SCIENTIFIC COMMITTEE
TWELFTH REGULAR SESSION

Bali, Indonesia
3–11 August 2016

SCIENTIFIC DATA AVAILABLE TO THE WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION

WCPFC-SC12-2016/ST WP-1(rev. 1)

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Revision 1.

- Update Table 7 to include provision of 2015 size data for El Salvador purse seine fleet

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ABSTRACT

This paper reports on the major developments over the past year with regard to filling gaps in the provision of scientific data to the Commission.

The review of gaps in 2014 and 2015 scientific data provisions includes the assignment of a tier-scoring evaluation level, as recommended by WCPFC11, and an overall evaluation of the submission of scientific data, as recommended by WCPFC12. Some categories of the main data gaps have not changed over the last year and readers have therefore been referred to the relevant sections in last year's data gaps paper. An update on recent developments with the provision of operational data and issues with key shark species reporting is provided.

Three CCMs with fleets active in the WCPFC Convention Area had not provided 2015 annual catch estimates by deadline of the 30th April 2016 but these have now been provided. The issues previously reported in annual catch estimates have further reduced and the lack of any estimates for key shark species remains the main gap for certain CCMs.

The timeliness of the provision of aggregate catch/effort data continues to improve with nearly all CCMs providing data by the deadline of 30th April 2016. The quality of aggregate data provided also continues to improve with a reduction in the number of data-gap notes assigned to the aggregate data in recent years.

The main developments in the resolution of operational data gaps over the past year were the provision of 2015 operational data for the Japan tuna fleets (longline, pole-and-line and purse seine) for the first time, the improved coverage of operational data (2015) provided for the China tuna fleets (longline and purse seine) and the continued provision of operational data (2015) for the Korean tuna fleets (longline and purse seine).

The UNDP-funded Sustainable Management of Highly Migratory Fish Stocks in the West Pacific and East Asian Seas (WPEA–SM) project now provides WCPFC technical assistance to the Philippines, Indonesia and Vietnam to, *inter alia*, improve monitoring and data management of their domestic fisheries through to the end of 2017. There has been good progress in the collection and provision of data from each of these countries in recent years and the paper also lists some of the challenges that remain.

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1. INTRODUCTION

1. The obligations for provision of scientific data to the Commission are set out in the Scientific Committee (SC) documentation "*Scientific Data to be Provided to the Commission*" and "*Standards for the Provision of Operational Catch and Effort Data to the Commission*" (Anon. 2005a, Annex VII) which were adopted by the Western and Central Pacific Fisheries Commission (WCPFC) at its second session in December 2005 (Anon. 2005b, par. 25). The "*Standards for the Provision of Operational Catch and Effort Data to the Commission*" were incorporated as ANNEX 1 of "*Scientific Data to be Provided to the Commission*" which was further refined and subsequently adopted at the Fourth Regular Session of the Commission, Tumon, Guam, USA, 2-7 December 2007 (Anon, 2007). The most recent revisions (covering the inclusion of catch estimates of key shark species and specifying the size class intervals for size data) were adopted at the Seventh Regular Session of the Commission (WCPFC7), Honolulu, Hawaii, 6–10 December 2011 (Anon. 2011), the Ninth Regular Session of the Commission (WCPFC9), Manila, Philippines, 6–10 December 2012 (Anon. 2012) and the Tenth Regular Session of the Commission (WCPFC10), Cairns, Australia 2–6 December 2013 (Anon. 2013), and can be found at http://www.wcpfc.int/guidelines-procedures-and-regulations, or more specifically at http://www.wcpfc.int/doc/data-01/scientific-data-be-provided-commission-revised-wcpfc4-6-7-and-9.

2. As specified in the recommendations for the provision of data, the SPC Oceanic Fisheries Programme (OFP), which has been engaged by the Commission to provide scientific services (including the collection, compilation and dissemination of fisheries data) under Article 13 of the Convention, has compiled annual catch estimates, operational (logsheet or logbook) catch and effort data, aggregated catch and effort data, and size composition data on behalf of the Commission. In conducting scientific research and analyses in support of the work of the Commission, the OFP has also compiled other types of data, such as reports of unloadings, observer data, port sampling data, tagging data, oceanographic data and various types of biological data.

3. While the catch, effort and size composition data currently available are extensive, there are important gaps. The purpose of this paper is to review recent developments concerning the compilation of data by the OFP, on behalf of the Commission, particularly in regard to these important data gaps.

4. The WCPFC Data Catalogue has been updated on the WCPFC web site (http://www.wcpfc.int/wcpfc-data-catalogue-0) to cover the 2015 data provisions. This facility provides a description of the WCPFC data holdings by gear, species and data type (annual catch estimates, aggregate catch and effort data, operational catch/effort data and aggregated size data).

5. The Tenth meeting of the Technical and Compliance Committee of the WCPFC (TCC10 – Pohnpei, Sept. 2014) reviewed a request to consider a tiered-scoring system to better reflect the magnitude and severity of the implications of the lack of scientific data provisions, and directed the SPC to produce an outline of how this system might work:

> ***"Para. 256. TCC10 requested SPC to develop a working paper on tiered scoring system to reflect the magnitude of implications of data gaps and report back to WCPFC11." (Anon., 2014a)***

6. A paper by SPC on a proposed tier-scoring system was considered at WCPFC11 and the SPC was directed by WCPFC11 (Anon, 2014b) to consider this system for the data gaps paper prepared for SC11 (see Williams, 2015). The ANNEX of this paper briefly outlines the methodology for undertaking the tier-scoring evaluation of the 2014 and 2015 scientific data submissions by CCMs, which has been included in the tables of this paper.

7. SC11 (Anon, 2015a) and TCC11 (Anon, 2015b) noted the usefulness of the tier-scoring evaluation for the submission of scientific data and recommended this process continue, acknowledging there may be further refinements as required. For example, the following TCC11 recommendation has been addressed through Table 8 in this paper.

> ***Para. 388. TCC11 recommends that WCPFC12 tasks SPC to further refine the tier scoring system to provide, among other things, an indicator of compliance of CCMs as a whole with provision of scientific data.***

2. STATUS OF DATA GAPS

8. Data gaps and other issues related to the provision of data have been reported at SC1 (Williams and Lawson, 2005), SC2 (OFP, 2006), SC3 (OFP, 2007), SC4 (OFP, 2008), SC5 (OFP, 2009), SC6 (Williams, 2010), SC7 (Williams, 2011), SC8 (Williams, 2012), SC9 (Williams, 2013), SC10 (Williams, 2014) and SC11 (Williams, 2015).

9. The following sections describe the most important current gaps in the WCPFC scientific data holdings. The text in *blue italics* reflects the recent work and/or developments to resolve the respective data gaps.

10. Readers are referred to previous versions of this paper for more detail on important categories of data gaps where there have not been any significant developments over the past year. These sections will continue to be referenced in future versions of this paper when there are significant developments and until they are resolved. Please refer to the following issues:

- Major data gaps for key fleets (Williams, 2014 – Section 2.1.4)
  - Chinese Taipei STLL fleet prior to 2004
  - Japanese pole-and-line fleet prior to 1972
  - Japanese Coastal longline fleet prior to 1994
- Coverage rates (Williams, 2014 – Section 2.2)
- Nationality of the catch (Williams, 2014 – Section 2.3)
- Aggregate catch and effort data (Williams, 2014 – Section 2.6)
- Species composition data for purse seiners (Williams, 2014 – Section 2.8 and Hampton & Williams, 2016)
- Annual catch estimates by EEZ (Williams, 2015 – Section 2.3)
- Number of vessels in the aggregate data (Williams, 2015 – Section 2.4)

2.1 Major data gaps for key fleets

2.1.1 Philippines tuna fishery data

11. During the past year, the WCPFC Secretariat and the SPC/OFP continued to work with their Philippine counterparts to improve the data available from the Philippines domestic fisheries. The UNDP-funded Sustainable Management of Highly Migratory Fish Stocks in the West Pacific and East Asian Seas (WPEA–SM[2]) project has provided support for this work since 2015 after the first WPEA-OFM[3] project terminated (in 2014). Significant progress has been made over the past 5 years with several important data gaps resolved.

12. Significant developments in resolving data gaps in the Philippines' domestic fisheries over the past year include:

- *The Ninth Philippines Annual Catch Estimates Review Workshop was convened and attended by important stakeholders with knowledge and information on the tuna fisheries in the Philippines (government, industry and NGOs).*
- *The Philippines government committed funds to significantly increase the monitoring of landings from their domestic tuna fisheries in 2014 and 2015. The Seventh National Stock Assessment Project (NSAP) Data Review Workshop reviewed the data collected and estimates produced from each region in the Philippines and noted that in several regions, all landing sites servicing the landings of oceanic tuna were now covered and so contributed to more accurate estimates, and a useful comparison to estimates produced from previous years when coverage was lower. The substantial increase in data is the focus of a study by Philippines University statisticians to determine the optimal coverage of sampling to implement in the future.*

[2] Refer to http://www.wcpfc.int/doc/wpea-sm-project-document
[3] Refer to http://www.wcpfc.int/doc/2009/wpea-ofm-project-document

- *The coverage of logbook and observer data collected for the component of the Philippines domestic purse seine fleet fishing in the High Seas Pocket #1 was 100% for 2015, as was the case in recent years. For the first time, complete E-Reported logbook data were provided for this fishery covering 2015 activities.*

13. The Philippines have enhanced the monitoring of their complex and diverse domestic fisheries significantly over the past 5–10 years, with most of the important data gaps now resolved. Areas that need further attention in the future include:

i. Improving logsheet coverage for the purse seine vessels fishing in the Philippines EEZ;
ii. More reliable estimates for the small-scale municipal gears;
iii. A better understanding of the extent of catches from the handline fisheries targeting large yellowfin tuna in some regions.

2.1.2 Indonesian tuna fishery data

14. Prior to the WPEA–OFM and WPEA–SM projects, the absence of a breakdown of annual catch estimates by gear type, the lack of operational logsheet and size data for the Indonesian domestic fisheries were amongst the most significant gaps in the provision of data to the WCPFC, but these projects have assisted Indonesia make significant progress in resolving at least two of these data gaps: the regular submission of size data and the provision of annual catch estimates by gear and species.

