 CP	U.S.A.	PS	T1																									5																																			
56 CP	U.S.A.	PS	T2																									5	0,03%	99,60%	56																																
57 CP	UK.British Virgi	LL	T1																									4	4	7																																	
57 CP	UK.British Virgi	LL	T2																									4	4	7																																	
58 NCO	Faroe Islands	LL	T1																									5	4																																		
58 NCO	Faroe Islands	LL	T2																									5	0,03%	99,65%	58																																
59 CP	EU.Ireland	TW	T1																									4	18	1	3	5	12	1	1	2	2	2	1	1																							
59 CP	EU.Ireland	TW	T2																									4	0,03%	99,68%	59																																

Agenda of the Sub-Committee on Statistics

1. Opening, adoption of Agenda and meeting arrangements
2. Review of fisheries and biological data (new and historical revisions) submitted during 2011
 - 2.1 Task I (nominal catches and fleet characteristics)
 - 2.2 Task II (catch & effort and size samples)
 - 2.3 Tagging
 - 2.4 Trade information (BFT Catch Documentation Scheme; SWO/BET Statistical Documents)
 - 2.5 Other relevant statistics (North Atlantic detailed data including discards and effort statistics)
3. Updated report on the ICCAT relational database system
4. National and international statistical activities
 - 4.1 International and inter-agency coordination and planning (FAO, CWP, FIRMS)
 - 4.2 National data collection systems and improvements
5. Report on data improvement activities
 - 5.1 ICCAT/Japan Data and Management Improvement Project
 - 5.2 Data Funds from [Res. 03-21]
 - 5.3 Data recovery activities
 - 5.4 BFT-E VMS data
 - 5.5 BFT-E observer data
 - 5.6 BFT-E weekly catch reports
 - 5.7 Transshipment observer data
6. Review of publications and data dissemination
 - 6.1 Review of the results of the ICCAT-Aquatic Living Resources publication agreement
 - 6.2 Development of sharks identification species sheets
7. Review of progress made for a revised ICCAT Manual
8. Consideration of recommendations from 2011 inter-sessional meetings
9. Evaluation of data deficiencies pursuant to [Rec. 05-09]
 - 9.1 Current data catalogues of major species by stock
 - 9.2 Implications of identified deficiencies in future stock assessments
 - 9.3 Proposals for data recovery plans and improvements on data collections systems
10. Review of existing data submission formats and procedures
 - 10.1 Formats and e-FORMS improvement (to account for current fishery practices)
 - 10.2 Improvements to the ICCAT coding system
 - 10.3 Rules applied to historical data revisions
 - 10.4 Rules used to determine deadlines for submitting statistics
 - 10.5 Other related matters
11. Future plans and recommendations
12. Other matters
13. Adoption of the report and closure

Protocols to Follow for the Use of Data Funds & Other ICCAT Funds

Introduction

Among the existing ICCAT funds, some like those available in the JDIMP or the EU Fund for Capacity Building, have their own user protocol defined by the Steering Committee or by the terms of reference of the corresponding contracts. In other cases, the Secretariat establishes the criteria in collaboration with the SCRS.

Considering that these funds were created to support the active participation in the work of the SCRS of scientists of countries with less resources, this document aims to define the objectives of funding and to establish protocols for more fluid and productive usage. The proposal has been developed based on the most recent recommendations and requirements of the SCRS.

The lines defined in this document and the protocols established will be applied to those funds available that do not have their own protocol.

Use of funds

Three large groups are considered: Improvement of Statistics, Capacity Building, and Supporting Work of the SCRS

1. Improvement of statistics

The improvement of statistics can be considered at various levels:

1.1 Recovery of historical data. The reconstruction of historical data series is fundamental, both for the overall assessment of the resources, and for the analysis of fishery dynamics. This section would include:

- Data searches and incorporations from various sources.
- Computerization of the data (e.g., logbooks) which are available in other formats (in paper copy, etc.).
- Data analysis, including sampling systems, observer programs, etc.

