



**TO ALL COMMISSION MEMBERS, COOPERATING NON-MEMBERS,
PARTICIPATING TERRITORIES AND OBSERVERS**

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TTMW2 – Chair’s Report

Dear All,

As the Chair of the Commission, Ms Jung-re Riley Kim, undertook at the end of the second workshop to develop a new tropical tuna measure for the WCPFC (TTMW2), I am pleased to circulate the enclosed Chair’s Report of TTMW2. The Report as explained at end of TTMW2 is a summation by the Chair of the key points expressed (without attribution) during the presentations and ensued discussions and the Chair’s discerned outcomes of the discussions under each agenda item.

The Chair’s Report of TTMW2 is also posted on the website at <https://www.wcpfc.int/meetings/ttmw2>.

Yours sincerely,

**Feleti Penitala Teo, OBE
EXECUTIVE DIRECTOR**



**DEVELOPMENT OF A NEW TROPICAL TUNA MEASURE
WORKSHOP 2 (TTMW2)
Electronic Meeting
6-10 September 2021**

CHAIR's REPORT OF TTMW2

WCPFC-TTMW2-2021-Chair's Report

Agenda Item 1 — Opening of Workshop

1. The Chair of the Western and Central Pacific Fisheries Commission (WCPFC), Ms Jung-re Riley Kim, opened the second Tropical Tuna Measure Workshop (TTMW2) at 10:00 am Pohnpei time on 06 September 2021. The meeting was convened electronically.
2. The following Members, Cooperating Non-Members and Participating Territories (CCMs) attended TTMW2: American Samoa, Australia, Canada, the People's Republic of China, the Cook Islands, the European Union (EU), the Federated States of Micronesia (FSM), Fiji, French Polynesia, Guam, Indonesia, Japan, Kiribati, the Republic of Korea, the Republic of the Marshall Islands (RMI), Nauru, New Zealand, Niue, Palau, Papua New Guinea (PNG), the Philippines, Samoa, the Solomon Islands, Chinese Taipei, Thailand, Tokelau, Tonga, Tuvalu, the United States of America (USA), and Vanuatu.
3. The following Observers attended TTMW2: Australian National Centre for Ocean Resources and Security (ANCORS), International Pole and Line Foundation (IPNLF), International Seafood Sustainability Foundation (ISSF), Marine Stewardship Council (MSC), Organisation for the Promotion of Responsible Tuna Fisheries (OPRT), Pacific Islands Forum Fisheries Agency (FFA), Parties to the Nauru Agreement Office (PNA), the Pew Charitable Trusts, The Pacific Community (SPC), Sustainable Fisheries Partnership Foundation (SFP), The Ocean Foundation, and World Wide Fund for Nature (WWF). A full list of meeting attendees is posted on the workshop site as WCPFC-TTMW2-2021-participants.

1.1. Opening remarks

4. The WCPFC Chair welcomed all delegates and participants to TTMW2 and thanked them for their intersessional contributions to efforts to develop a new tropical tuna measure. She observed that the prolonged coronavirus pandemic (COVID-19) disruptions served to highlight the strength of the Commission and the excellence of the Secretariat and its Scientific Services Provider (SSP), who were progressing the work of the Commission despite the challenges posed by COVID-19. She noted that the first Tropical Tuna Measure Workshop (TTMW1) had provided clarity with respect to the positions and approaches of CCMs regarding the formulation of management objectives in the new measure, and that securing agreement with respect to those objectives was fundamental, as they form the foundation of the management regime for tropical tuna stocks and fisheries. She stated her hope that TTMW2 could advance the formulation of management objectives for the new tropical tuna measure. She noted the long list of

issues to address and stated that of necessity the focus would be on what elements to include, rather than on specific details. She stated that she looked forward to CCM's contributions and to working with them in a spirit of compromise and cooperation.

5. The Executive Director of the WCPFC, Mr Feleti Penitala Teo, OBE, also welcomed all delegates and participants to TTMW2, and emphasized the importance of the workshop as the last collective opportunity to consider the general architect and structure of the new tropical tuna measure. He noted that the management objectives for the tropical tuna stocks and fisheries are central to defining the architecture for the new CMM. He urged delegates to make their best efforts and to be flexible and willing to compromise so that the new CMM has the best opportunity to be adopted by WCPFC18. He thanked SPC for their intersessional work and looked forward to receiving a clear set of instructions and guidelines which the Chair, with the support of the Secretariat, could use in drafting a new measure for consideration by WCPFC18. He assured that the Secretariat would provide its full support to the workshop's deliberations.

1.2. Adoption of agenda

6. The Chair noted that the agenda was developed in accordance with guidance provided by CCMs during TTMW1, and that the draft agenda was circulated for responses in WCPFC Circular 2021/47 of 24 June 2021.

7. The workshop adopted the agenda as posted in WCPFC-TTMW2-2021-agenda.

1.3. Workshop meeting arrangements

8. The Chair reviewed the meeting schedule and arrangements. The Secretariat's IT Manager explained the electronic meeting protocols and reminded delegates of the need to register for Commission meetings several days in advance, because of the need to secure official clearance from CCM's Official Contacts for attendance by individuals.

9. A number of CCMs expressed their concern regarding the meeting schedule, which included one day in which the meeting times are outside the normal working hours of the WCPFC Secretariat, and requested that the schedule be changed so that all sessions would be held within the Secretariat's normal working hours. At the Chair's suggestion, TTMW2 participants agreed to retain the previously announced TTMW2 meeting schedule, with the understanding that there would be intersessional discussions regarding the meeting schedule for future online meetings of the Commission.

Agenda Item 2 — Update on intersessional activities since TTMW1

2.1. Chair and CCMs to provide update (if any) on any intersessional discussions related to the new tropical tuna measure.

10. The Chair noted that at WCPFC17 the Commission encouraged intersessional discussions between TTMW1 and TTMW2, and the Chair had asked CCMs to keep her updated regarding any intersessional activities. She stated she had not received any updates from CCMs, and invited CCMs to comment.

11. A number of CCMs referenced WCPFC-TTMW2-2021-DP02, which reflects their position on a number of issues under discussion at TTMW2. They noted that they were not approached by any CCMs seeking to undertake consultations in accordance with the requirements of CMM 2013-06, and encouraged and invited CCMs to undertake intersessional consultations following TTMW2.

Agenda Item 3 — Outcomes of additional analysis and information by SSP

3.1. Summary of Requests at TTMW1, results and key points.

12. SPC reviewed WCPFC-TTMW2-2021-01_rev4, Results of Analyses Requested by TTMW1, which presents the results of analyses that SPC could produce by the date of TTMW2. Some medium-term analyses would be produced by SPC for WCPFC18, subject to the prioritisation discussions under agenda item 7. SPC noted that the report breaks down analyses by theme with a short narrative under each; the presentation focussed on the assumptions that were necessarily made by SPC in preparing the analyses, rather than a detailed review of the results, which are contained in the paper. They made the following specific points:

- (i) With regard to bigeye TRPs, SPC used the same approach as in SC17-MI-WP-01. When SPC sought to identify the conditions in the fishery that would lead to the requested bigeye tuna depletion levels ($SB/SB_{F=0}$) under “recent” and “long-term” recruitment, they modified the longline catch and purse seine effort by the same amount relative to 2016-2018 average levels. The same candidate TRPs could be achieved by other purse seine/longline combinations, and this is illustrated in WCPFC-TTMW2-2021-IP11.
 - (ii) For skipjack TRPs, the approach used was that detailed in SC17-MI-WP-02, which uses 2012 as the baseline for purse seine and pole and line catch, while the domestic fisheries of Indonesia, the Philippines and Vietnam are based on the 2016-2018 levels. The key new request was to look at the fishing mortality patterns that resulted at different candidate skipjack depletion levels. The outcomes are strongly influenced by the assumptions made in the projection process; overall the pattern is driven by changes in fishing mortality in Region 5 (the region that includes the waters of Indonesia and the Philippines), with a notable increase in the fishing mortality at younger ages in this region. In other areas there is relatively little change in fishing mortality-at-age. SPC noted that future fishing mortality patterns are driven by the combination of the fisheries projected, how they are projected (on catch or effort), and the selectivity of each gear to younger or older individuals. In region 5, the domestic fisheries are necessarily projected based upon catch (rather than effort), with that future catch set at the 2016-2018 average, which is notably higher than estimates for 2012. As a result, fishing mortality increases relative to 2012 levels.
 - (iii) The FAD closure requests covered many different patterns of in zone/high seas FAD closure and different purse seine effort baselines. SPC used an approach consistent with the tropical tuna evaluations as outlined in SC17-MI-IP-03. For bigeye, the main impact for the purse seine fishery is through the number of FAD sets. SPC assumed that changes to the FAD closure period and the purse seine effort baseline would have a multiplicative effect (for example - a higher baseline effort and a shorter FAD closure period would both contribute to increases in FAD sets). The pattern of sets per day was assumed to remain constant (there is no change in the frequency of FAD sets with changes in the FAD closure period). SPC noted that the spatial implications of high seas FAD closures were not fully factored in; bigeye catch per FAD set is higher in the east of the WCPO, where the impact of changes in the high seas FAD closure would be concentrated. For yellowfin and skipjack, the primary impact is through overall purse seine effort, not through the estimated number of FAD sets. Two baseline fishing levels were requested: 2016-2018 conditions, and 2019 conditions (when effort was 7% lower compared to 2016-2018). In turn, the 2016-2018 total average purse seine effort is about 8% lower than in 2012; this should be taken into account when considering the consequences for skipjack against candidate TRP levels.
13. The following clarifications were offered by SPC in response to questions posed by CCMs:
- (i) **Region 5 data, and Table 5.** Overall, the 2016-2018 data for region 5 catches in Table 5 are felt to be an improvement over what was available in 2012, noting that catch information for some gears remains uncertain. In Table 5, other small-scale gears include troll, gillnet, and other gears.