15. During the past year, the WCPFC Secretariat and the SPC/OFP continued to work with their Indonesian counterparts to improve the data available from these fisheries. Significant developments in the past year include:

- *The Seventh Indonesia/WPCFC Area Annual Catch Estimates Review Workshop was conducted in Bogor, Indonesia in June 2016. Participants included the Directorate General of Capture Fisheries and the Center for Fisheries Research and Development (CFRD). 2015 catch estimates by SPECIES and GEAR were compiled for the EEZ and archipelagic waters and historical estimates by GEAR and SPECIES were reviewed and refined. For the first time, participation at this workshop was extended to NGOs, industry and other relevant stakeholders of their domestic tuna fisheries and their presentations and input were acknowledged to have been very useful to the catch estimates process;*
- *This workshop noted the progress with the implementation of national logbook data collection system and that nearly 5,000 logsheets had been submitted for 2015 covering the longline, pole-and-line and purse seine fisheries in their national waters overlapping the WCPFC Area. Submission of logbook (operational data) to the WCPFC is currently pending resolution of issues in quality of the data, but also national legislation related to data ownership which are the main issues currently preventing Indonesia from submitting these data to the WCPFC*
- *The Fourth Indonesia/WCPFC Port Sampling data review workshop was held in Bitung in March 2016. This workshop reviewed port sampling protocols and the data collected over the years 2013–2015, including a review of sampling at new ports (Sorong and Majene). The time series of size data from the Indonesian fisheries is now more than 5 years.*

16. The most important areas for progress with catch estimates and data within Indonesia include:

i. The need for more comprehensive review and consolidation of data from all potential sources in the catch estimation process (including industry and NGO data) which would help, *inter alia*, explain the trends in catches by gear;
ii. Compilation and submission of available aggregate and operational catch/effort data for recent years since the logbooks became mandatory in the Indonesian domestic tuna fisheries (2011-2015), although this is acknowledged as a long term goal (in line with the conditions stated under the WCPFC CMM 2014-01).

2.1.3 Vietnamese tuna fishery data

17. Prior to the WPEA–OFM and the WPEA-SM projects, there were no annual catch estimates, no operational and no aggregated catch and effort data data available from Vietnam tuna fisheries, other than anecdotal information on catches (e.g. Lewis, 2005). Since the establishment of the two WPEA projects, there has been considerable progress in Vietnam to establish data collection and management systems for their tuna fisheries and it has ultimately resulted in the submission of, *inter alia*, annual catch estimates to the WCPFC over the past four years.

18. The fifth Vietnam Annual catch estimates workshop was conducted in June 2016 with a focus on reviewing data collected in the Vietnam tuna fisheries over recent years and the production of estimates for 2015 for their three tuna fisheries (longline/handline, gillnet and purse seine). The workshop received the news that Vietnam has recently committed to the long-term support of port monitoring in their tuna fisheries beyond the current WPEA-SM project; a review will be conducted in the coming months, the findings of which will elaborate on the data collection system to be used.

19. Operational logbook and size data continue to be collected from Vietnam tuna fisheries with coverage improving each year. These data are fundamental to the production of accurate annual catch estimates and are also available to the WCPFC Science service provider for stock assessments. However, at this stage, Vietnam has yet to authorise the inclusion of these data into the WCPFC data holdings.

20. Significant progress has been made in a short period but there remain several challenges for Vietnam in the monitoring and data management areas, including:

i. enhancing the coverage of the establishment of logbook and port sampling data collection for their longline, purse seine and gillnet fisheries;
ii. the compilation and provision of aggregate and operational catch/effort data from the longline fishery from logbooks collected since 2011;
iii. a formal decision on their database system to manage their tuna fisheries data and resources required;
iv. a sustainable observer programme;
v. a review of data collection forms to consider, *inter alia*, inclusion of the WCPFC key shark species where relevant.

2.2 Operational catch and effort data

21. Significant progress has been made with the provision of historical operational data over the past few years (see Section 3.3 below and Tables 5 and 6 in this paper, and previous versions of this paper). Significant developments over the past two years include:

- *Provision of operational data for the Japan Longline, Pole-and-line and Purse seine fleets for 2015. These operational data have been provided according to CMM 2014-1, paragraphs 56-60 and cover the WCFPC Area south of 20°N (100% coverage), with aggregated data (year, month, 1°x1°) provided for these gears for the WCPFC Area north of 20°N;*
- *Provision of operational data (100% coverage) for the Korean Longline and Purse seine fleets for 2014 and 2015;*
- *Provision of operational data for the China Longline fleet for 2014 and 2015 and for the China purse seine fleet in 2015. The longline operational data for 2014 represented very low coverage, but the data provided for 2015 are an improvement on the level of coverage of 2014 data (2015 purse seine coverage is 100% and 2015 longline data coverage is around 15%).*

22. The operational catch and effort data for the Japanese longline, pole-and-line and purse seine fleets (2015) and the China longline fleets (2014) were made available for the first time, and were by far the most significant developments in resolving data gaps over the past year. The intent in providing these data is very positive and we look forward to the provision of historical operational data for these fleets in the future (to resolve the gap in historical data provision). Chinese Taipei has yet to provide operational catch/effort data

to the WCPFC, but we understand that operational data will be provided at the latest by 2018 under the conditions of CMM 2014-01.

23. For the countries yet to provide **historical** operational data to the WCPFC, the recent initiative whereby the WCPFC scientific service providers had access to operational data in a collaborative study (see OFP, 2015a and OFP, 2015b) was acknowledged as a good interim arrangement until such time as the complete historical data can be provided on a permanent basis to satisfy the wide range of Commission work, noting that this submission is a member country reporting obligation. In the short term, therefore, an extension of this arrangement to access all historical data needs to be formalized as soon as possible to ensure this important work can continue.

2.3 Key shark species

24. The requirement to submit annual catch estimates, aggregate and operational catch data for key shark species has now been in force for several years and the quality and coverage of data continues to improve as the implementation of logbooks catering for this level of reporting is well advanced and CCMs are better equipped at collecting and managing these data.

25. However, there remain gaps in the submission of key shark species catch data and the following highlight some procedural matters for consideration:

- A number of coastal states have now implemented the new, extended longline logbooks which require foreign and domestic fleets fishing in their waters to report catches of shark to the species level; the implementation of logbooks by flag states on distant-water longline vessels has also been reported. While catches for shark species continue to improve there is some concern that catches may be non- or under-reported and more in-depth review/investigation is required to determine the extent of issues and the quality of the catch estimates provided. Most CCMs now submit catch for all key shark species, including legitimate instances when there was no catch of a key shark species by their fleet. In the first year of submissions (2012), it was obvious where catch was under-reported for a key shark species in some cases, but this exercise was a qualitative evaluation when a more stringent evaluation is required, although this level of evaluation is currently beyond the scope of the data-gaps review process;
- Some CCMs have indicated that, since there is a requirement for 100% observer coverage in the purse seine fishery, the annual catch estimates and aggregate/operational catch data for key shark species should be determined from the observer data. In these cases, no data gap has been assigned;
- Some CCMs have indicated that the WCFPC science and data service provider should use available observer and logbook data to provide a better estimate the catches of key shark species for their LONGLINE fleet. This work has been conducted in the past, but needs to be recognized as an ongoing task of the service provider.

26. Improvements to the shark reporting and data gap assessment processes for key shark species were suggested in Clarke et al. (2015), and while the proposals were acknowledged to be useful, they did not result in a SC11 recommendation. Nonetheless, at least one of the proposals in this paper have been progressed over the past year:

- *Several CCMs have reported the catch of mako and thresher shark to the species level in their scientific data submission. The WCPFC operational catch/effort database has been modified to store the catches of these shark species and the WCPFC aggregate database will be updated to store the catches of these shark species in the future.*

27. Further enhancements to the shark reporting and data gap assessment processes can be considered over the longer term, dependent on direction from the SC and available resources to undertake the additional work. This work might include, for example, a separate Data and Statistics Theme information paper providing a more detailed review of the data submissions that were outlined in some of the proposals in Clarke et al. (2015), but also extending to other key species. Alternatively, SC may decide that a more detailed review of data available for science is best included in the respective key species stock assessment papers.

3. RECENT PROVISIONS OF SCIENTIFIC DATA TO THE WCPFC

28. Under the policy for the provision of data to the Commission, annual catch estimates and aggregated catch and effort data must be provided by 30 April of the following year (see "Reporting obligations" at the following web page http://www.wcpfc.int/status-data-provision).

29. As noted in the introduction, the tables of data submission presented herein include a column with a "tier-scoring evaluation score" which will be referred to under the WCPFC compliance monitoring process and reviewed at TCC12 (September 2016).

3.1 Annual Catch Estimates

30. Tables 1 and 2 list the dates on which catch estimates for 2014 and 2015, respectively, were provided, and include notes on the data that have been provided, mainly highlighting gaps or problems in those data (4th column), general notes on the data provided (5th column), and an indicator for the tier-scoring evaluation level (6th column).

31. Annual catch estimates for 2014 have been provided by all CCMs (although, we are seeking clarification on whether the sole Belize longline vessel was active during this year). Annual catch estimates for 2015 have been provided by all CCMs with fleets active in that year.

32. For both 2014 and 2015, Twenty-six (26) out of the twenty-nine (29) active CCM fleets (93%) had provided annual catch estimates by the respective deadlines (30 April 2015 and 30 April 2016). Indonesia and Vietnam schedule their annual catch estimates workshops after the submission deadline (e.g. in June 2016 for 2015 data) so the submission of their estimates is typically delayed but satisfied nonetheless. The delay in provision of data from Ecuador was related to disruptions in their offices caused by a natural disaster in their country. Revisions to annual catch estimates were also received from other CCMs prior to July 2016, and we expect further revisions to be included in the WCFPC Part 1 Annual Reports.

33. The quality of estimates provided continues to improve with further reduction in the number of data-gap notes. For the 2015 estimates, the remaining data gap is the lack of estimates of any key shark species for the Indonesian and Vietnamese domestic fisheries, although it is acknowledged that the establishment of tuna fisheries data collection systems in these countries is in its infancy.

3.2 Aggregate Catch/Effort data

34. Tables 3 and 4 list the dates on which aggregated catch and effort data were provided for 2014 and 2015, respectively. The notes in the 4th column of the table refer to instances where the data provided do not satisfy criteria specified in the guidelines for the provision of Scientific Data to the WCPFC, general notes on the data are provided in the 5th column (these notes are not data gap issues but are informative) and an indicator for the tier-scoring evaluation level in the 6th column.

