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Paper prepared by
Tiffany Vidal[1] and Peter Williams[1]

Rev 1:

- **Updated the operational longline coverage for US-CNMI/Guam (Table 6)**
- **Separated out several gear types for Indonesia's 2023 operational coverage to reflect improvements made in logbook coverage (Table 6)**
- **Updated the size data provision assessment for Vanuatu in 2022 (Table 7)**

[1] Oceanic Fisheries Programme, The Pacific Community

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 2022 and 2023 scientific data provisions includes the assignment of a tier-scoring evaluation level. Some categories of the data gaps identified have remained over the past five years, with little progress made. Readers have therefore been referred to the relevant sections in past data-gap papers as reference for outstanding issues.

In 2022, there was only one CCM that was late submitting their annual SciData (i.e., deadline of 30 April 2023); this CCM's submission was provided in July 2023. All CCMs provided annual catch estimates for 2023 by the deadline[2] (30 April 2024).

Aggregate catch/effort data for 2023 were provided by the deadline of 30th April 2024 for all fleets. The main gap in the provision of 2023 aggregate catch/effort data was:

i. the low coverage of operational data available to generate aggregate data for two CCMs (which has been the case in recent years)

The other main data gap is the anticipated under-reporting of key shark species in general. However, 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.

Operational catch/effort data for 2023 were provided by the deadline of 30 April 2024 for all CCMs (see footnote 2). The main gaps in the 2022 and 2023 data submissions include:

i. The low coverage in the data provided by two CCMs;

ii. The non-provision of several required fields in the data submission for one CCM.

The coverage of 2023 operational data for most fleets is nearly 100%, and we expect there will be additional operational data submissions in the coming year to complete some of the existing gaps. The coverage of 2022 operational data has been updated to account for data received since SC19, with several improvements in data gaps reported last year. In most cases where coverage is not 100%, but annual catch and effort estimates by geographic area (e.g., aggregate data) have been made available, the combination of the two data sources is sufficient for the scientific work of the Commission to be undertaken (these situations are noted in each of the tables).

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). The latest version of these tables are included in a separate SC20 Information Paper (SPC-OFP, 2024a), for SC20 review. SPC-OFP continues to engage with relevant CCMs to resolve some of the gaps presented in these tables, with several gaps resolved over the past year.

[2] One CCM submitted a couple days late, but within an acceptable grace period (i.e., 3 May 2024).

CCMs have continued to adjust their annual submissions of operational data to align with Annex 2, 'guidelines for data submission of operational level catch and effort data fields for fisheries', in the *Scientific Data to be Provided to the Commission* (SciData), which facilitated the import into the WCPFC databases this year.

Based on the contents of this paper, **SC20 is invited to**:

- Note the availability of the ACE template provided by the SSP for CCMs to use when submitting their annual catch estimates (ACE) to improve the efficiency and data quality control of loading the ACE data into the WCPFC databases. The use of this template is voluntary, but strongly encouraged, at least as a means of cross-checking the required ACE information that should be submitted. Please see https://www.wcpfc.int/ace-template. The WCPFC SSP is available to assist CCMs that are interested in using this template. It is anticipated that an online tool available on the WCPFC web site will be developed for CCMs to enter and manage their Annual Catch Estimates (ACE) in the longer term.
- Note the development of JSON standards to facilitate and standardize data submissions for logbook and observer data, for select gear types, to reduce manual data preparation and eventually ease data reporting burdens.
- Recognize the importance of processor (cannery) data for, inter alia, the validation of tuna species composition, note the progress with WCPFC Project 114 (provided in an SC20 Information paper Project 114 (SPC-OFP, 2024b), and endorse the project for year 3.
- Consider the proposal for additional operational data fields for the longline fishery to support the scientific work of the Commission.

Contents

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* (SciData) and *Standards for the Provision of Operational Catch and Effort Data to the Commission* (SC01 Report, Annex VII) which were adopted by the Western and Central Pacific Fisheries Commission (WCPFC) at its second session in December 2005 (WCPFC2 Report, par. 25). The *Standards for the Provision of Operational Catch and Effort Data to the Commission* were incorporated as ANNEX 1 of the SciData which was further refined and subsequently adopted at the Fourth Regular Session of the Commission, Tumon, Guam, USA, 2-7 December 2007 (SC03 Report, 2007). The latest version of SciData can be found on the WCPFC web site. 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 (WCPFC7 Report), the Ninth Regular Session of the Commission (WCPFC9), Manila, Philippines, 6–10 December 2012 (WCPFC9 Report) and the Tenth Regular Session of the Commission (WCPFC10), Cairns, Australia 2–6 December 2013 (WCPFC10 Report).
- 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 (WCPFC13 Report).
- The inclusion of standard tables of operational level catch and effort data fields for longline, purse seine and pole-and-line gears as ANNEX 2, which was adopted at the Nineteenth Regular Session of the Commission (WCPFC19), Da Nang, Vietnam, 27 Nov – 3 Dec 2022 (WCPFC19 Report). These tables provide guidance for the submission of operational catch and effort data in a standard format, as described in Section 2.5 of Williams (2022).

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, port sampling, tagging, oceanographic 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 most recently at SC19 (Williams, 2023).

5. 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 continued cooperative nature by all CCMs is very much appreciated.

6. The following table provides a list of the **SC19 recommendations** related to data gaps, and reference to how each recommendation has been addressed over the past year.