1.2 Development of support material. Sampling and observer programs require additional information such as observer manuals, species identification sheets, etc. The funds could be used for the preparation and publication of this material.

1.3 Development of programs for data entry and processing. The development of data entry and processing programs is essential and the funds should finance this work.

In any of the abovementioned sections, and if so warranted, the funds can be applied to hire experts or to finance the travel expenses of the Secretariat's staff to carry out tasks to support the work teams involved. These tasks can be achieved through data analysis, support *in situ* for the collection of information and sampling, observers, development of support material, development of data processing programs, etc.

These funds would also be used to finance the participation of scientists from countries that do not have their own means to be able to participate in the SCRS meetings.

Protocol for the allocation of funds

To finance the improvement of statistics the following conditions must be met:

1. There should be an explicit recommendation from the SCRS or a formal approval by the SCRS Chair on the need and/or interest of the data to be recovered, development of support material and/or development of the data processing programs, i.e. explicitly referring to the identification of the period to be recovered, the fishery, type of data, type of support material, data processing programs, etc.

2. The SCRS, through the corresponding Species Groups and the Sub-Committee on Statistics (SC-STAT), or the SCRS Chair will develop a work plan.
3. The SCRS or the SCRS Chair will define the procedure to carry out the work plan (e.g., hiring of experts, funding local teams, etc.).
4. The Secretariat will facilitate the process defined in the work plan.
5. The decision on the selection/approval of the projects and contracting experts will be made by the SCRS or the SCRS Chair. The selection of the experts will be made by the Secretariat after consulting the SCRS Chairman and, if contemplated in the defined procedure, with a Selection Committee.

The conditions for financing the participation of scientists at SCRS would be the following:

1. Pertain to developing countries that do not participate by their own means.
2. Present a request, within a deadline defined in the protocol approved by the SCRS in 2010, including a detailed description of the applicant's contribution to the meeting.
3. The Secretariat will process the request and, after obtaining agreement from the rapporteurs of the Species Groups involved and/or from the SCRS Chairman, will carry out the necessary procedures in accordance with the protocol approved by the Committee.
4. The invited scientists are expected to participate actively in the meeting and likely present scientific documents.

2. Capacity building

The Working Group on the Organization of the SCRS noted a decreasing trend in the participation of scientists of CPCs in the work of the SCRS and stressed the need to strengthen their active involvement in this work. One of the causes pointed out by the Group referred to the increasing complexity of the models used and the difficulty to access them. Faced with this, the Group stressed the need to establish capacity building policies which continually develops skills that will result in an overall understanding of the assessment procedures that are carried out within the SCRS.

In this sense, the third meeting of tuna RFMOs insisted on the need to coordinate efforts among the different organizations to develop a more efficient training policy.

In line with these recommendations, the funds could be used to:

- 2.1 *Develop training programs structured by levels and impart training courses.*
- 2.2 *Develop supporting learning materials (manuals, applications, web pages, etc.).* This section could include both the development of specific applications such as the payment of fees for the use of the material already developed, as well as potential expenses linked to a tutorial in training modules.
- 2.3 *Exchange of scientists between research centres.* In 2011, for the first time, a scientist from a developing country spent training time at the IRD-IFREMER centre in Sète.
- 2.4 *Finance the participation at the SCRS meetings of scientists from countries which do not have their own means to support the participation of this scientist in the meetings.*

The financing of participants at training courses will be limited to scientists from countries which do not have their own resources to support its participation. However, the funds can be applied towards hiring experts to give courses and/or to develop the learning material, independent of the degree of development of their country of origin.