35. Pacific Island countries provide operational catch/effort (logsheet) data [which are aggregated by the OFP] on a regular basis and their provisions of aggregate catch/effort data have therefore been flagged as being provided on the deadline (30 April 2016) since they were available at that time.

36. Notable issues in aggregate catch/effort data that have been resolved in recent years include:

- *China are now providing operational catch/effort data which has automatically resolved several issues in their aggregate catch/effort data submission;*
- *The general improvement with the inclusion of key shark species catches in the aggregate data submissions;*
- *The EU-Portugal longline fleet is now providing catch in number in their operational data, automatically satisfying this requirement in their aggregate catch/effort data submission.*

37. The main gap in the provision of 2015 aggregate catch/effort data is for the commercial domestic Indonesian (longline, purse seine and pole-and-line) fleets. Logsheet data for these fleets have been collected but there needs to be some resolution on domestic constraints before these can be provided.

38. The timeliness of the provision of aggregate catch/effort data continues to improve with nearly all CCMs providing data by the deadline of 30th April 2016. The quality of aggregate data provided continues to improve with a reduction in the number of notes assigned to the aggregate data in recent years.

3.3 Operational catch/effort data

39. Tables 5 and 6 show the schedule for the submissions of 2014 and 2015 operational catch and effort data to the WCFPC, respectively. The difficulties in implementing logbook programs for small-scale fisheries is acknowledged and indicated in these tables. The data gaps in 2015 include:

- The lack of catch in number information for the EU-Spain longline fleet;
- The absence of data for the Indonesian fleets (refer to Para 39 above);
- The low coverage in the data provided for the China longline, Solomon Islands longline and Vietnam fleets.

40. Recent developments with regards to the status of the provisions of **historical** operational data to the WCPFC is as follows:

- *Operational catch and effort data for the US Hawaii and American Samoa permitted longline fleets have been provided to the WCPFC for 2007-2015; Data prior to 2007 have been provided to SPC to contribute to the stock assessments undertaken on behalf of the WCPFC and for a study related to data reconciliation of SPC and NOAA data holdings;*
- *Nearly all CCMs have now modified data collection systems and are including a breakdown of the catch (and where relevant, the release) of the key shark species in their operational data submissions.*

41. Good progress continues to be made in resolving data gaps in the provision of operational catch and effort data to the WCPFC, particularly with the submission of operational data for recent years from China, Japan and Korea (see Section 2.2 above). The provision of **historical** operational data for the Asian tuna fleets (China, Indonesia, Japan, Korea and Chinese Taipei) remain the main data gaps and it is hoped that these data can be provided at some stage.

3.4 Size data

42. Table 7 shows the schedule for the submissions of 2015 size data to the WCFPC. The notes in the 4th column of the table refer to instances where the data provided do not satisfy criteria specified in the guidelines for the provision of Scientific Data to the WCPFC, general notes on the data are provided in the 5th column (these notes are not data gap issues but are informative), and an indicator for the tier-scoring evaluation level in the 6th column. The gaps in the provision of 2015 size data include instances where size data have been collected and made available for the fleet by Coastal states but not the flag state.

3.5 Overall scientific data submission evaluation

43. Table 8 provides an overall evaluation of each CCM's submission of scientific data to the WCPFC by consolidating the tier-scoring evaluations for each data type (see ANNEX for further information), as requested by TCC11:

> ***Para. 388. TCC11 recommends that WCPFC12 tasks SPC to further refine the tier scoring system to provide, among other things, an indicator of compliance of CCMs as a whole with provision of scientific data.***

44. For the submission of 2015 data, 25 of the 34 CCMs/entities (74%) were evaluated as completely satisfying (100%) the **binding** requirements for the provision of scientific data to the WCPFC. Of the nine (9) CCMs that did not achieve 100%, only one CCM (Indonesia) was below 75%, acknowledging that the establishment of their tuna fisheries data collection system is in its infancy and there are national legislation issues to resolve before data can be provided.

3.6 Regional Observer Programme (ROP) data

45. The SPC/OFP has been processing observer data on behalf of their member countries for close to 20 years and the Seventh Regular Session of the Commission (6–10 December 2011) approved the continuation of this work in respect of the Regional Observer Programme (ROP) data in the short-medium term (Anon., 2012). Williams et al. (2016) describes the recent developments, future work and initiatives with respect to ROP data management and it also includes tables indicating the current coverage of available observer data.

46. The backlog in the provision of ROP data to SPC for processing has been significantly addressed and the next year should see the backlog processing completed. SPC continues to collaborate with a number of stakeholders (e.g. national fisheries authorities, FFA and the fishing industry) in undertaking trials in observer E-Reporting and E-Monitoring which has the potential for efficiency gains in the timeliness and quality of observer data.

47. Significant provisions of ROP data in the past year include –

- *A total of twenty-one (21) national and sub-regional observer programmes have contributed 2015 observer data to date;*
- *Provision of 2015 observer data from the Philippines National observer programme active on vessels permitted to fish in HSP1 (these data represent 100% observer coverage);*
- *Provision to SPC of all historical non-ROP observer data for the US Hawaii and American Samoa permitted longline fleets. While not a WCPFC data submission, these data will contribute to the stock assessments undertaken on behalf of the WCPFC and for a study related to data reconciliation of SPC and NOAA observer data holding;*
- *Provision of longline observer trips on Chinese longline vessels covering a period of 2015 (provided by China);*
- *Provision of longline observer trips on Chinese Taipei longline vessels for 2014 (provided by Chinese Taipei and adding to the data provided in previous years);*
- *Provision of Australia longline observer trips for 2015, which include, for the first time, data generated from E-Monitoring.*

4. DISSEMINATION OF DATA

4.1 Bycatch Data Exchange Protocol (BDEP)

48. The report of SC11 (Para. 669 of Anon,. 2015a) recommended:

> *...that SPC, with help from ABNJ Tuna Project:*
>
> - *develop a process to populate the [BDEP] template; and*
> - *provide the first BDEP template (for 2013-2015) to SC12 for review with ROP data subject to the WCPFC data rules.*

49. In response to this recommendation, a working paper (Williams et al., 2016b) has been prepared for SC12 and will be addressed under the Ecosystems and Bycatch Theme. This paper will propose that, in the future, the BDEP tables be published on the WCPFC web site and that any developments with the BDEP tables are addressed within this paper (i.e. the data gaps paper).

4.2 Consideration for amending the definition of WCPFC public domain data

50. In July 2015, member countries of the Inter-American Tropical Tuna Commission (IATTC) agreed to amend their data confidentiality policy and procedures[4], *inter alia*, relating to the definition of public domain data. The relevant text follows:

> ***1. Standard stratification***
>
> *Catch, effort and length-frequency data grouped by 5° longitude by 5° latitude by month for longline and 1° longitude by 1° latitude by month for surface fisheries stratified by fishing nation are considered to be in the public domain, provided that the catch of no individual vessel, company, or person can be identified within a time/area stratum. In cases when an individual vessel, company, or person can be identified, the data will be aggregated by time, area or flag to preclude such identification, and will then be in the public domain.*

51. The current definition of the WCPFC aggregated catch and effort data that can be made available in the public domain[5] requires the removal of data (often more than 50% of the data records) which reduces the usefulness of the public domain data to *bona fide* researchers. The new IATTC definition of public domain data, if adopted by the WCPFC, would improve the coverage of WCPFC public domain data since fewer data records would be removed, while still retaining the need for confidentiality related to national legislation, for example.

52. SC12 is therefore requested to consider the following draft recommendation.

> **SC12 recommends the establishment of a small working group (ideally during SC12) to consider an amendment to the WCPFC data rules to modify the definition of public domain data in line with the new definition of public domain data adopted by the IATTC. In its deliberations, the small working group should also consider proposing a clear process for how the public domain data would be constructed to provide guidance to the WCPFC Science and Data service provider. The outcomes of the small working group should then be considered by SC12 and if agreed, forwarded to TCC12 and WCPFC13 for approval.**

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[4] See AMENDMENT TO RESOLUTION C-13-05 ON DATA CONFIDENTIALITY POLICY AND PROCEDURES, at https://www.iattc.org/PDFFiles2/Resolutions/C-15-07-Amendment-Resolution-C-13-05-Confidentiality.pdf

[5] See http://www.wcpfc.int/doc/data-02/rules-and-procedures-protection-access-and-dissemination-data-compiled-commission and https://www.wcpfc.int/node/4648

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ANNEX – Notes on tier-scoring evaluation system

WCPFC11 agreed to adopt the proposal to assign a tier-scoring evaluation system for the provision of scientific data to the WCPFC which clearly distinguishes between the three levels described below.[6] The tier-scoring system developed by the WCPFC science/data service provider (SPC/OFP) is a systematic process used to evaluate scientific data submissions against the requirements in the "Scientific Data to be Provided to the Commission[7]", which attempts to provide some measure of the significance of data gaps to the scientific work of the Commission.

The tier-scoring approach ranges from "LEVEL I" which indicates the most severe gap with little or no submission of data which has by far the greatest impacts on the scientific work of the Commission , and that "LEVEL III" would indicate fully satisfying the requirements for data submission.

I. No data are provided, or data have been provided but they have been evaluated as 'unusable' (instances where none of the data provided can be used in assessments). This level of data gap is the most severe and has by far the greatest impacts on the scientific work of the Commission.
II. Data have been provided, most of which can be used for the scientific work of the Commission, but (i) there are one or several (minimum-standard) data fields not provided and/or (ii) the coverage of the data is not according to the requirements. In these cases, some of the scientific work of the Commission cannot be undertaken. Within this level, further distinction on the level of data submission could be made by considering the number of missing data fields in the data provided (for example, a status of FOUR data gaps is considered more serious than a status of ONE data gap).
III. Data have been provided, there are no gaps in the (minimum standard) data fields provided and the coverage of data is sufficient to be used for undertaking the scientific work of the Commission.

It should be noted that the tier-score evaluation should not be considered a final compliance evaluation by the Commission on data gaps. However, it is recognized that the tier-score evaluation is expected to be amongst the advice and information that will be available to the TCC for its review of compliance with "Scientific data to be Provided to the Commission" decision through the WCPFC Compliance Monitoring process.

The methodology for determining the tier-scoring evaluation score listed in relevant columns of TABLES in this paper are as follows:

1. Where data have not been provided by a CCM, then a CATEGORY I level is assigned.
2. Where data provided by a CCM is deemed complete, without any gaps in (minimum standard) data fields provided, then a CATEGORY III level is assigned.
3. Where data provided by a CCM is deemed incomplete due to some fields missing, a CATEGORY II level is assigned, and the following procedures are used:
    a. The table below lists the total number of key attributes required in the submission of each type of scientific data.