- (ii) **Skipjack.** For skipjack projections, overall purse seine effort is assumed constant at whatever level is specified to achieve the candidate TRP. An increase or decrease in the number of FAD sets is therefore compensated for by a change in unassociated sets to keep the effort or catch at same level within the projections. Previous analyses have shown that changing the proportions of FAD or unassociated sets does not affect skipjack stock status. SPC therefore assumes that there is no increase in the frequency of sets made into the future and the length of the FAD closure does not affect the number of sets per day. Regarding catchability, SPC assumes that regardless of what is projected, catchability is fixed at the level estimated in the last year of the stock assessment; no effort creep is assumed, and the frequency of sets is constant. Responding to an intervention from the PNA, SPC highlighted that the PNA wanted to use 2012 as a baseline level for overall purse seine effort in the future, unless otherwise stated. Regarding potential additional FAD closure/longline catch scenarios, SPC suggested that CCMs minimize the number of longline catch scenarios to keep the analyses and results manageable. Responding to queries on the level of skipjack fishing mortality under candidate skipjack TRP levels, SPC referenced Figure 7 relating to skipjack juvenile and adult mortality, noting that juvenile skipjack are generally younger than 1yr old. Noting the different fishing mortality pattern in the historical period of the stock assessment (1972 to 2018) to the projected period (2019 to 2048) in that figure, SPC stated that for the stock assessment period the level of fishing mortality (F) at a specific time is based upon the specific estimated recruitment patterns and variable patterns of fishing seen in the fishery. In the projection period purse seine effort is assumed ‘constant’ rather than varying as seen in the assessment period, and the results of the projection conform to a pattern of ‘average’ future recruitment, leading to the less variable fishing mortality shown in that projection period. Regarding the pattern of fishing mortality in Region 5 for the skipjack TRP projections, SPC noted that an 18-year projection (rather than a 30 year projection) would generate a similar pattern in F-at-age as seen in the existing results (Figure 4).
- (iii) **Scalars.** As used in the papers under discussion, a scalar greater than 1 implies an increase in the listed quantity (effort or catch).
- (iv) **Tables 1 and 2.** If recent recruitment patterns continued for bigeye, in Tables 1 and 2 in working paper TTMW2-2021-01, if the objective is to achieve 2000-2004 levels, the scalar from 2016-2018 is 1, meaning FAD closure levels would be equal to the average closures in those years. Usually the longline fishery takes adults, and the purse seine FAD fishery takes a combination of adults and juveniles; the domestic fisheries of Indonesia, Philippines and Vietnam focus on juveniles. The notation used in Tables 1 and 2 (e.g., Juvenile $F_{2048}/F_{2014-2017}$) refers to the ratio of fishing mortality in 2048 compared to the average over 2014-2017. As noted for skipjack, the resulting relative fishing mortality is influenced by the settings SPC has used in the projections (purse seine projected based on effort, longline on catch) which influences the estimated fishing mortality in the various regions.
- (v) **Archipelagic waters.** Regarding FADs and associated sets, these do not include sets in archipelagic waters because these are not covered under the CMM.
- (vi) **Log sets.** There has been a decrease in log sets over time (the values in Figure 6 are based on log sheet data, which agrees with observer data); this reduction is likely to have been influenced by the restrictions in associated sets under the CMMs over that period.
- (vii) **Tables 6 and 7.** As noted above, SPC assumes that the main impact on skipjack and yellowfin derives from the overall fisheries effort rather than the combination of free school and associated sets. Previous analyses have shown that changing the proportions of FAD or unassociated sets for a given effort does not affect skipjack or yellowfin stock status.

Agenda Item 4 — Management Objectives

4.1. Recap of the Chair's Summary of Discussions on Management Objectives at TTMW1

14. The Chair shared her summary of the discussion on Management Objectives from TTMW1 (in Attachment 1 of WCPFC-2021-TTMW1-Chair's Report), and noted some of the agreed approaches and perspectives, and points of divergence.

4.2. Current objectives and baseline periods versus new objectives

15. The Chair noted that the following guiding principles were generally agreed:

- Development of management objectives in the new measure must consider best available scientific advice and information;
- Management objectives should have a clear rationale, be understandable, able to be operationalized and monitored; and
- The management objectives of the new measure must sustain the healthy status of the stocks / fisheries and they must not carry an unreasonably high risk of breaching the limit reference points (LRPs).

16. The Chair observed that there were two general views expressed at TTMW1. On the one hand, is to use the current management objectives as the starting point of discussion, and the other is to develop new management objectives based on the best available scientific advice. She invited CCMs to share their views.

17. A number of CCMs noted commonalities and differences regarding the management objectives, and stated that they are encouraged that all CCMs want to maintain the health of the tuna stocks. They stated the hope that CCMs will continue to work on commonalities and converge on agreed management objectives and reiterated the need for CMM 2013-06 reviews of any proposals.

18. Some CCMs stated that because over 80% of the catch is taken within waters of coastal and developing states, the objectives need to reflect the interests of those coastal states, and that the objectives should remain unchanged.

19. Individual CMMs offered the following perspectives:

- The current management objectives can be adjusted to some extent without completely overhauling them.
- WCPFC's tropical tuna measures, beginning with CMM 2008-01, were designed based ultimately on the status of the bigeye fishery in 2001-2004, and the fishery status and mortality in 2000-2004 should set the context for new objectives.
- The area for both longline and purse seine fisheries should be 20°N to 20°S, and if the 2012 level is used for purse seine, the same should apply to the longline fishery.
- The measure should apply only to EEZs, and do not extend to archipelagic and territorial waters.

20. CCMs agreed to continue discussion of the outstanding issues at TCC17, relevant small working groups (SWGs), and during the tropical tuna measure (TTM) consultation process leading to WCPFC18.

4.2.1. Bigeye and yellowfin

21. A number of CCMs stated that they support keeping the current management objectives for bigeye and yellowfin, as these are working well. They noted this is desirable in part because it is an appropriate, precautionary approach, and the current objectives represent the interests of different fisheries and the CCMs involved in those fisheries.

22. Individual CCMs offered the following perspectives:

- the tropical tuna catch can be increased while maintaining a sustainable fishery.
- Management objectives should reflect fishing mortality for bigeye.
- Management objectives can be based on the risk of avoiding the LRP for these stocks, noting that LRPs can be essentially equivalent, whether expressed as a risk or baseline period.
- BET depletion is unevenly distributed, particularly by latitude and affects various fisheries differently. The introduction of a spatial component could address all CCM's interests: for example those with low catch rates, and others with restrictive catch limits in areas with light exploitation. A CCM suggested language to be added to any management objective for bigeye to reflect the goal of avoiding excessive spatial unevenness in stock biomass depletion.

23. A number of CCMs reiterated that the objectives need to reflect the geography of where the tropical tuna catches are taken and Article 30. They referenced the four core elements of the CMM that are related to bigeye conservation namely the 3-months FAD closure in EEZs and high seas, the additional high seas FAD closure, the high seas purse seine effort limits, and the longline bigeye catch limits; and strongly advocated that there should be no changes in these important elements. However, they stated that if other CCMs insisted on changes, then those changes would have to be made as a package. They noted SPC analysis indicates that a 10% increase in longline bigeye catches has the equivalent effect on the bigeye stock of about 1 month of the FAD closure; therefore, if longline bigeye catches are increased by 10%, they expect the FAD closure should be reduced by 1 month. Changes in other elements would be additional.