Protocol for the allocation of funds related to Capacity Building

1. A training course may be requested by a developing Country and/ or may be proposed by the SCRS;
2. When requested by a developing country, a work plan for the training Course should be submitted for the approval by the SCRS or by the SCRS Chair. When proposed by the SCRS, the corresponding Species Groups and/or the Sub-Committee on Statistics will develop a work plan.
3. The SCRS or the SCRS Chair with the Secretariat will define the procedures to carry out the work plan (e.g., hiring of experts, funding local teams, etc.), in coordination with the relevant developing State.
4. The Secretariat will facilitate the process defined in the work plan.
5. The decision on the selection/approval of the projects and contracting experts will be made by the SCRS Chairman, in coordination with, if contemplated in the defined procedures, a Selection Committee and in consultation with the Secretariat.

In the case of a request for a stay at research centres, the protocol shall remain the same as above; however it will include some additional conditions:

- The request, which must be presented at least two months before initiating the stay, should include:
 - a) A justification supporting the stay and a work plan describing the activities to be undertaken.
 - b) A letter of consent from the director of the center where the researcher works.
 - c) A letter from the director of the center accepting the scientist's stay.
 - d) In case a visa is required, the applicant should negotiate it directly with the country of the center where he/she will carry out the stay.
 - e) ICCAT will not provide any health and/or accident insurance during the stay).
- Following the stay, a document must be presented to the SCRS including a detailed description of the work carried out during the stay and the results obtained.

3. Support the work of the SCRS

One consequence of the decreasing participation of CPC scientists at SCRS meetings is that the Secretariat has increased its participation during the meetings of the SCRS, which went from supporting the work carried out by the SCRS scientists to, in some cases, carrying out a major part of the assessment work. This situation does not correspond with the philosophy of the work of the SCRS or with the structure and means which the Secretariat has available. This preparatory work would be particularly indicated in the application of integrated or similar statistical models which require a large volume of data. The current ICCAT funds could support the work of the SCRS in different ways:

- 3.1 *Contracting experts to develop models, analysis, data preparatory work, and/or participate in the assessments.*
- 3.2 *Financing the participation of external experts at the SCRS meetings.* In the case that the expert is associated with a tRFMO, such participation would have a double benefit of a peer review (ICCAT Performance Review recommendation) and encouraging the coordination and exchange among tuna RFMOs (Kobe III recommendation).

As in the section above, financing could be applied to any expert who meets the required conditions.

Protocol for the allocation of funds

1. The SCRS Chair, after consultation with the appropriate subsidiary body of SCRS, should specify the profile of the experts in detail, the work to be carried out and, in some cases (e.g., for peer review) provide the Secretariat with a list of potential reviewers.

2. The SCRS Chair, after consultation with the appropriate subsidiary body of SCRS and in consultation with the Secretariat, will define the procedure to carry out the work plan (e.g., hiring of experts, funding local teams, etc.).
3. The Secretariat will facilitate the process defined by the SCRS or SCRS Chair.
4. The decision on the selection/approval of the projects and/or contracting experts will be made by the SCRS or the SCRS Chair. The contracting of the experts will be made by the Secretariat after consulting the SCRS Chairman and, if contemplated in the defined procedure, with a Selection Committee.

Addendum 3 to Appendix 7

Recommendations from Inter-sessional Meetings Referred to the Sub-Committee on Statistics

2011 ICCAT South Atlantic and Mediterranean Albacore Stock Assessment Sessions

- The Group recommended continuing the work towards integrating the various growth estimate attempts for the Mediterranean albacore. If possible, by including the original datasets in the various works being published so far.
- It was recommended to further investigate on the nature and magnitude of the historical trap catches of albacore in southern Portugal, as well as implications for the assumed stock structure.
- The Group noted that information on some albacore fisheries exists (e.g. FAO, GFCM, Eurostat) which is not incorporated into the ICCAT database. Moreover, the group detected some datasets with either too small (<30 cm in 2009) or too large (>150cm) individuals reported, or important catches by “unclassified” gears. The group emphasizes the need for complete and accurate Task I and Task II data from the main fisheries catching albacore in the Atlantic and the Mediterranean in order to be able to give adequate management advice. Thus, it recommends that all CPCs make an effort to revise the available information and submit it to ICCAT, following the ICCAT standards, before the next assessment.

