

 <p data-bbox="215 548 454 593">Agreement on the Conservation of Albatrosses and Petrels</p>	<p data-bbox="598 235 1385 324" style="text-align: center;"><b>Fifth Meeting of the Seabird Bycatch Working Group</b></p> <p data-bbox="837 347 1385 380" style="text-align: center;"><i>La Rochelle, France, 1-3 May 2013</i></p> <p data-bbox="507 459 1364 548" style="text-align: center;"><b>Review of Seabird Bycatch Data collection in tuna RFMOs</b></p> <p data-bbox="529 638 1343 683" style="text-align: center;"><b><i>Jacquelyn Turner, Warren Papworth (Secretariat)</i></b></p>
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### SUMMARY

This paper reviews the data collection requirements of the scientific observer programs in the longline fisheries of the five tuna Regional Fisheries Management Organisations (tRFMOs): the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Inter-American Tropical Tuna Commission (IATTC), the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Indian Ocean Tuna Commission (IOTC) and the Western and Central Pacific Fisheries Commission (WCPFC). The paper assesses the extent to which they fulfil the objectives for collecting seabird bycatch data identified at AC6, which is to characterise and quantify seabird bycatch within a fishery, to understand the nature of seabird bycatch, and to assess the effectiveness of seabird bycatch measures in reducing seabird mortality.

Although the CCSBT has had an observer programme established since 2001, the remaining tRFMOs have only established longline observer programmes in the last three years, with implementation of three of these programmes only commencing in 2012 – 2013 period. The effectiveness of these observer programmes is difficult to gauge due to the low level of reporting by many Members.

Four of the tRFMO have a requirement for 5% observer coverage however the calculation of this varies between days, trips or sets. The exception is the CCSBT who requires 10% observer coverage of the catch caught. All of these programmes fall well below the 20% level of observer coverage recommended at WCPFC-SC2.

The CCSBT and WCPFC observer programmes require their members to collect most of the critical data recommended by ACAP's Seabird Bycatch Working Group (SBWG). In comparison, the IATTC, ICCAT and IOTC observer programmes do not currently require many of these critical data to be collected.

Data collection protocols and reporting requirements vary significantly between the tRFMOs with the WCPFC currently being the only tRFMO having centralised management of the data collected.

### RECOMMENDATIONS

That ACAP should:

1. Seek the mandatory collection and reporting by the IATTC, ICCAT and IOTC observer programmes of the critical data fields recommended by ACAP;
2. Assist the tRFMOs in the development of data collection and reporting protocols (and guidelines) for these critical data fields and encourage centralised management of the data collected by the CCSBT, IATTC, ICCAT and IOTC. This will likely require ACAP participation in relevant Working Groups; Scientific Committees and Technical Committees;
3. Seek an increase in the level of observer coverage by the tRFMOs to a minimum of 20% of total fishing effort (number of hooks set/hailed) in accordance with the recommendation of WCPFC-SC2; and
4. Consider alternative mechanisms for collecting relevant data if it appears that the tRFMO regional observer programmes will be unable to provide data in the foreseeable future that addresses ACAP's objectives for data collection.
5. Participate in the WCPFC Intersessional Working Group for the Regional Observer Programme (IWG-ROP) when it takes into account the need to obtain detailed information on seabird interactions to allow analysis of the effects of fisheries on seabirds and evaluation of the effectiveness of bycatch mitigation measures.
6. Participate in the Kobe tRFMO Bycatch Technical Working Group to seek the harmonisation of minimum data standards and reporting requirements across the tRFMO observer programmes.

### **Revisión de la recolección de datos sobre captura secundaria de aves marinas en las OROP de atún**

Este documento revisa los requisitos para la recolección de datos de los programas de observadores científicos en las pesquerías de palangre de las cinco Organizaciones Regionales de Ordenamiento Pesquero (OROP) de atún: la Comisión para la Conservación del Atún Rojo (CCSBT), la Comisión Interamericana del Atún Tropical (IATTC), la Comisión Internacional para la Conservación del Atún Atlántico (ICCAT), la Comisión del Atún del Océano Índico (IOTC) y la Comisión de Pesca para el Pacífico Centro Occidental (WCPFC). El documento evalúa el grado de cumplimiento de los objetivos para la recolección de datos sobre la captura secundaria de aves marinas identificados en la CA6, que son caracterizar y cuantificar la captura secundaria de aves marinas dentro de una pesquería, para comprender sus características, y para evaluar la efectividad de las medidas relativas a la captura secundaria de aves marinas en la reducción de la mortalidad de estas aves.

Si bien la CCSBT cuenta con un programa de observadores establecido desde 2001, las OROP restantes únicamente han establecido programas de observadores para la pesca con palangre en los últimos tres años, con la implementación de tres de estos programas que recién comenzó en el período 2012 – 2013. Es difícil medir la efectividad de estos programas de observadores debido a la escasa presentación de informes de muchos Miembros.

Cuatro de las OROP tienen un requisito para una cobertura de observadores del 5%, sin embargo, su cálculo varía según los días, expediciones o lances. Salvo por la CCSBT, que requiere una cobertura de observadores del 10% de la captura. Todos estos programas se encuentran bastante por debajo del 20% de cobertura de observadores recomendada en la WCPFC-SC2.

Los programas de observadores de la CCSBT y WCPFC exigen que sus miembros recolecten la mayor parte de los datos críticos que recomienda el Grupo de Trabajo sobre Captura Secundaria de Aves Marinas (GdTCS) del ACAP. En comparación, los programas de observadores de la IATTC, la ICCAT y la IOTC actualmente no exigen la recolección de muchos de estos datos críticos.