24. The Chair summarized the discussion, noting that CCMs stressed the importance of taking a package approach with the TTM in the context of balance, and that CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

4.2.2.Skipjack

25. A number of CCMs stated that the wording for the management objective for skipjack should be based on maintaining the 2012 spawning biomass and fishing effort levels, which will ensure that the skipjack objective stays constant over time. They noted that the tropical tuna measure is a bridging measure and emphasized the need to develop TRPs and a harvest strategy for tropical tuna stocks.

26. In response to a request by a CCM, SPC calculated recent (2014-2017) fishing mortality as a proportion of 2012 and 2012-2015 levels, which they presented in Table 17 in WCPFC-TTMW2-2021-01, rev 04; SPC noted that estimated (weighted) median fishing mortality levels for all stock components were lower in 2012 or 2012-2015 relative to the recent period (scalars in the table are less than 1).

27. Individual CCMs offered the following perspectives:

- The TRP should be set higher to reverse the declining trend of the stock.

- The TRP should be based on a multiple (minimum 3-year) reference period.
- The management objective should reflect the CPUE for skipjack.

28. The Chair acknowledged that CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

4.3. Balance between fisheries

29. The Chair noted that there were repeated calls for maintaining an appropriate balance between longline and purse seine, and asked CCMs to provide their views on what this balance should look like.

30. A number of CCMs stated that the current CMM strikes the correct balance between fisheries and CCMs, and that the new measure must maintain the existing balance. They stated the need to ensure that SIDS in particular can benefit from any relaxation of management measures should this be decided upon.

31. Some CCMs stated that the balance is a critical element, including between the longline and purse seine fisheries, and noted the SPC analysis in WCPFC-TTMW2-2021-IP-11, which assesses the effect of different measures on stock outcomes. They noted the failure of the Commission to effectively regulate the longline fishery, and stated there cannot be a transfer of the conservation burden to developing states, and urged the Commission to take into account how the balance is affected by any proposals.

32. Individual CCMs offered the following perspectives:

- The balance is not related to management objectives but will be clearer after consideration of the management options under Agenda item 5.
- The balance is needed not only between the purse seine and the longline fisheries but also between CCMs in order to avoid a disproportionate burden of conservation placed on SIDS and Participating Territories.
- The balance also includes the balance between the high seas and in-zone purse seine fisheries.
- The balance, as with previous practice, requires a package approach to changes to the longline bigeye catch limit, the lengths of FAD closure and high seas purse seine effort limits.

33. The Chair acknowledged that CCMs agreed to keep alive the idea of maintaining the appropriate balance between the various factors and considerations as the new measure is developed and to continue to discuss those outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

4.4. Social and economic considerations

34. The Chair stated that at TTMW1 there was general support for taking social and economic considerations into account in the formulation of the management objectives but little guidance on how this should be done. She asked CCMs to consider what these considerations are and how they should be reflected in the new tropical tuna measure.

35. CCMs broadly supported the view that social and economic considerations have to be taken into account in management objectives.

36. A number of CCMs stated that in their views social and economic considerations are already reflected in the current objectives; they referenced discussions at WCPFC15 regarding the 2012-based skipjack TRP proposal, which included heavy emphasis on social and economic considerations. They do not see any strong need to change those considerations, and therefore do not see sufficient basis for changing the objectives in the current CMM.

37. A CCM stated that one element that reflects the fact that social and economic considerations are taken into account in the current measure is the definition of charter vessels as part of SIDS' domestic fleets in Footnote 1 and the FAD closure provisions.

38. Some CCMs raised the issue of the capacity of CCMs to collect the right economic data to enable analysis and review of the performance of socioeconomic considerations in the objectives. Suggestions from CCMs regarding data included that the priority should be on defining data related to social and economic considerations so as to inform the Commission's discussions, that data collection needs to be improved, and that more time might be needed to consider how to improve data collection.

39. Individual CCMs provided these other perspectives:

- Social and economic considerations, including of artisanal and coastal communities must be taken into account especially when setting TRPs, along with biological considerations.
- Fish price and market stability should be considered as one of the social and economic consideration.
- A common approach is needed to accommodate the complexity of social and economic factors and varying perspectives of CCMs.

40. The Chair acknowledged that CCMs agreed to keep alive the notion of the need to account for social and economic considerations in developing the new tropical tuna measure and agreed to continue to discuss those outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

Agenda Item 5 — Management Options

41. The Chair introduced the agenda item by stating that management options must align with the management objectives. The management options are grouped in the agenda as arranged under the current CMM. She encouraged CCMs to approach the discussion as a set of questions namely: *Do CCMs wish to retain a management option? If yes, should it be kept as is, or a revision or addition is needed? If no, do we delete, or amend it or replace it.* The Chair noted that the Secretariat has produced working paper WCPFC-TTMW2-2021-02 as a reference paper to guide discussions on Agenda Items 5 and 6. The reference paper indicates the applicable existing provisions in CMM 2020-01 and provided a brief commentary on how those provisions were implemented and monitored through the compliance monitoring scheme (CMS).

5.1. Purse seine fishery

5.1.1. Zone-based effort control

42. The Chair pointed out that the relevant existing provisions for zone-based effort control are paragraph 25 and Table 1 of Attachment 1 of CMM 2020-01, which is a key feature of the existing measure. She invited comments and discussion, mindful of the need to respond to the guiding questions earlier explained.

43. A number of CCMs supported retaining paragraph 25. They stated that they consider the purse seine effort limits within EEZs established in paragraph 25 and Table 1 to be a critical factor in ensuring the management of skipjack, yellowfin and bigeye tuna stocks in the Convention Area, and suggested amendments to Table 1 of Attachment 1 to remove ambiguities, as follows:

- delete the US footnote in this table as it creates confusion, and instead seek clarity from the US on the limits to apply in-zone only;
- include the EEZ purse seine effort limits of Indonesia, Philippines, Chinese Taipei and Wallis and Futuna; and
- remove the ‘qualifying comment’ for Cook Islands, Fiji, Niue, Samoa, Tonga and Vanuatu.

44. The Chair acknowledged that CCMs agreed that zone-based effort control is an essential part of the tropical tuna measure and should be retained in the new measure. The Chair also acknowledged the need to further review Table 1 of Attachment 1 and noted that CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

5.1.2. High seas effort control

45. The Chair, in introducing this agenda item, referred to the reference paper which highlighted paragraphs 26, 28 and 30 as the relevant exiting provisions in CMM 2020-01 to the issue of high seas effort control.

General

46. There was broad agreement among CCMs that high seas purse seine effort control and overage provisions should be retained. A number of CCMs supported retaining paragraphs 26 and 30 and the limits in Table 2 as they are. They noted that, if changes to Table 2 were proposed, the following should be noted: the limits in Table 2 are linked to the FAD closure as part of the package of bigeye conservation measures. Thus, if the limits in Table 2 are increased, the length of the FAD closure will need to be reduced.

47. Many CCMs also supported placing a hard limit on purse seine effort or catch on the high seas. A number of these CCMs also supported the development of an allocation framework that is compatible with zone-based limits and adequately takes into account Articles 8, 10 (3) and 30 of the Convention. They noted that the request made at TTMW1 that the SSP evaluate the impacts of a hard limit of 5,000 days of purse seine effort on the high seas, stating that this limit remained an option, but that further investigation of the implications was needed. A CCM stated that paragraph 28 in the CMM includes the collective commitment to have a total limit.

48. Several CCMs stated that the new measure should take into account the needs and circumstances of all SIDS equally.

49. A CCM noted the changes in high seas versus EEZ efforts over time, and the resulting negative impact on some fleets, and stated that this should be addressed.

Table 2 of Attachment 1

50. CCMs offered differing perspectives regarding Table 2 in Attachment 1 of the CMM 2020-01:

- A CCM stated that flag-based limits based on historical fishing are the problem, and that there was no basis for listing SIDS in Table 2 until a hard limit is established.
- A CCM stated that the effort of CCMs that have no effective limits in the high seas has increased by more than ten-fold since 2012 and stated they should be included in Table 2 of Attachment 1 in the new measure, which would place all fishing activities to be considered under a common framework and would enable SPC to simulate the fishing scenarios. It expressed support for an interim arrangement that could prevent endless increase without limit.
- A CCM stated that developing states should retain the right to utilize the stock in the high seas, regardless of their current or prior high seas activities.
- A number of CCMs stated that Table 21 of working paper WCPFC-TTMW2-2021-01_rev4 indicates that the impact of the SIDS exemption is negligible on resulting bigeye depletion levels under both recent and long-term recruitment conditions, and that this should address concerns from CCMs concerned that SIDS have not been included in Table 2. They supported retaining paragraph 26 and Table 2 in their current form.
- In response, a CCM stated that Table 21 compares the impacts over a very short period; if done over a longer period there would be a larger impact. It also suggested that Table 23 include 2 lines that reflect the trends that are alluded to, as this would be useful for comparison purposes.
- A CCM stated that if limits in Table 2 are to be changed, these should take into account the decline in the size of fleets, noting the scope for making valuable adjustments. Non-SIDS fleets are declining in size and if the limits in Table 2 are to be changed, in its view that change should take into account the decline in the sizes of all the fleets in Table 2.

