SCIENTIFIC COMMITTEE
ELEVENTH REGULAR SESSION

Pohnpei, Federated States of Micronesia
5-13 August 2015

Summary Report: First E-Reporting and E-Monitoring Intersessional Working Group Meeting

WCPFC-SC11-2015 ST-WP-04

FIRST E- REPORTING AND E-MONITORING INTERSESSIONAL WORKING GROUP MEETING (ERandEMWG1)

Novotel Hotel, Nadi, FIJI
8 – 10 July 2015

SUMMARY REPORT

AGENDA ITEM 1 — OPENING OF MEETING

1.1 Welcome

1. The WCPFC Compliance Manager called the meeting to order, and noted that the WCPFC Executive Director, Mr Feleti P. Teo OBE had delivered remarks related to the opening of this meeting during the IWG-ROP4 meeting (**Attachment 1**). The ERandEMWG Chair, Ms Kerry Smith, Secretariat staff and SPC-OFP staff providing support to this meeting were also introduced.

2. The Chair welcomed participants to the inaugural meeting of the ERandEMWG, and provided some opening remarks to guide the work of the working group. Key points were that:

    i. There is a wealth of experience across the participants at ERandEMWG1, and that participants have come with a common purpose of contributing to improving the management of data and streamlining data flows from CCMs and their vessels to the Commission;

    ii. The focus for ERandEMWG1 will be on development of draft electronic-reporting data standards;

    iii. There is a separate decision by the Commission that is necessary to require CCMs to submit data electronically in a standardized format; and

    iv. Development of draft standards for electronic reporting by the Commission is not an entirely new concept, for example the Commission has agreed standards for VMS and Record Fishing Vessels (RFV).

3. The following members, cooperating non-members and participating territories (CCMs) attended ERandEMWG1: Australia, Cook Islands, Federated States of Micronesia (FSM), Fiji, Japan, Republic of the Marshall Islands (RMI), Nauru, New Zealand, Papua New Guinea (PNG), Solomon Islands, Chinese Taipei, Tonga, Tuvalu United States of America (USA), and Vanuatu

4. Intergovernmental organisations the Agreement for the Conservation of Albatross and Petrels (ACAP), Pacific Islands Forum Fisheries Agency (FFA), the Parties to the Nauru

Agreement (PNA) Office, and the Secretariat of the Pacific Community (SPC) attended EMandERWG1.

5. Observers representing International Seafood Sustainability Foundation (ISSF), PEW Charitable Trusts, University of the South Pacific (USP), and World Wildlife Fund (WWF) also attended ERandEMWG1.

6. A list of EMandERWG1 meeting participants is at **Attachment 2**.

1.2 Adoption of Agenda

7. The provisional agenda (WCPFC-2015- ERandEMWG1-02) as adopted is at **Attachment 3**.

AGENDA ITEM 2 — REVIEW OF INFORMATION / UPDATES ON APPLICATION OF ER AND EM TECHNOLOGIES IN WCPO

8. The Secretariat introduced WCPFC-2015- ERandEMWG1-03, which reviews the activities by WCPFC and the Secretariat on electronic-reporting and electronic monitoring during 2014/15, and the background to the establishment of the EMandERWG. It was noted that no nominations were received in response to WCPFC Circular 2015/23 that requested technical experts to join the Secretariat and representatives of the specified subregional agencies on the ER-sub working group. The Secretariat further explained that work on the documents in support of the meeting had been completed by the Secretariat and SPC-OFP. The Secretariat expressed its appreciation to Philippines and Chinese Taipei for their willingness to work collaboratively with the Secretariat in recent months, including on trial formats for HSP1SMA and VMS manual reporting in text (txt) or CSV formats (instead of pdf and in-body emails). The Terms of Reference for the ERandEMWG were introduced, noting that the working group reports to TCC and to SC as appropriate.

9. All members participants provided an update on their respective national and subregional initiatives in the areas of electronic reporting and electronic monitoring. SPC-OFP and PNA Office, as well as WWF and ISSF, also provided updates on their respective work in these areas.

10. The Chair summarized the key points from the various presentations as follows:

    i. There are a number of different trials of electronic technologies that are being undertaken by members and through subregional agencies in the region. Members are at varying stages with respect to implementation;

    ii. The ERandEMWG provides a valuable mechanism for WCPFC members and subregional agencies to share experiences and facilitate information exchange on lessons learnt and possibly provide opportunities for members to coordinate the development and implementation of electronic technology trials in the WCP region;

    iii. The ERandEMWG noted that a variety of approaches were being used to incentivize or garner support from vessel operators for these technologies. Training was considered an important component for both vessel operators and national administrations;

iv. Participants recognised that e-technologies collect data and information for both science and compliance purposes, and that there may be a need for further consideration of these aspects in the development of WCPFC standards and procedures going forward (timeliness, confidentiality, evidentiary status);

v. It was noted that the characteristics of some fisheries was a factor to be considered with respect to implementation;

vi. There is a need to consider SIDS administrative and technical needs in the further development of ER and EM in the region; and

vii. The rate of technology change, including as seen by ER and EM technologies that are being implemented or trialled in the region, does support an "anything is possible" mentality.

11. The Chair briefly introduced WCPFC-TCC10-2014-16 and overviewed the international standards that are approaches for a range of different fisheries data. The use of international standard, where appropriate, would facilitate data sharing across RFMOs. It was noted that the proposed approach in that paper, was used as a basis for the work by the Secretariat and SPC-OFP in their development work on draft standards documentation for the ERandEMWG1 meeting.

12. **The ERandEMWG acknowledged the substantial work being conducted in the region on ER and EM systems and encourages cooperation and the sharing of related information among CCMs, sub-regional organizations, and NGOs.**

13. **The ERandEMWG recognized that electronic reporting can enhance data accuracy, data entry efficiency, reducing reporting burden and avoiding duplication for vessel operators and national fisheries agencies, and therefore encourages CCMs and the Commission to develop policies and systems that allow e-reported information to satisfy data reporting requirements.**

14. **The ERandEMWG recognized that some CCMs support the development of ER systems that require a captain to be able to authenticate submitted data which can be used for enforcement purposes. The ERandEMWG encouraged CCMs that have already addressed ER issues for compliance applicability, to share information to support methods to authenticate ER submitted data.**

15.

16. The Secretariat on behalf of the CDS-IWG Chair Mr Alois Kinol, confirmed that the next meeting of the CDS-IWG would take place in Pohnpei, FSM on 20-21 September 2015, immediately in advance of the TCC11 meeting. The agenda for that meeting was presently being worked on, but is hoped to include some reports and participation by experts who are developing international best practice standards for catch documentation schemes. It was noted that there were few intersessional responses to the circular seeking comments from CCMs. An understanding that FFA members had continued work to progress their draft proposal document, and this is expected to include linkages to electronic reporting and Information Management Systems development by those members to be proposed as a basis for the WCPFC Catch Documentation Scheme.

17. The FAD Management Options WG Chair, Mr Brian Kumasi, confirmed that work was currently underway and that advice would shortly be sent out to the working group on the next steps for the FAD Management Options WG intersessional work. He noted an expectation that there are clear linkages to e-reporting initiatives, in the areas of FAD monitoring and possibilities of FAD tracking and management options.

18. The IWG-ROP Chair, Mr Raymond Clarke, congratulated the many member participants who reported progress on trial implementations of electronic reporting technologies in their observer programmes, and encouraged continued work in this area. The IWG-ROP4 report does note specific links to electronic-reporting and noted these to be areas which could continue to be monitored by the IWG-ROP.

19. **The ERandEMWG recognized that there are clear linkages to the ongoing work being conducted in various WCPFC intersessional working groups related to electronic reporting of information and recommended that the Secretariat facilitate participation and information sharing among working groups.**

AGENDA ITEM 3 — DRAFT E-REPORTING STANDARDS

20. The Secretariat introduced WCPFC-2015- ERandEMWG1-04, noting that the draft consultation document used the RFV SSPs format as a basis for the layout. The consultation document was formulated to support discussions at the ERandEMWG1 on a process for development of draft electronic reporting standards. The consultation document for draft standards was provided to ERandEMWG participants in three parts:

    i. WCPFC-2015-ERandEMWG1-04: Consultation document, including SSPs containing the following Attachments:

        - 1A: Electronic data standard to be used for paragraph 2 of CMM 2010-02 Conservation and Management Measure for the Eastern High Seas Pocket Special Management Area (or its replacement) (EHSPSMARPT)
        - 1B: Electronic data standard to be used for Attachment C paragraph 3 of CMM 2014-01 Conservation and Management Measure for Bigeye, Yellowfin and Skipjack tuna in the Western and Central Pacific Ocean (or its replacement) (HSP1MARPT)
        - 1C: Electronic data standard to be used for WCPFC9 decision on the Standard format for manual position reporting in the event of ALC/MTU Malfunction or Failure (WCPFC9 Summary Report Attachment H) (or its replacement) (VMSMNLRPT)
        - 2: Electronic Formatting Specifications for EHSPSMARPT, HSP1SMARPT and VMSMNLRPT
        - 4: Electronic Formatting Specifications for observer data and logbook data

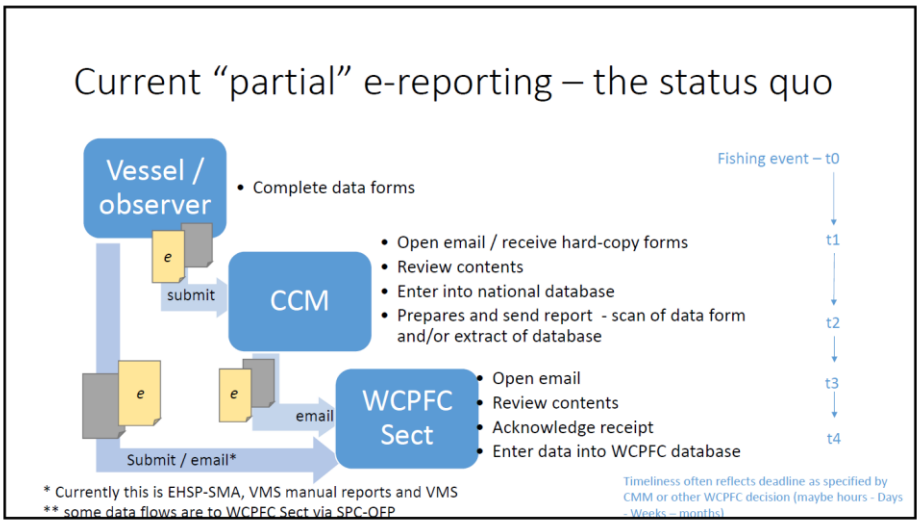
    ii. WCPFC-2015-ERandEMWG1-05: Attachment 3A: Electronic data standard to be used for WCPFC ROP Minimum Standard Data Fields, as amended by WCPFC11 decisions; and

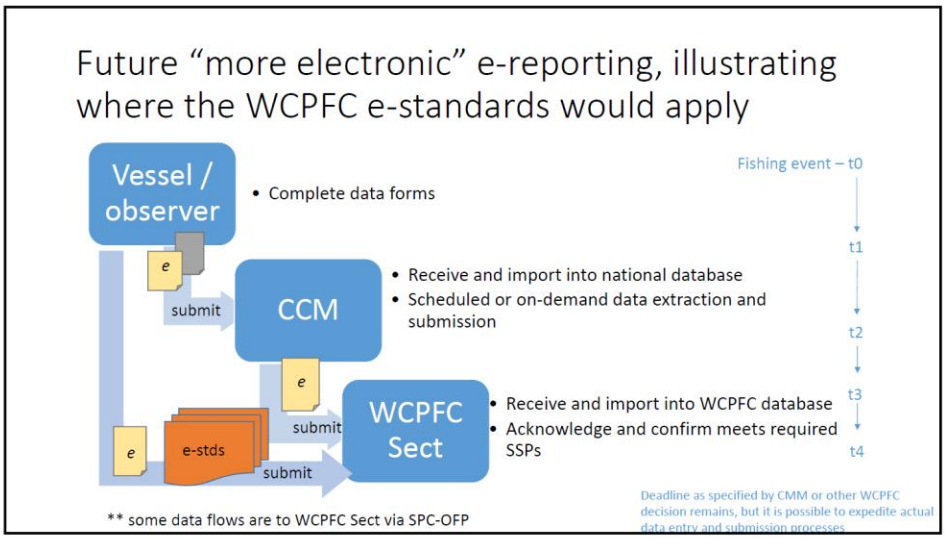
iii. WCPFC-2015-ERandEMWG1-06: Attachment 3B: Electronic data standard to be used for Paragraph 3 and Annex 1 of Scientific Data to be Provided to the Commission.

21. Noting the consultation document to be a collaborative work-product by the Secretariat and SPC-OFP, the Secretariat expressed its appreciation to colleagues at SPC for their considerable efforts in developing and documenting draft standards as contained in WCPFC-2015-ERandEMWG1-05 and WCPFC-2015-ERandEMWG1-06.

22. To assist meeting participants in visualizing the flow of data to the WCPFC Secretariat either directly from the vessel or via CCMs, the Secretariat described the current arrangements where some degree of human intervention is required and a possible future state whereby data submitted in accordance with the proposed data standards would be subject to no or minimal human intervention. (see Figure 1)

Figure 1. Illustrative Diagram of current arrangements of data flow to the Commission (top), and a possible future state where as a result of the development of electronic data standards a minimal degree of human intervention is required (below).





23. The ERandEMWG recognized that some CCMs already submit data to the Commission through a range of different electronic formats, and often via email. Participants also recognized that some required reporting such as manual position reporting in the event of ALC/MTU malfunction (VMS manual reports), and that some CCMs require their vessels to send these reports directly from the vessel to the WCPFC Secretariat.

24. SPC provided an overview of the draft WCPFC E-Reporting standard data fields for operational observer data (WCPFC-2015-ERandEMWG1-05) concentrating on the structure and objectives of the document. The main components of this document are (i) the introduction which outlines background, purpose and refers to complementary documentation to be used in conjunction with the data standards, (ii) a graphical description of the 'data model' of the operational observer data to be provided (ii) the individual distinct 'tables' (i.e.components) that make up the operational observer data to be provided covering longline and purse seine observer data and (iii) the APPENDICES, which include information on the data fields that need to adhere to international standards (e.g. date and position) and standard codes to be used for certain fields collected by observers.

25. The ERandEMWG noted that the draft standard for operational catch and effort data (WCPFC-2015-ERandEMWG1-06) follows the same structure.

26. **The ERandEMWG encouraged CCMs to consider further evaluation of the draft data field standards for observer data and logsheet data to**

    i. **(i) review and comment on the draft data standards document for logsheet and observer data, and**

    ii. **(ii) attempt to produce sample data according to these draft data standards and submit the sample data to SPC with any comments on any issues encountered in the process.**

27. The ERandEMWG noted that the US, NZ and Chinese Taipei offered to send in sample data using the draft data standards. No strict deadline for the submission of the sample data was suggested but at least one of these CCMs suggested it should be possible prior to TCC11.

28. SPC-OFP to introduced a selection of file formats that could be used for electronic data transmission (logbook and observer data): XML (preferred format), TEXT (delimited or not, txt), Comma-separated values (csv), EXCEL (xls). (**Attachment 4**)

29. In reference to Attachment 4 in the consultation document (WCPFC-2015-ERandEMWG1-04), some suggested language on file naming was also discussed, and agreed to be formatted with a unique name, featuring: the CCM submitting the data, the vessel details (RFV VID and departure date), the type of data (logsheet or observer), and a reference to the corresponding standard table. These suggestions were incorporated into the revised consultation document. The need to ensure security of data transmission (through encryption) was also suggested.

30. The ERandEMWG noted that the draft standards (SSPs) would benefit from some preamble language to set the context.

AGENDA ITEM 4 — STRATEGIES FOR E-REPORTING IN THE WCPO

31. Participants generally supported the approach proposed in WCPFC-2015-ERandEMWG1-04, noting that the consultative document and associated attachments provided a good basis for progressing the development of ER SSPs as it was consistent with current requirements relating to data fields and submission and reiterated that the adoption of standards was separate to a decision to require CCMs to report electronically. The ERandEMWG recognized that, in order to support a standardized approach to ER, the data required by current decisions of the Commission needed to be further described including technical specifications. The RFV SSPs are a good example and the attachments in WCPFC-2015-ERandEMWG1-04, build on the format used in the RFV SSPs.

32. Further discussion and clarification centred on:

    i. Recognition of the need for further refinement of the SSPs and the possibility that the Commission may wish to empower the subworking group with making refinements relating to data validation rules and other small technical changes

    ii. That there may be a preference to link the ER SSPs associated with specific CMMs to their respective CMM (eg as an appendix)

    iii. Consistency in specifications for data fields and formats (eg file names)

    iv. In some cases, additional data fields were necessary to support the implementation of ER

    v. Opportunities to "test the specs" by cooperating with the Secretariat and SPC

    vi. The need to involve staff responsible for reporting when reviewing specifications

    vii. The need to consider submission of electronically reported data by vessels direct to the Secretariat in addition to reporting by CCMs direct to the Secretariat (eg HSP1 reporting, VMS manual reporting)

33. **The EMandERWG tasked the sub-working group (referenced in ERandEMWG Terms of Reference workplan item 1) to:**

    i. develop and maintain a master list of electronic data standards to support the collection of Commission agreed data fields that includes but is not limited to data validation rules field formats and tags;

    ii. recommend amendments to CMMs and certain decisions covered by these SSPs in relation to data fields that are reported electronically;

    iii. undertake testing as appropriate, of data submission by CCMs working with the Secretariat or SPC using the master list of electronic data standards;

    iv. review results of data submission by CCMs working with the Secretariat or SPC using the master list of electronic data standards; and

    v. report to the ERandEM WG as required (including electronically).

34. **The ERandEMWG agreed to recommend the draft SSPs to TCC11 for consideration, with the recognition that the SSPs could be further refined prior to WCPFC12. (Attachment 5)**

35. **The ERandEMWG recommended that TCC11 consider how the electronic reporting standards associated with specific CMMs are linked to their respective CMMs.**

36. **The ERandEMWG recommended that TCC11 discuss additional SSPs that may be useful (eg transhipment notification).**

37. Participants noted that a unique vessel identifier was important in order to link events and relevant data to an individual vessel. The VID (which is number that is generated automatically by the RFV, see CMM 2014-03) was noted as presently providing the basis for linking records within WCPFC databases, and that this was the basis for its inclusion in the draft standards.

38. The ERandEMWG noted the VID was a minimum data field for the RFV (CMM 2014-03) and it provides a means to match reporting related to a specific vessel within WCPFC databases.

AGENDA ITEM 5 — STRATEGIES FOR E-MONITORING IN THE WCPO

39. The Chair opened this agenda item noting that electronic-monitoring would be an area of longer-term work for the ERandEMWG.

40. Key points noted in the discussions included:

    i. A view that electronic monitoring should not replace human observers completely, but that they are expected to be complementary;

    ii. Trials should continue to be undertaken, and members should continue to share experiences with other members;

    iii. Further analysis should be undertaken of cost-benefits of electronic monitoring technologies, including on processes to review videos;

    iv. There may be some scope for electronic monitoring technologies to be used in fisheries where there is a perceived higher risk to the safety of observers; and

    v. Electronic monitoring could also be considered as an intermediary step until CCMs are able to implement higher levels of observer coverage, particularly in improving monitoring of fisheries impacts on species of special interest.

    vi. Acknowledgement that EM could be beneficial for monitoring implementation of operational vessel aspects with respect to adopted CMMs (eg CMM 2012-07 on seabird mitigation measures).

41. **The ERandEMWG encouraged the development of EM in areas where data gaps exist such as longline observer coverage and high seas transshipment.**

42. **The ERandEMWG recognized that EM systems can support and complement observer programs.**

AGENDA ITEM 6 — GENERAL DISCUSSION AND NEXT STEPS

43. The ERandEMWG noted that the priority continued to be the development of standards to coordinate efforts of CCMs and the Secretariat in their efforts to take these technologies forward. The Chair noted that the steps taken in developing standards were positive. Further work was needed in areas such as training, confidentiality, technical capacity. The Chair also noted that we had a joint responsibility to reflect on the work of the ERandEMWG when drafting or revising CMMs.

44. Participants requested that a copy of SPC's presentation on eTUNALOG be included in the attachments to the record (**Attachment 6).**

45. The Chair congratulated the participants on their considerable work over the last two and a half days. She commented that at its inaugural meeting the ERandEMWG has made good progress on its priority task to develop draft electronic reporting standards. The draft proposed standards have been developed taking into account the different stages of implementation of electronic reporting amongst members, and is intended provide a basis for CCMs and the Secretariats preparations and enhancing technical capacities. Importantly the draft standards is intended to be a founding document, which can be expanded to include additional types of CMM reporting. She also noted that it will be incumbent on the members of the ERandEMWG to consider our work when considering revisions to existing CMMs or development of new CMMs.

46. Eric Kingma expressed on behalf of the participants thanks to the Chair for her leadership of the ERandEMWG. He also thanked the Secretariat and SPC-OFP for their considerable work in developing the draft standards document that were the basis of the discussions and in their support to the meetings.

47. Warren Papworth expressed thanks on behalf of ACAP for the dedication and hard work by the ERandEMWG at this meeting. He noted the work by the ERandEMWG as being important to the development of a sustainable fishery in the Western and Central Pacific.

48. The Chair closed the meeting at 12.45pm on Friday 10 July 2015.

Attachment 1

WCPFC Executive Director; Mr Feleti Teo Statement at the Opening of the Meetings of the Inter-sessional Working Groups on the Regional Observer Programme and the Electronic Reporting and Monitoring

[At Nadi, Fiji on 6th July, 2015]

Colleagues, ladies and gentlemen. I appreciate and am grateful for the opportunity to make some remarks at this opening session of the meetings of the two inter-sessional working groups of the WCPFC taking place this week here in Nadi, Fiji Islands.

So let me firstly extend to you all participants a very warm welcome and a big nisa bula vianka to Nadi, Fiji Islands. But before I proceed with my remarks, let me acknowledge some people present in the room who have been instrumental in putting together the arrangements and materials for the two meetings.

In that regard, I acknowledge the Chair-persons of the two working groups. Mr Ray Clarke of the USA who is the chair for the IWG on the Regional Observer Programme (ROP); and Ms Kerry Smith of Australia who is the Chair for the IWG on Electronic Reporting and Electronic Monitoring (ERandEM). Thank you both for your enormous input and guidance to the development of the meeting agenda and the meeting documentation.

As participants will recall there were two other IWGs that were tasked by the Commission to undertake specific tasks. One on FAD Managements Options and the other on a Catch Documentation Scheme. We do have with us this week Mr Brian Kumasi of PNG who is the chair of the FAD Management Options working group, and I wish to acknowledge him personally as well. We were also hoping to have with us this week the Chair of the Catch Documentation Scheme working group, Mr Alois Kinol also of PNG who due to other competing commitments he is unable to be with us this week.

Ladies and gentlemen. I had wanted to specifically acknowledge the Chair-persons of these IWGs because these officials have their own full time jobs, and because of these roles entrusted on them they have to put in extra efforts at no costs to the Commission but to the enormous benefits of all members of the Commission. So I commend and applaud all their efforts and the cooperative and collaborative manners in which they have worked with the Secretariat.

I also acknowledge representatives of all CCMs present here this week, in particular to those that provided feedback and input to the agenda and meeting material for the two meetings this week.
I also acknowledge representatives of Observers, in particular those that have taken a keen and active interest in the work of these IWGs, I thank you also for your input.
I also acknowledge colleagues from our partner organisations, from FFA, SPC and USP.
Last but not least, I acknowledge my own staff at the Secretariat.

As most of you know I am still relatively fresh at the Secretariat and I am most grateful for the technical guidance I receive from staff in our compliance division. We have with us here this week, Dr Lara Manarangi-Trott; the Compliance Manager; Mr Karl Staisch; Manager of the ROP; and Mr Donald David, Data Quality officer for ROP.

These meetings this week are in fact the first set of meetings of the Commission after I took office as your Executive Director in March of this year. And I made every efforts to be here for the start of what will be an interesting week as we collectively seek to improve the performance and operation of the ROP and to

develop a new compliance tool for the Commission in the form of an electronic reporting and monitoring scheme.

So during the course of this week, we expect a mixture in the discussions of an existing compliance tool in the ROP and the discussion taking forward the aspiration to institute an electronic reporting and monitoring scheme for the Commission.

The first two and a half days, will involve discussions that will review and reflect on experiences from the implementation of the ROP over the last seven years. As you all know, the observer coverage in the tropical purse seine fishery has been at 100% for almost five years. The early years of implementing 100% observer coverage wasn't without its challenges for many of the national and sub-regional observer programmes as they strove to ensure supply of qualified and well trained observers to the ROP. In more recent times, there are now the requirement for 100% observer monitoring on the carriers receiving high seas transshipments, and the requirement for a minimum of 5% observer coverage in longline fisheries which has been in place for almost two years.
The IWG-ROP, under the chairmanship of Ray Clarke, is to review the operation and performance of the ROP and to seek to address the specific technical and operational issues identified and directed by the Commission in its meeting in Apia, Samoa last year. The underlying objective of the work of this IWG is to recommend improvements to the ROP and to promote a more consistent and more common understanding of the application of the ROP.

