DEVELOPMENT OF A NEW WCPFC TROPICAL TUNA MEASURE WORKSHOP 1 (TTMW1)
Electronic Meeting
26–30 April 2021

CHAIR'S REPORT OF TTMW1

WCPFC-TTMW1-2021-Chair's Report

Revision 1 Issued: 1st June 2021[1]

[1] Revision 1 replaces the original version issued on 11th May 2021, the only changes made were some edits and corrections made to the list of approved requests to SSP in Attachment 2

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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 Tropical Tuna Measure Workshop 1 (TTMW1) at 10:00am Pohnpei time on 26 April 2021. The meeting was convened electronically.

2. The following Members and Participating Territories attended TTMW1: American Samoa, Australia, Canada, the People's Republic of China, the Cook Islands, the European Union (EU), the Federated States of Micronesia (FSM), 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, Tokelau, Tonga, Tuvalu, the United States of America (USA), and Vanuatu.

3. The following Observers attended TTMW1: American Tunaboat Association (ATA), Australian National Centre for Ocean Resources and Security (ANCORS), Ecuador, International Pole and Line Foundation (IPNLF), International Seafood Sustainability Foundation (ISSF), Marine Stewardship Council, 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, Thailand, The Ocean Foundation, World Tuna Purse Seine Organisation (WTPO) and World Wide Fund for Nature (WWF). A full list of meeting attendees is posted on the workshop site as **WCPFC-TTMW1-2021-participants**.

1.1. Introduction to workshop

4. The Chair welcomed participants and reviewed the decision, made in December 2021 by the Seventeenth Regular Session of WCPFC (WCPFC17), to convene an intersessional process to develop a new tropical tuna conservation and management measure (CMM) CMM 2021-01. WCPFC17 adopted CMM 2020-01 which extended the 2020 provisions of CMM 2018-01 until February 2022. WCPFC17 also agreed to hold two workshops; the first (TTMW1) to discuss the scope and objectives of the new CMM and also to agree on relevant analyses to be provided by the Commission's Scientific Services Provider, the Pacific Community's Oceanic Fisheries Programme (SPC-OFP). The Chair noted that the objectives of the workshops had been clearly defined by WCPFC17. While acknowledging that the views of Commission members, cooperating non-members and participating territories (CCMs) may differ significantly at the outset, she expressed confidence that CCMs would find significant common ground.

5. The Executive Director of the WCPFC Secretariat, Feleti Teo, OBE also welcomed all participants to the workshop, which he acknowledged was the first step of an elaborate intersessional process to develop and adopt a new and hopefully improved CMM. He pledged the Secretariat's full support for the workshop.

6. CCMs emphasized the importance of focusing on the explicit mandate of the workshop such as the scope and management objectives of the new tropical tuna measure (TTM), and not on negotiating target reference points (TRPs) or other technical features of the new CMM. They stated their understanding that the analyses of candidate TRPs in working papers 4 & 5 prepared for the workshop were to support the discussion on adoption of spawning biomass depletion-related objectives and not intended to lead to discussion on the adoption of TRPs at TTMW1 and urged participants to focus on issues relating to scope and management objectives.

1.2. Workshop arrangements

7. The Chair reviewed and explained the schedule and working arrangements for the workshop, based on **WCPFC-TTM1-2021-agenda** *Workshop 1 Agenda*.

Agenda Item 2 — Review of Performance of CMM 2018-01

2.1 Overview of the performance of CMM 2018-01 against the stated objectives of the measure; work on risk levels associated with the limit reference points (LRPs) and associated level of exploitation.

8. SPC presented **WCPFC-TTMW1-2021-01-Rev_3** *Evaluation of CMM 2018-01 for Tropical Tuna:2020 update*. The paper evaluates the potential for CMM 2018-01 to achieve its objectives for each of the three WCPO tropical tuna (bigeye, yellowfin and skipjack) stocks as specified in paragraphs 12 to 14 of CMM 2018-01. Evaluations were based on the most recent stock assessments agreed by the Scientific Committee (SC), and include data through 2018 for all three species. Results of stock projections used to evaluate the long-term performance and risks under the CMM 2018-01 were summarized as follows:

- Bigeye: median spawning depletion - similar or less depleted than 2012-2015, except using long-term recruitment and the 'pessimistic' fishing scenario (more depleted), moderate risk of F exceeding F_{MSY} (particularly under long-term recruitment);
- Skipjack: median spawning depletion - slightly more depleted than 2012-15, zero risk of breaching LRP, low to moderate risk of F exceeding $F_{MSY;}$ and
- Yellowfin: median spawning depletion - slightly less depleted than 2012-15, zero risk of breaching LRP and of F exceeding $F_{MSY.}$

Discussion

9. In the ensuing discussion, CCMs made a number of inquiries and observations which are collated under various topics in the succeeding paragraphs.

General

10. A number of CCMs noted that data provided by SPC indicated that the CMM is achieving its goals, and that the precautionary approach and cooperative arrangements are working.

Footnote 1 exemptions

11. It was clarified that CMM 2018-01, footnote 1 exemptions to the FAD closure are incorporated into the scalars on the basis of the actual use (rather than potential use) of the exemption in 2018 specifically, the only year of the baseline period 2016-18 in which the exemption was in effect.

12. In response to an inquiry regarding the application of optimistic and pessimistic scenarios to the use of footnote 1 exemptions (and other such open-ended provisions), SPC stated that it would be very difficult for it to devise such scenarios, as assumptions would have to be made regarding the number of vessels that took up the exemption, and how they fish. SPC suggested CCMs should develop and agree parameters for these scenarios.

Effort

13. A CCM noted that scalars for the purse seine fishery are calculated through an increase and decrease in FAD sets, and assume that purse seine effort remains constant, which may be appropriate for bigeye, because most bigeye caught in purse seine is on FAD sets. The question was raised whether this is appropriate for yellowfin and skipjack? SPC was also asked if it assumed that total purse seine effort remains constant, given that there was a 7% increase in FAD sets in 2019 above the 2016-2018 average; if purse seine high seas effort is increasing, this could affect future projections. SPC confirmed that FAD set scalars impact only on bigeye, and that overall purse seine effort could go up or down. The 7% change noted in 2019 was slightly less than SPC anticipated in the "optimistic" scalar, thus the situation in 2019 is slightly better than expected under the optimistic scenario in the evaluation for purse seines.