SC19 Statistics and Data Theme Recommendations	Summary of Progress
Data Gaps of the Commission[3]	
1. [23] SC19 acknowledged the scientific value of the additional longline operational data fields in Table ST-01 and recommended that these fields be considered for inclusion in the *Scientific Data to be Provided by the Commission* (SciData). [24] However, SC19 noted broad implementation concerns of CCMs with respect to the collection of these data, recommended that TCC and the Regular Session of the Commission take account of these concerns, and suggested a possible option would be to include them as voluntary reporting items.	The additional proposed longline fields may be revisited this year at SC20 (see SC19-ST-WP-03).
2. [25] SC19 acknowledged that the proposal for the addition of a new activity code for any day when a "transhipment at sea occurs" would allow the WCPFC's Scientific Services Provider (SSP) to define 'trips' within the operational data submitted to the Commission. [26] SC19 also noted the explanation from the SSP that aggregating the catch by species in the longline operational data at the trip level (when the trip is terminated by an at-sea transhipment) is fundamental for the validation processes using other independent sources of data (e.g., transhipment observers and carrier declarations) to provide more certainty in the data used in assessments and other work of the Commission. [27] SC19 recommended that this proposal be considered further by TCC and the Regular Session of the Commission.	The additional proposed longline fields may be revisited this year at SC20 (see SC19-ST-WP-03).
3. [30] SC19 recommended that TCC19 consider whether it is necessary to clarify the reporting requirements in the CMM 2018-04, while noting the difficulty of logbook-based data collection for sea turtles.	The SSP receives data for catches of species not included as key species in the SciData from some CCMs, retained and discarded, but noting that sea turtles are not explicitly included in the logbook minimum data reporting requirements.
4. [32] SC19 recommended that the WCPFC CCMs, with assistance from the WCPFC SSP where required, indicate: (a) the date/time standard used in their historical operational data submissions to the Commission, and (b) the date/time standard in their operational data, when they are submitted each year in the future. Information to ensure the date/time standard is linked back to GMT/UTC shall also be provided.	8 CCMs have notified the SSP of the date/time standards associated with their fleets. The SSP is working to develop standardized UTC data fields for all operational data sets.
5. [33] SC19 noted the need for data on shortbill spearfish and sailfish catches, as highlighted in the Billfish Research Plan, and recommended that TCC19 determine how to best accommodate the inclusion of these two species into the Science Data to be Provided to the Commission	These changes were adopted by the WCPFC20, and the SciData have been amended to reflect the addition of these two species.
6. [38] SC19 recommended WCPFC20 considers this work [developing a FAD logbook for vessel operators] be progressed intersessionally within the FADMO-IWG.	The FADMO-IWG has prepared an update on their progress in a paper to SC20 (PNA and Tokelau, 2024).
7. [41] SC19 noted that the adopted level of 5% observer coverage, which has been in place for over a decade, has not provided good estimates of longline bycatch. Therefore, SC19 recommended that the Commission explore options to expand the observer coverage on longline vessels through both human and electronic approaches in the WCPO so that the SC can provide better estimates of bycatch levels and other metrics from these fleets.	WCPFC20 adopted a provisional increase in observer coverage in association with possible increases in the longline bigeye quota (CMM 2023-01).

2.1 Data gaps previously identified

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 SPC-OFP, 2015b and SPC-OFP, 2015a)
- Operational data coverage rates (Williams, 2014 – Section 2.2)
- Operational data fields (SPC-OFP, 2023)
- Indonesia, Philippines and Vietnam tuna fishery data (SPC-OFP, 2020 – Section 2.2)
- Key shark species (Williams, 2017 – Section 2.3)
- Nationality of the catch (Williams, 2014, 2020 – 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, 2021, 2022, 2023, 2024)
- 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 et al., 2023)

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 Coverage levels for each operational data field by year and fleet

10. 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.

[3] Bracketed numbers refer to the corresponding paragraph of the SC19 Summary Report

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.

11. 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.*

12. 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 separate Information Papers, initially for SC18 and again this year for SC20 (SPC-OFP, 2024a).

13. During the past year, the WCPFC SSP has engaged with several CCMs on improving the coverage of data fields in their operational data submissions. Several improvements in operational data fields are evident over the past year (referencing SPC-OFP, 2024a) although some CCMs indicated they will need more time to resolve some of the gaps in their historical data submissions.

14. SPC-OFP will continue to engage with relevant CCMs to resolve the gaps presented in these tables. In some cases, it may be possible to resolve the gaps from other sources of information. For example, where VMS data are available, missing information on the departure and return ports and dates could be generated in the historical operational catch/effort data. It may also be possible to fill in gaps for data fields in the historical data such as 'hooks between floats', where industry information can categorize certain sub-fleets that operate in a similar manner (with respect to this data field).

2.3 Progress in the provision of operational data according to SciData guidelines

15. WCPFC19 adopted the SC18 recommendation for the inclusion of tables of the operational level catch and effort data fields for longline, purse seine and pole-and-line gears, as a guideline in Annex 2, 'guidelines for data submission of operational level catch and effort data fields for fisheries', in the SciData.

16. Several CCMs have continued to align their operational data submissions for 2023 with these guidelines, which has further facilitated the import into the WCPFC databases. The WCPFC SSP is very appreciative of the work done to align to the guidelines and, acknowledging this work is ongoing, will continue to engage with and assist other CCMs to determine whether adjustments to their operational data submissions will be possible.

17. WCPFC20 adopted the SC19 recommendation to add shortbill spearfish *Tetrapturus angustirostris* and sailfish *Istiophorus platypterus* to the list of key species to be reported in the SciData.