The second half of the week, is expected to focus on some preparatory work on a new and growing area of interest for the Commission. This is in the exciting area of utilizing existing electronic technologies in meeting reporting and monitoring responsibilities as Commission members. The preparatory work will, obviously need to take into account the efforts of many members of the Commission who have already commenced implementation of new electronic technologies to better support their fisheries monitoring, management and compliance and enforcement activities. In particular, the specific preparatory task that will be considered by the second IWG this week is the development of draft electronic reporting standards. It is also expected that a workplan for future work may be recommended, which among others will propose a schedule for the development of draft e-monitoring standards. The more immediate intention is to ensure that the Secretariat will have the capacity to receive a range of data and reports as required by CMMs and other decisions, which will be based on data collected through a members chosen national and / or sub-regional electronic technologies. The development of such standards and specifications, will be the task for the Electronic Reporting and Electronic Monitoring Inter-sessional Working Group to be chaired of Ms Kerry Smith. The ultimate objective of the work of this working group will be that, at some point in the future key, Commission members will be in a position to utilize these electronic technologies to meet their fisheries data reporting obligations.

So it will be a full work schedule for participants this week. I know most of you will be participating in both meetings. We have structured the agenda and meeting proceedings to keep them less formal and more interactive to facilitate free flowing discussions and participation.

Without taking up much more of your time I wish all of you successful deliberations.

And I wish Ray and Kerry well in presiding over you deliberations.

Thank you

END

Attachment 2

FIRST E- REPORTING AND E-MONITORING WORKING GROUP MEETING

(ERandEMWG1)

Novotel Hotel, Nadi, FIJI
8 – 10 July 2015

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Attachment 3

FIRST E- REPORTING AND E-MONITORING WORKING GROUP MEETING

(ERandEMWG1)

Novotel Hotel, Nadi, FIJI

8 – 10 July 2015

AGENDA

Wednesday 8th July 2015 (Day 1 - afternoon session only)

		Doc list
2.00-2.30pm	**AGENDA ITEM 1. WELCOME AND OPENING**	
	1.1 Opening	
	1.2 Adoption of agenda	
	1.3 Meeting arrangements	
2.30 – 3.00pm	**AGENDA ITEM 2. REVIEW OF INFORMATION / UPDATES ON APPLICATIONS OF ER AND EM TECHNOLOGIES IN WCPO**	
	2.1 Report from Secretariat, including review of 2014/15 WCPFC activities and introduce ERandEMWG TOR	**3**
3.00 – 4.15pm	2.2 Reports from CCMs	
	2.3 Reports from Subregional Agencies	
	2.4 Reports from Chairs of other WCPFC IWGs	
4.15 -4.30pm	**Afternoon tea**	
4.30 – 5.30pm	2.5 Brief introduction to international fisheries standards	**TCC10/16**
	AGENDA ITEM 3. DRAFT E-REPORTING STANDARDS 3.1 Brief introduction/overview of draft ER standards document and approach - Secretariat	**4, 5, 6**

Thursday 9th July 2015 (Day 2)

8.30 – 9.00am	**Recap from Day 1**	
9.00-10.30am	**AGENDA ITEM 3. DRAFT E-REPORTING STANDARDS**	
	3.2 Detailed review of draft ER standards document (continued)	
10.30 – 11am	**Morning tea**	
11-12.30pm	3.2 Detailed review of draft ER standards document (continued)	
12.30 -1.30pm	**Lunch**	
1.30-3.00pm	3.2 Detailed review of draft ER standards document (continued)	
3.00 -3.30pm	**Afternoon tea**	
3.30 – 5.30pm	3.2 Detailed review of draft ER standards document (continued)	

FIRST E- REPORTING AND E-MONITORING WORKING GROUP MEETING

(ERandEMWG1)

Novotel Hotel, Nadi, FIJI

8 – 10 July 2015

PROVISIONAL AGENDA AND INDICATIVE SCHEDULE

Friday 10th July 2015 (Day 3)

8.30 – 9.00am	**Recap from Day 2**	
9.00-10.30am	**AGENDA ITEM 4. STRATEGIES FOR E-REPORTING IN WCPO** 4.1 Next steps for development of draft E-Reporting standards, 4.2 Discuss possible prioritization and timelines for implementation of E-reporting in WCPO, and likely resource implications	
10.30 – 11am	**Morning tea**	
11-12.30pm	**AGENDA ITEM 5. STRATEGIES FOR E-MONITORING IN THE WCPO** 5.1 Next steps for development of draft E-Monitoring standards	
12.30 -1.30pm	**Lunch**	
1.30-3.00pm	**AGENDA ITEM 6. GENERAL DISCUSSION AND NEXT STEPS** 6.1 Outcomes – Next steps and report to TCC11/WCPFC12 6.2 Notes on linkages to other IWGs and work of other subsidiary bodies	
3.00 -3.30pm	**Afternoon tea**	
3.30 – 5.30pm	**AGENDA ITEM 7. OTHER MATTERS**	
	AGENDA ITEM 8. CLOSE	

Initial proposals for E-Reporting submissions
FILE FORMATS

Example - Table of ER data standards

1.6 PS SET LEVEL DATA

PS_SET
PROVIDE information for each FISHING SET

FIELD	Data Collection Instructions	Field format notes	Validation rules	NAF CODE	XML TAG	WCPFC FIELD
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE		Link to TRIP information		<TRIP_ID>	
ACTIVITY IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY		Link to ACTIVITY (SET)		<ACTIVITY ID >	
START DATE/TIME OF SET	PROVIDE the start time of the set which is defined at the time the SKIFF is launched.	REFER TO APPENDIX A1	Expect to be automatically integrated/generated with GPS DEVICE The chronology of SET START TIME with respect to other dates/times for the trip must be valid.	ST	<SETSTART>	Y
END DATE/TIME OF SET	PROVIDE the end time of the set which is defined as the time when the "RINGS UP" ON DECK.	REFER TO APPENDIX A1	Expect to be automatically integrated/generated with GPS DEVICE The chronology of SET END TIME with respect to other dates/times for the trip must be valid.	ET	<SETEND>	Y
SCHOOL ASSOCIATION	PROVIDE the School Associated Code	REFER TO APPENDIX A6	The code must be within the valid range.	SA	<SCHOOL>	Y
SCHOOL ASSOCIATION NOTE	PROVIDE information of the SCHOOL ASSOCIATION in cases where the school association is not covered in the list of School association codes 1. To 7.	VARCHAR(30)	Used only when the SCHOOL ASSOCIATION = 8	SA	<SCH_NOTE>	Y

Initial proposals for E-Reporting submissions
FILE FORMATS

FIVE (5) STANDARD FILE FORMATS proposed

1. XML format
2. TXT file – COMMA delimited
3. TXT file – TAB delimited
4. TXT file – No delimiters
5. XLS format

Initial proposals for E-Reporting submissions – File formats

1. XML format

- PROS : Recognised means of providing data in a structured manner, RDBMS tools readily available to import these data
- CONS : potentially complex to generate – may need DB tech skills, larger files sizes that other formats, …

```
<?xml version="1.0"?>
<ROWSET>
        <ROW>
                <VESSEL_ID>33456</VESSEL_ID>
                <DEP_DATE>2014-02-14</DEP_DATE>
                <ACTIVITY_ID>3</ACTIVITY_ID>
                <SETSTART>2014-02-16T09:32Z</SETSTART>
                <SETEND>2014-02-14T09:32Z</SETEND>
                <SCHOOL></SCHOOL>
                <SCH_NOTE></SCH_NOTE>
        </ROW>
        <ROW>
                <VESSEL_ID>33456</VESSEL_ID>
                <DEP_DATE>2014-02-14</DEP_DATE>
                <ACTIVITY_ID>2</ACTIVITY_ID>
                <SETSTART>2014-02-17T09:32Z</SETSTART>
                <SETEND>2014-02-14T09:32Z</SETEND>
                <SCHOOL></SCHOOL>
                <SCH_NOTE></SCH_NOTE>
        </ROW>
        <….>
</ROWSET>
```

Initial proposals for E-Reporting submissions – File formats

2. TXT file (COMMA Separated Values – CSV file)

- PROS : Standard format already used by some countries to provide data
- CONS : Problems when fields values include commas !
- **Requirement : remove COMMAs from all fields**

```
VESSEL_ID,DEP_DATE,ACTIVITY_ID,SetStart,SetEnd,SCHOOL,SCH_NOTE
33456,2014-02-14,3,2014-02-16T09:32Z,2014-02-14T09:32Z,,
33456,2014-02-14,2,2014-02-17T09:32Z,2014-02-14T09:32Z,,
33456,2014-02-14,1,2014-02-18T09:32Z,2014-02-14T09:32Z,4,
```

Initial proposals for E-Reporting submissions – File formats

3. TXT file (TAB delimited)

- PROS : Standard format already used by some countries to provide data
- CONS : Problems when fields include TABS !
- **Requirement : remove TABS from all fields**

VESSEL_ID	DEP_DATE	ACTIVITY_ID	SetStart	SetEnd	SCHOOL	SCH_NOTE
33456	2014-02-14	3	2014-02-16T09:32Z	2014-02-14T09:32Z		
33456	2014-02-14	2	2014-02-17T09:32Z	2014-02-14T09:32Z		
33456	2014-02-14	1	2014-02-18T09:32Z	2014-02-14T09:32Z	4	

Initial proposals for E-Reporting submissions – File formats

4. TXT file (no delimiters)

- PROS : No need to strip out commas/tabs, efficient file size, some CCMs are already providing data in this format (not new process)
- CONS : issues if the data format is not strictly adhered to

```
VESSEL_ID DEP_DATE ACTIVITY_ID SetStart SetEnd SCHOOL SCH_NOTE
334562014-02-1432014-02-16T09:32Z2014-02-14T09:32Z
334562014-02-1422014-02-17T09:32Z2014-02-14T09:32Z
334562014-02-1412014-02-18T09:32Z2014-02-14T09:32Z4
```

Initial proposals for E-Reporting submissions – File formats

5. XLS file (EXCEL)

- PROS : can easily be imported into database since fields are well defined
- CONS : -

	A	B	C	D	E	F	G
1	VESSEL_ID	DEP_DATE	ACTIVITY_	SetStart	SetEnd	SCHOOL	SCH_NOTE
2	33456	2014-02-14T09:32Z	3	2014-02-16T09:32Z	2014-02-14T09:32Z		
3	33456	2014-02-14T09:32Z	2	2014-02-17T09:32Z	2014-02-14T09:32Z		
4	33456	2014-02-14T09:32Z	1	2014-02-18T09:32Z	2014-02-14T09:32Z	4	
5							

Initial proposals for E-Reporting submissions – File naming

XX_DDD_VID_DEPDATE_<Table_Name>.EXT

- **XX** – two letter ISO country code of the CCM providing the file
- **DDD** – type of report (LOG – logbook e-data and OBS – Observers e-data)
- **VID** – five digit integer assigned number for a vessels record on the WCPFC Record of Fishing Vessels (RFV)
- **DEPDATE** – Departure date of the Vessel trip (format YYYYMMDD)
- **<Table_Name>** – Respective (subset data) table name within this data type
- **EXT** – the standard file extension (according to chosen format)

Example : FM_OBS_35641_20140214_PS_CATCH.CSV
Represents a comma-delimited file provided by FSM for an observer trip on-board the vessel identified with WCPFC RFV id as '35641' with a departure date of 14/03/2014; This file is the subset data for this trip corresponding to the PS_CATCH Table in the ER Observer data standards document

Initial proposals for E-Reporting submissions – Other Considerations

Data Compression (efficiency)

Data confidentiality issues

- Data encryption/decryption

Data transmission

- Secure FTP
- Email ?
- Cloud-hosted, third-party secure transmission tools…

CONSULTATION DOCUMENT_as amended by ERandEMWG1

DRAFT - STANDARDS, SPECIFICATIONS AND PROCEDURES (SSP) FOR ELECTRONIC REPORTING IN THE WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION

Objectives for the SSP

1. These SSP are a set of data standards that, at a minimum:

    a. provide a basis for those CCMs who are considering the implementation of electronic reporting technologies in their fisheries;

    b. provides a mechanism, for those CCMs who have commenced implementation of electronic reporting technologies in their fisheries, to have the option of using these technologies to facilitate their implementation of certain reporting requirements to the Commission;

    c. provides a basis for the Secretariats preparations to be ready to receive a standardized set of electronically reported fisheries data from CCMs and as appropriate from vessels;

    d. takes into account current and developing fisheries monitoring and information management systems in use in WCPFC fisheries; and

    e. where practicable, is mindful of existing and proposed data standards and formats in other regional bodies and RFMOs.

Scope of application

2. These SSPs apply initially to the following reporting requirements under these conservation and management measures or decisions of the WCPFC:
    a. Paragraph 2 of CMM 2010-02 *Conservation and Management Measure for the Eastern High Seas Pocket Special Management Area*;
    b. Attachment C paragraph 3 of CMM 2014-01 *Conservation and Management Measure for Bigeye, Yellowfin and Skipjack tuna in the Western and Central Pacific Ocean*;
    c. WCPFC9 decision on the *Standard format for manual position reporting in the event of ALC/MTU Malfunction or Failure* (WCPFC9 Summary Report Attachment H); and
    d. Paragraph 3 and Annex 1 of *Scientific Data to be Provided to the Commission*;
    e. *WCPFC ROP Minimum Standard Data Fields*, as amended by WCPFC11 decisions.

3. Until decided otherwise by the Commission, other forms of electronically reported data, and as appropriate hard copy formats, will continue to be acceptable forms of reporting from CCMs, and as appropriate from their vessels, to meet agreed reporting requirements under the above listed conservation and management measures or decisions of the WCPFC.

4. These SSP, including any agreed amendments, will take effect [six] months after adoption by the WCPFC.

Responsibilities of CCMs

5. It shall be the responsibility of CCMs who choose to use electronic reporting technologies to meet certain WCPFC reporting requirements to:

    a. submit electronically reported data to the WCPFC Secretariat[1] that includes the minimum required fields and also meets the structure and format specifications of Attachment 1A, 1B, 1C, 3A and 3B as appropriate; and

    b. submit electronically reported data to the WCPFC Secretariat that meet the electronic format specifications of Attachment 2 and 4, as appropriate.[2]

6. It shall be the responsibility of CCMs to inform the WCPFC Secretariat of any confidentiality requirements that may need to be taken into account upon receipt of such data.

Responsibilities of the WCPFC Secretariat

7. It shall be the responsibility of the WCPFC Secretariat to:

    a. develop and maintain the technical and administrative systems that ensure data confidentiality[3] needed to receive electronically reported data from CCMs, which may be submitted and that meet the electronic format specifications of Attachment 2 and 4;

    b. acknowledge, upon receipt of electronically reported data from a CCM or as appropriate from a vessel, receipt of the data and indicate to the CCM and as appropriate to the vessel, in a timely manner whether the data meet the minimum

[1] It is recognized that some CCMs, who are SPC members, submit data described in Attachment 3A and 3B to WCPFC via SPC-OFP

[2] The Commission may consider additional modes of transmission, such as modes involving direct links between the Commission's and CCMs' databases.

[3] In accordance with applicable data confidentiality rules, including Rules and Procedures for the Protection, Access to, and Dissemination of Data Compiled by the Commission (2007 and 2009)

data requirements and, if applicable, whether they meet the electronic formatting specifications of Attachment 2 and 4;

c. monitor and report annually to the TCC, and as appropriate the SC, on the performance of these electronic reporting standards and their application and, as necessary, make recommendations for improvements or modifications;

d. recommend continual improvements to these SSPs, including, where appropriate, standards and codes that are consistent with those used in other international fora, such as the FAO and UN/CEFACT; and

e. ensure the electronic data standards are publically available and is suitably version controlled.

Attachment 1A. Electronic data standard to be used for paragraph 2 of CMM 2010-02 Conservation and Management Measure for the Eastern High Seas Pocket Special Management Area *(or its replacement)* (EHSPSMARPT)

EHSP-SMA reporting				
2. Flag States shall require their vessels to submit reports, directly, or through such organisations designated by the flag state to the Commission at least 6 hours prior to entry and no later than 6 hours prior to exiting the E-HSP. Such reports shall also contain estimated catch (kilograms) on board. This information shall immediately be transmitted by the Commission Secretariat to the adjacent coastal states/territories, and shall be considered non-public domain data. The report shall be in the following format: *VID/Entry/Exit: Date/Time[1]; Lat/Long[1]; YFT/BET/ALB/SKJ/SWO/SHK/OTH/TOT(kgs) /TRANSHIPMENT (Y/N) [2]* *[1] Of anticipated point of entry or exit.* *[2] WCPFC11 agreed to amend CMM 2010-02 paragraph 2 to add vessel name to reporting requirements*				
Field name	**Field format**	**Field description/instructions**	**Example**	**Ref. in CMMs**
VID	Number (integer)	This number is generated automatically by the WCPFC Record of Fishing Vessels (RFV), and is now a field that in accordance with CMM 2014-03 is displayed, for all vessels on the WCPFC RFV.	10503	2010-02: 02 2014-03
Entry/Exit	Text	Enter "ENTRY" for reports prior to entry to Eastern High Seas Pocket Special Management Area. Enter "EXIT" for reports made prior to exiting the Eastern High Seas Pocket Special Management Area	ENTRY	2010-02: 02
Date/Time	Number (integer)	Of anticipated point of entry or exit, in UTC and 24 hour format (ISO 8601) [YYYY]-[MM]-[DD]T[HH]:[MM]Z	2014-01-24T23:00Z	2010-02: 02
Latitude	Number (integer)	Positions to degrees and minutes to 3 decimal places (ISO 6709) +/- DDMM.MMM	- 14.166 (*for* 14-10-00 S)	2010-02: 02
Longtitude	Number (integer)	Positions to degrees and minutes to 3 decimal places (ISO 6709) +/- DDDMM.MMM	- 157.45 (*for* 157-27-00 W)	2010-02: 02
Yellowfin	Number (integer)	Provide total weight (kg) of YELLOWFIN onboard. Enter "0" if NONE	23	2010-02: 02
Bigeye	Number (integer)	Provide total weight (kg) of BIGEYE onboard. Enter "0" if NONE	16	2010-02: 02
Albacore	Number (integer)	Provide total weight (kg) of ALBACORE onboard. Enter "0" if NONE	0	2010-02: 02

EHSP-SMA reporting

2. Flag States shall require their vessels to submit reports, directly, or through such organisations designated by the flag state to the Commission at least 6 hours prior to entry and no later than 6 hours prior to exiting the E-HSP. Such reports shall also contain estimated catch (kilograms) on board. This information shall immediately be transmitted by the Commission Secretariat to the adjacent coastal states/territories, and shall be considered non-public domain data. The report shall be in the following format:

VID/Entry/Exit: Date/Time[1]; Lat/Long[1]; YFT/BET/ALB/SKJ/SWO/SHK/OTH/TOT(kgs) /TRANSHIPMENT (Y/N) [2]

[1] Of anticipated point of entry or exit.

[2] WCPFC11 agreed to amend CMM 2010-02 paragraph 2 to add vessel name to reporting requirements

Field name	Field format	Field description/instructions	Example	Ref. in CMMs
Skipjack	Number (integer)	Provide total weight (kg) of SKIPJACK onboard. Enter "0" if NONE	0	2010-02: 02
Swordfish	Number (integer)	Provide total weight (kg) of SWORDFISH onboard. Enter "0" if NONE	0	2010-02: 02
Shark	Number (integer)	Provide total weight (kg) of SHARKS onboard. Enter "0" if NONE	0	2010-02: 02
Other	Number (integer)	Provide total weight (kg) of OTHER CATCHES onboard Enter "0" if NONE	5	2010-02: 02
Total	Number (integer)	Provide total weight (kg) of all species on board. Enter "0" if NONE	54	2010-02: 02
Transshipment (Y/N)	Text	Enter "Y" if intend to transship in Eastern High Seas Pocket Special Management Enter "N" if do not intend to transship in Eastern High Seas Pocket Special Management	N	2010-02: 02
WCPFC Identification Number (WIN)	Text	Vessel identifier assigned by flag State in accordance with CMM 2004-03, in UPPER CASE	ABC1234	2013-10: 6(a)
Vessel Name	Text	Name of the fishing vessel as indicated on flag State registration, in UPPER CASE	SEA MAPLE II	2013-10: 6(a)

Attachment 1B. Electronic data standard to be used for Attachment C paragraph 3 of CMM 2014-01 Conservation and Management Measure for Bigeye, Yellowfin and Skipjack tuna in the Western and Central Pacific Ocean *(or its replacement)* (HSP1MARPT)

PHILIPPINES HSP1-SMA reporting *3. Philippines shall require its concerned vessels to submit reports to the Commission at least 24 hours prior to entry and no more than 6 hours prior to exiting the HSP-1 SMA. This information may, in turn, be transmitted to the adjacent coastal States/Territories.* *The report shall be in the following format: VID/Entry or Exit: Date/Time; Lat/Long*				
Field name	**Field format**	**Field description/instructions**	**Example**	**Ref. in CMMs**
VID	Number (integer)	This number is generated automatically by the WCPFC Record of Fishing Vessels (RFV), and is now a field that in accordance with CMM 2014-03 is displayed, for all vessels on the WCPFC RFV.	10503	2014-03
WCPFC Identification Number (WIN)	Text	Vessel identifier assigned by flag State in accordance with CMM 2004-03, in UPPER CASE	ABC1234	2013-10: 6(a)
Vessel Name	Text	Name of the fishing vessel as indicated on flag State registration, in UPPER CASE	SEA MAPLE II	2013-10: 6(a)
Entry/Exit	Text	Enter "ENTRY" for reports prior to entry to High Seas Pocket 1 - Special Management Area. Enter "EXIT" for reports made prior to exiting the High Seas Pocket 1 - Special Management Area.	EXIT	2014-01: Att C 03
Date/Time	Number (integer)	Of anticipated point of entry or exit, in UTC and 24 hour format (ISO 8601) [YYYY]-[MM]-[DD]T[HH]:[MM]Z	2014-01-24T23:00Z	2014-01: Att C 03
Latitude	Number (integer)	Positions to degrees and minutes to 3 decimal places (ISO 6709) +/- DDMM.MMM	- 14.166 (*for* 14-10-00 S)	2014-01: Att C 03
Longtitude	Number (integer)	Positions to degrees and minutes to 3 decimal places (ISO 6709) +/- DDDMM.MMM	- 157.45 (*for* 157-27-00 W)	2014-01: Att C 03

Attachment 1C. Electronic data standard to be used for WCPFC9 decision on the Standard format for manual position reporting in the event of ALC/MTU Malfunction or Failure (WCPFC9 Summary Report Attachment H) *(or its replacement)* (VMSMNLRPT)

MANUAL POSITION REPORTING IN THE EVENT OF ALC/MTU MALFUNCTION OR FAILURE				
WCPFC9 agreed standard format for manual position reporting in the event of ALC/MTU Malfunction or Failure: *1 WIN* *2 Vessel Name* *3 Date: dd/mm/yy* *4 Time: 24 hour format HH:MM (UTC)* *5 Latitude – DD-MM-SS (N/S)* *6 Longitude – DDD-MM-SS (E/W)* *7 Activity (Fishing/Searching/Transit/Transhipping)*				
Field name	**Field format**	**Field description/instructions**	**Example**	**Ref. in CMMs**
VID	Number (integer)	This number is generated automatically by the WCPFC Record of Fishing Vessels (RFV), and is now a field that in accordance with CMM 2014-03 is displayed, for all vessels on the WCPFC RFV.	10503	2014-03**
WCPFC Identification Number (WIN)	Text	Vessel identifier assigned by flag State in accordance with CMM 2004-03, in UPPER CASE	ABC1234	2013-10: 6(a)
Vessel Name	Text	Name of the fishing vessel as indicated on flag State registration, in UPPER CASE	SEA MAPLE II	2013-10: 6(a)
Date/Time	Number (integer)	Of anticipated point of entry or exit, in UTC and 24 hour format (ISO 8601) [YYYY]-[MM]-[DD]T[HH]:[MM]Z	2014-01-24T23:00Z	2014-01: Att C 03
Latitude	Number (integer)	Positions to degrees and minutes to 3 decimal places (ISO 6709) +/- DDMM.MMM	- 14.166 (*for* 14-10-00 S)	2014-01: Att C 03
Longtitude	Number (integer)	Positions to degrees and minutes to 3 decimal places (ISO 6709) +/- DDDMM.MMM	- 157.45 (*for* 157-27-00 W)	2014-01: Att C 03
Activity	Text	Enter “FISHING” Enter “SEARCHING” Enter “TRANSIT” Enter “TRANSHIPPING”	TRANSIT	WCPFC9 decision

** - VID is an additional data field and is necessary to support operational “upload” into WCPFC databases

Attachment 2. Electronic Formatting Specifications for EHSPSMARPT, HSP1SMARPT and VMSMNLRPT

These specifications describe the electronic files that CCMs must provide if they choose to use electronic reporting technologies to meet the following WCPFC reporting requirements:

i. Paragraph 2 of CMM 2010-02 *Conservation and Management Measure for the Eastern High Seas Pocket Special Management Area* (CMM 2010-02: 02)
ii. Attachment C paragraph 3 of CMM 2014-01 *Conservation and Management Measure for Bigeye, Yellowfin and Skipjack tuna in the Western and Central Pacific Ocean* (CMM 2014-01: Att C 03); and
iii. WCPFC9 decision on the *Standard format for manual position reporting in the event of ALC/MTU Malfunction or Failure* (WCPFC9 Summary Report Attachment H) to meet (CMM 2014-02 9a VMS SSPs 5.4 - 5.5).