Meeting of the Working Group on the Organization of the SCRS

Secretariat support for SCRS

- **Further additions to data management staff at the Secretariat should be made to assure that current and future demands, which are likely to increase further, for rapid processing and summarization of the needed information sets is possible.** The pace of increasing demand on just the database management aspects for the Secretariat has occurred at double the rate of the addition of staffing to deal with the increased workload of the Secretariat. This is especially true since the mid-2000s with rapid increases in the amount of information the Secretariat is expected to process and rapidly summarize.
- **Given the success realized following the requirement that Task I and II data be submitted in specific electronic formats, a similar requirement for compliance information should be implemented.** Although compliance issues are not normally within the purview of the SCRS, it is clear that the workload associated with compliance monitoring, compounded by the fact that the vast majority of compliance documentation is submitted in paper/pdf rather than in a standard electronic format, has adversely impacted the ability of the Secretariat to fulfil SCRS data processing needs in a timely and complete manner.

Quality assurance and transparency

- **In support of further quality assurance and transparency, a checklist for stock assessment documentation should be developed and implemented to improve the current situation and allow easy location of the model inputs, software, and outputs (including the underlying data supporting tables and figures).** As the complexity of stock assessment workshops has increased, the amount of documentation needed to support the management advice provided to the Commission has increased. There is wide variability in the quality and quantity of documentation, including the basic input data, models applied, and outputs from the assessments. In addition, stricter guidelines streamlining reports (both detailed and executive summaries) need to be implemented in order to improve the quality of the documentation and advice provided.

- **Collaboration between tRFMOs scientific committees should be further enhanced as such collaboration provides a good basis for quality assurance through peer review and exchange of expertise and experience.** In line with the outcomes of the Kobe2 (Barcelona) discussions, benefits from joint, horizontal working groups devoted to cross-cutting issues such as seabird by-catch and data standardizations issues, should be pursued.

ICCAT-GBYP Symposium on Trap Fisheries for Bluefin Tuna

- The historical data series from the tuna trap fishery archives that have been recovered in the last two years provide an important improvement of the ICCAT data base. The Symposium recommends that further details be made available by national scientists, for a better understanding of the natural fluctuations of the stock, and to improve the standardised CPUEs taking into account the most relevant variables.
- It is also recommended that these traps be considered as “ICCAT Tuna Observatories”, by increasing their full cooperation with ICCAT and its scientific programs, by providing full access to their detailed catch and effort data, by providing that biological sampling can be carried out, and by allowing the tag and release of bluefin tunas.
- For standardizing the CPUE series from trap fisheries, it is recommended that:
 - Records be kept of landed fish as well as released fish from the traps.
 - Records be kept of size and/or age information of the fish caught, and indices be developed by age or age groups if there are changes in the size distribution of fish caught in the traps.
 - Regional-wide studies be promoted on the trends of catch rates at size-age from different tuna traps.
- The Symposium participants also recommended that these traps be kept open for a time period long enough to maintain the consistency of their long-term statistical series.

Tropical Tuna Species Group Inter-Sessional Meeting on the Ghanaian Statistics Analysis (Phase II)