KEY Attributes in each Scientific data type for TIER-SCORING EVALUATION					
Annual catch estimates	Aggregate catch/effort data - PS/PL	Aggregate catch/effort data - LL	Operational catch/effort data - PS/PL	Operational catch/effort data - LL	Size Data
26	26	42	28	47	9

    b. For each submission of data, the number of data field gaps are summed and subtracted from the total number of required data fields (by data type and gear) to produce a tier-scored percentage index for category II. For example, if a CCM submitted aggregate longline catch/effort data but did not include the catches of two key shark species (catch in weight and number = four data field gaps), then the tier-scored percentage index would be (42-4)/42 = 90%, and the assignment would be CATEGORY II (90%).
4. The required coverage of OPERATIONAL DATA is 100% and the coverage for each CCM submission has been listed in a dedicated column for COVERAGE in Tables 5 and 6. The guidelines for the submission of scientific data indicate in section "4. Catch and effort data aggregated by time period and geographic area" that:

[6] WCPFC11 adopted the tier scoring system for evaluating compliance with the provision of scientific data to the Commission, on the understanding that TCC will keep looking at the process of refining the CMR. The tiered scoring system would be sent to the SC for its consideration.

[7] http://www.wcpfc.int/doc/data-01/scientific-data-be-provided-commission-revised-wcpfc4-6-7-and-9

If the coverage rate of the operational catch and effort data that are provided to the Commission is less than 100%, then catch and effort data aggregated by time period and geographic area that have been raised to represent the total catch and effort shall be provided.

If the coverage rate of the operational catch and effort data that are provided to the Commission is less than 100%, then catch and effort data that have been raised to represent the total catch and effort shall also be aggregated by periods of year and areas of national jurisdiction and high seas within the WCPFC Statistical Area.

The guidelines also indicate that "*It is also recognized that certain members and cooperating non-members of the Commission may have practical difficulties in compiling operational data for fleets comprised of small vessels...*"

Instances where coverage of operational data is less than 100%, but (i) annual catch/effort estimates by geographic area have been made available and together with the operational level catch and effort data that has been submitted, is sufficient to allow the scientific work of the Commission to be undertaken, or (ii) the fleets in question are acknowledged to be "artisanal" in nature, have been distinctly highlighted in Tables 5 and 6.

As recommended by TCC11 (Anon, 2015b; Para. 388), this paper attempts to provide an overall evaluation of scientific data to the WCPFC in Table 8. This evaluation only considered **binding** requirements from the "Scientific data to be provided to the Commission", and did not consider (i) coverage of data types and (ii) other non-binding requirements listed in this document. This approach is consistent with how TCC reviews and uses the tier-scored evaluation information. The method for determining the overall evaluation was to take the average evaluation of each data type submission (without weighting). In each case, the evaluation level 'III' scored 100%, the evaluation level 'I' scored 0% and the evaluation level 'II' used the respective score (%) assigned in that data type. Where a CCM had a separate evaluation by gear(s) within a particular data type, then the average evaluation across all gears for that CCM and data type was determined and used.

TABLES

Table 1. Provision of 2014 annual catches estimates to the WCPFC

COUNTRY / TERRITORY / ENTITY	GEAR(s)	Date submitted	DATA-GAP Notes	General NOTES	TIER-SCORING EVALUATION LEVEL
Australia	LL, PS, PL, HL,TR	29 Apr 2015		G, H	III
Belize	LL				I
Canada	TR	11 Apr 2015			III
China	LL, PS	30 Apr 2015	6, 12, 13		II (73%)
Cook Islands	LL, TR	20 Apr 2015		F, G, H	III
Ecuador	PS	30 Apr 2015		F	III
El Salvador	PS	18 Apr 2015			III
Federated States of Micronesia	LL, PS	20 Apr 2015		F, G, H	III
Fiji Islands	LL, PL	20 Apr 2015		F, G, H	III
French Polynesia	LL, PL, OT	20 Apr 2015		G, H	III
Indonesia	LL	26 May 2015	6, 11, 13	F	II (65%)
	PS, PL, HL, TR, OT	26 May 2015	6	F, J	II (96%)
Japan	PS, LL	27 Apr 2015	13	C	II (96%)
	PL, TR, OT	27 Apr 2015			III
Kiribati	LL, PS, OT	20 Apr 2015		G, H	III
Republic of Korea	LL, PS	30 Apr 2015		H	III
Marshall Islands	LL, PS	20 Apr 2015		F, G, H	III
New Caledonia	LL	20 Apr 2015		G, H	III
New Zealand	LL, PS, TR, PL	30 Apr 2015		G, H	III
Niue	LL	20 Apr 2015		D	III
Palau	LL, PL	20 Apr 2015		D	III
Papua New Guinea	LL, PS	20 Apr 2015		G, H	III
Philippines	PS	20 Apr 2015		F, G, H	III
	LL	20 Apr 2015		F, G	III
	HL, RN, OT	20 Apr 2015		F, J	III
EU-Portugal	LL	30 Apr 2015	13	F	II (96%)
Samoa	LL	20 Apr 2015		G, H	III
Senegal	LL	30 Apr 2015		D	III
Solomon Islands	LL	20 Apr 2015		F, H	III
	PS, PL	20 Apr 2015		H	III
EU-Spain	LL	30 Apr 2015			III
	PS	30 Apr 2015			III
Chinese Taipei	LL, PS	30 Apr 2015			III
Tokelau	OT	20 Apr 2015			III
Tonga	LL	20 Apr 2015		G, H	III
Tuvalu	LL, PS, OT	20 Apr 2015		G, H	III
United States	LL, PS, TR, HL, PL	29 Apr 2015		G, H	III
Vanuatu	LL, PS	20 Apr 2015		G, H	III
Vietnam	LL	04 Jul 2015	6, 11		II (69%)
	GN, PS	04 Jul 2015	6, 11		II (69%)
Wallis and Futuna	LL	20 Apr 2015		D	III

DATA-GAP NOTES

1	Total annual catches were provided by SPECIES, but not broken down by GEAR.
2	Marlin catch estimate not provided to the species level.
3	Coverage of data used to determine estimates not provided
4	Type(s) of data used to determine estimates not provided
5	Methods used to determine estimates not provided
6	Breakdown of active vessels by GRT size class not provided
7	Swordfish catch estimates only provided
8	Billfish catch estimates not provided for the longline gear
9	Estimates of all main tuna species not provided
10	Estimates exclude archipelagic waters catches
11	Estimates of shark catch by species have NOT been provided
12	Estimates of shark catch by SPECIES provided, but not for all KEY species taken by this fleet
13	Estimates of DISCARDs not provided
14	Estimates of ALBACORE, SWORDFISH and STRIPED MARLIN for the South Pacific Ocean have NOT been provided

GENERAL NOTES

A	Catches were estimated by the SPC/OFP while assisting with the preparation of the national fisheries report.
B	Catch estimates were taken from the national fisheries report presented at the meeting of the Scientific Committee.
C	Total annual catches can be determined by aggregating operational data that were provided on this date.
D	Fleet(s) inactive for this calendar year in the WCPFC Convention Area
E	National legislation (or policy) requires that time/area strata comprising data for less than three vessels can not be disseminated.
F	Provisional estimates initially provided, and final estimates provided prior to SC11.
G	Estimates of all KEY shark species have been provided in AGGREGATE catch/effort data, OPERATIONAL catch/effort data and/or OBSERVER data provisions
H	Estimates of DISCARDs provided in AGGREGATE catch/effort data, OPERATIONAL catch/effort data or OBSERVER data provisions
I	Pending resolution of attribution of catches according to CHARTER arrangements
J	No Discards reported - advised that full retention is assumed in these fisheries.

TIER-SCORING EVALUATION LEVEL

I	No data are provided, or data have been provided but they have been evaluated as 'unusable' (instances where none of the data provided can be used in assessments). This level of data gap is the most severe and has by far the greatest impacts on the scientific work of the Commission.
II	Data have been provided, most of which can be used for the scientific work of the Commission, but (i) there are one or several (minimum-standard) data fields not provided and/or (ii) the coverage of the data is not according to the requirements. In these cases, some of the scientific work of the Commission cannot be undertaken. The % value assigned in this category represents the estimated proportion of the key attribute data provided compared to the full set of key attribute data required as stipulated in the the WCPFC data submission guidelines.
III	Data have been provided, there are no gaps in the data provided and the coverage of data is according to the requirements.

Table 2. Provision of 2015 annual catches estimates to the WCPFC

COUNTRY / TERRITORY / ENTITY	GEAR(s)	Date submitted	DATA-GAP Notes	General NOTES	TIER-SCORING EVALUATION LEVEL
Australia	LL, PS, PL, HL,TR	28 Apr 2016		G, H	III
Belize	LL	30 Apr 2016		D	III
Canada	TR	29 Apr 2016			III
China	LL, PS	30 Apr 2016			III
Cook Islands	LL, TR	27 Apr 2016		F, G, H	III
Ecuador	PS	09 Jun 2016			III
El Salvador	PS	26 Apr 2016			III
Federated States of Micronesia	LL, PS	27 Apr 2016		F, G, H	III
Fiji Islands	LL, PL	27 Apr 2016		F, G, H	III
French Polynesia	LL, PL, OT	27 Apr 2016		G, H	III
Indonesia	LL	30 Jun 2016	6, 11	F	II (65%)
	PS, PL, HL, TR, OT	30 Jun 2016	6	F, J	II (96%)
Japan	PS, LL	29 Apr 2016		C, K	III
	PL, TR, OT	29 Apr 2016			III
Kiribati	LL, PS, OT	27 Apr 2016		G, H	III
Republic of Korea	LL, PS	30 Apr 2016		H	III
Marshall Islands	LL, PS	27 Apr 2016		F, G, H	III
New Caledonia	LL	27 Apr 2016		G, H	III
New Zealand	LL, PS, TR, PL	29 Apr 2016		G, H	III
Niue	LL	27 Apr 2016		D	III
Palau	LL, PL	27 Apr 2016		D	III
Papua New Guinea	LL, PS	27 Apr 2016		G, H	III
Philippines	PS	27 Apr 2016		F, G, H	III
	LL	27 Apr 2016		D	III
	HL, RN, OT	27 Apr 2016		F, J	III
EU-Portugal	LL	30 Apr 2016		F	III
Samoa	LL	27 Apr 2016		G, H	III
Senegal	LL	30 Apr 2016		D	III
Solomon Islands	LL	27 Apr 2016		F, H	III
	PS, PL	27 Apr 2016		H	III
EU-Spain	LL	30 Apr 2016			III
	PS	30 Apr 2016			III
Chinese Taipei	LL, PS	30 Apr 2016			III
Tokelau	OT	27 Apr 2016			III
Tonga	LL	27 Apr 2016		G, H	III
Tuvalu	LL, PS, OT	27 Apr 2016		G, H	III
United States	LL, PS, TR, HL, PL	29 Apr 2016		G, H	III
Vanuatu	LL, PS	27 Apr 2016		G, H	III
Vietnam	LL	24 Jun 2016	6, 11	J	II (65%)
	GN, PS	24 Jun 2016	6, 11	J	II (65%)
Wallis and Futuna	LL	27 Apr 2016		D	III