Los protocolos de recolección de datos y los requisitos para la presentación de informes varían significativamente entre las OROP, donde la WCPFC es actualmente la única OROP que tiene una gestión centralizada de los datos recolectados.

### **RECOMENDACIONES**

Que el ACAP:

1. Procure la recolección y la presentación de informes obligatorias por parte de los programas de observadores de la IATTC, la ICCAT y la IOTC de los campos de datos críticos que recomienda el ACAP;
2. Ayude a las OROP para el desarrollo de protocolos (y directrices) para la recolección de datos y la presentación de informes para dichos campos críticos y promueva la gestión centralizada de los datos recopilados por parte de la CCSBT, la IATTC, la ICCAT y la IOTC. Es probable que esto requiera la participación del ACAP en los Grupos de Trabajo relevantes; los Comités Científicos y los Comités Técnicos;
3. Procurar un aumento en el nivel de cobertura de observadores de las OROP a un mínimo del 20% del total del esfuerzo pesquero (cantidad de anzuelos lanzados/recuperados) de acuerdo con la recomendación de la WCPFC-SC2; y
4. Considere mecanismos alternativos para la recolección de datos relevantes si es evidente que los programas de observadores regionales de las OROP no serán capaces de proporcionar los datos en un futuro previsible que responda a los objetivos del ACAP para la recolección de datos.
5. Participe en el Grupo de Trabajo Intersesional de la WCPFC para el Programa Regional de Observadores (IWG-ROP) cuando considere la necesidad de obtener información detallada sobre las interacciones de las aves marinas para permitir el análisis de los efectos de las pesquerías en las aves marinas y la evaluación de la efectividad de las medidas de mitigación de la captura secundaria.-
6. Participe en el Grupo de Trabajo Técnico sobre Captura Secundaria de la OROP de Kobe para procurar la armonización de las normas de datos y los requisitos para presentación de informes mínimos entre todos los programas de observadores de las OROP.

## **Examen de la collecte de données en matière de captures accidentelles d'oiseaux marins au sein des ORGP thonières**

Le présent document passe en revue les exigences en matière de collecte de données imposées aux programmes d'observation scientifique dans les pêches à la palangre des cinq ORGP (Organisations régionales de la Gestion des Pêches) thonières: la Commission pour la conservation du thon rouge du Sud (CCSBT), la Commission interaméricaine du thon tropical (CITT), la Commission internationale pour la conservation des thonidés de l'Atlantique (CICTA), la Commission des thonidés de l'Océan Indien (CTOI) et la Commission des pêches pour le Pacifique occidental et central (CPPCO). Ce document évalue dans quelle mesure les ORGP thonières ont atteint les objectifs établis lors du CC6 en matière de collecte de données liées aux captures accidentelles d'oiseaux marins. Ces objectifs consistent à caractériser et quantifier les captures accidentelles d'oiseaux marins au sein d'une pêcherie, comprendre la nature des captures accidentelles d'oiseaux marins et évaluer l'efficacité des mesures d'atténuation de la mortalité des oiseaux marins induite par les captures accidentelles.

Bien que la CCSBT dispose d'un programme d'observation depuis 2001, les autres ORGP thonières n'ont adopté ce genre de programme pour la pêche à la palangre qu'au cours des trois dernières années. Trois de ces programmes n'ont été mis en œuvre qu'en 2012-2013. Il est difficile d'évaluer l'efficacité de ces programmes d'observation en raison du faible niveau de déclaration de données de nombreux Membres.

Quatre ORGP thonières exigent la présence d'observateurs à bord des navires de pêche de 5%, cependant, ce calcul peut varier en fonction des jours, des campagnes ou des poses. La CCSBT, qui requiert une couverture d'observateur sur 10% des prises, fait figure d'exception. Tous ces programmes se situent bien en-deçà du taux d'observateurs de 20% qui avait été préconisé lors du WCPFC-SC2.

Les programmes d'observation de la CCSBT et de la CPPCO imposent aux Membres de ces ORGP de collecter la plupart des données sensibles recommandées par le Groupe de travail sur les captures accidentelles d'oiseaux marins (GTCA) de l'ACAP. Par contre, les programmes d'observation de la CITT, la CICTA et la CTOI ne prévoient pas, à ce jour, la collecte de ces données sensibles.

Les protocoles en matière de collecte de données et les exigences en matière de notification varient considérablement d'une ORGP à l'autre. A l'heure actuelle, la CPPCO est la seule ORGP thonière qui centralise la gestion des données collectées.

### **RECOMMANDATIONS**

Il est recommandé que l'ACAP :

1. Encourage CITT, la CICTA et la CTOI d'inclure dans leur programmes d'observation la notification et la collecte obligatoires des données sensibles, telles que recommandées par l'ACAP ;
2. Aide les ORGP thonières à développer des protocoles (et des lignes directrices) en matière de notification et de collecte de données pour ces données sensibles et encourage la gestion centralisée des données collectées par la CCSBT, la CITT, la

CICTA et la CTOI. L'ACAP sera probablement amené à s'impliquer dans des Groupes de travail, des comités scientifiques et des comités techniques.

3. Incite les ORGP thonières à élargir la présence d'observateurs à bord afin de couvrir, au minimum, 20% des efforts de pêche (nombre d'hameçons posés/remontés), conformément aux recommandations du CPPCO-SC2 ; et
4. Envisage d'autres mécanismes de collecte de données sensibles dans l'éventualité où les programmes d'observation régionaux des ORGP thonières ne sont pas en mesure de fournir, dans un avenir proche, des données qui satisfont aux objectifs de l'ACAP en matière de collecte de données.
5. Participe au Groupe de travail intersessionnel de la CPPCO consacré au programme d'observation régional (IWG-ROP) lorsqu'il abordera la nécessité de disposer d'informations détaillées sur les interactions avec les oiseaux marins afin d'analyser l'impact des pêches sur la faune aviaire et évaluer l'efficacité des mesures d'atténuation des captures accidentelles.
6. Participe au Groupe de travail technique sur les captures accidentelles des ORGP thonières (Kobe) afin d'encourager l'harmonisation des normes en matière de données et les exigences relatives à la notification à travers les programmes d'observation des ORGP thonières.

