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SCIENTIFIC DATA AVAILABLE TO THE WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION

WCPFC-SC18-2022-WP01

SPC-OFP

ABSTRACT

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

The review of gaps in 2020 and 2021 scientific data provisions includes the assignment of a tier-scoring evaluation level. There have not been any significant developments in some categories of the main data gaps over the past five years and readers have therefore been referred to the relevant sections in past data-gap papers.

All CCMs with fleets active in the WCPFC Convention Area provided 2021 **annual catch estimates** by the deadline of the 30th April 2022. The issues previously reported in annual catch estimates have been further reduced and the lack of any estimates for key shark species remains the main gap for some CCMs, particularly in years before 2017.

Aggregate catch/effort data for 2021 were provided by the deadline of 30th April 2022 for all fleets. The quality of aggregate data provided continues to improve with a reduction in the number of data-gap notes assigned to the aggregate data in recent years. The other main data gap concerns the low coverage of operational data available to generate aggregate data for the Indonesia and Vietnam fleets, and the anticipated under-reporting of key shark species in general.

Most CCMs with active fleets provided **operational catch/effort data** for 2021, with the main gaps being

(i) the low coverage in the data provided for the Indonesia and Vietnam fleets;
(ii) the non-provision of certain required fields in the Indonesia operational data; and
(iii) catches of key shark species are not included in the Indonesia fleet data.

The coverage of 2021 operational data for some fleets is not complete (100%), although there was some improvement in coverage compared to the 2020 data, and we expect there will be additional operational data submissions in the coming year. There were noted gaps in the provision of 2021 size data for several fleets where the impacts of COVID-19 prevented any size data collection (mainly through observers).

Tables providing a breakdown of the coverage levels for each operational data field by year and fleet have been prepared in response to a SC17 recommendation (Williams, 2021). These tables are included in a separate SC18 Information Paper – Tables of coverage levels for operational data fields submitted to the WCPFC (WCPFC-SC18-2022-ST-IP10), for SC18 review. SPC-OFP has already started the process to engage with relevant CCMs to resolve some of the gaps presented in these tables.

The continuation of work on how the impacts (due to COVID-19) of the reduced observer coverage in the purse seine fishery on the precision of tuna catch estimates is presented in Peatman et al. (2022). The results of the sub-sampling analysis in this latest study suggests that the reduction in observer coverage rates in 2020 and 2021 has significantly reduced the precision in estimated species proportions, with increases in CVs in the region of 90 to 250% depending on the species and set type. This study also recognized the importance of processor (cannery) data in the validation of purse seine species composition data.

This paper provides the following proposals/recommendations for SC18 consideration.

1. Recognizing the importance of processor (cannery) data for the validation of tuna species composition under WCPFC Project 60 (see Peatman et al., 2022), **SC18 is invited to consider** a future WCPFC project to cover, *inter alia*, the following areas:
    i. The SSP or WCPFC Contractor to work with relevant CCM port and flag states to obtain purse seine processor data not yet provided, using the guidelines for cannery data submission to ensure data confidentiality.
    ii. The SSP or WCPFC Contractor to work with relevant CCMs to review the protocols for collecting purse seine processor data at each source, including species identification.
    iii. The SSP to continue the management and data quality assurance of purse seine processor data submission, including the identification of gaps and resolving duplicate processor data (e.g. when Final Outturn [FOT] data are provide from a different source).

2. **SC18 is invited to recommend** the inclusion of tables of the operational level catch and effort data fields for longline, purse seine and pole-and-line gears (see SECTION 2.5 and ANNEX 1) as an additional ANNEX of the "*Scientific Data to be Provided to the Commission*", with an additional paragraph under ***Section 3. Operational level catch and effort data*** as follows:

"*Annex 2 provides tables of the operational level catch and effort data fields for longline, purse seine and pole-and-line gears in order to clarify and assist members in understanding the requirements of each data field and thereby facilitate the submission of data to the WCPFC.*"

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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*" (***SciData***) 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 latest version of SciData can be found on the WCPFC web site here. The main revisions to this document since it was first adopted include:

- The inclusion of catch estimates of key shark species and specifying the size class intervals for size data), which were adopted at the Seventh Regular Session of the Commission (WCPFC7), Honolulu, Hawaii, 6–10 December 2010 (Anon. 2010), 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)
- The change to require estimates of discards/releases for the key WCPFC species to be submitted as a member country obligation, which was adopted at the Thirteenth Regular Session of the Commission (WCPFC13), Denarau Island, Fiji, 5–9 December 2016 (Anon. 2016).

2. As specified in the recommendations for the provision of data, the Oceanic Fisheries Programme (OFP) of the Pacific Community (SPC), 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 regarding these important data gaps.

2. STATUS OF DATA GAPS

4. Data gaps and other issues related to the provision of data have been reported at each Scientific Committee meeting since the first in 2005 [the first data gaps paper for SC1 (Williams and Lawson, 2005) and the most recent data gaps paper for SC17 (Williams, 2021)].

5. While there has been some work in the resolution of data gaps that were reported in previous papers, the continuing restrictions to travel due to COVID-19 has impacted progress and work has only been conducted remotely, at best, without the benefits that physical meetings would provide, such as in-person side meetings outside plenary to resolve specific issues. Therefore, there are no new developments to report this year other than to respond to the recommendations from SC17, which are provided in Sections 2.3 and 2.4.

6. SPC-OFP deal with data issues on a daily basis. There were a number of issues successfully resolved over the past year through engagement directly with CCMs. These issues are too numerous to mention here although it is worthy to mention the cooperative nature by all CCMs is very much appreciated.

2.1 Data gaps reported elsewhere

7. 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, or other papers that provide more detail on recent developments to address specific gaps. These sections will continue to be referenced in future versions of this paper when there are significant developments and until they are resolved.

8. Please refer to the following categories of data gaps:

- **Major data gaps for key fleets** (Williams, 2014 – Section 2.1.4)
    - Chinese Taipei STLL (small-scale longline) fleet prior to 2004
- **Operational catch and effort data** (Williams, 2019 – Section 2.2), noting the need to continue the arrangement whereby the WCPFC scientific services provider has access to historical operational data for stock assessment purposes (see OFP, 2015a and OFP, 2015b).
- **Operational data coverage rates** (Williams, 2014 – Section 2.2)
- **Indonesia, Philippines and Vietnam tuna fishery data** (Williams, 2020a – Section 2.2)
- **Key shark species** (Williams, 2017 – Section 2.3)
- **Nationality of the catch** (Williams, 2014 and Williams, 2020a – Section 2.3 in both papers);
- **Aggregate catch and effort data** (Williams, 2014 – Section 2.6)
- **Species composition data for purse seiners** (Williams, 2014 – Section 2.8; Peatman et al., 2020; Peatman et al., 2021; Peatman et al., 2022)
- **Annual catch estimates by EEZ** (Williams, 2015 – Section 2.3)
- **Number of vessels in the aggregate data** (Williams, 2015 – Section 2.4)
- **Conversion factor data** (MacDonald, J. et al., 2022)

9. Some historical gaps could be resolved with the application of resources to conduct data rescue projects, for example. However, there are also some historical gaps that cannot be resolved but have been documented to explain those gaps in the context of the scientific work of the Commission.

2.2 Impact of reduced observer coverage on purse seine species catch estimates

10. The observer coverage in the purse seine fishery in 2020 and 2021 was much lower than the 100% target of the past decade due to the impacts of COVID-19; the estimated coverage for 2020 was ~50%, and only ~10% in 2021.

11. Even at 100% observer coverage, only ~0.1% of the catch can be sampled for species composition estimation, given the disruptions sampling causes to the brailing operation (and therefore is an objective to resolve under Project 60). At this level of sampling, the precision of the estimates declines with progressively higher resolution of the strata required (that is, estimates at the set level are not precise).

12. To determine the potential impacts of reduced observer coverage on the purse seine tuna species catch estimates (including the aggregate data used in assessments), Peatman et al. (2022) conducted a sub-sampling exercise under the WCPFC Project 60 work plan to assess the precision in grab-sample based estimates of species compositions in observer data for years 2016–2019 with reduced rates of observer coverage.