As this provision was adopted in December 2023, it is anticipated that CCMs will be fully reporting these species in the Sci Data for the 2024 fishing year. The SSP will work with CCMs to evaluate whether historical catch data for these species are available and could be provided for the work of the Commission.

2.4 Proposals for additional operational data fields

18. In 2023, two proposals were prepared for the consideration of SC19 and then to the Commission (Australia, 2023; PNA and Tokelau, 2023). Given time constraints during the WCPFC20, these proposals were not fully considered. Both are expected to be presented again to SC20 for consideration.

2.5 The ACE Template and data reporting developments

19. Estimates of annual catches (ACE) by gear, fleet and species are to be submitted each year by the 30th April according to the requirements in SciData.

20. These estimates are submitted by CCMs in various formats and are transcribed by the SSP into the WCPFC Annual Catch Estimates (ACE) database. A review of the data provided during the transcription process often identifies data which are required but have not been provided. The transcribing of ACE received in various formats also takes time to interpret and cross-check, and the potential to introduce errors in reentering data into the WCPFC ACE database.

21. In order to improve the efficiency and data quality control of loading the ACE data into the WCPFC databases, the SSP has developed a template for CCMs to potentially use when submitting their annual catch estimates. This template structure is already used by the Pacific Island member countries (CCMs) of the Commission when they prepare and submit their ACE through the Regional Tuna Data Workshops (TDWs) conducted by the SSP.

22. The standardized voluntary ACE template was used by several CCMs in 2024 and it has greatly facilitated the processing of these data submissions for the WCPFC as well as other ocean areas as specified in the SciData.

23. The SSP has developed a suite of JSON standards to facilitate data submission for logbook (longline and purse seine) as well as observer (purse seine) and ER/EM data, on a voluntary basis. Submission of data using these formats are expected to reduce the time spent preparing and processing data submissions, and may reduce reporting errors. The SSP is available to assist interested CCMs in developing a data submission work flow to use this reporting approach.

24. If CCMs find templates, such as for the ACE submissions, useful and would like to explore templates for other data sources, the SSP is available to work with CCMs to develop additional templates to facilitate reporting and processing of data submissions to the Commission.

3 Recent provisions of Scientific Data to the WCPFC

25. 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).

26. 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 TCC20 (September 2024).

3.1 Annual Catch Estimates

27. Tables 1 and 2 list the dates on which catch estimates for 2022 and 2023, 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).

28. All CCMs, except for one, provided annual catch estimates for 2022 by the deadline (30 April 2023), and all CCMs submitted annual catch estimates for 2023 by the deadline (30 April 2024)[4]. Indonesia and Philippines typically schedule their annual catch estimates review workshops after the submission deadline but once again prepared and submitted provisional 2023 estimates prior to the 30th April deadline this year. We expect revisions to be included in the WCPFC Part 1 Annual Reports for SC20.

29. Each year, the quality of estimates provided continues to improve with further reduction in the number of data-gap notes. The use of the template for the provision of annual catch estimates, on a voluntary basis, has improved the reception and processing of these data, as noted in Section 2.5 of this paper.

3.2 Aggregate catch/effort data

30. Tables 3 and 4 list the dates on which aggregated catch and effort data were provided for 2022 and 2023, 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.

31. Pacific Island countries provide operational catch/effort (logbook) 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 2024).

32. 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

[4] One CCM submitted a couple days late, but within an acceptable grace period (i.e., 3 May 2024).

the inclusion of key shark species catches in the aggregate data submissions.

33. The main gaps in the provision of 2023 aggregate catch/effort data are similar to recent years, namely:

i. the low coverage of operational data available to generate aggregate data for the Vietnam and Indonesia fleets (non-binding); and

ii. the expected under-reporting of key shark species in general.

3.3 Operational catch/effort data

34. Tables 5 and 6 show the schedule for the submissions of 2022 and 2023 operational catch and effort data to the WCPFC, respectively. The difficulties in implementing logbook programmes for small-scale fisheries is acknowledged and indicated in these tables. The gaps in the 2023 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 data, for example, the hooks set and hooks between floats for the longline fishery.

35. Operational catch/effort data for 2023 were provided before the 30 April 2023 deadline by most CCMs. The submission of 2023 operational data from Indonesia was once again in a format that aligned with Annex 2, 'guidelines for data submission of operational level catch and effort data fields for fisheries', in the SciData, and included catches of several key shark species, showing continued improvements, although the coverage levels remain low.

36. 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 2022 and 2023 will be submitted over the next six months.

37. 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, although noting some issues in under-reporting key shark release/discarding.

38. Although reporting of key shark species is understood to be under-reported in the logbook data, there have been notable improvements in recent years, with all CCMs reporting some level of shark catches in their operational data.

3.4 Size data

39. Table 7 and Table 8 show the schedule for the submissions of 2022 and 2023 size data to the WCPFC, 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 gaps, but offer contextual information), and an indicator for the tier-scoring evaluation level in the 6th column. The gaps in the provision of 2022 and 2023 size data include one fleet (US albacore troll) where the logistics of collecting size data are challenging, and for a number of fleets (Ecuador, Nauru, Samoa, 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).

40. Through the use of size data for the stock assessments, potential issues associated with length data collected at coarser size bins than prescribed in the SciData have been noted. Specifically, key tuna species should be measured at 1cm intervals, but in some cases the data suggest that measurements have been collected at 2 or 5 cm intervals instead, at the level of an observer trip or port sampling event. These data have been flagged in the database, and the approaches used to address potential sampling issues are detailed in the respective data inputs papers for the 2024 assessments (Castillo Jordán et al., 2024; Teears et al., 2024). Although these issues are relatively infrequent, the SSP will work with CCMs to address these issues when detected in data submissions, but also through relevant training programmes, to continue to improve upon the quality and utility of these data.