## INTRODUCTION

At AC6 it was noted that the main objectives of collecting seabird bycatch data are to characterise and quantify seabird bycatch within a fishery, to understand the nature of seabird bycatch, and to assess the effectiveness of seabird bycatch measures in reducing mortality. In order to fulfil these objectives a number of issues need to be addressed. These include:

- a. the establishment and implementation of effective observer programmes;
- b. sufficient observer coverage of fishing effort to accurately quantify seabird bycatch and to scale up reliably observed bycatch to the whole fishery;
- c. standardised collection of reliable seabird bycatch and associated data by well-trained observers; and
- d. clear and standardised requirements for reporting bycatch, and coordinated and preferably centralised management of bycatch data.(AC6 Report, paragraph 15.9.1).

This paper provides an assessment of the extent to which the scientific observer programmes in the longline fisheries of the tuna Regional Fisheries Management Organisations (tRFMOs) are currently addressing these issues, and makes recommendations on actions to take to improve data collection within these organisations. Table 1 provides a summary of the current data collection requirements of the five tRFMOs.

### **a. The Establishment and Implementation of Effective Observer Programmes**

#### **CCSBT**

The CCSBT adopted a scientific observer program in 2001 that requires 10% observer coverage for catch and effort monitoring (CCSBT SC5, 2001; CCSBT7, paragraphs 12 and 16). This level of observer coverage should result in about 10% of the total catch being observed (CCSBT Scientific Observer Program Standards).

The level of observer coverage and program implementation has generally been less than 10% and in 2012 the Extended Scientific Committee of CCSBT listed the scientific observer program as a high priority within the Scientific Research Program to increase data collection (CCSBT-SC17, paragraph 116 and Attachment 8).

### **IATTC**

The IATTC adopted a resolution on scientific observers for longline vessels in 2011 that requires 5% observer coverage of longline fishing effort by January 2013 (IATTC Resolution C-11-08). The method for calculating 5% effort is currently not defined and Members have been urged to observe as many trips as possible (Hall, 2013). Currently there is little observer coverage, resulting in little to no data, and it will be some time before the minimum 5% is being met (Hall, 2013).

### **ICCAT**

ICCAT established a Regional Observer Program in 2010, with a minimum 5% observer coverage for pelagic longline vessels, based on fishing days, number of sets or trips (ICCAT Recommendation 10-10).

### **IOTC**

The IOTC adopted a Regional Observer Scheme in 2009 (IOTC C13, paragraph 21), but full implementation of 5% coverage wasn't required until January 2013 (IOTC Resolution 11/04, paragraph 2). Observer coverage is calculated by sets.

Very little observer data has been submitted to the IOTC Secretariat and the Scientific Committee has recommended that the Commission consider how to address the lack of implementation of the observer programmes and reporting of data (IOTC SC15, paragraph 220).

### **WCPFC**

The WCPFC adopted Conservation and Management Measure 2007-01 that established a Commission Regional Observer Program (WCPFC4, paragraph 292). Full implementation for longline operations, with a minimum 5% coverage based on fishing trips, was not required until June 2012 (WCPFC Conservation and Management Measure 2007-01, Attachment K, Annex C, paragraph 6).

At present the WCPFC Secretariat have received very little observer data, and no data have been processed (Staisch, 2012). The required rate of 5% observer coverage is currently not being reached by all Members.

**Summary** - Although all tRFMOs have established observer programmes, the level of observer coverage has in many cases not yet met the target levels set.

### **b. Sufficient Observer Coverage of Fishing Effort to Accurately Quantify Seabird Bycatch and to Scale-up Reliably Observed Bycatch to the Whole Fishery**

When discussing the minimum level of observer coverage required, SBWG4 noted that it is difficult to recommend a single or explicit minimum standard that would be suitable for all

coastal state fisheries and RFMOs. Consequently, it was agreed to highlight in the guideline document that the level of observer coverage should be sufficient to assess and monitor bycatch, and not to specify a minimum level of coverage. It was also agreed that observer programmes should establish a process by which the effectiveness of the observer programme, and especially the level of observer coverage, is regularly reviewed (AC6 Doc 14 Rev 4).

Bearing this recommendation in mind, the report of the second meeting of the WCPFC Scientific Committee noted that to adequately characterize rare events [such as seabird bycatch], up to 100% observer coverage may be required statistically. Considering the constraints and practicalities involved in implementing this, it recommended the WCPFC regional observer programme should initially be spatially and temporally representative of each fishery and that the programme should aim to observe 20% of the fishing effort over a two year period (WCPFC SC report, paragraph 32).

**Summary** - Currently, four of the tRFMO require 5% observer coverage and the calculation of this varies between days, trips or sets. The exception is the CCSBT that requires 10% observer coverage of the catch caught. In view of the low level of observer coverage, as well as the low level of reporting by many tRFMO Members, it is unlikely that data provided by tRFMO observer programmes is currently sufficient to assess and monitor seabird bycatch, nor to adequately identify areas of spatial and temporal overlap of seabird species and fishing effort, or to allow an analysis of the effectiveness of the mitigation measures being used.