14. Some CCMs noted that the three fishing scenarios assume purse seine effort remains constant, but stated that there had been a steady increase in purse seine effort over the last 3 years, and requested an update of effort based on VMS data. In response SPC provided an overview of VMS data for 2020 and 2021 as available to date. Purse seine data (10° N to 10° S in the Convention Area) representing days at sea (not limited to fishing days but did exclude days in port) indicates 2020 had a high level of effort similar to 2017; the first 3 months of 2021 are similar to 2020. Tropical longline data for 2016-2020 based on days at sea shows 2019 had a high level of total effort, but that in 2020 was ultimately the lowest of the 5 years presented. The southern longline fishery (S of 10° S) shows 2020 effort was much higher than other recent years (SPC noted the global albacore market has been quite good, so this may reflect a shift to targeting albacore from tropical tunas).

15. In response, some CCMs stated that the VMS data indicated increasing effort occurred in both the longline and purse seine fishery compared to the period used when developing CMM 2018-01, and suggested there could be implications for catch and effort levels that should be considered in developing a new CMM.

2016-2018 effort baseline and reporting against other periods

16. SPC clarified that the 2016-2018 overall effort level was used because they were the latest years within the most recent stock assessments, but that other years could also be used.

17. CCMs requested that SPC continue to report relative to 2012-2015 time periods for bigeye and yellowfin and consider 2012 levels for skipjack.

Effort assumptions in the absence of limits

18. SPC stated that for flags without specified limits SPC assumes the 2016-2018 average effort applies. Changes after the 2016-2018 baseline levels are not captured.

Recruitment

19. In response to a query regarding how likely it is that above-average recruitment for bigeye will continue, SPC stated the drivers of recruitment variation for bigeye were not fully understood, which made it impossible to say with any certainty which recruitment scenario will be accurate in the future, thus both recruitment scenarios ("recent" and "long-term") are included in the projection analysis.

20. A CCM observed that differing recruitment periods were used for the stocks; the projection for yellowfin uses the average recruitment for the past 50 years, skipjack uses the past 30 years, and bigeye uses the recent level of 10 years. It asked SPC why the period is so short for bigeye? SPC replied that the use of the "recent" assumption for bigeye recruitment (the last 10 years) had stemmed from discussion held by SC based on stock assessments some 6-8 years ago. Somewhat more recently SC decided that considering longer-term recruitment for bigeye would also be appropriate. SC has not held a similar discussion regarding the use of recent recruitment only for skipjack and yellowfin, and therefore SPC assumes the long-term recruitment pattern for these stocks (i.e., the period over which SPC estimates the stock/recruitment relationship in the stock assessments). This was the origin of the discrepancy in the recruitment periods.

21. A CCM noted that bigeye spawning biomass has shown an ongoing decline, but the assumed "recent" bigeye recruitment level is higher than the "long-term" recruitment. It suggested this may be related to oceanic conditions and urged caution in the use of the recent bigeye recruitment assumption.

Climate change

22. In response to a query regarding the assumptions made in terms of response to climate change, especially in relation to the importance of stock resilience, SPC stated that the projections assume a number

of factors remain unchanged, including the biological processes that support the tuna; the future is unknown, and quantifying any changes is very hard. This is another reason why members should think of projections results as risk assessments. SPC stated that evaluating the impact of climate change will be a subject for consideration under the harvest strategy approach, and that it would aim for management resilience to certain shifts (such as in recruitment) in developing harvest strategies.

2.2 Summary of final CMR outcomes from the review of implementation of CMM 2018-01 through the Compliance Monitoring Scheme (CMS).

23. The Secretariat presented **WCPFC-TTMW1-2021-03** covering key outcomes of the 2019 and 2020 Compliance Monitoring Reports (CMRs) with respect to CMM 2017-01 and CMM 2018-01. There were 28 obligations reviewed in the final CMR in 2018, and 27 obligation reviewed in 2019. The paper addresses seven thematic categories as well as considering the four CMR sections addressing quantitative limits, implementation, reporting, and reporting deadlines. Across the 2018 and 2019 calendar years, the final CMR outcomes show that applicable CCMs received compliant for greater than 85% of obligations assessed. In summary, as shown in Table 10 of the paper, there were eight Tropical Tuna CMM obligations identified in the final CMR outcomes covering 2018 and 2019 activities where the compliance status assessments indicate that certain CCMs have experienced implementation or compliance difficulties in 2018-2019. Some of these obligations have also been identified in the final CMR executive summary covering 2018 and 2019 activities as needing to be prioritized for resolution by the Commission. For one of these obligations a capacity building assistance need has been identified for one CCM, and progress reports on its capacity development plan has been received which includes a schedule for progress towards implementation of the obligation. The Secretariat concluded with a supplementary note that explained that assessments of compliance statuses in the final CMR may not be equivalent, because availability of data and information for assessments differ, coverage of WCPFC data collection programmes varies between fisheries and spatially and tropical tuna CMMs and Compliance Monitoring Schemes may change.

Discussion

24. In the ensuing discussion CCMs made a number of inquiries and observations which are collated under various topics in the succeeding paragraphs.

General.

25. It was noted that the paper highlights specific parts of the CMM that needed clarification. Some are relatively simple: for example, clarifying the obligation to advise the Secretariat of the preferred additional two-month high seas FAD closure. Others are more complex, such as the work around clarifying "other commercial fisheries" and the need to improve compliance with quantitative limits. It was stated that it is essential that there is also improved monitoring of longline fisheries on the high seas.

26. Some CCMs stated they would look to incorporate a range of monitoring related elements into the new measure, including high seas entry/exit reporting and 100% E-Reporting by longline vessels.

Monthly bigeye longline data reporting

27. In response to a query regarding the utility of monthly reporting of bigeye longline catch, the Secretariat stated that the data was used to provide a regular report to the Commission and subsidiary bodies, and that reporting of longline catch would otherwise be unavailable until after SPC received CCMs' April 30 data submissions, consequently the Secretariat sees merit in continuing this data reporting.

28. The Secretariat acknowledged that Indonesia's reporting of monthly bigeye longline catches had improved with support of the WPEA project, as is shown in the 2019 final Compliance Monitoring Report outcomes compared to 2020.

Other Commercial fisheries

29. The Secretariat noted the WCPFC17 decision to task SC17 and TCC17 to review papers prepared by Indonesia and the Philippines related to paragraph 51 of CMM 2018-01. The Secretariat observed that Indonesia is planning to submit some updates in 2021.

Clarifications

30. A CCM requested that the Secretariat provide information on overages of quantitative limits across the tropical tuna measures to SPC so these could be taken into account in developing the evaluation presented in WCPFC-TTMW1-WP01. The Secretariat noted several complicating factors but stated it would work with SPC to address the issue.