51. The Chair acknowledged that CCMs agreed that high seas effort control and the overage provisions in paragraphs 26, 28 and 30 should be retained and the new measure should continue to commit the Commission to setting hard limit for purse seine efforts or catch on the high seas. However, further work is needed to review Table 1 of Attachment 1 of the current measure for inclusion in the new measure. CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC 18.

5.1.3. Effort control north of 20N and south of 20S

52. The Chair noted that paragraph 27 of CMM 2020-01 is the relevant provision to the management option under this agenda.

53. The Chair acknowledged that CCMs agreed that paragraph 27 should be retained in the new measure.

5.1.4. FAD Set Management

5.1.4.1. FAD control: closure periods or other measures

54. The Chair noted that the relevant existing provisions to FAD closure include paragraphs 16, 17 and 18 of CMM 2020-01.

General

55. CCMs generally supported retention of FAD control measures in the new CMM.

FAD Closure (paragraphs 16 and 17)

56. A number of CCMs stated their support for maintaining the 3-month FAD closure in its present form and specially retaining paragraphs 16 and 17, noting that the FAD closure is one element in the package of measures to conserve bigeye tuna in the tropical tuna measure, and the balance in conservation burden between the purse seine and longline fisheries, and among CCMs, in that package needs to be maintained.

57. One CCM stated it could support the 3-month purse seine FAD closure if the longline limit was returned to the 2014 level. Another CCM stated it did not support continuation of paragraph 17. A CCM emphasized its position that FAD closure provisions were dependent on achieving progress on observer reporting.

Paragraph 18

58. Opposing views were expressed regarding paragraph 18 (regarding “small garbage”): a number of CCMs supported removal of paragraph 18, while other CCMs noted the difficulty observers have with “small garbage”, and supported reviving the provision.

FAD definition

59. A variety of views were expressed regarding the FAD definition. Several CCMs supported restricting the definition of FADs to floating objects with attached radio buoys; one CCM stated that this might require adjusting the length of the FAD closure. A number of CCMs stressed that the FAD definition and Footnote 1 must be retained, as they are both integral elements of the FAD closure. They noted that the importance of the FAD definition was emphasised by the results presented by SPC that showed that an apparently simple change of removing log sets from the FAD definition could reduce the bigeye spawning biomass by 5% and probably more. A CCM stated that the FAD definition should apply only to drifting FADs, and not include anchored FADs; another CCM stated that both drifting and anchored FADs should be included because both have similar aggregating capacity.

60. Several CCMs suggested reducing the distance within which purse seine vessels are prohibited from conducting a set on a FAD from one nautical mile to 0.5 nautical miles.

Footnote 1

61. A CCM observed that there has been a significant increase in the number of vessels listed in the notifications (from 50 to 150 since 2018) that could benefit from the exemption, and stated under the new CMM the exemption under Footnote 1 that supports SIDS should be drafted so as to exclude the use by non-SIDS CCMs.

62. A CCM stated that with regard to chartering vessels, it should be up to the coastal States to decide what vessels form part of their domestic fleet.

63. A number of CCMs stated the arrangements in Footnote 1 were designed to partially offset the disproportionate burden on them by the FAD closure; rather than being viewed as an exemption, they stated it allows domestic vessels to continue to set on FADs in their own EEZ only during the closure. They stated these arrangements have had a minor impact on the effectiveness of the FAD closure, but the closures represented an increasing financial burden to them as the value of the purse seine fishery increases. They noted the increasing disproportionate burden on them from the FAD closure and the need for the Commission to take additional measures aimed at reducing this burden, such as strengthening Footnote 1.

64. A CCM stated that Table 23 of TTMW2-2021-01_rev 04 indicates that Footnote 1 has the most impact among the elements considered, and inquired how other CCMs would seek to strengthen Footnote 1. It stated their view that it was never envisaged that non-SIDS would benefit from Footnote 1 and the related exemption.

65. A CCM stated that the Commission cannot ensure that the CMM works if there is a total exemption for certain SIDS, as this means that there are no total catch or effort limits. Mindful of the special needs of SIDS, it stated that a total exemption is not the only way to address this. An appropriate limit should be set for each CCM; they looked forward to continuing discussions with CCMs in the future.

Observer reports for investigations and enforcement action

66. A CCM stated it continues to have concerns with any measure that relies on observer reports for taking enforcement action, and that it would want to first ensure that these reports can be accessed so that alleged violations are not ignored because the Commission cannot access observer reports.

67. The Chair acknowledged that there was general agreement that FAD control to be retained, and general support to include the concepts in paragraph 16. However, there continue to be differing views on the treatment of Footnote 1, the small garbage provision, the FAD definition, treatment of paragraph 17, and lengths of FAD closure periods. CCMs agreed to continue to consider the remaining outstanding issues through discussions at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC 18.

5.1.4.2. Non-entangling and biodegradable FADs

68. The Chair noted that the relevant existing provisions for this agenda item include paragraphs 19, 20, 21 and 22 of CMM 2020-01. The Chair further noted that the FAD Management Options IWG (FADMgmtOptionsIWG) had developed draft guidelines (WCPFC-TTMW2-2021-IP05) which were considered at SC17 and would also be presented to TCC17.

Paragraph 19

69. CCMs generally supported amendments to paragraph 19 to make the use of non-entangling material in the construction of FADs mandatory, including banning the use of mesh netting.

70. A CCM noted that there have been a number of shortages and supply chain issues that may result in materials being hard to obtain, and suggested that to ensure all CCMs can obtain the materials, the Commission should look carefully at the implementation timeframe for changes to paragraph 19. One CCM suggested at least a 1-year delay for actual implementation.

Paragraphs 20 and 21

71. A number of CCMs also supported maintaining the approach in paragraphs 20 and 21 about continuing to work on the use of biodegradable materials. Support was also expressed to revise paragraph 22 by referring the issue of FAD design back to the FADMgmtOptionsIWG. Due to the lack of scientific or technical information available on the use of natural or biodegradable materials for FADs, a number of CCMs expressed support for further scientific studies into the development and application of appropriate biodegradable materials in FAD construction, including research on the use of local materials, noting that such information will be critical in developing requirements for the use of biodegradable materials on FADs.

72. A CCM noted the need to consider compliance with the CMM which has been hampered by the lack of correct language, and stated they see merit in a more ambitious text in the new CMM regarding biodegradable FADs, noting that even if fully fledged biodegradable FADs are not available today, a significant portion of FADs could soon be made biodegradable.

73. An observer supported strengthened language for non-entangling and biodegradable FADs. It noted there are up to 40,000 FAD deployments each year, and thus the removal of mesh and a move to biodegradable FADs are priorities.

74. The Chair acknowledged that there is general agreement that paragraph 19 should be retained, and that the biodegradable FAD provision should be retained in the new CMM as a voluntary measure. However, there remain outstanding issues to strengthen specific language of paragraph 19, definition of biodegradable FADs in paragraph 20 and implementation timelines. CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the tropical tuna measure consultation process leading to WCPFC 18.

5.1.4.3 Instrumented buoys

75. The Chair noted that the relevant existing provisions for this agenda item include paragraphs 23 and 24 of CMM 2020-01.

76. CCMs generally supported retaining paragraph 23 in its current form. Several CCMs suggested revising the number of FADs specified to ensure the effectiveness of the measure.

77. A number of CCMs stated that although paragraph 24 (regarding a review of the number of FADs specified in para. 23) is out of date they could consider a revised version referring the issue of FAD numbers to the FADMgmtOptionsIWG.

78. Support was also expressed by CCMs for adoption of mechanisms to identify individual FADs as an important step towards improving knowledge about FADs that are washed up on reefs and beaches. There was also support for continued research to inform decisions relating to the optimum number of deployed drifting FADs, as this will help to maximise profitability while limiting impacts on tuna stocks and ecosystems.

79. A CCM suggested adding a more specific reporting requirement for drifting FADs, and stated it would be happy to provide text at a later date.

80. A CCM signalled their concern about the growing impacts from lost and abandoned FADs, and stated it would like to see tighter regulation of FADs. It supported developing measures to restrict the number of FADs deployed by vessels each year.

81. A CCM offered a suggested text regarding the reporting arrangements for active FADs for consideration.

82. A number of CCMs supported increased control of FADs in principle, if such control did not undermine the economic benefits of FADs in their waters. However, they raised a number of issues of concern with the proposed text. In summary, they stated that as framed the reporting provision is unlikely to be effective. They stated that to be effective, FAD log sheet-type reporting is needed, with FAD buoy IDs, which at minimum record which vessel, including supply vessels, deploy each FAD. It is also necessary to have a FAD buoy register that records who is the authorized operator for a FAD buoy, as well as regulating whether a buoy can be deactivated along with the reporting of lost buoys. They supported referring both the limits and arrangements for monitoring the limits to the FADMgmtOptionsIWG.