3.5 Overall scientific data submission evaluation

41. Table 9 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 1 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 2023 data, 32 of the 34 CCMs/entities (94%) were evaluated as completely satisfying (100%) of the binding requirements for the provision of scientific data to the WCPFC. There are some gaps in catch/effort data for one CCM that would normally satisfy the requirements for submissions of aggregate and operational data. The two (2) CCMs that did not achieve 100% (for 2023 data submissions) satisfied at least at 75% of requirements or greater, noting that some of these data gaps may be resolved before TCC20.

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 2010) approved the continuation of this work in respect of the Regional Observer Programme (ROP) data in the short-medium term (Summary Report - WCPFC7).

44. Panizza et al. (2024) 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:

- Tables summarizing current coverage of available observer data by gear;
- Tables summarizing observer data by Pacific Island observer providers;
- A table summarizing data generated from E-Monitoring trials that have been provided to the Scientific Services Provider;
- A table summarizing transhipment data received from observers monitoring carrier vessels.

45. In CMM 2012-03, there is a provision for ROP coverage for vessels fishing north of 20°N and landing fresh fish. Evaluation of coverage for this provision highlights a gap in the current data requirements, as there are currently no required data fields to indicate whether a vessel is landing fresh or frozen fish.

4 Recent developments in dissemination of data

4.1 WCPFC data products

46. 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 1970[5] to 2022 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
- Annual Catch by EEZ Table by fleet have been provided beginning in 2018, the year from which nearly complete operational data have been provided, enabling the generation of annual catches estimates at the resolution of the EEZ. **This was a new addition to the public domain data product in 2023.** https://www.wcpfc.int/ace_by_eez

[5] In 2023, the time series presented in the Yearbook was truncated to 1970 for presentation aesthetics. Data for the full time series, extending back to 1950, will continue to be maintained and updated, and are available on the WCPFC website.

- The WCPFC Data Catalogue which currently covers data provisions up to 2022. This data product 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). http://www.wcpfc.int/wcpfc-data-catalogue-0
- 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
- Public domain size data providing tables of aggregated fish SIZE (Length) data provided by Commission Members (CCMs) and Cooperating Non-members (CNMs). The WCPFC public domain SIZE data can be accessed at https://www.wcpfc.int/public-size-data.