2.3 Additional Analyses to Inform WCPFC Discussions on CMM 2018-01 as requested by SC16.

31. SPC presented **WCPFC-TTMW1-2021-02** (presented previously as WCPFC17-2020-16), which responds to a request by SC16 (SC16 Outcomes Document, paragraph 79). SPC noted the differences resulting from varying recruitment assumptions ("recent recruitment" is more optimistic than "long-term recruitment"), which has implications for risk; risk of the stock falling below the limit reference point is based upon uncertainty arising from the "uncertainty grid" of assessments and uncertainty in future recruitment. Not all uncertainty is captured; risk is likely underestimated, meaning minimum TRPs based purely on LRP risk are likely too low. Risk as presented in the paper is likely to change with future assessments and SC decisions on the grid structure and approaches to combining models (e.g., weighting). SPC noted those 'minimum' TRPs are generally at levels that have never been seen in these stocks, and the response of the stocks at those levels is unknown.

Discussion

32. In the ensuing discussion, CCMs made a number of inquiries and observations which are collated under various topics in the succeeding paragraphs.

General

33. Several CCMs observed that the Commission was overachieving the interim objective in the current CCM and should consider making corresponding adjustments to the existing CMM to allow some increase in fishing.

34. Other CCMs noted the uncertainty regarding bigeye recruitment, and the need to avoid an increase in bigeye mortality.

Fishing effort

35. The need to understand the current level of effort (as distinct from the effort during the reference period) was stressed, given the significant impact this can have on the risk of breaching the LRP under certain recruitment and fishing scenarios.

36. SPC noted that it would be very useful to have an agreement by CCMs on what baseline levels of effort should be used for purse seine and longline, as this would remove some confusion about assumptions, and result in greater clarity.

37. In response to a further query regarding the impact on skipjack spawning biomass from varying scalars, SPC stressed that the assumption is that overall purse seine effort is at 2016-2018 average levels, which is lower than the level of effort in 2012. Referencing Table 7 in **WCPFC-TTMW1-2021-01**, under that assumption, skipjack arrives at 43% of unfished levels ($SB/SB_{F=0}$) under all CMM scenarios, just above

the level it would reach under 2012 effort levels. SPC stated that this highlights that the assumptions about the overall level of purse seine effort are very important to specify so that everyone understands the basis of the projection results.

Scalars

38. In response to a query regarding the development of scalars, SPC stated that for the analysis, purse seine scalars are based on the level of future effort. Thus, a scalar of 1.5 is 150% of FAD sets or combined free school and FAD sets, not 150% of fishing mortality.

39. SPC stated that purse seine effort is based on the number of sets and longline on catch (in numbers of fish) as the basis for the scalars, as this is how those fisheries are modeled in the stock assessments. The optimistic scenario assumes that many CCMs do not fish at their limits. The pessimistic scenario assumes every fleet is fishing to their possible limit.

Effort vs. mortality

40. SPC stated that developing fishing mortality-based projections would be ultimately possible but was not currently straightforward. SPC assumes catchability remains constant from the last year of the relevant stock assessment, meaning that the level of effort is what impacts the stock. Responding to a question on whether future purse seine conditions could be specified on the basis of catch, SPC noted that this was possible, but that members should be guided by how the fishery would be controlled in reality. For bigeye in the purse seine fishery the level of actual catch is not fully determined until adjustments are made to the catch species composition based on observer data; in addition, given that management tools are largely effort-based it makes sense to use effort for projections.

Stock assessment peer review

41. SPC indicated that SC has called for the review of the yellowfin stock assessment to occur in the first half of 2022, with the aim of presenting the review outcomes to SC18 in August 2022.

Recruitment.

42. It was noted that the Commission had sought to conserve and manage tropical tuna through CMMs since 2008. During that time, the spawning biomass of tropical tuna generally declined, whereas most future projections show optimistic future projections of spawning biomass. SPC was asked what factors contribute to optimistic projections, with the observation that the projections do not consider future effort creep or catchability based on advances in technology. SPC referenced Fig 3 in **WCPFC-TTMW1-2021-01**, which shows the historical trend of bigeye under two recruitment scenarios ("recent" and "long-term"). From 1990 to 2018 there is a declining trend, mostly in the first 10-15 years; subsequently the decline reduces, with a recent (post-2015) increase. For the projection period, the recent recruitment scenario is more optimistic. It assumes good recruitment will continue into the future. The bump in the stock status figure around 2017 would contribute to that. The more recent recruitment estimated within the model are also affected as follows: as the purse seine fishery developed post 1980 and corresponding size data are incorporated in the model, more small fish were sampled and a better estimate can be made of recruitment. The converse is that one way the stock assessment model deals with change in catch over time can be by increasing recruitment levels, which may influence some recent results. SPC also noted that the 2016-2018 baseline purse seine effort is below 2012 levels, and that longline catches over that period are also relatively low, which will affect the future stock levels projected in the scenarios.

Agenda Item 3 — Management Objectives

3.1 Discussion of the desired management objectives for the tropical tuna fisheries and /or stocks in the new measure, mindful that the new measure should continue to support the pathway for the adoption of harvest strategies under the workplan under CMM 2014-06.

43. SPC presented **WCPFC-TTMW1-2021-04**, *Updates to WCPO Skipjack Tuna Projected Stock Status to Inform Consideration of an Updated Target Reference Point*. The paper presents the results of analyses requested by WCPFC17, WCPFC16 and SC16 to evaluate the performance of the interim skipjack tuna TRP, in particular examining candidate revised interim skipjack TRPs of 36% to 50% of $SB/SB_{F=0}$. In turn, it re-presents further requested information to aid discussions (paragraphs 258 and 259 of the WCPFC16 Summary Report) on:

- the formulation of TRPs for skipjack tuna, noting:
  - SC15 advice on a skipjack tuna TRP "that the Commission may identify a reference year, or set of years, which may be appropriate to use as a baseline for a skipjack TRP" and
  - the approach to the formulation of a skipjack tuna TRP proposed in WCPFC16-2019-DP01; and
- the impact of effort creep estimated in relation to the TRPs.

Discussion

44. In the ensuing discussion CCMs made a number of inquiries and observations which are collated under various topics in the succeeding paragraphs.

General

45. Some CCMs noted that although not the subject of discussion at TTMW1, they were open to a further separate discussion on a skipjack TRP in 2021. It was also noted that Table 2 of the paper helps explain the focus by some CCMs on 2012 effort and depletion levels, which was the basis for the earlier interim TRP, and could therefore be an appropriate starting point. It was suggested that a 2012-based skipjack objective would aim at keeping depletion levels stable with a minimum disruption to recent fishing levels. It was also suggested that the $50\%SB_{F=0}$ level was now outdated, based on the skipjack stock assessment, and that currently $42\%SB_{F=0}$ is an equivalent.

Fishing patterns in Indonesia, Philippines and Vietnam

46. In response to an inquiry regarding whether the scalars in Annex 2 of the paper (Pattern of catch estimates for the domestic fisheries in Indonesia, Philippines and Vietnam) are indicative of better information on the fishery or greater effort, SPC stated that it assumed the improvements that took place were as a result of the WPEA project, and thus reflect statistical improvements rather than an increase in catch. SPC suggested the countries involved could advise on changes in their fisheries over that period.