### **c. Standardised Collection of Reliable Seabird Bycatch and Associated Data by Well-trained Observers**

At SBWG4 the Working Group endorsed a list of recommended data to be collected in fishing operations in order to assess seabird bycatch (Annex 1). The data collected by each of the tRFMO observer programmes (refer Annex 2) was assessed to determine the extent to which they collected the critical data deemed necessary by ACAP to improve knowledge of fishery impacts on ACAP-listed species (SBWG-4 Doc 26 Rev 1)

#### **CCSBT**

CCSBT has an agreed set of scientific observer standards that provide minimum standards for Members' scientific observer programs (CCSBT10, paragraph 35). These standards **do not** include all the information that ACAP considers minimum data requirements (Table 1; Annex 2, Table 2.1).

CCSBT 18 adopted a - 'Recommendation to Mitigate the Impact on Ecologically Related Species (ERS)...', that requires a commitment to comply with measures adopted by IOTC, WCPFC and ICCAT on the collection and reporting of data in relation to ERS. (Attachment 17, paragraph 3).

#### **IATTC**

The IATTC Secretariat presented standard data collection forms to the IATTC Scientific Advisory Committee in 2012, but they were not adopted and serve as a guide only. At present there are **no** minimum data requirements for scientific observers (Table 1; Annex 2, Table 2.2). Observers are required to record any available biological and catch information

of target species, as well as interactions with non-target species, such as seabirds, (IATTC Resolution C-11-08, paragraph 4) however the actual data to be collected is not clearly defined.

### **ICCAT**

Currently there are **no** standard reporting forms for observer data. The Standing Committee on Research and Statistics (SCRS) noted the difficulties of having information provided on different formats and developed a list of components to be collected to ensure Members submit data in a consistent format from 2014 (ICCAT SCRS, Item 18.3). However, this list is not very specific, so it is unknown how detailed the data will be.

The minimum data collection requirements listed in ICCAT Recommendation 10-10 are very vague (Table 1; Annex 2, Table 2.3). The domestic observer programs are required to record and report upon the fishing activity, which includes quantifying total target catch and bycatch. They must also “observe the use of by-catch mitigation measures and other relevant information”. ICCAT Recommendations 07-07 and 11-09, require CPCs to collect and provide available information on seabird interactions with fishing vessels, including incidental bycatch. The need for minimum data standards has been agreed by ICCAT, and although some information relating to data collection and minimum standards is provided in Rec. 10-10, there is an urgent need to develop this further and provide explicit information to CPCs on data collection (and reporting) requirements.

The implementation of the observer program is low, with little data available. It is unclear whether all Members that have collected data are meeting the 5% observer coverage.

### **IOTC**

Minimum data requirements and an observer report template were adopted in 2011 (IOTC C15, paragraph 28). These are a comprehensive set of forms, but these are **not compulsory** and each Member can use their own forms as long as they collect at least the data required by IOTC. However, it is unclear if minimum data collection standards are being applied (Table 1; Annex 2, Table 2.4).

### **WCPFC**

WCPFC has an agreed set of ‘Minimum Data Fields and Instructions’ under its Regional Observer Program (ROP) which are to be used as a guide for the regional, sub-regional, and national programs (WCPFC4, paragraph 291). These standard forms do not currently collect all the information that ACAP considered minimum data requirements (Table 1; Annex 2, Table 2.5), however, WCPFC9 agreed to the addition of new data fields that would meet most of the ACAP requirements. These fields are not required to be added to the data collection forms until January 2015 (WCPFC TCC8, paragraph 152; WCPFC9, paragraph 330).

WCPFC CMM 2012-07 requires that the Intersessional Working Group for the Regional Observer Programme (IWG-ROP) take into account the need to obtain detailed information on seabird interactions to allow analysis of the effects of fisheries on seabirds and evaluation of the effectiveness of bycatch mitigation measures. (WCPFC CMM 2012-07, paragraph 8).

**Summary** - The CCSBT and WCPFC observer programmes require their members to collect most of the critical data recommended by the SBWG. In comparison, the IATTC, ICCAT and IOTC observer programmes do not currently require many of these critical data to be collected.

**d. Clear and Standardised Requirements for Reporting Bycatch, and Coordinated and Preferably Centralised Management of Bycatch Data**

**CCSBT**

The CCSBT *Recommendation to Mitigate the Impact on Ecologically Related Species of Fishing for Southern Bluefin Tuna* requests that seabird bycatch is reported in the annual national report to the Ecologically Related Species Working Group (CCSBT CC6 paragraph 55; CCSBT CC6, Attachment 5, Appendix 1, paragraph 5.2; CCSBT18 paragraph 23). This Recommendation is **not** binding. Data is not managed centrally, but is held by CCSBT Members.

CCSBT 18 adopted a - 'Recommendation to Mitigate the Impact on Ecologically Related Species (ERS)...', that requires a commitment to comply with measures adopted by IOTC, WCPFC and ICCAT on the collection and reporting of data in relation to ERS. (Attachment 17, paragraph 3).

**IATTC**

IATTC Members and Co-operating non-Members are required to provide annually to the IATTC Scientific Committee and Commission information on interactions with seabirds, including bycatch, as well as available information from any observer or monitoring programs (IATTC Resolution C-11-02, paragraph 7). Data will be managed centrally, but there are currently no standardised requirements for reporting bycatch.

**ICCAT**

Contracting Parties (CPCs) are required to record data on seabird incidental catch by species through scientific observers in accordance with the Recommendation 10-10 and report these data annually to ICCAT's Standing Committee on Research and Statistics (SCRS). However, there are currently no standard reporting forms for observer data, or an explicit requirement to submit the actual data. A bycatch database has recently been developed, but so far few data have been submitted to the database. Presently, CPCs are encouraged, rather than required, to submit data at the level of detail catered for in the database.