13. The latest sub-sampling analysis suggests that the reduction in observer coverage rates in 2020 and 2021 has significantly reduced the precision in estimated species proportions, with increases in CVs in the region of 90 to 250% depending on the species and set type. For more information, refer to Peatman et al. (2022).

2.3 Potential of purse seine processor data to validate purse seine species catch estimates

14. Purse seine processor (cannery) data have been identified as a potentially important source of data for verifying the estimates of purse seine tuna species catch determined from observer data (Williams, 2020b). The COVID-19 pandemic has resulted in a reduction in observer coverage in recent years (~50% in 2020 and ~10% in 2021), and therefore represents another important reason for considering the use of cannery data in estimation of purse seine tuna species composition (Peatman et al., 2022).

15. The WCPFC Scientific Service Provider (SSP) could potentially use these data in the process of verifying the estimates of purse seine tuna species composition obtained from the observer data, but the coverage of cannery data submitted to date is unfortunately too low (see Table 3 in Peatman et al., 2022).

16. The Guidelines for the Voluntary Submission of Purse seine Processor data by CCMs to the Commission provide a mechanism for improving the coverage of cannery data for potential use. We are therefore proposing the consideration of a future WCPFC project to cover, *inter alia*, the following areas:

i. The SSP or WCPFC Contractor to work with relevant CCM port and flag states to obtain purse seine processor data not yet provided, using the guidelines to ensure data confidentiality.
ii. The SSP or WCPFC Contractor to work with relevant CCMs to review the protocols for collecting purse seine processor data at each source, including species identification.
iii. The SSP to continue the management and data quality assurance of purse seine processor data submission, including the identification of gaps and resolving duplicate processor data (e.g. when valuable Final Outturn [FOT] data are provided from a different source).

2.4 Coverage levels for each operational data field by year and fleet

17. SC17 noted that the evaluation on data gaps regarding provision of operational catch and effort data required under the Scientific Data to be Provided by the Commission is based on whether the field is included in a data submission, rather than on an evaluation of data quality or completeness. Even if a data field is included in the data submission, it is possible that it may not be provided for each fishing operation, but this level of completeness (coverage) for each data field has not been undertaken to date.

18. The following SC17 recommendation requesting the coverage for each operational data field, is aimed at improving the quality and completeness of the data in the future.

Data gaps of the Commission

SC17 recommended that the SSP add a new annex to the data gaps paper to include a breakdown of the coverage levels for each operational data field by year and fleet.

19. The tables providing a breakdown of the coverage levels for each operational data field by year and fleet are considerable, so they have been included in a separate SC18 Information Paper – Tables of coverage levels for operational data fields submitted to the WCPFC (WCPFC-SC18-2022-ST-IP10), for SC18 review.

20. SPC-OFP has already started the process to engage with relevant CCMs to resolve some of the gaps presented in these tables.

2.5 Proposal to enhance the Scientific data submission guidelines

21. The Attachment K, Annex 1. of the Scientific Data to be Provided by the Commission provides the standards for the provision of OPERATIONAL LEVEL CATCH AND EFFORT data to the Commission. These more qualitative standards were developed to include an indication of the binding and non-binding requirements, although it may not be clear to the data technicians tasked to prepare the national data submissions.

22. The SC17 data gaps paper (Williams, 2021) provided a proposal which will not change the content of the scientific data submission guidelines but provides an additional annex to enhance the understanding of the standards for operational catch and effort data through a tabular structure, which is in line with what data technicians are expected to deal with. This additional information is also consistent with, and provides better linkages to, the agreed WCPFC Standards, Specifications and Procedures (SSPs) for Electronic Reporting in the WCPFC – operational catch and effort data.

23. SC17 reviewed this proposal and "*... recommended the SSP enhance the scientific data submission guidelines by preparing operational data field tables for longline, purse seine and pole and line operational data for SC18 review.*"

24. ANNEX 1 of this paper has been prepared in response to this recommendation and outlines the proposed table structure for the operational longline catch and effort data requirements, based on the text under Attachment K, Annex 1 of the "*Scientific Data to be Provided to the Commission*". The addition of these tables is aimed to provide guidance to members on the preferred structure of operational data to be submitted to the WCPFC and the SSP will continue to liaise with members to hopefully transition to this standard structure in the future (noting that data submissions by some members already adhere to this standard structure).

25. SC18 is invited to note the benefits of this proposal and recommend their inclusion as an additional ANNEX of the "*Scientific Data to be Provided to the Commission*", with an additional paragraph under ***Section 3. Operational level catch and effort data*** as follows:

> "*Annex 2 provides tables of the operational level catch and effort data fields for longline, purse seine and pole-and-line gears in order to clarify and assist members in understanding the requirements of each data field and thereby facilitate the submission of data to the WCPFC.*"

3. RECENT PROVISIONS OF SCIENTIFIC DATA TO THE WCPFC

26. 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 "7. Time periods covered and schedule for the provision of data" at https://www.wcpfc.int/system/files/Att%20G_Revised%20SciData%20decision.pdf).

27. 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 TCC18 (September 2022).

3.1 Annual Catch Estimates

28. Tables 1 and 2 list the dates on which catch estimates for 2020 and 2021, 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).

29. All CCMs provided annual catch estimates for 2020 and 2021, by the respective deadlines (30 April 2021 and 30 April 2022). Indonesia and Philippines typically schedule their annual catch estimates review workshops after the submission deadline but prepared and submitted provisional 2021 estimates from these countries prior to the 30th April deadline this year. Revisions to annual catch estimates were also received from other CCMs prior to July 2022, and we expect further revisions to be included in the WCFPC Part 1 Annual Reports.

30. The quality of estimates provided continues to improve with further reduction in the number of data-gap notes.

3.2 Aggregate Catch/Effort data

31. Tables 3 and 4 list the dates on which aggregated catch and effort data were provided for 2020 and 2021, 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.

32. 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 before the deadline (30 April 2022).

33. Notable issues in aggregate catch/effort data where progress has been made in recent years have been described in previous versions of this paper, including the continued improvement with the inclusion of key shark species catches in the aggregate data submissions.

34. The main gaps in the provision of 2021 aggregate catch/effort data are similar to recent years, namely

i. the absence of key shark species catch in Indonesia,
ii. the low coverage of operational data available to generate aggregate data for the Vietnam and Indonesia fleets, and
iii. the continued under-reporting of key shark species in general.

35. The timeliness of the provision of aggregate catch/effort data has been maintained from recent years with most CCMs providing 2021 data by the deadline of 30th April 2022.

3.3 Operational catch/effort data

36. Tables 5 and 6 show the schedule for the submissions of 2020 and 2021 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 gaps in the 2021 data submissions include:

- The low coverage in the data provided for the Indonesia and Vietnam fleets
- The non-provision of several required fields in the Indonesia operational data, for example, the hooks set and hooks between floats for the longline fishery.
- Catches of key shark species are not included in the Indonesia fleet data, although the 2021 data included, for the first time, some records of Mako shark catch for the small-scale fisheries.

37. Operational catch/effort data for 2021 were provided before the 30 April 2022 deadline by all CCMs except Indonesia, who needed more time to compile these data and they were provided in July 2022.

38. Most of the significant gaps in operational data have been resolved in recent years, as noted in Section 2.2 of Williams (2019). The coverage of operational data for some fleets is not complete (100%), although we expect more operational data for 2020 and 2021 will be submitted over the next six months.

39. The provision of **historical** operational data for the Asian tuna fleets (China, Indonesia, Japan, Korea and Chinese Taipei) remains the main data gap for the WCPFC and it is hoped that these data can be provided in the near future. As reported in previous years, 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.

3.4 Size data

40. Table 7 shows the schedule for the submissions of 2021 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 2021 size data include one fleet (US albacore troll) where the logistics of collecting size data are challenging, and for a number of fleets (Ecuador, El Salvador, EU-Spain, Kiribati, Nauru, Tuvalu and Vanuatu) where the impacts of COVID-19 prevented any size data collection (through observers). We also note that provision of size data is only binding at the CCM level (that is, if data are provided for one gear for that CCM, then that submission satisfies the provision of size data even if data have not been provided for another gear type for that CCM).