- The Group recognized the extraordinary work conducted by Ghanaian scientists with very limited resources for sampling and collection of fishery statistics corresponding to the Ghanaian fleet fishing tropical tunas. However, taking into consideration the relevance of tropical tuna catches landed in Tema by this fleet and fleets of other nationalities and the very limited material and human resources currently available, the Group remains concerned. While some positive steps have been taken Ghana to address staffing and infrastructure issues previously identified by SCRS, current levels are not yet sufficient to fully meet data collection obligations for Task I and II statistics for the overall fleet.
- The Group found that for several fleet segments, very little sample data were available and only partial or no total annual catch was available through official data collection mechanisms. The behaviour of certain segments of the fleet, which includes transfer of catch at sea to carrier vessels for landing at various ports, prevents adequate sampling of catch (by gear) and makes access to logbooks at port, difficult, if not impossible, to achieve for some fleet segments. While the Group made attempts to estimate catch and size characteristics for those fleet segments, these estimates remain highly uncertain. The Group is concerned that a fraction of the Ghanaian fleet behaves in ways that could be considered in contravention of the objectives of the ICCAT Convention. In particular, because obligatory data collection and reporting is generally not possible under the current practices, proper monitoring of the full fleet activity is not carried out.
- The Group reemphasized the SCRS view of convenience for the Ghanaian sampling program to follow, as closely as possible, the sampling scheme protocol used in the EU fishery in order to facilitate the joint analysis of standardized data. In that sense, as different teams are responsible for the Ghanaian and European purse seine sampling in Côte d'Ivoire, it would be convenient to continue enhancing collaboration and coordination between both groups.

Improvements in data collection infrastructure and procedures to fully address data reporting obligations

- The Group recommends development of a permanent structure, adequately equipped, with the necessary human resources, in charge of collecting detailed information on the tropical tuna fisheries (Task I, Task II (C/E) and sampling of catches (Task II size, biological parameters)).

- The Group recommends the Ghanaian authorities make the necessary efforts to conduct a proper monitoring of the activities of their fleet in order to guarantee the necessary coverage for the collection of statistical data required. Such monitoring should include at-sea observations, including sampling catches, as well as collection of complete and accurate fishing logbooks from the vessels.
- Furthermore, the Group recommends that data collection protocols be instituted in Ghana which in make it possible to sample catches landed, regardless of flag, as is the process used in Abidjan.

Mechanisms for meeting data obligations

- The Group recommended that mechanisms to improve capacity for meeting data collection and reporting obligations, including industry financial contributions or inter-governmental arrangements, be instituted to enhance financial support for staffing and infrastructure improvements needed to meet the above recommendations.

Technical recommendations

- The Group noted a difference in the percentage of skipjack sampled on Ghanaian landings by scientists and at the cannery. This divergency in species composition remains unexplained. The Group recommended that an intensive multispecies sampling scheme should be done in Tema, validating in parallel the tunas sampling and data entries done by scientists and at the cannery. This comparative sampling should be done under the responsibility of a scientist fully experienced in multispecies tuna sampling.
- The Group noted a relative lack of larger yellowfin tuna in the sample records from Ghana for a series of years. While the Group found that very large yellowfin are infrequently encountered in the Ghanaian fleet, compared to the European purse seine fleet, it was discovered during a site visit to Ghana and in subsequent discussion, that while larger fish are sampled, they are measured in a different way and recorded on separate sheets, which may not have been computerized. The Group recommended that all measures of fish should be on the same sheet, to avoid loss of these measures.
- The Group noted that there are some observer data now available and becoming available for the tropical tuna fleets for characterizing size composition and potentially species composition of the catches as well. Currently these data are not used in the processes for estimating species and size composition of the catches for the European fleet because of concerns about their potential bias. The TGG recommends that observer data be fully analyzed and compared to port sampling information to judge the adequacy of current observer sampling protocols for these purposes.
- The Group noted that the metrics used for comparing Ghanaian and European fleet performance make use of somewhat different components of the catch. For Ghanaian vessels landing in Tema, "market fish" which do not go to canneries are recorded and officially reported in Task I data. For European vessels and Ghanaian vessels landing outside of Tema, the landed fish which do not go to canneries are characterized as "faux poisson" but are not recorded or officially reported as part of Task I. While there is now ongoing sampling to estimate "faux poisson", it is not yet considered part of official Task I. The TGG recommends that official Task I statistics should include all sources of fishery induced mortality and that CPCs endeavour to achieve this recommendation.
- The Group also noted that the procedures used during the meeting for re-estimating Ghanaian species and size composition made use of both newly available observations and assumptions for time-area combinations where no direct observations were available. While the Group considered the assumptions used to be plausible and resulting in a substantial improvement in the available Task II data base, there are other assumptions that are also plausible and the Group did not have sufficient time to evaluate sensitivity of the outcomes to a range of plausible assumptions. The Group recommends that such evaluations be carried out in the future before accepting any one set of assumptions as the best available.
- The Group recommended working toward development of an improved and harmonized sampling and data processing process for the Ghanaian fleet. In this sampling scheme, it is necessary to separate free school from FAD sets in the data collection and processing. The data validation software (AKADO) needs to be English-language and the processing system made more user friendly and should be introduced into the ICCAT software catalogue as one means of validation. Furthermore, the Working Group recommended that data recovery efforts continue.