**IOTC**

IOTC Resolution 10/06 requires Members and Cooperating non-Contracting Members to provide available information on interactions with seabirds, including bycatch, in their annual reports to the Commission. However, if they do not collect this data as part of IOTC Resolution 10/02 (Mandatory Statistical Requirements for IOTC Members and Cooperating non-Contracting Parties), then they have no available data to report in compliance with IOTC Resolution 10/06 (see IOTC SC15, Appendix XXXII).

**WCPFC**

Data collected by scientific Observers are considered Commission data (CMM 2007-01, Attachment K, Annex C) and are currently managed centrally by the Secretariat of the Pacific Community (SPC Secretariat), under contract to the Commission.

WCPFC9 adopted Conservation and Management Measure (CMM 2012-07) that requires its Members to annually provide to the Commission, in Part 1 of their annual reports, all available information on interactions with seabirds reported or collected by observers, including mitigation used, observed and reported species specific seabird bycatch rates and

numbers, to enable the Scientific Committee to estimate seabird mortality in all fisheries to which the WCPFC Convention applies. Annex 2 for Part 1 of CMM 2012-07 provides the reporting template guideline. Alternatively, statistically rigorous estimates of species-specific seabird interaction rates (for longline, interactions per 1,000 hooks) and total numbers are to be reported.

**Summary** - Data collection protocols and reporting requirements vary significantly between the tRFMOs with the WCPFC currently being the only tRFMO having centralised management of the data collected.

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Table 1: Minimum data collection requirements for scientific observers determined by ACAP (from SBWG-4 Doc 26 (Rev 1)) and minimum data collection requirements from scientific observers in the five tRFMO longline fisheries. **Blue** = ACAP minimum data requirements. **Yellow** = ACAP ideal data requirements.

Information	CCSBT	IATTC	ICCAT	IOTC	WCPFC
National/International observer	National	National	National	National or non-national (CPC choice)	Regional, sub-regional and national observer programs
Year established	2001	2011	2010	2009	2008
Year of full implementation	2001	2013	Not specified	2013	2012
Target observer coverage (coverage based on % of...)	10% (catch caught)	5% (trips)	5% (days, sets or trips)	5% (sets)	5% (trips)
Who holds the data?	Members	Members (CPCs)	Members (CPCs)	Members,- but recommended that data is sent to Secretariat	Secretariat of the Pacific Community (SPC)
Where do they report seabird bycatch?	Members report to ERSWG. Data Exchange now to include aggregated bycatch data. National Reports	Members report to the IATTC Scientific Advisory Committee and Commission	Members report to SCRS	Member annual reports to Commission. Observer reports are supposed to be made available to the Scientific Committee	Member Annual Reports to Scientific Committee
Observer Programme Mandatory?	No	Yes	Recommendation	Yes	Yes

<b>ACAP Minimum Data Collection Requirements</b>	<b>CCSBT Minimum Data Collection Requirements</b>	<b>IATTC Minimum Data Collection Requirements</b>	<b>ICCAT Minimum Data Collection Requirements</b>	<b>IOTC Minimum Data Collection Requirements</b>	<b>WCPFC Minimum Data Collection Requirements</b>
Vessel Characteristics	Yes, as per ICCAT, IOTC & WCPFC	No	No	Yes	Yes
Fishing trip and event characteristics	Yes, as per ICCAT, IOTC & WCPFC	No	Yes	Yes	Yes
Total fishing effort	Yes, as per ICCAT, IOTC & WCPFC	No	Yes	Yes	Yes
Total fishing effort observed	Yes, as per ICCAT, IOTC & WCPFC	No	No	Yes	Yes
Spatial and temporal information about the fishing operation	Yes, as per ICCAT, IOTC & WCPFC	No	Yes	Yes	Yes
Line weighting - mass of added weight	Yes, as per ICCAT, IOTC & WCPFC	No	Yes	Yes	Yes
Branchline length (m)	Yes, as per ICCAT, IOTC & WCPFC	No	No	Yes	Yes
Distance between weight and hook (m)	Yes, as per ICCAT, IOTC & WCPFC	No	Yes	Yes	Yes
Mitigation measures used	Yes, as per ICCAT, IOTC & WCPFC	No	Yes	Yes	Yes
Seabird data and samples	Yes, as per ICCAT, IOTC & WCPFC	Yes	Yes	Yes	Yes
Regular seabird abundance estimates	No	No	No	No	No
Interactions of seabirds with	Yes, as per ICCAT,	Yes	No	Yes	Yes

fishing operations	IOTC & WCPFC				
Environmental data	Yes, as per ICCAT, IOTC & WCPFC	No	No	No	Yes
Information about offal management	Yes, as per ICCAT, IOTC & WCPFC	No	No	Yes	Yes

## ANNEX 1: ACAP DATA COLLECTION REQUIREMENTS

SBWG-4 Doc 26 (Rev1)  
 Agenda Item 7

**Table 1:** Recommended data to be collected in longline fisheries operations (adapted from Dietrich et al. 2007, FAO 2009 and Anderson et al. 2010). These data will be recorded for each set and haul observed. Data considered critical for assessing seabird bycatch are highlighted in bold.