A) File type

The information must be provided in one of the following formats:

Microsoft Excel file ; Comma separated values (CSV) file ; Text file

B) File name

The name of the file must be: XX_ VID_xxxxxxxxxx_ DDMMYYYY.sssss
where:

- XX – two letter ISO country code (CMM 2014-03 Att 7) of the CCM providing the file
- VID – five digit integer assigned number for a vessels record on the WCPFC Record of Fishing Vessels (RFV) (CMM 2014-03)
- xxxxxxxxxx – a ten digit code to represent the type of CMM reporting requirement
  EHSPSMARPT – CMM 2010-02: 02
  HSP1SMARPT – CMM 2014-01: Att C 03
  VMSMNLRPT – VMS manual report for ALC failure or malfunction (CMM 2014-02 9a VMS SSPs 5.4 - 5.5)
- DDMMYYYY – the date of the provision of the file
- sssss – the standard file suffix (xls or xlsx if Excel file; csv if CSV file; txt if Text file)

For example:

CK_5936_EHSPSMARPT_11082013.xlsx (Excel file Eastern High Sea Pocket Special Management Area Report provided by Cook Islands for vessel with VID 5936, on 11 August 2013)

C) File content and structure

Each record in the electronic file represents a single report. Each record must have the structure specified in Attachment 1A, 1B or 1C, including the same sequence of fields.

Sample electronic reporting files with the proper formats are available from the Secretariat.

Attachment 3A. Electronic data standard to be used for WCPFC ROP Minimum Standard Data Fields, as amended by WCPFC11 decisions.

Western and Central Pacific Fisheries Commission (WCPFC)

E-REPORTING STANDARD DATA FIELDS

OPERATIONAL OBSERVER DATA

Draft – Version 1.0

10th June 2015

Contents

INTRODUCTION

These tables set out the proposed standards for the provision of operational OBSERVER data fields collected in the WCPFC tropical purse seine and the longline fisheries through E-Reporting. These tables provide the minimum requirements for data entities, data formats and data validation to be established for data submitted to the national and regional fisheries authorities from E-Reporting systems. The data fields contained herein are based on information collected under the current regional standard data collection forms. This document acknowledges that national fisheries authorities require certain data fields that are not mandatory WCPFC Regional Observer Programme (ROP) data fields (for example, for anticipated Catch Documentation System – CDS – requirements), so a column in these tables identifies whether the data field is a mandatory WCFPC data field[1] or not.

These E-Reporting data field standards are consistent with, and should be considered in conjunction with more detailed instructions[2] on how to collect observer data provided by SPC.

These tables are intended for, *inter alia*, E-Reporting service providers who have been contracted to provide electronic systems to record OBSERVER data collected on-board purse seine vessels.

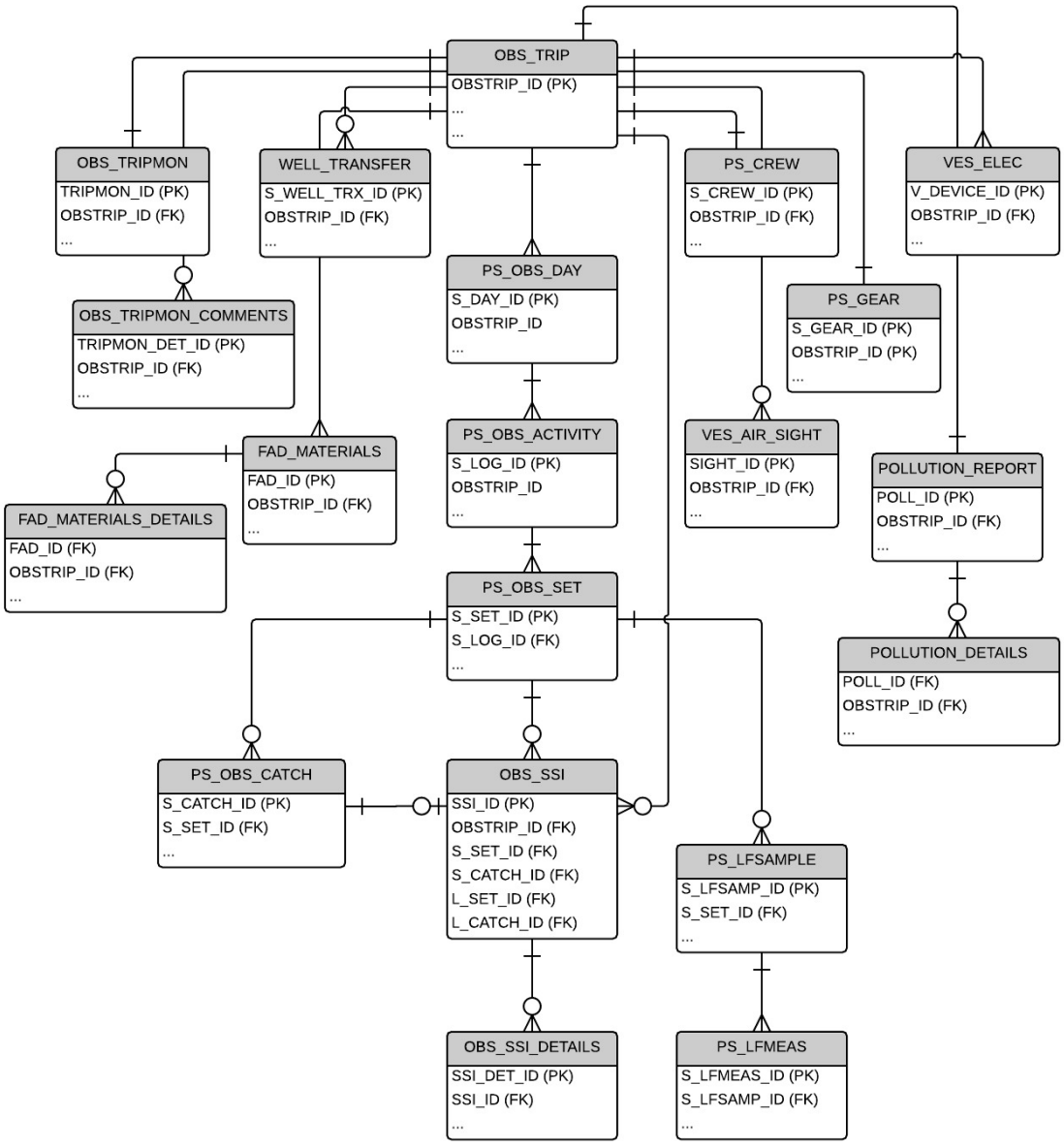
[1] The minimum standard WCPFC Regional Observer programme (ROP) data fields for purse seine data are found in the "WCPFC ROP Minimum Standard Data Fields & Instructions" http://www.wcpfc.int/doc/table-rop-data-fields-including-instructions

[2] In addition to the minimum WCPFC ROP data fields, instructions for observer data collection in the WCPFC Area are available with the regional standard observer data collection forms at http://www.spc.int/oceanfish/en/data-collection/241-data-collection-forms, general information/instruction for observers at http://www.spc.int/OceanFish/en/ofpsection/fisheries-monitoring/observers and http://www.spc.int/OceanFish/en/certification-and-training-standards.

1. PURSE SEINE OBSERVER E-REPORTING STANDARDS

1.1 DATA MODEL DIAGRAM

The following basic data model diagram outlines the structure of the entities and their relationships for purse seine operational OBSERVER data collected by E-Reporting systems and submitted to national and regional fisheries authorities. The tables that follow provide more information on the mechanisms of the links (relationships) between the entities.



1.2 TRIP-LEVEL DATA

OBS_TRIP "The start of a trip is defined to occur when a vessel (a) leaves port after unloading part or all of the catch to transit to a fishing area or (b) recommences fishing operations or transits to a fishing area after transshipping part or all of the catch at sea (when this occurs in accordance with the terms and conditions of article 4 of Annex III of the Convention, subject to specific exemptions as per article 29 of the Convention)."					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
OBSPRG_CODE	OBSERVER SERVICE PROVIDERS identification– National or sub-regional observer programmes For national programmes, this is the COUNTRY_CODE + 'OB' for example, 'PGOB' – for the PNG national observer programme. For Sub-regional programmes, the following codes are used. 'TTOB' – US Multilateral Treaty Observer programme 'FAOB' – FSM Arrangement Observer Programme	Char (4)	Observer programme code must be must valid country. Refer to valid ISO two-letter Country Codes - ISO 3166 For example, refer to http://en.wikipedia.org/wiki/ISO_3166-1	<OBSPRG_CODE>	Y
STAFF_CODE	Observer field staff NAME CODE. This will be unique and link to information kept at the regional level including Observer Name, Nationality of observer, Observer provider.	VarChar (5)	Staff code must exist in the regional Observer (FIELD_STAFF) Name Table. The unique 5-letter staff codes are generated and maintained by SPC/FFA.	<STAFF_CODE>	Y
TRIPNO	Unique TRIPNO for each observer in a given year (Regional Standard) Use the last two digits of the trip year followed by a dash and increment number for each trip in a year FOR THAT OBSERVER. YY-XX, for example, '14-01' would represent the first trip for an observer in the calendar year 2014	Char (5)	Must adhere to the regional standard	<TRIPNO>	N
TRIPNO_INTERNAL	TRIPNO as allocated and used by the respective Observer service provider. (If this system is different from the regional standard (e.g. the US PS MLT observer programme trip number uses the format '24LP/xxx')	VarChar (15)		<TRIPNO_INT>	N

OBS_TRIP

"The start of a trip is defined to occur when a vessel (a) leaves port after unloading part or all of the catch to transit to a fishing area or (b) recommences fishing operations or transits to a fishing area after transshipping part or all of the catch at sea (when this occurs in accordance with the terms and conditions of article 4 of Annex III of the Convention, subject to specific exemptions as per article 29 of the Convention)."

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
DATE and TIME OF DEPARTURE	Depart DATE/TIME for the observer trip (Observer's departure) Vessel depart date/time will be obtained from other sources of data (e.g. VMS Data)	REFER TO APPENDIX A1	Use UTC DATE for the departure date.	<DEP_DATE>	Y
DATE AND TIME OF ARRIVAL IN PORT	Return DATE/TIME for the observer trip (from the observer's point of view) Vessel return date/time will be obtained from other sources of data (e.g. VMS Data)	REFER TO APPENDIX A1	Use UTC DATE for the return date. DD/MM/YY	<RET_DATE>	Y
GEAR_CODE	Link to ref_gears table	Char (1)	Must be a valid GEAR: 'L' – Longline; 'S' – Purse seine; 'P' – Pole-and-line	<GEAR_CODE>	Y
FISHING PERMIT/LICENSE NUMBERS	PROVIDE License/Permit number that the vessel holds for the period of the TRIP.	CHAR(40) UPPER CASE	Where possible, include validation to ensure the Permit format relevant to the agreement (national or sub-regional) complies to the required format.	<LICENSE_NO>	N
VESSEL IDENIFIER	REFER TO APPENDIX A4				
VERSN_ID	Data standards version	Int		<VERSN_ID>	N
COUNTRY_CODE	Two letter COUNTRY CODE for the country who organise the trip	Char (2)	Refer to valid ISO two-letter Country Codes - ISO 3166 For example, refer to http://en.wikipedia.org/wiki/ISO_3166-1	<COUNTRY_CODE>	Y
PORT OF DEPARTURE	PROVIDE the Port of Departure	REFER TO APPENDIX A3	Must be valid United Nations - Code for Trade and Transport Locations (UN/LOCODE) – see http://www.unece.org/cefact/locode/service/location	<DEP_PORT>	Y
PORT OF RETURN	PROVIDE the Port of Return for Unloading	REFER TO APPENDIX A3	Must be valid United Nations - Code for Trade and Transport Locations (UN/LOCODE)	<RET_PORT>	Y
DEP_LAT	The actual depart LAT position for the trip (if departing AT SEA)	REFER TO APPENDIX A2		<DEP_LAT>	Y
DEP_LON	The actual depart LON position for the trip (if departing AT SEA)	REFER TO APPENDIX A2		<DEP_LON>	Y
RET_LAT	The actual return LAT position for the trip (if departing AT SEA)	REFER TO APPENDIX A2		<RET_LAT>	Y
RET_LON	The actual return LON position for the trip (if departing AT SEA)	REFER TO APPENDIX A2		<RET_LON>	Y
VESOWNER	NAME of the vessel owner	NVarChar (50)		<VESOWNER>	Y
VESCAPTAIN	NAME of the captain of the vessel	NVarChar (50)		<VESCAPTAIN>	Y
VESCAPT_NATION	NATIONALITY of the captain of the vessel	Char (2)	Refer to valid ISO two-letter Country	<VESCAPT_CO_CODE>	Y

OBS_TRIP

"The start of a trip is defined to occur when a vessel (a) leaves port after unloading part or all of the catch to transit to a fishing area or (b) recommences fishing operations or transits to a fishing area after transshipping part or all of the catch at sea (when this occurs in accordance with the terms and conditions of article 4 of Annex III of the Convention, subject to specific exemptions as per article 29 of the Convention)."

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
	Two letter COUNTRY CODE for the country who organise the trip		Codes - ISO 3166 For example, refer to http://en.wikipedia.org/wiki/ISO_3166-1		
VESCAPT_ID_DOC	Captain's Document ID	NVarChar (20)		<VESCAPT_ID_DOC>	Y
VESMASTER	NAME of the fishing master	NVarChar (50)		<VESMASTER>	
VESMAST_NATION	NATIONALITY of the vessel MASTER Two letter COUNTRY CODE for the country who organise the trip	Char (2)	Refer to valid ISO two-letter Country Codes - ISO 3166 For example, refer to http://en.wikipedia.org/wiki/ISO_3166-1	<VESCAPT_CO_CODE>	Y
VESMAST_ID_DOC	FISHING MASTERS's Document ID	NVarChar (20)		<VESCAPT_ID_DOC>	Y
CREW_NUMBER	Total number of CREW onboard during the trip	Int		<CREW_NUMBER>	Y
SPILL	FLAG to indicated the trip was a SPILL SAMPLE trip	Bit		<SPILL>	N
CADET	FLAG to indicated whether the trip was observed by a CADET observer	Bit		<CADET>	N
SHARKTARGET	FLAG to indicated a trip has targeted SHARKS (LONGLINE trips only)	Bit		<SHARKTARGET>	N
COMMENTS	General comments about the trip	NText		<COMMENTS>	N

1.3 DAILY SUMMARY DATA

PS_OBS_DAY The observer must provide the information in this table (daily logged DAY) for EACH DAY AT SEA for the period of the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
DAY LOG IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + LOCAL DAY LOG DATE			<S_DAY_ID>	Y
DAY_START	Local Date and time at the start of the logged date.	REFER TO APPENDIX A1		<START_DATE>	Y
UTC_DAY_START	UTC equivalent of DAY_START	REFER TO APPENDIX A1		<UTC_START_DATE>	Y
LOG_NOFISH_N	For the entire logged day, provide the Number of logs sighted but no schools association.	SmallInt		<LOG_NOFISH_N>	Y
LOG_FISH_N	For the entire logged day, provide the Number of log associated schools sighted.	SmallInt		<LOG_FISH_N>	Y
SCH_FISH_N	For the entire logged day, provide the	SmallInt		<SCH_FISH_N>	Y
FAD_FISH_N	For the entire logged day, provide the Number of anchored FADs sighted.	SmallInt		<FAD_FISH_N>	Y
FAD_NOFISH_N	For the entire logged day, provide the Number of anchored FADS sighted but no schools association.	SmallInt		<FAD_NOFISH_N>	Y
GEN3TODAY_ANS	For the entire logged day, provide the FLAG to indicate that incident has occurred on GEN3.	Char (1)	Must be consistent with the GEN-3 data.	<GEN3TODAY_ANS>	N
DIARYPAGE	Journal page # which has detail explanations of the incident	VarChar (50)		<DIARYPAGE>	N

1.4 ACTIVITY LOG DATA

PS_OBS_ACTIVITY The observer must PROVIDE a record of EACH change in ACTIVITY for EACH DAY AT SEA for the period of the trip. This is effectively the OBSERVER's ACTIVITY LOG					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
ACTIVITY LOG IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + DAY LOG DATE + ACTIVITY LOG TIME			<S_LOG_ID>	Y
ACT_DATE	Local/Ship's date and time of Activity log recording.	REFER TO APPENDIX A1	Must be consistent with the start of DAY log DATE	<ACT_DATE>	Y
UTC_ACT_DATE	UTC equivalent of ACT_DATE	REFER TO APPENDIX A1		<UTC_ACT_DATE>	Y
LAT	Latitude at which this ACTIVITY LOG recorded	REFER TO APPENDIX A2		<LAT>	Y
LON	Longitude at which this ACTIVITY LOG recorded.	REFER TO APPENDIX A2		<LON>	Y
S_ACTIV_ID	Purse seine activity code.	REFER TO APPENDIX A5		<S_ACTIV_ID>	Y
SCHAS_ID	School association code.	REFER TO APPENDIX A6		<SCHAS_ID>	Y
DETON_ID	Detection id. code. Must be 1-6 or 0 for no information.	REFER TO APPENDIX A7		<DETON_ID>	Y
BEACON	Beacon number where	NVarChar (20)	Can only be recorded where an activity is related to an event for investigating, deploying, retrieving or setting on a floating object. REFER TO APPENDIX A5	<BEACON>	N
COMMENTS	Observer comments related to this activity	NText		<COMMENTS>	N

1.5 SET-LEVEL DATA

PS_OBS_SET The observer must PROVIDE the following information for EACH FISHING SET for the period of the trip.						
FIELD	**Data Collection Instructions**		**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE				<OBSTRIP_ID>	Y
SET IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME			Must be consistent with PS_OBS_ACTIVITY record where S_ACTIV_ID = 1 (A fishing set).	<S_SET_ID>	Y
SET_NUMBER	Unique # for the SET ni this trip		Int		<SET_NUMBER>	N
SKIFFOFF_TIME	DEFINED as the START of SET – Local DATE/Time when net skiff off with net		REFER TO APPENDIX A1		<SKIFFOFF_TIME>	Y
SKIFFOFF_UTC	UTC DATE & TIME of START of SET		REFER TO APPENDIX A1	Must be aligned to SKIFFOFF_TIME	<SKIFFOFF_UTC>	Y
WINCHON_TIME	LOCAL DATE/TIME when winches start to haul the net.		REFER TO APPENDIX A1		<WINCHON_TIME>	Y
WINCHON_UTC	UTC DATE & TIME when winches start to haul the net.		REFER TO APPENDIX A1	Must be aligned to WINCHON_TIME	<WINCHON_UTC>	Y
RINGUP_TIME	LOCAL DATE/TIME when purse ring is raised from the water.		REFER TO APPENDIX A1		<RINGUP_TIME>	Y
RINGUP_UTC	UTC DATE & TIME when purse ring is raised from the water.		REFER TO APPENDIX A1	Must be aligned to RINGUP_TIME	<RINGUP_UTC>	Y
SBRAIL_TIME	LOCAL DATE/TIME when brailing begins.		REFER TO APPENDIX A1		<SBRAIL_TIME>	Y
SBRAIL_UTC	UTC DATE & TIME when brailing begins.		REFER TO APPENDIX A1	Must be aligned to SBRAIL_TIME	<SBRAIL_UTC>	Y
EBRAIL_TIME	LOCAL DATE/TIME when brailing ends.		REFER TO APPENDIX A1		<EBRAIL_TIME>	Y
EBRAIL_UTC	UTC DATE & TIME when brailing ends.		REFER TO APPENDIX A1	Must be aligned to EBRAIL_TIME	<EBRAIL_UTC>	Y
STOP_TIME	LOCAL DATE/TIME for the END of SET - Time when net skiff comes on-board i.e. end of set.		REFER TO APPENDIX A1		<STOP_TIME>	Y
STOP_UTC	UTC DATE & TIME – Date &Time when net skiff comes on-board i.e. end of set.		REFER TO APPENDIX A1	Must be aligned to STOP_TIME	<STOP_UTC>	Y
LD_BRAILS	Sum of all brails		Decimal (8,3)		<LD_BRAILS>	N
LD_BRAILS2	Sum of brails (#2)- only where a second type of brailer was used		Decimal (8,3)		<LD_BRAILS2>	N
MTTOTAL_OBS	Total observed catch (TUNA and BYCATCH) (mt)		Decimal (8,3)		<MT_TOTAL_OBS>	Y
MTTUNA_OBS	TOTAL amount of TUNA observed (mt)		Decimal (8,3)	Derived from and consistent with MTTOTAL_OBS minus all the bycatch (mt) listed under PS_OBS_CATCH for this SET	<MTTUNA_OBS>	Y
TOTSKJ_ANS	SKIPJACK	FLAG to indicate whether SKJ is presence in the set catch	Char (1)		<TOTSKJ_ANS>	Y
PERC_SKJ		% of SKJ in the set catch	Int		<PERC_SKJ>	Y
MTSKJ_OBS		Metric Tonnes of SKJ in the set catch	Decimal (8,3)	Determined from MTTUNA_OBS and PERC_SKJ fields	<MTSKJ_OBS>	Y
TOTYFT_ANS	YELLOW FIN	FLAG to indicate whether YFT is presence in the set catch	Char (1)		<TOTYFT_ANS>	Y
PERC_YFT		% of YFT in the set catch	Int		<PERC_YFT>	Y

PS_OBS_SET

The observer must PROVIDE the following information for EACH FISHING SET for the period of the trip.

FIELD	Data Collection Instructions		Field format notes	Validation rules	XML TAG	WCPFC FIELD
MTYFT_OBS	BIGEYE	Metric Tonnes of YFT in the set catch	Decimal (8,3)	Determined from MTTUNA_OBS and PERC_YFT fields	<MTYFT_OBS>	Y
LARGE_YFT_ANS		FLAG to indicate YFT in the set catch	Char (1)		<LARGE_YFT_ANS>	Y
PERC_LARGE_YFT		% of large YFT in the set catch	Int		<PERC_LARGE_YFT>	Y
NB_LARGE_YFT		# of large YFT in the set catch	Int		<NB_LARGE_YFT>	Y
TOTBET_ANS		FLAG to indicate whether BET is presence in the set catch	Char (1)		<TOTBET_ANS>	Y
PERC_BET		% of BET in the set catch	Int		<PERC_BET>	Y
MTBET_OBS		Metric Tonnes of BET in the set catch	Decimal (8,3)	Determined from MTTUNA_OBS and PERC_BET fields	<MTBET_OBS>	Y
LARGE_BET_ANS		FLAG to indicate BET in the set catch	Char (1)		<LARGE_BET_ANS>	Y
PERC_LARGE_BET		% of large BET in the set catch	Int		<PERC_LARGE_BET>	Y
NB_LARGE_BET		# of large BET in the set catch	Int		<NB_LARGE_BET>	Y
COMMENTS	comments		NText		<COMMENTS>	N
B_NBTAGS	Number of tags		SmallInt		<B_NBTAGS>	Y

1.6 SET CATCH DATA

PS_OBS_CATCH The observer must PROVIDE the following CATCH DETAILS for EACH FISHING SET for the period of the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
SET IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME		Must be consistent with PS_OBS_ACTIVITY record where S_ACTIV_ID = 1 (A fishing set).	<S_SET_ID>	Y
CATCH IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME + SPECIES CODE + FATE CODE			<S_CATCH_ID>	Y
SP_CODE	Species code.	Char (3)	REFER TO APPENDIX 8.	<SP_CODE>	Y
FATE_CODE	FATE of this catch. This indicates whether it was RETAINED, DISCARDED or ESCAPED, and any specific processing.	Char (3)	REFER TO APPENDIX 9	<FATE_CODE>	Y
COND_CODE	CONDITION of this catch. Relevant for the Species of Special Interest.	Char (2)	REFER TO APPENDIX 10	<COND_CODE>	Y
OBS_MT	Observer's visual estimate of TOTAL Species catch in metric tonnes. OBTAINED from the visual estimate of % of TUNA SPECIES in the respective fields for SKJ, YFT and BET in the table PS_OBS_SET. For BYCATCH species, this is the visual estimate, where relevant.	Decimal (8,3)		<OBS_MT>	Y
OBS_N	Species catch (in numbers). OBTAINED from the visual estimate, which may be relevant for DISCARDs of TUNA, the discards/retained catch of BILLFISH and most other bycatch species. Entry into this field is mandatory for any Species of Special interest.	Int	For Species of Special interest (Mammals, Turtles, Birds and Sharks) there must be a corresponding set of records in the Species of Special interest table.	<OBS_N>	Y
COMMENTS	Are there any comments for this species catch ? (Y/N)	NText		<COMMENTS>	N

1.7 SPECIES OF SPECIAL INTEREST DATA

OBS_SSI

The observer must PROVIDE the following SPECIES OF SPECIAL INTEREST CATCH DETAILS for EACH FISHING SET for the period of the trip. There may be one or many records for each SSI record in PS_OBS_CATCH. When SIGHTED only, then this table is linked to the OBS_TRIP database table.

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
SET IDENTIFIER - PS	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME		To be used to link to PS OBS SET when relevant When SGTYPE = 'L' or 'I' Must be consistent with PS_OBS_ACTIVITY record where S_ACTIV_ID = 1 (A fishing set).	<S_SET_ID>	Y
CATCH IDENTIFIER - PS	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME + SPECIES CODE + FATE CODE		To be used to link to PS OBS CATCH when relevant When SGTYPE = 'L' or 'I' Must be a link to the corresponding PS_OBS_CATCH record for this SSI	<S_CATCH_ID>	Y
SET IDENTIFIER – LL	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME		To be used to link to LL_OBS_SET when relevant When SGTYPE = 'L' or 'I' Must be consistent with PS_OBS_ACTIVITY record where S_ACTIV_ID = 1 (A fishing set).	<L_SET_ID>	Y
CATCH IDENTIFIER – LL	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME + SPECIES CODE + FATE CODE		To be used to link to LL OBS CATCH when relevant When SGTYPE = 'L' or 'I' Must be a link to the corresponding PS_OBS_CATCH record for this SSI	<L_CATCH_ID>	Y
SSI CATCH IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + DAY LOG + SIGHTING TIME + SPECIES CODE + FATE CODE			<SSI_ID>	Y
SGTYPE	Type of Interaction : 'L' - Landed; "S"- Sighted; "I" - Interacted with Gear	Char (1)	Must be 'L' - Landed; "S"- Sighted; "I" - Interacted with Gear	<SGTYPE>	Y
SGTIME	Time of Interaction : 'L' - Time of Landing; "I" - Time of Interaction / sighting	Char (1)		<SGTIME>	Y
SSI_DATE	Local/Ship's date and time when	REFER TO	When SGTYPE = 'L' or 'I'	<SSI_DATE>	Y

OBS_SSI

The observer must PROVIDE the following SPECIES OF SPECIAL INTEREST CATCH DETAILS for EACH FISHING SET for the period of the trip. There may be one or many records for each SSI record in PS_OBS_CATCH. When SIGHTED only, then this table is linked to the OBS_TRIP database table.