3.5 Overall scientific data submission evaluation

41. 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 2 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.***

42. For the submission of 2021 data, 32 of the 34 CCMs/entities (94%) were evaluated as completely satisfying (100%) the **binding** requirements for the provision of scientific data to the WCPFC. The two (2) CCMs that did not achieve 100% (for 2021 data submissions) were at least at 84% or greater, noting that some of these data gaps may be resolved before TCC18.

3.6 Regional Observer Programme (ROP) data

43. The SPC/OFP has been processing observer data on behalf of its member countries for more than 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).

44. Panizza et al. (2022) provides a range of observer data summaries and describes the recent developments, future work and initiatives with respect to ROP data management. This paper includes

1. Tables summarizing current coverage of available observer data by gear;
2. Tables summarizing observer data by Pacific Island observer providers;
3. Tables summarizing data generated from E-Monitoring trials that have been provided to the Scientific Services Provider.

4. RECENT DEVELOPMENTS IN DISSEMINATION OF DATA

4.1 WCPFC Data products

45. A range of data products have been made available on the WCPFC web site and these include:

- The WCPFC Tuna Fishery Yearbook presents annual catch estimates in the WCPFC Statistical Area from 1950 to 2020. https://www.wcpfc.int/statistical-bulletins
- The WCPFC Annual Catch and Effort Estimates (ACE) Tables by fleet include the essential Annual Fisheries Information Tables I – IV and Tabular Annual Fisheries Information Tables 1-5 and Figures 1-3 required in the Annual Report Part 1. https://www.wcpfc.int/ace-by-fleet.
- The WCPFC Data Catalogue (http://www.wcpfc.int/wcpfc-data-catalogue-0) which currently covers data provisions up to 2020. 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).
- Public domain aggregate catch/effort data products (six different combinations of time/area). https://www.wcpfc.int/public-domain.
- Public domain bycatch data providing tables of aggregated bycatch data and associated effort and observer data for the WCPFC using the Bycatch Data Exchange Protocol (BDEP) approach. https://www.wcpfc.int/public-domain-bycatch.

4.2 Public domain size data

46. SC17 recommended publishing aggregated size data via the WCPFC public domain web page. The WCPFC Scientific Service Provider (SSP) has compiled a public domain version of aggregated fish SIZE (Length) data provided by Commission Members (CCMs) and Cooperating Non-members (CNMs). The public domain size data have been prepared for dissemination in accordance with the current "Rules and Procedures for the Protection, Access to, and Dissemination of Data Compiled by the Commission" or ("RAP"). The WCPFC public domain SIZE data can be accessed at https://www.wcpfc.int/public-size-data.

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TABLES

Table 1. Provision of 2020 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	30 Apr 2021		G, H	III
Canada	TR	28 Apr 2021			III
China	LL, PS	30 Apr 2021			III
Cook Islands	LL, PS, TR	09 Apr 2021		G, H	III
Ecuador	PS	28 Apr 2021			III
El Salvador	PS	25 Apr 2021			III
European Union	LL, PS	21 Apr 2021			III
Federated States of Micronesia	LL, PS	09 Apr 2021		G, H	III
Fiji Islands	LL, PL	09 Apr 2021		G, H	III
French Polynesia	LL, PL, OT	09 Apr 2021		G, H	III
Indonesia	LL	30 Apr 2021		F	III
	PS, PL, HL, TR, OT	30 Apr 2021		F, J	III
Japan	PS, LL	21 Apr 2021		F, C	III
	PL, TR, OT	21 Apr 2021		F	III
Kiribati	LL, PS, OT	09 Apr 2021		G, H	III
Republic of Korea	LL, PS	30 Apr 2021		H	III
Marshall Islands	LL, PS	09 Apr 2021		G, H	III
Nauru	PS	09 Apr 2021		G, H	III
New Caledonia	LL	09 Apr 2021		G, H	III
New Zealand	LL, PS, TR, PL	30 Apr 2021		G, H	III
Niue	LL	09 Apr 2021		D	III
Palau	LL, PL	09 Apr 2021		G, H	III
Papua New Guinea	LL, PS	09 Apr 2021		G, H	III
Philippines	PS	14 Apr 2021		F, G, H	III
	LL	14 Apr 2021		D	III
	HL, RN, OT	14 Apr 2021		F, J	III
Samoa	LL	09 Apr 2021		G, H	III
Solomon Islands	LL	09 Apr 2021		G, H	III
	PS, PL	09 Apr 2021		H	III
Chinese Taipei	LL, PS	30 Apr 2021			III
Tokelau	OT	09 Apr 2021			III
Tonga	LL	09 Apr 2021		G, H	III
Tuvalu	LL, PS, OT	09 Apr 2021		G, H	III
United States	LL, PS, TR, HL, PL	29 Apr 2021		G, H	III
Vanuatu	LL, PS	09 Apr 2021		G, H	III
Vietnam	LL/HL, GN, PS	23 Apr 2021		F, L	III
Wallis and Futuna	LL	09 Apr 2021		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 SC14.
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)
L	Breakdown of vessels by GRT not provided but brekdown by HP provided and an understanding that most vessels are < 50 GRT

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 2021 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 2022		G, H	III
Canada	TR	28 Apr 2022			III
China	LL, PS	25 Apr 2022			III
Cook Islands	LL, PS, TR	07 Apr 2022		G, H	III
Ecuador	PS	27 Apr 2022			III
El Salvador	PS	29 Apr 2022			III
European Union	LL, PS	30 Apr 2022			III
Federated States of Micronesia	LL, PS	07 Apr 2022		G, H	III
Fiji Islands	LL, PL	07 Apr 2022		G, H	III
French Polynesia	LL, PL, OT	07 Apr 2022		G, H	III
Indonesia	LL	29 Apr 2022		F	III
	PS, PL, HL, TR, GN, OT	29 Apr 2022		F, J	III
Japan	PS, LL	28 Apr 2022		F, C	III
	PL, TR, OT	28 Apr 2022		F	III
Kiribati	LL, PS, OT	07 Apr 2022		G, H	III
Republic of Korea	LL, PS	19 Apr 2022		H	III
Marshall Islands	LL, PS	07 Apr 2022		G, H	III
Nauru	PS	07 Apr 2022		G, H	III
New Caledonia	LL	07 Apr 2022		G, H	III
New Zealand	LL, PS, TR, PL	29 Apr 2022		G, H	III
Niue	LL, OT	07 Apr 2022		D	III
Palau	LL, PL	07 Apr 2022		D	III
Papua New Guinea	LL	07 Apr 2022		D	III
Papua New Guinea	PS	07 Apr 2022		G, H	III
Philippines	PS	08 Apr 2022		G, H	III
	LL	08 Apr 2022		D	III
	HL, RN, OT	08 Apr 2022		F, J	III
Samoa	LL	07 Apr 2022		G, H	III
Solomon Islands	LL	07 Apr 2022		G, H	III
	PS, PL	07 Apr 2022		H	III
Chinese Taipei	LL, PS	28 Apr 2022			III
Tokelau	OT	07 Apr 2022			III
Tonga	LL	07 Apr 2022		G, H	III
Tuvalu	LL, PS, OT	07 Apr 2022		G, H	III
United States	LL, PS, TR, HL, PL	29 Apr 2022		G, H	III
Vanuatu	LL, PS	07 Apr 2022		G, H	III
Vietnam	LL/HL, GN, PS	29 Apr 2022		F, L	III
Wallis and Futuna	LL	07 Apr 2022		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 this year's SC meeting.
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)
L	Breakdown of vessels by GRT not provided but brekdown by HP provided and an understanding that most vessels are < 50 GRT