- The Group recommends that discrepancies identified between the ICCAT authorized vessel list and the results of in-field investigation of active vessels in the Ghanaian fleet be further evaluated.

Atlantic Yellowfin Stock Assessment Sessions

- The Group recommended that historical and present samples of size frequency (in contrast to raised and substituted size-frequency) be recovered and provided to the Secretariat in support of conducting stock evaluations that make use of the sampling fraction in calculations.
- Recalling the previous SCRS recommendation, the Group reaffirmed that catch and catch at size necessary for fine-scale scientific analysis be reported by CPCs in at most 5x5 degree resolution.
- The Group recommended that procedures for collection of size samples should be reviewed to assure that there is no size bias in sampling, as the Group suspects that such size-bias may be occurring in certain fisheries.
- The Group recommended the evaluation of market information sources or other alternative ways to improve the accuracy of catch estimates coming from logbooks.
- The Group recommended re-evaluation of the length-weight and associated relationships which were developed on historical information. It is possible that such relationships have changed as the stock condition has changed over time.

Sharks Data Preparatory Meeting for the Application of the Ecological Risk Assessment

- Urge scientists to participate in the 2012 assessment of shortfin mako and comply with the deadlines for the submission of data and documents (see item 5).
- The Group recommended that the CPCs provide data to analyze conventional tag shedding rates.
- The information on tagging should specify the sex of sharks tagged by scientific personnel.
- Allow scientific observers to collect biological samples (vertebrae, tissues, reproductive tracts, stomachs) from species whose retention is prohibited by current regulations that are dead at haulback.
- The Group recommended that the CPCs explore methods to estimate catches of sharks in purse seine fisheries.
- The Group recommended that CPCs report shark Task II size data by sex since this information can be easily collected by observers in most cases.
- The Group suggested to incorporate the description of the 6 species of sharks that have been included in recent Recommendations (ALV, BTH, OCS, SPL, SPZ, SPM) in Chapter 2 of the ICCAT Manual in the by-catch species section.

Recommendations Pertinent to the Sub-Committee on Statistics from the Inter-sessional Meeting of the Sub-Committee on Ecosystems

- The Sub-Committee recommends that guidelines for the presentation and analysis of by-catch statistics be developed in conjunction with the Working Group of Stock Assessment Method (WGSAM) and that these guidelines be made available as part of the *ICCAT Manual*. Furthermore, the Sub-Committee should work with WGSAM to evaluate how these data can be used as part of a risk management advice framework.
- The Sub-Committee re-iterated the need for all CPCs to collect and provide by-catch data to the SCRS, and highlighted the need for further analysis combining species distribution and by-catch data to fill existing data gaps, and to monitor levels and impacts of by-catch.
- With regard to sea turtle by-catch mitigation, the Sub-Committee reminds the obligations of CPCs to provide the by-catch information as required in Rec. 10-09 in 2012.