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6 Tables

Table 1: Provision of 2022 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	27 Apr 2023		G, H	III
Canada	TR	25 Apr 2023			III
China	LL, PS	28 Apr 2023			III
Cook Islands	LL, PS, TR	21 Apr 2023		G, H	III
Ecuador	PS	11 Jul 2023			III
El Salvador	PS	30 Apr 2023			III
European Union	LL, PS	29 Apr 2023			III
Federated States of Micronesia	LL, PS	21 Apr 2023		G, H	III
Fiji Islands	LL, PL	21 Apr 2023		G, H	III
French Polynesia	LL, PL, OT	21 Apr 2023		G, H	III
Indonesia	LL	30 Apr 2023		F	III
	PS, PL, HL, TR, GN, OT	30 Apr 2023		F, J	III
Japan	PS, LL	28 Apr 2023		F, C	III
	PL, TR, OT	28 Apr 2023		F	III
Kiribati	LL, PS, OT	21 Apr 2023		G, H	III
Republic of Korea	LL, PS	29 Apr 2023		H	III
Marshall Islands	LL, PS	21 Apr 2023		G, H	III
Nauru	PS	21 Apr 2023		G, H	III
New Caledonia	LL	21 Apr 2023		G, H	III
New Zealand	LL, PS, TR, PL	30 Apr 2023		G, H	III
Niue	LL, OT	30 Apr 2023		D	III
Palau	LL, PL	21 Apr 2023		D	III
Papua New Guinea	LL, PS	21 Apr 2023		G, H	III
Philippines	PS	14 Apr 2023		G, H	III
	LL	14 Apr 2023		D	III
	HL, RN, OT	14 Apr 2023		F, J	III
Samoa	LL	21 Apr 2023		G, H	III
Solomon Islands	LL	21 Apr 2023		G, H	III
	PS, PL	21 Apr 2023		H	III
Chinese Taipei	LL, PS	29 Apr 2023			III
Tokelau	OT	21 Apr 2023			III
Tonga	LL	21 Apr 2023		G, H	III
Tuvalu	LL, PS, OT	21 Apr 2023		G, H	III
United States	LL, PS, TR, HL, PL	26 Apr 2023		G, H	III
Vanuatu	LL, PS	21 Apr 2023		G, H	III
Vietnam	LL/HL, GN, PS	06 Apr 2023		F, L	III
Wallis and Futuna	LL	21 Apr 2023		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 2: Provision of 2023 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 2024		G, H	III
Canada	TR	13 Apr 2024			III
China	LL, PS	28 Apr 2024			III
Cook Islands	LL, PS, TR	03 May 2024		G, H	III
Ecuador	PS	30 Apr 2024			III
El Salvador	PS	30 Apr 2024			III
European Union	LL, PS	30 Apr 2024			III
Federated States of Micronesia	LL, PS	12 Apr 2024		G, H	III
Fiji Islands	LL, PL	12 Apr 2024		G, H	III
French Polynesia	LL, PL, OT	12 Apr 2024		G, H	III
Indonesia	LL	30 Apr 2024		F	III
	PS, PL, HL, TR, GN, OT	30 Apr 2024		F, J	III
Japan	PS, LL	27 Apr 2024		F, C	III
	PL, TR, OT	27 Apr 2024		F	III
Kiribati	LL, PS, OT	12 Apr 2024		G, H	III
Republic of Korea	LL, PS	30 Apr 2024		H	III
Marshall Islands	LL, PS	12 Apr 2024		G, H	III
Nauru	PS	12 Apr 2024		G, H	III
New Caledonia	LL	12 Apr 2024		G, H	III
New Zealand	LL, PS, TR, PL	30 Apr 2024		G, H	III
Niue				D	III
Palau	LL, PL	12 Apr 2024		D	III
Papua New Guinea	LL, PS	12 Apr 2024		G, H	III
Philippines	PS	17 Apr 2024		G, H	III
	LL	17 Apr 2024		D	III
	HL, RN, OT	17 Apr 2024		F, J	III
Samoa	LL	12 Apr 2024		G, H	III
Solomon Islands	LL	12 Apr 2024		G, H	III
	PS, PL	12 Apr 2024		H	III
Chinese Taipei	LL, PS	30 Apr 2024			III
Tokelau	OT	12 Apr 2024			III
Tonga	LL	12 Apr 2024		G, H	III
Tuvalu	LL, PS, OT	12 Apr 2024		G, H	III
United States	LL, PS, TR, HL, PL	23 Apr 2024		G, H	III
Vanuatu	LL, PS	12 Apr 2024		G, H	III
Vietnam	LL/HL, GN, PS	30 Apr 2024		F, L	III
Wallis and Futuna	LL	12 Apr 2024		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 2022 aggregate 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	27 Apr 2023		C,I	III
Canada	TR	25 Apr 2023			III
China	LL (DWFN)	28 Apr 2023		P	III
	PS	28 Apr 2023		E	III
Cook Islands	LL, PS, TR	21 Apr 2023		J, O	III
Ecuador	PS	21 Jun 2023		D	III
El Salvador	PS	30 Apr 2023		C	III
European Union	LL	31 May 2023		C, F, P, R	III
	PS	29 Apr 2023		C	III
Federated States of Micronesia	LL, PS	21 Apr 2023		J, O	III
Fiji Islands	LL, PL	21 Apr 2023		J, O	III
French Polynesia	LL	21 Apr 2023		J, O	III
Indonesia	LL, PS, PL	08 Aug 2023		Q, O, S, T	III
	HL, TR, GN, OT	08 Aug 2023		N, Q	III
Japan	LL	28 Apr 2023		A, F,H, I, L, R	III
	PL	28 Apr 2023		L	III
	PS	28 Apr 2023		L	III
Kiribati	LL, PS	21 Apr 2023		J, O	III
Republic of Korea	LL, PS	29 Apr 2023		P	III
Marshall Islands	LL, PS	21 Apr 2023		J, O	III
Nauru	PS	21 Apr 2023		J, O	III
New Caledonia	LL	21 Apr 2023		J, O	III
New Zealand	LL, PL, HL, PS	30 Apr 2023		C,I	III
Niue	LL	30 Apr 2023		E	III
Palau	LL, PL	21 Apr 2023		E	III
Papua New Guinea	LL	21 Apr 2023		E	III
	PS	21 Apr 2023		J, O	III
Philippines	PS	14 Apr 2023		M, Q	III
	LL	14 Apr 2023		E	III
	HL, RN, OT	14 Apr 2023		M, N, Q, T	III
Samoa	LL	21 Apr 2023		J, O	III
Solomon Islands	LL	21 Apr 2023		J, O	III
	PL, PS	21 Apr 2023		J	III
Chinese Taipei	LL (DWFN)	29 Apr 2023		H, I, L	III
	LL (STLL)	29 Apr 2023		H, I, L	III
	PS	29 Apr 2023		L	III
Tonga	LL	21 Apr 2023		J, O	III