DATA-GAP NOTES

1	Total annual catches were provided by SPECIES, but not broken down by GEAR.
2	Marlin catch estimate not provided to the species level.
3	Coverage of data used to determine estimates not provided
4	Type(s) of data used to determine estimates not provided
5	Methods used to determine estimates not provided
6	Breakdown of active vessels by GRT size class not provided
7	Swordfish catch estimates only provided
8	Billfish catch estimates not provided for the longline gear
9	Estimates of all main tuna species not provided
10	Estimates exclude archipelagic waters catches
11	Estimates of shark catch by species have NOT been provided
12	Estimates of shark catch by SPECIES provided, but not for all KEY species taken by this fleet
13	Estimates of DISCARDs SHOULD BE provided (non-binding)
14	Estimates of ALBACORE, SWORDFISH and STRIPED MARLIN for the South Pacific Ocean have NOT been provided

GENERAL NOTES

A	Catches were estimated by the SPC/OFP while assisting with the preparation of the national fisheries report.
B	Catch estimates were taken from the national fisheries report presented at the meeting of the Scientific Committee.
C	Total annual catches can be determined by aggregating operational data that were provided on this date.
D	Fleet(s) inactive for this calendar year in the WCPFC Convention Area
E	National legislation (or policy) requires that time/area strata comprising data for less than three vessels can not be disseminated.
F	Provisional estimates initially provided, and final estimates provided prior to SC12.
G	Estimates of all KEY shark species have been provided in AGGREGATE catch/effort data, OPERATIONAL catch/effort data and/or OBSERVER data provisions
H	Estimates of DISCARDs provided in AGGREGATE catch/effort data, OPERATIONAL catch/effort data or OBSERVER data provisions
I	Pending resolution of attribution of catches according to CHARTER arrangements
J	No Discards reported - advised that full retention is assumed in these fisheries (except for protected species).
K	Estimates of DISCARDs SHOULD be provided (non-binding)

TIER-SCORING EVALUATION LEVEL

I	No data are provided, or data have been provided but they have been evaluated as 'unusable' (instances where none of the data provided can be used in assessments). This level of data gap is the most severe and has by far the greatest impacts on the scientific work of the Commission.
II	Data have been provided, most of which can be used for the scientific work of the Commission, but (i) there are one or several (minimum-standard) data fields not provided and/or (ii) the coverage of the data is not according to the requirements. In these cases, some of the scientific work of the Commission cannot be undertaken. The % value assigned in this category represents the estimated proportion of the key attribute data provided compared to the full set of key attribute data required as stipulated in the the WCPFC data submission guidelines.
III	Data have been provided, there are no gaps in the data provided and the coverage of data is according to the requirements.

Table 3. Provision of 2014 Aggregated catch and effort data to the WCPFC

COUNTRY / ENTITY	GEAR TYPE	Date Submitted	DATA-GAP Notes	General NOTES	TIER-SCORING EVALUATION LEVEL
Australia	LL, PL, PS, TR	29 Apr 2015		C,I	III
Belize	LL	30 Apr 2015		D	III
Canada	TR	11 Apr 2015			III
China	LL (DWFN)	30 Apr 2015	18, 20		II (88%)
	PS	30 Apr 2015	19, 20, 24	D	II (88%)
Cook Islands	LL, TR	30 Apr 2015		J, I, O	III
Ecuador	PS	30 Apr 2015		C	III
El Salvador	PS	18 Apr 2015		C	III
Federated States of Micronesia	LL, PS	30 Apr 2015		J, O	III
Fiji Islands	LL, PL	30 Apr 2015		J, O	III
French Polynesia	LL	30 Apr 2015		J, O	III
Indonesia	LL, PS, PL			Q	I
	HL, TR, GN, OT			N, Q	I
Japan	LL	27 Apr 2015	22	A, F,H, I, L	II (98%)
	PL	27 Apr 2015		L	III
	PS	27 Apr 2015		L	III
Kiribati	LL, PS	30 Apr 2015		J, O	III
Marshall Islands	LL, PS	30 Apr 2015		J, O	III
New Caledonia	LL	30 Apr 2015		J, I, O	III
New Zealand	LL, PL, HL, PS	30 Apr 2015		C,I	III
Niue	LL	30 Apr 2015		E	III
Palau	LL, PL	30 Apr 2015		E	III
Papua New Guinea	LL, PS	30 Apr 2015		J, I, O	III
Philippines	PS	30 Apr 2015		M, Q	III
	LL	30 Apr 2015		M, O, Q	III
	HL, RN, OT			N, Q	I
EU-Portugal	LL	30 Apr 2015	1, 10	C, F	II (88%)
Republic of Korea	LL	30 Apr 2015		P	III
	PS	30 Apr 2015		P	III
Samoa	LL	30 Apr 2015		J, I, O	III
Senegal	LL	30 Apr 2015		E	III
Solomon Islands	LL	30 Apr 2015		J, K, O	III
	PL, PS	30 Apr 2015		J	III
EU-Spain	LL	30 Apr 2015	1, 10, 22	C, F	II (88%)
	PS	30 Apr 2015		C	III
Chinese Taipei	LL (DWFN)	30 Apr 2015		H, I, L	III
	LL (small)	30 Apr 2015		H, I, L	III
	PS	30 Apr 2015		L	III
Tonga	LL	30 Apr 2015		J, I, O	III
Tuvalu	LL, PS	30 Apr 2015		J, O	III
United States	LL (American Samoa)	29 Apr 2015		B, I	III
	LL (Hawaii)	29 Apr 2015		B, I	III
	PS (Treaty)	29 Apr 2015		J	III
	TR (North Pacific)	29 Apr 2015		B	III
	TR (South Pacific)	29 Apr 2015		B	III
Vanuatu	LL, PS	30 Apr 2015		J, O	III
Vietnam	LL	30 Apr 2015	11, 23	M, Q	II (50%)
	PS, GN	30 Apr 2015	11	M, Q	II (50%)
Wallis and Futuna	LL	30 Apr 2015		E, O	III

DATA-GAP NOTES

1	The catch data are in units of weight (kgs or metric tonnes) only, rather than both numbers of fish and weight.
2	The catch data are in units of numbers of fish only, rather than both numbers of fish and kilograms.
3	The catch data are for swordfish only.
4	The unit of effort is "days on which a set was made", rather than "days fished or searched".
5	The unit of effort is "sets" rather than "days fished or searched".
6	The catch/effort data are not stratified by the required categories of school association
7	The units of effort are unknown, or non-standard
8	No effort data provided
9	The data are aggregated by 5°x5° instead of 1°x1°
10	The 5°x5°/month Longline catch and effort data are not stratified by "Hooks between Floats"
11	Coverage of data provided is less than 50%
12	No breakdown of Billfish species catch provided
13	The estimation of bigeye in the reported yellowfin-plus-bigeye catch has not been undertaken in these data
14	The spatial aggregation is non-standard (must be 5°x5° for Longline; 1°x1° for surface fisheries)
15	Data have not been "raised" to represent total catch and effort
16	Species composition of main tuna species catch does correspond to annual catch estimates
17	Aggregate data provided for the WCPO area (Pacific Ocean west of 150°W) and not the WCPFC Convention Area
18	Catches of KEY shark species have been provided, but (i) not all KEY SPECIES COVERED, and/or (ii) COVERAGE of shark species catches is considered LOW.
19	Annual Catch and Effort estimates by areas of national jurisdiction (EEZs) and High Seas have NOT BEEN PROVIDED.
20	Vessel numbers by YEAR, MONTH and AREA used to filter public domain data have NOT BEEN PROVIDED
21	Catches of KEY shark species have not been provided, but can potentially be estimated from observer data.
22	Aggregate Catch/Effort data for ALBACORE, SWORDFISH and STRIPED MARLIN for the south Pacific Ocean east of the WCPFC Area have NOT been provided
23	Catches of KEY shark species have not been provided.
24	Effort in SETS by SET TYPE not provided for PURSE SEINE data

GENERAL NOTES

A	Unraised data stratified by 5°x5°, month and hooks between floats were also provided
B	National legislation (or policy) requires that time/area strata comprising data for less than three vessels can not be disseminated.
C	Aggregate data not provided, but have been generated from Operational data submitted to the WCPFC.
D	Aggregate data not provided or incomplete, but have been generated from annual catch estimates and operational data made available by the Coastal States.
E	This fleet was inactive in the WCPFC Convention Area.
F	Distant-water longline fleet data do not cover the entire Pacific Ocean (required for stock assessments of certain species)
G	Represents a combination of data provided by the flag state (for domestically-based vessels) and coastal states
H	Vessel numbers per Month and Area provided.
I	Catches of KEY shark species provided in their AGGREGATE data
J	Aggregate data have been generated from annual catch estimates and operational data made available to the SPC by their member countries through national bilateral agreements or subregional arrangements (e.g. the US Multilateral Purse Seine treaty managed by FFA).
K	Pending resolution of attribution of catches according to CHARTER arrangements
L	Annual Catch and Effort estimates by areas of national jurisdiction (EEZs) and High Seas HAVE BEEN PROVIDED.
M	Aggregate data not provided, but have been generated from Annual catch estimates and operational data provided to SPC directly for stock assessments.
N	"It is recognized that certain members and cooperating non-members of the Commission may have practical difficulties in compiling operational data for fleets comprised of small vessels."
O	Logsheet forms used by this fleet cover the collection of each of the KEY SHARK species and these logsheet data have been aggregated and provided to the WCPFC.
P	OPERATIONAL catch/effort data also provided and satisfies the requirements stipulated under AGGREGATE data.
Q	Flag State advised that there is full retention in their fishery, so no DISCARDS

TIER-SCORING EVALUATION LEVEL

I	No data are provided, or data have been provided but they have been evaluated as 'unusable' (instances where none of the data provided can be used in assessments). This level of data gap is the most severe and has by far the greatest impacts on the scientific work of the Commission.
II	Data have been provided, most of which can be used for the scientific work of the Commission, but (i) there are one or several (minimum-standard) data fields not provided and/or (ii) the coverage of the data is not according to the requirements. In these cases, some of the scientific work of the Commission cannot be undertaken. The % value assigned in this category represents the estimated proportion of the key attribute data provided compared to the full set of key attribute data required as stipulated in the the WCPFC data submission guidelines.
III	Data have been provided, there are no gaps in the data provided and the coverage of data is according to the requirements.