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 2020 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	30 Apr 2021		C,I	III
Canada	TR	28 Apr 2021			III
China	LL (DWFN)	30 Apr 2021		P	III
	PS	30 Apr 2021		P	III
Cook Islands	LL, PS, TR	09 Apr 2021		J, O	III
Ecuador	PS	28 Apr 2021		C	III
El Salvador	PS	30 Apr 2021		C	III
European Union	LL	21 Apr 2021		C, F, P, R	III
	PS	21 Apr 2021		C	III
Federated States of Micronesia	LL, PS	09 Apr 2021		J, O	III
Fiji Islands	LL, PL	09 Apr 2021		J, O	III
French Polynesia	LL	09 Apr 2021		J, O	III
Indonesia	LL, PS, PL	30 Apr 2021	18	Q, O, S, T	II (50%)
	HL, TR, GN, OT	30 Apr 2021		N, Q	III
Japan	LL	21 Apr 2021		A, F,H, I, L, R	III
	PL	21 Apr 2021		L	III
	PS	21 Apr 2021		L	III
Kiribati	LL, PS	09 Apr 2021		J, O	III
Marshall Islands	LL, PS	09 Apr 2021		J, O	III
Nauru	PS	09 Apr 2021		J, O	III
New Caledonia	LL	09 Apr 2021		J, O	III
New Zealand	LL, PL, HL, PS	30 Apr 2021		C,I	III
Niue	LL	09 Apr 2021		E	III
Palau	LL, PL	09 Apr 2021		J, O	III
Papua New Guinea	LL, PS	09 Apr 2021		J, O	III
Philippines	PS	14 Apr 2021		M, Q	III
	LL	14 Apr 2021		E	III
	HL, RN, OT	14 Apr 2021		M, N, Q, T	III
Republic of Korea	LL	30 Apr 2021		P	III
	PS	30 Apr 2021		P	III
Samoa	LL	09 Apr 2021		J, O	III
Solomon Islands	LL	09 Apr 2021		J, O	III
	PL, PS	09 Apr 2021		J	III
Chinese Taipei	LL (DWFN)	30 Apr 2021		H, I, L	III
	LL (small)	30 Apr 2021		H, I, L	III
	PS	30 Apr 2021		L	III
Tonga	LL	09 Apr 2021		J, O	III
Tuvalu	LL, PS	09 Apr 2021		J, O	III
United States	LL (American Samoa)	29 Apr 2021		B, I	III
	LL (Hawaii)	29 Apr 2021		B, I	III
	PS (Treaty)	29 Apr 2021		J	III
	TR	29 Apr 2021		B	III
Vanuatu	LL, PS	09 Apr 2021		J, O	III
Vietnam	LL/HL	23 Apr 2021	18	M, Q, S, T	II (95%)
	PS, GN	23 Apr 2021	18	M, Q, S, T	II (92%)
Wallis and Futuna	LL	09 Apr 2021		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)
T	Aggregate data not provided, but can be estimated from Operational data submitted to the WCPFC and landings data collected under the WPEA project.

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 2021 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 2022		C,I	III
Canada	TR	28 Apr 2022			III
China	LL (DWFN)	25 Apr 2022		P	III
	PS	25 Apr 2022		E	III
Cook Islands	LL, PS, TR	07 Apr 2022		J, O	III
Ecuador	PS	27 Apr 2022		C	III
El Salvador	PS	29 Apr 2022		C	III
European Union	LL	30 Apr 2022		C, F, P, R	III
	PS	30 Apr 2022		C	III
Federated States of Micronesia	LL, PS	07 Apr 2022		J, O	III
Fiji Islands	LL, PL	07 Apr 2022		J, O	III
French Polynesia	LL	07 Apr 2022		J, O	III
Indonesia	LL, PS, PL	12 Jul 2022	18	Q, O, S, T	II (50%)
	HL, TR, GN, OT			N, Q	III
Japan	LL	28 Apr 2022		A, F,H, I, L, R	III
	PL	28 Apr 2022		L	III
	PS	28 Apr 2022		L	III
Kiribati	LL, PS	07 Apr 2022		J, O	III
Marshall Islands	LL, PS	07 Apr 2022		J, O	III
Nauru	PS	07 Apr 2022		J, O	III
New Caledonia	LL	07 Apr 2022		J, O	III
New Zealand	LL, PL, HL, PS	29 Apr 2022		C,I	III
Niue	LL	07 Apr 2022		E	III
Palau	LL, PL	07 Apr 2022		E	III
Papua New Guinea	LL	07 Apr 2022		E	III
	PS	07 Apr 2022		J, O	III
Philippines	PS	08 Apr 2022		M, Q	III
	LL	08 Apr 2022		E	III
	HL, RN, OT	08 Apr 2022		M, N, Q, T	III
Republic of Korea	LL	19 Apr 2022		P	III
	PS	19 Apr 2022		P	III
Samoa	LL	07 Apr 2022		J, O	III
Solomon Islands	LL	07 Apr 2022		J, O	III
	PL, PS	07 Apr 2022		J	III
Chinese Taipei	LL (DWFN)	28 Apr 2022		H, I, L	III
	LL (STLL)	28 Apr 2022		H, I, L	III
	PS	28 Apr 2022		L	III
Tonga	LL	07 Apr 2022		J, O	III
Tuvalu	LL, PS	07 Apr 2022		J, O	III
United States	LL (American Samoa)	29 Apr 2022		B, I	III
	LL (Hawaii)	29 Apr 2022		B, I	III
	PS (Treaty)	29 Apr 2022		J	III
	TR	29 Apr 2022		B	III
Vanuatu	LL, PS	07 Apr 2022		J, O	III
Vietnam	LL/HL	23 Apr 2022	18	M, Q, S, T	II (95%)
	PS, GN	23 Apr 2022	18	M, Q, S, T	II (92%)
Wallis and Futuna	LL	30 Apr 2022		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)
T	Aggregate data not provided, but can be estimated from Operational data submitted to the WCPFC and landings data collected under the WPEA project.

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 2020 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	30 Apr 2021		E	III	100%
Canada	TR	28 Apr 2021			III	100%
China	LL	30 Apr 2021	11	I	III	70% *
	PS	30 Apr 2021			III	100%
Cook Islands	LL, PS	09 Apr 2021		C, J	III	100%
Ecuador	PS	28 Apr 2021	11	F	III	80% *
El Salvador	PS	30 Apr 2021			III	100%
European Union	LL	21 Apr 2021		E	III	100%
	PS				III	100%
Federated States of Micronesia	LL	09 Apr 2021	11	C, J, F	III	60% *
	PS		11	C, J	III	85% *
Fiji Islands	LL, PL	09 Apr 2021		C, J	III	100%
French Polynesia	LL	09 Apr 2021		C, J, F	III	100%
	OT	09 Apr 2021		G, L	III	#
Indonesia	LL, PS, PL	30 Apr 2021	1,2,4,5,6,9	K	II (96%)	< 10%
	HL, TR, GN, OT			G, K	III	#
Japan	PS, PL	21 Apr 2021		E, M	III	100%
	LL	21 Apr 2021	11	E, M	III	65% *
Kiribati	LL	09 Apr 2021		C, J, F	III	100%
	PS		11	C, J, F	III	95% *
Republic of Korea	LL	30 Apr 2021		E	III	100%
	PS			E	III	100%
Marshall Islands	LL	09 Apr 2021		C, J	III	100%
	PS			C, J	III	100%
Nauru	PS	09 Apr 2021		C, J	III	100%
New Caledonia	LL	09 Apr 2021		C, J	III	100%
New Zealand	LL	30 Apr 2021		E, F	III	100%
	PL, TR, PS			E	III	100%
Niue	LL	09 Apr 2021		A	III	N/A
Palau	LL	09 Apr 2021		C, J	III	100%
Papua New Guinea	LL	09 Apr 2021		C, J, F	III	100%
	PS		11	C, J, F	III	95% *
Philippines	PS	14 Apr 2021	11	J, K	III	70% *
	LL	14 Apr 2021		A	III	N/A
	HL, RN, OT			G, K	III	#
Samoa	LL	09 Apr 2021	11	C, J	III	85% *
Solomon Islands	LL	09 Apr 2021	11	C, J	III	80% *
	PS			C, J, F	III	100%
	PL			C, J	III	100%
Chinese Taipei	LL	30 Apr 2021		E, F	III	100%
	PS	30 Apr 2021		F	III	100%
Tonga	LL	09 Apr 2021		C, J	III	100%
Tuvalu	LL, PS	09 Apr 2021		C, J	III	100%
United States	LL (American Samoa)	29 Apr 2021		E	III	100%
	LL (CNMI, GUAM)	29 Apr 2021		E	III	100%
	LL (Hawaii)	29 Apr 2021		E	III	100%
	PL, HL, TR (trop)			G	III	#
	PS	29 Apr 2021		B	III	100%
	TR (ALB)	29 Apr 2021			III	100%
Vanuatu	LL	09 Apr 2021		C, J, F	III	100%
	PS	09 Apr 2021		C, J, F	III	100%
Vietnam	LL/HL	23 Apr 2021	6, 8	G, H, K, F, N	III	< 10%
	PS, GN	23 Apr 2021	6, 8	G, H, K, F, N	III	< 10%
Wallis and Futuna	LL	30 Apr 2021		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	Represents a range of French Polynesia small-scale, artisanal gears taking tuna with a range of fishing methods. Vessels include the poti marara and bonitier fleets.
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
N	National logbook data provided, but does not completely satisfy the WCPFC operational data field requirements as yet.
O	Trip-level departure, return/unloading/transhipment information available within daily records, and/or through VMS.