Effort creep

47. In response to a query regarding effort creep SPC stated that in general for skipjack the main focus is whether effort creep is occurring in the purse seine fishery, and there are suggestions that this may be taking place. For a given level of fishing effort, with effort creep a greater impact on the stock can be expected. In the context of a harvest strategy, if effort creep is suspected, the fishing level would be adjusted accordingly.

3.2 Discussion of upper-bound or target exploitation levels associated with the management objectives (how a given objective would be translated into quantitative limits in the various fishing sectors)

48. SPC presented **WCPFC-TTMW1-2021-05**, *SC16-Requested Analyses to Inform WCPFC Discussions on Candidate Target Reference Points for WCPO Bigeye and Yellowfin Tuna.* SC16 agreed new stock assessments for WCPO bigeye and yellowfin tuna, that indicated both stocks are on average not overfished nor subject to overfishing. The paper presents the results of analyses requested by SC16 and based upon those new assessments to assist WCPFC17 in the identification of interim target reference points for WCPO bigeye and yellowfin tuna stocks. It presents the consequences for stock and fishery of SC16-defined stock depletion levels ($SB/SB_{F=0}$) consistent with specified historical conditions and stock risk levels (paragraphs 76 to 78 of the SC16 Outcomes Document). For each depletion level, results are presented comparably to those in WCPFC16-2019-14 for skipjack tuna, indicating changes in biomass from both 2012-2015 and recent (2015-2018 average) levels, changes in fishing from baseline (2016-2018 average) levels, median equilibrium yield (as a proportion of MSY), risk relative to the agreed limit reference point, and SC16-requested per-recruit metrics. Under baseline (2016-2018 average) fishing conditions, both bigeye and yellowfin stocks were projected to increase relative to 2012-2015 average levels, and either remain at recent (2015-2018 average) levels (yellowfin) or increase (bigeye).

Discussion

49. In response to inquiries from CCMs, SPC confirmed that Table 1 indicated that assuming "recent" recruitment, an objective based on a 20% risk of breaching the LRP for bigeye would correspond to $29\%SB_{F=0}$; this would correspond to a 70% increase in fishing from 2016-2018 levels. If "long-term" recruitment is assumed, Table 2 indicates a 20% risk of breaching the LRP for bigeye would correspond to $33\%SB_{F=0}$; this would correspond to a 33% increase in fishing from 2016-2018 levels. In both cases increases are equal in both longline and purse seine fisheries, while other fisheries are assumed to remain at 2016-2018 levels. SPC indicated it did not have figures immediately available to evaluate a TRP based on the 1976-2006 period proposed by Japan, but that it would be a level of effort lower than in the most recent period (following some analysis, this was responded to in paragraph 87 of this report). SPC also stated that, based on VMS data, the 2020 level of purse seine fishing effort (in total VMS days) is about 10% higher than that in 2016-2018; this can be more accurately determined when all data are available (likely in May). On that basis the 2020 effort is a scalar of about 1.1 compared to the 2016-2018 baseline.

3.3 Management Objectives as Expressed in Delegation Papers Submitted to TTMW1

50. CCMs that prepared delegation papers for TTMW1 all presented an overview of the management objectives aspects contained in their submissions. They are contained in Delegation Papers 1 to 6 (**https://www.wcpfc.int/meetings/ttmw1**).

Discussion

51. The Chair noted some commonalities among the management objectives as expressed by the CCMs, and some areas of differences. Commonly held views include that a new CMM should maintain the health of the tropical tuna stocks, maintain a balance within fisheries, be a bridge toward harvest strategies, and be consistent with the Convention, including with respect to clauses relating to SIDS interests.

52. In the ensuing discussion CCMs made a number of inquiries and observations which are collated under various topics in the succeeding paragraphs.

Developing States, SIDS and participating territories

53. Many CCMs referenced Article 30 of the Convention, which requires the Commission to take into account the special requirements of small island developing States (SIDS); in particular, Article 30 paragraph 2(c) which requires that the Commission take into account, "*the need to ensure that such measures do not result in transferring, directly or indirectly, a disproportionate burden of conservation action onto developing States Parties, and territories and possessions*."

54. Several CCMs stressed that participating territories are afforded the same status under the Convention as SIDS, and urged CCMs to apply considerations relating to SIDS equally to all participating territories.

Reference periods

55. For skipjack, it was suggested using 3 to 5 years as a reference period for a skipjack TRP would be more stable than basing a TRP on a single year.

56. For bigeye, some CCMs stated that using a reference period of 2012-2015 for bigeye was desirable because it is consistent with the objectives in the current CMM, is precautionary, and would serve to maintain future options. A CCM observed that the 2012-2015 reference period was included in the CMM following a recommendation by SC13 to ensure that F not deviate from 2012-2015 levels. It was highlighted that 2012-2015 was essentially an arbitrary period, one that is not referenced in the current stock assessment. Concerns were expressed that a proposed 1976-2006 reference period predates the development of the WCPO purse seine fishery, and was not realistic because it does not reflect the current fishery structure. Conversely, it was noted that longline CPUE declined once the purse seine fishery became prevalent in the mid-2000s, and that use of the 1976-2006 reference period as a long-term target could enable long-term survival of longline fisheries.

Consultation with SIDS, CMM 2013-06

57. CCMs agreed on the need to consult with SIDS and meet the requirements of CMM 2013-06, while differing views were expressed regarding whether consultation was adequate.

TRPs based on fishing mortality

58. A CMM expressed preference for basing TRPs on fishing mortality rather than effort. It was observed that skipjack biomass is declining despite having set an interim TRP, and that an F-based TRP may be more effective than a TRP based on effort.

Changes in harvest and effort

59. Most CCMs objected to possible significant longline bigeye catch increases; some voiced support for maintaining overall catch and effort at current levels, and some for a progressive or gradual increase.

60. It was suggested that relevant provisions in CMM 2018-01 that aim to revive the bigeye stock are based on old information and advice and should be updated. It was also stated that the purse seine high seas effort limit is based on a period (beginning in 2010) that had closures in high seas fishing, and consequently creates difficulties for some fleets, and that these provisions of the CMM should be changed based on current scientific information and advice.

61. It was stated that the SC advice regarding bigeye stocks remains relevant, given the uncertainty over recruitment, and that any changes from the status quo should be undertaken with great caution.

Biomass

62. Some CCMs referenced potential 30% reductions in biomass that could result from significant longline catch increases above 2016-2018 levels and stated this poses an unacceptable risk to stock sustainability.