Category	Variables
Temporal	<b>Date gear deployed</b> <b>Start time of gear deployment</b> <b>End time of gear deployment</b> Date gear retrieved Start time of gear retrieval End time of gear retrieval
Spatial	<b>Latitude at beginning of gear deployment</b> <b>Longitude at beginning of gear deployment</b> <b>Latitude at beginning of gear retrieval</b> <b>Longitude at beginning of gear retrieval</b> Latitude at end of gear retrieval Longitude at end of gear retrieval
Physical and Environmental	Sea state (Beaufort Scale) Moon phase Wind strength and direction Depth fished (average/target depth) Cloud cover (important for night setting)
Fishing operation	Unique vessel identifier Unique observer identifier Vessel length Setting speed (knots) <b>Total number of hooks deployed</b> <b>Total number of hooks observed (crucial for calculating seabird bycatch levels)<sup>1</sup></b> Target species <sup>2</sup> Bait species Composition of bait used (%) Bait status (live/fresh/frozen/thawed/whole/cut) <b>Mass of added weight (describe size and position of weight, e.g. 60g 2m from the hook)</b>
Fishing gear	Groundline/mainline length <sup>3</sup> <b>Branchline/ganglion length</b> <b>Distance between weight and hook on ganglion (when used)</b> Distance between branchlines Line setter used (Y/N) Line setter speed (knots) Hook size Hook type
Catch	Total catch, actual or estimated (number and/or weight) Catch by species (number and/or weight)

Category	Variables
Mitigation Measure	<p><b>Tori line used (yes/no)</b>            Side of tori line deployment (port or starboard or both)</p> <p><b>Number of tori lines used</b>            Length of tori line (m)</p> <p><b>Aerial coverage achieved (m)</b>            Attachment height (m above water line)            Number of streamers            Distance between streamers</p> <p>Dumping of bait/offal (yes/no; also describe if dumping of offal took place during setting and hauling and whether offal was dumped on the opposite side of the hauling bay)</p> <p>Deck lighting astern of the vessel (yes/no)</p> <p>Bait caster used (yes/no)</p> <p>Other mitigation measures used (provide details)</p>
Bycatch	<p><b>Species identification</b></p> <p><b>Number of each species captured</b></p> <p>Type of interaction (hooking/entanglement)</p> <p><b>Disposition (dead/alive/injured)</b></p> <p><b>Description of condition/viability of animal upon release (if released alive)</b></p>
Other	Seabird abundance counts

- 1 – Important to record the numbers of hooks observed specifically for seabirds. If the observer is in the factory or collecting information elsewhere they may miss seabirds being hauled aboard. Therefore it is important to be able to relate the number of birds caught to the number of hooks observed.
- 2 – Target species may be derived in some programmes from the catch composition
- 3 – Groundline/mainline length is rarely an exact measurement, due to the length of the line. Instead it is either derived (by multiplying distance between floats by number of floats), estimated by the observer, or reported by the vessel.

## ANNEX 2: TUNA REGIONAL FISHERIES MANAGEMENT ORGANISATIONS DATA COLLECTION REQUIREMENTS

Table 2.1: Minimum data collection requirements for scientific observers determined by ACAP (from SBWG-4 Doc 26 (Rev 1)) and minimum data collection requirements from scientific observers in the CCSBT longline fishery. **Blue** = ACAP minimum data requirements. **Yellow** = ACAP ideal data requirements.

Information	CCSBT	Reference	Additional information
National/International observer	National	CCSBT7, paragraphs 12 and 16  CCSBT10, paragraph 35; <a href="http://www.ccsbt.org/site/research.php">http://www.ccsbt.org/site/research.php</a>  CCSBT 18 EC, paragraph 41	Although national programs, exchange between Members is encouraged  Data collection standards were adopted by CCSBT in 2003 (CCSBT10 Report, paragraph 35).  Attachment 17, paragraph 3 - Recommendation to Mitigate the Impact on Ecologically Related Species (ERS)...', requires a commitment to comply with measures adopted by IOTC, WCPFC and ICCAT on the collection and reporting of data in relation to ERS.
Year established	2001	CCSBT7, paragraphs 12 and 16	
Year of full implementation	2001		
Target observer coverage (coverage based on % of...)	10% (catch caught)	CCSBT7, paragraphs 12 and 16	
Who holds the data?	Members		There is an annual data exchange that now includes observer logbooks

Where do they report seabird bycatch?	Members report to ERSWG.  Annual Data Exchange now to include aggregated  National Reports	CCSBT CC6 paragraph 55; CCSBT CC6, Attachment 5, Appendix 1, paragraph 5.2; CCSBT18 paragraph 23; CCSBT19, paragraph 52.	Non-binding Recommendation
<b>ACAP Minimum Data Collection Requirements</b>	<b>CCSBT Minimum Data Collection Requirements</b>	<b>Reference</b>	<b>Additional information</b>
Vessel Characteristics	Yes	CCSBT Scientific Observer Program Standards	Also a commitment to comply with data collection and reporting measures adopted by IOTC, WCPFC and ICCAT – Attachment 17 to CCSBT 18 Report
Fishing trip and event characteristics	Yes	CCSBT Scientific Observer Program Standards	As above
Total fishing effort	Yes	CCSBT Scientific Observer Program Standards	As above
Total fishing effort observed	Yes	CCSBT Scientific Observer Program Standards	As above
Spatial and temporal information about the fishing operation	Yes	CCSBT Scientific Observer Program Standards	As above
Line weighting - mass of added weight	No		As above
Branchline length (m)	Yes	CCSBT Scientific Observer Program Standards	As above

ACAP Minimum Data Collection Requirements	CCSBT Minimum Data Collection Requirements	Reference	Additional information
Distance between weight and hook (m)	No		As above
Mitigation measures used	Yes	CCSBT Scientific Observer Program Standards	Tori pole and/or line shooter used: Y/N. Also a commitment to comply with data collection and reporting measures adopted by IOTC, WCPFC and ICCAT – Attachment 17 to CCSBT 18 Report
Seabird data and samples	Yes	Recommendation to Mitigate the Impact of Ecologically Related Species of Fishing for Southern Bluefin Tuna, paragraph 3	Non-binding Recommendation. Also a commitment to comply with data collection and reporting measures adopted by IOTC, WCPFC and ICCAT – Attachment 17 to CCSBT 18 Report
Regular seabird abundance estimates	No		
Interactions of seabirds with fishing operations	No		Also a commitment to comply with data collection and reporting measures adopted by IOTC, WCPFC and ICCAT – Attachment 17 to CCSBT 18 Report
Environmental data	Yes	CCSBT Scientific Observer Program Standards	As above
Information about offal management	No		As above

Table 2.2: Minimum data collection requirements for scientific observers determined by ACAP (from SBWG-4 Doc 26 (Rev 1)) and minimum data collection requirements from scientific observers in the IATTC longline fisheries. **Blue** = ACAP minimum data requirements. **Yellow** = ACAP ideal data requirements.