83. The Chair acknowledged that CCMs agreed that the instrument buoy management provision should be retained in the new measure and that the FADMgmtOptionsIWG should be involved in assessing the number of drifting FADs to be included in the new measure. CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

5.1.5. Catch retention

84. The Chair noted that the relevant existing provisions for this agenda item are paragraphs 32 and 32 of CMM 2020-01.

85. A number of CCMs stated that the catch retention arrangements for the purse seine fishery outlined in paragraphs 31 and 32 are important for the sustainable management of tuna stocks and should be retained in the new measure.

86. The Chair acknowledged that the CCMs agreed to retain these provisions in the new measure.

5.2. Longline fishery

5.2.1. Bigeye catch limits

87. The Chair noted that the relevant existing provisions for this agenda item include paragraphs 39, 40, 42, 43 and Table 3 of Attachment 1 of CMM 2020-01.

Zone-based vs. Flag-based Limits

88. A number of CCMs stated that they are managing longline fishing in their waters through zone-based management arrangements, including the PNA Longline Vessel Day Scheme, and that any flag-based longline bigeye catch limits in the new measure will not apply in FFA member waters. They stated that the Commission has a responsibility to ensure that the measures in place in the high seas are compatible with those in the EEZs. They stated that this approach would entail revising paragraph 39 to include zone-based management in FFA waters, retaining paragraphs 42 and 43, and deleting paragraph 40.

89. A number of CCMs stated that current flag-based limits for longline bigeye catches don't regulate fishing for bigeye effectively; fail to recognise SIDS' sovereign rights and special requirements; and fail to provide for equitable access for SIDS to high seas fishing. They also stated that flag-based limits fall out of line with fishing patterns over time and should be replaced by zone-based limits.

90. A CCM stated that if this portion of the current measure is amended, then Table 3 should be returned to the 2004 level.

91. Several CCMs stated that they support maintaining the current structure to regulate the longline catch, and wanted this to be a flag-based limit. They stated that the nature of the longline fishery is very different from the purse seine fishery. In the purse seine fishery, most of the catch is in EEZs, so a zone-based system is effective at controlling overall effort. In the longline fishery most of the catch is in the high seas, so flag-based management is more effective. A CCM stated it would like to consider any proposals, but that changing the basic structure this year would be difficult because of the time constraints.

92. A CCM stated that this agenda item is closely linked to agenda 5.2.4 (hard limits). It noted the divergent views on what the scheme should be; some want a flag-based approach, and others want to switch to zone-based limits, with limits on the high seas. The CCM welcomed input from other CCMs regarding proposed limits for the high seas and stated that a major shift would take time, meaning it was unlikely to

be agreed in December. The CCM suggested possibly agreeing to further discussion but maintaining flag-based limits, possibly with revisions, at present.

93. A number of CCMs stated that the reason the bigeye stocks are not overfished is because of the FAD closure that preserves the adult spawning biomass, but stated that the FAD closure is economically unsustainable and transfers a disproportionate burden to SIDS, and advocated for a change in the way fishing for bigeye is managed. They stated that paragraph 39 needs to be revised to provide that flag-based longline catch limits will not apply in coastal states' waters that are currently managed under a zone-based scheme.

Easing longline limits

94. Several CCMs supported easing the longline limits. A CCM stated it could not support any increases in catch without much stronger monitoring and management of the tropical longline fishery in the high seas.

95. The Chair acknowledged that CCMs agreed that limits set in a new tropical tuna measure should not confer allocation rights to any CCM and should be without prejudice to future decisions of the Commission regarding longline bigeye catch allocations, and that a new tropical tuna measure should continue to commit the Commission to setting hard limits for longline catch limits. However, there remain differing views on potential adjustments in longline catch limits, and the appropriate management regime for longline bigeye fishery (zone-based, flag-based or a hybrid). CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

5.2.2. Reporting requirements for catch limits

96. The Chair noted that the relevant existing provision to this agenda item is paragraph 41 of CMM 2020-01.

97. CCMs expressed support for retaining the current reporting requirements, with several CCMs stating that there was a need to reconsider monthly reporting on bigeye longline catch. A number of CCMs stated they consider this paragraph should be retained until appropriate e-reporting requirements are in place, noting that the current reporting arrangement is inefficient. They also expressed concern about the integrity of bigeye catch limits, and stated they won't agree to increases in bigeye catch limits without some clear improvements in monitoring and reporting on bigeye.

98. The Chair acknowledged that CCMs agreed that a new tropical tuna measure must have a reporting requirement. However, there remain differing views on linking any increase in longline limits to improvements in reporting and monitoring and reconsideration of reporting frequency. CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

5.2.3. Hard limits and allocation

99. The Chair noted that the relevant existing provision on this agenda item is paragraph 44 of CMM 2020-01.

100. A number of CCMs stated that they see the setting of hard limits for bigeye and a framework for allocation among all members as a primary function of the Commission and a critical step to the transition of this work towards the harvest strategy management approach. They agreed to maintain the paragraph should there be no agreement on any change.

101. The Chair acknowledged that CCMs agreed that the new measure should commit the Commission to setting hard limits for bigeye.

5.3. Other commercial fisheries for bigeye, yellowfin and skipjack

102. The Chair noted that the relevant existing provision to this agenda item include paragraphs 50 and 51.

103. A number of CCMs noted the importance of ensuring that the tropical tuna measure provides controls for non-purse seine and longline fisheries that target skipjack, yellowfin and bigeye, and supported retaining paragraph 51 in the new measure. They noted the effective implementation of paragraph 51 for some fisheries, while recognising that there have been significant implementation challenges for other fisheries. They welcomed efforts by CCMs, supported by SPC, to improve data availability for their relevant fisheries, to strengthen management arrangements for these fisheries and to provide advice to SC17 and TCC17 on the applicability of paragraph 51. They looked forward to discussing these issues further at the upcoming TCC17 meeting and resolving the applicability of paragraph 51 in the new measure. Contingent on these discussions they stated that they are hopeful that paragraph 50 will not be needed in the new measure and that the Commission will have clarity on the management of non-purse seine and longline management arrangements for the new measure.

104. Two CCMs proposed retaining these measures, and stated they appreciated the support of the WPEA project to improve data on their fisheries.

105. The Chair acknowledged that CCMs agreed that the concept of paragraph 51 should be retained in the new measure, but that the applicability of paragraph 50 will be reviewed at TCC17.

5.4. Capacity management for certain purse seine and longline fleets

106. The Chair noted that the relevant existing provisions to this agenda item include paragraphs 45, 46, 47, 48 and 49 of CMM 2020-01.

107. A number of CCMs stated that they support retention of the paragraphs, and requested that information on longline fleets should be provided in future versions of TTMW-2021-IP04, similar to the information on purse seine tuna catch and effort by set type and species (in Table 4), to allow the capacity limits for both the purse seine and longline fleets to be reviewed.

108. The Chair acknowledged that CCMs generally prefer to retain the capacity management provisions but requested SPC to provide data for longline fleet capacity relevant to paragraphs 47 and 48 for further review.

5.5. Other related issues

5.5.1. Chartering arrangements

109. The Chair noted that the relevant existing provisions for this agenda item are paragraphs 8 and 9 of CMM 2020-01.

110. A CCM referenced WCPFC17-2020-DP12 and explained its proposal regarding allocation of effort and catch between flag or charter state or member. The CCM stated that, based on differences in the text in CMM 2013-01 and CMM 2017-01 (and subsequent tropical tuna CMMs), it is clear that for purse seine, effort allocation should be to Flag CCMs. It referenced the challenges faced on this issue at TCC, and stated it would help if the Commission amends the text to make this very clear. It also stated that SPC and the Secretariat already use this same essential interpretation. It stated that the CMM should ensure it is not

possible for non-SIDS to use SIDS' exemptions, either during FAD closures or when fishing on the high seas.

111. A number of CCMs stated that this interpretation was incorrect, and that paragraph 8 had never applied to the 3-month FAD closure, and should be retained as is, while paragraph 9 should be removed unless there is a clear justification for retaining it.

112. Another CCM stated that regarding paragraph 8, there has been a demonstrated difference of interpretation that has arisen in the CMS context. It stated that a goal when developing CMMs is to reduce confusion, and that the Commission should therefore seek to remove the problem when the tropical tuna CMM is revised; it also indicated that paragraph 9 is essential and should be kept.

113. A CCM stated the location (in the CMM) of paragraph 9 should be changed, as these are not charter arrangements. It also noted that vessels involved in charter arrangements become part of the domestic fleet of SIDS. Those vessels can only operate in the SIDS's EEZs, not on the high seas, and advocated Flag States should assert control on the high seas.