63. Concerns were also expressed regarding the disparity between biomass estimates and CPUE for bigeye.

Recruitment

64. It was stated that a precautionary approach to recruitment should be adopted, given that SPC could not currently predict which bigeye recruitment scenario (recent or long-term) was more likely, and that this issue might be examined in the 2022 stock assessment review.

Unique characteristics of fisheries

65. Support was voiced for considering the unique characteristics of fisheries, and for considering their socioeconomic viability.

Risk-based management objectives

66. Some CCMs stated that while they supported using a risk-based approach to constraining or conditioning objectives, they view the proposed use of a risk-based approach to determining management objectives as counter to the progress that had been made by the Commission.

Maintaining current objectives for bigeye and yellowfin

67. Several CCMs voiced support for the proposal to maintain the current objectives for bigeye and yellowfin.

68. Other CCMs suggested these objectives should be updated.

Skipjack objective

69. Some CCMs stated their support for a skipjack objective that maintains skipjack biomass at 2012 levels.

70. Concern was voiced regarding an increase in fishing mortality for skipjack, given that spawning biomass has declined, and effort creep cannot be predicted. It was suggested that the current interim TRP should be maintained.

High seas purse seine limits.

71. A CCM suggested that consideration be given to increasing high seas purse seine days for all fleets with very low high seas days.

Inclusion of socioeconomic factors.

72. It was noted by CCMs that the Commission has taken into account biological and economic factors in the TRP for south Pacific albacore, and thus the precedent for this had been established. It was suggested that the experience with south Pacific albacore may provide useful insights.

73. For bigeye, it was suggested that economic situation faced by various bigeye longline fisheries varied by region, and that the impact of the fishery on bigeye stock also varies greatly, with the impact of fishing on SSB much lower in northern areas. It was also observed that fishing is having profoundly different impacts on various target species, and that this was likely also true for non-target species; impact varies by latitude, distance to shore or seamounts, etc. It was suggested that management schemes could be tailored by area or region.

74. Concern was expressed that further depletion of bigeye and yellowfin stocks would reduce CPUE for these stocks and thereby adversely impact the viability of the tropical longline (northern and southern) and purse seine fisheries (noting targeted free school fishing for yellowfin). The importance of maintaining biomass at a level to support the longline fleet was stressed, especially given a lack of understanding of the socioeconomic effect of significantly reduced bigeye and yellowfin biomass.

75. Concern was also expressed that including socioeconomic factors would require the capacity to collect the correct economic data to enable a meaningful analysis, noting that CPUE can be a proxy, but a range of elements determine the socioeconomic impact of CMMs across fisheries.

3.4 Further Discussion Aided by the Chair's Questions

76. To progress further discussion, the Chair produced two sets of questions intended to clarify uncertainties with some aspects of members positions in relation to their preferred management objectives and provoke additional discussion. The key points that were made in the ensued discussion of the questions are recorded in the succeeding paragraphs as they relate to the Chair's specific questions (boxed) under the various themes in the succeeding paragraphs.

(i) ***Balance between Fisheries***

Is there agreement on the need for a balance between the purse seine and longline fisheries? [setting aside what CCMs think the balance should be].

77. There was agreement that there needed to be a balance between fisheries, and what that balance would look like would require further discussion.

If so, will that balance represent equal impact on the level of fishing in each gear; or equal impact on each stock; or equal impact on other conditions?

78. It was generally agreed that maintaining the balance did not constitute a simple equal increase or decrease in both longline and purse seine fisheries, and that the balance should take into account not only fishing opportunities but also MCS measures.

79. The other points that were raised include:

- Decisions on balance should be based on scientific advice and information from SPC.
- There is a need to devise a balance that maintains bigeye biomass at a level that enables survival of all fisheries that depend on bigeye catch.
- Under the precautionary approach adopted under CMM 2017-01/18-01, longline fisheries sacrificed more than purse seine fisheries, because catch limits for CCMs (other than SIDS) were 10% below the 2012-2015 level; it was suggested this needed to be addressed in the new CMM.
- Balance between longline and purse seine fisheries needs to include balance in terms of the obligations faced by those fisheries.
- There is a need to take a broad perspective on balance, including scientific advice, various obligations under the Convention, and the strength or composition of various management arrangements.
- Balance should consider relative fishery impact on spawning stock biomass because fisheries have a very different yield per recruit, or impact on spawning stock biomass per ton of fish caught; in striking balance attempts should be made to reduce unwanted bycatch of bigeye in the purse seine fleet, as these fish are essential for the longline fishery.
- MCS needs to be strengthened across all fisheries.

- The current balance should be preserved, and thus the impact of any changes should be balanced; this would eliminate the need to address how that balance is measured.
- Long-term changes in balance should be addressed in the future through the multi-species harvest strategy work.
- Relaxation of FAD closure provisions would be needed to equalize the burden among CCMs of conserving bigeye and yellowfin; this would further increase pressure on bigeye stock in the event that longline catches are increased.
- Article 30 of the Convention and CMM 2013-06 need to be considered in any discussion of balance.

What are some of the broader factors which affect the balance between fisheries? Do they include economic viability, impact on biomass, developmental and SIDS and participating territories considerations? Any others? *How can CCMs gauge whether the balance in the new TT measure is right?*

80. CCMs agreed that the issues being raised were complex and would require further intersessional consultations.

81. CCMs could not reach agreement on the use of the current CMM as a starting point for discussions of balance.

82. The other points made include:
- The term "economic factors" should be used rather than "economic viability" to enable consideration of a broader range of economic issues.
- Considerations of balance should include the current unequal reporting responsibilities for longline and purse seine fisheries.
- Factors not part of the current CMM (e.g., MCS measures, high seas transshipment, VMS) should be considered apart from the discussion on CMM 2021-01.

(ii) ***Baseline***

Is it useful to reflect desired management objectives in relation to a baseline year or set of years? If so, what characteristics should that baseline year or set of years reflect?

83. Many CCMs considered that management objectives should reflect a baseline period, but it was also suggested that management objectives should be defined relative to the risk of exceeding the LRP associated with a respective baseline period.

84. The other points made include:
- Use of 2012-2015 as a baseline for bigeye and yellowfin should be continued as it is in accordance with advice from SC13 through SC16, which suggest maintaining SSB at or above 2012-2015 levels, and takes into account the interests of developing states.
- The 2012-2015 baseline level is precautionary.
- Multi-year baselines are preferable to single-year baselines.
- The average catch level for 2001-2004 should be considered as a baseline for longline bigeye catch; this is used for "other commercial fisheries" in CMM 2018-01, para. 51.
- Agreement is required regarding the characteristics of a particular baseline period.
- 2012-2015 is a rather random period that derived from the reference period used for management advice by SC and was not chosen for its particular characteristics.
- 2010-2013 is not a desirable period to include because the high seas were closed to purse seine fisheries during that time; this makes the 2012-2015 reference period a poor choice.

