

12th MEETING OF THE SCIENTIFIC COMMITTEE

30 September to 05 October 2024, Lima, Peru

SC 12 – WP 01 SC12 Q&A for meeting papers

Scientific Committee

This document is organised in the order of SC11 agenda items. Added **text in red is from the Chair or the Secretariat**. Text in green is from participants. **Sections highlighted in yellow are for Members to complete**.

All participants will be given a link that will enable them to view this document. Some participants from each Member will be able to add new information to this document such as paper summaries, questions, and answers, and are requested to provide this information as soon as possible. All such new information will be added as tracked changes. The Secretariat will examine the additions, accept changes, and advise Members of the additions on a daily basis.

Please abide by the following deadlines:

1. One-paragraph summaries of annual reports and meeting papers should be entered into this document by **29 August 2023**.
2. Questions regarding content of national reports, relevant papers and names of rapporteurs from each delegation should be entered into this document by **4 September 2023**.
3. Answers to questions should be entered into this document by **9 September 2023**.



1. Annual Reports

1. Annual reports were received from Australia, Belize, Chile, China, Cook Islands, Curaçao, Ecuador, European Union, Faroe Islands, Korea, New Zealand, Panama, Peru, Russian Federation, Chinese Taipei, United States of America and Vanuatu (SC12-Doc14 to SC11-Doc34).
2. Questions and answers about the different annual reports were addressed prior to the meeting through a live collaboration document on Microsoft Teams.
3. All reports, including questions, responses, and final report text, were expected to be finalised by the close of day on 9 September. The questions and answers regarding Annual Reports are included in Annex X of this report.

2.1 Australia

4.

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.2 Belize

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.3 Chile

2.3.1 Jack mackerel

QUESTIONS & ANSWERS SECTION

5. By [EU]: Why is there a discrepancy between the numbers in length sampling and biological sampling listed in Table V and as submitted to the JMWG for the assessment?

Length sampling and biological sampling amount in Table V to 80922 length measurements and 26883 biological sampled while the reported data only lists 8 110 measured and 2 032 aged.

Regarding the discrepancy between the reported values, first we should clarify a confusion about the names of the columns of the "sampling" sheet of the template: In the "total of sample" column the catch is reported in tons. In the "samples" column the total number of individuals measured in the biological sampling is reported, which in the 2023 template appears reported as 34,928 specimens in total, which was a notation error. The correct value is 26,883 specimens in total. In the "measured" column, the number of individuals that had otolith sampling is reported, which in 2023 corresponded to 9,308 specimens in the whole zone and 8,110 corresponded to the individuals reported for the South-Central zone only. Again, a notation error was found



here. The correct number for the whole area corresponds to 6,989, and for the south-central zone is 5,791. The notations errors occurred because the final figures in these cells were not updated to the final data validation process. The "aged" column was correct, with the total number of specimens which had an age reading in 2023, and were 2,720 in total for the entire region (of which 2,032 correspond to the Central South area). All the other data in the ALK template were correct.

Table VI does not include any sharks/rays/dolphin/whales. Are these never bycaught in the area?