Tuvalu	LL, PS	21 Apr 2023		J, O	III
United States	LL (American Samoa)	26 Apr 2023		B, I	III
	LL (Hawaii)	26 Apr 2023		B, I	III
	PS	26 Apr 2023		J	III
	TR	26 Apr 2023		B	III
Vanuatu	LL, PS	21 Apr 2023		J, O	III
Vietnam	LL/HL	30 Apr 2023	18	M, Q, S, T	II (95%)
	PS, GN	30 Apr 2023	18	M, Q, S, T	II (92%)
Wallis and Futuna	LL	21 Apr 2023		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 (or trip-level logsheet) 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 2023 aggregate 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 2024		C,I	III
Canada	TR	13 Apr 2024			III
China	LL (DWFN)	28 Apr 2024		P	III
	PS	28 Apr 2024		E	III
Cook Islands	LL, PS, TR	03 May 2024		J, O	III
Ecuador	PS	30 Apr 2024		D	III
El Salvador	PS	30 Apr 2024		C	III
European Union	LL	30 Apr 2024		C, F, P, R	III
	PS	30 Apr 2024		C	III
Federated States of Micronesia	LL, PS	12 Apr 2024		J, O	III
Fiji Islands	LL, PL	12 Apr 2024		J, O	III
French Polynesia	LL	12 Apr 2024		J, O	III
Indonesia	LL, PS, PL	30 Apr 2024		Q, O, S, T	III
	HL, TR, GN, OT	30 Apr 2024		N, Q	III
Japan	LL	27 Apr 2024		A, F,H, I, L, R	III
	PL	27 Apr 2024		L	III
	PS	27 Apr 2024		L	III
Kiribati	LL, PS	12 Apr 2024		J, O	III
Republic of Korea	LL, PS	30 Apr 2024			III
Marshall Islands	LL, PS	12 Apr 2024		J, O	III
Nauru	PS	12 Apr 2024		J, O	III
New Caledonia	LL	12 Apr 2024		J, O	III
New Zealand	LL, PL, HL, PS	30 Apr 2024		C,I	III
Niue				E	III
Palau	LL, PL	12 Apr 2024		E	III
Papua New Guinea	LL	12 Apr 2024		E	III
	PS	12 Apr 2024		J, O	III
Philippines	PS	17 Apr 2024		M, Q	III
	LL	17 Apr 2024		E	III
	HL, RN, OT	17 Apr 2024		M, N, Q, T	III
Samoa	LL	12 Apr 2024		J, O	III
Solomon Islands	LL	12 Apr 2024		J, O	III
	PL, PS	12 Apr 2024		J	III
Chinese Taipei	LL (DWFN)	30 Apr 2024		H, I, L	III
	LL (STLL)	30 Apr 2024		H, I, L	III
	PS	29 Apr 2023		L	III
Tonga	LL	12 Apr 2024		J, O	III
Tuvalu	LL, PS	12 Apr 2024		J, O	III
United States	LL (American Samoa)	23 Apr 2024		B, I	III
	LL (Hawaii)	23 Apr 2024		B, I	III
	PS	23 Apr 2024		J	III
	TR	23 Apr 2024		B	III
Vanuatu	LL, PS	12 Apr 2024		J, O	III
Vietnam	LL/HL	30 Apr 2024		M, Q, S, T	III
	PS, GN	30 Apr 2024		M, Q, S, T	III
Wallis and Futuna	LL	12 Apr 2024		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 (or trip-level logsheet) 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 2022 operational 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	27 Apr 2023		E	III	100%
Canada	TR	25 Apr 2023			III	100%
China	LL	28 Apr 2023	11	I	III	100%
	PS	28 Apr 2023		P	III	100%
Cook Islands	LL, PS	21 Apr 2023	11	C, J	III	100%
Ecuador	PS	11 Jul 2023		I	III	60%
El Salvador	PS	30 Apr 2023			III	100%
European Union	LL	31 May 2023		E	III	100%
	PS	29 Apr 2023			III	100%
Federated States of Micronesia	LL	21 Apr 2023		C, J, F	III	100%
	PS			C, J	III	100%
Fiji Islands	LL, PL	21 Apr 2023		C, J	III	100%
French Polynesia	LL	21 Apr 2023		C, J, F	III	100%
	OT	21 Apr 2023		G, L	III	#
Indonesia	LL, PS, PL	08 Aug 2023	1,2,4,5,6	K, J	II (96%)	15%
	HL, TR, GN, OT	08 Aug 2023		G, K	III	#
Japan	PS, PL	28 Apr 2023		E, M	III	100%
	LL	28 Apr 2023		E, M	III	90%*
Kiribati	LL	21 Apr 2023		C, J, F, O	III	80%*
	PS			C, J, F	III	100%
Republic of Korea	LL	29 Apr 2023		E, O	III	100%
	PS			E	III	95%*
Marshall Islands	LL	21 Apr 2023		C, J	III	100%
	PS			C, J	III	100%
Nauru	PS	21 Apr 2023		C, J	III	100%
New Caledonia	LL	21 Apr 2023		C, J	III	93%*
New Zealand	LL	30 Apr 2023		E, F	III	100%
	PL, TR, PS			E	III	100%
Niue	LL	21 Apr 2023		A	III	N/A
Palau	LL			A	III	100%
Papua New Guinea	LL	21 Apr 2023		C, J	III	100%
	PS		11	C, J, F	III	90% *
Philippines	PS	14 Apr 2023		J, K	III	100%
	LL	14 Apr 2023		A	III	N/A
	HL, RN, OT			G, K	III	#
Samoa	LL	21 Apr 2023	11	C, J	III	100%
Solomon Islands	LL	21 Apr 2023	11	C, J	III	100%
	PS			C, J, F	III	100%
	PL			C, J	III	100%
Chinese Taipei	LL	29 Apr 2023	11	E, F, O	III	95%*
	PS	29 Apr 2023		F	III	100%
Tonga	LL	21 Apr 2023		C, J	III	100%
Tuvalu	LL, PS	21 Apr 2023		C, J	III	100%
United States	LL (American Samoa)	26 Apr 2023		E	III	100%
	LL (CNMI, GUAM)	26 Apr 2023		E	III	100%
	LL (Hawaii)	26 Apr 2023		E	III	100%
	PL, HL, TR (trop)			G	III	#
	PS	26 Apr 2023		B	III	90%*
	TR (ALB)	26 Apr 2023			III	100%
Vanuatu	LL	21 Apr 2023	11	C, J, F	III	100%
	PS	21 Apr 2023		C, J, F	III	100%
Vietnam	LL/HL	30 Apr 2023	6, 8	G, H, K, F, N	III	< 10%
	PS, GN	30 Apr 2023	6, 8	G, H, K, F, N	III	< 10%
Wallis and Futuna	LL	21 Apr 2023		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%
12	Trip-level data provided instead of data at the fishing operation level, with vessel identifier.