- Management objectives that are expressed in relation to a baseline period include factors beyond the risk of breaching the LRP (e.g., socioeconomic factors), and are preferable to a TRP defined only by risk considerations.
- The reference period chosen should apply to both purse seine and longline fisheries.
- The baseline should reflect the conditions in the fishery that are generally agreed as desirable.
- The choice of reference period should be made in association with consideration of catch and effort limits, as these in combination are what determine the impact on a particular fishery.

What information would be useful to assist CCMs in coming to an agreement on baseline periods?

85. CCMs offered the following observations:

- Although acknowledging that the current baseline was not universally ideal (e.g., with regard to longline CPUE), use of the baseline was generally resulting in maintenance of stocks as desired by the Commission.
- Considerations of alternate or new baseline periods could be incorporated in the future through the harvest strategy process.

To what extent is 2012 or 2012-2015 a representative period for either the purse seine or longline fisheries? [SPC advice] How feasible is it to base management objectives on historical longline CPUE data? [SPC advice?]

86. In the discussion among CCMs, it was suggested that historical longline CPUE could be used for setting the TRP for bigeye, as a similar approach was used in setting the south Pacific albacore TRP; however, it was also noted that there would be difficulties in using longline CPUE for a purse seine TRP.

87. SPC advised that in setting the south Pacific albacore objective the goal was to find a level of the stock that resulted in a profitable fishery. This related to catch rates, which were scaled to a baseline year, which was agreed to be 2013 +8% in terms of vulnerable biomass (the CPUE proxy); the use of a baseline year allowed recalculation of the TRP if the perception of stock status changed in the future with a new assessment. In turn, if a given year gave catch rates and profitability that are desirable, that year could be used as a baseline in a manner not dissimilar to what was done for skipjack. In terms of the historical period, there are challenges in going back far in the history of the fishery or having a very long average period over which the composition of the fishery changes significantly. For example, over the previously proposed 1976-2006 period there was lots of change, with purse seine fishing introduced (although it was still a smaller fishery than currently by 2006). The question would be how to transition from the present to those very different historical conditions. Also, median $SB/SB_{F=0}$ for 1976-2006 was 66% and 64% as a mean value. This is notably larger than the stock size of recent years and is largely outside the range of values within the WP2 analyses of the current fishery, which indicates the significant changes in the fishery that would be needed to get back to those conditions.

88. In response to a suggestion to use a reference period of 2000-2004, SPC advised that **WCPFC-TTMW1-2021-05** includes (in the tables on pages 3-5) median bigeye and yellowfin depletion levels ($SB/SB_{F=0}$) in 2012-2015 compared to average depletion in 2000-2004. For bigeye, assuming recent recruitment, this represents a 4% reduction in 2016-2018 purse seine and longline fishing levels; for "long-term recruitment", there is a 17% reduction.

(iii) ***Associated upper-bound or target exploitation levels***

Is there agreement that even if the CMM 2018-01 management objective for example bigeye is used, this could result in management actions implying some increase in allowable catches/effort, while still keeping a precautionary approach?

89. Many CCMs agreed that some increase in catches could be considered, although one CCM did not consider additional exploitation by either longline or purse seine fisheries could be sustained, citing continuing decline in bigeye stock status.

Is there a need to specify upper-bound or target exploitation levels within management objectives?

90. CCMs generally stated that an upper bound or target exploitation levels did not need to be specified within the management objectives but could be addressed elsewhere in the CMM.

(iv) ***Socio-economic considerations***

Is there agreement that socio-economic considerations are relevant factors in determining management objectives? If so, what socio-economic principles would be relevant? What weighting should be given to them?

91. There was agreement that socio-economic considerations would be taken into account in management objectives. There was also a common view that consideration of socio-economic factors needs to be done based on objective criteria, and the Convention was noted to provide good criterion for socio-economic considerations.

92. The other points made include:

- Consideration should be given to the Convention, including Articles 5(b), 10.3, and 30.
- Area-specific management could help to address the specific impacts and needs of various fisheries.
- CPUE may be insufficient as a proxy for socio-economic factors, given issues such as disproportionate burden and the various types of fisheries. Agreement is needed on relevant data and metrics, what constitutes desirable economic performance, and what progress has been made on issues identified under Article 30 since the signing of the Convention.
- SC should be tasked with analyses related to socioeconomic considerations to enable a more informed discussion based on scientific information and advice.
- Weighting of various factors related to socioeconomic considerations is not needed in the development of the management objectives.

(v) ***Time period***

Is it feasible to have an interim one-year management objective pending further SC advice and agreement on candidate TRPs? Or should the management objective be set for the duration (3 years?) of the new measure?

93. CCMs agreed that the duration of the management objectives would depend on their specifics, but that in theory they could be for the duration of the measure (3 years); one CCM advocated for giving consideration to a longer time frame.

(vi) ***Next steps***

Is it necessary to get additional SC advice before being able to agree on management objectives?

94. CCMs agreed that it was not necessary to get SC advice prior to agreeing to management objectives. However, it was noted that the Commission would likely have taskings for SC related to the management measures, and that SC advice on prospective management measures could be useful in understanding their implications, including with respect to socioeconomic issues.

3.5 Chair's Summary of State of Discussion on Management Objectives

95. The Chair in attempting to capture the common approaches to the setting of management objectives under the new tropical tuna measure produced a document that purported to identify those common approaches (principles) as discussed and the different perspectives as to their application. The rationale for the document is to identify the commonalities in approaches to setting management objectives and to gauge the extent of the gaps in their application so that future discussions on management objectives could be more focused and strategic with the aim to bridge those gaps. The set of common approaches and the differing perspectives as to their application was discussed on Day 3 and 4 of the Workshop and the final iteration of the document is in *Attachment 1*.

Agenda Item 4 — Scope of the new Tropical Tuna Measure

96. CCMs generally agreed that the new CMM should maintain its current scope with respect to geographical area, stocks covered, and the duration of the measure. It was suggested there should be an annual review of the CMM. A number of CCMs agreed that exemptions should be addressed in a future discussion.

Agenda Item 5 — Issues to include in the Agenda for Workshop 2

5.1 Issues to be considered at Workshop 2

97. The Chair proposed several broad themes to generate discussions at TTMW2 as follows:

- consideration of the results of the analyses to be provided by the SSP;
- consideration of results of intersessional discussions on management objectives;
- consideration of management options; and
- consideration of MCS measures and reporting requirements.

98. CCMs supported the themes as a general direction for discussions at TTMW2, noting that these would allow discussion of various specific issues of concern to CCMs (e.g., charter arrangements, characteristics of various fleets, considerations regarding the development of compatible measures).