6. Answer:
7. A) Regarding the discrepancy between the reported values, first we should clarify a confusion about the names of the columns of the "sampling" sheet of the template:
8. In the "total of sample" column the catch is reported in tons. In the "samples" column the total number of individuals measured in the biological sampling is reported, which in the 2023 template appears reported as 34,928 specimens in total, which was a notation error. The correct value is 26,883 specimens in total. In the "measured" column, the number of individuals that had otolith sampling is reported, which in 2023 corresponded to 9,308 specimens in the whole zone and 8,110 corresponded to the individuals reported for the South-Central zone only. Again, a notation error was found here. The correct number for the whole area corresponds to 6,989, and for the south-central zone is 5,791. The notations errors occurred because the final figures in these cells were not updated to the final data validation process. The "aged" column was correct, with the total number of specimens which had an age reading in 2023, and were 2,720 in total for the entire region (of which 2,032 correspond to the Central South area). All the other data in the ALK template were correct.
9. B) about the bycatch. The **Table VI** of the national report provides consolidated information on incidental catches for the jack mackerel fishery between 2015-2024. According to Chilean legislation, the concept of incidental catch only considers seabirds, marine mammals and sea turtles involuntarily captured during fishing operations and does not necessarily involve mortality. Consequently, a difference is made between both categories (captured/dead).
10. Also, in accordance with Chilean regulations, scientific observers on board must record information on all species incidentally captured in fishing sets selected for this purpose. Therefore, from the information presented in Table VI it is concluded that at least in the sampled sets, no cetaceans have been detected to date. On the other hand, regarding chondrichthyans, they must be registered by observers but in the category of accompanying fauna if they occur in the species composition samples. However, all specimens must be returned to sea since they are not authorized to be captured with purse seines gears according to Exempt Resolution 3917/2019. In addition, the return must be carried out following mandatory handling protocols established by Exempt Resolution 2063/2020.
11. In relation with this last provision, some restrictions have arisen for the sampling of chondrichthyans by observers since the crews return the specimens to sea as soon as they detect them to avoid non-compliance issues as the fleet is being monitored by cameras on board (EMS).
12. Despite the constraints named above, records of captured sharks have been documented as a frequency of occurrence for 3369 fishing sets sampled by observers onboard the jack mackerel fleet between 2015 and 2023 (**Table a**). For these specimens, due to the difficulty of handling large specimens and some safety restrictions, a weight was not obtained, and



therefore it is not possible to make an estimates or extrapolation of total catch. These specimens were returned to the sea according to the protocol.

13.

14. **Cited regulations**

15. Exempt Resolution 3917/2019 https://www.subpesca.cl/portal/615/articles-106318_documento.pdf

16. Exempt Resolution 2063/2020 https://www.subpesca.cl/portal/615/articles-108757_documento.pdf

17.

18. **Table a**

19. Presence of captured sharks in the jack mackerel purse-seine industrial fishery operating between Valparaíso and Los Lagos, Chilean administrative regions (32°10'23" - 43°44'17" S) and international waters of the SPRFMO. Source: data collected by scientific observers onboard from 3,369 fishing sets between January 2015 and December 2023 Source: Vega et al. (2024) Preliminary data, final annual report under evaluation

Common name	Scientific name	PFS	POO
Blue shark	<i>Prionace glauca</i>	70	0.021
Shortfin mako	<i>Isurus oxyrinchus</i>	10	0.003
Porbeagle	<i>Lamna nasus</i>	6	0.002
Unidentified pelagic shark	Chondrichthyes	3	0.001
Thresher shark	<i>Alopias vulpinus</i>	2	0.001

- a. **PFS:** Presence in fishing sets
- b. **POO:** Proportion of occurrence in fishing sets

20.

21.

2.3.2 *Squid*

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.4 China

2.4.1 *Squid*

QUESTIONS & ANSWERS SECTION

22. By [USA]: China reports that 50 transshipment activities were observed but we cannot seem to figure out how many total transshipment activities took place. Would you be able to share this information with us?



23. Answer: **With regards to transshipment activities, it is not required to be in the annual report. These data in 2023 have been submitted to the Secretariat, and the total transshipment is about 5,100. .**

24. By [EU]: For table 1 and 2 of the main report, it would be insightful to have a full table encompassing all active years for which effort and catch is available. Especially because trends are addressed in the text.

No percentages on observation coverage are provided anywhere in the text of the main report, please mention the level of observer coverage in this main report too

- Answer:

2.4.2 *Observer Programme*

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.5 Cook Islands

QUESTIONS & ANSWERS SECTION

25. By [EU]: Please report effort and CPUE.

Please report on levels of bycatch of VMEs, mammals, birds and reptiles. If zero, then say so.