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
	this SSI was encountered.	APPENDIX A1	Must be consistent with PS_OBS_ACTIVITY record - ACT_DATE		
UTC_SSI_DATE	UTC equivalent of SSI_DATE	REFER TO APPENDIX A1	When SGTYPE = 'L' or 'I' Must be consistent with PS_OBS_ACTIVITY record - UTC ACT_DATE	<UTC_SSI_DATE>	Y
LAT	Latitude at which this SSI was encountered	REFER TO APPENDIX A2	When SGTYPE = 'L' or 'I' Must be consistent with PS_OBS_ACTIVITY record - LAT	<LAT>	Y
LON	Longitude at which this SSI was encountered	REFER TO APPENDIX A2	When SGTYPE = 'L' or 'I' Must be consistent with PS_OBS_ACTIVITY record - LON	<LON>	Y
SP_CODE	SSI Species encountered. Link to species table	Char (3)	REFER TO APPENDIX 8. Must correspond to the PS_OBS_CATCH record	<SP_CODE>	Y
SP_DESC	Extended Species Description	NText		<SP_DESC>	N
LANDED_COND_CODE	Condition code on LANDING	Char (2)	REFER TO APPENDIX 10	<LANDED_COND_CODE>	Y
LANDED_COND_DESC	Description of Condition on Landing or at start of interaction with vessel's gear	NText		<LANDED_COND_DESC>	Y
LANDED_HANDLING	Description of handling on landing	NText		<LANDED_HANDLING>	N
LANDED_LEN	Length of landed species	Decimal (5,1)		<LANDED_LEN>	Y
LEN_CODE	Length code of the individual	Char (2)	REFER TO APPENDIX 11	<LEN_CODE>	Y
LANDED_SEX_CODE	Sex code of the individual	Char (1)	REFER TO APPENDIX 12	<LANDED_SEX_CODE>	Y
DISCARD_COND_CODE	Condition code on RELEASE/DISCARD, or at the END of interaction with vessel's gear	Char (2)	REFER TO APPENDIX 10	<DISCARD_COND_CODE>	Y
DISCARD_COND_DESC	Description of Condition on RELEASE/DISCARD, or at the END of interaction with vessel's gear	NText		<DISCARD_COND_DESC>	Y
SHK_FIN_WT_KGS	Estimated SHARK FIN WEIGHT (kgs)	Decimal (5,0)		<SHK_FIN_WT_KGS>	Y
SHK_FIN_BODY_KGS	Estimated SHARK CARCASS WEIGHT (kgs)	Decimal (5,0)		<SHK_FIN_BODY_KGS>	Y
TAG_RET_NO	Tag Number recovered from animal	NVarChar (7)		<TAG_RET_NO>	Y
TAG_RET_TYPE	Type of Tag recovered from animal	NVarChar (5)		<TAG_RET_TYPE>	Y
TAG_RET_ORG	Origin of Tag recovered from animal (Organisation)	NVarChar (10)		<TAG_RET_ORG>	Y
TAG_PLACE_NO	Tag number placed on animal	NVarChar (14)		<TAG_PLACE_NO>	Y
TAG_PLACE_TYPE	Type of Tag placed on animal	NVarChar (8)		<TAG_PLACE_TYPE>	Y
TAG_PLACE_ORG	Origin of Tag placed on animal (Organisation)	NVarChar (10)		<TAG_PLACE_ORG>	Y
INTACT_ID	Vessel activity when INTERACTION occurs	Int	REFER TO APPENDIX 13	<INTACT_ID>	Y

OBS_SSI

The observer must PROVIDE the following SPECIES OF SPECIAL INTEREST CATCH DETAILS for EACH FISHING SET for the period of the trip. There may be one or many records for each SSI record in PS_OBS_CATCH. When SIGHTED only, then this table is linked to the OBS_TRIP database table.

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
INTACT_OTHER	Other types of interaction	NVarChar (20)		<INTACT_OTHER>	Y
INT_DESCRIBE	Description of the interaction	NText		<INT_DESCRIBE>	Y
SGACT_ID	Vessel activity when SIGHTING occurs	Int	REFER TO APPENDIX 13	<SGACT_ID>	Y
SGACT_OTHER	Indicates "other" Vessel Activity	NVarChar (20)		<SGACT_OTHER>	N
SIGHT_N	Number of individuals sighted	SmallInt		<SIGHT_N>	Y
SIGHT_ADULT_N	Number of adults sighted	SmallInt		<SIGHT_ADULT_N>	N
SIGHT_JUV_N	Number of juveniles sighted	SmallInt		<SIGHT_JUV_N>	N
SIGHT_LEN	Estimated overall length (Average if more than one individual)	NText		<SIGHT_LEN>	N
SIGHT_DIST	Distance of sighted animals from vessel	Decimal (7,3)		<SIGHT_DIST>	N
SIGHT_DIST_UNIT	Units used for SIGHT_DIST	INT	1 = Metres; 2 = kilometres; 3 = Nautical miles	<SIGHT_DIST_UNIT>	N
SIGHT_DIST_NM	Distance in nautical miles	Decimal (10,4)		<SIGHT_DIST_NM>	N
SIGHT_BEHAV	Description of behaviour of Sighted animals	NText		<SIGHT_BEHAV>	N

1.8 SPECIES OF SPECIAL INTEREST DETAILS DATA

OBS_SSI_DETAILS The observer must PROVIDE the following SPECIES OF SPECIAL INTEREST CATCH DETAILS for EACH FISHING SET for the period of the trip. The specific detail of each interaction needs to be recorded/stored here.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
SSI CATCH IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + DAY LOG + SIGHTING TIME + SPECIES CODE + FATE CODE		Link to OBS_SSI table	<SSI_ID>	Y
SSI DETAILS IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + DAY LOG + SIGHTING TIME + SPECIES CODE + FATE CODE			<SSI_DET_ID>	Y
START_END	Indication of "START" or "END" of interaction	Char (1)	Must be either 'S' for START or 'E' for END	<START_END>	Y
SSI_NUMBER	Number of animals interacted	Int		<SSI_NUMBER>	Y
COND_CODE	CONDITION at the point of recording (either START or END)	Char (2)	REFER TO APPENDIX 10	<COND_CODE>	Y
DESCRIPTION	Descriptions of the interaction	VarChar (100)		<DESCRIPTION>	N

1.9 LENGTH SAMPLE DATA

PS_LFSAMPLE PROVIDE the information related to the size (length) and species composition SAMPLE from each FISHING SET.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
SET IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME			<S_SET_ID>	Y
LF SAMPLE IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + DAY LOG + SET START DATE + SET START TIME + SAMPLE_TYPE			<S_LFSAMP _ID>	Y
SAMPLETYPE ID	Sample Type	CHAR(1)	REFER TO APPENDIX 14	<SAMPLETYPE_ID>	Y
OTHER_DESC	Description other sampling type	NText		<OTHER_DESC>	N
FISH_PER_BRAIL	Target # of fish for sampling	SmallInt		<FISH_PER_BRAIL>	N
MEASURE_CODE	MEASURING INSTRUMENT	Char (1)	REFER TO APPENDIX 15	<MEASURE_CODE>	N
COMMENTS	Comments about the sampling	NText		<COMMENTS>	N
BRAIL_FULL_N	# of Full brail count	SmallInt		<BRAIL_FULL_N>	N
BRAIL_78_N	# of Seven eighths brail count	SmallInt		<BRAIL_78_N>	N
BRAIL_34_N	# of Three quarter brail count	SmallInt		<BRAIL_34_N>	N
BRAIL_23_N	# of Two third brail count	SmallInt		<BRAIL_23_N>	N
BRAIL_12_N	# of Half brail count	SmallInt		<BRAIL_12_N>	N
BRAIL_13_N	# of One third brail count	SmallInt		<BRAIL_13_N>	N
BRAIL_14_N	# of One quarter brail count	SmallInt		<BRAIL_14_N>	N
BRAIL_18_N	# of One eighth brail count	SmallInt		<BRAIL_18_N>	N
BRAIL_N	Total number of brails	SmallInt		<BRAIL_N>	N
SUM_BRAILS	Sum of All Brails	Decimal (7,2)		<SUM_BRAILS>	N
SAMPLED_BRAIL_NUM	# of sampled brail	Int		<SAMPLED_BRAIL_NUM>	N
MEASURED_N	# of samples measured	Int		<MEASURED_N>	N

1.10 INDIVIDUAL LENGTH DATA

PS_LFMEAS PROVIDE the individual fish measurements from the SAMPLE from each FISHING SET.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
SET IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME			<S_SET_ID>	Y
LF SAMPLE IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + DAY LOG + SET START DATE + SET START TIME + SAMPLE_TYPE			<S_LFSAMP _ID>	Y
LF MEASURE IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + DAY LOG + SET START DATE + SET START TIME + SAMPLE_TYPE + SEQ_NUMBER			<S_LFMEAS_ID>	Y
SEQ_NUMBER	Measurement number.	Int		<SEQ_NUMBER>	N
SP_CODE	Link to species table	Char (3)	REFER TO APPENDIX 8.	<SP_CODE>	Y
LEN	Length (cm). Expect that the following measurements have been taken by the observers, as instructed. TUNA SPECIES - Upper jaw to fork length; SHARK SPECIES - total length; BILLFISH SPECIES - Lower jaw to fork length for billfish.	SmallInt		<LEN>	Y

1.11 TRIP MONITORING QUESTIONS

OBS_TRIPMON PROVIDE the details of the OBSERVER GEN-3 "OBSERVER VESSEL TRIP MONITORING FORM". One record per question.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
TRIP MONITORING IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + UNIQUE SEQ NUMBER			<TRIPMON_ID>	Y
QUESTION_CODE	Unique CODE for each question in GEN3	Char (4)	REFER TO APPENDIX 16	<QUESTION_CODE>	Y
ANSWER	FLAG to indicate whether has been answered or NOT	Char (1)	MUST BE 'Y', 'N' or 'X' - not answered	<ANSWER>	Y
JOURNAL_PAGE	Detail description of the incident	NText		<JOURNAL_PAGE>	Y

1.12 TRIP MONITORING COMMENTS

OBS_TRIPMON_COMMENTS PROVIDE the details of the OBSERVER GEN-3 "OBSERVER VESSEL TRIP MONITORING FORM". One record per day of trip monitoring reported event/incident.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
TRIP MONITORING COMMENTS IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + UNIQUE SEQ NUMBER			<TRIPMON_DET_ID>	Y
GEN3_DATE	Date of the incident on GEN3	REFER TO APPENDIX A1		<GEN3_DATE>	Y
COMMENTS	Detail description of the incident	NText		<COMMENTS>	Y

1.13 VESSEL/AIRCRAFT SIGHTINGS DATA

VES_AIR_SIGHT PROVIDE the details on the GEN-1 form -- VESSEL AND AIRCRAFT SIGHTINGS / FISH, BUNKERING and OTHER TRANSFERS LOGS					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
SIGHTING IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SIGHT_DATE_TIME			<SIGHT_ID>	Y
SIGHT_DATE_TIME	Date/Time of sighting	REFER TO APPENDIX A1		<SIGHTING_DATE>	Y
LAT	Latitude of SIGHTING	REFER TO APPENDIX A2		<LAT>	Y
LON	Longitude of SIGHTING	REFER TO APPENDIX A2		<LON>	Y
VESSEL IDENIFIER	REFER TO APPENDIX A4				
VATYP_ID	Vessel / Aircraft type	Int	REFER TO APPENDIX 17	<VATYP_ID>	Y
BEARING_DIR	Bearing (0-360 degrees)	SmallInt		<BEARING_DIR>	Y
DISTANCE	Distance	Decimal (7,3)		<DISTANCE>	Y
DIST_UNIT	Units of Distance	INT	1 = Metres; 2 = kilometres; 3 = Nautical miles	<DIST_UNIT>	Y
ACTION_CODE	Action of Vessel/Aircraft sighted	Char (2)	REFER TO APPENDIX 18 for Vessel/Aircraft sightings only - only allow actions where FORM USED = 'GEN-1'	<ACTION_CODE>	Y
COMMENTS	Comments	NText		<COMMENTS>	Y

1.14 CREW DATA

PS_CREW PROVIDE the details of each PURSE SEINE CREW member on this TRIP.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
CREW IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + CREW NAME			<S_CREW_ID>	Y
VSJOB_ID	CREW JOB TYPE	Int	REFER TO APPENDIX 19	<VSJOB_ID>	N
NAME	Name of the person in this position	NVarChar (50)		<NAME>	Y
COUNTRY_CODE	Nationality of the person in this position	Char (2)	Refer to valid ISO two-letter Country Codes - ISO 3166 For example, refer to http://en.wikipedia.org/wiki/ISO_3166-1	<COUNTRY_CODE>	Y
EXP_YR	Experience in Years	SmallInt		<EXP_YR>	N
EXP_MO	Experience in months	SmallInt		<EXP_MO>	N
COMMENTS	Comments	NText		<COMMENTS>	N

1.15 MARINE DEVICES DATA

VES_ELEC PROVIDE information on the standard Marine Electronic devices.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
TRIP/VESSEL DEVICE IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + DEVICE_ID			<V_DEVICE_ID>	Y
DEVICE_ID	Marine Device CODE.	Int	Refer to APPENDIX 20 - the DEVICES should only be available according to the respective gear code (e.g. "S" for purse seine or "L" for longline is in the GEAR LIST CODES column)	<DEVICE_ID>	Y
ONBOARD_CODE	Is this DEVICE SIGHTED ONBOARD ?	Char (1)	'Y' or 'N'	<ONBOARD_CODE>	Y
USAGE_CODE	Is this DEVICE USED ?	Char (3)	Refer to APPENDIX 21	<USAGE_CODE>	N
MAKE_DESC	Description of Make	NVarChar (30)		<MAKE_DESC>	N
MODEL_DESC	Description of Model	NVarChar (30)		<MODEL_DESC>	N
COMMENTS	Comments	NText		<COMMENTS>	N

1.16 WELL TRANSFER DATA

WELL_TRANSFER PROVIDE information for each transfer to/from storage WELLs during the trip. This may become mandatory WCPFC data collection related to CDS.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	N
WELL TRANSFER IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + TRX_DATE			<S_WELL_TRX_ID>	N
TRX_DATE	DATE and TIME of fish transfer	REFER TO APPENDIX A1		<TRX_DATE>	N
ACTION_CODE	WELL TRANSFER ACTION CODE	Char (2)	REFER TO APPENDIX 18 for Well transfers only – only allow actions where FORM USED = 'PS-5	<ACTION_CODE>	N
SOURCE	Fish transfer source Can be the 'NET' and valid well number or a VESSEL	VarChar (80)	Can be the 'NET' and valid well number or a VESSEL	<SOURCE>	N
DESTINATION	Description of the transfer destination Can be Well No., vessel, SHORE or DISCARD	VarChar (80)	Can be Well No., vessel, SHORE or DISCARD	<DESTINATION>	N
WELL_MT	Weight of the fish transfer	Decimal (8,3)		<WELL_MT>	N
CHANGE	Change of transfer – add or remove	Char (1)	Must be either '+', '-' or '0' (for no change)	<CHANGE>	N
NEW_TOTAL	New cumulative to for the transfer	Decimal (8,3)		<NEW_TOTAL>	N
ON_LOGSHEET	FLAG to indicate the transfer has been stated on the logsheet	Char (1)		<ON_LOGSHEET>	N
COMMENTS	Comments made on the fish transfer	NText		<COMMENTS>	N

1.17 PURSE SEINE GEAR DATA

PS_GEAR PROVIDE information on the PURSE SEINE GEAR on the vessel.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
PS GEAR IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<S_GEAR_ID>	Y
PB_MAKE	Power block make	NVarChar (20)		<PB_MAKE>	N
PB_MODEL	Power block model	NVarChar (20)		<PB_MODEL>	N
PW_MAKE	Purse winch make	NVarChar (20)		<PW_MAKE>	N
PW_MODEL	Purse winch model	NVarChar (20)		<PW_MODEL>	N
NET_DEPTH	Max depth of the net	SmallInt		<NET_DEPTH>	Y
NET_DEPTH_UNIT_ID	Net Depth unit of measurement M – metres; Y- Yards; F-Fathoms	Int	Must be M, Y, F or blank	<NET_DEPTH_UNIT_ID>	Y
NET_LENGTH	Max length of the net	SmallInt		<NET_LENGTH>	Y
NET_LENGTH_UNIT_ID	Net Length unit of measurement M – metres; Y- Yards; F-Fathoms	Int	Must be M, Y, F or blank	<NET_LENGTH_UNIT_ID>	Y
NET_STRIPS	Number of net strips	SmallInt		<NET_STRIPS>	N
NET_HANG_RATIO	Max net hang ratio	SmallInt		<NET_HANG_RATIO>	N
MESH_MAIN	Main Mesh size	SmallInt		<MESH_MAIN>	Y
MESH_MAIN_UNIT_ID	Main mesh size unit of measurement C – centimetres; I - Inches	Int	Must be C, I or blank	<MESH_MAIN_UNIT_ID>	Y
BRAIL_SIZE1	Brail #1 Capacity	Decimal (5,1)		<BRAIL_SIZE1>	Y
BRAIL_SIZE2	Brail #2 Capacity	Decimal (5,1)		<BRAIL_SIZE2>	Y
BRAIL_TYPE	Brailing Type Description	NText		<BRAIL_TYPE>	Y

1.18 FAD MATERIAL DATA

PS_FAD_MATERIAL PROVIDE information on the FAD MATERIAL observed during the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
FAD EVENT IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + FAD EVENT DATE/TIME			<FAD_ID>	Y
FAD_EVENT_DATE	DATE/TIME of the FAD observation event	REFER TO APPENDIX A1		<FAD_EVENT_DATE>	Y
OBJECT_NUMBER	Number allocated for the object	SmallInt		<OBJECT_NUMBER>	Y
ORIGIN_CODE	Original CODE of the FAD	REFER TO APPENDIX A24	Code 5 or 6 used for FADs with radio buoy attached	<ORIGIN_CODE>	Y
DEPLOYMENT_DATE	Date of FAD deployment	REFER TO APPENDIX A1		<DEPLOYMENT_DATE>	Y
LAT	LAT postion of deployment	REFER TO APPENDIX A2		<LAT>	Y
LON	LON postion of deployment	REFER TO APPENDIX A2		<LON>	Y
SSI_TRAPPED	FLAG to indicate whether any SSI are trapped on the FAD	Char (1)		<SSI_TRAPPED>	Y
AS_FOUND_CODE	CODE to indicate whether the FAD "as Found"	Int		<AS_FOUND_CODE>	Y
AS_LEFT_CODE	CODE to indicate whether the FAD "as Left"	Int		<AS_LEFT_CODE>	Y
MAX_DEPTH_M	Max DEPTH of the FAD in metres	Decimal (5,1)		<MAX_DEPTH_M>	Y
LENGTH_M	Max LENGTH of the FAD in metres	Decimal (5,1)		<LENGTH_M>	Y
WIDTH_M	Max WIDTH of the FAD in metres	Decimal (5,1)		<WIDTH_M>	Y
BUOY_NUMBER	Buoy number stated on the FAD	NVarChar (20)		<BUOY_NUMBER>	Y
MARKINGS	Markings on the FAD	NVarChar (50)		<MARKINGS>	Y
COMMENTS	Comments made by the observer about the FAD	NText		<COMMENTS>	Y

1.19 FAD MATERIAL DETAIL

PS_FAD_MATERIAL_DETAIL PROVIDE information on the FAD MATERIAL DETAIL observed during the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
FAD EVENT IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + FAD EVENT DATE/TIME			<FAD_ID>	Y
MATERIAL_CODE	FAD Material CODE	REFER TO APPENDIX A26	Material Code must exist in the ref_ids table	<MATERIAL_CODE>	Y
IS_ATTACHMENT	FLAG to indicate if there is an attachment to the FAD	Char (1)	'Y' or 'N'	<IS_ATTACHMENT>	Y

1.20 OBSERVER POLLUTION REPORT

OBS_POLLUTION PROVIDE information any Pollution observed during the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
POLLUTION EVENT IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + INCIDENT DATE/TIME			<POLL_ID>	Y
INC_DATE	DATE & TIME of the incident	REFER TO APPENDIX A1		<INC_DTIME>	Y
LAT	Latitude where incident occured	REFER TO APPENDIX A2		<LAT>	Y
LON	Longitude where incident occured	REFER TO APPENDIX A2		<LON>	Y
PORT_ID	PORT where incident occurred	REFER TO APPENDIX A3		<PORT_ID>	N
ACTIV_ID	Activity when event occurred	REFER TO APPENDIX A5		<ACTIV_ID>	N
VESSEL IDENIFIER	REFER TO APPENDIX A4				
VATYP_ID	Vessel / Aircraft type	Int	REFER TO APPENDIX 17	<VATYP_ID>	N
BEARING_DIR	Compass Bearing to offending vessel	SmallInt		<BEARING_DIR>	N
DISTANCE	Distance to offending vessel	Decimal (7,3)		<DISTANCE>	N
COMMENTS	Additional comments	NText		<COMMENTS>	N
STICKERS_ANS	Response to "Stickers" question	Char (1)	'Y' or 'N'	<STICKERS_ANS>	N
AWARE_ANS	Response to "MARPOL" question	Char (1)	'Y' or 'N'	<AWARE_ANS>	N
ADVISED_ANS	Response to "INFRINGEMENTS" question	Char (1)	'Y' or 'N'	<ADVISED_ANS>	N
PHOTOS_ANS	Response to "PHOTOS" question	Char (1)	'Y' or 'N'	<PHOTOS_ANS>	N
PHOTO_NUMBERS	Number of photos taken on the incident	NVarChar (50)		<PHOTO_NUMBERS>	N

1.21 OBSERVER POLLUTION DETAILS

OBS_POLLUTION_DETAILS PROVIDE information any Pollution details observed during the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
POLLUTION EVENT IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + INCIDENT DATE/TIME			<POLL_ID>	Y
POLLUTIONTYPE_ID	Pollution type code	REFER TO APPENDIX A31	For example, Disposal of OFFAL MANAGEMENT is a WCFPC required field.	<POLLUTIONTYPE_ID>	Y
MATERIAL_ID	Pollution Materials code	REFER TO APPENDIX A29		<MATERIAL_ID>	
POLL_GEAR_ID	Pollution Gear code	REFER TO APPENDIX A28		<POLL_GEAR_ID>	
POLL_SRC_ID	Pollution Source code	REFER TO APPENDIX A30	For example, Disposal of OFFAL MANAGEMENT is a WCFPC required field.	<POLL_SRC_ID>	Y
POLL_DESC	Description of pollution type	NText	For example, Disposal of OFFAL MANAGEMENT is a WCFPC required field.	<POLL_DESC>	Y
POLL_QTY	Description of pollution quantity	NText	For example, Disposal of OFFAL MANAGEMENT is a WCFPC required field.	<POLL_QTY>	Y

1.22 OBSERVER JOURNAL

OBS_JOURNAL PROVIDE a description of the day's activities in a daily journal record for the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	N
DAILY JOURNAL IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBS_JRNL_ID>	N
JRNL_DATE	DATE of Journal entry	REFER TO APPENDIX A1		<JRNL_DATE>	N
JRNL_TEXT	Daily journal entry	NText		<JRNL_TEXT>	N

1.23 PURSE SEINE TRIP REPORT

PS_TRIP_REPORT PROVIDE descriptive information on the trip. Refer to the relevant sections in http://www.spc.int/OceanFish/en/publications/doc_download/1334-2014-ps-trip-report-					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	N
1_BACKGROUND	(Refer to relevant section in link above)	NText		<1_BACKGROUND>	N
2_0_CRUISE_SUMMARY	(Refer to relevant section in link above)	NText		<2_0_CRUISE_SUMMARY>	N
2_1_AREA_FISHED	(Refer to relevant section in link above)	NText		<2_1_AREA_FISHED>	N
2_2_END_OF_TRIP	(Refer to relevant section in link above)	NText		<2_2_END_OF_TRIP>	N
3_0_DATA_COLLECTED	(Refer to relevant section in link above)	NText		<3_0_DATA_COLLECTED>	N
4_0_VESSEL_CREW	Refer to relevant section in link above)	NText		<4_0_VESSEL_CREW>	N
4_1_VESS_INFO	Refer to relevant section in link above)	NText		<4_1_VESS_INFO>	N
4_2_CREW_NATION	Refer to relevant section in link above)	NText		<4_2_CREW_NATION>	N
4_2_1_PIC	Refer to relevant section in link above)	NText		<4_2_1_PIC>	N
4_3_FISHING_GEAR	Refer to relevant section in link above)	NText		<4_3_FISHING_GEAR>	N
4_3_1_BRAIL	Refer to relevant section in link above)	NText		<4_3_1_BRAIL>	N
4_3_2 NET	Refer to relevant section in link above)	NText		<4_3_2 NET>	N
4_4_ELEC	Refer to relevant section in link above)	NText		<4_4_ELEC>	N
4_5_SAFETY_EQ	Refer to relevant section in link above)	NText		<4_5_SAFETY_EQ>	N
4_6_OTHER_GEAR	Refer to relevant section in link above)	NText		<4_6_OTHER_GEAR>	N
5_0_FISH_STRATEGY	Refer to relevant section in link above)	NText		<5_0_FISH_STRATEGY>	N
5_1_FLOAT_SCHS	Refer to relevant section in link above)	NText		<5_1_FLOAT_SCHS>	N
5_2_FREE_SCHS	Refer to relevant section in link above)	NText		<5_2_FREE_SCHS>	N
5_3_SET_TECH	Refer to relevant section in link above)	NText		<5_3_SET_TECH>	N
5_4_VESS_ADV	Refer to relevant section in link above)	NText		<5_4_VESS_ADV>	N
5_5_HELICOPTER	Refer to relevant section in link above)	NText		<5_5_HELICOPTER>	N
5_6_FISH_SUCC	Refer to relevant section in link above)	NText		<5_6_FISH_SUCC>	N
5_7_FISH_INFO	Refer to relevant section in link above)	NText		<5_7_FISH_INFO>	N
6_0_COC	Refer to relevant section in link above)	NText		<6_0_COC>	N
7_0_ENVIRON	Refer to relevant section in link above)	NText		<7_0_ENVIRON>	N
8_1_TARGET_RET	Refer to relevant section in link above)	NText		<8_1_TARGET_RET>	N
8_2_TARGET_DISC	Refer to relevant section in link above)	NText		<8_2_TARGET_DISC>	N
8_3_TARGET_LOG	Refer to relevant section in link above)	NText		<8_3_TARGET_LOG>	N
8_4_BYCATCH	Refer to relevant section in link above)	NText		<8_4_BYCATCH>	N
8_4_1_BYC_LOG_COMP	Refer to relevant section in link above)	NText		<8_4_1_BYC_LOG_COMP>	N
8_4_2_BILL	Refer to relevant section in link above)	NText		<8_4_2_BILL>	N
8_4_3_SHARKS_RAYS	Refer to relevant section in link above)	NText		<8_4_3_SHARKS_RAYS>	N
8_4_4_OTHER_BY-CATCH	Refer to relevant section in link above)	NText		<8_4_4_OTHER_BY-CATCH>	N
8_4_5_UNSPEC_SP_CODES	Refer to relevant section in link above)	NText		<8_4_5_UNSPEC_SP_CODES>	N
8_4_6_SSI_LAND	Refer to relevant section in link above)	NText		<8_4_6_SSI_LAND>	N
8_4_7_SSI_INTERACT	Refer to relevant section in link above)	NText		<8_4_7_SSI_INTERACT>	N
8_4_8_SSI_SIGHT	Refer to relevant section in link above)	NText		<8_4_8_SSI_SIGHT>	N
9_0_SAMPLING	Refer to relevant section in link above)	NText		<9_0_SAMPLING>	N
9_1_GRAB	Refer to relevant section in link above)	NText		<9_1_GRAB>	N

PS_TRIP_REPORT

PROVIDE descriptive information on the trip.