99. The Chair advised that the same approach would be used in setting the agenda for TTMW2 as had been used for TTMW1.

5.2 Timing and arrangements for Workshop 2

100. CCMs agreed to hold TTMW2 as a virtual workshop sometime after mid-July, with specific dates to be proposed by the Chair, mindful of the need for CCMs and SPC to prepare for SC17, and of the meeting schedule of regional meetings, including those of other tuna-RFMOs. CCMs generally supported using the same meeting arrangements (spread over 5 days, with 4 meeting days and 1 break day in the middle).

Agenda Item 6 — Activities to pursue before Workshop 2

101. The Chair observed that the workshop had identified many common points as well as areas that required further work and stated she would engage with CCMs to find the best way to proceed. She

encouraged CCMs to engage with each other in a constructive process to find additional common ground and clarify their differences. The Chair also encouraged CCMs that intend to develop specific proposal to do so at earliest opportunity and to consult widely on it mindful of the requirements of CMM 2013-06.

Agenda Item 7 — Analysis and Information required from the Scientific Services Provider

102. Several CCMs provided specific requests for additional analysis and information by SPC before the second Workshop (TTMW2). All the requests were reviewed by the SPC and analysed as to their technical feasibility and the time required to undertake them. SPC's assessment of the requests were presented for discussion by CCMs on Day 4 of workshop. After substantial discussions and compromises CCMs agreed on two sets of priorities: short-term requests that can be completed by SPC prior to TTMW2 (to be held sometime after mid-July 2021), and medium-term requests that can be completed prior to WCPFC18. The list of requests that were supported for SPC to provide is in ***Attachment 2***.

Agenda Item 8 — Workshop Outcomes

103. The Chair stated she would prepare a Chair's Report of the TTMW1, which would provide a summary of the meeting, including key points of the discussion without attribution. The Chair's Report will be circulated within 7 working days after the close of the meeting.

Agenda Item 9 — Close of workshop

104. The Chair thanked CCMs for their valuable contributions, noting that significant progress had been made, and looked forward to intersessional work and consultations in advance of the second workshop. She thanked the Secretariat and SPC for their support and encouraged all CCMs to continue their collaborative discussions.

105. The Executive Director thanked the Chair for her leadership and looked forward to helping facilitate collaborations between and amongst CCMs during the lead up to the second workshop.

106. FSM, on behalf of CCMs, thanked the Chair, the Secretariat and SPC.

107. The Chair closed the meeting at 7:37pm Pohnpei time on Friday, 30 April 2021.

Attachment 1

TTMW1 – Agenda 3

Chair's Summary of Discussion on Management Objectives

The list below identifies the common approaches (principles) to the setting of management objectives and related issues in the new tropical tuna measure, and the different perspectives as to their application:

Principles

1) The new measure shall be fully consistent with the WCPF Convention, in particular articles 5, 10 and 30 and CMM 2013-07.
    - Directive from WCPFC17.

2) The new measure should continue to support the pathway for the adoption of harvest strategies.
    - Directive from WCPFC17.

Management objectives

3) Development of management objectives in the new measure must consider best available scientific advice and information.

4) Management objectives should have a clear rationale, be understandable, able to be operationalized and monitored.

5) 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 LRPs.

    <u>BET and YFT</u>
    - FFA (and others) – objectives for BET and YFT are fine and must be retained.
    - US, Korea, EU – objective overly conservative and there is room to increase levels of exploitation (differences in the appropriate level of increase).
    - Japan - seeking a higher level of BET and YFT biomass based on historical longline CPUE series.

    <u>SKJ</u>
    - FFA - maintain intent of objectives for SKJ, but revise text to refer to 2012 levels.
    - USA – set at a level consistent with interim TRP.
    - Japan - seeking a more conservative objective for SKJ based on "fishing mortality" rather than "fishing effort".

Baseline period(s)

6) Most CCMs considered that management objectives should reflect a baseline period, however the US preferred to define management objectives based on risk of exceeding LRP.
    - The choice of a reference period of 2012 – 2015 for the BET and YFT and use of 2012 baseline for SKJ is to be further discussed.
    - Some consideration could be given to historical longline CPUE rates, but this would require further discussion.

Associated upper-bound or exploitation levels

7) Most CCMs agreed that some increase in catches could be considered, although Japan did not consider that additional exploitation could be sustained.

8) There does not appear to be a need to specify upper-bound or target exploitation levels within management objectives.

Balance between fisheries

9) The new measure is to maintain an appropriate balance between the interests of CCMs, fisheries, gears; zones etc. What this balance would look like required further discussion.
    - FFA (and others) - balance is about right under the current measure.
    - USA, EU, Japan, Korea and others - balance is not quite right and require adjustments.
    - The balance should take into account not only fishing opportunities but also MCS measures.

Socio-economic considerations

10) Socio-economic considerations would be taken into account in setting management objectives.
    - How socio-economic considerations would be taken into account requires further discussion.
    - Consideration of socio-economic factors should be based on objective criteria.
    - The Convention, especially Article 5, 10 and 30, provided good criterion for socio-economic considerations.
    - US noted that it is considering socio-economic considerations further, and in particular the possibility of a tailored scheme for different areas, especially in light of differential longline CPUEs in different areas. This requires further discussion.
    - The EU suggested that advice could be obtained from the SC on socio economic considerations in order to have a more informed discussion.

Time period

11) Depending on what the management objectives looked like, the management objectives could be for the duration of the measure (3 years).

Next steps

12) It was not necessary to obtain further SC advice prior to agreeing management objectives.

Attachment 2

Approved Requests to SSP

Considering the capacity of the SSP it is not possible to complete all the 'Short' requests by the next meeting. With this is mind, the remaining 'Short' requests have been scored by the SSP in relation to their difficulty/time requirements, i.e., the 'Points' column. The meeting selected a priority list of requests that total no more than 20 points. The SSP would expect to complete these requests in the available time before the next meeting.

Category	Request	CCM/s making request	Technical feasibility	Time scale[2]	Points
TRPs	**BET** TRP as **average depletion 2000-2004**, determine, MSY, F, as a proportion of recent levels (2014-2017), projected to achieve this TRP. Overall, region, fish size (juv/ad)	Japan	**Technically feasible**	Short	2
TRPs	**BET** TRP as **median depletion 2000-2004**, determine, MSY, F, as a proportion of recent levels (2014-2017), projected to achieve this TRP. Overall, region, fish size (juv/ad)	Japan	**Technically feasible**	Short	
TRPs	**SKJ** Evaluate applying purse seine effort 2007-2009 ave., equlib yield v MSY, LRP risks 50%, 48%, 46%, 44% and 42%SBF=0, plus 36, 38 and 40% (Tokelau)	Korea	**Technically feasible**	Short	1
TRPs	**BET** Evaluate 2007-2009 fishing level in terms of median depletion level and the corresponding change in spawning biomass from 2012-2015 average, recent and long-term recruitment conditions	Korea	**Technically feasible**	Short	1
FAD closure	Adding months, projected change in **future depletion** for **SKJ, BET, YFT** **HS x 6 months, EEZ x 3 months**	Japan	**Technically feasible**	Short	
FAD closure	Adding months, projected change in **future depletion** for **SKJ, BET, YFT** **HS x 5 months, EEZ x 4 months**	Japan	**Technically feasible**	Short	

[2] **Short** – next meeting; **Medium** – commission; **Long** – 2022?