114. A CCM raised questions regarding paragraph 9, and inquired why the special arrangement was needed. It asked for clarification regarding which CCM is supplying the notification under paragraph 9. In response, a CCM stated that it and other US participating territories are afforded status under Article 43 of the Convention. It noted that fishing vessels based in US participating territories fly the US flag and fall under the jurisdiction of the USA. However, longline and purse seine fisheries in US territories are distinct from other US fisheries by virtue of their management plans, and by the way their catch is landed. It stated that it is not accurate to describe a US fishing vessel as being under charter by the participating territories of the US because the vessel remains under the US flag. Paragraph 9 was developed to recognize this difference and still requires notification to the Commission, and attributes catch parallel to paragraph 8, and it stated they provide those notifications as required. They described the arrangements by which their fisheries are managed, and the economic and domestic fishery development support that they receive through their agreements with US-based and flagged fishing vessels. It noted their lack of direct access to the high seas, and stated that this and other disadvantages they face should be considered under Article 30 of the Convention. It stressed that all Pacific Island Territories should be treated equally by the Commission.

115. The Chair acknowledged that CCMs agreed that provisions on charter arrangements should be included in the new measure. However there remain differing views on the interpretation of paragraph 8, the location of paragraph 9 in the new measure and further information is required on the notification arrangements between American Samoa and the USA. CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

5.5.2. "No data – no fish" provision

116. The Chair noted that there is currently no provision in the tropical tuna measure relating to a "no data – no fish" provision.

117. A CCM observed that fisheries data collection is vital to conserve resources, and data are essential for the work of all RFMOs. It advocated linking CCMs' access or quota allocations to its provision of scientific data. It stated this was not a new concept, and is in place in other RFMOs.

118. CCMs acknowledged the importance of data to the work of the Commission, but noted that there are many details to consider. They stated this should be a general approach, and not stock by stock, and suggested it be included in data provisions, where it would apply to all resources. A CCM noted the ability of CCMs to provide data varies, because of funding, infrastructure and complexity of fisheries, and stated

the proposal needs more discussion and consideration, because it could pose an additional burden for some CCMs.

119. The Chair acknowledged that CCMs welcomed discussion on the proposal, likely through TCC, but not for insertion into the new measure.

5.5.3.Catch retention for longline and other commercial fisheries

120. The Chair noted that there is currently no provision in the tropical tuna measure relating to catch retention for longline and other commercial fisheries.

121. A CCM proposed extending the catch retention provisions as contained in paragraph 31 to the longline fishery and other commercial fisheries. It referenced SC17-ST-IP-01 that mentions discards in the longline fishery, and suggested there could be instances of high grading. It suggested that discards may reach 5% of overall catch for a species.

122. Several CCMs noted that the purse seine retention provisions in paragraph 31 arose from the formerly high number of discards, especially in the EPO, so paragraph 31 gave incentive to not discard small fish. It was noted that this has worked very well in IATTC and WPCFC, but that there is not a parallel problem in the longline fishery. It was suggested that implementing the proposal could be complicated by prohibitions on retention of some species (e.g., some shark species). They suggested there was no urgent need for this provision.

123. A number of CCMs suggested that instead of catch retention, it is more important to have robust monitoring requirements; once these are in place the Commission can focus on issues such as catch retention if data suggest there are issues to be addressed.

124. The Chair acknowledged that some CCMs expressed interest in further consideration of this concept if supported by sufficient data that justify the need for catch retention in longline and other commercial fisheries, but no need to include it in the new measure.

Agenda Item 6 —MCS measures and reporting requirements

6.1. Observer coverage requirements

6.1.1. Purse seine observer coverage

125. The Chair noted the relevant existing provisions for this agenda include paragraphs 34 and 35 of CMM 2020-01. The Chair further noted that the requirement for national observer coverage on purse seine vessels fishing solely within national waters is currently suspended following the COVID-19 Intersessional Decision, and a paper for TCC17 provides some suggestion for a phased approach to the safe redeployment of observers on purse seine vessels.

126. A CCM inquired about current observer coverage for purse seine vessels beyond 20°N and 20°S. In reply a CCM stated that the 100% purse seine observer coverage requirement applies only in tropical waters; in temperate region, management is very different, and usually does not use FADs. Observer coverage is consequently very different.

127. A number of CCMs supported retaining paragraphs 34 and 35. They also noted that COVID-19 related decreased observer coverage affects catch estimates, and supported the SC17 recommendation that encourages CCMs to resume observer coverage in their fisheries as soon as is safe and logistically feasible.

128. A CCM remarked on the burdens it faces in ensuring 100% observer coverage for the entire year for purse seine vessels, given the high cost of implementation and diverse size of purse seine vessel in its national waters.

129. The Chair acknowledged that CCMs agreed to retain the same observer coverage for purse seine arrangements in the new measure. However, further discussion is needed on the issue of meeting observer coverage in national waters and the point of a CCM on the need for making progress on the provision of observer reports. CCMs agreed to continue to discuss these outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

6.1.2. Processes to support safe redeployment of observers on vessels

130. The Chair noted that WCPFC-TCC17-2021-14 provides some suggestions for a phased approach to safe redeployment of observers. This focuses on the current COVID-19 decisions and impacts. The Chair asked CCMs to indicate whether this should be addressed in the context of the new measure or should be left to TCC to address separately.

131. CCMs agreed that this is a very important issue that needs to be considered carefully, and that it should be discussed at TCC, with subsequent recommendations provided to the Commission. CCMs made a number of observations during the discussion relating to redeployment protocols and ongoing vaccination programs, and expressed their support for the safe redeployment of observers.

132. The Chair acknowledged that redeployment of observers need not necessarily be addressed in the new measure, and encouraged CCMs to continue to discuss this important issue at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

6.1.3. Observer coverage requirements for longline and other commercial fisheries

133. The Chair noted that the relevant existing provisions to this agenda item are set out in CMM 2018-05, Annex C paragraphs 6, 9 and 10. The Chair further noted that in the past some fleets had difficulty reaching the 5% minimum requirement for observer coverage in the longline fishery.

134. The Chair asked CCMs to provide input on whether these requirements should be in the new CMM, or addressed through the regional observer programme (ROP) measure.

135. A number of CCMs recommended strengthening observer coverage for longline fisheries, including through ER&EM, especially for longline vessels on the high seas. They noted that there is no specific section in the current measure on MCS elements for the longline fishery and no specific agenda item in this workshop on this issue. They referenced their delegation paper to the first workshop and WCPFC-2021-TTMW2-DP02, and stated that they seek to incorporate a range of longline monitoring related elements into the new Tropical Tuna measure. They noted concern with the lack of effective monitoring of the longline fisheries in the high seas, stating that the minimum 5% observer coverage is barely met by flag CCMs whose longline vessels are mostly fishing in the high seas. There is a lack of effective monitoring of transshipment on the high seas, particularly by large scale freezer longline vessels. In addition, the CMS process has clearly highlighted anomalies in vessels reporting to the Commission VMS.

136. A number of CCMs supported the retention of the current structure in terms of longline vessel observer coverage. They stated that future discussion on observer coverage for longline and other commercial fisheries should be in conjunction with EM application discussions. Some indicated this should be addressed through the ROP measures, because other fisheries will be considered as well (e.g., South Pacific albacore). They noted difficulties associated with placing observers on longline vessels, especially

on smaller vessels; one CCM suggested requirements could be different on smaller vessels. Given progress in ER&EM, they suggested consideration can be given to increasing the minimum 5% ROP observer coverage rate, but any increase should be through EM.

137. A CCM stated its preference to retain this in the tropical tuna CMM, but that the more important issue is content of the requirements. It stated that it has long advocated for higher coverage in the longline fishery, adding that a 5% rate is far too low and cannot be simply supplemented through EM, which is helpful but is not a substitute for human observers. It advocated for a phased increase in observer coverage rates, and that this be kept in the measure.

138. A CCM supported the need to increase the observer rate for the longline fleet, both in the high seas and EEZs. It stated it understand that EM can supplement but would not replace observers.

139. A CCM referenced the comments regarding high seas entry and exit reporting, and stated that the centralized VMS would allow the position of a vessel to be detected hour by hour. It stated that if a coastal state wanted to request that a vessel report high seas exit and entry it can do it through license conditions and not necessarily in a Commission measure.

140. Some CCMs emphasized that they are looking at a package in terms of obligations of purse seine and longline fleets, and seek to balance existing purse seine obligations.

141. CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC 18 to see how longline MCS can be reflected in the new measure.