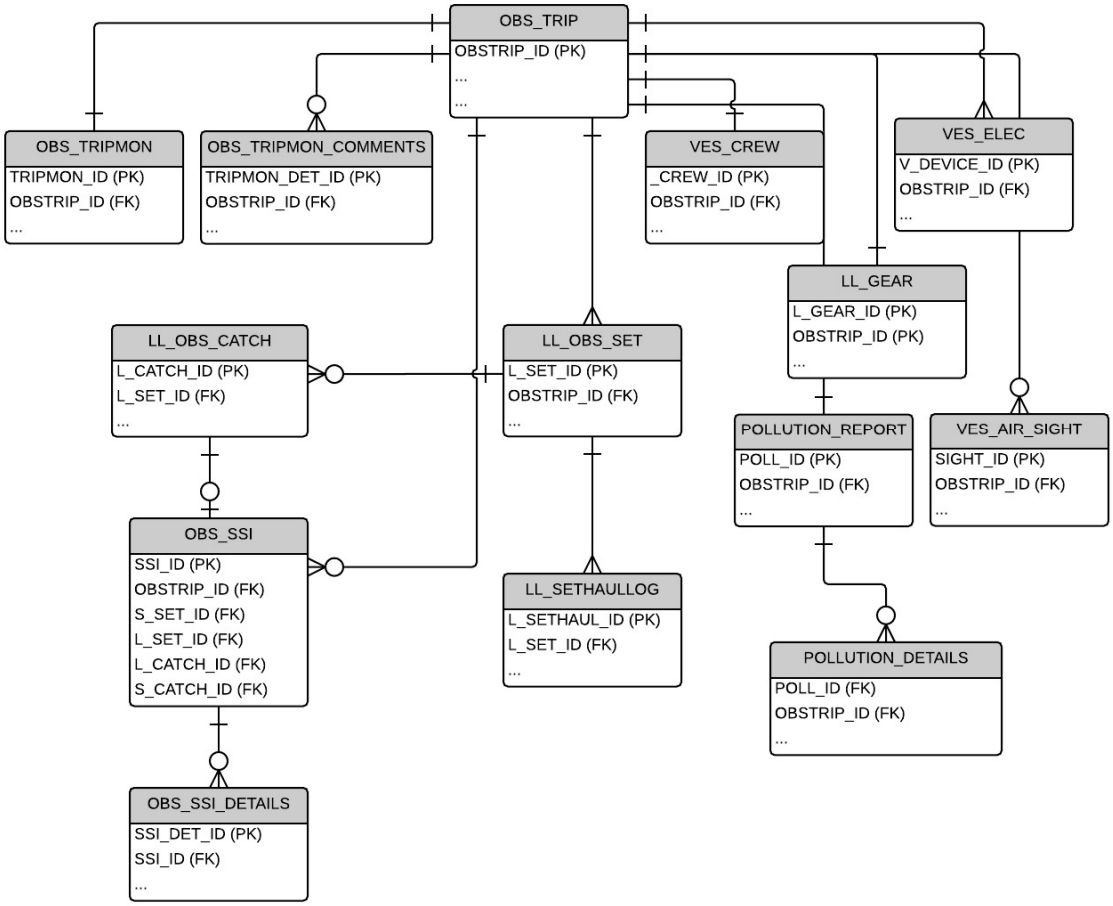
Refer to the relevant sections in http://www.spc.int/OceanFish/en/publications/doc_download/1334-2014-ps-trip-report-

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
9_2_SPILL	Refer to relevant section in link above)	NText		<9_2_SPILL>	N
9_3_OTHER	Refer to relevant section in link above)	NText		<9_3_OTHER>	N
10_0_OTHER_PROJ	Refer to relevant section in link above)	NText		<10_0_OTHER_PROJ>	N
11_0_WELL_LOAD	Refer to relevant section in link above)	NText		<11_0_WELL_LOAD>	N
12_0_VESS _DATA	Refer to relevant section in link above)	NText		<12_0_VESS _DATA>	N
13_0_GENERAL	Refer to relevant section in link above)	NText		<13_0_GENERAL>	N
14_0_ TRIP_MON	Refer to relevant section in link above)	NText		<14_0_ TRIP_MON>	N
14_1_CLARIFY	Refer to relevant section in link above)	NText		<14_1_CLARIFY>	N
14_2_RECOMMEND	Refer to relevant section in link above)	NText		<14_2_RECOMMEND>	N
14_3_CREW_INFO	Refer to relevant section in link above)	NText		<14_3_CREW_INFO>	N
14_4_MEDICAL	Refer to relevant section in link above)	NText		<14_4_MEDICAL>	N
14_5_PHOTOS	Refer to relevant section in link above)	NText		<14_5_PHOTOS>	N
14_6_OTHER_INFO	Refer to relevant section in link above)	NText		<14_6_OTHER_INFO>	N
15_0_PROBS	Refer to relevant section in link above)	NText		<15_0_PROBS>	N
15_1_FORM_CH_RECS	Refer to relevant section in link above)	NText		<15_1_FORM_CH_RECS>	N
16_0_CONCL	Refer to relevant section in link above)	NText		<16_0_CONCL>	N
17_0_ACKS	Refer to relevant section in link above)	NText		<17_0_ACKS>	N

2. LONGLINE OBSERVER E-REPORTING STANDARDS

2.1 DATA MODEL DIAGRAM

The following basic data model diagram outlines the structure of the entities and their relationships for purse seine operational OBSERVER data collected by E-Reporting systems and submitted to national and regional fisheries authorities. The tables that follow provide more information on the mechanisms of the links (relationships) between the entities.



2.2 TRIP-LEVEL DATA

(see the common OBS_TRIP table under 1.2 TRIP-LEVEL DATA)

2.3 SET-LEVEL DATA

LL_OBS_SET The observer must PROVIDE the following information for EACH FISHING SET/HAUL during the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
SET IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME			<L_SET_ID>	Y
SET_NUMBER	Unique # for the SET in this trip	Int		<SET_NUMBER>	N
OBSERVED_YN	Flag to indicate whether set was observer or not.	Bit		<OBSERVED_YN>	N
SET_DATE	Start Date/time for set.	REFER TO APPENDIX A1		<SET_DATE>	Y
HK_BT_FLT	Number of hooks between floats	SmallInt	Must be 1-60, or -1 for no information.	<HK_BT_FLT>	Y
BASK_SET	Number of baskets set.	SmallInt		<BASK_SET>	Y
BASK_OBSERVED	Number of basket observed (bottom of form, Nov 07 version)	SmallInt		<BASK_OBSERVED>	Y
HOOK_SET	Total number of hooks set.	SmallInt		<HOOK_SET>	Y
HOOK_OBSERVED	Number of hooks observed and data recorded.	SmallInt		<HOOK_OBSERVED>	Y
FLOAT_LENGTH	Length of floatline (m)	SmallInt		<FLOAT_LENGTH>	Y
LSPEED	Line setting speed.	Decimal (5,1)		<LSPEED>	Y
LSPEED_UNIT_ID	Link to ref ids table	CHAR(1)	Must be 'M' for metres/second or 'K' for knots	<LSPEED_UNIT_ID>	Y
BRANCH_INTVL	Time interval (secs.) between branchline sets.	SmallInt		<BRANCH_INTVL>	Y
BRANCH_DIST	Mainline distance between branchlines (m).	Decimal (4,1)		<BRANCH_DIST>	Y
VESSEL_SET_SPEED	Vessel setting Speed (Knots).	Decimal (5,1)		<VESSEL_SET_SPEED>	N
LIGHTSTICKS	Number of lightsticks used	SmallInt		<LIGHTSTICKS>	Y
TDRS	Number of Time Depth recorders used	SmallInt		<TDRS>	Y
BRANCH_LENGTH	Length of branchline (m) (If all are of a consistent length, otherwise use next set of fields).	Decimal (4,1)		<BRANCH_LENGTH>	Y
BRANCH_0_20	Number of branchlines between successive floats that are < 20 m.	SmallInt		<BRANCH_0_20>	Y
BRANCH_20_34	Number of branchlines between successive floats that are 20-35 m.	SmallInt		<BRANCH_20_34>	Y
BRANCH_35_50	Number of branchlines between successive floats that are 35-50 m.	SmallInt		<BRANCH_35_50>	Y
BRANCH_50_99	Number of branchlines between successive floats that are > 50 m.	SmallInt		<BRANCH_50_99>	Y
FLOAT_HOOK_N	The total number of hooks that have been hung directly from the floatline for this set.	SmallInt		<FLOAT_HOOK_N>	Y
TAR_SP_CODE	Target Species id recorded on the form	Char (3)	REFER TO APPENDIX 8.	<TAR_SP_CODE>	Y

LL_OBS_SET The observer must PROVIDE the following information for EACH FISHING SET/HAUL during the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
	for this set (refer to the SPECIES table)				
TARGET_TUN_YN	ADDITIONAL FLAG indication for MULTIPLE targeting	Bit		<TARGET_TUN_YN>	Y
TARGET_SWO_YN	ADDITIONAL FLAG indication for MULTIPLE targeting	Bit		<TARGET_SWO_YN>	Y
TARGET_SKH_YN	ADDITIONAL FLAG indication for MULTIPLE targeting	Bit		<TARGET_SKH_YN>	Y
SETDETAILS	General notes on the setting procedures. Any comments relating to the setting strategy. For example has there been any specific targetting of shark in this set.	NText		<SETDETAILS>	N
BAIT1_SP_CODE	Bait species id. # 1	Char (3)	REFER TO APPENDIX 8.	<BAIT1_SP_CODE>	Y
BAIT2_SP_CODE	Bait species id. # 2	Char (3)	REFER TO APPENDIX 8.	<BAIT2_SP_CODE>	Y
BAIT3_SP_CODE	Bait species id. # 3	Char (3)	REFER TO APPENDIX 8.	<BAIT3_SP_CODE>	Y
BAIT4_SP_CODE	Bait species id. # 4	Char (3)	REFER TO APPENDIX 8.	<BAIT4_SP_CODE>	Y
BAIT5_SP_CODE	Bait species id. # 5	Char (3)	REFER TO APPENDIX 8.	<BAIT5_SP_CODE>	Y
BAIT1_W	Weight of bait species #1 used, (kg)	SmallInt		<BAIT1_W>	N
BAIT2_W	Weight of bait species #2 used, (kg)	SmallInt		<BAIT2_W>	N
BAIT3_W	Weight of bait species #3 used, (kg)	SmallInt		<BAIT3_W>	N
BAIT4_W	Weight of bait species #4 used, (kg)	SmallInt		<BAIT4_W>	N
BAIT5_W	Weight of bait species #5 used, (kg)	SmallInt		<BAIT5_W>	N
BAIT1_H	Hook number(s) in basket that Bait 1 was placed	NVarChar (25)	(Hook numbers separated by commas)	<BAIT1_H>	N
BAIT2_H	Hook number(s) in basket that Bait 2 was placed	NVarChar (25)	(Hook numbers separated by commas)	<BAIT2_H>	N
BAIT3_H	Hook number(s) in basket that Bait 3 was placed	NVarChar (25)	(Hook numbers separated by commas)	<BAIT3_H>	N
BAIT4_H	Hook number(s) in basket that Bait 4 was placed	NVarChar (25)	(Hook numbers separated by commas)	<BAIT4_H>	N
BAIT5_H	Hook number(s) in basket that Bait 5 was placed	NVarChar (25)	(Hook numbers separated by commas)	<BAIT5_H>	N
BAIT1_DYED_YN	FLAG indication on dyed on bait #1	SmallInt		<BAIT1_DYED_YN>	Y
BAIT2_DYED_YN	FLAG indication on dyed on bait #2	SmallInt		<BAIT2_DYED_YN>	Y
BAIT3_DYED_YN	FLAG indication on dyed on bait #3	SmallInt		<BAIT3_DYED_YN>	Y
BAIT4_DYED_YN	FLAG indication on dyed on bait #4	SmallInt		<BAIT4_DYED_YN>	Y
BAIT5_DYED_YN	FLAG indication on dyed on bait #5	SmallInt		<BAIT5_DYED_YN>	Y
TORI_POLES_YN	FLAG indication on tori poles used	SmallInt		<TORI_POLES_YN>	Y
BIRD_CURTAIN_YN	FLAG indication on bird curtain used	SmallInt		<BIRD_CURTAIN_YN>	Y
WT_LINES_YN	FLAG indication on weighted lines used	SmallInt		<WT_LINES_YN>	Y
UW_CHUTE_YN	FLAG indication on underwater chute used	SmallInt		<UW_CHUTE_YN>	Y

2.4 SET-HAUL LOG DATA

LL_SETHAULLOG The E-Reporting system must PROVIDE the following log information for EACH SET/HAUL during the period of the trip, typically on a 30-minute basis.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
SET IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME			<L_SET_ID>	Y
SETHAUL LOG IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME + LOG DATE + LOG TIME			<L_SETHAULOG_ID>	Y
LOG_DATE	Date/TIME of log reading	REFER TO APPENDIX A1		<LOG_DATE>	Y
SETHAUL	Status of gear at this logged date/time : Set (S) Haul (H) or Soak (K)	Char (4)	Must be either 'S', 'H', 'K'	<SETHAUL>	Y
STEND_ID	Indicator for status of the SET-HAUL 83 – First log record for the SET (start of SET information) 84 – Last log record for the SET (end of SET information) 85 – First log record for the HAUL (start of HAUL information) 86 – Last log record for the HAUL (end of HAUL information)	Int	Must be 83, 84, 85, 86 or NULL	<STEND_ID>	Y
LAT	Latitude (long format)	REFER TO APPENDIX A2		<LAT>	Y
LON	Longitude (long format)	REFER TO APPENDIX A2		<LON>	Y
COMMENTS	Comments	NText		<COMMENTS>	N

2.5 SET CATCH DATA

LL_OBS_CATCH The observer must PROVIDE the following CATCH DETAILS for EACH FISHING HAUL for the period of the trip.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
SET IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME			<L_SET_ID>	Y
CATCH IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + SET START DATE + SET START TIME + CATCH EVENT DATE + CATCH EVENT TIME			<L_CATCH_ID>	Y
CATCH_DATE	Date/TIME of individual catch event	REFER TO APPENDIX A1		<CATCH_DATE>	Y
HOOK_NO	Hook number (since the last float). Hook number=99 represents catch on a hook hanging directly from the floatline.	SmallInt		<HOOK_NO>	Y
SP_CODE	Species code.	Char (3)	REFER TO APPENDIX 8. Only shark species can have a FATE as 'RFR' and 'DFR'.	<SP_CODE>	Y
FATE_CODE	FATE of this catch. This indicates whether it was RETAINED, DISCARDED or ESCAPED, and any specific processing.	Char (3)	REFER TO APPENDIX 9 Only shark species can have a FATE as 'RFR' and 'DFR'.	<FATE_CODE>	Y
COND_CODE	CONDITION of this catch on LANDING. Relevant for the Species of Special Interest.	Char (2)	REFER TO APPENDIX 10	<COND_CODE>	Y
COND_REL_CODE	CONDITION of this catch on RELEASE/DISCARD. Relevant for the Species of Special Interest.	Char (2)	REFER TO APPENDIX 10		Y
LEN	Length (cm).	SmallInt	Refer to SPECIES RANGE table for these species	<LEN>	Y
LEN_CODE	Length measurement code	Char (2)	REFER TO APPENDIX 11	<LEN_CODE>	Y
WT	Weight (kgs) – must be measured weight and not a visual estimate	Decimal (5,1)		<WT>	N
WT_CODE	Weight code.	Char (2)	REFER TO APPENDIX 22	<WT_CODE>	N
SEX_CODE	SEX of fish	Char (1)	REFER TO APPENDEX 12	<SEX_CODE>	Y
GSTAGE_CODE	GONAD STAGE CODE	Char (1)	REFER TO APPENDIX 23	<GSTAGE_CODE>	N
COMMENTS	Comments	NVarChar (40)		<COMMENTS>	N

2.6 SPECIES OF SPECIAL INTEREST DATA

(see 1.7 SPECIES OF SPECIAL INTEREST DATA)

2.7 SPECIES OF SPECIAL INTEREST DETAILS DATA

(see 1.8 SPECIES OF SPECIAL INTEREST DETAIL DATA)

2.8 TRIP MONITORING QUESTIONS

(see 1.11 TRIP MONITORING DATA)

2.9 TRIP MONITORING COMMENTS

(see 1.12 TRIP MONITORING COMMENTS)

2.10 VESSEL/AIRCRAFT SIGHTINGS DATA

(see 1.13 VESSEL/AIRCRAFT SIGHTINGS)

2.11 MARINE DEVICES DATA

(see 1.15 MARINE DEVICES DATA)

2.12 CREW DATA

VES_CREW PROVIDE the summary details of VESSEL CREW by NATIONALITY on this TRIP.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
CREW IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE + COUNTRY_CODE			<V_CREW_ID>	Y
COUNTRY_CODE	Nationality of the CREW	Char (2)	Refer to valid ISO two-letter Country Codes - ISO 3166 For example, refer to http://en.wikipedia.org/wiki/ISO_3166-1	<COUNTRY_CODE>	Y
CREWCOUNT	Total number of crew on board during the trip for this COUNTRY OF NATIONALITY	SmallInt		<CREWCOUNT>	Y

2.13 LONGLINE GEAR DATA

LL_GEAR PROVIDE information on the LONGLINE GEAR on the vessel.					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	Y
LL GEAR IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<L_GEAR_ID>	Y
MLINEHAUL_ANS	Mainline hauler (Y/N)	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<MLINEHAUL_ANS>	Y
MLINEHAUL_USAGE_CODE	Link to ref_usage table	Char (3)	REFER TO APPENDIX 21	<MLINEHAUL_USAGE_CODE>	Y
MLINEHAUL_COMMENTS	Comments on Mainline Hauler	NVarChar (50)		<MLINEHAUL_COMMENTS>	N
BLINEHAUL_ANS	Branchline hauler (Y/N)	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<BLINEHAUL_ANS>	Y
BLINEHAUL_USAGE_CODE	Link to ref_usage table	Char (3)	REFER TO APPENDIX 21	<BLINEHAUL_USAGE_CODE>	Y
BLINEHAUL_COMMENTS	Comments on Branchline Hauler	NVarChar (50)		<BLINEHAUL_COMMENTS>	N
LSHOOT_ANS	Line shooter (Y/N)	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<LSHOOT_ANS>	Y
LSHOOT_USAGE_CODE	Link to ref_usage table	Char (3)	REFER TO APPENDIX 21	<LSHOOT_USAGE_CODE>	Y
LSHOOT_COMMENTS	Comments on Line shooter	NVarChar (50)		<LSHOOT_COMMENTS>	N
BAITTHR_ANS	Automatic bait thrower (Y/N)	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<BAITTHR_ANS>	Y
BAITTHR_USAGE_CODE	Link to ref_usage table	Char (3)	REFER TO APPENDIX 21	<BAITTHR_USAGE_CODE>	Y
BAITTHR_COMMENTS	Comments on Automatic Bait thrower	NVarChar (50)		<BAITTHR_COMMENTS>	N
BRANCHATT_ANS	Automatic branchline attacher (Y/N)	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<BRANCHATT_ANS>	Y
BRANCHATT_USAGE_CODE	Link to ref_usage table	Char (3)	REFER TO APPENDIX 21	<BRANCHATT_USAGE_CODE>	Y
BRANCHATT_COMMENTS	Comments on Automatic Branchline attacher	NVarChar (50)		<BRANCHATT_COMMENTS>	N
WT_SCA_ANS	Weighing scales (Y/N)	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<WT_SCA_ANS>	N
WT_SCA_USAGE_CODE	Weighing scales USAGE	Char (3)	REFER TO APPENDIX 21	<WT_SCA_USAGE_CODE>	N
WT_SCA_COMMENTS	Comments on Automatic B Weighing scales	NVarChar (50)		<WT_SCA_COMMENTS>	N
MLINE_COMP	Composition of mainline	NText		<MLINE_COMP>	Y
BLINE_COMP	Composition of branchlines	NText		<BLINE_COMP>	Y
MLINE_MAT	Mainline material	NVarChar (15)		<MLINE_MAT>	Y
MLINE_MAT_DESC	Mainline material description	NVarChar (50)		<MLINE_MAT_DESC>	Y
MLINE_LEN	Mainline length (nm)	Decimal (5,1)		<MLINE_LEN>	Y
MLINE_DIAM	Mainline diameter (mm)	Decimal (4,1)		<MLINE_DIAM>	Y
BLINE_MAT1	Composition of branchlines (Material #1)	NVarChar (40)		<BLINE_MAT1>	Y
BLINE_MAT1_DESC	Branchlines (Material #1)	NVarChar (50)		<BLINE_MAT1_DESC>	Y

LL_GEAR

PROVIDE information on the LONGLINE GEAR on the vessel.