Category	Request	CCM/s making request	Technical feasibility	Time scale[2]	Points
FAD closure	Adding months, projected change in **future depletion** for SKJ, BET, YFT **HS x 6 months, EEZ x 4 months**	Japan	**Technically feasible**	Short	
FAD closure	Reduce FAD closure implications on **SKJ, BET, YFT** future depletion **status quo (3 mths EEZ/HS + 2 mths HS)** **+ a sensitivity with the 2019 effort and catch levels.**	PNA	**Technically feasible**	Short	
FAD closure	Reduce FAD closure implications on **SKJ, BET, YFT** future depletion **1 month reduction (EEZ and HS)** **+ a sensitivity with the 2019 effort and catch levels.**	PNA	**Technically feasible**	Short	
FAD closure	Reduce FAD closure implications on **SKJ, BET, YFT** future depletion **complete removal (both EEZ and HS** **+ a sensitivity with the 2019 effort and catch levels.**	PNA	**Technically feasible**	Short	
FAD closure	Reduce FAD closure implications on **SKJ, BET, YFT** future depletion **2 mo EEZ, 3 mo HS** **+ a sensitivity with the 2019 effort and catch levels.**	PNA	**Technically feasible**	Short	
FAD closure	Reduce FAD closure implications on **SKJ, BET, YFT** future depletion **2 mo HS, 2 mo EEZ** **+ a sensitivity with the 2019 effort and catch levels.**	PNA	**Technically feasible**	Short	
FAD closure	Reduce FAD closure implications on **SKJ, BET, YFT** future depletion **1 mo HS, 1 mo EEZ** **+ a sensitivity with the 2019 effort and catch levels.**	PNA	**Technically feasible**	Short	
FAD closure	Changed FAD closure implications on **SKJ, BET, YFT** future depletion **5 mo HS, 5 mo EEZ** **+ a sensitivity with the 2019 effort and catch levels.**	EU	**Technically feasible**	Short	
FAD closure	Changed FAD closure implications on **SKJ, BET, YFT** future depletion **4 mo HS, 4 mo EEZ** **+ a sensitivity with the 2019 effort and catch levels.**	EU	**Technically feasible**	Short	

Category	Request	CCM/s making request	Technical feasibility	Time scale[2]	Points
FAD closure	Changed FAD closure implications on **SKJ, BET, YFT** future depletion **3 mo HS, 3 mo EEZ** **+ a sensitivity with the 2019 effort and catch levels.**	EU	**Technically feasible**	Short	
FAD closure	Changed FAD closure implications on **SKJ, BET, YFT** future depletion **2 mo HS, 3 mo EEZ** **+ a sensitivity with the 2019 effort and catch levels.**	EU	**Technically feasible**	Short	
FAD closure	Changed FAD closure implications on **SKJ, BET, YFT** future depletion **3 mo HS, 4 mo EEZ** **+ a sensitivity with the 2019 effort and catch levels.**	EU	**Technically feasible**	Short	
FAD closure	Assess the trade-off between increases in longline bigeye catch and length of FAD closure, include results for SKJ, BET, YFT	PNA	**Technically feasible**	Short	1
High Seas effort	Maintaining EEZ PS effort, evaluate the impact of varying effort on the high seas between 0 and **10,000** days (increment by **2000** days)	FFA	**Technically feasible**	Short	1
FAD definitions	Impact of the exclusion of floating objects that do not have a tracking buoy attached from the definition of FAD	Korea	**Technically feasible**	Short	2
Exemptions	Consequence on the projected stock status on the exemption from 20% of the 35% cuts applied to the bigeye catch limits of other major longline fleets from the baseline limits in CMM 2008-01 for any fleet in accordance with para 35 of CMM 2008-01.	PNA	**Technically feasible**	Short	2
Additional metrics/scalars	**SKJ** WP04 – A calculation of recent fishing mortality levels as proportions of 2012 and 2012-2015 levels, overall, region fish size (juv/ad)	Japan	**Technically feasible**	Short	2

Category	Request	CCM/s making request	Technical feasibility	Time scale[2]	Points
Additional metrics/scalars	Alternative values for estimating future depletion levels against alternative catch and effort baselines **Purse seine** 1-month EEZ FAD closure; 1-month High seas FAD closure 1-month High seas + EEZ FAD closure; and	PNA	**Technically feasible**	Short	1
Additional metrics/scalars	Alternative values for estimating future depletion levels against alternative catch and effort baselines **Longline catch equivalents for:** 1-month EEZ FAD closure; 1-month High seas FAD closure 1-month High seas + EEZ FAD closure; and	PNA	**Technically feasible**	Short	
Additional metrics/scalars	Current equivalent scalars - what scalars should apply relative to the 2016-18 "starting point" for 2019 conditions (for both catch and effort).	PNA	**Technically feasible**	Short	0
CPUE	**Request during WS1**: compile informative BET CPUE time series	Japan	**Technically feasible**	Short	1
High seas	Schedule of high seas effort by US vessels against the US limits in applicable CMMs since 2012	PNA	**Technically feasible**	Short (SPC or Secretariat)	0
High seas	Evaluate the removal of the FAD sets in 2019 in the HS for flags not in table 2 of the measure (i.e., not bound by limits).	EU	**Technically feasible**	Short (SPC or Secretariat)	(1-evaluate?)
Other	Table of the number of purse seine vessels as fishing in the Convention Area between 20N-20s by CCMs listed in Table 2 of Attachment 1 of CMM 2020-01 from 2012	PNA	**Technically feasible**	Short (SPC or Secretariat)	1
Other	Results shown in table 15 and table 14 in WCPFC-TTMW1-2021-01_rev3 be merged.	EU	**Technically feasible**	Short	1
Other	IP02: Two plain graphs expressing the percentage of effort in (EEZ+AW) and HS (split between CCMs with limits, PH, CCMs without limits)	EU	**Technically feasible**	Short	

Category	Request	CCM/s making request	Technical feasibility	Time scale[2]	Points
Other	IP02: update of figure 3 taking into account the FADs sets estimated for footnote 1 of CMM 2018-01.	EU	**Technically feasible**	Short	