Information	IATTC	Reference	Additional information
National/International observer	National	IATTC SAC 2012.	IATTC Secretariat compiled some minimum data collection requirements, but they have <b>not</b> been adopted so used as a guide only. Therefore there are <b>no</b> minimum data requirements for scientific observers.
Year established	2011	IATTC Resolution C-11-08	
Year of full implementation	2013	IATTC Resolution C-11-08, paragraph 1	
Target observer coverage (coverage based on % of...)	5% (fishing effort)	IATTC Resolution C-11-08, paragraph 1	Mandatory to have 5% observation of fishing effort by a scientific observer.
Who holds the data?	Members (CPCs)	IATTC Resolution C-11-08, paragraph 7	CPCs shall submit information annually to the Scientific Advisory Committee. Format for data submission not yet agreed to by Scientific Advisory Committee.
Where do they report seabird bycatch?	Members report to the ICCAT Scientific Advisory Committee and Commission	IATTC Resolution C-11-02, paragraph 7	Member reports.

ACAP Minimum Data Collection Requirements	IATTC Minimum Data Collection Requirements	Reference	Additional information
Vessel Characteristics	No		
Fishing trip and event characteristics	No		
Total fishing effort	No		
Total fishing effort observed	No		
Spatial and temporal information about the fishing operation	No		
Line weighting - mass of added weight	No		
Branchline length (m)	No		
Distance between weight and hook (m)	No		
Mitigation measures used	Yes	IATTC Resolution C-11-02, paragraphs 2 and 5	Requirement to use 2 mitigation measures and report to IATTC on mitigation measures their flag vessels plan to employ.
Seabird data and samples	Yes	IATTC Resolution C-11-02, paragraph 7	CPCs shall provide any available information on seabird interactions, including bycatch, and details of species.
Regular seabird abundance estimates	No		
Interactions of seabirds with fishing operations	No		

Environmental data	No		
Information about offal management	No		

Table 2.3: Minimum data collection requirements for scientific observers determined by ACAP (from SBWG-4 Doc 26 (Rev 1)) and minimum data collection requirements from scientific observers in the ICCAT longline fisheries. **Blue** = ACAP minimum data requirements. **Yellow** = ACAP ideal data requirements.

Information	ICCAT	Reference	Additional information
National/International observer	National		
Year established	2010	Recommendation 10-10	
Year of full implementation	Not specified		To be continually assessed by the SCRS
Target observer coverage (coverage based on % of...)	5% (days, sets or trips)	Recommendation 10-10, paragraph 1(a)	
Who holds the data?	Members (CPCs)	Recommendation 10-10, paragraph 4	
Where do they report seabird bycatch?	Members report to SCRS	Recommendation 10-10, paragraph 4	
<b>ACAP Minimum Data Collection Requirements</b>	<b>ICCAT Minimum Data Collection Requirements</b>	<b>Reference</b>	<b>Additional information</b>
Vessel Characteristics	No		Not specified
Fishing trip and event characteristics	Yes	Recommendation 10-10, paragraph 2	Date of fishing operation, including, as appropriate, the start and stop times of the fishing activity
Total fishing effort	Yes	Recommendation 10-10, paragraph 2	Number of sets, number of hooks
Total fishing effort observed	No		Not specified, but it would be assumed that observed period would be recorded

ACAP Minimum Data Collection Requirements	ICCAT Minimum Data Collection Requirements	Reference	Additional information
Spatial and temporal information about the fishing operation	Yes	Recommendation 10-10, paragraph 2	
Line weighting - mass of added weight	Yes	Recommendation 10-10, paragraph 2 b) Recommendation 11-09, Table 1	Only if used as a mitigation measure. CPCs only need to use two out three of the listed measures.
Branchline length (m)	No		
Distance between weight and hook (m)	Yes	Recommendation 10-10, paragraph 2 b)Recommendation 11-09, Table 1	Recorded if used as a mitigation measure.
Mitigation measures used	Yes	Recommendation 10-10, paragraph 2	Observe and record the use of by-catch mitigation measures and other relevant information.
Seabird data and samples	Yes	Recommendation 11-09, paragraph 1 Recommendation 10-10, paragraph 2(a)i)	CPC's shall record data on seabird incidental catch by species through scientific observers. Observers shall collect data on by-catch.
Regular seabird abundance estimates	No		
Interactions of seabirds with fishing operations	No		
Environmental data	No		
Information about offal management	No		

Table 2.4: Minimum data collection requirements for scientific observers determined by ACAP (from SBWG-4 Doc 26 (Rev 1)) and minimum data collection requirements from scientific observers in the IOTC longline fisheries. **Blue** = ACAP minimum data requirements. **Yellow** = ACAP ideal data requirements.

Information	IOTC	Reference	Additional information
National/International observer	National or non-national (CPC choice)	Resolution 11/04 IOTC C15, paragraph 28	Minimum data collection requirements were adopted by the IOTC Commission, but are <b>not compulsory</b> . However Member programmes should collect at least the data required by the IOTC.
Year established	2009	IOTC C13, paragraph 21	
Year of full implementation	2013	Resolution 11/04, paragraph 2	5% coverage shall be achieved progressively by January 2013.
Target observer coverage (coverage based on % of...)	5% (sets)	Resolution 11/04, paragraph 2	
Who holds the data?	Members, although it is recommended that the data is sent to the Secretariat	Resolution 11/04, paragraph 11	
Where do they report seabird bycatch?	Member annual reports to Commission.  Observer reports are to be made available to the Scientific Committee	Resolution 10/06, paragraph 7  Resolution 11/04, paragraph 11.	

ACAP Minimum Data Collection Requirements	IOTC Minimum Data Collection Requirements	Reference	Additional information
Vessel Characteristics	Yes	Observer minimum standards, Form 1	
Fishing trip and event characteristics	Yes	Observer minimum standards, Form 1, Form 3, Form 4	
Total fishing effort	Yes	Observer minimum standards, Form 4	
Total fishing effort observed	Yes	Observer minimum standards, Form 4	
Spatial and temporal information about the fishing operation	Yes	Observer minimum standards, Form 1, Form 4	
Line weighting - mass of added weight	Yes	Resolution 10/06 Observer minimum standards, Form 4	Only if used as a mitigation measure
Branchline length (m)	Yes	Observer minimum standards, Form 2	
Distance between weight and hook (m)	Yes	Observer minimum standards, Form 4	
Mitigation measures used	Yes	Resolution 10/06, paragraph 7 Observer minimum standards, Form 2, Form 4	

ACAP Minimum Data Collection Requirements	IOTC Minimum Data Collection Requirements	Reference	Additional information
Seabird data and samples	Yes	Resolution 10/06, paragraph 7 Form 9	Seabird interactions and bycatch should be provided to the Commission in CPCs annual reports.
Regular seabird abundance estimates	No		
Interactions of seabirds with fishing operations	Yes	Resolution 10/06, paragraph 7	
Environmental data	No		
Information about offal management	Yes	Observer Minimum Standards, Form 4, Form 5	

Table 2.5: Minimum data collection requirements for scientific observers determined by ACAP (from SBWG-4 Doc 26 (Rev 1)) and minimum data collection requirements from scientific observers in the WCPFC longline fisheries. **Blue** = ACAP minimum data requirements. **Yellow** = ACAP ideal data requirements.

Information	WCPFC	Reference	Additional information
National/International observer	Regional, sub-regional and national observer programs	CMM-2007-01  <a href="http://www.wcpfc.int/regional-observer-programme">http://www.wcpfc.int/regional-observer-programme</a>	The objective of the Commission Regional Observer Program shall be to collect verified catch data, other scientific data, and additional information related to the fishery from the Convention Area and to monitor the implementation of the conservation and management measures adopted by the Commission.  Minimum data fields that ROP observers need to collect were adopted at WCPFC4.
Year established	2008	CMM-2007-01	
Year of full implementation	2012	CMM-2007-01	No later than 30 June 2012, CCMs shall achieve 5% coverage of the effort in each fishery under the jurisdiction of the Commission
Target observer coverage (coverage based on % of...)	5% (trips)	CMM-2007-01	

Who holds the data?	Secretariat of the Pacific Community (SPC)	WCPFC-SPC MoU  ROP 3 <sup>rd</sup> Annual Report (WDPFC8-2011-24, paragraph 12)	The SPC noted that that there is still an amount of ROP observer data to be sent to SPC for data entry.
Where do they report seabird bycatch?	Member Annual Reports to Scientific Committee		
<b>ACAP Minimum Data Collection Requirements</b>	<b>WCPFC Minimum Data Collection Requirements</b>	<b>Reference</b>	<b>Additional information</b>
Vessel Characteristics	Yes	ROP minimum data standards and field instructions	
Fishing trip and event characteristics	Yes	ROP minimum data standards and field instructions	
Total fishing effort	Yes	ROP minimum data standards and field instructions	
Total fishing effort observed	Yes	ROP minimum data standards and field instructions	

ACAP Minimum Data Collection Requirements	WCPFC Minimum Data Collection Requirements	Reference	Additional information
Spatial and temporal information about the fishing operation	Yes	ROP minimum data standards and field instructions	
Line weighting - mass of added weight	Yes		ROP minimum data asks whether the branchline has weighted attachments  Agreed to at WCPFC9
Branchline length (m)	Yes	ROP minimum data standards and field instructions	
Distance between weight and hook (m)	Yes		Agreed to at WCPFC9
Mitigation measures used	Yes	ROP minimum data standards and field instructions	Tori poles, bird curtain, weighted branchlines, blue dyed bait, underwater setting shoot.
Seabird data and samples	Yes	Resolution-2005-01	CCMs shall provide the Commission with all available information on interactions with seabirds, including incidental catches and details of species, to enable the Scientific Committee to estimate seabird mortality in all fisheries to which the WCPF Convention applies.
Regular seabird abundance estimates	No		

ACAP Minimum Data Collection Requirements	WCPFC Minimum Data Collection Requirements	Reference	Additional information
Interactions of seabirds with fishing operations	Yes	ROP minimum data standards and field instructions (observer trip monitoring summary)  Resolution-2005-01	Interact with non target species: (Yes/No)  CCMs shall provide the Commission with all available information on interactions with seabirds, including incidental catches and details of species, to enable the Scientific Committee to estimate seabird mortality in all fisheries to which the WCPF Convention applies.
Environmental data	Yes	ROP minimum data standards and field instructions	Sea Surface Temperature gauge, weather facsimile
Information about offal management	Yes	ROP minimum data standards and field instructions	