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 2021 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 2022		E	III	100%
Canada	TR	28 Apr 2022			III	100%
China	LL	25 Apr 2022	6	I	III	40% *
	PS	25 Apr 2022		A	III	100%
Cook Islands	LL, PS	07 Apr 2022		C, J	III	100%
Ecuador	PS	27 Apr 2022	11	F	III	82% *
El Salvador	PS	29 Apr 2022			III	100%
European Union	LL	30 Apr 2022		E	III	100%
	PS				III	100%
Federated States of Micronesia	LL	07 Apr 2022	11	C, J, F	III	100%
	PS		11	C, J	III	100%
Fiji Islands	LL, PL	07 Apr 2022		C, J	III	100%
French Polynesia	LL	07 Apr 2022		C, J, F	III	100%
	OT	07 Apr 2022		G, L	III	#
Indonesia	LL, PS, PL	12 Jul 2022	1,2,4,5,6,9	K	II (96%)	< 10%
	HL, TR, GN, OT			G, K	III	#
Japan	PS, PL	28 Apr 2022		E, M	III	100%
	LL	28 Apr 2022	11	E, M	III	80% *
Kiribati	LL	07 Apr 2022		C, J, F, O	III	80% *
	PS		11	C, J, F	III	100%
Republic of Korea	LL	19 Apr 2022		E, O	III	100%
	PS			E	III	100%
Marshall Islands	LL	07 Apr 2022		C, J	III	100%
	PS			C, J	III	95% *
Nauru	PS	07 Apr 2022		C, J	III	100%
New Caledonia	LL	07 Apr 2022		C, J	III	100%
New Zealand	LL	29 Apr 2022		E, F	III	90% *
	PL, TR, PS			E	III	100%
Niue	LL	07 Apr 2022		A	III	N/A
Palau	LL	07 Apr 2022		A	III	100%
Papua New Guinea	LL	07 Apr 2022		A	III	100%
	PS		11	C, J, F	III	80% *
Philippines	PS	08 Apr 2022	11	J, K	III	70% *
	LL	08 Apr 2022		A	III	N/A
	HL, RN, OT			G, K	III	#
Samoa	LL	07 Apr 2022	11	C, J	III	100%
Solomon Islands	LL	07 Apr 2022	11	C, J	III	100%
	PS			C, J, F	III	100%
	PL			C, J	III	100%
Chinese Taipei	LL	28 Apr 2022		E, F, O	III	90% *
	PS	28 Apr 2022		F	III	100%
Tonga	LL	07 Apr 2022		C, J	III	100%
Tuvalu	LL, PS	07 Apr 2022		C, J	III	100%
United States	LL (American Samoa)	29 Apr 2022		E	III	100%
	LL (CNMI, GUAM)	29 Apr 2022		E	III	100%
	LL (Hawaii)	29 Apr 2022		E	III	100%
	PL, HL, TR (trop)			G	III	#
	PS	29 Apr 2022		B	III	100%
	TR (ALB)	29 Apr 2022			III	100%
Vanuatu	LL	07 Apr 2022		C, J, F	III	90% *
	PS	07 Apr 2022		C, J, F	III	100%
Vietnam	LL/HL	29 Apr 2022	6, 8	G, H, K, F, N	III	< 10%
	PS, GN	29 Apr 2022	6, 8	G, H, K, F, N	III	< 10%
Wallis and Futuna	LL	30 Apr 2022		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	Represents a range of French Polynesia small-scale, artisanal gears taking tuna with a range of fishing methods. Vessels include the poti marara and bonitier fleets.
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
N	National logbook data provided, but does not completely satisfy the WCPFC operational data field requirements as yet.
O	Trip-level departure, return/unloading/transhipment information available within daily records, and/or through VMS.

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 2021 Size data to the WCPFC

FLAG STATE / ENTITY	GEAR(s)	Date Submitted	DATA-GAP Notes	General NOTES	TIER-SCORING EVALUATION LEVEL
Australia	LL	30 Apr 2022		B, C	III
	PL, PS, TR			J	III
Canada	TR	28 Apr 2022		A	III
China	LL	25 Apr 2022		A, H	III
	PS	25 Apr 2022		A, H	III
Cook Islands	LL, PS	07 Apr 2022		A, H, K	III
Ecuador	PS			H	I
El Salvador	PS			H	I
European Union	LL			L, M, N	III
	PS	30 Apr 2022		H	III
Federated States of Micronesia	LL, PS	07 Apr 2022		A, H, I, K	III
Fiji Islands	LL, PL	07 Apr 2022		A, H, K	III
French Polynesia	LL	07 Apr 2022		A, H, K	III
Indonesia	LL, PS, OT	25 Mar 2022		A, K	III
Japan	PS	28 Apr 2022		A, H	III
	LL, PL	28 Apr 2022		A, H, I	III
Kiribati	LL, PS			A, H, K	I
Republic of Korea	LL, PS	19 Apr 2022		A, H	III
Marshall Islands	LL, PS	07 Apr 2022		A, H, K	III
Nauru	PS			A, H, K	I
New Caledonia	LL	07 Apr 2022		A, H, K	III
New Zealand	LL, PL, PS, TR	29 Apr 2022		A, H	III
Niue	LL	07 Apr 2022		G	III
Palau	LL, PL	07 Apr 2022		A, H, K	III
Papua New Guinea	LL, PS	07 Apr 2022		A, H	III
Philippines	PS, HL, RN, OT	08 Apr 2022		A, H, K	III
	LL	08 Apr 2022		G	III
Samoa	LL	07 Apr 2022		A, H, K	III
Solomon Islands	LL, PS, PL	07 Apr 2022		A, H	III
Chinese Taipei	LL	28 Apr 2022		A, H, I	III
	PS	28 Apr 2022		A, H, I	III
Tonga	LL	07 Apr 2022		A, H, K	III
Tuvalu	LL, PS			A, H, N	I
United States	LL (American Samoa)	28 Apr 2022		B, E, F	III
	LL (Hawaii)	28 Apr 2022		B, E, F	III
	HL	28 Apr 2022		B, E, F	III
	TR			M	III
	PS	28 Apr 2022		A, H, K	III
Vanuatu	LL, PS			A, H, I, K	I
Vietnam	LL, PS	30 Apr 2022		M	III
	GN	30 Apr 2022		M	III
Wallis and Futuna	LL	09 Apr 2022		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.
M	Data not provided, despite activity in this fishery. However, this gap is not considered a WCPFC compliance issue.
N	No size data collection for this fleet due to the impact of COVID-19

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 compliance evaluation for the provision of 2021 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%	100%	100%
Cook Islands	LL, PS, TR	100%	100%	100%	100%	100%
Ecuador	PS	100%	100%	100%	100%	100%
El Salvador	PS	100%	100%	100%	100%	100%
European Union	LL	100%	100%	100%	100%	100%
	PS	100%	100%	100%	100%	
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	100%	50%	85%	100%	84%
Japan	PS, LL, PL, TR, OT	100%	100%	100%	100%	100%
Kiribati	LL, PS, OT	100%	100%	100%	100%	100%
Republic of Korea	LL, PS	100%	100%	100%	100%	100%
Marshall Islands	LL, PS	100%	100%	100%	100%	100%
Nauru	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%
Samoa	LL	100%	100%	100%	100%	100%
Senegal	LL	100%	100%	100%	100%	100%
Solomon Islands	LL, PS, PL	100%	100%	100%	100%	100%
Chinese Taipei	LL, PS	100%	100%	100%	100%	100%
Tokelau	OT	100%	100%	100%	100%	100%
Tonga	LL	100%	100%	100%	100%	100%
Tuvalu	LL, PS, OT	100%	100%	100%	100%	100%
United States	LL, PS, HL, PL	100%	100%	100%	100%	100%
	TR	100%	100%	100%	100%	
Vanuatu	LL, PS	100%	100%	100%	100%	100%
Vietnam	LL, GN, PS	100%	93%	100%	100%	98%
Wallis and Futuna	LL	100%	100%	100%	100%	100%