Table 4. Provision of 2015 Aggregated catch and effort data to the WCPFC

COUNTRY / ENTITY	GEAR TYPE	Date Submitted	DATA-GAP Notes	General NOTES	TIER-SCORING EVALUATION LEVEL
Australia	LL, PL, PS, TR	28 Apr 2016		C,I	III
Belize	LL	30 Apr 2016		E	III
Canada	TR	29 Apr 2016			III
China	LL (DWFN)	30 Apr 2016		P	III
	PS	30 Apr 2016		P	III
Cook Islands	LL, TR	30 Apr 2016		J, I, O	III
Ecuador	PS	09 Jun 2016		C	III
El Salvador	PS	26 Apr 2016		C	III
Federated States of Micronesia	LL, PS	30 Apr 2016		J, O	III
Fiji Islands	LL, PL	30 Apr 2016		J, O	III
French Polynesia	LL	30 Apr 2016		J, O	III
Indonesia	LL, PS, PL			Q	I
	HL, TR, GN, OT			N, Q	I
Japan	LL	29 Apr 2016		A, F,H, I, L, R	III
	PL	29 Apr 2016		L	III
	PS	29 Apr 2016		L	III
Kiribati	LL, PS	30 Apr 2016		J, O	III
Marshall Islands	LL, PS	30 Apr 2016		J, O	III
New Caledonia	LL	30 Apr 2016		J, I, O	III
New Zealand	LL, PL, HL, PS	29 Apr 2016		C,I	III
Niue	LL	30 Apr 2016		E	III
Palau	LL, PL	30 Apr 2016		E	III
Papua New Guinea	LL, PS	30 Apr 2016		J, I, O	III
Philippines	PS	30 Apr 2016		M, Q	III
	LL	30 Apr 2016		E	III
	HL, RN, OT	30 Apr 2016		M, N, Q	III
EU-Portugal	LL	30 Apr 2016		C, F, P	III
Republic of Korea	LL	30 Apr 2016		P	III
	PS	30 Apr 2016		P	III
Samoa	LL	30 Apr 2016		J, I, O	III
Senegal	LL	30 Apr 2016		E	III
Solomon Islands	LL	30 Apr 2016		J, K, O	III
	PL, PS	30 Apr 2016		J	III
EU-Spain	LL	30 Apr 2016	1	C, F, P, R	II (98%)
	PS	30 Apr 2016		C	III
Chinese Taipei	LL (DWFN)	30 Apr 2016		H, I, L	III
	LL (small)	30 Apr 2016		H, I, L	III
	PS	30 Apr 2016		L	III
Tonga	LL	30 Apr 2016		J, I, O	III
Tuvalu	LL, PS	30 Apr 2016		J, O	III
United States	LL (American Samoa)	29 Apr 2016		B, I	III
	LL (Hawaii)	29 Apr 2016		B, I	III
	PS (Treaty)	29 Apr 2016		J	III
	TR (North Pacific)	29 Apr 2016		B	III
	TR (South Pacific)	29 Apr 2016		B	III
Vanuatu	LL, PS	30 Apr 2016		J, O	III
Vietnam	LL	30 Apr 2016	23	M, Q, S	II (83%)
	PS, GN	30 Apr 2016	23	M, Q, S	II (73%)
Wallis and Futuna	LL	30 Apr 2016		E, O	III

DATA-GAP NOTES

1	The catch data are in units of weight (kgs or metric tonnes) only, rather than both numbers of fish and weight.
2	The catch data are in units of numbers of fish only, rather than both numbers of fish and kilograms.
3	The catch data are for swordfish only.
4	The unit of effort is "days on which a set was made", rather than "days fished or searched".
5	The unit of effort is "sets" rather than "days fished or searched".
6	The catch/effort data are not stratified by the required categories of school association
7	The units of effort are unknown, or non-standard
8	No effort data provided
9	The data are aggregated by 5°x5° instead of 1°x1°
10	The 5°x5°/month Longline catch and effort data are not stratified by "Hooks between Floats"
11	Coverage of data provided is less than 50%
12	No breakdown of Billfish species catch provided
13	The estimation of bigeye in the reported yellowfin-plus-bigeye catch has not been undertaken in these data
14	The spatial aggregation is non-standard (must be 5°x5° for Longline; 1°x1° for surface fisheries)
15	Data have not been "raised" to represent total catch and effort
16	Species composition of main tuna species catch does correspond to annual catch estimates
17	Aggregate data provided for the WCPO area (Pacific Ocean west of 150°W) and not the WCPFC Convention Area
18	Catches of KEY shark species have been provided, but (i) not all KEY SPECIES COVERED, and/or (ii) COVERAGE of shark species catches is considered LOW.
19	Annual Catch and Effort estimates by areas of national jurisdiction (EEZs) and High Seas have NOT BEEN PROVIDED.
20	Vessel numbers by YEAR, MONTH and AREA used to filter public domain data have NOT BEEN PROVIDED
21	Catches of KEY shark species have not been provided, but can potentially be estimated from observer data.
22	Aggregate Catch/Effort data for ALBACORE, SWORDFISH and STRIPED MARLIN for the south Pacific Ocean east of the WCPFC Area MAY ALSO be provided (non-binding)
23	Catches of KEY shark species have not been provided.
24	Effort in SETS by SET TYPE not provided for PURSE SEINE data

GENERAL NOTES

A	Unraised data stratified by 5°x5°, month and hooks between floats were also provided
B	National legislation (or policy) requires that time/area strata comprising data for less than three vessels can not be disseminated.
C	Aggregate data not provided, but have been generated from Operational data submitted to the WCPFC.
D	Aggregate data not provided or incomplete, but have been generated from annual catch estimates and operational data made available by the Coastal States.
E	This fleet was inactive in the WCPFC Convention Area.
F	Distant-water longline fleet data do not cover the entire Pacific Ocean (required for stock assessments of certain species)
G	Represents a combination of data provided by the flag state (for domestically-based vessels) and coastal states
H	Vessel numbers per Month and Area provided.
I	Catches of KEY shark species provided in their AGGREGATE data
J	Aggregate data have been generated from annual catch estimates and operational data made available to the SPC by their member countries through national bilateral agreements or subregional arrangements (e.g. the US Multilateral Purse Seine treaty managed by FFA).
K	Pending resolution of attribution of catches according to CHARTER arrangements
L	Annual Catch and Effort estimates by areas of national jurisdiction (EEZs) and High Seas HAVE BEEN PROVIDED.
M	Aggregate data not provided, but have been generated from Annual catch estimates and operational data provided to SPC directly for stock assessments.
N	"It is recognized that certain members and cooperating non-members of the Commission may have practical difficulties in compiling operational data for fleets comprised of small vessels."
O	Logsheet forms used by this fleet cover the collection of each of the KEY SHARK species and these logsheet data have been aggregated and provided to the WCPFC.
P	OPERATIONAL catch/effort data also provided and satisfies the requirements stipulated under AGGREGATE data.
Q	Flag State advised that there is full retention in their fishery (except for protected species which must be released), so no DISCARDS
R	Aggregate Catch/Effort data for ALBACORE, SWORDFISH and STRIPED MARLIN for the south Pacific Ocean east of the WCPFC Area MAY ALSO be provided (non-binding)
S	Coverage of data provided is less than 50% (non-binding)

TIER-SCORING EVALUATION LEVEL

I	No data are provided, or data have been provided but they have been evaluated as 'unusable' (instances where none of the data provided can be used in assessments). This level of data gap is the most severe and has by far the greatest impacts on the scientific work of the Commission.
II	Data have been provided, most of which can be used for the scientific work of the Commission, but (i) there are one or several (minimum-standard) data fields not provided and/or (ii) the coverage of the data is not according to the requirements. In these cases, some of the scientific work of the Commission cannot be undertaken. The % value assigned in this category represents the estimated proportion of the key attribute data provided compared to the full set of key attribute data required as stipulated in the the WCPFC data submission guidelines.
III	Data have been provided, there are no gaps in the data provided and the coverage of data is according to the requirements.