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 or Logbook E-Reporting system 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.
P	Vessels of this fleet have been chartered to Pacific Island countries in recent years, although chartering arrangements for this year are not yet understood, so available operational data for some vessels are assigned to this flag state.

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 2023 operational 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 2024		E	III	100%
Canada	TR	13 Apr 2024			III	100%
China	LL	28 Apr 2024	11	I	III	55%*
	PS	28 Apr 2024		P	III	100%
Cook Islands	LL, PS	03 May 2024	11	C, J	III	100%
Ecuador	PS	30 Apr 2024		I	III	100%
El Salvador	PS	30 Apr 2024			III	100%
European Union	LL	30 Apr 2024		E	III	100%
	PS	30 Apr 2024			III	100%
Federated States of Micronesia	LL	12 Apr 2024		C, J, F	III	100%
	PS			C, J	III	100%
Fiji Islands	LL, PL	12 Apr 2024		C, J	III	95%*
French Polynesia	LL	12 Apr 2024		C, J, F	III	100%
	OT			G, L	III	#
Indonesia	LL, PL	30 Apr 2024	1,2,4,6	K, J	II (94%)	< 10%
	PS		5,6	K, J	II (96%)	15%
	HL		6	G, K	III	25%
	TR, GN, OT			G, K	III	#
Japan	PS, PL	27 Apr 2024		E, M	III	100%
	LL			E, M	III	85%*
	LL (CS)		6	E, M	III	< 10%
Kiribati	LL	12 Apr 2024		C, J, F, O	III	100%
	PS			C, J, F	III	95%*
Republic of Korea	LL	30 Apr 2024		E, O	III	100%
	PS			E	III	100%
Marshall Islands	LL	12 Apr 2024		C, J	III	100%
	PS			C, J	III	100%
Nauru	PS	12 Apr 2024		C, J	III	N/A
New Caledonia	LL	12 Apr 2024		C, J	III	100%
New Zealand	LL	30 Apr 2024		E, F	III	95%*
	PL, TR, PS			E	III	100%
Niue				A	III	N/A
Palau	LL	12 Apr 2024		A	III	100%
Papua New Guinea	LL	12 Apr 2024		C, J	III	100%
	PS		11	C, J, F	III	100%
Philippines	PS	30 Apr 2023		J, K	III	100%
	LL	30 Apr 2023	6	A	III	< 10%
	HL, RN, OT			G, K	III	#
Samoa	LL	12 Apr 2024	11	C, J	III	100%
Solomon Islands	LL	12 Apr 2024	11	C, J	III	60%*
	PS			C, J, F	III	100%
	PL			C, J	III	100%
Chinese Taipei	LL (DW)	30 Apr 2024		E, F, O	III	95%*
	LL (STLL)		11	E, F, O	III	90%*
	PS			F	III	100%
Tonga	LL	12 Apr 2024		C, J	III	100%
Tuvalu	LL	12 Apr 2024		C, J	III	< 10%
	PS	12 Apr 2024		C, J	III	100%
United States	LL (American Samoa)	23 Apr 2024		E	III	100%
	LL (CNMI, GUAM)			E	III	100%
	LL (Hawaii)			E	III	100%
	PL, HL, TR (trop)			G	III	#
	PS			B	III	75%*
	TR (ALB)				III	100%
Vanuatu	LL	12 Apr 2024	11	C, J, F	III	100%
	PS	12 Apr 2024		C, J, F	III	100%
Vietnam	LL/HL	30 Apr 2023	6	G, H, K, F, N	III	< 10%
	PS, GN	30 Apr 2023	6	G, H, K, F, N	III	< 10%
Wallis and Futuna	LL	12 Apr 2024		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%
12	Trip-level data provided instead of data at the fishing operation level, with vessel identifier.

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 or Logbook E-Reporting system 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.
P	Vessels of this fleet have been chartered to Pacific Island countries in recent years, although chartering arrangements for this year are not yet understood, so available operational data for some vessels are assigned to this flag state.

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 2022 size data to the WCPFC