ANNEX 1 – Proposed additional ANNEX to the "Scientific Data to be Provided to the Commission"

A1.1 Longline operational data – TRIP INFORMATION

FIELD	Reference text in Attachment K, Annex 1.	Binding	Notes on recommended submission requirements
TRIP IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE
VESSEL IDENTIFIER	Name of the **vessel**, **country of registration**, **registration number**, and **international radio call sign**: The registration number is the number assigned to the vessel by the state that has flagged the vessel. A code may be used as a vessel identifier instead of the name of the vessel, registration number and call sign for vessels that have fished and that intend to fish only in the waters of national jurisdiction of the State that has flagged the vessel.	**YES**	Using a vessel identifier field (ideally the WCPFC VID) removes the redundancy of including all vessel attributes with each trip record and ensures standardisation and consistency through referencing the WCPFC Vessel Registry database. Please provide a separate list of Vessel attributes linked to the Vessel identifier field.
PORT/PLACE OF DEPARTURE	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). If the start of a trip coincides with recommencing fishing operations or transiting to a fishing area after transshipping part or all of the catch at sea, then "Transshipment at sea" shall be reported in lieu of the port of departure.	**YES**	Where possible, please provide a standardised Port location code through the following facility https://unece.org/trade/cefact/unlocode-code-list-country-and-territory The WCPFC will consider the establishment of WCPFC LOCATION CODEs in the future.
PORT/PLACE OF UNLOADING	If the end of a trip coincides with transhipping part or all of the catch at sea, then "ATSEA" code shall be reported in lieu of the port of unloading.	**YES**	Where possible, please provide a standardised Port location code through the following facility https://unece.org/trade/cefact/unlocode-code-list-country-and-territory The WCPFC will consider the establishment of WCPFC LOCATION CODEs in the future.
DATE OF DEPARTURE	**Date of departure from Port**. If the start of a trip coincides with recommencing fishing operations or transiting to a fishing area after transhipping part or all of the catch at sea, then date for the transhipment at sea shall be indicated.	**YES**	Recommend using ISO 8601 – Date only format
DATE OF UNLOADING /TRANSHIPMENT	**Date of return to Port** If the end of a trip coincides with transhipping part or all of the catch at sea, then date for the transhipment at sea shall be indicated.	**YES**	Recommend using ISO 8601 – Date only format

A1.2 Longline operational data – ACTIVITY INFORMATION

FIELD	Reference text in Attachment K, Annex 1.	Binding	Notes on recommended submission requirements
TRIP IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE
ACTIVITY IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY
ACTIVITY	**Activity**: This item shall be reported for each set. Activities should include "a set".	**YES**	Suggest using a standardised numeric code for each activity consistent with the WCFPC E-Reporting data field standards. 1 – "a set"; [2 – "a day searched, but no set made"]; 3 – "no fishing – in transit"; 4 – "no fishing – gear breakdown"; 5 – "no fishing – bad weather"; 6 – "no fishing – in port".
	Activity: This item … should be reported for days on which no sets were made, from the start of the trip to the end of the trip. Activities should include "no fishing – in transit"; "no fishing – gear breakdown"; "no fishing – bad weather"; and "no fishing – in port".	**NO**	
DATE/TIME ACTIVITY	**Date of start of set and time of start of set**. CCMs shall provide information on how their vessels report time zone/format.	**YES**	
	The date and start of set time should be GMT/UTC. If no sets are made, the date and main activity should be reported.	**NO**	Please provide the NOON DATE/TIME for each day that the vessel is at sea when a set was not made on that day.
POSITION OF START OF SET	**Position of start of set:**	**YES**	Please provide position according to ISO 6709 – Positions in degrees and minutes (to 3 decimal places where relevant).
	The position of start of set should be reported in units of at least minutes of latitude and longitude. If no sets are made for the day, the noon position should be reported.	**NO**	
NUMBER OF HOOKS PER SET	Number of hooks per set	**YES**	
NUMBER OF BRANCHLINES	Number of branch lines between floats. The number of branch lines between floats shall be reported for each set.	**YES**	The "Number of Branchlines" are also commonly referred to as "Hooks between floats" or "Branchlines between FLOATS" for some fleets.

A1.3 Longline operational data – CATCH INFORMATION

<table>
<tr><th>FIELD</th><th>Reference text in Attachment K, Annex 1.</th><th>Binding</th><th>Notes on recommended submission requirements</th></tr>
<tr><td>TRIP IDENTIFIER</td><td></td><td>NO</td><td>Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE</td></tr>
<tr><td>ACTIVITY IDENTIFIER</td><td></td><td>NO</td><td>Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY</td></tr>
<tr><td rowspan="2">SPECIES CODE</td><td>The following species:
<table>
<tr><th>Species name</th><th>FAO Code</th></tr>
<tr><td>albacore (Thunnus alalunga),</td><td>ALB</td></tr>
<tr><td>bigeye (Thunnus obesus),</td><td>BET</td></tr>
<tr><td>skipjack (Katsuwonus pelamis),</td><td>SKJ</td></tr>
<tr><td>yellowfin (Thunnus albacares),</td><td>YFT</td></tr>
<tr><td>striped marlin (Tetrapturus audax),</td><td>MLS</td></tr>
<tr><td>blue marlin (Makaira mazara),</td><td>BUM</td></tr>
<tr><td>black marlin (Makaira indica)</td><td>BLM</td></tr>
<tr><td>swordfish (Xiphias gladius),</td><td>SWO</td></tr>
<tr><td>blue shark,</td><td>BSH</td></tr>
<tr><td>silky shark,</td><td>FAL</td></tr>
<tr><td>oceanic whitetip shark,</td><td>OCS</td></tr>
<tr><td>mako sharks,</td><td>MAK, SMA, LMA</td></tr>
<tr><td>thresher sharks,</td><td>THR, ALV, PTH, BTH</td></tr>
<tr><td>porbeagle shark,</td><td>POR</td></tr>
<tr><td>hammerhead sharks (winghead, scalloped, great, and smooth)</td><td>SPN, SPK, SPL, SPZ, SPQ, EUB</td></tr>
<tr><td>whale shark,</td><td>RHN</td></tr>
<tr><td>other species as determined by the Commission.</td><td></td></tr>
</table></td><td>YES</td><td>Key WCPFC Species.
For each species taken in the set, PROVIDE the SPECIES CODE according to the FAO standard species code list.</td></tr>
<tr><td>Species that are not WCPFC key species.</td><td>NO</td><td>Other species not included in list of Key WCPFC species.</td></tr>
<tr><td>CATCH NUMBER</td><td>Number of fish caught per set for each of the key WCPFC species.</td><td>YES</td><td>For each of the key WCPFC species. Also for other non-key WCPFC species if provided.</td></tr>
<tr><td>CATCH WEIGHT</td><td>If the total weight or average weight of fish caught per set has been recorded, then the total weight or average weight of fish caught per set, by species, shall also be reported. If the total weight or average weight of fish caught per set has not been recorded, then the total weight or average weight of fish caught per set, by species, should be estimated and the estimates reported. The total weight or average weight shall refer to whole weights, rather than processed weights.</td><td>NO</td><td>For each of the key WCPFC species.</td></tr>
<tr><td>DISCARDED / RELEASED NUMBER</td><td>Number of fish discarded or released per set for each of the key WCPFC species.</td><td>NO</td><td>Required through other CMMs for certain key WCPFC species, including information on fate and life status. For each of the key WCPFC species.</td></tr>
</table>