Table 5. Provision of 2014 Operational catch and effort data to the WCPFC

					TIER-SCORING EVALUATION LEVEL	
FLAG STATE / ENTITY	GEAR(s)	Date Submitted	DATA-GAP Notes	General NOTES	KEY ATTRIBUTES	COVERAGE
Australia	LL, PL, PS, TR	29 Apr 2015		E	III	100%
Belize	LL	30 Apr 2015		I	III	100%
Canada	TR			A	III	N/A
China	LL	30 Apr 2015	4, 6, 7, 8	L	II (32%)	15%
	PS				I	0%
Cook Islands	LL, TR	30 Apr 2015		C, J	III	100%
Ecuador	PS	30 Apr 2015			III	100%
El Salvador	PS	18 Apr 2015			III	100%
Federated States of Micronesia	LL	30 Apr 2015	11	C, J, F	III	89% *
	PS			C, J	III	100%
Fiji Islands	LL, PL	30 Apr 2015		C, J	III	100%
French Polynesia	LL	30 Apr 2015	11	C, J, F	III	75% *
	PL			G	III	0% #
	TR			G	III	0% #
Indonesia	LL, PS, PL			K	I	0%
	HL, TR, GN, OT			G, K	III	0% #
Japan	PS, PL			F	I	0%
	LL			F, L	I	0%
Kiribati	LL	30 Apr 2015	11	C, J, F	III	79% *
	PS			C, J	III	100%
Republic of Korea	LL, PS	30 Apr 2015		E, L	III	100%
Marshall Islands	LL	30 Apr 2015		C, J	III	100%
	PS			C, J	III	100%
New Caledonia	LL	30 Apr 2015		C, J	III	100%
New Zealand	LL	30 Apr 2015	11	E, F	III	65% *
	PL, TR, PS			E	III	100%
Niue	LL	30 Apr 2015		A	III	N/A
Palau	LL, PL	30 Apr 2015		A	III	N/A
Papua New Guinea	LL	30 Apr 2015	11	C, J, F	III	71% *
	PS		11	C, J, F	III	82% *
Philippines	PS	30 Apr 2015		J, K	III	100%
	LL	30 Apr 2015		J, K	III	100%
	HL, RN, OT			G	III	0% #
EU-Portugal	LL	30 Apr 2015	1, 7, 10	E	II (85%)	100%
Samoa	LL	30 Apr 2015		C, J	III	100%
Senegal	LL	30 Apr 2015		A	III	100%
Solomon Islands	LL	30 Apr 2015	6	C, J, F	III	37%
	PS		11	C, J, F	III	74% *
	PL			C, J	III	100%
EU-Spain	LL	30 Apr 2015	1, 7, 10	E	II (85%)	100%
	PS	30 Apr 2015			III	100%
Chinese Taipei	LL, PS			F, L	I	0%
Tonga	LL	30 Apr 2015		C, J	III	100%
Tuvalu	LL, PS	30 Apr 2015		C, J	III	100%
United States	LL (American Samoa)	29 Apr 2015	11	E, F	III	92% *
	LL (CNMI)	29 Apr 2015	11	E, F	III	89% *
	LL (Hawaii)	29 Apr 2015		E	III	100%
	PL, HL, TR (trop)			G	III	0% #
	PS, TR (ALB)	29 Apr 2015		B	III	100%
Vanuatu	LL	30 Apr 2015	11	C, J, F	III	84% *
	PS	30 Apr 2015		C, J	III	100%
Vietnam	LL	30 Apr 2015	6, 8	G, H, K, F	II (96%)	20%
	PS, GN	30 Apr 2015	6	G, H, K, F	II (96%)	20%
Wallis and Futuna	LL	30 Apr 2015		A	III	N/A

DATA-GAP NOTES

1	For LONGLINE GEAR - "Branchlines between floats" not provided
2	For LONGLINE GEAR - "Hooks per set" not provided
3	"Activity" not provided
4	"Time of set" not provided
5	For PURSE SEINE GEAR - categories of "School Association" were not provided
6	Coverage of data provided is < 50%
7	Discard information not included
8	Catches of KEY shark species have not been provided.
9	Catches of KEY shark species have been provided, but (i) not all KEY SPECIES COVERED, and/or (ii) COVERAGE of shark species catches is considered LOW.
10	The catch data are in units of weight (kgs or metric tonnes) only, rather than both numbers of fish and weight.
11	Coverage of data data provided is > 50% but < 100%

GENERAL NOTES

A	No activity in the WCPFC Convention Area during this year
B	Operational Logsheet data provided by FFA on behalf of their member countries on a regular basis
C	Operational Logsheet data provided to SPC by their member countries on a regular basis
D	Operational Logsheet data provided to SPC by their member countries on a regular basis, but authorisation to pass on to WCPFC yet to be provided.
E	Catches of KEY shark species have been provided
F	Coverage of operational data is not 100%, but Annual Catch and Effort estimates by areas of national jurisdiction (EEZs) and High Seas ARE AVAILABLE.
G	"It is recognized that certain members and cooperating non-members of the Commission may have practical difficulties in compiling operational data for fleets comprised of small vessels."
H	Operational Logsheet data provided to SPC for analyses related to stock assessments.
I	Operational Logsheet data provided to SPC by their member countries which are coastal states where this FLAG STATE fleet is based
J	Logsheet forms used by this fleet cover the collection of each of the KEY SHARK species.
K	Flag State advised that there is full retention in their fishery, so no DISCARDS.
L	2014 historical operational longline data were provided to SPC for a collaborative study in accordance to the agreement with respective CCMs (see SC10 report-Attachment F and OFP [2015a] and OFP [2015b].

TIER-SCORING EVALUATION LEVEL

I	No data are provided, or data have been provided but they have been evaluated as 'unusable' (instances where none of the data provided can be used in assessments). This level of data gap is the most severe and has by far the greatest impacts on the scientific work of the Commission.
II	Data have been provided, most of which can be used for the scientific work of the Commission, but (i) there are one or several (minimum-standard) data fields not provided and/or (ii) the coverage of the data is not according to the requirements. In these cases, some of the scientific work of the Commission cannot be undertaken. The % value assigned in this category represents the estimated proportion of the key attribute data provided compared to the full set of key attribute data required as stipulated in the the WCPFC data submission guidelines.
III	Data have been provided, there are no gaps in the (minimum standard) data fields provided and the coverage of data is sufficient to be used for undertaking the scientific work of the Commission.

COVERAGE

Coverage has been determined from VMS trip coverage where possible. Where VMS data are incomplete or not available, coverage has been deteremined in some cases by comparing the total target tuna catch from operational data for that gear to the total target tuna catch from ANNUAL CATCH ESTIMATES.

*	Instances where coverage of operational data is less than 100%, but annual catch/effort estimates by geographic area have been made available and together with the operational level catch and effort data that has been submitted, is sufficient to allow the scientific work of the Commission to be undertaken
#	"It is recognized that certain members and cooperating non-members of the Commission may have practical difficulties in compiling operational data for fleets comprised of small vessels."

Table 6. Provision of 2015 Operational catch and effort data to the WCPFC

					TIER-SCORING EVALUATION LEVEL	
FLAG STATE / ENTITY	GEAR(s)	Date Submitted	DATA-GAP Notes	General NOTES	KEY ATTRIBUTES	COVERAGE
Australia	LL, PL, PS, TR	28 Apr 2016		E	III	100%
Belize	LL	30 Apr 2016		A	III	N/A
Canada	TR			A	III	N/A
China	LL	30 Apr 2016	6	I	III	< 40% *
	PS	30 Apr 2016			III	100%
Cook Islands	LL, TR	30 Apr 2016		C, J	III	100%
Ecuador	PS	09 Jun 2016	11	F	III	73% *
El Salvador	PS	26 Apr 2016			III	100%
Federated States of Micronesia	LL	30 Apr 2016	11	C, J, F	III	71% *
	PS			C, J	III	100%
Fiji Islands	LL, PL	30 Apr 2016		C, J	III	100%
French Polynesia	LL	30 Apr 2016	11	C, J, F	III	63% *
	PL			G	III	#
	TR			G	III	#
Indonesia	LL, PS, PL			K	I	0%
	HL, TR, GN, OT			G, K	III	#
Japan	PS, PL	29 Apr 2016		E, M	III	100%
	LL	29 Apr 2016		E, M	III	100%
Kiribati	LL	30 Apr 2016	6	C, J, F	III	< 40% *
	PS		11	C, J, F	III	61% *
Republic of Korea	LL, PS	30 Apr 2016		E	III	100%
Marshall Islands	LL	30 Apr 2016		C, J	III	100%
	PS			C, J	III	100%
New Caledonia	LL	30 Apr 2016		C, J	III	100%
New Zealand	LL	29 Apr 2016	11	E, F	III	65% *
	PL, TR, PS			E	III	100%
Niue	LL	30 Apr 2016		A	III	N/A
Palau	LL, PL	30 Apr 2016		A	III	N/A
Papua New Guinea	LL	30 Apr 2016	11	C, J, F	III	75% *
	PS		11	C, J, F	III	75% *
Philippines	PS	30 Apr 2016		J, K	III	100%
	LL	30 Apr 2016		A	III	N/A
	HL, RN, OT			G, K	III	#
EU-Portugal	LL	30 Apr 2016		E	III	100%
Samoa	LL	30 Apr 2016		C, J	III	100%
Senegal	LL	30 Apr 2016		A	III	100%
Solomon Islands	LL	30 Apr 2016	6	C, J, F	III	< 40% *
	PS		11	C, J, F	III	85% *
	PL			C, J	III	100%
EU-Spain	LL	30 Apr 2016	10	E	II (87%)	100%
	PS	30 Apr 2016			III	100%
Chinese Taipei	LL, PS			F	I	0%
Tonga	LL	30 Apr 2016		C, J	III	100%
Tuvalu	LL, PS	30 Apr 2016		C, J	III	100%
United States	LL (American Samoa)	29 Apr 2016	11	E, F	III	92% *
	LL (CNMI)	29 Apr 2016		E	III	100%
	LL (Hawaii)	29 Apr 2016		E	III	100%
	PL, HL, TR (trop)			G	III	#
	PS, TR (ALB)	29 Apr 2016		B	III	100%
Vanuatu	LL	30 Apr 2016	11	C, J, F	III	100%
	PS	30 Apr 2016		C, J	III	100%
Vietnam	LL	30 Apr 2016	6, 8	G, H, K, F	II (85%)	< 20%
	PS, GN	30 Apr 2016	6, 8	G, H, K, F	II (75%)	< 20%
Wallis and Futuna	LL	30 Apr 2016		A	III	N/A

DATA-GAP NOTES

1	For LONGLINE GEAR - "Branchlines between floats" not provided
2	For LONGLINE GEAR - "Hooks per set" not provided
3	"Activity" not provided
4	"Time of set" not provided
5	For PURSE SEINE GEAR - categories of "School Association" were not provided
6	Coverage of data provided is < 50%
7	Discard information not included
8	Catches of KEY shark species have not been provided.
9	Catches of KEY shark species have been provided, but (i) not all KEY SPECIES COVERED, and/or (ii) COVERAGE of shark species catches is considered LOW.
10	The catch data are in units of weight (kgs or metric tonnes) only, rather than both numbers of fish and weight.
11	Coverage of data data provided is > 50% but < 100%