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
	description				
BLINE_MAT2	Composition of branchlines (Material #2)	NVarChar (40)		<BLINE_MAT2>	Y
BLINE_MAT2_DESC	Branchlines (Material #2) description	NVarChar (50)		<BLINE_MAT2_DESC>	Y
BLINE_MAT3	Composition of branchlines (Material #3)	NVarChar (40)		<BLINE_MAT3>	Y
BLINE_MAT3_DESC	Branchlines (Material #3) description	NVarChar (50)		<BLINE_MAT3_DESC>	Y
WIRETRACE_ANS	Presence orf wire trace (Y/N)	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<WIRETRACE_ANS>	Y
SEAWATER_ANS	Refrigeration method - Sea water ?	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<SEAWATER_ANS>	Y
BLASTFREEZER_ANS	Refrigeration method - blast freezer ?	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<BLASTFREEZER_ANS>	Y
ICE_ANS	Refrigeration method - Ice ?	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<ICE_ANS>	Y
CHILLEDSEAWATER_ANS	Refrigeration method - Chilled Sea water ?	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<CHILLEDSEAWATER_ANS>	Y
OTHERSTORAGE_ANS	Refrigeration method - other ?	Char (1)	Must be 'Y', 'N' or 'X' (observer did not respond to this question)	<OTHERSTORAGE_ANS>	Y
OTHERSTORAGE_DESC	Refrigeration method – other description	NVarChar (50)		<OTHERSTORAGE_DESC>	Y
HKSJAPAN_SIZE	Japanese hook size	NVarChar (50)		<HKSJAPAN_SIZE>	Y
HKSJAPAN_PERC	% of Japanese hook	TinyInt		<HKSJAPAN_PERC>	N
HKSJAPAN_ORS	Japanese hook original size	NVarChar (5)		<HKSJAPAN_ORS>	Y
HKSCIRCLE_SIZE	Circle hook size	NVarChar (50)		<HKSCIRCLE_SIZE>	Y
HKSCIRCLE_PERC	% of Circle hook	TinyInt		<HKSCIRCLE_PERC>	N
HKSCIRCLE_ORS	Circle hook original size	NVarChar (5)		<HKSCIRCLE_ORS>	Y
HKSJ_SIZE	J hook size	NVarChar (50)		<HKSJ_SIZE>	Y
HKSJ_PERC	% of J hook size	TinyInt		<HKSJ_PERC>	N
HKSJ_ORS	J hook original size	NVarChar (5)		<HKSJ_ORS>	Y
HKSOTH_TYPE	Other hook types description	NVarChar (50)		<HKSOTH_TYPE>	Y
HKSOTH_SIZE	Other hook type size	NVarChar (50)		<HKSOTH_SIZE>	Y
HKSOTH_PERC	% of Other hook types	TinyInt		<HKSOTH_PERC>	N
HKSOTH_ORS	Others types of hook original size	NVarChar (5)		<HKSOTH_ORS>	Y
BLINE_MAT1_DIAM	Branchlines (Material #1) diameter	Decimal (4,1)		<BLINE_MAT1_DIAM>	Y
BLINE_MAT2_DIAM	Branchlines (Material #2) diameter	Decimal (4,1)		<BLINE_MAT2_DIAM>	Y

2.14 POLLUTION REPORT

(see 1.20 POLLUTION REPORT and 1.21 POLLUTION DETAILS)

2.15 OBSERVER JOURNAL

(see 1.22 OBSERVER JOURNAL)

2.16 LONGLINE TRIP REPORT

LL_TRIP_REPORT PROVIDE descriptive information on the trip. Refer to the relevant sections in http://www.spc.int/OceanFish/en/publications/doc_download/1318-2014-ll-trip-report					
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE			<OBSTRIP_ID>	N
1_BACKGROUND	(Refer to relevant section in link above)	NText		<1_BACKGROUND>	N
2_0_CRUISE_SUMMARY	(Refer to relevant section in link above)	NText		<2_0_CRUISE_SUMMARY>	N
2_1_AREA_FISHED	(Refer to relevant section in link above)	NText		<2_1_AREA_FISHED>	N
2_2_END_OF_TRIP	(Refer to relevant section in link above)	NText		<2_2_END_OF_TRIP>	N
3_0_DATA_COLLECTED	(Refer to relevant section in link above)	NText		<3_0_DATA_COLLECTED>	N
3_1_OTHER_DATA_COLL	(Refer to relevant section in link above)	NText		<3_1_OTHER_DATA_COLL>	N
4_0_COC	Refer to relevant section in link above)	NText		<4_0_COC>	N
5_1_VESS_INFO	Refer to relevant section in link above)	NText		<5_1_VESS_INFO>	N
5_2_CREW_NATION	Refer to relevant section in link above)	NText		<5_2_CREW_NATION>	N
5_2_1_PIC	Refer to relevant section in link above)	NText		<5_2_1_PIC>	N
5_3_ELEC	Refer to relevant section in link above)	NText		<5_3_ELEC>	N
5_3_1_RADIO_BUOYS	Refer to relevant section in link above)	NText		<5_3_1_RADIO_BUOYS>	N
5_4_FISHING_GEAR	Refer to relevant section in link above)	NText		<5_4_FISHING_GEAR>	N
5_4_1_MAINLINE	Refer to relevant section in link above)	NText		<5_4_1_MAINLINE>	N
5_4_2_BRANCHLINES	Refer to relevant section in link above)	NText		<5_4_2_BRANCHLINES>	N
5_4_3_FLOATLINES	Refer to relevant section in link above)	NText		<5_4_3_FLOATLINES>	N
5_4_4_BLINE_WTS	Refer to relevant section in link above)	NText		<5_4_4_BLINE_WTS>	N
5_4_5_FISH_HOOKS	Refer to relevant section in link above)	NText		<5_4_5_FISH_HOOKS>	N
5_5_SAFETY_EQ	Refer to relevant section in link above)	NText		<5_5_SAFETY_EQ>	N
5_6_REGRIG	Refer to relevant section in link above)	NText		<5_6_REGRIG>	N
5_7_OTHER_GEAR	Refer to relevant section in link above)	NText		<5_7_OTHER_GEAR>	N
6_0_FISH_STRATEGY	Refer to relevant section in link above)	NText		<6_0_FISH_STRATEGY>	N
6_1_FISHERY_INFO	Refer to relevant section in link above)	NText		<6_1_FISHERY_INFO>	N
6_2_OCEAN_FEATURES	Refer to relevant section in link above)	NText		<6_2_OCEAN_FEATURES>	N
6_3_SET_HAUL	Refer to relevant section in link above)	NText		<6_3_SET_HAUL>	N
6_4_TARGET_DEPTH	Refer to relevant section in link above)	NText		<6_4_TARGET_DEPTH>	N
6_5_BAITING	Refer to relevant section in link above)	NText		<6_5_BAITING>	N
6_6_MITIGATION	Refer to relevant section in link above)	NText		<6_6_MITIGATION>	N
6_6_1_FISH_OFFAL	Refer to relevant section in link above)	NText		<6_6_1_FISH_OFFAL>	N
6_7_HAUL_PROCESS	Refer to relevant section in link above)	NText		<6_7_HAUL_PROCESS>	N
6_8_UNUSUAL_SET	Refer to relevant section in link above)	NText		<6_8_UNUSUAL_SET>	N
6_9_CHANGES_SETS	Refer to relevant section in link above)	NText		<6_9_CHANGES_SETS>	N
7_1_WEATHER	Refer to relevant section in link above)	NText		<7_1_WEATHER>	N
7_2_SEA_COND	Refer to relevant section in link above)	NText		<7_2_SEA_COND>	N
7_3_MOON_PHASE	Refer to relevant section in link above)	NText		<7_3_MOON_PHASE>	N
8_1_TARGET_CATCH	Refer to relevant section in link above)	NText		<8_1_TARGET_CATCH>	N
8_1_1_TARGET_PROC	Refer to relevant section in link above)	NText		<8_1_1_TARGET_PROC>	N
8_1_2_TARGET _DISC	Refer to relevant section in link above)	NText		<8_1_2_TARGET _DISC>	N

LL_TRIP_REPORT

PROVIDE descriptive information on the trip.

Refer to the relevant sections in http://www.spc.int/OceanFish/en/publications/doc download/1318-2014-ll-trip-report

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
8_1_3_TARGET_DAMAGE	Refer to relevant section in link above)	NText		<8_1_3_TARGET_DAMAGE>	N
8_2_1_OTHER_TUN_BILL	Refer to relevant section in link above)	NText		<8_2_1_OTHER_TUN_BILL>	N
8_2_2_SHARKS_RAYS	Refer to relevant section in link above)	NText		<8_2_2_SHARKS_RAYS>	N
8_2_3_OTHER_BY-CATCH	Refer to relevant section in link above)	NText		<8_2_3_OTHER_BY-CATCH>	N
8_3_UNSPEC_SP_CODES	Refer to relevant section in link above)	NText		<8_3_UNSPEC_SP_CODES>	N
8_4_1_SSI_LAND	Refer to relevant section in link above)	NText		<8_4_1_SSI_LAND>	N
8_4_2_SSI_INTERACT	Refer to relevant section in link above)	NText		<8_4_2_SSI_INTERACT>	N
8_4_3_SSI_MAM	Refer to relevant section in link above)	NText		<8_4_3_SSI_MAM>	N
8_4_4_SSI_SIGHT	Refer to relevant section in link above)	NText		<8_4_4_SSI_SIGHT>	N
9_0_TRANS	Refer to relevant section in link above)	NText		<9_0_TRANS>	N
10_1_TAGS	Refer to relevant section in link above)	NText		<10_1_TAGS>	N
10_2_STOMACH	Refer to relevant section in link above)	NText		<10_2_STOMACH>	N
10_3_OTHER	Refer to relevant section in link above)	NText		<10_3_OTHER>	N
11_0__TRIP_MON	Refer to relevant section in link above)	NText		<11_0__TRIP_MON>	N
11_1_CLARIFY	Refer to relevant section in link above)	NText		<11_1_CLARIFY>	N
11_2_RECOMMEND	Refer to relevant section in link above)	NText		<11_2_RECOMMEND>	N
11_3_CREW_INFO	Refer to relevant section in link above)	NText		<11_3_CREW_INFO>	N
11_4_MEDICAL	Refer to relevant section in link above)	NText		<11_4_MEDICAL>	N
11_5_PHOTOS	Refer to relevant section in link above)	NText		<11_5_PHOTOS>	N
11_6_OTHER_INFO	Refer to relevant section in link above)	NText		<11_6_OTHER_INFO>	N
12_0_VESS__DATA	Refer to relevant section in link above)	NText		<12_0_VESS__DATA>	N
13_0_GENERAL	Refer to relevant section in link above)	NText		<13_0_GENERAL>	N
14_0_PROBS	Refer to relevant section in link above)	NText		<14_0_PROBS>	N
14_1_FORM_CH_RECS	Refer to relevant section in link above)	NText		<14_1_FORM_CH_RECS>	N
15_0_CONCL	Refer to relevant section in link above)	NText		<15_0_CONCL>	N
16_0_ACKS	Refer to relevant section in link above)	NText		<16_0_ACKS>	N

APPENDICES

APPENDIX A1 – DATE/TIME FORMAT

The DATE/TIME formats must adhere to the following standard:

ISO 8601 - Dates and times format – both local and UTC dates

[YYYY]-[MM]-[DD]T[HH]:[MM]Z for fields designated as UTC date/time

[YYYY]-[MM]-[DD]T[HH]:[MM] for fields designated as LOCAL date/time

APPENDIX A2 – POSITION/COORDINATE FORMAT

The Latitude and Longitude coordinates must adhere to the ISO 6709 – Positions
Degrees and minutes to 3 decimal places

LATITUDE	+/- DDMM.MMM
LONGITUDE	+/- DDDMM.MMM

APPENDIX A3 – PORT LOCATION CODES

The PORT LOCATION Codes must adhere to the UN/LOCODE standard UPPERCASE CHAR(5)
United Nations - Code for Trade and Transport Locations (UN/LOCODE) – see
http://www.unece.org/cefact/locode/service/location

APPENDIX A4 – VESSEL IDENTIFICATION

The attributes to be provided for the VESSEL needs to be consistent with several VESSEL registers at the global and regional level. The most important are the proposed IMO/UVI standard vessel identifier (UVI), the WCPFC vessel register and the FFA Vessel register.

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
VESSEL NAME	PROVIDE the VESSEL attributes which should be consistent with the attributes stored in the WCPFC and FFA Regional Vessel Registers	CHAR(30) UPPER CASE	Must be consistent with the WCPFC and FFA Vessel Registers	<VESSELNAME>	Y
COUNTRY OF VESSEL REGISTRATION		CHAR(2) ISO 3166-1 alpha-2 two-letter country code UPPER CASE	ISO 3166-1 alpha-2 two-letter country code Must be consistent with the WCPFC and FFA Vessel Registers Country of registration is distinct from the chartering nation, where relevant	<COUNTRYREG>	Y
VESSEL REGISTRATION NUMBER		CHAR(20) UPPER CASE	Must be consistent with the WCPFC and FFA Vessel Registers	<REGNO>	Y
FFA VESSEL REGISTER NUMBER		INTEGER(5)	Must be consistent with the FFA Vessel Register	<FFAVID>	N
WCPFC RFV VID		INTEGER(10)	Must be consistent with the WCPFC RFV	<WIN>	Y
UNIVERSAL VESSEL IDENTIFIER (UVI)		INTEGER(10)	Must be consistent with the WCPFC and FFA Vessel Registers	<IMO_UVI>	N
VESSEL INTERNATIONAL CALLSIGN		CHAR(10) UPPER CASE	Must be consistent with the WCPFC and FFA Vessel Registers	<IRCS>	Y

APPENDIX A5 – PURSE SEINE OBSERVER ACTIVITY CODES

S_ACTIV_ID	Description	FAD reference (to record BEACON field)	FORM Code version (old)
1	Set	YES	1
2	Searching		2
3	Transit		3
4	No fishing - Breakdown		4
5	No fishing - Bad weather		5
6	In port - please specify		6
7	Net cleaning set		7
8	Investigate free school		8
9	Investigate floating object	YES	9
10	Deploy - raft, FAD or payao	YES	10D
11	Retrieve - raft, FAD or payao	YES	10R
12	No fishing - Drifting at day's end		11
13	No fishing - Drifting with floating object	YES	12
14	No fishing - Other reason (specify)		13
15	Drifting -With fish aggregating lights	YES	14
16	Retrieve radio buoy	YES	15R
17	Deploy radio buoy	YES	15D
18	Transhipping or bunkering		16
19	Servicing FAD or floating object	YES	17
20	*Helicoptor takes off to search*		*H1*
21	*Helicopter returned from search*		*H2*

APPENDIX A6 – PURSE SEINE TUNA SCHOOL ASSOCIATION CODES

S_ACTIV_ID	Description	SCHOOL TYPE CATEGORY
1	Unassociated (free school)	UNASSOCIATED
2	Feeding on Baitfish (free school)	UNASSOCIATED
3	Drifting log, debris or dead animal	ASSOCIATED
4	Drifting raft, FAD or payao	ASSOCIATED
5	Anchored raft, FAD or payao	ASSOCIATED
6	Live whale	ASSOCIATED
7	Live whale shark	ASSOCIATED
8	Other (please specify)	
9	No tuna associated	

APPENDIX A7 – PURSE SEINE TUNA SCHOOL DETECTION CODES

DETON _ID	Description
1	Seen from vessel
2	Seen from helicopter; Use when vessel gets to the school of tuna that helicopter either: 1. reported on; or 2. dropped buoy on.
3	Marked with beacon
4	Bird radar
5	Sonar / depth sounder
6	Info. from other vessel
7	Anchored FAD / payao (recorded)

APPENDIX A8 – SPECIES CODES

Refer to the FAO three-letter species codes:

http://www.fao.org/fishery/collection/asfis/en

APPENDIX A9 – OBSERVER FATE CODES

FATE CODE	DESCRIPTION
DCF	Discarded - Line cut or Other
DDL	Discarded - Difficult to land
DFR	Discarded - fins removed and trunk discarded
DFW	Discarded - Discarded from well
DGD	Discarded - Gear damage
DNS	Discarded - No space in freezer
DOR	Discarded - other reason (specify)
DPA	Discarded - Protected species - Alive
DPD	Discarded - Protected species - Dead
DPQ	Discarded - poor quality
DPS	Discarded - protected species (e.g. turtles)
DPU	Discarded - Protected Species - Condition unknown
DSD	Discarded - Shark damage
DSO	Discarded - rejected (struck off before landing)
DTS	Discarded - too small
DUS	Discarded - Undesirable species
DVF	Discarded - Vessel fully loaded
DWD	Discarded - Whale damage
ESC	Escaped
RCC	Retained - Crew Consumption
RFL	Retained - Filleted
RFR	Retained - fins removed and trunk retained
RGG	Retained - gilled and gutted (retained for sale)
RGO	Retained - gutted only
RGT	Retained - gilled gutted and tailed (for sale)
RHG	Retained - headed and gutted (Marlin)
RHT	Retained - Headed, gutted and tailed
RMD	Retained - fins removed/trunk retained (MANDATORY)
ROR	Retained - other reason (specify)
RPT	Retained - partial (e.g. fillet, loin)
RSD	Retained - Shark damage
RTL	Retained - Tailed
RWD	Retained - Whale Damage
RWG	Retained - Winged
RWW	Retained - whole
UUU	Unknown - not observed

APPENDIX A10 – OBSERVER CONDITION CODES

CONDITION CODE	Description
A0	Alive but unable to describe condition
A1	Alive and healthy
A2	Alive, but injured or distressed
A3	Alive, but unlikely to live
A4	Entangled, okay
A5	Entangled, injured
A6	Hooked, externally, injured
A7	Hooked, internally, injured
A8	Hooked, unknown, injured
D	Dead
D1	Entangled, dead
D2	Hooked, externally, dead
D3	Hooked, internally, dead
D4	Hooked, unknown, dead
U	Condition, unknown
U1	Entangled, unknown condition
U2	Hooked, externally, condition unknown
U3	Hooked, internally, condition unknown
U4	Hooked, unknown, condition unknown

APPENDIX A11 – LENGTH CODES

Length Code	Description
AN	Anal fin length
BL	Bill to fork in tail
CC	Curved Carapace Length
CK	Cleithrum to anterior base caudal keel
CL	carapace length (turtles)
CW	Carapace width
CX	Cleithrum to caudal fork
EO	Posterior eye orbital to caudal fork
EV	Posterior eye orbital to vent
FF	1st dorsal to fork in tail
FN	Weight of all fins (sharks)
FS	1st dorsal to 2nd dorsal
FW	Fillets weight
GF	Gilled, gutted, headed, flaps removed
GG	Gilled and gutted weight
GH	Gutted and headed weight
GI	Girth
GO	Gutted only (gills left in)
GT	Gilled, gutted and tailed
GX	Gutted, headed and tailed
LF	lower jaw to fork in tail
NM	not measured
OW	Observer's Estimate
PF	pectoral fin to fork in tail
PS	Pectoral fin to 2nd dorsal
SC	Straight Carapace Length
SL	Tip of snout to end of caudal peduncle
TH	Body Thickness (Width)
TL	tip of snout to end of tail
TW	total width (tip of wings - rays)
UF	upper jaw to fork in tail
US	Upper jaw to 2nd dorsal fin
WW	Whole weight

APPENDIX A12 – SEX CODES

Sex Code	Description
F	Female
I	Indeterminate (checked but unsure)
M	Male
U	Unknown (not checked)

APPENDIX A13 – Vessel activity (SSI interaction) codes

Activity Code for interaction	Description
1	SETTING
2	HAULING
3	SEARCHING
4	TRANSITING
5	OTHER

APPENDIX A14 – SIZE and SPECIES COMPOSIION SAMPLE PROTOCOL

Sample Type	Description
R	Random (GRAB) sample
S	SPILL sample
B	Bycatch only sampling
F	Small-fish only sampling
O	Other type of sampling protocol (please specify)

APPENDIX A15 – MEASURING INSTRUMENTS Codes

Measure Code	Description
B	BOARD
C	CALLIPER - ALUMINIUM
E	EYE
R	RULER
T	TAPE
U	UNKNOWN
W	CALLIPER - WOOD

APPENDIX A16 – TRIP MONITORING QUESTION Codes

QUESTION CODE	Description	WCPFC Question
RS-A	Did the operator or any crew member assault, obstruct, resist, delay, refuse boarding to, intimidate or interefere with observers in the performance of their duties	Y
RS-B	Request that an event not be reported by the observer	Y
RS-C	Mistreat other crew	N
RS-D	Did operator fail to provide observer with food, accommodation, etc.	Y
NR-A	Fish in areas where the vessel is not permitted to fish	Y
NR-B	Target species other than those they are licenced to target	N
NR-C	Use a fishing method other than the method the vessel was designed or licensed	Y
NR-D	Not display or present a valid (and current) licence document onboard	N
NR-E	Transfer or transship fish from or to another vessel	Y
NR-F	Was involved in bunkering activities	N
NR-G	Fail to stow fishing gear when entering areas where vessel is not authorised to fish	Y
WC-A	Fail to comply with any Commission Conservation and Management Measures (CMMs)	Y
WC-B	High-grade the catch	Y
WC-C	Fish on FAD during FAD Closure	N
LP-A	Inaccurately record vessel position on vessel log sheets for sets, hauling and catch	Y
LP-B	Fail to report vessel positions to countries where required	Y
LC-A	Inaccurately record retained 'Target Species' in the Vessel logs [or weekly reports]	Y
LC-B	Inaccurately record 'Target Species' Discards	Y
LC-C	Record target species inaccurately [eg. combine bigeye/yellowfin/skipjack catch]	Y
LC-D	Not record bycatch discards	N
LC-E	Inaccurately record retained bycatch Species	Y
LC-F	Inaccurately record discarded bycatch species	Y
SI-A	Land on deck Species of Special Interest (SSIs)	N
SI-B	Interact (not land) with SSIs	Y
PN-A	Dispose of any metals, plastics, chemicals or old fishing gear	Y
PN-B	Discharge any oil	Y
PN-C	Lose any fishing gear	Y
PN-D	Abandon any fishing gear	Y
PN-E	Fail to report any abandoned gear	Y
SS-A	Fail to monitor international safety frequencies	Y
SS-B	Carry out-of-date safety equipment	N

APPENDIX A17 – VESSEL / AIRCRAFT SIGHTINGS Codes

CODE	Description
1	SINGLE PURSE SEINE
2	LONGLINE
3	POLE AND LINE
4	MOTHERSHIP
5	TROLL
6	NET BOAT
7	BUNKER
8	SEARCH, ANCHOR OR LIGHT BOAT
9	FISH CARRIER
10	TRAWLER
11	LIGHT AIRCRAFT
12	HELICOPTER
13	OTHER

APPENDIX A18 – ACTION Codes

Action Codes	Description	FORM Used
AG	Aground	GEN6
BG	Bunkering (transfer of fuel), vessel observer is on is GIVING	GEN1, GEN6
BR	Bunkering (transfer of fuel), vessel observer is on is RECEIVING	GEN1, GEN6
CR	Retained from a set solely because of catch-retention rules	PS5
DF	Dumping of fish	GEN1
DS	Discarded into the sea	PS5
FI	Fishing	GEN1, GEN6
FO	Fish On-board	PS5
FS	From set	PS5
NF	Not fishing	GEN1
OG	Other, vessel observer is on is GIVING	GEN1
OR	Other, vessel observer is on is RECEIVING	GEN1
PF	Possibly fishing	GEN1
SG	Set sharing, vessel observer is on is GIVING	GEN1
SR	Set sharing, vessel observer is on is RECEIVING	GEN1,PS5
TG	Transferring fish between vessels, vessel observer is on is GIVING	GEN1,PS5, GEN6
TR	Transferring fish between vessels, vessel observer is on is RECEIVING	GEN1,PS5, GEN6
UL	Unloaded at cannery or cool store	PS5
WT	Transferred between wells	PS5

GEN1 – Vessel / Aircraft sightings
GEN6 – Pollution Report
PS-5 – Purse seine Well transfer

APPENDIX A19 – Purse seine CREW JOB Codes

CODE	Description
1	CAPTAIN
2	NAVIGATOR/MASTER
3	MATE
4	CHIEF ENGINEER
5	ASSISTANT ENGINEER
6	DECK BOSS
7	COOK
8	HELICOPTER PILOT
9	SKIFF MAN
10	WINCH MAN
11	HELICOPTER MECHANIC
12	CREW
13	NAVIGATOR
14	FISHING MASTER
15	RADIO OPERATOR
16	TRANSLATOR

APPENDIX A20 – MARINE DEVICES Codes

Code	Description	WCPFC FIELD	GEAR LIST CODES
1	BATHYTHERMOGRAPH MBT	YES	
2	BIRD RADAR	YES	SP
3	CHART PLOTTER	YES	LSP
4	DEPTH SOUNDER	YES	LSP
5	DOPPLER CURRENT MONITOR	YES	
6	SATELLITE BUOY	YES	S
7	FISHERY INFORMATION SERVICES	YES	LSP
8	GPS	YES	LSP
9	NAVIGATIONAL RADAR #1	YES	LP
10	RADIO BUOYS - CALL-UP	YES	LSP
11	RADIO BUOYS - NON CALL-UP	YES	LSP
12	RADIO BEACON DIRECTION FINDER	YES	LSP
13	SATELLITE - HF TELEX	YES	
14	SEA SURFACE TEMP. GAUGE	YES	LP
15	SONAR	YES	LSP
16	HF RADIO TELEPHONE	YES	
17	SMART-LINK PHONE	YES	
18	TRACK PLOTTER	YES	LSP
19	VESSEL MONITORING SYSTEM (VMS)	YES	LSP
20	WEATHER FACSIMILE	YES	LP
21	WEATHER SATELLITE MONITOR	YES	
22	NET SOUNDER		LSP
23	BINOCULARS		P
24	ECHO SOUNDING BUOY		S
25	EPIRB		

APPENDIX A21 – DEVICE USAGE codes

Code	Description
	Not mentioned
ALL	used all the time for fishing
BRO	broken now but used normally
NA	Not applicable / Not filled
NOL	no longer ever used
OIF	used only in transit
RAR	used rarely
SIF	used often but only in fishing
TRA	used all the time

APPENDIX A22 – WEIGHT MEASUREMENT codes

Weight measurement code	Description
CW	Captain's Estimate
FN	Weight of all fins (sharks)
FW	Fillets weight
GF	Gilled, gutted, headed, flaps removed
GG	Gilled and gutted
GH	Gutted and headed
GO	Gutted only (gills left in)
GT	Gilled, gutted and tailed
GX	Gutted, headed and tailed
NM	Not measured
OW	Observer's Estimate
TW	Trunk weight
WW	Whole weight

APPENDIX A23 – GONAD STAGE codes

Gonad stage code	Short description	Description
N	No information	No information
I	Immature	Ovary small and slender. Cross-section round
E	Early Maturing	Enlarged, pale yellow ovaries. Ova not visible.
L	Late Maturing	Enlarged, turgid, orange-yellow ovaries. Ova opaque
M	Mature	Enlarged, richly vascular, orange ovaries, losing turgidity. Ova translucent.
R	Ripe	Greatly enlarged ovaries, not turgid. Ova easily dislodged and extruded by pressure.
S	Spent	Flaccid, vascular ovaries. Most ova gone. Often dark orange-red coloration.
R	Recovering	Vascular ovaries. Next batch of ova developing.