6.2. VMS requirements during FAD closure

142. The Chair noted that the relevant existing provisions to this agenda are paragraphs 33 and 37 of CMM 2020-01.

143. The Chair acknowledged that CCMs agreed that the VMS requirements should be retained in the new measure.

6.3. Data provision

144. The Chair noted that the relevant existing provisions to this agenda are paragraphs 52, 53 and 54 of CMM 2020-01.

145. A number of CCMs supported retaining paragraphs 52 and 53, but deleting reference to “S of 20N” in paragraph 52, which would make paragraph 54 redundant. They advocated deleting Footnotes 9 and 10, and proposed adopting ER for submission of operational catch and effort data in line with the standards that are already in place.

146. Several CCMs stated that in the area N of 20°N some CCMs have legal constraints on providing operational data. This is currently accomplished through MOUs between individual CCMs and SPC, as provided for in paragraph 54. This framework has worked very well. They stated they would continue to cooperate with SPC in alignment with paragraph 54, and wished to retain the provisions as they are. It was noted Footnote 10 is related to the ability of one CCM to provide data, and should be retained.

147. A CCM stated it would work with its legal office regarding paragraph 54, noting that this is a complicated domestic situation, and a longstanding issue. Given the complexity, it would seek to make progress on this for WCPFC18, and will work with other CCMs.

148. The Chair acknowledged that CCMs agreed that the data provisions should be included in the new measure, including the need for data confidentiality for non-public domain data (paragraph 53). CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC 18 and see how data provision can be reflected in the new measure.

6.4. Other reporting and MCS measures to support the monitoring and effectiveness of management options for tropical tunas

6.4.1. Transshipment management

149. The Chair noted that provisions relating to transshipment are included in CMM 2009-06, which is under review.

150. A number of CCMs stated that they seek a reform of transshipment monitoring on the high seas, including the use of EM as a priority. They stated they have always advocated that transshipment should happen in port as transshipment in the high seas is difficult to monitor. Without effective monitoring, transshipment provides easy opportunities to mix illegal or unreported catch with legal catch and has been implicated in a range of criminal activities. They stated that although the current transshipment CMM requires that observers be carried, work is needed on protocols and data forms to ensure proper validation, reporting and monitoring of transshipment activities.

151. Several CCMs agreed that transshipment may create problems in the absence of monitoring but stated that they have 100% observer coverage on their vessels when engaging in transshipment and do not agree there are serious problems. It was observed that if vessels are in foreign ports there is only a 5% inspection requirement.

152. An Observer stated that the Commission has heard over many years that transshipment has been monitored by observers, but remarked that few if any observer reports are submitted to the Secretariat. It suggested making submission of Observer reports compulsory within the new measure.

153. The Chair acknowledged that there was no agreement to include transshipment provisions in the new measure but CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC 18 and see if there are any elements of transshipment that can be reflected in the new measure.

6.4.2. Observer reports for investigation

154. The Chair noted that the relevant provision relating to this agenda is paragraph 36 of CMM 2020-01 which provides for ROP reports for trips taken during the FAD closure period to be given priority for data input and analysis by the Secretariat and the Commission's Scientific Services Provider.

Observer reports

155. Several CCMs stated that difficulties in receiving observer reports continues to be an area of concern, and that they are looking for creative solutions. They noted that this pertains to the tropical tuna measure, because the FAD closure relies on observer reports for enforcement, and said that agreement on measures such as the FAD closure was linked to making progress on the issue of observer reports. A CCM indicated that many cases identified through the CMS process are still in flag state investigation status, and that observer data flow is an important issue. They looked forward to discussions on this at TCC.

156. A number of CCMs stated that they are very encouraged by the improvements in the flow of observer data, and noted they are applying improved processes for sharing of observer data among their fleets, which include some foreign flag vessels. They looked forward to the development of messaging and

tracking functions of the compliance case file system, which they stated should help ensure flag state investigation obligations are met. They noted the need for an understanding of what is meant by “relevant parts” of observer reports that need to be shared. They stated that Flag and Coastal State CCMs may need to have some procedures in place with observer providers, and observed that the issue is broader than the tropical tuna CMM. They looked forward to discussions at TCC.

157. One CCM suggested that there is no need for discussion at TCC, given that this is not a new issue. It stated that there is already a pathway for data sharing through the bilateral arrangements for observer providers in the region. It observed that they do not want the Commission to dictate how to share this data. In response a CCM noted its bilateral experience, and stated that some CCMs are very helpful and provide the needed data, but other bilateral contacts fail to reply. It stated that authority at the Commission level is needed to enable CCMs to finish their cases. It also remarked on the need for TCC to consider how to reduce the workload for CCMs and the Secretariat associated with serious cases.

MCS provisions for longline vessels

158. A number of CCMs stated that a major gap is the absence of monitoring and control for longline vessels, as was raised under 6.1.3. They stated the need for improved monitoring of bigeye longline catch limits. This needs to be addressed as a matter of priority. There are no longline MCS provisions. The lack of monitoring of longline catch limits is a major risk, and without improved longline MCS provisions these CCMs would not support an increase in bigeye catch. They outlined the following specific proposals on longline monitoring elements:

- (i) High Seas Entry/Exit Report: Analysis of VMS coverage has indicated gaps in VMS coverage. The result is that the Commission does not have a fully reliable set of information on what vessels are legally operating in the high seas, as there is no information to cross check VMS data against. They noted that no coastal state would try to manage its EEZ without entry and exit reports from any vessel entering or leaving their waters, including data on catch on board, and that the Commission should have a parallel arrangement, which would strengthen information available on vessels operating in the high seas and provide highly useful information on catches. They proposed that this reporting should be required from 1 January 2023, and noted the precedent for this reporting in CMM 2010-02; they proposed that the process used to implement the reporting requirement for CMM 2010-02 should be adopted for this requirement.
- (ii) High Seas Real time e-Reporting: They noted the concerns expressed about the current requirement for monthly reporting of bigeye catches and stated that E-reporting would address those concerns and perhaps provide an efficient solution to monitoring bigeye catches against CCM limits. They proposed a January 2023 start date with staged implementation if needed.
- (iii) Bigeye Catch documentation to 1st point of sale: they stated that verification of bigeye catches is a key priority noting the lack of progress on full supply chain catch documentation schemes. They suggested establishing a scheme for documentation of catch to the first point of sale, which could capture much of the benefit of a CDS without the complexities associated with a full chain CDS. This would operate similarly to the proposal for the provision of cannery data for the purse seine fishery. The requirement would be for each vessel to provide information on catches at their first point of sale, with a process for verification; this should be referred to the TCC for consideration.
- (iv) E-Monitoring. They stated they seek a commitment in the CMM for the establishment of e-Monitoring requirements to supplement human observers with a specific time commitment (to be pursued through the ER&EM WG).

- (v) Improved transshipment of at sea monitoring. They also sought a commitment to prioritization of high seas transshipment reform (to be pursued through the Transshipment WG).

159. A CCM noted that CDSs have been established in other RFMOs; this took much time because it is complicated, and would require additional Commission funding. This would need to be established for other fisheries (not just longline), as if it covers only some fisheries it may create a loophole. They stated they would like to study the idea further.

160. A CCM stated it did not accept the argument that there is no monitoring of the bigeye catch limit in the Convention area. It noted that they had worked hard over last 10 years to create their own system, with 100% observer coverage of their carrier vessels, and had established a CDS. All bigeye caught on their vessels must have a customs declaration by their fisheries authority; the CCM authorities know which bigeye go where, and know the quantity. It also stated that longline at least has a catch limit; for purse seine there is no limit for bigeye, so it is unbalanced. It noted further that high seas entry and exit is redundant, as previously outlined; this should be by license condition. Regarding ER, the CMM stated the Commission has only minimum standards, and needs to establish compulsory requirements, and conduct training.

161. A CCM agreed that there is some room for improvement in overall MCS measures in longline fisheries, but stated that simple comparisons between purse seine and longline are sometimes not appropriate because the fishing methods are different and working and living conditions on the vessels differ. As indicated in WCPFC-TTMW2-20201-DP01, it is natural for the Commission to have more stringent measures for the purse seine fishery because it accounts for some 70% of the tropical tuna catch, and longline for only 10%. It welcomed further discussions on MCS measures for longline vessels, and stated that any MCS measures that the Commission adopts should not restrict freedom for fishing on the high seas. Future measures should apply throughout the Convention Area.

162. The Chair acknowledged that CCMs agreed that the concept in paragraph 36 should be retained in the new measure. CCMs agreed to continue to discuss the outstanding issues at TCC17, relevant SWGs, and during the TTM consultation process leading to WCPFC18.

Agenda Item 7 — Requests for further analysis and information by SSP

163. SPC presented background regarding the analysis requests made by CCMs, which included elements from SC17, TTMW1, and TTMW2.