A2.1 Purse seine operational data – TRIP INFORMATION

FIELD	Reference text in Attachment K, Annex 1.	Binding	Notes on recommended submission requirements
TRIP IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE
VESSEL IDENTIFIER	Name of the **vessel**, **country of registration**, **registration number**, and **international radio call sign**: The registration number is the number assigned to the vessel by the state that has flagged the vessel. A code may be used as a vessel identifier instead of the name of the vessel, registration number and call sign for vessels that have fished and that intend to fish only in the waters of national jurisdiction of the State that has flagged the vessel.	**YES**	Using a vessel identifier field (ideally the WCPFC VID) removes the redundancy of including all vessel attributes with each trip record and ensures standardisation and consistency through referencing the WCPFC Vessel Registry database. Please provide a separate list of Vessel attributes linked to the Vessel identifier field.
PORT/PLACE OF DEPARTURE	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). If the start of a trip coincides with recommencing fishing operations or transiting to a fishing area after transshipping part or all of the catch at sea, then "Transshipment at sea" shall be reported in lieu of the port of departure.	**YES**	Where possible, please provide a standardised Port location code through the following facility https://unece.org/trade/cefact/unlocode-code-list-country-and-territory The WCPFC will consider the establishment of WCPFC LOCATION CODEs in the future.
PORT/PLACE OF UNLOADING	If the end of a trip coincides with transhipping part or all of the catch at sea, then "ATSEA" code shall be reported in lieu of the port of unloading.	**YES**	Where possible, please provide a standardised Port location code through the following facility https://unece.org/trade/cefact/unlocode-code-list-country-and-territory The WCPFC will consider the establishment of WCPFC LOCATION CODEs in the future.
DATE OF DEPARTURE	**Date of departure from Port**. If the start of a trip coincides with recommencing fishing operations or transiting to a fishing area after transhipping part or all of the catch at sea, then date for the transhipment at sea shall be indicated.	**YES**	Recommend using ISO 8601 – Date only format
DATE OF UNLOADING / TRANSHIPMENT	**Date of return to Port** If the end of a trip coincides with transhipping part or all of the catch at sea, then date for the transhipment at sea shall be indicated.	**YES**	Recommend using ISO 8601 – Date only format

A2.2 Purse seine operational data – ACTIVITY INFORMATION

FIELD	Reference text in Attachment K, Annex 1.	Binding	Notes on recommended submission requirements
TRIP IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE
ACTIVITY IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY
ACTIVITY	**Activity**: This item shall be reported for each set and for days on which no sets were made, from the start of the trip to the end of the trip. Activities should include "a set"; "a day searched, but no sets made"; "no fishing – in transit"; "no fishing – gear breakdown"; "no fishing – bad weather"; and "no fishing – in port".	**YES**	Suggest using a standardised numeric code for each activity consistent with the WCFPC E-Reporting data field standards. 1 – "a set"; 2 – "a day searched, but no sets made"; 3 – "no fishing – in transit"; 4 – "no fishing – gear breakdown"; 5 – "no fishing – bad weather"; 6 – "no fishing – in port". The purse seine SET INFORMATION and CATCH INFORMATION should be used for every SET event.
	Activity: The current definition for a purse seine day in transit ('a day in transit') should only cover the following cases: • Transiting from port to the tropical WCPFC area (10°N - 10°S); or • Transiting back to port; or • Transiting from one fishing zone to another in the Convention Area. Where vessels are transiting as described above, the conditions of transit are that the gear is stowed, with the boom lowered and tied down, and the net covered (subject to any further clarification).	**NO**	
DATE/TIME ACTIVITY	**Date/Time of Activity**. DATE/TIME shall be reported for each set and for days on which no sets were made. CCMs shall provide information on how their vessels report time zone/format. If searching occurs, but no sets are made, then NOON shall be reported as the TIME.	**YES**	If the activity is 'a set' record DATE/TIME when the set started. Please provide the NOON DATE/TIME for each day that the vessel is at sea when a set was not made on that day.
	The date and start of set time should be GMT/UTC.	**NO**	
POSITION OF ACTIVITY	**Position of set or noon position:**	**YES**	Please provide position according to ISO 6709 – Positions in degrees and minutes (to 3 decimal places where relevant).
	If a set is made, then the position of the set shall be reported. If searching occurs, but no sets are made, then the noon position shall be reported. The position should be reported in units of at least minutes of latitude and longitude.	**NO**	

A2.3 Purse seine operational data – SET INFORMATION

FIELD	Reference text in Attachment K, Annex 1.	Binding	Notes on recommended submission requirements
TRIP IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE
ACTIVITY IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY
SET IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF SET.
DATE/TIME OF SET START	**Date of start of set and time of start of set**. CCMs shall provide information on how their vessels report time zone/format.	**YES**	
	The date and start of set time should be GMT/UTC. If no sets are made, the date and main activity should be reported.	**NO**	
DATE/TIME OF END SET	**Date of end of set and time of end of set**. CCMs shall provide information on how their vessels report time zone/format.	**YES**	
	The date and end of set time should be GMT/UTC. If no sets are made, the date and main activity should be reported.	**NO**	
SCHOOL ASSOCIATION	All common types of school association shall be reported, while uncommon types of associations shall be reported as "other", including other explanation as appropriate. Common types of school association are "free-swimming" or "unassociated"; "feeding on baitfish"; "drifting log, debris or dead animal"; "drifting raft, FAD or payao"; "anchored raft,FAD or payao"; "live whale"; and "live whale shark".	**YES**	Suggest using a standardised numeric code for each school type consistent with the WCFPC E-Reporting data field standards. 1 Unassociated (free school) 2 Feeding on Baitfish (free school) 3 Drifting log, debris or dead animal 4 Drifting raft, FAD or payao 5 Anchored raft, FAD or payao 6 Live whale 7 Live whale shark

A2.4 Purse seine operational data – CATCH INFORMATION

<table>
<tr><th>FIELD</th><th>Reference text in Attachment K, Annex 1.</th><th>Binding</th><th>Notes on recommended submission requirements</th></tr>
<tr><td>TRIP IDENTIFIER</td><td></td><td>NO</td><td>Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE</td></tr>
<tr><td>ACTIVITY IDENTIFIER</td><td></td><td>NO</td><td>Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY</td></tr>
<tr><td>SET IDENTIFIER</td><td></td><td>NO</td><td>Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF SET.</td></tr>
<tr><td rowspan="2">SPECIES CODE</td><td>The following species:
<table>
<tr><th>Species name</th><th>FAO Code</th></tr>
<tr><td>albacore (Thunnus alalunga),</td><td>ALB</td></tr>
<tr><td>bigeye (Thunnus obesus),</td><td>BET</td></tr>
<tr><td>skipjack (Katsuwonus pelamis),</td><td>SKJ</td></tr>
<tr><td>yellowfin (Thunnus albacares),</td><td>YFT</td></tr>
<tr><td>striped marlin (Tetrapturus audax),</td><td>MLS</td></tr>
<tr><td>blue marlin (Makaira mazara),</td><td>BUM</td></tr>
<tr><td>black marlin (Makaira indica)</td><td>BLM</td></tr>
<tr><td>swordfish (Xiphias gladius),</td><td>SWO</td></tr>
<tr><td>blue shark,</td><td>BSH</td></tr>
<tr><td>silky shark,</td><td>FAL</td></tr>
<tr><td>oceanic whitetip shark,</td><td>OCS</td></tr>
<tr><td>mako sharks,</td><td>MAK, SMA, LMA</td></tr>
<tr><td>thresher sharks,</td><td>THR, ALV, PTH, BTH</td></tr>
<tr><td>porbeagle shark,</td><td>POR</td></tr>
<tr><td>hammerhead sharks (winghead, scalloped, great, and smooth)</td><td>SPN, SPK, SPL, SPZ, SPQ, EUB</td></tr>
<tr><td>whale shark,</td><td>RHN</td></tr>
<tr><td>other species as determined by the Commission.</td><td></td></tr>
</table></td><td>YES</td><td>Key WCPFC Species.
For each species taken in the set, PROVIDE the SPECIES CODE according to the FAO standard species code list.</td></tr>
<tr><td>Species that are not WCPFC key species.</td><td>NO</td><td>Other species not included in list of Key WCPFC species.</td></tr>
<tr><td>CATCH WEIGHT</td><td>Weight of fish caught per set, for the following species: albacore, bigeye, skipjack, yellowfin, blue shark, silky shark, oceanic whitetip shark, mako sharks, thresher sharks, porbeagle shark (south of 20°S, until biological data shows this or another geographic limit to be appropriate), hammerhead sharks (winghead, scalloped, great, and smooth), whale shark, and other species as determined by the Commission.</td><td>YES</td><td>For each of the key WCPFC species.</td></tr>
<tr><td>DISCARDED / RELEASED NUMBER</td><td>Number of fish/animal discarded or released per set for each of the key WCPFC species.</td><td>NO</td><td>Required through other CMMs for certain key WCPFC species, including information on fate and life status. For each of the key WCPFC species.</td></tr>
<tr><td>DISCARDED / RELEASED WEIGHT</td><td>Weight of fish/animal discarded or released per set for each of the key WCPFC species.</td><td>NO</td><td>Required through other CMMs. For each of the key WCPFC species.</td></tr>
</table>