APPENDIX A24 – FAD ORIGIN codes

FAD ORIGIN CODE	Description
1	Your vessel deployed this trip
2	Your vessel deployed previous trip
3	Other vessel (owner consent)
4	Other vessel (no owner consent)
5	Other vessel (consent unknown)
6	Drifting and foudn by your vessel
7	Deployed by FAD auxillary vessel
8	Origin unknown
9	Other origin

APPENDIX A25 – FAD DETECTION codes

FAD DETECTION CODE	Description
1	Seen from Vessel (no other method)
2	Seen from Helicopter
3	Marked with Radio beacon
4	Bird Radar
6	Info. from other vessel
7	Anchored (GPS)
8	Marked with Satellite Beacon
9	Navigation Radar
10	Lights
11	Flock of Birds sighted from vessel
12	Other (please specify)
13	Vessel deploying FAD (not detected)

APPENDIX A26 – FAD MATERIAL codes

FAD MATERIAL CODE	Description
1	Logs, Trees or debris tied together
2	Timber/planks/pallets/spools
3	PVC or Plastic tubing
4	Plastic drums
5	Plastic Sheeting
6	Metal Drums (i.e. 44 gallon)
7	Philippines design drum FAD
8	Bamboo/Cane
9	Floats/Corks
10	Unknown (describe)
11	Chain, cable rings, weights
12	Cord/rope
13	Netting hanging underneath FAD
14	Bait containers
15	Sacking/bagging
16	Coconut fronds/tree branches
17	Other (describe)

APPENDIX A27 – FAD TYPE codes

FAD TYPE CODE	Description
1	Man made object (Drifting FAD)
2	Man made object (Non FAD)
3	Tree or log (natural, free floating)
4	Tree or logs (converted into FAD)
5	Debris (flotsam bunched together)
6	Dead Animal (specify; i.e. whale, horse, etc.)
7	Anchored Raft, FAD, or Payao
8	Anchored Tree or Logs
9	Other (please specify)
10	Man made object (Drifting FAD)-changed

APPENDIX A28 – POLLUTION GEAR codes

POLLUTION GEAR CODE	DESCRIPTION
1	Lost during fishing
2	Abandoned
3	Dumped

APPENDIX A29 – POLLUTION MATERIALS codes

POLUTION MATERIALS CODES	DESCRIPTION
1	Plastics
2	Metals
3	Waste Oils
4	Chemicals
5	Old fishing gear
6	General garbage

APPENDIX A30 – POLLUTION SOURCE codes

POLLUTION SOURCE CODES	DESCRIPTION
1	Vessel Aground/Collision
2	Vessel at Anchor/Bearth
3	Vessel Underway
4	Land Based Source
5	Other

APPENDIX A31 – POLLUTION TYPE codes

POLLUTION TYPE CODES	DESCRIPTION
1	Waste dumped overboard
2	Oil splillages and leakages
3	Abandoned or Lost Fishing Gear

Attachment 3B. Electronic data standard to be used for Paragraph 3 and Annex 1 of Scientific Data to be Provided to the Commission

Western and Central Pacific Fisheries Commission (WCPFC)

E-REPORTING STANDARD DATA FIELDS

OPERATIONAL LOGSHEET DATA

Draft – Version 2.0

7th June 2015

Contents

INTRODUCTION

These tables set out the proposed standards for the provision of operational logsheet data fields collected in the WCPFC tropical purse seine fishery and the longline fisheries through E-Reporting. These tables provide the minimum requirements for data entities, data formats and data validation to be established for data submitted to the national and regional fisheries authorities from E-Reporting systems. The data fields contained herein are based on information collected under the current regional standard data collection forms. This document acknowledges that national fisheries authorities require data (e.g. licence/permit numbers and for anticipated Catch Documentation System – CDS – requirements) that are not mandatory WCPFC data fields, so a column in these tables identifies whether the data field is a mandatory WCFPC data field[1] or not.

These E-Reporting data field standards are consistent with, and should be considered in conjunction with more detailed instructions[2] on how to collect LOGBOOK data provided by SPC.

These tables are intended for, *inter alia*, E-Reporting service providers who have been contracted to provide electronic systems to record LOGBOOK information on-board purse seine vessels.

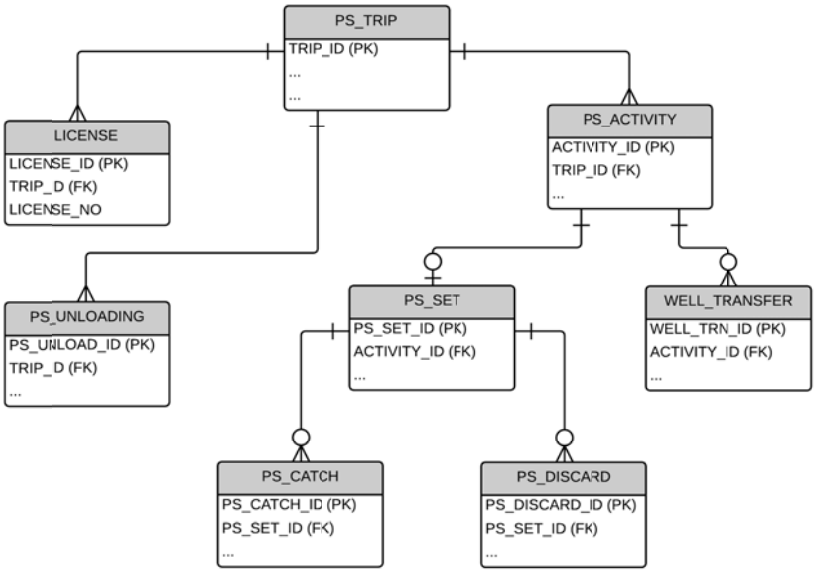
[1] The mandatory WCPFC data fields for operational LOGBOOK data are found in the "Scientific Data to be provided to the Commission - Attachment K, Annex 1. Standards for the Provision of Operational Level Catch and Effort Data"
http://www.wcpfc.int/system/files/Scientific%20Data%20to%20be%20Provided%20to%20the%20Commission%20-%20decision%20made%20by%20WCPFC10%20%28clean%29.pdf

[2] In addition to the WCPFC LOGBOOK data fields requirements, instructions for LOGBOOK data collection in the WCPFC Area are available with the regional standard observer data collection forms at http://www.spc.int/oceanfish/en/data-collection/241-data-collection-forms.

1. PURSE SEINE LOGBOOK E-REPORTING STANDARDS

1.1 DATA MODEL DIAGRAM

The following basic data model diagram outlines the structure of the entities and their relationships for purse seine operational logsheet data collected by E-Reporting systems and submitted to national and regional fisheries authorities. The tables that follow provide more information on the mechanisms of the links (relationships) between the entities.



1.2 PURSE SEINE TRIP-LEVEL DATA

PS_TRIP "The start of a trip is defined to occur when a vessel (a) leaves port after unloading part or all of the catch to transit to a fishing area or (b) recommences fishing operations or transits to a fishing area after transshipping part or all of the catch at sea (when this occurs in accordance with the terms and conditions of article 4 of Annex III of the Convention, subject to specific exemptions as per article 29 of the Convention)."						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL IDENTIFIER + DEPARTURE DATE				<TRIP_ID>	
VESSEL IDENIFIER	REFER TO APPENDIX A4					
COUNTRY OF CHARTER	PROVIDE the Country responsible for chartering the vessel, where relevant. This only applies if the vessel has been chartered according to the requirements under WCFPC CMM 2012-05 – chartering notifications.	CHAR(2) ISO 3166-1 alpha-2 two-letter country code UPPER CASE	ISO 3166-1 alpha-2 two-letter country code This field must be completed if it has been listed as a chartered vessel on the WCPFC web site according to the requirements under WCFPC CMM 2012-05 – chartering notifications.	CS	<CHARTER>	Y
AGENT FOR UNLOADING	PROVIDE the name of the Agent for the Unloading	CHAR(50)	Where possible, link this field to a reference table of authorised Agents for unloading. (referential integrity)	AN	<AGENT>	N
TRIP NUMBER	PROVIDE the trip number undertaken by this vessel for the year. Trip number is sequential, starting at 1 for first trip of the year for each vessel.	INTEGER(2)		TN	<TRIPNO>	N
PORT OF DEPARTURE	PROVIDE the Port of Departure	REFER TO APPENDIX A3	Must be valid United Nations - Code for Trade and Transport Locations (UN/LOCODE) – see http://www.unece.org/cefact/locode/service/location	PE	<PORTDEPART>	Y
PLACE OF UNLOADING	PROVIDE the Port of Return for Unloading	REFER TO APPENDIX A3	Must be valid United Nations - Code for Trade and Transport Locations (UN/LOCODE)	PO	<PORTUNLOAD>	Y
DATE and TIME OF DEPARTURE	PROVIDE the GMT/UTC DATE and TIME of departure for this	REFER TO APPENDIX A1	ISO 8601 - Dates and times format The chronology of Departure date with respect to Date of	SD ST	<DATEDEPART> <TIMEDEPART>	Y

PS_TRIP

"The start of a trip is defined to occur when a vessel (a) leaves port after unloading part or all of the catch to transit to a fishing area or (b) recommences fishing operations or transits to a fishing area after transshipping part or all of the catch at sea (when this occurs in accordance with the terms and conditions of article 4 of Annex III of the Convention, subject to specific exemptions as per article 29 of the Convention)."

FIELD	Data Collection Instructions	Field format notes	Validation rules	NAF CODE	XML TAG	WCPFC FIELD
	trip		arrival in port and the Days at sea must be valid.			
DATE AND TIME OF ARRIVAL IN PORT	PROVIDE the GMT/UTC DATE and TIME of arrival back in port for this trip	REFER TO APPENDIX A1	ISO 8601 - Dates and times format The chronology of Arrival date with respect to Date of Departure and the Days at sea must be valid.	ED ET	<DATEARRIVAL> <TIMEARRIVAL>	Y
FISH ONBOARD – START	PROVIDE the total amount of fish on-board at the time of leaving port on this trip.	NUMBER(4)	WARNING: Should be a realistic amount. For example, having catch >200 t. would be unrealistic?	QS	<AMOUNTSTART>	N
FISH ONBOARD – END	PROVIDE the total amount of fish on-board AFTER ALL UNLOADINGs have been undertaken before the next trip.	NUMBER(4)	WARNING: Should be a realistic amount. For example, having catch >200 t. would be unrealistic? Having catch greater than what was caught on the trip is not possible.	QE	<AMOUNTAFTER>	N

1.3 LICENSE/PERMIT DATA

LICENSE PROVIDE each LICENSE/PERMIT that the vessel holds for the period of the trip.						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE				<TRIP_ID>	
FISHING PERMIT/LICENSE NUMBERS	PROVIDE License/Permit number that the vessel holds for the period of the TRIP.	CHAR(40) UPPER CASE	Where possible, include validation to ensure the Permit format relevant to the agreement (national or sub-regional) complies to the required format.	LC	<LICENSE_NO>	N

1.4 PS UNLOADING DATA

PS_UNLOADING PROVIDE information for TRIP UNLOADING INFORMATION which covers one or several unloading events during or at the end of the trip to (i) carriers, (ii) on-shore processing plants (Canneries) and/or (iii) a net-share event with another catcher vessel						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE		Link to TRIP information		<TRIP_ID>	
UNLOADING START DATE	PROVIDE the start date for this specific Unloading event	REFER TO APPENDIX A1	ISO 8601 - Dates and times format GMT/UTC time [YYYY]-[MM]-[DD]T[HH]:[MM]Z The chronology of Unload Start date with respect to other dates for the trip and unloading must be valid.	SD	<STARTDATE>	N
UNLOADING END DATE	PROVIDE the end date for this specific Unloading event	REFER TO APPENDIX A1	ISO 8601 - Dates and times format GMT/UTC time [YYYY]-[MM]-[DD]T[HH]:[MM]Z The chronology of Unload End date with respect to other dates for the trip and unloading must be valid.	ED	<ENDDATE>	N
CARRIER VESSEL IDENTIFIER	REFER TO APPENDIX A4 If relevant, PROVIDE the receiving CARRIER VESSEL for this specific Unloading event. Note that for NET-SHARE events, this could be another purse seine catcher vessel. If Relevant, PROVIDE the FFA VID for the CARRIER vessel. Must be consistent with the WCPFC and FFA Vessel Registers					
CANNERY/ DESTINATION	If relevant, PROVIDE the receiving CANNERY/DESTINATION for this specific Unloading event.	CHAR(40) UPPER CASE	Where possible, link this field to a reference table of authorised Canneries/Destinations (referential integrity)	FD FN	<DESTINATION>	N
SKJ UNLOADED	PROVIDE the total weight (metric tonnes) of SKIPJACK unloaded in this specific Unloading event	DECIMAL(7,3)	CONTROL TOTAL CHECK: Total amounts for this trip should reconcile checking total trip catch, catch on-board at start, catch on-board at end and all unloading events.	DQ	<UNLOADSKJ>	N
YFT UNLOADED	PROVIDE the total weight (metric tonnes) of YELLOWFIN unloaded in this specific Unloading event	DECIMAL(7,3)		DQ	<UNLOADYFT>	N
BET UNLOADED	PROVIDE the total weight (metric tonnes) of BIGEYE unloaded in this specific Unloading event	DECIMAL(7,3)		DQ	<UNLOADBET>	N
MIXED TUNA UNLOADED	PROVIDE the total weight (metric tonnes) of MIXED TUNA unloaded in this specific Unloading event	DECIMAL(7,3)		DQ	<UNLOADMIX>	N

PS_UNLOADING

PROVIDE information for TRIP UNLOADING INFORMATION which covers one or several unloading events during or at the end of the trip to (i) carriers, (ii) on-shore processing plants (Canneries) and/or (iii) a net-share event with another catcher vessel

FIELD	Data Collection Instructions	Field format notes	Validation rules	NAF CODE	XML TAG	WCPFC FIELD
OTHERS UNLOADED	PROVIDE the total weight (metric tonnes) of OTHERS unloaded in this specific Unloading event	DECIMAL(7,3)		DQ	<UNLOADOTH>	N
REJECTS UNLOADED	PROVIDE the total weight (metric tonnes) of REJECTED TUNA unloaded in this specific Unloading event	DECIMAL(7,3)		RT	<UNLOADREJ>	N

1.5 PS ACTIVITY DATA

PS_ACTIVITY PROVIDE information on the designated activities for each DAY AT SEA						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE		Link to TRIP information		<TRIP_ID>	
ACTIVITY IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY				<ACTIVITY_ID>	
DATE	PROVIDE the DATE for each day that the vessel is at sea.	REFER TO APPENDIX A1	Expect to be automatically integrated/generated with GPS DEVICE	DA	<DATE_EVENT >	Y
START TIME OF ACTIVITY	PROVIDE the time when the ACTIVITY started	REFER TO APPENDIX A1	Expect to be automatically integrated/generated with GPS DEVICE	ST	<TIME_EVENT>	Y
LATITUDE	PROVIDE the LATITUDE position when the ACTIVITY started	REFER TO APPENDIX A2	Expect to be automatically integrated/generated with GPS DEVICE	LT	<LAT> <LATH>	Y
LONGITUDE	PROVIDE the LONGITUDE position when the ACTIVITY started	REFER TO APPENDIX A2	Expect to be automatically integrated/generated with GPS DEVICE	LG	<LON> <LONH>	Y
ACTIVITY	PROVIDE each new ACTIVITY of the vessel within the DAY	REFER TO APPENDIX A5	The code must be within the valid range. Ensure relational integrity for certain values, for example, "1 - Fishing Set" must link to a SET record and perhaps to other tables "8 - Non-Set Well Transfer" must link to a WELL_TRANSFER record	AT	<S_ACT_ID>	Y

1.6 PS SET LEVEL DATA

PS_SET PROVIDE information for each FISHING SET						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE		Link to TRIP information		<TRIP_ID>	
ACTIVITY IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY		Link to ACTIVITY (SET)		<ACTIVITY_ID>	
START DATE/TIME OF SET	PROVIDE the start time of the set which is defined at the time the SKIFF is launched.	REFER TO APPENDIX A1	Expect to be automatically integrated/generated with GPS DEVICE The chronology of SET START TIME with respect to other dates/times for the trip must be valid.	ST	<SETSTART>	Y
END DATE/TIME OF SET	PROVIDE the end time of the set which is defined as the time when the "RINGS UP" ON DECK.	REFER TO APPENDIX A1	Expect to be automatically integrated/generated with GPS DEVICE The chronology of SET END TIME with respect to other dates/times for the trip must be valid.	ET	<SETEND>	Y
SCHOOL ASSOCIATION	PROVIDE the School Associated Code	REFER TO APPENDIX A6	The code must be within the valid range.	SA	<SCHOOL>	Y
SCHOOL ASSOCIATION NOTE	PROVIDE information of the SCHOOL ASSOCIATION in cases where the school association is not covered in the list of School association codes 1. To 7.	VARCHAR(30)	Used only when the SCHOOL ASSOCIATION = 8	SA	<SCH_NOTE>	Y

1.7 PS CATCH DATA

PS_CATCH PROVIDE information on each species catch RETAINED from a SET						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE		Link to TRIP information		<TRIP_ID>	
ACTIVITY IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY		Link to ACTIVITY (SET)		<ACTIVITY_ID>	
SET IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF SET		Link to PS_SET		<PS_SET_ID>	
SPECIES CODE	For each species taken in the set and RETAINED, PROVIDE the SPECIES CODE according to the FAO standard species code list	CHAR(3)	REFER TO APPENDIX 7.	DC	<SP_CODE>	Y
SIZE CATEGORY	For Yellowfin (YFT) and Bigeye tuna (BET) RETAINED catch, distinguish the catch by size category < 9kgs and > 9kgs) otherwise leave blank.	CHAR(2)	LG - Large Fish (>= 9 kgs) SM - Small Fish (< 9 kgs) <Blank> - Not applicable Validate that it can only be used for YFT and BET.	DC	<SP_SIZE>	N
WELL TO	Well number where the catch is moved to. Set catch for this species/size category may be moved to more than one well. (Used for Catch Documentation systems).	CHAR(3)	Valid code DIS – Discard of fish to sea from a well (e.g. due to spoilage) Snn – Starboard well with number = <nn> Pnn – Port well with number = <nn> Cnn – Central well with number = <nn>	TC	<WELL_TO>	N
RETAINED WEIGHT	PROVIDE the RETAINED ESTIMATED WEIGHT (metric tonnes, to 3 decimal places if possible) covering this species/size category combination.	DECIMAL(7,3)	Validate that it is within the acceptable range for this species. (Refer to the SPECIES_RANGE table provided)	DC	<SP_RET_MT>	Y
RETAINED NUMBER	PROVIDE the RETAINED NUMBER covering this species/size category combination. This is only required for non-target species.	INTEGER(6)	Validate that it is within the acceptable range for this species. (Refer to the SPECIES_RANGE table provided)	DC	<SP_RET_NO>	N

1.8 PS DISCARD DATA

PS_DISCARD PROVIDE information on each species catch DISCARDED from a SET						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE		Link to TRIP information		<TRIP_ID>	
ACTIVITY IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY		Link to ACTIVITY (SET)		<ACTIVITY_ID>	
SET IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF SET		Link to PS_SET		<PS_SET_ID>	
SPECIES CODE	For each species taken in the set and DISCARDED, PROVIDE the SPECIES CODE according to the FAO standard species code list	CHAR(3)	REFER TO APPENDIX 7.	DI	<SP_CODE>	Y
DISCARDED WEIGHT	PROVIDE the DISCARDED ESTIMATED WEIGHT (metric tonnes, to 3 decimal places if possible) covering this species.	DECIMAL(7,3)	Validate that it is within the acceptable range for this species. (Refer to the SPECIES_RANGE table provided)	DI	<SP_DISC_MT>	Y
DISCARDED NUMBER	PROVIDE the DISCARDED NUMBER, where appropriate.	INTEGER(6)	Validate that it is within the acceptable range for this species. (Refer to the SPECIES_RANGE table provided)	DI	<SP_DISC_NO>	Y
REASON FOR DISCARD	PROVIDE the reason for the DISCARD.	INTEGER(1)	REFER TO APPENDIX 8.	DI	<DISC_REA_ID>	Y
REASON FOR DISCARD NOTE	PROVIDE information of the REASON FOR DISCARD in cases where the code is not covered in the list of Reason codes 1. To 4.	VARCHAR(30)	Used only when the REASON FOR DISCARD = 5	DI	<DISC_NOTE>	Y

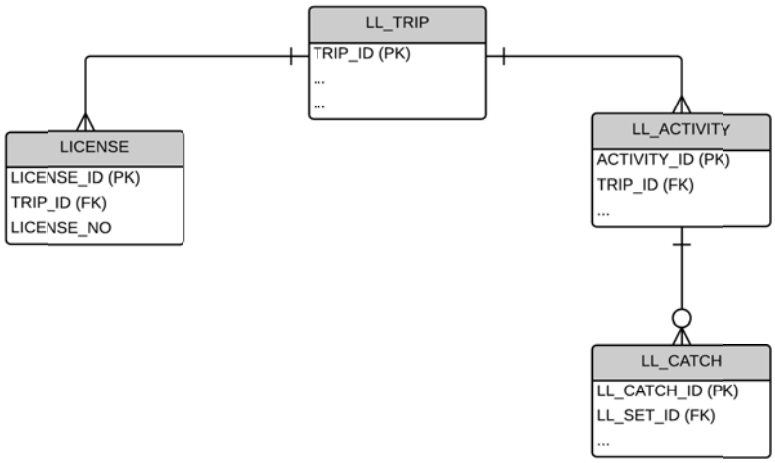
1.9 PS WELL TRANSFER DATA

WELL_TRANSFER PROVIDE information on each WELL TRANSFER or NET-to-WELL TRANSFER when the relevant ACTIVITIES are recorded						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE		Link to TRIP information		<TRIP_ID>	
ACTIVITY IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY		Link to ACTIVITY (SET or WELL TRANSFER)		<ACTIVITY_ID>	
WELL FROM	Well number or the NET (in the case of a set) where the catch is coming from.	CHAR(3)	Valid code Snn – Starboard well with number = <nn> Pnn – Port well with number = <nn> Cnn – Central well with number = <nn>	TC	<WELL_FROM>	N
WELL TO	Well number where the catch is moved to. Note that this includes DISCARDs of fish from the well.	CHAR(3)	Valid code DIS – Discard of fish to sea from a well (e.g. due to spoilage) Snn – Starboard well with number = <nn> Pnn – Port well with number = <nn> Cnn – Central well with number = <nn>	TC	<WELL_TO>	N
SPECIES CODE	For each species catch transferred, PROVIDE the SPECIES CODE according to the FAO standard species code list	CHAR(3) UPPER CASE	REFER TO APPENDIX 7.	TC	<SP_CODE_WELL>	N
SIZE CATEGORY	For Yellowfin (YFT) and Bigeye tuna (BET) transferred catch, distinguish the catch by size category < 9kgs and > 9kgs) otherwise leave blank.	CHAR(2)	LG - Large Fish (>= 9 kgs) SM - Small Fish (< 9 kgs) <Blank> - Not applicable Validate that it can only be used for YFT and BET.	DC	<SP_WELL_SIZE>	N
WEIGHT TRANSERRED	PROVIDE the WEIGHT (metric tonnes, to 3 decimal places if possible) of the species transferred.	DECIMAL(6,3)		TC	<SP_WELL_MT>	N

2. LONGLINE LOGBOOK E-REPORTING STANDARDS

2.1 DATA MODEL DIAGRAM

The following basic data model diagram outlines the structure of the entities and their relationships for longline operational logsheet data collected by E-Reporting systems and submitted to national and regional fisheries authorities. The tables that follow provide more information on the mechanisms of the links (relationships) between the entities.



2.2 LONGLINE TRIP-LEVEL DATA

LL_TRIP "The start of a trip is defined to occur when a vessel (a) leaves port after unloading part or all of the catch to transit to a fishing area or (b) recommences fishing operations or transits to a fishing area after transshipping part or all of the catch at sea (when this occurs in accordance with the terms and conditions of article 4 of Annex III of the Convention, subject to specific exemptions as per article 29 of the Convention)."						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL IDENTIFIER + DEPARTURE DATE				<TRIP_ID>	
VESSEL IDENIFIER	REFER TO APPENDIX A4					
COUNTRY OF CHARTER	PROVIDE the Country responsible for chartering the vessel, where relevant. This only applies if the vessel has been chartered according to the requirements under WCFPC CMM 2012-05 – chartering notifications.	CHAR(2) ISO 3166-1 alpha-2 two-letter country code UPPER CASE	ISO 3166-1 alpha-2 two-letter country code This field must be completed if it has been listed as a chartered vessel on the WCPFC web site according to the requirements under WCFPC CMM 2012-05 – chartering notifications.	CS	<CHARTER>	Y
AGENT FOR UNLOADING	PROVIDE the name of the Agent for the Unloading	CHAR(50)	Where possible, link this field to a reference table of authorised Agents for unloading. (referential integrity)	AN	<AGENT>	N
TRIP NUMBER	PROVIDE the trip number undertaken by this vessel for the year. Trip number is sequential, starting at 1 for first trip of the year for each vessel.	INTEGER(2)		TN	<TRIPNO>	N
PRIMARY TARGET SPECIES	PROVIDE the Primary Target species for this trip	CHAR(3)	REFER TO APPENDIX A7	DC	<SP_CODE_TARGET>	N
PORT OF DEPARTURE	PROVIDE the Port of Departure	CHAR(5) UN/LOCODE UPPERCASE	REFER TO APPENDIX A3	PE	<PORTDEPART>	Y
PLACE OF UNLOADING / TRANSHIPPMENT AT SEA	PROVIDE the Port of Return for Unloading or indicate TRANSHIPMENT AT SEA	CHAR(5) UN/LOCODE UPPERCASE	REFER TO APPENDIX A3	PO	<PORTUNLOAD>	Y

LL_TRIP

"The start of a trip is defined to occur when a vessel (a) leaves port after unloading part or all of the catch to transit to a fishing area or (b) recommences fishing operations or transits to a fishing area after transshipping part or all of the catch at sea (when this occurs in accordance with the terms and conditions of article 4 of Annex III of the Convention, subject to specific exemptions as per article 29 of the Convention)."