164. CCMs discussed the requests and agreed on a shortened list of analyses that could be undertaken by SPC prior to WCPFC18. During the discussion CCMs made the following points:

- A CCM stated that one of the requests to SPC by a number of CCMs involved an 8% increase in longline bigeye catch; they stated that in the past the Commission has approved a 10% decrease (from the 2014 base year, with a further 10% decrease, in 2017), and questioned the use of 8%. They also stated that the use of 2016-2018 as a baseline was not suitable, noting the relatively low catch in 2017, which included a 4-month FAD closure for the purse seine fishery.
- A CCM observed that a number of other CCMs believed that the balance in the elements of the CMM 2020-01 were appropriate, and any changes to those elements in a new CMM should be made as a package, taking into account that balance. In that context, they stated that they did not understand why there should be no change in high seas purse seine effort, as outlined in one of the evaluation requests, even if there are changes in other elements. It noted that they would not oppose the evaluation request made to SPC, but stated that in their view if there are other changes in the

CMM (such as in bigeye longline catch or FAD closure reductions), changes should also be made to high seas purse seine effort.

- A number of CCMs remarked on the importance of these analyses in framing the discussion on the new tropical tuna measure, and stated that discussions regarding the final elements of the tropical tuna measure should be held after the results of the analyses are presented.

165. The Chair thanked CCMs for their flexibility and understanding and acknowledged that CCMs have agreed to the finalised list of requests for further analysis by SPC which is in **Attachment 1**.

Agenda Item 8 — Other Matters

8.1. Way forward for development of a tropical tuna measure

166. In response to queries from CCMs, the Chair stated the continuing tropical tuna measure consultation process is envisaged as an informal process between TTMW2 and WCPFC18 during which CCMs may consult with each other and the Chair may also reach out to CCMs.

167. CCMs agreed to the following schedule for further consultations on the development of the new tropical tuna measure:

Time frame	Tasks
~ Sep 30, 2021	The Chair with the support of the Secretariat produces a consultative draft based on the results of discussions at TTMW2
Oct 1, 2021	Consultative draft on CMM 2021-01 circulated to CCMs
Oct 22, 2021	CCM comments due
Nov 1, 2021	Draft CMM 2021-01 posted
~Dec. 1, 201	Further consultations on draft CMM posted
WCPFC 18	Adoption of a CMM 2021-01

8.2. Meeting obligations under CMM 2013-06

168. The Chair noted the need to meet the Commission's obligations under 2013-06. She stated that the Chair and the Secretariat would serve as coordinators in developing the new measure, but that it was a collective obligation of all CCMs to provide clear guidance on what goes into the new measure, and to ensure that CMM 2013-06 obligations were met.

169. CCMs agreed on the importance of ensuring that obligations under CMM 2013-06 are met.

170. A number of CCMs stated their view that CMM 2013-06 assessments must be performed by the proponent of any proposal. They referenced their letter to the Commission dated 21 May 2021 that speaks to this issue. They stated that most elements in the CMM deserve collective support from the Commission, and expressed concern that some proposals would undermine what many CCMs have worked hard to preserve. They stated that CCMs must individually comply with CMM 2013-06 through consultations with SIDS as members of the Commission.

171. Several CCMs stated that CMM 2013-06 indicates that the obligation for consultation is collective and must be met by the Commission; they stated that while there should be consultations between individual proponents of proposals and SIDS, it was unclear how to apply this assessment requirement when developing a new CMM collectively, as CMM 2013-06 does not explicitly state who should do the assessment, and how it should be done. A CCM noted that the questions in paragraph 3 of CMM 2013-06

are in some cases better answered by SIDS, and advocated having further discussion on the issue; they suggested that the Commission should discuss and decide how to assess and apply CMM 2013-06 in the context of the tropical tuna measure. Another CCM referenced the procedure that had been previously adopted in development of a tuna bridging measure; they stated that the current process constituted revision of an existing CMM, so that the procedure that might apply for an individual CCM as proponent of a new CMM would not apply. A CCM stated that the intent in CMM 2013-06 was not to create impediments to the ability of CCMs to present proposals, and that a strict interpretation would alter the intent of the CMM.

172. A CCM supported the prior comments regarding the need for CCMs to individually comply with CMM 2013-06 through consultations with SIDS as members of the Commission, and stated that the discussion was a good indicator why the consultative process was needed when developing any new measure. It noted prior templates and other guidance by CCMs for filling out the CMM 2013-06 assessment, and suggested the process could be both engaging and consultative.

173. The Chair acknowledged the various views on how the obligations under CMM 2013-06 would be implemented but acknowledged that no CCM objected to the idea that CMM 2013-06 must be implemented and is an agreed measure. To ensure that it is complied with in the development of the new tropical tuna measure, the Chair suggested the following approach: until 22 October 2021 (the deadline for CCM comments on the consultative draft, which will be circulated by 1 October), CCMs were encouraged to engage and consult with each other; during that time, CCMs that seek to put forward new ideas and text should consult with each other and especially with SIDS to respond to the questions in CMM 2013-06. When CCMs provide comments, if those include new text or proposals, they should provide CMM 2013-06 assessments along with them. The Chair stated that normally proposals have a single proponent but this is a collage by many CCMs, so a creative approach is required. She noted that it was up to each CCM to take this approach, but if they did not do so it could be necessary to have this discussion on each specific part of the proposal. She offered to facilitate discussions among CCMs.

Agenda Item 9 — Workshop Outcomes

9.1. The Chair to issue a Chair's Report outlining the key points of discussions and outcomes of the workshop.

174. The Chair stated that workshop outcomes would be in the form of a Chair's Report, which would have a summary of the proceedings, key points of the discussion without attribution to individual CCMs, and the Chair's summary of the outcomes. It would be circulated within 7 working days of the end of TTMW2.

Agenda Item 10 — Close of workshop

175. The Chair acknowledged that CCMs had made significant progress during TTMW2, and thanked participants for their flexibility and contributions, which were informative and constructive. She looked forward to reaching a final agreement. She thanked the Secretariat and SPC for their support and encouraged CCMs to continue their engagement.

176. A number of CCMs thanked the Chair for her excellent leadership, noted the significance of the tropical tuna measure, and strongly reiterated the need for consideration of CMM 2013-06 in any proposals that are brought to the Commission.

177. The Chair closed the workshop at 19:15 Pohnpei time on 10 September 2021.

List of TTMW2 Approved Requests for Analysis to SSP

Source	Category	Request	CCM making request	Technical feasibility	Points
SC17	TRPs	Calculate SPA outcomes for different candidate BET/YFT TRP levels presented in MI-WP-01 (SC17 draft summary report, para 265)	FFA	Technically feasible	3
SC17	TRPs	Development of yield and spawning biomass per recruit curves by fisheries sector for bigeye and yellowfin tuna (SC17 draft summary report, para 271)	US	Technically feasible	2
TTMW1	FAD definitions	Update on evaluation re-small floating objects	Japan	Technically feasible	3
TTMW2	Exemptions	Modifications to table 23 of WCPFC-TTMW2-2021-01_rev4: evaluation of the ‘patterns of high seas effort’ for 2020 and 2019, calculate these comparisons against the ‘optimistic’ and ‘pessimistic’ scenarios based on the ‘actual reported numbers’ of high seas FAD sets (as opposed average high seas days and sets/high seas day by flag) in the 2016/18 baseline period for flags not included in table 2 of CMM 2020-01.	EU	Technically feasible	1
TTMW2	Exemptions	Modifications to table 23 of WCPFC-TTMW2-2021-01_rev4: include information on the impact of high seas effort by CCMs not in table 2 of CMM 2020-01 (i.e., analogous to the evaluation of “HS effort limits set to zero for limited flags” in table 23 of WCPFC-TTMW2-2021-01_rev4	EU	Technically feasible	1

TTMW2	Exemptions	<p>Modifications to table 23 of WCPFC-TTMW2-2021-01_rev4: Include a column with estimates of “Approximate equivalent HS FAD closure period”.</p> <p>Caveat: This would only be done for high seas scenarios</p>	EU	Technically feasible	1
TTMW2	Additional metrics/scalars	Include time series data for the US LL fleet in Figure 12 of TTMW2-01_REV4	PNA	Technically feasible	1
TTM2	Additional evaluations	<p>Assess the projected depletion levels and present the results for skipjack tuna relative to the 2012 levels and for bigeye and yellowfin against the 2012-2015 levels resulting from:</p> <p>Using 2016-18 baseline fishing levels adjusted by appropriate scalars to take into account the changes in the CMM in 2017, as well as 2019 levels as starting points, make the following adjustments:</p> <ul style="list-style-type: none"> o 8% increase in longline bigeye catch; o FAD closure reduced to 2 months; o High Seas FAD closure reduced by 1/3rd to 40 days; o With no change to the High Seas purse seine effort. 	PNA	Technically feasible	1
					TOTAL = 13 points