- The Sub-Committee noted that the By-catch Coordinator position remains unfilled and strongly recommends that this position be recruited promptly. The Sub-Committee also recommended modifications to the job description (Section 5) to better reflect its needs at this time, and to facilitate the ability to recruit an individual with the appropriate skills.
- The Sub-Committee recommends that national scientists from CPCs provide available information which would facilitate to provide a response to the Commission regarding Resolution 05-11 (Sargassum).
- The Sub-Committee recommends that the Secretariat attempt to collate user manuals or protocols describing data collection from CPC observer programs. Also, an attempt should be made to identify historical changes to the data collection protocols that might complicate data analyses and interpretation.

GBYP Steering Committee Meeting

- *Excluding data of the year.* The Steering Committee discussed about the limits to be adopted in the data recovery policy, particularly taking into account the discussions raised after some proposals in Phase 2. It was recognised that although the ICCAT rules are very precise for Task I data, they do not define a minimum level of sampling for Task II data by fishery. This fact makes problematical a precise definition of the policy to be adopted for GBYP data recovery. The Coordinator provided some examples of data sets which are collected and provided according to the general rules under Task II, which are not very useful for scientific purposes. It was very clear that GBYP cannot pay for data that have been collected under national sampling schemes by ICCAT CPCs to fulfil their Task II obligations. It was also clear that many data are not usually provided to ICCAT even though they may be collected. This is because they are collected by various entities on their own costs and for various purposes. The Steering Committee recommended that a reasonable policy for GBYP is to limit the data recovery to data collected in previous years, excluding the data of the year. This policy would thus make a clear distinction between data recovery (which is a legitimate task under this part of the GBYP, and paying for the collection of data which are the responsibility of the CPCs (such as Task II). The Steering Committee also recommended that the focus in these cases should be on the last two decades and particularly for those data which could be directly used for stock assessment purposes, such as CPUEs or Task II data for fisheries poorly represented in the ICCAT bluefin tuna data base. At the same time, the Steering Committee recommended the GBYP Coordinator to contact the chair of ICCAT Sub-Committee on Statistics in order to initiate an exercise among all CPCs for establishing a minimum level of sampling for the provision of Task II data for bluefin (eventually this exercise could be extended to all species under the competence of ICCAT) and for eventually defining, in agreement with the scientists concerned, a minimum level of sampling coverage to be officially adopted by the ICCAT.

First Meeting of the Joint Tuna RFMO Technical Working Group on By-Catch

Data collection and harmonization

- The Working Group agreed that there should be minimum data standards, with data fields that are collected across all RFMOs with a view to allowing interoperability.
- All members of RFMOs are encouraged to improve the quality of data collection system to improve fisheries and by-catch assessments.
- All members of RFMOs are strongly encouraged to share data or information within RFMOs collected from observer and log book programs for the purposes of by-catch management and research.
- The Working Group will prepare a short report on data harmonization using all existing data forms from all tuna RFMOs by December 31, 2011. To facilitate this process, the IATTC forms will be circulated for a comparison with the other tuna RFMOs.
- Noting that there is a working group to be convened between IATTC and WCPFC on observer data harmonization, including by-catch, the Working Group recommends involving the other tuna RFMOs at this workshop.
- Seabird identification: the tuna Secretariats will provide ACAP with existing seabird identifications, and ACAP will develop a standardized identification guides. The drafts of the identification guides will be reviewed by the Working Group working group and Tuna RFMO working groups.
- Shark identification: the Working Group, with WCPFC and ICCAT taking the lead, will harmonize guidance for shark identification, in collaboration with the IUCN shark specialist group and others.

- Sea turtle identification: the Secretariats will provide the Working Group Chair with the materials currently in use for turtle identification so these can be harmonized and distributed to all tuna RFMOs.
- The Working Group should consider a process to develop harmonized marine mammal identification guides for the fisheries for which they are not available.