GENERAL NOTES

A	No activity in the WCPFC Convention Area during this year
B	Operational Logsheet data provided by FFA on behalf of their member countries on a regular basis
C	Operational Logsheet data provided to SPC by their member countries on a regular basis
D	Operational Logsheet data provided to SPC by their member countries on a regular basis, but authorisation to pass on to WCPFC yet to be provided.
E	Catches of KEY shark species have been provided
F	Coverage of operational data is not 100%, but Annual Catch and Effort estimates by areas of national jurisdiction (EEZs) and High Seas ARE AVAILABLE.
G	"It is recognized that certain members and cooperating non-members of the Commission may have practical difficulties in compiling operational data for fleets comprised of small vessels."
H	Operational Logsheet data provided to SPC for analyses related to stock assessments.
I	Operational Logsheet data also provided to SPC by their member countries which are coastal states where this FLAG STATE fleet is based
J	Logsheet forms used by this fleet cover the collection of each of the KEY SHARK species.
K	Flag State advised that there is full retention in their fishery, so no DISCARDS.
L	2014 historical operational longline data were provided to SPC for a collaborative study in accordance to the agreement with respective CCMs (see SC10 report-Attachment F and OFP [2016a] and OFP [2016b].
M	Operational data provided to the WCPFC for the WCPFC Area south of 20°N and aggregate 1°x1° year/month data provided for WCPFC Area north of 20°N

TIER-SCORING EVALUATION LEVEL

I	No data are provided, or data have been provided but they have been evaluated as 'unusable' (instances where none of the data provided can be used in assessments). This level of data gap is the most severe and has by far the greatest impacts on the scientific work of the Commission.
II	Data have been provided, most of which can be used for the scientific work of the Commission, but (i) there are one or several (minimum-standard) data fields not provided and/or (ii) the coverage of the data is not according to the requirements. In these cases, some of the scientific work of the Commission cannot be undertaken. The % value assigned in this category represents the estimated proportion of the key attribute data provided compared to the full set of key attribute data required as stipulated in the the WCPFC data submission guidelines.
III	Data have been provided, there are no gaps in the (minimum standard) data fields provided and the coverage of data is sufficient to be used for undertaking the scientific work of the Commission.

COVERAGE

Coverage has been determined from VMS trip coverage where possible. Where VMS data are incomplete or not available, coverage has been deteremined in some cases by comparing the total target tuna catch from operational data for that gear to the total target tuna catch from ANNUAL CATCH ESTIMATES.

*	Instances where coverage of operational data is less than 100%, but annual catch/effort estimates by geographic area have been made available and together with the operational level catch and effort data that has been submitted, is sufficient to allow the scientific work of the Commission to be undertaken
#	"It is recognized that certain members and cooperating non-members of the Commission may have practical difficulties in compiling operational data for fleets comprised of small vessels."

Table 7. Provision of 2015 Size data to the WCPFC

FLAG STATE / ENTITY	GEAR(s)	Date Submitted	DATA-GAP Notes	General NOTES	TIER-SCORING EVALUATION LEVEL
Australia	LL	28 Apr 2016		B, C	III
	PL, PS, TR			J	III
Belize	LL	30 Apr 2016	8	G	III
Canada	TR	29 Apr 2016		G	III
China	LL	01 Jul 2016		H	III
	PS		8	H	I
Cook Islands	LL	30 Apr 2016		A, H, K	III
Ecuador	PS		8	H	I
El Salvador	PS	06 May 2016		H	III
Federated States of Micronesia	LL, PS	30 Apr 2016		A, H, I, K	III
Fiji Islands	LL, PL	30 Apr 2016		A, H, K	III
French Polynesia	LL	30 Apr 2016		A, H, K	III
	PL, TR			J	III
Indonesia	LL, PS, OT	30 Mar 2016		A, K	III
Japan	PS	29 Apr 2016		A, H	III
	LL, PL	29 Apr 2016		A, H, I	III
Kiribati	LL		7		I
	PS	30 Apr 2016		A, H	III
Republic of Korea	LL, PS	30 Apr 2016		A, H	III
Marshall Islands	LL, PS	30 Apr 2016		A, H, K	III
New Caledonia	LL	30 Apr 2016		A, H, K	III
New Zealand	LL, PL, PS, TR	30 Apr 2016		A, H	III
Niue	LL	30 Apr 2016		G	III
Palau	LL, PL	30 Apr 2016		G	III
Papua New Guinea	LL, PS	30 Apr 2016		A, H	III
Philippines	PS, HL, RN, OT	30 Apr 2016		A, H, K	III
	LL	30 Apr 2016		G	III
EU-Portugal	LL	30 Apr 2016		L	III
Samoa	LL	30 Apr 2016		A, H, K	III
Senegal	LL	30 Apr 2016		G	III
Solomon Islands	LL, PS, PL	30 Apr 2016		A, H	III
EU-Spain	LL		7		I
	PS	30 Apr 2016		H	III
Chinese Taipei	LL	30 Apr 2016		A, H, I	III
	PS	30 Apr 2016		A, H, I	III
Tonga	LL	30 Apr 2016		A, H, K	III
Tuvalu	LL		7	A, H	I
	PS	30 Apr 2016		A, H	III
United States	LL (American Samoa)	29 Apr 2016		B, E, F	III
	LL (Hawaii)	29 Apr 2016		B, E, F	III
	HL	29 Apr 2016		B, E, F	III
	TR	29 Apr 2016		A	III
	PS	30 Apr 2016		A, H, K	III
Vanuatu	LL, PS	30 Apr 2016		A, H, I, K	III
Vietnam	LL	30 Apr 2016		A, K	III
	PS, GN	30 Apr 2016		A, K	III
Wallis and Futuna	LL	30 Apr 2016		G	III

DATA-GAP NOTES

1	Temporal stratification at the YEAR level has been provided only
2	Spatial stratification is larger than 10° latitude x 20° longitude
3	There is no breakdown by SCHOOL ASSOCIATION in PURSE SEINE samples provided by the FLAG STATE
4	The data were not stratified by latitide/longitude
5	LENGTH INTERVAL in data provided does not comply to WCPFC Requirements
6	WEIGHT INTERVAL in data provided does not comply to WCPFC Requirements
7	No SIZE data provided by the FLAG STATE
8	No SIZE data provided by the FLAG STATE, but SIZE data provided for this fleet by COASTAL STATES

GENERAL NOTES

A	LENGTH DATA PROVIDED and LENGTH INTERVALS comply with the WCPFC Requirements where data provided (Skipjack tuna – 1cm, Albacore tuna – 1cm, Yellowfin tuna – ideally 1cm, but not more than 2 cm, Bigeye tuna – ideally 1cm, but not more than 2 cm, Billfish – ideally 1cm, but not more than 5 cm)
B	WEIGHT DATA PROVIDED and WEIGHT INTERVALS comply with WCFPC requirements (1kgs)
C	Weights are gilled-and-gutted (kilograms)
D	Weights are gilled-and-gutted-and-tailed (kilograms)
E	Weights are gilled-and-gutted (pounds)
F	Broad areas which can be equated to 10° latitude x 20° longitude blocks were provided
G	No activity by this fleet in the WCPFC Convention Area
H	Includes data provided through the WCPFC Regional Observer Programme (ROP) data
I	Includes data collected through PORT SAMPLING by COASTAL STATES and provided to SPC on a regular basis.
J	Acknowledged to be small-scale/insignificant fisheries
K	Includes data collected through PORT SAMPLING by FLAG STATE.
L	Swordfish target fishery with swordfish size data provided at 5cm intervals.

TIER-SCORING EVALUATION LEVEL

I	No data are provided, or data have been provided but they have been evaluated as 'unusable' (instances where none of the data provided can be used in assessments). This level of data gap is the most severe and has by far the greatest impacts on the scientific work of the Commission.
II	Data have been provided, most of which can be used for the scientific work of the Commission, but (i) there are one or several (minimum-standard) data fields not provided and/or (ii) the coverage of the data is not according to the requirements. In these cases, some of the scientific work of the Commission cannot be undertaken. The % value assigned in this category represents the estimated proportion of the key attribute data provided compared to the full set of key attribute data required as stipulated in the the WCPFC data submission guidelines.
III	Data have been provided, there are no gaps in the data provided and the coverage of data is according to the requirements.

Table 8. Overall evaluation for the provision of 2015 scientific data to the WCPFC

COUNTRY / TERRITORY / ENTITY	GEAR(s)	Annual Catch estimates	Aggregate CATCH/EFFORT data	Operational CATCH/EFFORT data	SIZE data	OVERALL Science Data
Australia	LL, PS, PL, HL,TR	100%	100%	100%	100%	100%
Belize	LL	100%	100%	100%	100%	100%
Canada	TR	100%	100%	100%	100%	100%
China	LL, PS	100%	100%	100%	50%	88%
Cook Islands	LL, TR	100%	100%	100%	100%	100%
Ecuador	PS	100%	100%	100%	0%	75%
El Salvador	PS	100%	100%	100%	0%	75%
Federated States of Micronesia	LL, PS	100%	100%	100%	100%	100%
Fiji Islands	LL, PL	100%	100%	100%	100%	100%
French Polynesia	LL, PL, OT	100%	100%	100%	100%	100%
Indonesia	LL, PS, PL, HL, TR, OT	80%	0%	0%	100%	45%
Japan	PS, LL, PL, TR, OT	100%	100%	100%	100%	100%
Kiribati	LL, PS, OT	100%	100%	100%	50%	88%
Republic of Korea	LL, PS	100%	100%	100%	100%	100%
Marshall Islands	LL, PS	100%	100%	100%	100%	100%
New Caledonia	LL	100%	100%	100%	100%	100%
New Zealand	LL, PS, TR, PL	100%	100%	100%	100%	100%
Niue	LL	100%	100%	100%	100%	100%
Palau	LL, PL	100%	100%	100%	100%	100%
Papua New Guinea	LL, PS	100%	100%	100%	100%	100%
Philippines	PS, LL, HL, RN, OT	100%	100%	100%	100%	100%
EU-Portugal	LL	100%	100%	100%	100%	100%
Samoa	LL	100%	100%	100%	100%	100%
Senegal	LL	100%	100%	100%	100%	100%
Solomon Islands	LL, PS, PL	100%	100%	100%	100%	100%
EU-Spain	LL, PS	100%	99%	94%	50%	86%
Chinese Taipei	LL, PS	100%	100%	0%	100%	75%
Tokelau	OT	100%	100%	100%	100%	100%
Tonga	LL	100%	100%	100%	100%	100%
Tuvalu	LL, PS, OT	100%	100%	100%	50%	88%
United States	LL, PS, TR, HL, PL	100%	100%	100%	100%	100%
Vanuatu	LL, PS	100%	100%	100%	100%	100%
Vietnam	LL, GN, PS	65%	78%	80%	100%	81%
Wallis and Futuna	LL	100%	100%	100%	100%	100%