FLAG STATE / ENTITY	GEAR(s)	Date Submitted	DATA-GAP Notes	General NOTES	TIER-SCORING EVALUATION LEVEL
Australia	LL	14 May 2023		B, C	III
	PL, PS, TR			J	III
Canada	TR	25 Apr 2023		A	III
China	LL	28 Apr 2023		A, H	III
	PS	28 Apr 2023		A, H	III
Cook Islands	LL, PS	21 Apr 2023		A, H, K	III
Ecuador	PS		7	H	I
El Salvador	PS	21 Aug 2023		H	III
European Union	LL	13 July 2023		L, M, N	III
	PS			H	III
Federated States of Micronesia	LL, PS	21 Apr 2023		A, H, I, K	III
Fiji Islands	LL, PL	21 Apr 2023		A, H, K	III
French Polynesia	LL	21 Apr 2023		A, H, K	III
Indonesia	LL, PS, OT	29 May 2023		A, K	III
Japan	PS	28 Apr 2023		A, H	III
	LL, PL	28 Apr 2023		A, H, I	III
Kiribati	LL, PS	21 Apr 2023		A, H, K	III
Republic of Korea	LL, PS	29 Apr 2023		A, H	III
Marshall Islands	LL, PS	21 Apr 2023		A, H, K	III
Nauru	PS	21 Apr 2023		A, H, K	III
New Caledonia	LL	21 Apr 2023		A, H, K	III
New Zealand	LL, PL, PS, TR	30 Apr 2023		A, H	III
Niue	LL	21 Apr 2023		G	III
Palau	LL, PL	21 Apr 2023		A, H, K	III
Papua New Guinea	LL, PS	21 Apr 2023		A, H	III
Philippines	PS, HL, RN, OT	14 Apr 2023		A, H, K	III
	LL	14 Apr 2023		G	III
Samoa	LL	21 Apr 2023		A, H, K	III
Solomon Islands	LL, PS, PL	21 Apr 2023		A, H	III
Chinese Taipei	LL	29 Apr 2023		A, H, I	III
	PS	28 Apr 2023		A, H, I	III
Tonga	LL	21 Apr 2023		A, H, K	III
Tuvalu	LL, PS	21 Apr 2023		A, H, N	III
United States	LL (American Samoa)	26 Apr 2023		B, E, F	III
	LL (Hawaii)	26 Apr 2023		B, E, F	III
	HL	26 Apr 2023		B, E, F	III
	TR			M	III
	PS	26 Apr 2023		A, H, K	III
Vanuatu	LL			A, H, I, K	III
	PS	08 Aug 2023		A, H, I, K	III
Vietnam	LL, PS	30 Apr 2023		M	III
	GN	30 Apr 2023		M	III
Wallis and Futuna	LL	21 Apr 2023		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: Provision of 2023 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 2024		B, C	III
	PL, PS, TR	30 Apr 2024		J	III
Canada	TR	13 Apr 2024		A	III
China	LL	28 Apr 2024		A, H	III
	PS	28 Apr 2024		A, H	III
Cook Islands	LL, PS	03 May 2024		A, H, K	III
Ecuador	PS	30 Apr 2024	7	H	I
El Salvador	PS	30 Apr 2024		H	III
European Union	LL			L, M, N	III
	PS	30 Apr 2024		H	III
Federated States of Micr	LL, PS	12 Apr 2024		A, H, I, K	III
Fiji Islands	LL, PL	12 Apr 2024		A, H, K	III
French Polynesia	LL	12 Apr 2024		A, H, K	III
Indonesia	LL, PS, OT	30 Apr 2024		A, K	III
Japan	PS	27 Apr 2024		A, H	III
	LL, PL	27 Apr 2024		A, H, I	III
Kiribati	LL, PS	12 Apr 2024		A, H, K	III
Republic of Korea	LL, PS	30 Apr 2024		A, H	III
Marshall Islands	LL, PS	12 Apr 2024		A, H, K	III
Nauru	PS	12 Apr 2024		A, H, K	III
New Caledonia	LL	12 Apr 2024		A, H, K	III
New Zealand	LL, PL, PS, TR	30 Apr 2024		A, H	III
Niue	LL			G	III
Palau	LL, PL	12 Apr 2024		A, H, K	III
Papua New Guinea	LL, PS	12 Apr 2024		A, H	III
Philippines	PS, HL, RN, OT	30 Apr 2024		A, H, K	III
	LL	30 Apr 2024		G	III
Samoa	LL	12 Apr 2024		A, H, K	III
Solomon Islands	LL, PS, PL	12 Apr 2024		A, H	III
Chinese Taipei	LL	30 Apr 2024		A, H, I	III
	PS	30 Apr 2024		A, H, I	III
Tonga	LL	12 Apr 2024		A, H, K	III
Tuvalu	LL, PS	30 Apr 2024		A, H, N	III
United States	LL (American Samoa)	23 Apr 2024		B, E, F	III
	LL (Hawaii)	23 Apr 2024		B, E, F	III
	HL			B, E, F, M	III
	TR			M	III
	PS	23 Apr 2024		A, H, K	III
Vanuatu	LL	12 Apr 2024		A, H, I, K	III
	PS	12 Apr 2024		A, H, I, K	III
Vietnam	LL, PS	30 Apr 2024		M	III
	GN	30 Apr 2024		M	III
Wallis and Futuna	LL	12 Apr 2024		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 9: Overall compliance evaluation for the provision of 2023 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%	0%		75%
El Salvador	PS	100%	100%	100%	100%		100%
European Union	LL	100%	100%	100%	100%		100%
	PS	100%	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%	100%	96%	100%		99%
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%		100%
Vanuatu	LL, PS	100%	100%	100%	100%		100%
Vietnam	LL, GN, PS	100%	100%	100%	100%		100%
Wallis and Futuna	LL	100%	100%	100%	100%		100%

7 Annex 1 - Notes on tier-scoring evaluation system

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

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

2. Where data provided by a CCM is deemed complete, without any gaps in (minimum standard) data fields provided, then a CATEGORY III level is assigned.

3. Where data provided by a CCM is deemed incomplete due to some fields missing, a CATEGORY II level is assigned, and the following procedures are used:

   a. The table below lists the total number of key attributes required in the submission of each type of scientific data.

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

   b. For each submission of data, the number of data field gaps are summed and subtracted from the total number of required data fields (by data type and gear) to produce a tier-scored percentage index for category II. For example, if a CCM submitted aggregate longline catch/effort data but did not include the catches of two key shark species (catch in weight and number = four data field gaps), then the tier-scored percentage index would be (42-4)/42 = 90%, and the assignment would be CATEGORY II (90%).

4. The required coverage of OPERATIONAL DATA is 100% and the coverage for each CCM submission has been listed in a dedicated column for COVERAGE in Tables 5 and 6. The guidelines for the submission of scientific data indicate in section "4. Catch and effort data aggregated by time period and geographic area" that:

   > *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 (TCC11- Summary Report; Para. 388), this paper attempts to provide an overall evaluation of scientific data to the WCPFC in Table 9. 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.