Blue Marlin Stock Assessment Meeting

- The Group recommended on the need to stress that CPCs should report Task I and Task II for Inter-sessional meetings by the deadlines provided by the Secretariat.
- The Group recognized the important new catch estimates of blue marlin from FAD fisheries of Martinique and Guadalupe and recommended that detail of estimation be presented as an SCRS document in the next species group meeting. The Group also recommended that other Caribbean countries with FAD fisheries report detail specific billfish catches.
- The Group encouraged the Secretariat to reach out to other RMFO in the Greater Caribbean to explore sharing data pertinent to ICCAT fisheries.
- The Group strongly recommended that the Commission provide additional funding (50K Euros) to the Enhanced Billfish Research Program for a genetic study in order to accelerate the data acquisition and analysis for separating white marlin from spearfishes to be undertaken in the immediate future.
- The Commission should require the reporting of catches of white marlin and roundscale spearfish separated.

Addendum 4 to Appendix 7

Response to the Resolution by ICCAT to Establish a Working Group on Sport and Recreational Fisheries [Res. 06-17]

In 2006, the Commission resolved that the SCRS should establish a Working Group to evaluate sport and recreational fishing activities. The Working Group would:

- a) Examine the biological and economic impact of recreational and sport fishing activities on ICCAT managed stocks and assess the level of harvest.
- b) Based on available information, identify approaches for managing the recreational and sport fishing activities in ICCAT fisheries.
- c) Report the results of deliberations to the Commission and, as appropriate, propose recommendations for next steps to manage the recreational and sport fishing activities in the Convention area. CPCs shall report prior to the Working Group meeting the techniques used to manage their sport and recreational fisheries and methods used to collect such data.

With regard to item (a), the group recognized that recreational and sport fishing activities can have considerable biological and economic impact on ICCAT managed stocks. Furthermore, these impacts are not currently estimable due to a general lack of data.

With regard to item (b), the group recognized that the evaluation of suitable management measures requires reliable statistics be reported by all CPCs with non-trivial recreational and sport fisheries, and would be further improved by concomitant socio-economic data. The group recommended enhanced efforts by CPCs to collect and report such information.

With regard to item (c), the CPCs that attended the group made reports on their sport and recreational fishing activities, and the techniques used to collect data and manage these activities. These reports have been compiled, and are summarized below.

Taking into account the need to improve stock assessments by obtaining reliable estimates of total removals (harvest + dead discards) of ICCAT managed stocks; the Committee reiterated its following recommendation:

1. In order to develop appropriate estimates of harvest and dead discards by recreational and sport fishing activities, the SCRS recommended that each CPC:

- a) Identify the “universe” of recreational fishing participants.
 - b) Sample that universe with appropriate coverage to allow estimation of total removals with sufficient accuracy and precision.
 - c) Produce or obtain estimates of release mortality to facilitate the quantification of fish released alive that subsequently die due to interaction with fishery.
2. The Committee concluded that sufficiently accurate and precise estimates of total recreational removals require CPCs to collect the following information through national and/or regional sampling programs. This data would be retained by CPCs, but used to develop the estimates of total recreational removals that are reported to ICCAT. The following should be considered minimum standard practices. These are the essential components for estimation of Task I and Task II data to meet reporting obligations.
- a) Catch by species
 - b) Length/Weight of landed fish
 - c) Discards by species
 - d) Length/Weight of discarded fish
 - e) Disposition of discards (e.g. released alive and likely to survive, released alive but unlikely to survive, discarded dead, used for bait).
 - f) Location and time of fishing trip
 - g) Estimates of release mortality by species

The Group acknowledged that some CPCs have already developed successful sampling programs, and currently use data collected by these programs to report recreational Task I and Task II statistics to ICCAT. Several of these programs were identified by the group, and the methodologies were discussed. These issues will be further taken up at a future meeting of the Working Group on Stock Assessment Methods.