A3.1 Pole-and-line operational data – TRIP INFORMATION

FIELD	Reference text in Attachment K, Annex 1.	Binding	Notes on recommended submission requirements
TRIP IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE
VESSEL IDENTIFIER	Name of the **vessel**, **country of registration**, **registration number**, and **international radio call sign**: The registration number is the number assigned to the vessel by the state that has flagged the vessel. A code may be used as a vessel identifier instead of the name of the vessel, registration number and call sign for vessels that have fished and that intend to fish only in the waters of national jurisdiction of the State that has flagged the vessel.	**YES**	Using a vessel identifier field (ideally the WCPFC VID) removes the redundancy of including all vessel attributes with each trip record and ensures standardisation and consistency through referencing the WCPFC Vessel Registry database. Please provide a separate list of Vessel attributes linked to the Vessel identifier field.
PORT/PLACE OF DEPARTURE	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). If the start of a trip coincides with recommencing fishing operations or transiting to a fishing area after transshipping part or all of the catch at sea, then "Transshipment at sea" shall be reported in lieu of the port of departure.	**YES**	Where possible, please provide a standardised Port location code through the following facility https://unece.org/trade/cefact/unlocode-code-list-country-and-territory The WCPFC will consider the establishment of WCPFC LOCATION CODEs in the future.
PORT/PLACE OF UNLOADING	If the end of a trip coincides with transhipping part or all of the catch at sea, then "ATSEA" code shall be reported in lieu of the port of unloading.	**YES**	Where possible, please provide a standardised Port location code through the following facility https://unece.org/trade/cefact/unlocode-code-list-country-and-territory The WCPFC will consider the establishment of WCPFC LOCATION CODEs in the future.
DATE OF DEPARTURE	**Date of departure from Port**. If the start of a trip coincides with recommencing fishing operations or transiting to a fishing area after transhipping part or all of the catch at sea, then date for the transhipment at sea shall be indicated.	**YES**	Recommend using ISO 8601 – Date only format
DATE OF UNLOADING / TRANSHIPMENT	**Date of return to Port** If the end of a trip coincides with transhipping part or all of the catch at sea, then date for the transhipment at sea shall be indicated.	**YES**	Recommend using ISO 8601 – Date only format

A3.2 Pole-and-line operational data – DAILY INFORMATION

FIELD	Reference text in Attachment K, Annex 1.	Binding	Notes on recommended submission requirements
TRIP IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE
ACTIVITY IDENTIFIER		**NO**	Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY
ACTIVITY	**Activity**: This item shall be reported for each day, from the start of the trip to the end of the trip. Activities should include "a day fishing or searching with bait onboard"; "no fishing – collecting bait"; "no fishing – in transit"; "no fishing – gear breakdown"; "no fishing – bad weather"; and "no fishing – in port".	**YES**	Suggest using a standardised numeric code for each activity. 1 – "a day fishing or searching with bait onboard"; 2 – "no fishing – collecting bait"; 3 – "no fishing – in transit"; 4 – "no fishing – gear breakdown"; 5 – "no fishing – bad weather"; 6 – "no fishing – in port".
DATE	**Date (at sea)**.	**YES**	
	The date should be GMT/UTC.	**NO**	Please provide the NOON DATE/TIME for each day that the vessel is at sea when a set was not made on that day.
NOON POSITION	**Noon position:**	**YES**	Please provide position according to ISO 6709 – Positions in degrees and minutes (to 3 decimal places where relevant).
	The noon position should be reported in units of at least minutes of latitude and longitude.	**NO**	

A3.3 Pole-and-line operational data – CATCH INFORMATION

<table>
<tr><th>FIELD</th><th>Reference text in Attachment K, Annex 1.</th><th>Binding</th><th>Notes on recommended submission requirements</th></tr>
<tr><td>TRIP IDENTIFIER</td><td></td><td>NO</td><td>Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be VESSEL + DEPARTURE DATE</td></tr>
<tr><td>ACTIVITY IDENTIFIER</td><td></td><td>NO</td><td>Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF ACTIVITY</td></tr>
<tr><td>SET IDENTIFIER</td><td></td><td>NO</td><td>Internally generated. Can be NATURAL KEY or unique integer. NATURAL KEY would be DATE + START TIME OF SET.</td></tr>
<tr><td rowspan="2">SPECIES CODE</td><td>The following species:
<table>
<tr><th>Species name</th><th>FAO Code</th></tr>
<tr><td>albacore (Thunnus alalunga),</td><td>ALB</td></tr>
<tr><td>bigeye (Thunnus obesus),</td><td>BET</td></tr>
<tr><td>skipjack (Katsuwonus pelamis),</td><td>SKJ</td></tr>
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<tr><td>striped marlin (Tetrapturus audax),</td><td>MLS</td></tr>
<tr><td>blue marlin (Makaira mazara),</td><td>BUM</td></tr>
<tr><td>black marlin (Makaira indica)</td><td>BLM</td></tr>
<tr><td>swordfish (Xiphias gladius),</td><td>SWO</td></tr>
<tr><td>blue shark,</td><td>BSH</td></tr>
<tr><td>silky shark,</td><td>FAL</td></tr>
<tr><td>oceanic whitetip shark,</td><td>OCS</td></tr>
<tr><td>mako sharks,</td><td>MAK, SMA, LMA</td></tr>
<tr><td>thresher sharks,</td><td>THR, ALV, PTH, BTH</td></tr>
<tr><td>porbeagle shark,</td><td>POR</td></tr>
<tr><td>hammerhead sharks (winghead, scalloped, great, and smooth)</td><td>SPN, SPK, SPL, SPZ, SPQ, EUB</td></tr>
<tr><td>whale shark,</td><td>RHN</td></tr>
<tr><td>other species as determined by the Commission.</td><td></td></tr>
</table></td><td>YES</td><td>Key WCPFC Species.
For each species taken in the set, PROVIDE the SPECIES CODE according to the FAO standard species code list.</td></tr>
<tr><td>Species that are not WCPFC key species.</td><td>NO</td><td>Other species not included in list of Key WCPFC species.</td></tr>
<tr><td>CATCH WEIGHT</td><td>Weight of fish caught per day, for the following species: albacore, bigeye, skipjack, yellowfin, blue shark, silky shark, oceanic whitetip shark, mako sharks, thresher sharks, porbeagle shark (south of 20°S, until biological data shows this or another geographic limit to be appropriate), hammerhead sharks (winghead, scalloped, great, and smooth), whale shark, and other species as determined by the Commission.</td><td>YES</td><td>For each of the key WCPFC species.</td></tr>
<tr><td>DISCARDED / RELEASED NUMBER</td><td>Number of fish/animal discarded or released per set for each of the key WCPFC species.</td><td>NO</td><td>Required through other CMMs for certain key WCPFC species, including information on fate and life status. For each of the key WCPFC species.</td></tr>
<tr><td>DISCARDED / RELEASED WEIGHT</td><td>Weight of fish/animal discarded or released per set for each of the key WCPFC species.</td><td>NO</td><td>Required through other CMMs. For each of the key WCPFC species.</td></tr>
</table>

ANNEX 2 – 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.[1] 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[2]", 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%).

[1] 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.

[2] http://www.wcpfc.int/doc/data-01/scientific-data-be-provided-commission-revised-wcpfc4-6-7-and-9 is the basis of the evaluation of submissions of 2016 scientific data, but the latest version adopted at WCPFC13 (https://www.wcpfc.int/system/files/Att%20G_Revised%20SciData%20decision.pdf) will be used for submissions of 2017 scientific data, onwards.

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:

> *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.