FIELD	Data Collection Instructions	Field format notes	Validation rules	NAF CODE	XML TAG	WCPFC FIELD
DATE and TIME OF DEPARTURE	PROVIDE the GMT/UTC DATE and TIME of departure for this trip	REFER TO APPENDIX A1	REFER TO APPENDIX A1	SD ST	<DATEDEPART>	Y
DATE AND TIME OF ARRIVAL IN PORT / TRANSHIPMENT AT SEA	PROVIDE the GMT/UTC DATE and TIME of arrival back in port for this trip or indicate DATE for the TRANSHIPMENT AT SEA	REFER TO APPENDIX A1	REFER TO APPENDIX A1	ED ET	<DATEARRIVAL>	Y

2.3 LICENSE/PERMIT DATA

LICENSE PROVIDE each LICENSE/PERMIT that the vessel holds for the period of the trip.						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE				<TRIP_ID>	
FISHING PERMIT/LICENSE NUMBERS	PROVIDE License/Permit number that the vessel holds for the period of the TRIP.	CHAR(40) UPPER CASE	Where possible, include validation to ensure the Permit format relevant to the agreement (national or sub-regional) complies to the required format.	LC	<LICENSE_NO>	N

2.4 LL ACTIVITY/SET DATA

LL_ACTIVITY PROVIDE the following information on EACH FISHING SET; if there was no fishing set on that day, provide information on the MAIN ACTIVITY FOR THAT DAY AT SEA						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE		Link to TRIP information		<TRIP_ID>	
ACTIVITY IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY				<ACTIVITY_ID>	
ACTIVITY DATE/TIME	PROVIDE the NOON DATE/TIME for each day that the vessel is at sea when a set was not made on that day, OR the START DATE/TIME of the SET	REFER TO APPENDIX A1	Expect to be automatically integrated/generated with GPS DEVICE	DA	<ACT_DATE>	Y
ACTIVITY	PROVIDE the ACTIVITY CODE	NUMBER(2)	REFER TO APPENDIX A5	AT	<L_ACT_ID>	Y
LATITUDE	PROVIDE the LATITUDE position when the ACTIVITY started	REFER TO APPENDIX A2	Expect to be automatically integrated/generated with GPS DEVICE Check of position relative to previous position and whether it is realistic to have travelled that distance in the allotted time.	LT	<LAT> <LATH>	Y
LONGITUDE	PROVIDE the LONGITUDE position when the ACTIVITY started	REFER TO APPENDIX A2	Expect to be automatically integrated/generated with GPS DEVICE Check of position relative to previous position and whether it is realistic to have travelled that distance in the allotted time.	LG	<LON> <LONH>	Y
HOOKS BETWEEN FLOATS	PROVIDE the HOOKS BETWEEN FLOATS (synonymous to BRANCHLINES between FLOATS) for this set	NUMBER(2)	The code must be within the valid range. Only relevant with ACTIVITY = "1 – FISHING SET"	SA	<HK_BTWN_FLT>	Y
HOOKS	PROVIDE the total number of HOOKs set	NUMBER(4)	The code must be within the valid range (e.g. < 5,000 hooks). Only relevant with ACTIVITY = "1 – FISHING SET"	SA	<HOOKS>	Y

2.5 LL CATCH DATA

LL_CATCH PROVIDE information on each species catch from a SET						
FIELD	**Data Collection Instructions**	**Field format notes**	**Validation rules**	**NAF CODE**	**XML TAG**	**WCPFC FIELD**
TRIP IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE		Link to TRIP information		<TRIP_ID>	
ACTIVITY IDENTIFIER	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY		Link to ACTIVITY (SET)		<ACTIVITY_ID>	
SPECIES CODE	For each species taken in the set, PROVIDE the SPECIES CODE according to the FAO standard species code list	CHAR(3) UPPER CASE	REFER TO APPENDIX 8.	DC	<SP_CODE_RET>	Y
RETAINED NUMBER	PROVIDE the NUMBER OF RETAINED FISH covering this species.	INTEGER(6)	Validate that it is within the acceptable range for this species. (Refer to the SPECIES_RANGE table provided)	DC	<SP_RET_NO>	Y
RETAINED WEIGHT	PROVIDE the RETAINED ESTIMATED WEIGHT (metric tonnes to three decimal places) for this species.	DECIMAL(6,3)	Validate that it is within the acceptable range for this species. (Refer to the SPECIES_RANGE table provided)	DC	<SP_RET_MT>	Y
DISCARDED / RELEASED NUMBER	PROVIDE the NUMBER of this species DISCARDED or RELEASED.	INTEGER(6)	Validate that it is within the acceptable range for this species. (Refer to the SPECIES_RANGE table provided)	DC	<SP_RET_NO>	Y

APPENDICES

APPENDIX A1 – DATE/TIME FORMAT

The DATE/TIME formats must adhere to the following standard:

ISO 8601 - Dates and times format – both local and UTC dates

[YYYY]-[MM]-[DD]T[HH]:[MM]Z for fields designated as UTC date/time

[YYYY]-[MM]-[DD]T[HH]:[MM] for fields designated as LOCAL date/time

APPENDIX A2 – POSITION/COORDINATE FORMAT

The Latitude and Longitude coordinates must adhere to the ISO 6709 – Positions
Degrees and minutes to 3 decimal places

LATITUDE	+/- DDMM.MMM
LONGITUDE	+/- DDDMM.MMM

APPENDIX A3 – PORT LOCATION CODES

The PORT LOCATION Codes must adhere to the UN/LOCODE standard UPPERCASE CHAR(5)
United Nations - Code for Trade and Transport Locations (UN/LOCODE) – see
http://www.unece.org/cefact/locode/service/location

APPENDIX A4 – VESSEL IDENTIFICATION

The attributes to be provided for the VESSEL needs to be consistent with several VESSEL registers at the global and regional level. The most important are the proposed IMO/UVI standard vessel identifier (UVI), the WCPFC vessel register and the FFA Vessel register.

FIELD	Data Collection Instructions	Field format notes	Validation rules	XML TAG	WCPFC FIELD
VESSEL NAME	PROVIDE the VESSEL attributes which should be consistent with the attributes stored in the WCPFC and FFA Regional Vessel Registers	CHAR(30) UPPER CASE	Must be consistent with the WCPFC and FFA Vessel Registers	<VESSELNAME>	Y
COUNTRY OF VESSEL REGISTRATION		CHAR(2) ISO 3166-1 alpha-2 two-letter country code UPPER CASE	ISO 3166-1 alpha-2 two-letter country code Must be consistent with the WCPFC and FFA Vessel Registers Country of registration is distinct from the chartering nation, where relevant	<COUNTRYREG>	Y
VESSEL REGISTRATION NUMBER		CHAR(20) UPPER CASE	Must be consistent with the WCPFC and FFA Vessel Registers	<REGNO>	Y
FFA VESSEL REGISTER NUMBER		INTEGER(5)	Must be consistent with the FFA Vessel Register	<FFAVID>	N
WCPFC RFV VID		INTEGER(10)	Must be consistent with the WCPFC RFV	<WIN>	Y
UNIVERSAL VESSEL IDENTIFIER (UVI)		INTEGER(10)	Must be consistent with the WCPFC and FFA Vessel Registers	<IMO_UVI>	N
VESSEL INTERNATIONAL CALLSIGN		CHAR(10) UPPER CASE	Must be consistent with the WCPFC and FFA Vessel Registers	<IRCS>	Y

APPENDIX A5 – PURSE SEINE OBSERVER ACTIVITY CODES

S_ACTIV_ID	Description	PURSE SEINE LOGSHEET	LONGLINE LOGSHEET	PURSE SEINE OBSERVER
1	Set	Y	Y	Y
2	Searching	Y	N	Y
3	Transit	Y	Y	Y
4	No fishing - Breakdown	Y	Y	Y
5	No fishing - Bad weather	Y	Y	Y
6	In port - please specify	Y	Y	Y
7	Net cleaning set	Y	N	Y
8	Investigate free school	Y	N	Y
9	Investigate floating object	Y	N	Y
10	Deploy - raft, FAD or payao	Y	N	Y
11	Retrieve - raft, FAD or payao	Y	N	Y
12	No fishing - Drifting at day's end	N	N	Y
13	No fishing - Drifting with floating object	N	N	Y
14	No fishing - Other reason (specify)	N	N	Y
15	Drifting -With fish aggregating lights	N	N	Y
16	Retrieve radio buoy	N	N	Y
17	Deploy radio buoy	N	N	Y
18	Transhipping or bunkering	N	Y	Y
19	Servicing FAD or floating object	Y	N	Y
20	*Helicoptor takes off to search*	*N*	*N*	*Y*
21	*Helicopter returned from search*	*N*	*N*	*Y*

APPENDIX A6 – PURSE SEINE TUNA SCHOOL ASSOCIATION CODES

S_ACTIV_ID	Description	SCHOOL TYPE CATEGORY
1	Unassociated (free school)	UNASSOCIATED
2	Feeding on Baitfish (free school)	UNASSOCIATED
3	Drifting log, debris or dead animal	ASSOCIATED
4	Drifting raft, FAD or payao	ASSOCIATED
5	Anchored raft, FAD or payao	ASSOCIATED
6	Live whale	ASSOCIATED
7	Live whale shark	ASSOCIATED
8	Other (please specify)	
9	No tuna associated	

APPENDIX A7 – SPECIES CODES

Refer to the FAO three-letter species codes:

http://www.fao.org/fishery/collection/asfis/en

APPENDIX A8 – PURSE SEINE REASON FOR DISCARD

REASON CODE	Description
1	FISH DAMAGED / UNFIT FOR CONSUMPTION
2	VESSEL FULLY LOADED
3	GEAR FAILURE
4	NON-TARGET SPECIES
5	OTHER REASON (SPECIFY)

Attachment 4. Electronic Formatting Specifications for observer data and logbook data

These specifications describe the electronic files that CCMs must provide if they choose to choose to use electronic reporting technologies to meet the following WCPFC reporting requirements:

i. Paragraph 3 and Annex 1 of *Scientific Data to be Provided to the Commission*;
ii. *WCPFC ROP Minimum Standard Data Fields*, as amended by WCPFC11 decisions.

A) File type

The information must be provided in one of the following formats:

Microsoft Excel file ; Comma separated values (CSV) text file ; Text file (TAB delimited) ; text file (no delimiters) XML

B) File name

The name of the file must be: **XX_ DDD_ VID_DEPDATE_<Table_Name>.EXT**

- **XX** – two letter ISO country code (CMM 2014-03 Att 7) of the CCM providing the file
- **DDD** – type of report (LOG – logbook e-data and OBS – Observers e-data)
- **VID** – five digit integer assigned number for a vessels record on the WCPFC Record of Fishing Vessels (RFV) (CMM 2014-03)
- **DEPDATE** – Departure date of the Vessel trip (format YYYYMMDD)
- **<Table_Name>** – Respective (subset data) table name within this data type (refer to the relevant list of tables in the E-Reporting LOGSHEET and OBSERVER data field standards)
- **EXT** – the standard file extension (according to one of the five available formats)
  - XML
  - TXT file – COMMA delimited (CSV)
  - TXT file – TAB delimited
  - TXT file – No delimiters
  - XLS

Example : FM_OBS_35641_20140214_PS_CATCH.CSV
Represents a comma-delimited file provided by Federated States of Micronesia for an observer trip on-board the vessel identified with WCPFC RFV id as '35641' with a departure date of 14/03/2014; This file is the subset data for this trip corresponding to the PS_CATCH Table in the ER Observer data standards document

C) File content and structure

Each record in the electronic file represents a single report. Each record must have the structure specified in Attachment 3A or 3B, including the same sequence of fields.
Sample electronic reporting files with the proper formats are available from the Secretariat.

WCPFC ER and EM WG1
Nadi, 8-10 July 2015

Agenda Item 2:
Review of information/updates on applications of ER and EM technologies in WCPO

2.3: Report from Subregional Agencies:

SPC

Update on E-Reporting (vessels)

- 2 longline vessels using eTUNALOG in NC
- 3 longline vessels using eTUNALOG in CK
- Plans to conduct trials in VU, FJ, FM and FP
- PS vessels still using eTUNALOG (mostly US Treaty vessels)

eTUNALOG for LL Vessels

- Front end: Smart PDF. Back end: XML
- Ability to import into TUFMAN and TUFMAN 2
- Plans to release v1.4 with more detailed summary page

Revised March 2014

SPC / FFA REGIONAL LONGLINE LOGSHEET
(EXPANDED FORMAT)

ALL DATES AND TIMES MUST BE UTC / GMT - WEIGHTS IN KILOGRAMS
START A NEW LOGSHEET AFTER FULL OR PARTIAL UNLOADING/TRANSHIPMENT

Longline PDF v1.1

Name of Vessel	LONGLINE TEST				
Fishing Company	FISH TUNA	FFA VID	1 2 3 4 5		
Country Regist.	SOLOMON ISLANDS	UVI	12,345		
Registration No	SI12345	IRC	12345		
Permit / License	SI12345	Agent	HELP TUNA		
Port Depart	NORO	Date Depart	12-Feb-15	Time	14:45
Port Unload	NORO	Date Unload	18-Feb-15	Time	18:45
Primary Target Sp.	YELLOWFIN	Year	2 0 1 5	Trip No	1
Captain's Name	JOHN NEMO				

Send Data | Flat PDF | Print | Save

CATCH SUMMARY

MAIN SPECIES	No	Kg	Disc	CPUE
ALBACORE	55	850		17.000
BIGEYE	15	250		5.000
PACIFIC BLUEFIN				0.000
SKIPJACK	2	20		0.400
YELLOWFIN	55	850		17.000
BLACK MARLIN				0.000
BLUE MARLIN	1	200		4.000
STRIPED MARLIN				0.000
SWORDFISH	3	500		10.000
BLUESHARK			1	0.000
HAMMERHEAD SH.			1	0.000
MAKO SHARK			1	0.000
OCEAN WHITETIP			2	0.000
PORBEAGLE SHARK				0.000
SILKY SHARK			1	0.000
THRESHER SHARK				0.000
OTHER	42	405		8.100
TOTAL	173	3075	6	61.500

One page per day

<< - VESSEL TRIP + >>

Vessel	LONGLINE TEST	Reg	NC12345	FFAVID	1 2 3 4 5	Port Depart	NORO	Date Depart	10-Feb-15	Page	2 / 2

SET

DATE	ACTIVITY	LATITUDE (DDMM.MMM)	N S	LONGITUDE (DDDMM.MMM)	E W	SET START	NO. OF HOOKS SET	HOOKS BETWEEN FLOATS
10-Feb-15	1-A SET	1234.567	S	12345.678	E	14:56	2556	27
Comments ->	NEW CREW LONG TIME TO DEPLOY							

CATCH (Kg)

	ALBACORE	BIGEYE	PACIFIC BLUEFIN	SKIPJACK	YELLOWFIN	BLACK MARLIN	BLUE MARLIN	STRIPED MARLIN
NO. RET	34	10	1	5	20			
KG RET								
NO. DISC	1			2	2			

	SWORDFISH	BLUE SHARK	HAMMERHEAD SHARK	MAKO SHARK	OCEANIC WHITETIP	PORBEAGLE SHARK	SILKY SHARK	THRESHER SHARK
NO. RET								
KG RET								
NO. DISC		2		1			1	

OTHER SPECIES (click on + to add extra species, on - to delete the last one)

+ -	MAHI MAHI	WAHOO	OPAH	GREAT BARRACUDA
NO. RET	10	8	10	
KG RET				
NO. DISC				

BUTTERFLY TUNA / ESCOLAR
GREAT BARRACUD
LANCETFISH
MAHI MAHI
OILFISH
OPAH
OTHER FISH

How to download eTUNALOG

- Google search: type in eTUNALOG
- Click on the first page that is listed
- http://www.spc.int/oceanfish/en/ofpsection/data-management/spc-members/e-reporting/379-etunalog-smart-pdf-manager
- Click on 'Download eTUNALOG' blue button

Update on E-Reporting (observers)

- Since 2013, 10 observers trained in ER using TUBS
- 5 laptops equipped with TUBS
- 22 debriefed trips received at SPC
- Consider Electronic Journal and Trip Report writing

Update on E-Reporting Officers

- MH (September 2014)
  - Coordinating TUBS trials, eTUNALOG trials (LL and PS)
  - Coordinating FIMS trials (observers)
- CK (February 2015)
  - Coordinating LL eTUNALOG trials
- FM (April 2015)
  - Coordinating TUBS trials
  - Coordinating FIMS trials (observers)

Update on E-Monitoring

- 2014: Two vessel trial in SB
  - In process of conducting comparative analysis between EM and on-board observer data
- 2015: Single vessel trial launched in NC
- Plan: Review of EM technology offered by technical service providers

Electronic Monitoring: New Caledonia

Project partners

- Direction des Affaires Maritimes de la Nouvelle-Calédonie – service de la pêche et de l'environnement marin (DAM-SPE)
- Secretariat of the Pacific Community – Oceanic Fisheries Programme (SPC-OFP)
- L'ADECAL Technopôle
- Fishing company BABY BLUE
- EM technical service provider SATLINK

Project objectives

- To determine whether EM can be used to accurately observe the effort and catch activities, after the trip has been completed.
- Provide data that can be used in the same way as those collected by on-board observers.
- The project will run for one year. EM equipment could potentially be fitted onboard other vessels in New Caledonia if results are satisfactory.
- This project will also serve as a lesson learned for other member countries that would like to increase their longline observer coverage.

EM equipment

- 3 High definition cameras
- VMS antennae
- Central unit with 4 hard drives and screen to relay videos

Cameras views

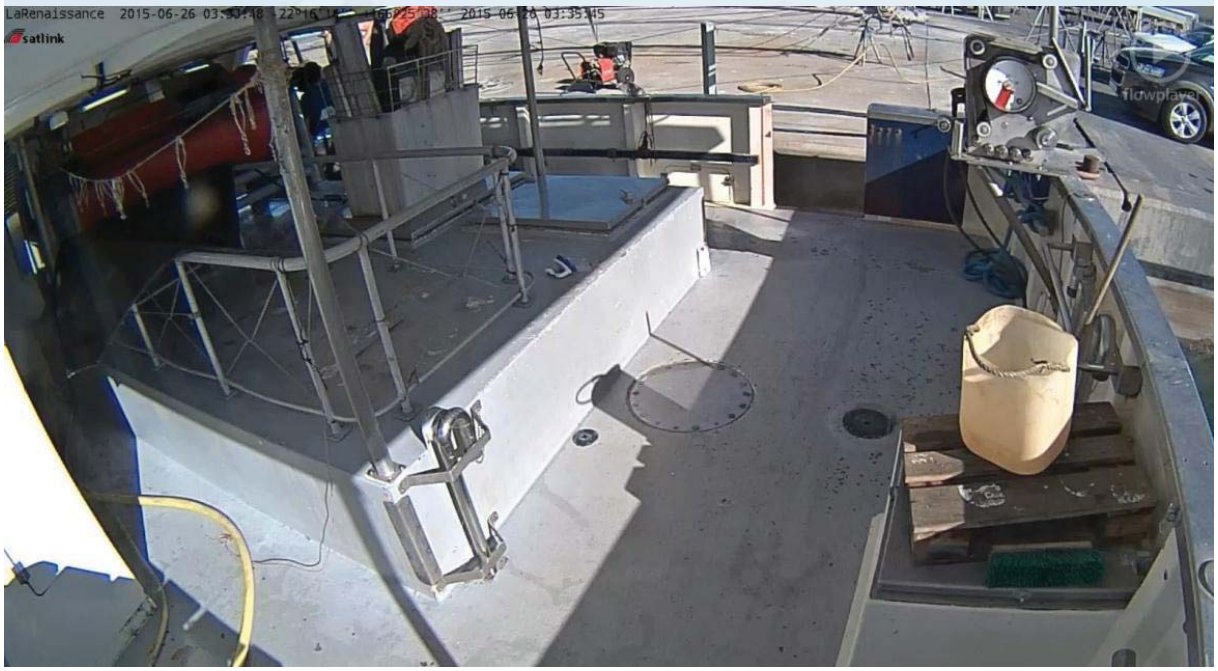
•Cam 1: Starboard outwards and forward

• Cam 3: Processing area

•Cam 2: Aft section

Observer will be able to keep count of hook and float numbers as they are hauled.

Observer will be able to identify bait species and count amount used. Shooter speed can be determined using specialised software.



Precise fish size measurements will be achievable from this camera angle

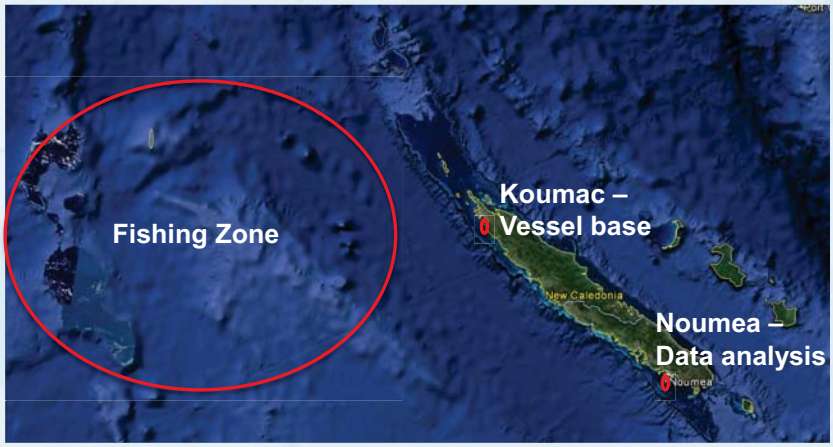
Project schedule

- **July 2015:**
  - EM equipment installed on vessel and office observer trained
- **February 2016**:
  - Audit from Satlink on data analysis centre
- **April 2016:**
  - Begin writing final report
- **July 2016:**
  - End of pilot project
- **August 2016**:
  - Report to stakeholders and decision makers

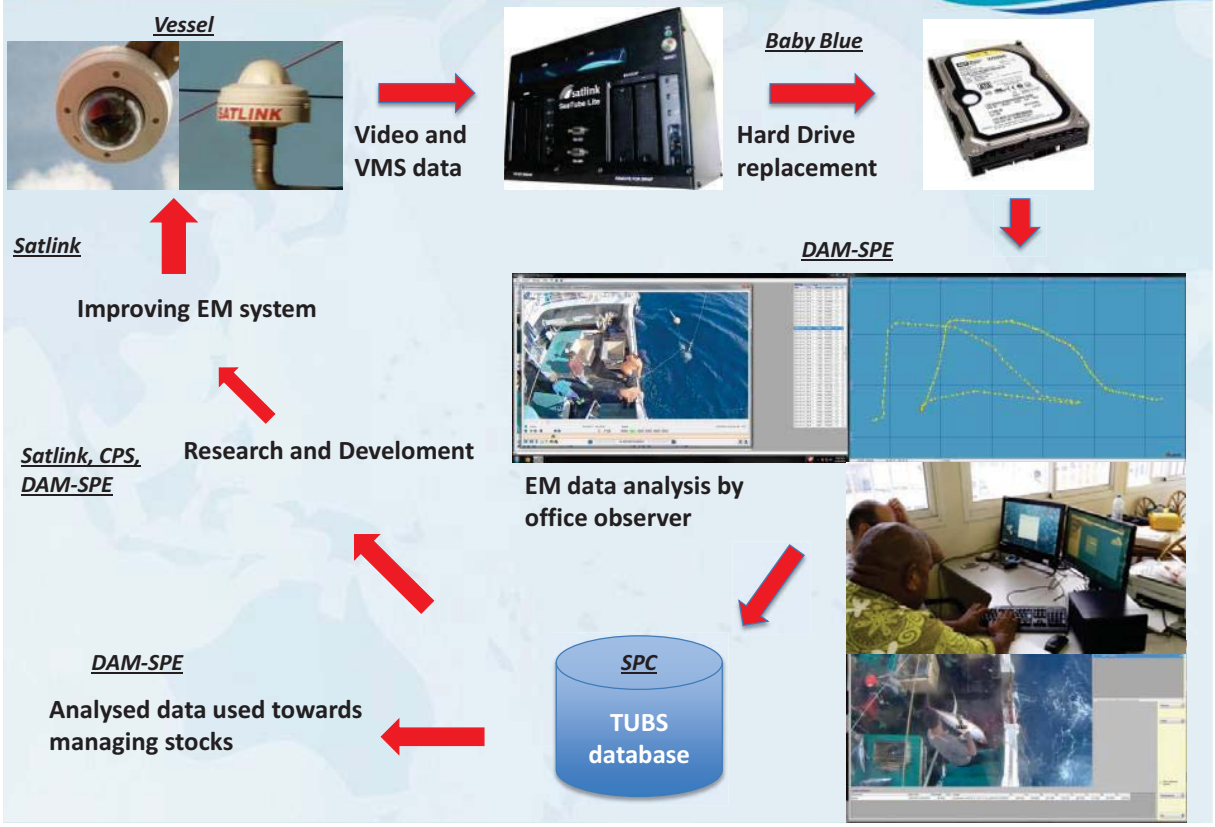
Project management

- A steering committee including representatives from each party will maintain weekly communications and will meet every two months.

- Two project coordinators (DAM and SPC) will meet every two weeks with the office observer to plan and supervise EM data analysis.



Summary



Thank you

For further information please contact: .

- Mr Malo Hosken, Regional E-Reporting Coordinator for the Oceanic Fisheries Programme at SPC. E-mail : maloh@spc.int – Tel : 26 20 00