Please quantify the level of observer coverage

26. Answer: A rev 1 of the Cook Islands Annual Report has been submitted.

2.6 Curaçao

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.7 Ecuador

2.7.1 *Jack mackerel*

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.7.2 *Squid*

QUESTIONS & ANSWERS SECTION



- By [Member]: Insert here your question
- Answer:

2.8 European Union

QUESTIONS & ANSWERS SECTION

27. By USA: In the past there used to be maps showing the general locales of Jack mackerel fishing. Any reason why they are omitted in this report? In particular, it would be useful to have a better feeling on where and why the chub mackerel catches have increased in recent years.
28. Answer:
29. This info is placed currently in PFA WD: JM02, albeit in a different format

2.9 Faroe Islands

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.10 Korea

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.11 New Zealand

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.12 Panama

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.13 Peru

2.13.1 SPRFMO Area

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.13.2 ANJ

QUESTIONS & ANSWERS SECTION



30. By [EU]: What was the F/Fmsy ratio for 2024 under the 204.000t TAC?

31. Answer: The F/Fmsy ratio was: 0.859

Is technical creep (1%) applied in the JIM model used to set ANJ TAC for Jack mackerel (similar to how the SC uses the Peruvian CPUE)?

32. Answer: We have not applied a technical creep. However, as an index error (Indexerr) in the model the CPUE is affected by a CV (coefficient of variation, $CPUE \times CV$); where $CV = 0.2$ for the period 2002-2017 and $CV = 0.3$ for the period 2018-2024.

33. By (USA): in nearly every year since 2019 there have been pulses of catch in Jan or Feb except for 2024. The text says because the fish were dispersed. Elsewhere there is mention of lower interest in other species. Has the season or interest in anchoveta or chub mackerel changed in 2024?

34. Answer: We could not say that the season or interest in another resource had changed. However, due to the warming of the Peruvian sea caused by the 2023-2024 El Niño event (see Figures 2, 3; SC12- Doc 29), jack mackerel were dispersed during the summer 2024 (similar behaviour to that observed in previous El Niño events, e.g. El Niño 2017-SC5-Doc19). These conditions favoured resources such as chub mackerel. This species was more accessible to the fleet, mainly in January 2024. Subsequently from April 2024, when El Niño 2023-2024 weakened, jack mackerel became more concentrated and available. The artisanal fleet increased its fishing activity from April onwards, and then the industrial fleet showed the same behaviour at the end of June, mainly in the southern part of the Peruvian coast.

35. Also, the CPUE for 2024 remains quite high, could there be an issue if the catches are lower?

36. Answer: Catches were low at the beginning of the year 2024, but increased from April onwards and followed an increasing trend until August-September this year. Now catches are similar to those observed in the previous year.

37. These high CPUE values are explained by efficient catches of jack mackerel (since the May-June) due to their high concentration in the southern area.

38. An internal analysis with current data (from August-September 2024), shows that the index continues to follow the same trend as shown in SC12- Doc 29.

39.

40. Finally, would it be useful to show statistics on chub mackerel catch within zone? What is the understanding of stock structure to only show this under the SPRFMO area alone?

41. Answer: Peru provides the main statistics on the chub mackerel fishery in the SPRFMO area in document SC 12-Doc 28. However, as described in the introduction, document SC12- Doc 29 contains information on the jack mackerel stock and its fishery in Peruvian jurisdictional waters, provided voluntarily for information purposes and to support research work within the SPRFMO. For this reason, chub mackerel is not discussed in this report. Finally, chub mackerel is a more coastal resource, and its stock structure has not yet been discussed in the SPRFMO. However, Peru carries out an annual stock assessment of this resource to ensure its sustainability.

2.14 Russian Federation

QUESTIONS & ANSWERS SECTION



42. By [EU]: Comprehensive and exhaustive report. one element that could be addressed: it is mentioned that "*In 2023, the maximum catch was recorded in November and December when three trawlers were involved in the fishery, while the maximum productivity of the fishery was recorded in June-July and November-December (Fig. 6, 7).*"
- > The referred figures do not disclose clear information of the productivity other than a small spike in total catches. A figure of CPUE would be useful for this purpose, or an index of recruitment, but at least some indicator of sorts to validate the statement
43. Answer: Data on CPUE by month are shown in Table 9 in RF National Report. The table clearly shows that the maximum CPUE of Jack mackerel were observed in June-July and October-December 2023.

2.15 Chinese Taipei

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.16 United States

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer:

2.17 Vanuatu

QUESTIONS & ANSWERS SECTION

- By [Member]: Insert here your question
- Answer: