



DEVELOPMENT OF A NEW TROPICAL TUNA MEASURE WORKSHOP 4 (TTMW4)

Pohnpei, Federated States of Micronesia
29-30 September 2023

CHAIR’S REPORT OF TTMW4

WCPFC-TTMW4-2023-Chair’s Report
2 November 2023

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AGENDA ITEM 1. Opening of Workshop

1. After the delegation of Tonga blessed the workshop with a prayer, the WCPFC Chair, Dr Josie Tamate (Niue), opened the workshop.

1.1 Opening remarks by Chair

2. The Chair's opening remarks are appended as [1](#)

1.2 Adoption of agenda

3. The Chair noted that there had been no comments on the circulated Provisional Agenda. A final version of the Agenda had been issued on 9th September without attracting comment. The agenda was adopted.

1.3 Workshop meeting arrangements

4. The workshop was held in hybrid form, with all but one Commission member being represented in person at the Head of Delegation level, with other individuals participating online.

5. The Chair drew the attention of participants to the information on the "Meeting Arrangements" folder on the TTMW4 meeting webpage, particularly the document WCPFC-TTMW4-2023 "Indicative Schedule". She hoped to complete Agenda Items 1 to 5 during the first day of the workshop.

6. The following members, cooperating non-members and participating territories (CCMs) attended TTMW4: American Samoa, Australia, China (online), Cook Islands, El Salvador, European Union (EU), Federated States of Micronesia (FSM), Fiji, France, French Polynesia, Indonesia, Japan, Kiribati, Korea, Marshall Islands (RMI), Nauru, New Zealand, Niue, Papua New Guinea (PNG), Philippines, Samoa, Solomon Islands, Chinese Taipei, Thailand (online), Tokelau, Tonga, Tuvalu, United States (USA), Vanuatu and Vietnam (online).

7. Representatives from the following intergovernmental organisations attended TTMW4: Pacific Islands Forum Fisheries Agency (FFA), the Office of the Parties to the Nauru Agreement (PNAO), the Pacific Community (SPC), the Secretariat of the Pacific Regional Environment Programme (SPREP).

8. Observers representing the following organisations also attended TTMW4: Australian National Centre for Ocean Resources and Security (ANCORS), International Seafood Sustainability Foundation (ISSF), Marine Stewardship Council (MSC), Organisation for the Promotion of Responsible Tuna Fisheries (OPRTF), the Pew Charitable Trusts, the Ocean Foundation and World Wide Fund for Nature (WWF).

9. A full list of participants is provided as [Attachment 2](#).

AGENDA ITEM 2. Objectives of the Workshop

10. The Chair presented TTMW4-2023-01 and described the objectives for the workshop, noting that these had already been conveyed in Circular No. 2023/66 of 22nd August 2023.

11. The main objective was to review the results of the analysis that had been requested of the Pacific Community (SPC), the WCPFC's Scientific Services Provider (SSP), at TTMW3, contained in [Attachment 3 of the Chair's Report of TTMW3](#), and to take account of the advice and recommendations from the 19th Scientific Committee (SC19) relevant to the revision of the Tropical Tuna Measure. These two sets of advice would be considered under Agenda Items 3 and 4 respectively. The TTMW4 Workshop would then

draw on this scientific advice and analysis in order to make progress on review and revision on identified paragraphs of the Tropical Tuna Measure, including on relevant hard limits and allocation frameworks.

12. She recalled that WCPFC19 had agreed that any new tropical tuna measure would be based on the current measure (CMM 2021-01) as far as possible, particularly in maintaining the balance between fisheries, but that there was room for strengthening certain elements of CMM 2021-01 including the design of allocation frameworks for high seas purse-seine fisheries and tropical longline bigeye fisheries.

13. TTMW4 would provide an opportunity for more targeted discussions on how WCPFC could best make progress on these matters, taking into account the various views of CCMs that had been stated at TTMW3.

14. She wanted the Workshop to review proposed revisions to CMM 2021-01, including the proposals from CCMs, and those emerging from exchanges during the Workshop. Previous discussions, including those held at TTMW3 in June 2023 and at TTMW2 in September 2021 should provide useful starting points and references.

15. There were no flags raised for discussion, and the objectives of the workshop were confirmed.

AGENDA ITEM 3. Outcomes of SC19 relevant to revision of the Tropical Tuna Measure

16. The Chair drew the attention of the meeting to Working Paper TTMW4-2023-02 (*Chairs Draft*), which was a tabular summary of Working Paper TTMW4-2023-03 (*SC19 Advice Relevant to revisions to CMM 2021-01*) and Working Paper TTMW4-2023-04 Rev2 (*SPC Report to TTMW4 on results of TTMW3 Prioritised Requests of SPC*), setting each item of new advice from SC19 and from the SSP (SPC) against the relevant paragraphs of the latest tropical tuna measure CMM 2021-01.

17. The purpose of TTMW4-2023-02 (WP02) was to assist CCMs in considering the analyses requested of the SSP and SC19 advice and recommendations that were relevant to the process of revising CMM 2021-01. The Table in WP02 provided an overview of the paragraphs of CMM 2021-01 that had been identified by the Chair as potentially requiring review in 2023. Against each identified paragraph was an indication of which CCM or groups of CCMs supported this identification, as well as where there was either a requested analysis relevant to the paragraph or advice available from the 19th Scientific Committee (SC19).

18. She explained that the Table should assist CCMs to concentrate consideration and discussion at TTMW4 on the paragraphs of the CMM that have been agreed as requiring review, mindful of the Commission's agreement at WCPFC19 that CMM 2021-01 did not require a full overhaul. To further assist CCMs with making progress on the review of relevant provisions, a column labelled "*Drafting Elements*" was included to capture any draft text that members wished to propose at TTMW4 for ongoing consideration through to WCPFC20.

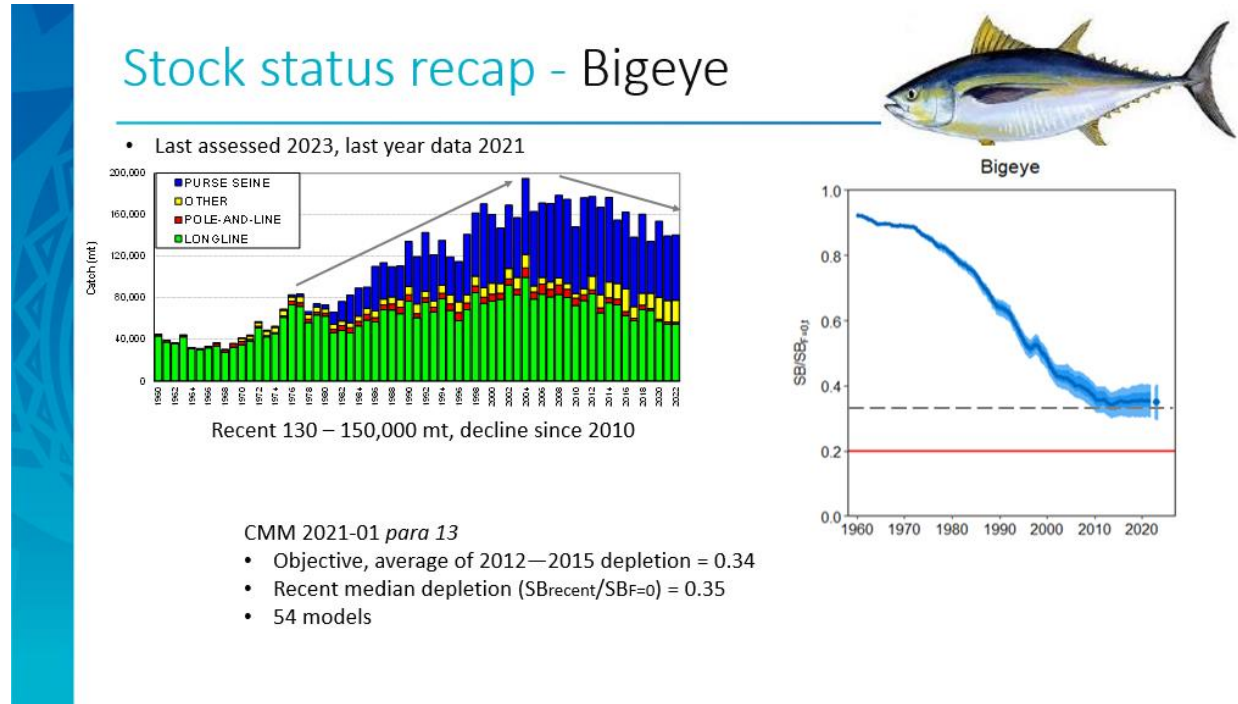
19. She reiterated her intention to maintain focus on the key paragraphs that many of CCMs had agreed needed review, particularly in light of the recent SC19 advice which was now available for consideration alongside the results of analyses requested of the SSP. She expected this approach to help CCMs in making the most of the limited time available and ensure movement towards agreement on a revised CMM by December 8th.

20. The Chair noted that she had already invited CCMs to review the Table in WP02 ahead of this 4th TTM Workshop. She explained the order of the presentations to come and, there being no comment, she hoped that all participants were prepared to engage in constructive discussion.

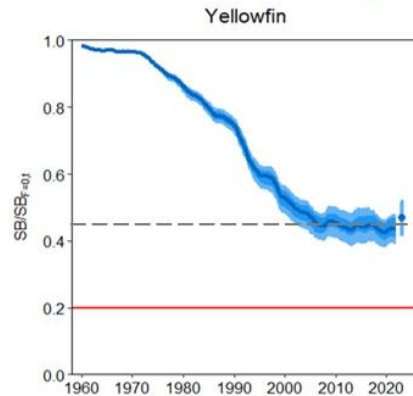
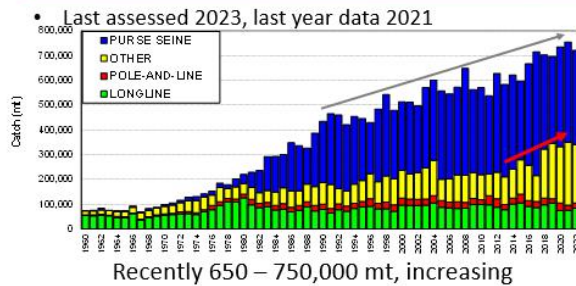
3.1 Review of SC19 management advice and recommendations

21. The SSP presented the tropical tuna stock assessments that had been discussed at SC19. Both the bigeye (BET) and yellowfin (YFT) tuna assessments carried out in 2023 had taken into account the YFT peer review. They noted that the previous (2020) YFT assessment had been considered a little too optimistic by some CCMs, which was why a major independent peer review had been commissioned. The new (2023) YFT and BET assessments incorporated several changes recommended by the peer review and both had been adopted by SC19.

22. They briefly summarised the status of the two recently assessed stocks diagrammatically:



Stock status recap - Yellowfin



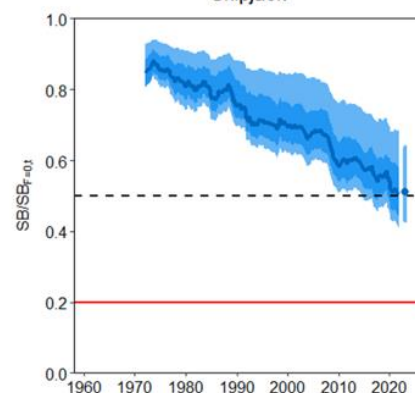
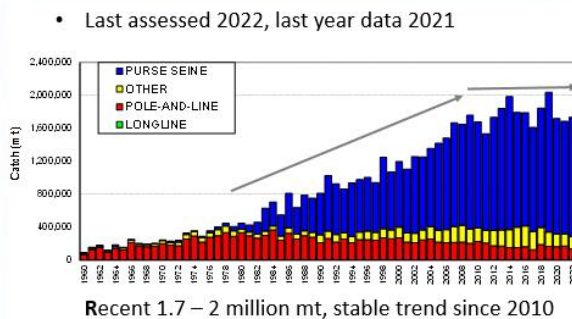
CMM 2021-01 *para* 13

- Objective, average of 2012—2015 depletion = 0.44
- Recent median depletion ($SB_{\text{recent}}/SB_{F=0}$) = 0.47
- 54 models

23. For both stocks, the plot on the right of the slide showed the trend in depletion of spawning stock biomass against the estimated biomass that would have been present in the absence of fishing.

24. The objective of the tropical tuna CMM for BET and YFT stocks was for depletion to be maintained around the average 2012-2015 level (the dashed horizontal line), and above the Limit Reference Point (LRP) (0.2 $SB/SB_{F=0}$ – the solid horizontal line). This CMM objective was being achieved for both stocks.

Stock status recap - Skipjack



- TRP calculated as defined in the skipjack MP CMM 2022-01 = 0.50
- Recent median depletion ($SB_{\text{recent}}/SB_{F=0}$) = 0.51
- 18 models

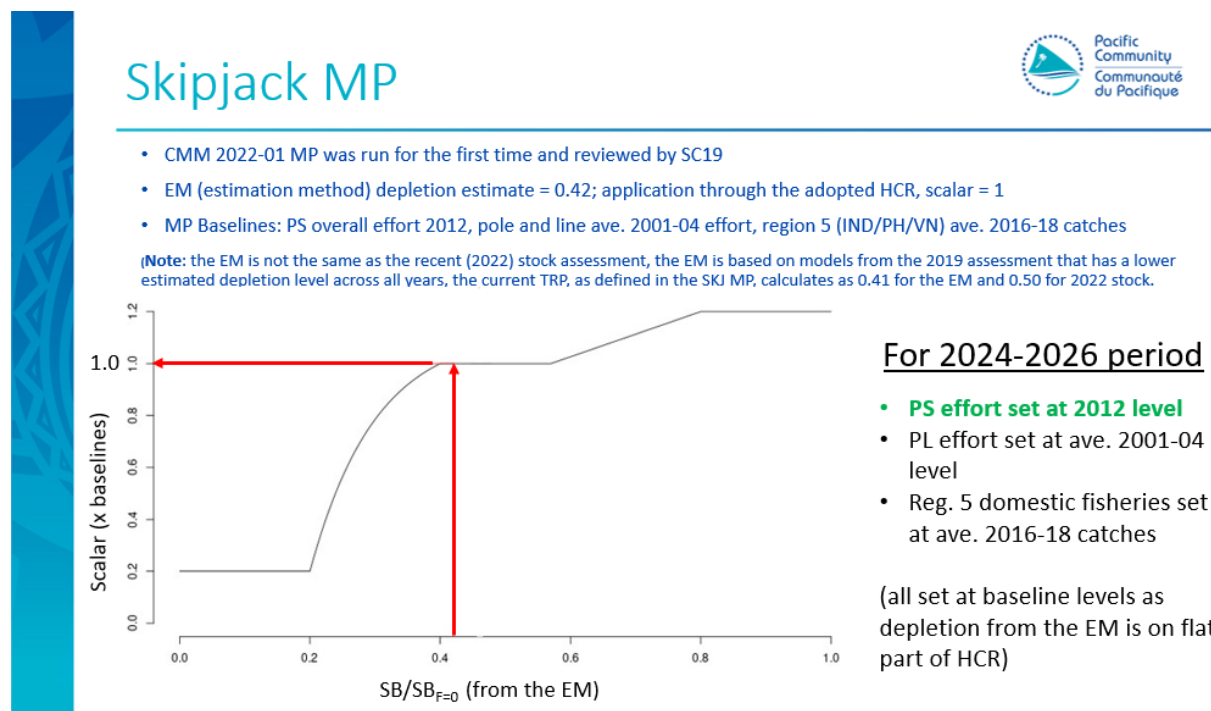
25. For skipjack tuna (SKJ), there was more uncertainty in the assessment, as could be seen from the

width of the ribbon plot on the right-hand side of the slide. However, the SSP explained that the skipjack catch had stabilised since management had been introduced around 2010, and the recent median depletion level of 0.51 was around the 0.50 Target Reference Point (TRP) defined by the Skipjack Management Procedure CMM and was well above the 0.20 LRP.

26. YFT was the only tropical tuna stock whose total catch had not stabilised or declined. The catch trend in the left-hand plot in the second slide suggested that the longline, purse-seine and pole and line YFT catches had been stable recently, and the increase in yellowfin catch since 2013 was mainly due to an increase in the “other” fisheries – although whether this was a real increase or just an increase in catch monitoring coverage was not yet clear.

27. He also explained the interim Skipjack Management Procedure that would provide an overall upper limit on all fisheries taking skipjack, and which had a harvest control rule to specify how total effort or catch would need to be varied from the current baseline level in each fishery (purse-seine, pole and line, and Region 5) in response to any significant change in the biomass depletion ratio.

28. He noted that the purse-seine baseline of 2012 was 19% higher than current purse-seine effort levels—in other words to return to 2012 levels of purse-seine effort would require a scalar of 1.19 to be applied, which would imply a 19% increase in current purse-seine fishing effort.

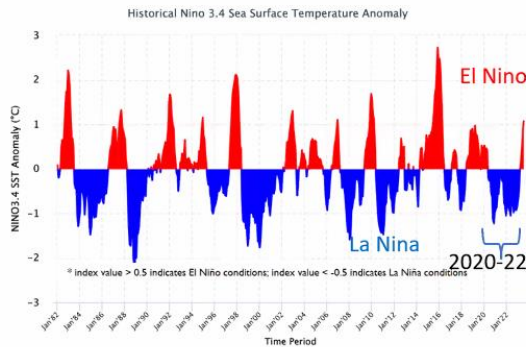


29. The SKJ Management Procedure had just been run for the first time and he said that a full evaluation would be done for the WCPFC20 meeting. This would be explained in the next agenda item.

30. Moving on to climate cycles and longer-term changes, the SSP pointed out that the WCPFC tropical tuna region had recently moved into El Niño conditions, after a La Niña episode lasting from 2020 to the end of 2022. This meant that the western tropical Pacific warm pool would be likely to expand towards the east and the conditions for purse-seining should improve in the equatorial central Pacific. However, during El Niño conditions the thermocline was deeper and the warm pool larger and the tuna

schools would probably be less concentrated than during the La Niña warm pool contraction. El Niño would perhaps require more FAD fishing to maintain skipjack CPUE.

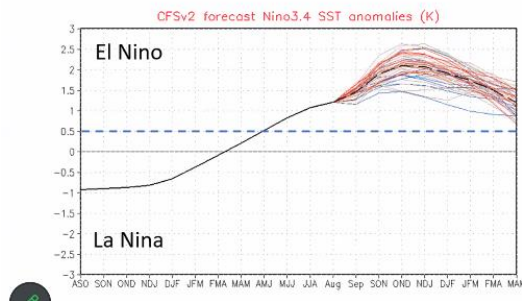
Near term climate effects



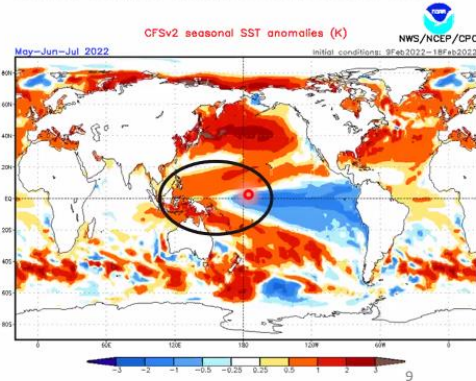
Recently transitioned from La Niña to El Niño

Recent conditions: La Niña

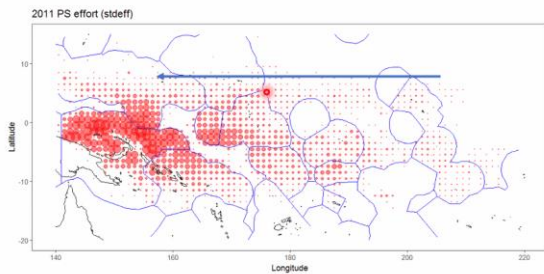
- Warmer water (warm pool) squeezed towards the west and deeper, sea surface temp cooler to the central and east WCPO
- Concentration of SKJ and YFT to western equatorial Pacific
- Greater reliance on FAD sets in eastern WCPO



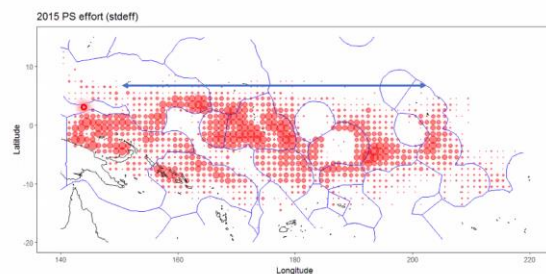
June 2020-2022
La Niña



Example: distribution of purse seine effort in 2011 La Niña

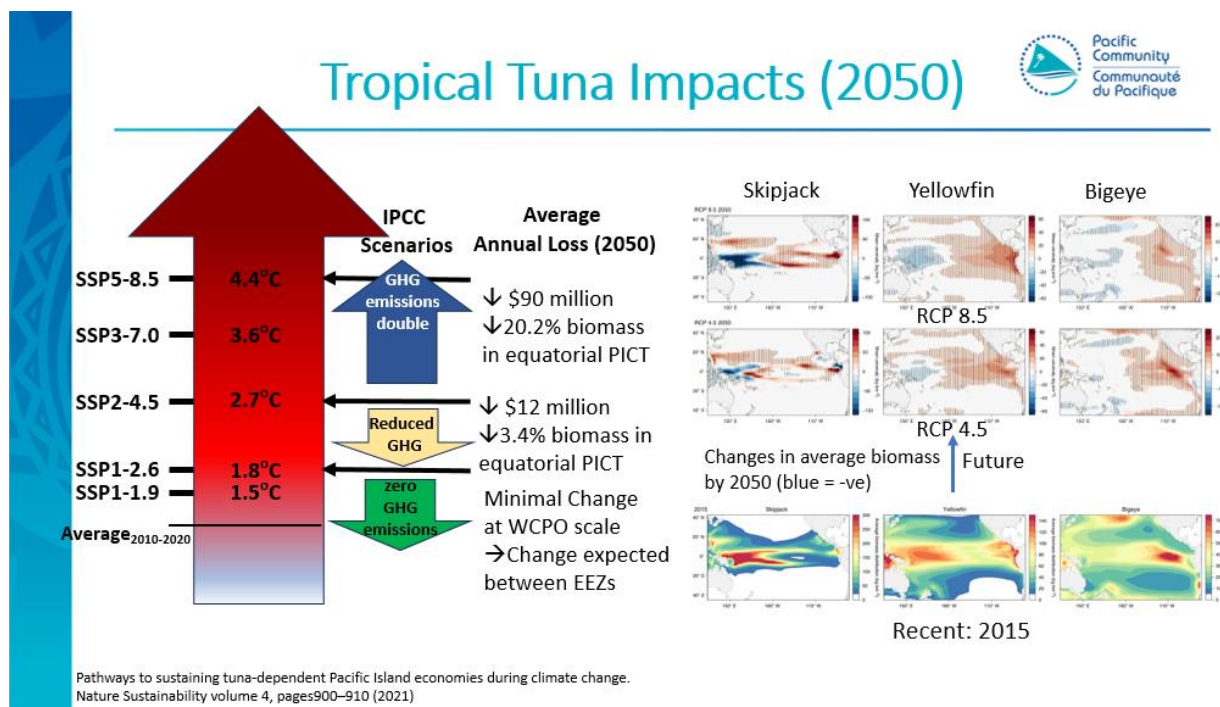


Example: distribution of purse seine effort in 2015 El Niño



31. Quite a bit of work had now been done on the likely effects of climate change on tropical tuna fisheries. The El Niño southern oscillation had given tuna scientists a fair idea of how stocks would react to warming conditions. The Representative Concentration Pathway (RCP) 4.5 scenario (one of the greenhouse gas concentration trajectories used by the IPCC) was expected to lead to reduced tropical tuna abundance in the west of the region. If a more severe greenhouse gas concentration scenario occurred, such as RCP 8.5, then there would be significant impacts on the tropical tuna fishery, and the recommended management response would be for fishing to become more conservative.

Tropical Tuna Impacts (2050)



32. SC19 had also considered Fish Aggregation Devices (FADs). The research that had been planned on biodegradable FADs had been delayed by COVID, and this work had to be extended to 2025, with additional financial support from the European Union. The WCPFC FAD Management Options Intersessional Working Group (FADMO-IWG) had reviewed timelines for the transition to biodegradable FADs and had also considered the IATTC transition plan. Proposals had been made by some CCMs for WCPFC to follow a similar timetable. It could also be important to consider how to incentivise the use of biodegradable FADs. SC19 had noted that no purse-seiners were actually reaching the 350 monitored buoys limit, and 90% of them had less than 130 buoys active per day.

33. Japan thanked the SSP for conducting the analyses requested by TTMW3. They had one question about the YFT assessment. They noted that the YFT catch of the “other fisheries” in model Region 2 in the SPC data had increased recently, but 2001-2004 had been proposed as the baseline for controlling the longline catch limit. Japan wondered why there was no limit on the “other fisheries” particularly in the western part of region.

34. The SSP noted that the question of WHY there was no limit was a management issue for others to consider. There was a stepwise increase in the “other fisheries” catch estimates which suggested that at least some of the increase was due to the improvement in reporting capacity in that area. But it was not easy to know at this stage exactly what the reasons were for this trend. And it should be noted that from the statistics in the west, a key part of the increase had been from the domestic component of model Region 2 and had been inside archipelagic waters rather than the EEZ.

35. The EU had a similar question on the YFT Stock Assessment regarding the consistently increasing trend in the YFT catch, particularly recently, while the trend in the depletion plot had stabilised. They wondered if these two observations were consistent.

36. The SSP explained that the model was looking at CPUE trends and trying to reconcile the catch data by moving things around. They would need to look at the CPUE indicators in future years to understand exactly what was happening.

37. Japan understood now that this “other fishery” was mainly in archipelagic waters, and not only was there an increase in catch, but an increase in the proportion of small fish in the catch, and this could have a big impact on the stock. Japan understood that archipelagic waters were outside the scope of the WCPFC CMM, but that coastal States were required to take compatible measures—not necessarily exactly the same measures—but to make an equivalent effort to avoid impact. So Japan was concerned. There was apparently also an increase in the catch of small skipjack, and this could be a problem even though other WCPFC members had made efforts to limit the impact of their fisheries on these stocks.

38. The EU followed up with a question they had asked at SC19 on the SKJ Management Procedure, noting that the meeting had been avoiding an issue with the TRP. The dry run of the Management Procedure had produced TRP results which the EU felt were difficult to reconcile with previous estimates and wondered if there was a need to update the Estimation Model.

39. The SSP explained that the dry run estimation model had given a different result to the previous estimation model. The model was apparently sound, but there had been an issue with setting up the data file. There was no issue with the data itself, but in the way the data inputs had been translated into the data file as a result of the compressed timeframe. The dry run had only been a demonstration of the system, but it had been taken rather seriously at SC19. The SSP noted that the Management Procedure was now running satisfactorily and giving results that the SSP was happy with.

40. Korea asked a question on the Skipjack depletion ratio. They understood that the current spawning biomass depletion level (compared to the biomass in the absence of fishing) was 0.42. But another figure of 0.51 had just been presented as the median recent depletion level. What was the relationship between these numbers?

41. The SSP explained that the SKJ Management Procedure had an estimation method (in this case a model) within it that was based on the 2019 SKJ stock assessment diagnostic model, and that this was a different model with different settings from the most recent (2022) stock assessment. The estimation method within the SKJ MP was a single model which has been tested using Management Strategy Evaluation (MSE) as part of the full MP (which includes data collection/preparation, the estimation method and HCR). The model used for the estimation method in the SKJ MP produced different absolute estimates of depletion compared to the recent stock assessment model, but the *relative* differences and changes across time were similar—the scales just differed. If the approach to calculate the TRP as specified in the SKJ MP was applied (i.e. what depletion do you get to under projected 2012 effort levels?) and averaged with the average depletion from 2018-2021 a value of 0.41 would be obtained for the model in the MP and 0.51 for the recent assessment. So, an estimated TRP value based on the model in the MP would be 0.41 and based on the stock assessment would be 0.51, but they were both referencing the same stock condition. It was simply that the values were scaled differently due to the different models. For the SKJ MP that had just been run, the estimation model indicated a depletion of 0.42, so that could be interpreted as being close to the TRP. The SSP noted that it was important to remember that the stock assessment was not part of the MP and was a separate set of models that changes with each assessment cycle to accommodate new information and approaches, to try to provide the best estimates of stock status. The stock assessment is part of the monitoring strategy that runs alongside the MP. Unlike the stock assessment, the estimation method/model in the MP should not change because it has been tested to work within the full MP, and while it may not provide the best available science on stock status at any particular time, it did provide a reliable enough indicator of stock status changes to drive the Harvest Control Rule (HCR).

42. If the MP was no longer working, then the stock assessment should indicate that the stock was no longer meeting the objectives expected from the testing of the MP, and that the MP might need review.

So, for stock status, CCMs should pay attention to the stock assessment. The depletion value from the model used in the MP was just providing the value to set the fishing levels via the HCR.

43. The EU felt it was not as simple as that – that the estimation model had management implications. When the depletion ratio of the stock was still on the plateau of the HCR it didn't matter, but if the model had produced an output that moved the stock depletion ratio onto the curve, the meeting would have been having a very different discussion. It would be useful to reconcile the models.

44. The SSP explained that the MP is a process for setting fishing levels that has been tested (using MSE) to meet objectives, for example, the SKJ TRP. The estimation method within the MP could have been a CPUE time series or other indicator that worked in terms of providing information to drive the HCR. The point was that the MP (and its HCR) had been chosen in the expectation that it would meet objectives for stock condition (and a number of other objectives that were perhaps considered by various delegations). The MP was a process, a mechanism, for setting fishing levels. It was true that the estimation method within the MP obviously did have implications for management because it tells the HCR where to set the fishing levels. When the MP is run again in 3 years' time, the same estimation method would be used and it might come out with a depletion ratio of 0.38 which, based on the HCR, would suggest that fishing needs to be reduced. There would also be another stock assessment every three years, and that would estimate the stock status based on the best available science, noting that stock assessment models change to incorporate new information etc. unlike the estimation method in the MP which should remain the same as that tested by the MSE. If the SKJ MP was working as expected, as tested under the MSE, the stock assessment (part of the monitoring strategy) should be showing that the stock status is hovering around the TRP conditions. If the stock status from the assessment was not meeting the objective, the Commission would need to come back and consider reviewing the MP. Or perhaps other factors might change, such as data availability. For example, the pole and line CPUE is important data for the current MP, and there's a concern that the fishery has been declining, and there may not be sufficient long term CPUE data, as had been discussed at SC19. The process would have to be regularly reviewed—the MP was not set in stone. If it failed to maintain the stock, exceptional circumstances could be invoked, and everything reviewed and altered if necessary.

3.2 Implications of SC19 advice and recommendations for revisions to TT measure

45. The Chair recalled the meeting to her intention of completing much of the background discussion during the first day, using the analyses that had been presented to start drawing together the elements that would be required in drafting the language for any changes needed to the CMM text elements that had been identified for adjustment. She intended to leave the preamble untouched until the WCPFC20 meeting in Rarotonga and to begin by looking at the objectives of the measure. But it would be useful for all CCMs to make their positions known on day one of the workshop, so the discussion on the second day of the workshop could start working towards identifying what would need to go into the text.

46. She drew the attention of the workshop to WP02 again, where the attached table identified the paragraphs proposed by the Chair for revision or review, along with an identification of the analyses that had been provided relevant to that paragraph, and an idea of which CCMs supported which positions. The Secretariat and Chair would be working overnight to begin populating the table of drafting elements in the last column of the table in Working Paper 2, and the aim during this workshop would be to have this column of drafting elements substantially filled in with the various positions of CCMs, and any agreements emerging. This would be the main output of the workshop, which would go to Rarotonga for finalisation.

47. Starting with the objectives, she noted that some potential language from the USA and from PNA + Tokelau had already been pencilled into paragraphs 11-13 on the interim objectives for BET, SKJ and

YFT. There were some minor adjustments proposed to the BET and YFT objectives, and for the inclusion of the Skipjack Management Procedure under the SKJ objective. So, the workshop had heard from the Scientific Services Provider, some CCMs had already provided some ideas about the objectives which need to be discussed, and then CCMs could start looking at the balance of the measure. She asked for comments on the objectives.

48. The Solomon Islands, speaking for PNA + Tokelau, considered that the advice of the Scientific Committee on bigeye and yellowfin was very clear. These stocks were healthy and the CMM was maintaining them around their interim management objectives. The output of the skipjack Management Procedure also indicated that no change should be made to the skipjack limits in the CMM. This indicated there was no need to change the key elements of the Tropical Tuna Measure, and the SC hadn't recommended any changes. PNA + Tokelau thought this advice provided a basis for looking at a rollover of the CMM with some tweaks, keeping the major elements of the CMM and the current balance in place.

49. The Chair asked if all CCMs understood that the CMM was achieving its purpose and asked whether there are any alternative views.

50. There being no other views expressed at that time, the Chair asked if any CCM have any proposed changes to the bigeye objective, noting that there were none in any Delegation Papers submitted to the workshop. There were no additional views and so the Chair invited PNA + Tokelau and the USA to present their proposed language for amending the Skipjack objective under paragraph 12.

51. The USA said that they had misunderstood the Chair's question earlier and did have an interest in discussing bigeye and they were also interested in discussing the yellowfin objective when the updated projections could be provided by the SSP. They did have a great deal of interest in discussing these further at a later stage – Table 3 in particular. They then quickly walked the workshop through the USA's proposal in delegation paper TTMW4-2023-**DP01** for an amendment to the Skipjack objective in paragraph 12, recognizing the Management Procedure for Skipjack.

52. Palau said that PNA + Tokelau did have proposed language for the Skipjack objective that recognised the SKJ TRP from the Management Procedure (CMM 2022-01) in the objective and thought that the PNA and USA proposals could be merged.

53. Japan wanted to return to Bigeye and said that they had repeatedly pointed out their view that the BET objective should be based on 2001-2004 depletion levels because that period was the baseline for the longline flag catch limits. They felt that the interim BET objective should be revised. As PNA had pointed out, the current BET depletion ratio of 35% was close to interim BET objective, and so Japan would like to maintain the current CMM for the coming years. And to also scrutinise the relationship with, and the potential impact on, YFT if we changed the management measures for BET right now, because there were some interactions. The SSP would be conducting further analyses on YFT before the WCPFC20 meeting. The future projections for YFT were pessimistic and this needed to be taken into account. In summary, Japan did not want substantive changes to the measure for BET but did want to change the BET objective to base it on 2001-2004 levels.

54. Chinese Taipei saw the Tropical Tuna CMM as the flagship measure of WCPFC. They were waiting further update from the SSP and believed that the additional analyses would help in understanding the current status which would then help in reviewing the fitness of the current measure. So, they would not make any further comment on the Objectives at this stage but would be interested in further discussion with members on revising Table 3.

55. The EU thanked the members who had shared their views on the important topic of management objectives. As for SKJ, they were fine with the broad concept of what had been suggested based on what

the Commission had adopted last year. The aim would be to have stock fluctuating on average around the adopted TRP – that would not be a problem for the EU, and it should be quite easy to merge the PNA and USA proposals already on the table. For the other two species they sought clarification from Japan on whether they were wanting a different TRP or objective for BET and what the implications of the proposal would be, and whether the measure would be able to meet the new BET objective without significant amendment. The EU further added that if the Commission sets up a new standard, knowing from the outset that the measure would not be likely to achieve that new standard, then the Commission would not be acting appropriately. However, it would not be appropriate to make this change to the objective without knowing from Japan what the implication of any such BET TRP would be. The EU also pointed out that they would need to wait for the new yellowfin projections before making progress on the YFT objective.

56. Regarding the EU question, Japan advised that they had proposed a similar idea in past workshops. Most of the longline bigeye flag catch limits in the measure were originally based on the 2001-2004 period, and Japan would like to achieve the BET depletion ratio that was in place at the time which was about 45%. Japan further added that they would like to see the future projections for the BET stock status moving upward. TRPs had social as well as biological implications. Japan did not think it would be possible to agree to the BET TRP in such a short time, but at this stage, maintained its original position that the stock should be recovered to 2001-2004 levels. They emphasised again that this was not a new position.

57. Fiji, speaking on behalf of FFA members, pointed out that they attached a high priority to maintaining the current delicate balance of interests between fisheries in the current TTM. This balance had been achieved after many years of careful and considered development, and FFA members viewed the current measure as the starting point for the discussions on a revised CMM. Any changes would need to ensure that the overall balance of the measure was maintained. The outcomes of the stock assessments for all three key tuna species under the TTM suggested that the TTM was working well and that major changes to the measure were not necessary. Fiji further added that FFA members felt that the SKJ MP needed to be incorporated into the TTM this year because it is the means for implementing the MP's outputs. This would require the inclusion of a preambular paragraph as well as an update to the management objective in paragraph 12 to reflect the objective as outlined in CMM 2022-01. Additionally, minor revisions to other preambular paragraphs would eventually be needed to ensure that the most recent CMMs were being referenced. Specifically, reference to CMM 2014-06 would need to be updated to CMM 2022-03, and Resolution 2019-01 would need to be included in the climate change paragraph.

58. The Chair summed up the discussion thus far, noting that there seemed to be agreement on how to fine-tune the skipjack objective, but that the discussion on the yellowfin objective might need to await the results of the SSP's further analysis of the implications from Region 2. On the bigeye objective, she noted that most CCMs seemed to be in favour of the status quo in view of the indications from the stock assessment that the measure was meeting its objective. She further noted that Japan is looking for a change in the bigeye objective to 2001-2004 biomass levels. She asked if the SSP could provide an opinion on the implications of the Japan proposal.

59. The SSP (SPC) said that the objectives of the measure should reflect the outcomes that the Commission wanted to see from the stock and its fisheries. Changing the bigeye objective to 2001-2004 levels as Japan had suggested, looking at Table 6 of the working paper, would imply a 46% depletion level. In the SSP's analysis of the CMM, the only scenario that would get the stock to that level would be the optimistic scenario, which is pretty much status quo fishing under the recent recruitment scenario, that would produce a depletion level of 46% in the long term. In other words, if actual catches remained as they were now, depletion levels would be equivalent to those you saw back in 2001-2004. If all CCMs

started to fully utilise their limits and options, then the measure was unlikely to be able to achieve 2001-2004 levels for the bigeye stock.

60. The Chair suggested that the discussions on bigeye and yellowfin objectives be suspended for the time being, and that the workshop concentrate on finalising a draft skipjack objective. Two texts had been proposed and several CCMs had suggested they could be amalgamated, and it should be possible to agree something for skipjack. Thus, the discussion then would focus on bigeye and yellowfin objectives.

61. Japan recalled that for further discussion of the yellowfin objective, CCMs would have to wait for the Region 2 re-analysis. It was important to consider the potential impact of this sharp increase in small yellowfin catches on the CMM, and even if the other members were implementing management measures based on the scientific advice, if a certain region continued to increase its catch particularly of small fish that could have a negative impact and thus undermine the effectiveness of the CMM. Japan would like to discuss this with other relevant members towards the Commission meeting.

62. The Chair noted that the workshop could not proceed with yellowfin before the additional analysis had been completed and sought views from CCMs on bigeye, and the proposal made by Japan.

63. The EU had been trying to understand the views that had been expressed regarding BET. From the EU perspective, the existing interim bigeye objective was already quite conservative because it maintained the stock at a level which was far above the level that could produce maximum sustainable yield (MSY). The EU noted that Japan's proposal wants to set the bar even higher; to be even more conservative so the stock would be around about two times MSY. The EU would be interested in hearing more about the reasoning behind this proposal, because simply saying that this was the case in the past is not sufficient. The EU is uncertain on how informative this would be for today or in the future and asked if Japan could share its justification to underpin this suggestion for an even more conservative management objective for bigeye.

64. Japan pointed out that they had provided their paper ([WCPFC-TTMW1-2021-DP03](#)) on this matter to the first CMM 2021-01 workshop (TTMW1) in 2021, which indicated that the trend in Japanese longline CPUE since 2000 had dropped sharply and that the economic situation of longliners had been quite difficult. Japan wanted to return to the CPUE from 2001-2004. This was a similar position to that taken with the South Pacific albacore TRP which was based on the CPUE preferred during a particular period in time. Japan's preferred bigeye TRP had not been well-received by other members in the past, but Japan wanted to maintain this position. They did not expect the proposal to be adopted quickly, but that remained their position.

65. The Chair then directed the attention of the meeting to a discussion about how any trade-offs between different fisheries should be accomplished in order to maintain the overall balance of the measure, in the event that any members wished to increase, or even decrease, any of their fishing limits. The SSP had produced tables that looked at what kind of changes in the purse-seine FAD closure period would be equivalent, in terms of their impact on bigeye stock status, to certain changes in the longline fishery catch of bigeye, and this appeared to be the main reference that CCMs expected to use in any discussion of balance. She drew attention to the tables in **WP04**, and also to the work that the SSP had done on identifying the biomass depletion levels associated with various potential candidate TRPs.

66. Korea noted that the workshop was now discussing the trade-offs between longline bigeye catch increase and the FAD closure period in paragraph 14 and 15 of the measure. Korea believed that trade-off to be the main factor to be considered in revising this measure, but also pointed out that SC19 had provided the management advice that a reduction of fishing mortality (F) by fisheries taking juveniles could increase yields and reduce further impacts on the spawning stocks. Korea further believed that this

was another important factor to consider when this workshop and the Commission in December discuss the possible revision of the tropical tuna measure.

67. Papua New Guinea on behalf of PNA + Tokelau noted that regarding paragraph 14, on the FAD closure, the SSP analysis of the effect of the FAD closure showed a loss of around 100,000 tonnes annually from the purse-seine fishery as a result of the FAD closure. Almost all of this loss was in the EEZs of SIDS and most of it in the waters of PNA and Tokelau. This was a huge burden being disproportionately transferred to PNA and Tokelau CCMs for the conservation of bigeye which is largely taken in the high seas by longliners of distant water fleets. It seemed there was not much scope for increasing bigeye fishing mortality in the light of the bigeye assessment results. But if there were to be any adjustments to measures affecting bigeye, then a reduction in the length of the FAD closure in the EEZs would have to be part of that package.

68. The USA acknowledged the earlier intervention by Japan, but, given that the region was operating under the current CMM, the United States viewed the current LRP (limit reference point) as being conservative, and that there was a very low risk of breaching the LRP. Given that, the United States would be interested in exploring adjustments to the longline bigeye catch. Within the context of the updated projections from the science provider on yellowfin to make sure that those were balanced, and to PNA + Tokelau's intervention, the USA would be willing to also explore the trade-offs that they had noted with respect to a commensurate reduction in the FAD closure.

69. The Chair referred to Table 3 in Appendix 1 of the tropical tuna CMM (*Bigeye Longline Catch Limits [paragraphs 37-39]*) and noted the interest by one CCM in adjusting these limits, and for any adjustment to be balanced by commensurate adjustment to the FAD closure. She encouraged CCMs to indicate more precisely how these limits might be adjusted.

70. China pointed out that the limits in Table 3 were something like the 2016 level of catch for all. China recalled that the Commission agreed to a FAD closure in PNA waters, and that the reduction of the longline effort by 2017 would be something like 30% based on the 2004 level. However, after the Commission had decided the FAD closure for three months, the longline catch limit should have been returned to the 2004 level. But right now, there was a further reduction to the 2016 level. So that was why, during 2017 in the Commission meeting in Manila, the final result was that Japan had agreed to transfer 500 metric tonnes to China, so it was more like the 2004 level. China noted that people here were always saying that a trade-off was needed because the burden was being given to the PNA waters. But frankly speaking, during the last three years with COVID-19 there were no observers on board purse-seiners. Additionally, most of the PNA countries are exempted from the FAD closure during the three months, and so there was no additional burden on the PNA. China further pointed out that the history of the tropical tuna negotiation should not be forgotten, that the first CMM on tropical tuna was first adopted in December 2008, on a very cold day in Busan, and at the time the 2001-2004 level was the historical level adopted by this organisation for the tropical tuna especially for the bigeye tuna. But China was flexible for the PNA to have a reduction from 3-month to 2-month FAD closure. But in that case the longline catch in this table should be increased compatible with the 2004 level.

71. The Marshall Islands wished to reflect on how things stood at the present time. They agreed with the Chair that it was time to "get into the weeds" of the trade-off, but, as stated by PNA + Tokelau, there was no room to move upwards with longline bigeye catch unless there was trade-off with a reduced FAD closure. They noted that there was no point in throwing numbers around at this stage. At the end of the day, perhaps all could agree that a balanced trade-off was the way to go and that CCMs could agree on the exact numbers later, based on the analyses being done by the SSP. The Marshall Islands further noted that they would be guided by the consensus of the workshop, but felt it was too early to begin specifying

numbers.

72. The USA said it might be premature to state specific numbers but would be useful to have a theoretical number to help see what kind of trade-offs might be involved.

73. The Chair noted that what was coming through was an interest to increase bigeye longline limits, and if so, we would need to have an idea of what kinds of FAD reduction might be needed to balance that, and what the total impact on the stock could be, so it might be time to have that theoretical conversation.

74. Japan said that many members had the appetite to discuss an increase in the bigeye flag longline catch limit and a reduction in the purse-seine FAD closure, but this would create a downward trend on the bigeye stock status in the future, possibly even to below the LRP if all CCMs fully utilised their limits. That was the difference between the Japan delegation and others. Some had said the BET TRP was conservative, but this objective should be based on social as well as biological factors. Japan wanted a TRP that was well above the LRP, as certain Pacific Island countries wanted for South Pacific Albacore (SPA) in order to support the CPUE of their domestic fisheries. Japan was not supportive of increased bigeye catch limits because of the implications for a decline in the stock if the FAD closure was reduced in proportion. This was why Japan was suggesting a more conservative bigeye objective. It was understandable to discuss the trade-off of increases, but Japan just wanted to make their position clear.

75. China suggested that perhaps the historical catch limits or catches could be added to Table 3 to make it clear that the workshop was not talking about an increase, but a return to the past.

76. The EU agreed with Japan that TRPs can have economic and social aspects. The EU also noted that Japan was drawing parallels with the SPA TRP discussion but further noted that the SPA TRP had been supported by various studies showing the economic hardship that SIDS economies were suffering. The EU did not recall if similar information about national economic hardship had been provided for the BET longline fishery. The EU pointed out that perhaps the meeting could be reminded of those socio-economic analyses.

77. The Chair reminded CCMs of the two scenarios on the table: to maintain the status quo or to increase the longline bigeye catch with any concomitant trade-offs needed against the FAD closures.

78. The Marshall Islands said that the workshop needed to manoeuvre within the confines of the scientific advice, and CCMs should not only be talking about an increase in longline bigeye catch, but about a trade-off. The scientific advice suggested that there was a limit to which the longline bigeye catch could be increased at the same time as the purse-seine FAD closure was decreased. The discussion was not exclusively about a longline limit increase, but about an increase in bigeye fishing mortality which must be shared between longline and purse-seine fisheries without exceeding the capacity of the stock to absorb it. It was the total trade-off that must conform to the scientific advice.

79. Recalling the suggestion on additional or expansion of Table 3, the Chair sought confirmation from China if it was asking the Secretariat to expand Table 3 of CMM 2021-01 Appendix 1 to include the historical bigeye longline catch limits against each flag CCM. China explained that it was the actual historical catch that was needed rather than the limits, but that they had found that this could easily be compiled from existing data by the delegation.

80. The Chair then paused the session and suggested the meeting resume with Agenda Item 5 (*Consideration of options for hard limits and allocation frameworks*) and see if an alternative entry point to the trade-off discussion might emerge.

AGENDA ITEM 4. Results of analyses requested by TTMW3

4.1 & 4.2 Review of analyses requested by TTMW3, and Implications of these analyses for revisions to TT measure

81. WCPFC's Scientific Service Provider (SSP) presented Working Paper TTMW4-2023-04 (*Results of SPC analyses requested by TTMW3 and preliminary evaluation of CMM 2021-01*) immediately after the SSP's presentation under Agenda Item 3.1.

82. He explained that the 3rd workshop on the development of a new Tropical Tuna Measure (TTMW3 in June 2023) had requested specific analyses from the SSP to help inform Commission members on options for the new Measure (see Attachment 3 of WCPFC-TTMW3-2023-Chair's Report; also Appendix 1 to TTMW4-2023-04). This paper was to present the results of these analyses. The analyses had been grouped into different overall categories and re-ordered accordingly by the Scientific Services Provider. For each analysis, a short methodological summary was provided where necessary, particularly where interpretation of the request by the SSP was necessary to perform the analysis. This was then followed by the results and, where appropriate, key points for CCMs to note when interpreting those results.

83. The TTMW3 requests were divided into three categories:

- a. 'trade-offs', reflecting requests that required a balance between purse seine and longline fishing;
- b. 'purse seine management', reflecting requests focussed on purse seine fishing levels; and
- c. 'longline management', reflecting requests focussed on longline fishing levels.

84. Requests had been allocated a sequential number for ease of reference. SC19 had additionally requested that the results of a re-evaluation of CMM 2021-01 based upon the accepted 2023 stock assessments of WCPO bigeye and yellowfin be provided to TTMW4 (WCPFC20-2023-SC19-01; paragraph 202). While the SSP did not have the capacity to complete the full revision of the CMM evaluation in time for TTMW4, they had prioritized the update to key components of Tables 1 and 2 of WCPFC19-2022-13_rev1, which were presented as part of the response to request #1. The full re-evaluation would be provided to WCPFC20.

85. Rather than run through the results figure by figure, since it was assumed that participants had already read the results of the analyses they had requested, his presentation concentrated upon identifying the assumptions behind each analysis, because these were important.

86. The first "trade-off" analysis requested—to "Produce the usual depletion/risk matrices (nuclear grids) for BET and YFT based on LL and PS scalars using the 2023 assessment grids—was considered by the SSP to be key, as it underpinned a lot of the other requests. A key point was that the scalars would be applied to 2019-2021 baseline effort levels—for example: a multiplier of 0.5 would mean that there would be half the level of fishing effort that there had been in 2019-2021. The scalars for the Indonesia/Philippines/Vietnam area fisheries were to be applied to the 2016-2018 baseline average catch levels. The projections assumed constant effort or catch for 30 years into the future and it was assumed that fishery would settle down to equilibrium during this time.

87. In the nuclear grid, each cell represented the depletion of the stock at that level of relative effort for each fishery. He thanked Rob Scott who had run this analysis and noted that this figure summarised over 1million projections.

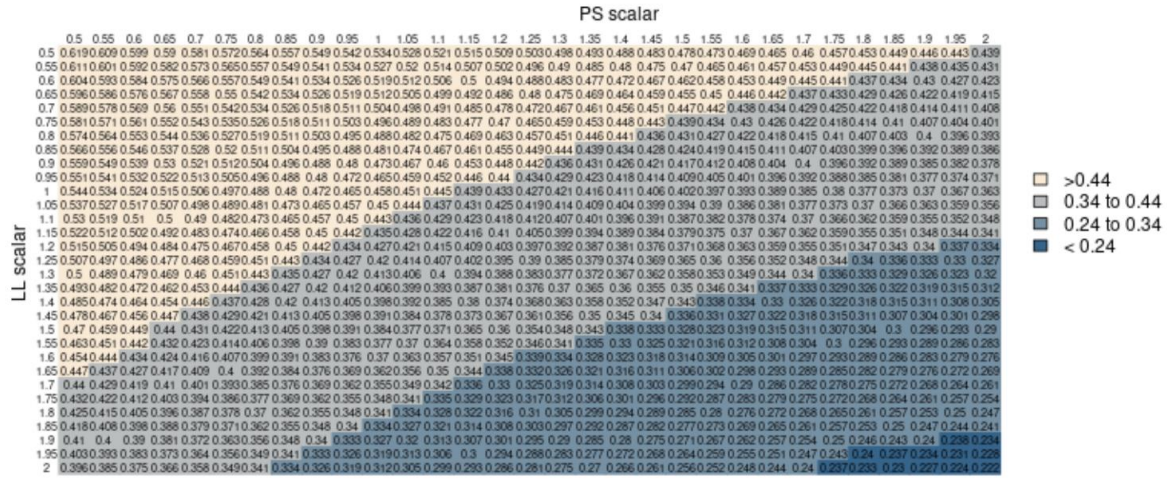


Figure 1. Bigeye equilibrium stock depletion levels ($SB/SB_{F=0}$) resulting under the different purse seine (across) and longline (down) scalars (relative to 2019-21 levels), under the assumption that 'recent' recruitment levels continue. Values indicate equilibrium depletion levels resulting under fishery conditions. Shading indicates depletions relative to average stock depletion levels over the period 2012-15 ($34\%SB_{F=0}$), consistent with CMM 2021-01.

88. These nuclear grids were also produced for bigeye under the long-term recruitment assumption, and for yellowfin, along with grids showing the risk that the stock depletion levels would fall below the limit reference point for each cell of each nuclear grid.

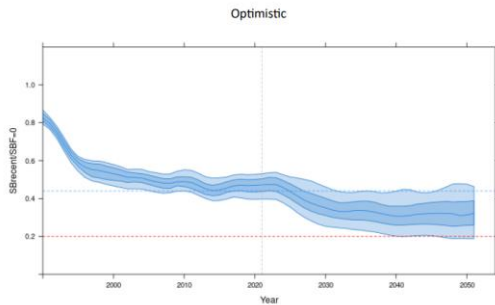
89. While performing these analyses, two issues were identified which the SSP was hoping to address before WCPFC20:

- a. Within the bigeye analyses, projections off one specific grid model consistently failed. Given the time available, the results from this specific model were not included.
- b. For the yellowfin model, the assumption of constant catch for the domestic fisheries in 'Region 2' of the 2023 yellowfin assessment (i.e. ID/PH/VN region) led to the stock in that region failing under many future scenarios. This biased the overall outcome downwards (more depleted stock, greater risk). However, the assumption of constant catch was obviously unrealistic in the face of a declining stock, where it would be expected that CPUE would also decline, and projections based on effort would be preferable. The SSP was examining the potential to assume 2016-2018 effort levels as the scalar baseline for these fisheries.

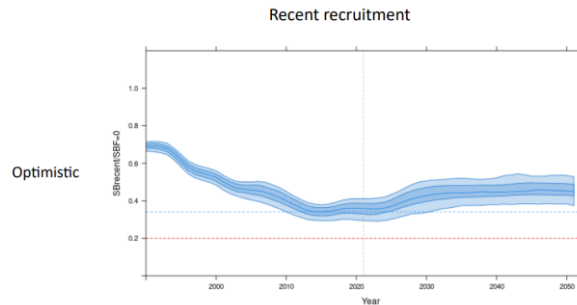
90. Considering the preliminary updated evaluation of CMM 2021-01, which SC19 had requested be provided to this workshop, the SSP had prioritised this work and updated WCPFC19-2022-13_rev1 Tables 1 and 2 as far as possible with the results available.

91. The SSP noted that even the most optimistic YFT projection results were a lot less optimistic than the BET. However, this could be considered a worst-case scenario because the projection included the assumption that Region 2 catches would continue at the same level despite the worsening condition of the stock, as mentioned previously.

Yellowfin, optimistic scenario where current catch/effort continues for 30 years (as opposed to fully-utilised where each CCM fishes to the maximum allowed)



Bigeye, optimistic scenario, and assuming recruitment continues similar to recent levels (2011-2020) (as opposed to long-term (1962-2020) average levels).



92. The SSP also ran through some of the assumptions that went into the analyses of the “trade-off” between bigeye longline catch and the FAD closure period. As per WCPFC18-2021-15, this trade-off request had been interpreted in two ways.

93. The first component evaluated the level of change required in one gear (relative to 2019-2021 baseline conditions) to maintain the depletion of bigeye tuna (under the two recruitment scenarios) at a specific level. For this analysis, the bigeye stock depletion level (2012-2015 average) was used (i.e. the CMM objective), to reflect the differing impacts of the recruitment assumptions being examined on future stock productivity. This therefore mirrored a specific ‘diagonal line’ of Figure 1 and Figure 3 of Working Paper 4 (maintaining BET depletion at 0.34 $SB_{F=0}$ for ‘recent’ and ‘long-term’ recruitment scenarios, respectively). The request indicated increases in longline catch, so additional catch increments of 6,000 mt (approximately 10% of the 2019-2021 average) were evaluated, up to a set of scalars that fell within the range examined under request #1.

94. The approach identified trade-offs in terms of the impact on the bigeye stock, i.e. maintaining the stock at specific depletion levels to best reflect the differential impacts purse-seine and longline fishing have on that stock. An approach that equated the impact in terms of equal catch, for example, would ignore the fact that to take a comparable level of catch (mt), the longline fleet would take fewer and larger fish given its selectivity, and hence would have a different impact on the stock to the removal of an equivalent weight of smaller fish by the purse-seine fishery.

95. The approximate equivalent FAD closure period was calculated as equal in in-zone and high seas FAD closure periods. This used the results from request #5 to first identify the number of sets estimated to be removed by a theoretical 3-month combined in-zone and high seas closure compared to the theoretical number of sets that would be present where there was no FAD closure at all (in EEZs or high seas), to identify the average FAD sets removed by a single month closure. The current 3-month EEZ + 5-month high seas closure was approximately equivalent to a 3.3-month equal EEZ and HS closure. The approximate additional months of closure (EEZ + HS) were estimated using the scalars provided in Table 8 and Table 9.

96. The original request had asked for the corresponding impacts on yellowfin and skipjack stocks. An assumption of this evaluation was that overall purse-seine effort would remain constant at 2019-2021 levels, with increased FAD closure duration equating to an increased number of sets being transferred to free school sets to maintain the overall effort. Under this assumption there was no differential impact on skipjack tuna, and hence the consequences for this stock are not presented. For yellowfin, this assumption meant that the main impact was through the change in longline catch. For this analysis, the simplifying

assumption was made that changes in yellowfin longline catch were equal to the assumed change in bigeye longline catch. Under that strong assumption, the consequences for yellowfin were included within Table 3 and Table 4 in WP04.

97. Going back to BET nuclear grid, the SSP informally summarised the trade-off as follows: if catch/effort continued at current (less than the maximum allowable under the current CMM) levels then things were fine. If there was an increase in total longline bigeye catch and purse-seine FAD effort to the levels allowed for in the current CMM then the bigeye stock would run into the red.

98. Japan thanked the presenter and found the presentation quite informative. However, Japan also noted that it was quite difficult to digest, and managers might take some time to understand. Regarding the recruitment scenarios for future BET assessments, Japan understood that the SSP used only the long-term average recruitment for SKJ and YFT but two scenarios had been used for BET. As Japan had stated at SC19, they thought that the long-term recruitment scenario was better for BET, particularly with environmental changes over the long term. They wanted to know the specific reasons why the SSP was still using two BET recruitment scenarios.

99. The SSP reminded the meeting that they had been requested by WCPFC to use these two BET recruitment scenarios. At that time, the stock assessment was much less positive and there was a more notable gradient in the recruitment trend. SC tended to place more weight on the recent recruitment than the long-term because increased sampling of smaller fish from the purse-seine fishery provides a better estimate of fluctuation in small fish abundance, close to the age at recruitment. And future recruitment levels couldn't be well predicted. The SSP had not been using recent recruitment scenarios for SKJ and YFT because that had not been required. For SKJ particularly, it probably was not important since SKJ tuna are fairly short-lived and the entire population can be considered recent recruits. Climate change impacts were not being explicitly factored into the 30-year projections, and that was a fair point. The way that climate change was being captured was indirectly, by looking at the patterns of ENSO fluctuation over time on recruitment and sampling these into the future. The SSP noted that there was a feeling that a less heavily-exploited BET stock would be more robust to climate change – that a larger population would be able to maintain more genetic diversity, among other factors.

100. Japan noted that the current bigeye tuna stock status was 35% of the unfished level and that depletion ratio was quite close to the interim TRP at 34% - only a 1% difference. And in the past, they had seen a constant decline in bigeye tuna stock and the Commission had not substantively changed the tropical tuna conservation management measure. For the future projection, Japan noted that the SSP was maybe predicting an optimistic future stock status like 43-45%. So, even with a status quo fishing effort and catch, we could apparently achieve a 43% depletion ratio according to the future projection. However, with regard to the kind of factors that contributed to such optimistic future BET projections, and why was that projection different from the SKJ or YFT projections, Japan again noted that they had experienced a constant decrease in BET stock status in the past despite no change in management rules under the CMM.

101. The SSP confirmed that the BET stock depletion ratio was just above the CMM objective according to the latest assessment. The stock had certainly declined over time, but the stock assessment results presented earlier suggested that it had reached a plateau over the last 10 years or so. From that point the SSP had projected forward under the recruitment levels and the pattern of fishing, and under those assumptions it had suggested that the BET stock was relatively robust under both short and long-term recruitment scenarios. Assuming those patterns of recruitment remain into the future then the current level of actual fishing does allow for some increase in the stock. It would be dependent on the assumptions made for the future, and the best assessments that the SSP had, in terms of the parameter estimates within their stock assessments.

102. The USA pointed out that this was a rather complex paper and had to be read at least 2.5 times. They asked if the SSP could please confirm if the EEZ and high seas FAD closure scalars were additive. For example, if we had one month of the EEZ FAD closure, the scalar seemed to be about 0.1, and if we closed one month on the high seas, the scalar would be about 0.02. The USA asked whether this meant that the total scalar for one month difference in FAD closure on both the high seas and EEZs would be 0.12.

103. The SSP said this would be correct for a given level of effort.

104. The EU thanked the SSP for this major endeavour but found it sometimes challenging to grasp the underlying assumptions of some of the scenarios, because the work was presented in a narrative way. They wondered if in future it would be possible to describe the scenarios in a different way that would be easier to understand. They also believed that it would be valuable to have a section at the end that drew attention to some key conclusions and presented the facts that could not be disputed. At the moment it left members to make their own analyses and draw their own conclusions. This was of course part of the homework of CCMs, but there would be value in having a summary of key outputs outlined by the SSP team doing the work. The EU thought that this would facilitate the understanding of CCMs, particularly in capturing key messages that might otherwise be overlooked, especially for those without a scientific mindset.

105. The Chair pointed out that it was the job of members to understand the outputs resulting from their own questions, and for national scientists to assist national managers with that understanding, but she was aware that delegations did have a mix of backgrounds when it came to understanding stock assessments and not all delegations had tuna stock assessment scientists on tap. The Secretariat would look at ways of making these kinds of presentations easier to understand at meetings like this, but high-pressure questions had been asked of the SSP by members, to be answered in a very compressed timeframe.

106. The EU also had a question on the nuclear grids. If these were compared to the analogous grids in 2021 then opposite trends were apparent, where BET was more pessimistic than YFT in 2021 and YFT more pessimistic than BET in 2023. The EU asked what may be driving this. The EU also noted that the Commission now seemed to be in a situation where YFT had become a choke species and there was no room for manoeuvre with BET and SKJ since the YFT objective would not be met. The EU asked whether this observation was correct.

107. The SSP said one reason for these differences was the fact that there were new and improved stock assessments available for both species. The YFT assessment in particular had benefitted from the external review. The new regional structure, with 5 regions rather than 9, had highlighted the impacts of Region 2 on the whole YFT stock. The other reason was that there was a new, more recent baseline, and all assessment baselines now ended in 2021. This gave the impression of there being more room to manoeuvre because those recent levels were relatively low compared to the historical period. One thing he stressed was that we could use any baseline we liked. All that the baseline does is provide a specific level from which we are scaling to our alternative scenarios.

108. On the concern that YFT is becoming a choke species, the SSP advised that the analysis had been assuming that Region 2 catches would continue at the same level despite the likely decline in the YFT stock in that region, and that it would probably be more realistic to assume that the catch would decline as well, as CPUE declined, and thus there would be a declining impact on whole stock. The SSP would endeavour to redo that analysis with this technical fix before WCPFC20.

109. Australia made a comment regarding the reliability of the YFT projections that underpin much of this work, noting the issue with Region 2. As it stood, the CURRENT analyses indicated substantial

difficulties in achieving the TTM YFT objective of keeping biomass at or above 2012-15 levels (~44%). However, as had been noted by the SSP, there were problems with that analysis in that the results were being dragged down (made more pessimistic) by the stock crashing in Region 2 due to the projections assuming constant high catches into the future. That Region 2 represented a lot of catch and was highly influential. The technical solution would be to use constant *effort* projections for that region, but he understood that these were harder to provide and would not be available here. So, this presented a constraint for this workshop, which had incomplete information to assess the performance of Tropical Tuna Measure options for YFT. As just noted by the SSP, they would be endeavouring to provide those updated results to the Commission. In response, Australia noted that it certainly looked forward to seeing them.

Table 9. Combinations of specified EEZ and high seas FAD closure periods, purse seine effort and longline catch scenarios, and resulting depletion levels and risk of breaching the LRP (20%SB_{70d}) for bigeye (long term recruitment assumption), yellowfin and skipjack tuna.

Scenario combinations					Resulting Scalars					BET outcomes			YFT outcomes			SKU outcomes		
EEZ PS effort	EEZ FAD closure	HS FAD closure	LL catch	Other catch	PS effort & HS PS effort v 2019-21 avg	FAD closure	Overall PS scalar	LL catch scalar	Other catch scalar	BET depletion	Result v 2012-15 avg	LRP risk	YFT depletion	Result v 2012-15 avg	LRP risk	SKU depletion	Result v TRP	LRP risk
2016-18 levels	3mth	6mth	2016-18 levels	2016-18 levels	1.06	0.98	1.04	1.04	1	0.42	1.24	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	4mth	5mth	2016-18 levels	2016-18 levels	1.06	0.90	0.96	1.04	1	0.43	1.26	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	4mth	6mth	2016-18 levels	2016-18 levels	1.06	0.89	0.94	1.04	1	0.43	1.26	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	3mth	5mth	2016-18 levels	2016-18 levels	1.06	1.00	1.06	1.04	1	0.41	1.21	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	4mth	4mth	2016-18 levels	2016-18 levels	1.06	1.12	1.18	1.04	1	0.4	1.18	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	0mth	0mth	2016-18 levels	2016-18 levels	1.06	1.39	1.47	1.04	1	0.37	1.09	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	2mth	3mth	2016-18 levels	2016-18 levels	1.06	1.14	1.20	1.04	1	0.4	1.18	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	2mth	2mth	2016-18 levels	2016-18 levels	1.06	1.16	1.22	1.04	1	0.39	1.15	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	1mth	1mth	2016-18 levels	2016-18 levels	1.06	1.27	1.35	1.04	1	0.38	1.12	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	5mth	5mth	2016-18 levels	2016-18 levels	1.06	0.81	0.86	1.04	1	0.44	1.29	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	4mth	4mth	2016-18 levels	2016-18 levels	1.06	0.92	0.98	1.04	1	0.42	1.24	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	3mth	3mth	2016-18 levels	2016-18 levels	1.06	1.04	1.10	1.04	1	0.41	1.21	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	3mth	2mth	2016-18 levels	2016-18 levels	1.06	1.06	1.12	1.04	1	0.41	1.21	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	4mth	3mth	2016-18 levels	2016-18 levels	1.06	0.94	1.00	1.04	1	0.42	1.24	0%	0.32	0.73	5%	0.52	1.04	0%
2016-18 levels	5mth	3mth	2016-18 levels	2016-18 levels	1.06	0.85	0.90	1.04	1	0.44	1.29	0%	0.32	0.73	5%	0.52	1.04	0%
2019 levels	3mth	6mth	2019 levels	2016-18 levels	0.98	0.98	0.97	1.14	1	0.41	1.21	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	4mth	5mth	2019 levels	2016-18 levels	0.98	0.90	0.89	1.14	1	0.42	1.24	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	4mth	6mth	2019 levels	2016-18 levels	0.98	0.89	0.87	1.14	1	0.42	1.24	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	3mth	5mth	2019 levels	2016-18 levels	0.98	1.00	0.99	1.14	1	0.41	1.21	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	2mth	4mth	2019 levels	2016-18 levels	0.98	1.12	1.10	1.14	1	0.39	1.15	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	0mth	0mth	2019 levels	2016-18 levels	0.98	1.39	1.36	1.14	1	0.36	1.06	1%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	2mth	3mth	2019 levels	2016-18 levels	0.98	1.14	1.12	1.14	1	0.39	1.15	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	2mth	2mth	2019 levels	2016-18 levels	0.98	1.16	1.14	1.14	1	0.39	1.15	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	1mth	1mth	2019 levels	2016-18 levels	0.98	1.27	1.25	1.14	1	0.37	1.09	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	5mth	5mth	2019 levels	2016-18 levels	0.98	0.81	0.80	1.14	1	0.43	1.26	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	4mth	4mth	2019 levels	2016-18 levels	0.98	0.92	0.91	1.14	1	0.42	1.24	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	3mth	3mth	2019 levels	2016-18 levels	0.98	1.04	1.02	1.14	1	0.4	1.18	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	3mth	2mth	2019 levels	2016-18 levels	0.98	1.06	1.04	1.14	1	0.4	1.18	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	4mth	3mth	2019 levels	2016-18 levels	0.98	0.94	0.93	1.14	1	0.42	1.24	0%	0.32	0.73	4%	0.54	1.08	0%
2019 levels	5mth	3mth	2019 levels	2016-18 levels	0.98	0.85	0.83	1.14	1	0.43	1.26	0%	0.32	0.73	4%	0.54	1.08	0%
2012 levels	3mth	6mth	2019 levels	2016-18 levels	1.19	0.98	1.17	1.14	1	0.38	1.12	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	4mth	5mth	2019 levels	2016-18 levels	1.19	0.90	1.08	1.14	1	0.39	1.15	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	4mth	6mth	2019 levels	2016-18 levels	1.19	0.89	1.05	1.14	1	0.4	1.18	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	3mth	5mth	2019 levels	2016-18 levels	1.19	1.00	1.19	1.14	1	0.38	1.12	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	2mth	4mth	2019 levels	2016-18 levels	1.19	1.12	1.33	1.14	1	0.37	1.09	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	0mth	0mth	2019 levels	2016-18 levels	1.19	1.39	1.65	1.14	1	0.34	1.00	3%	0.29	0.66	12%	0.5	1	0%
2012 levels	2mth	3mth	2019 levels	2016-18 levels	1.19	1.14	1.35	1.14	1	0.36	1.06	1%	0.29	0.66	12%	0.5	1	0%
2012 levels	2mth	2mth	2019 levels	2016-18 levels	1.19	1.16	1.37	1.14	1	0.36	1.06	1%	0.29	0.66	12%	0.5	1	0%
2012 levels	1mth	1mth	2019 levels	2016-18 levels	1.19	1.27	1.51	1.14	1	0.35	1.03	2%	0.29	0.66	12%	0.5	1	0%
2012 levels	5mth	5mth	2019 levels	2016-18 levels	1.19	0.81	0.96	1.14	1	0.41	1.21	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	4mth	4mth	2019 levels	2016-18 levels	1.19	0.92	1.10	1.14	1	0.39	1.15	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	3mth	3mth	2019 levels	2016-18 levels	1.19	1.04	1.24	1.14	1	0.38	1.12	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	3mth	2mth	2019 levels	2016-18 levels	1.19	1.06	1.26	1.14	1	0.37	1.09	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	4mth	3mth	2019 levels	2016-18 levels	1.19	0.94	1.12	1.14	1	0.39	1.15	0%	0.29	0.66	12%	0.5	1	0%
2012 levels	5mth	3mth	2019 levels	2016-18 levels	1.19	0.85	1.01	1.14	1	0.41	1.21	0%	0.29	0.66	12%	0.5	1	0%

110. The USA went back to Table 9 in WP04 and noted that no matter what the EEZ purse-seine effort period, or whatever FAD closures – EEZ or high seas – were used, the yellowfin depletion was always the same. It was relatively insensitive. For example, if there were no EEZ nor high seas closures, the depletion was 0.32. If there was a 5-month closure on both the EEZs and the high seas, it was also 0.32. The USA asked whether this was because, in the absence of closures, purse-seiners are targeting free swimming schools of yellowfin tuna producing a similar depletion effect.

111. The SSP said that the assumption made for the yellowfin projections was that it was the overall level of purse-seine effort that was impacting on that stock, and the longline impact was comparable to the scalar for bigeye. So, for a lot of those scenarios the underlying level of purse-seine effort was comparable. It might not be quite the same, but the change in the longline catch led to a balancing of the two different impacts. So, the USA was correct that it was relatively insensitive as a result. But that was the logic behind the outcomes for yellowfin.

112. The EU wanted to follow up on previous topic raised by Australia. They understood that the SSP would be able to update these tables ahead of WCPFC20 to take account of the Region 2 catch increase.

The EU wondered how realistic some of these pessimistic scenarios were. The EU further pointed out that, in previous years, the EU delegation had raised the very same issue that the SSP had indicated for the yellowfin projection—scenarios that maintain the level of catch for some fisheries at high levels, even when the stock is declining over time in the projection. They wondered whether this would also be captured in the evaluation of the measure as a whole.

113. The SSP promised that once they got through the technical issues with the yellowfin projections that they would aim to get that information circulated, if not at the WCPFC20 meeting, then as soon as possible. Regarding evaluation of the CMM, the constraint they faced was that the CMM was specifying levels of bigeye longline catch. While it could be argued that setting a level of longline catch and a level of purse-seine effort that led to the stock declining might be unrealistic, one of the things they were not seeing within the nuclear grid was the bigeye stock collapsing. So, unlike yellowfin, bigeye seemed to be able to take the levels of fishing within the range allowed by the tropical tuna CMM discussions. It could rightly be argued whether those assumptions were realistic, but SPC had to try to capture what potentially could happen under the CMM. As written, with those two different ways of controlling the fishery, identifying a level of effort that would be consistent with that catch would require working out what the underlying level of the stock would be for that catch to be taken, and then applying that effort into the future. So that would be very difficult to actually do. It was a very valid point, but SPC is constrained by the management controls in the CMM, and some technical issues as well.

114. The SSP then moved his presentation of WP04 forward onto the purse-seine management requests (request #s 6-11), and this was followed by their presentation of request #s 12 and 13.

#	Request to SPC
6	Include stock projections for different scenarios of reduced FAD closure (10% 20%, 30% reduction, status quo) in their analyses [to be presented to SC19].
7	Include stock projections for different scenarios of increased FAD closure (10%, 20%, 30% increase) in their analyses.
8	What is the impact to juvenile BET and YFT from decreasing the FAD closure period in terms of SB/SB _{FAD} ?
9	Examine the implications of the FAD closure on foregone catches of SKJ and YFT
10	Update of Tables 14 and 15 of WCPFC19-2021-15, with the updated TRP from the interim skipjack MP for the reference periods 2012, 2016-2018 and 2018-2021
11	Provide an updated analysis on the potential level of high seas purse seine effort based on the SKJ TRP (SKJ MP output).
12	Table with future purse seine scalars under current conditions, without footnote 1 exemptions, without paragraph 15 exemptions (previous paragraph 17), without HS effort by CCMs in table 2, without HS effort by CCMs not in table 2
13	Provide information to support inclusion of the catch by the Philippines in the high seas limit and how this could be implemented.

115. New Zealand had two minor questions for the SSP. Regarding Table 12, when making comparison with the 2012 EEZ effort levels, NZ asked whether this was based on the actual EEZ fishing effort in 2012 or based on the EEZ *limits* which were in place in 2012.

116. The SSP said in Table 12, this was the actual effort in the EEZs.

117. NZ further asked about the use of the 2019-2021 recent period compared with 2012. NZ noted that at one point in the slides, it was indicated that the scalar would be 1.19, which presumably meant that the 2019-2021 fishing would need to increase by 19% in order to match the 2012 period. But at another point in the slides, it said that the 2019-2021 recent period was 16% lower than 2012.

118. The SSP said that this was just the way the percentage was calculated. If 2012 was used as the denominator, then the 2019-2021 level was 16% lower than 2012. But if the denominator was 2019-2021, then the 2012 level was 19% higher than 2019-2021. The difference was the same, but one compared 2019 to 2012 and the other compared 2012 to 2019.

119. Japan asked a question concerning the FAD closure period analyses in request #s 6, 7 and 8 made

to the SSP. When Japan had requested these analyses, they had expected much bigger change in the bigeye depletion ratio. A 30% increase in the FAD closure was a big change, but only caused a 0.02 difference in the stock depletion ratio. Japan asked why this change in the FAD closure did not have a bigger impact on depletion.

120. The SSP noted that BET did appear to be a bit more robust than previous assessments. The analysis was running off longline catch baselines of 2019-2021, so the overall stock was in a more robust place than it might have been under previous baseline levels, and there had also been a new stock assessment. Based on the underlying assumptions in these analyses, the overall impact on the BET stock, given these baselines, implies a relatively healthy stock at just under 0.5 depletion. The stock is well above the tropical tuna CMM BET objective level and thus handles the changes in the FAD closure period with relatively low impact on total stock.

121. Japan also asked about Table 24 where the longline CPUE by country is split between EEZs and high seas. They noted that for some flag States, CPUE was much higher than others – with up to 4 times difference even in high seas areas. Japan asked why this was the case.

122. The SSP noted that these were not standardised CPUE estimates – they were just based on total catch reported over total effort for each category. There was a lot of variability between years and flags, and for some flags there might be only short periods of data available. For example, if vessels were only spending a short time on the high seas and then returning. It should also be noted that the analysis in this table was for the latitudinal region between 20°N-20°S, so if there was a shift in Japanese longline effort, perhaps related to COVID or market prices and there was not so much fishing in that equatorial region, it might explain why it had dropped away in the last couple of years on the high seas.

123. The EU asked a question related to the analysis that had focussed for purse-seine on the impact of the FAD closures. It was good to see that there was such an impact, especially for bigeye. However, there was a big variation depending on the years from 12% to more than 30% in terms of the total catch. They wondered whether something might explain that.

124. In response, the SSP drew attention to the Table in Analysis #9 (FAD closure period implications on catch) that looked at the estimate of catch foregone under different lengths of FAD closure. They noted that this, for a particular year, may be a two-month FAD closure, a three-month FAD closure, or a four-month FAD closure, so that had an implication for the catch levels estimated here, and that the corresponding percentage of bigeye in the total purse-seine tuna catch in a particular year may go up or down, depending on how good the fishing has been.

125. The EU also said that, relating to the analysis that was undertaken in relation to the various exemptions under the measure, they found it useful to monitor these exemptions and their impacts to provide more confidence about what it implies when the Commission is agreeing on these exemptions. It seemed that the impact was rather limited so that was good news. But at the same time, when they compared the same calculations that they were made in the high seas, where there was the assumption of removing the high seas purse-seine effort for those that were included in the measure, or those that were not included in the measure, it seemed that in the end, it had more or less the same impact as the impact of Footnote 1. They wondered if they were understanding this correctly.

126. The SSP explained that the Footnote 1 exemption was in EEZs - countries could notify WCPFC which vessels were exempted from the full FAD closure in their EEZ. But the other number referred to the high seas – the Paragraph 15 additional 2-month high seas FAD closure, and also the removal of effort from CCMs either in, or not in, Table 2 (of the CMM), but it was all related to the high seas. Although the resultant numbers were similar, they were referring to two very different things.

127. The Chair noted that the SSP had now provided the status of the stocks and the evaluation of the measure, plus the analyses of various potential trade-offs between longline and purse-seine fisheries. The next discussion would start with the objectives of the CMM in paragraphs 11-13, and then the workshop should work through things that would help to find the balance – to steer us through what would need to be done to accommodate what she had been hearing from one CCM asking for an increase in the longline fishery. That was one scenario. Another option would of course be to keep things as they are.

128. The Marshall Islands followed up on those comments by the Chair, and thanked FSM for hosting what was almost a science-management dialogue. He noted that Marshall Islands was getting the take-home message that things were good, and that we should not be moving the goalposts too far because we are where we wanted to be, but that there was room for some adjustment. He further noted that the workshop would need to take into account climate change and various other issues, and that the Chair's list of issues for discussion sounded useful.

4.3 & 4.4 Timing of additional analysis requested by TTMW3, and Any further requests for analysis to be undertaken prior to WCPFC20

129. The Chair introduced Agenda Item 4.3 and noted that this was about the additional analysis that had been requested by the June TTMW3 workshop of the Scientific Services Provider (SSP), the Pacific Community (SPC). It had been agreed that several of these analyses were to be undertaken after this workshop, but it was also understood that the SSP, as a priority, had to do more work on the implications of a potential future yellowfin CPUE reduction in Region 2 on the projections for future status of this stock, by replacing the constant future catch assumption with something more plausible. It would be useful if CCMs considered which of the remaining analyses would be most likely to advance discussions in Rarotonga, and which would add most value to the process of developing the Tropical Tuna Measure. The analyses proposed for completion after TTMW4 were identified in the Attachment to Working Paper TTMW4-2023-02 with the words "Post TTMW4" in the 4th column.

130. The USA recognised that the requests to the SSP were substantial and that the SSP still needed some time to complete them and hoped that CCMs would not add more. The USA said that they could withdraw one of their requests—which was the request to develop methods to convert between purse-seine effort and longline catch, and what would a day of purse-seine fishing and a set of longline fishing equate to in terms of catch both on high seas and inside EEZs—if that would alleviate some of the load on the scientific services provider.

131. The EU said that the additional requests that were attributed to the EU were not about additional analysis or work. They were simply about updating tables.

132. The Solomon Islands said that PNA + Tokelau could withdraw their request to update Tables 6 and 7 for analysis of a TRP without the FAD closure. Instead, they had three simple requests for further analysis. These were designed to strengthen some of the existing analyses in a way that would help progress discussions at the Commission.

- a. Firstly, they requested estimates of additional longline yields alongside the estimates of foregone purse-seine catch from the FAD closure as set out in Table 11 of Working Paper 4. This would provide further information on the trade-off.
- b. Secondly, they requested a table showing the adjustments to the longline bigeye catch limits for each CCM over time since 2008. This would be basically an extension of the table from China (TTM4-2023-DP03) back to 2008. And this might be something that could be done by the WCPFC Secretariat rather than the SSP.

- c. Thirdly, they requested an estimate of the potential impact of extending footnote 1 to cover all SIDS including American Samoa.

133. Japan, as one of the proponents of the request to look at the TRP in the absence of a FAD closure, said that they were flexible about removing this request if there was going to be difficulty for the SSP in producing that analysis within the time available.

134. The USA also asked if they could add some analyses, which is why they had withdrawn one of their previous requests.

135. The Chair said that Agenda Items 4.3 (timing of outstanding analyses) and 4.4 (new requests for analyses) had been amalgamated, so this was expected.

136. The USA noted that their new request would help advance discussion and could be explained rapidly as follows: *“An objective of a new tropical tuna measure may be to balance the impacts or depletion to bigeye and yellowfin between fishery sectors. In the WCPO, associated purse seine and miscellaneous sectors have the largest impacts on the two stocks. From the most recent assessment documents presented to SC19, the impact is not balanced. The US requests annual fishery sector impact estimates from 2000-2021 for WCPO bigeye and yellowfin contained in Figure 70 from the (latest) bigeye assessment and Figure 66 from the yellowfin tuna assessment”*.

137. Japan noted that some delegations had expressed concern about increasing YFT and SKJ catch in Region 2, particularly small fish. They felt that the catch in that region had an impact that WCPFC could not ignore, and asked for the following analysis to be conducted: *“Future projection of depletion rate of BET, YFT and SKJ respectively with an assumption that catches in region 2/5 (i.e. Indonesia, Philippines and Vietnam) increase or decrease by 10%, 20%, 30%.”*.

138. China noted that the request by Japan included catch by Vietnam, but the South China Sea was outside the WCPFC Convention Area. Their suggestion was to delete reference to Vietnam in the request by Japan, since the catch was outside the WCPO.

139. After a request from the Chair, the SSP said that the new requests were *technically* feasible, but they would need to make some assumptions. On the first request of PNA + Tokelau, regarding additional longline yields, they could use the projection results to look at theoretical longline catch without the FAD closure and compare to the actual catch. For the second request, the WCPFC Secretariat was able to do this. The third would require assumptions about the number of FAD sets that could be made during the closure – it was similar to an analysis already made, but in a more extreme sense by being expanded to all SIDS CCMs. The 4th request from PNA was also practicable. Japan’s request for depletion rates for 3 tropical tuna species increasing or decreasing by 10, 20, and 30% would need to assume that the status of stocks affects the catch in Region 2. To make it tractable, the SSP would be considering all the different fishery components: purse seine and longline as well as the Region 2 (BET/YFT) or Region 5 (SKJ) catches. The SSP would propose setting the purse-seine and longline fishing at status quo levels (the 2019-2021 baseline levels) to avoid having to run thousands of different scenarios. So, under the assumption that they would be looking at bigeye under recent or long-term recruitment, and yellowfin as well as skipjack, then there would be about 24 different scenarios across those different stocks. But there was need to clarify the question of removing Vietnam from the model regions.

140. Japan thanked the SSP for this information, and China for noting their concern about Vietnam, but said that the Scientific Committee usually used the terms “Region 2” or “Region 5” and it might be easier to simply remove the words “i.e. Indonesia, Philippines and Vietnam” from the request text in the Table.

AGENDA ITEM 5. Consideration of options for hard limits and allocation frameworks

141. The Chair opened the agenda item during session 4 on Day 1 of the workshop by noting that there were two main issues to discuss – the hard limits in CMM 2021-01 Appendix 1, Table 2 (*High seas purse seine effort control [paragraphs 25-27]*) and also the development of a more logical and equitable allocation framework that could control the effort of all purse-seiners on the WCPFC high seas. CCMs had had some useful discussion at TTMW3 in June and she drew attention to three information papers¹ on the TTMW4 meeting page. These papers would not be presented but had been posted to provide CCMs with reminders about previous discussions on allocation going back to 2006. The principles for allocation are reflected in the Convention Article 10.3, and the purpose of these Information Papers was to make the bottom line clear. Some CCMs were very experienced in allocation discussions, but not all, and different regions had different circumstances.

142. She reminded participants that the current tropical tuna measure was still a bridging measure on the way towards full implementation of the Harvest Strategy Approach and an equitable Allocation Framework. Some flag CCMs—the main high seas purse-seine CCMs when the tropical tuna measure was first enacted—had high seas purse-seine fishing days limits, but these limits did not confer the allocation of rights and were without prejudice to future decisions of the Commission (paragraph 27 of CMM 2021-01), and the Commission had committed to transitioning to a more equitable allocation framework for high seas fishing opportunities that take into account Articles 8, 10 (3) and 30 of the Convention. This was the long-term allocation issue that CCMs had been talking about for some time, but where CCMs had essentially been avoiding any decisions. So this agenda item was about paragraphs 27 and 41 of the Tropical Tuna Measure.

143. The Chair invited discussion based on the three referenced information papers and suggested that the discussion should start with the high seas fishing days limits for flag purse-seiners.

144. Tonga, speaking on behalf of all FFA members, said that to ensure integrity in the implementation of the interim Skipjack Management Procedure, it was critical that a hard limit for all purse-seine effort on the high seas was implemented. Towards this end, FFA members proposed as a starting point a hard limit of 2,300 days of purse-seine effort on the high seas in the WCPFC Convention Area, including the overlap area. Such a limit would be consistent with the Management Procedure for skipjack tuna and would minimise the risk to bigeye and yellowfin tuna stocks. FFA members noted that the existing purse seine effort limits in Tables 1 and 2 of the measure exceeded 2012 effort levels. Setting a limit higher than 2,300 days on the high seas increased the disconnect between the Tropical Tuna Measure and the Skipjack Management Procedure. Given the limited resources available, and the need to prioritise work, FFA members suggested that any discussions on the allocation framework be deferred, because it was unlikely that the Commission would reach consensus on an allocation framework this year. The FFA members noted their preference that work relating to harvest strategies be prioritised during 2024.

145. In response to a question from the Chair, Tonga clarified that this 2,300 high-seas flag purse-seine days limit proposal would include all CCMs.

146. The USA thought it important to establish a process to develop limits and an allocation framework

¹ [WCPFC-TTMW4-2023-IP01](#) (*Information paper on Allocation Criteria*), [WCPFC-TTMW4-2023-IP02](#) (*Information Paper on Progressing Development of an Allocation Framework alongside Harvest Strategies in the WCPFC*) and [WCPFC-TTMW4-2023-IP03](#) (*Information Paper on Elements of Allocation Frameworks in other tRFMOs*)

and welcomed the opportunity to begin this discussion. As noted, it could take several more years to address, but it could be useful to develop a framework for skipjack first since it was the first to have a Management Procedure and this framework would be useful in implementing the SKJ MP. The USA also had a direct question for FFA and wanted to know how the number of 2,300 days had been derived.

147. The Marshall Islands, speaking on behalf of FFA members on their initial proposal for a purse-seine days limit on the high seas, said it was worth noting that this proposal was consistent with the 2012 total purse-seine days fishing on the high seas and also consistent with implementing the SKJ MP. But most importantly, it was a good starting point for discussion. They noted that there were already firm limits set for EEZs and that the Commission had thus far avoided firming up the high seas limits. FFA members were trying to get the discussion started.

148. The EU recognised the need and commitment to progress an appropriate allocation scheme, including appropriate limits for high seas purse-seine effort. In recent years they had repeatedly made this point and argued that all tropical tuna fishing should be covered by the tropical tuna CMM. They understood from information provided by the SSP in Tables 12-14 that there was a range of data that could provide the basis for discussion. But in the view of the EU, it was necessary to consider the connections between the high seas and the EEZ. The Commission could not simply consider the high seas in isolation because these were highly migratory fish stocks. As to the proposal of 2,300 days on the high seas, the EU wondered how realistic that was, given that it was far below the existing level of effort. The principles in the Convention provided a good starting point for the elements to be addressed. He noted that in other RFMOs there had been specific working groups on allocation, and if the WCPFC could be considered analogous, this process was likely to take many years.

149. Korea was not sure which agenda item this was, nor what paragraph of the measure, but had a general comment on limits. During the previous session they had heard from members on the flag longline bigeye catch limits, and the USA had proposed an increase of this limit. Korea was of the same view. The longline BET limits were related to other parts of the tropical tuna CMM since they needed to be dealt with as a package. Korea had also heard from other CCMs who did not support the idea of BET longline catch limits and understood their reasons. At this point they just wished to remind CCMs that the Commission had the important task of agreement on a hard limit for flag BET longline catch as well as the high seas flag purse-seine days limit for all CCMs. During the process of negotiation there would be winners and losers. So, it would be difficult to agree, unless we agree to increase the total limit for longline BET catch and high seas purse-seine days. Korea was not sure how much flexibility the CCMs who objected to the increase in the longline BET catch limit had, but hoped they would reconsider their position at some point. They also emphasised the point that one of the pieces of scientific advice on BET was related to the greater impact on the bigeye stock and MSY from the catch of juveniles, and that this would need to be taken account in any trade-off. So, it might not be appropriate to pick a number from the trade-off table that the SSP had presented.

150. The Chair noted that the USA had received a reply from FFA members about the reasons for their proposed hard limit for high seas purse seine. She asked FFA members to confirm if their proposal for 2,300 days referred to Table 2 of Appendix 1, and the Marshall Islands confirmed this.

Table 2. High seas purse seine effort control [paragraphs 26-28]

CCM	EFFORT LIMIT (DAYS)
CHINA	26
ECUADOR	**
EL SALVADOR	**
EUROPEAN UNION	403
INDONESIA	(0)
JAPAN	121
NEW ZEALAND	160
PHILIPPINES	#
REPUBLIC OF KOREA	207
CHINESE TAIPEI	95
USA	1270

** subject to CNM on participatory rights
 # The measures that the Philippines will take are in Attachment 2.

151. PNG, speaking on behalf of PNA + Tokelau, noted the scope of paragraph 27. It was very clear. Paragraph 27 said that the Commission will work towards reaching agreement in 2023 on a hard limit or catch limits in the high seas of the Convention Area and a framework for the allocation of those limits in the high seas. So, the scope of the discussion was clear. All CCMs had agreed that this discussion was about high seas purse-seine effort limits.

152. Japan asked PNA + Tokelau if this high seas purse-seine limit of 2,300 days would apply between 20°N and 20°S or throughout the entire Convention Area—Japan understood it would only apply between 20°N and 20°S. Japan also noted that the recent effort in the high seas at those latitudes was around 5,000 days or about twice the 2,300 days limit proposed, and asked if it was their intention to cut the total effort in the high seas by half. Japan sought confirmation from PNA on its understanding.

153. The Marshall Islands spoke on behalf of PNA + Tokelau. They noted the comments made by Korea were on the balance between fisheries. Having looked at the SSP analysis alongside the Scientific Committee’s advice, PNA + Tokelau saw a huge loss of yield to the purse-seine fishery from the FAD closure. In addition, this meant that it might be necessary to consider reducing longline bigeye catch limits to allow a reduction in the length of the FAD closures in order to reduce the disproportionate losses to purse-seine yield from the FAD closure, and thereby bring this CMM in line with the Convention.

154. Japan reiterated its request for clarification in response to their question to PNA + Tokelau about whether the proposed annual 2,300 days limit was for the tropical region, and that recent high seas effort was around 5,000 days while the PNA proposal was for around half that.

155. The Marshall Islands spoke for PNA + Tokelau and pointed out that, as they had stated earlier, to be consistent with SKJ MP, they had used the 2012 effort level as the baseline. In addition, because the SKJ MP applied to the Convention Area, the areas north and south of 20°N and 20°S would also have to adhere to the 2012 baseline.

156. The Chair suggested the meeting set aside the exact numbers now and look for a more general way forward under Agenda Item 5, and to bracket the 2,300 proposal for future discussion. The purpose of agenda item 5 was really to have an exchange of views rather than getting boxed into a narrow discussion about numbers.

157. Japan said that perhaps their earlier intervention had not been clear enough. They had highlighted that the FFA proposal did not seem to be a realistic starting point because it did not correspond to even half the level of effort. In their view, the Convention had some guidance and one of the elements should

be the existing level of effort.

158. Chair suggests we suspend this discussion and talk about it under Agenda Item 6. She had already heard from the floor that this would be a longer-term process, and if there was any other proposal for the high seas purse-seine limit it could be parked there as well. She noted that there had been attempts to discuss broader issues such as the EU's suggestion that this should be an allocation that takes in the whole of the fishery including EEZs, not just the high seas, but the scope of the task before the workshop had been clearly defined in paragraph 27 and was limited at this stage to the high seas.

159. The Marshall Islands appreciated the Chair's dilemma noting the difficult history of this conversation. It was clear that this workshop was not going to come to a decision, but they agreed with bracketing the FFA proposal for a high seas purse-seine limit as a starting point for discussion. Other proposals would be welcomed as well, and these would all be discussed on the way towards agreement. FFA members had put a proposal on the table built on the established 2012 precedent and consistent with the SKJ MP. And FFA members noted also that Article 30 as well as Article 10.3 would need to be taken into account as the allocation framework was discussed.

160. The Chair closed the first day of the workshop and suggested that participants sleep on it and return the following day to resume the discussion.

161. The discussion on options for hard limits resumed at the start of Day 2 of the workshop. The Chair summed up the discussion under agenda item 5 from the previous day, noting that the task was to populate the column marked "drafting elements" in the table of CMM paragraphs proposed for revision in TTMW4-2023-02 (*Chairs Draft*). The Chair wanted to get enough information from CCMs to enable her and the Secretariat to put together a draft revised measure to discuss ahead of the meeting in Rarotonga in December. The discussion yesterday had been captured in the table overnight, and this was projected on the screen for further discussion.

162. She noted that a lot of the potential drafting elements were to do with the trade-offs, and the SSP would have some further information on this to present in the next session of the workshop. She noted that increasing the total limits was not the only option, but it might be possible to keep the totals from CMM 2021-01 and for members to talk to one another about possible reallocations. If the totals didn't need to be increased, then the Commission would not need to consider the trade-off, but the first step would be to see if any reallocation between CCMs would be possible.

163. Korea said that they had submitted a proposal to the Secretariat overnight, and introduced a short paper, posted as [TTMW4-2023-DP04](#). They noted that yesterday, the FFA had proposed a number of purse-seine days for the high seas limit based on the 2012 high seas effort. Korea could not go along with the 2,300 days proposal, but it was useful to know what other CCMs preferred, and Korea wanted to also put their preference on the table. Korea proposed 10,479 days. This was the 2012 high seas actual purse-seine effort plus the 2012 EEZ actual effort minus the average of the 2019-2021 EEZ days.

$$(2,318 + 41,883) - 33,722 = 10,479$$

164. Korea's rationale for this calculation was as follows:

- a. The Outcome of SKJ MP = purse seine effort at 2012 level (44,201 days)
- b. Setting purse-seine effort at 2012 as per the outcome of SKJ MP did not mean high seas effort should be the same as that of 2012. Rather, it was about the combined total EEZ+high sea PS effort.
- c. high seas PS effort in 2012 was too low compared to the historical level (pre-2010). Again, "2012 baseline" was about the combined total EEZ + high seas PS effort, and the high seas effort and

EEZ effort did not necessarily have to be the same as those in 2012 respectively.

165. Korea also noted that the proposed high seas purse seine limit of 10,479 days might need to be adjusted depending on:

- a. The outcome of longline BE catch limit and FAD closure period negotiation, in particular the length of FAD closure period
- b. The number of total EEZ PS days that PNA would apply in 2024 and on. Actual fishing effort would be important rather than fishing possibilities.

166. The USA suggested including this Korea proposed limit in brackets together with the PNA proposal.

167. The Marshall Islands pointed out that the 2,300 days was an FFA position not a PNA proposal. FFA was 17 CCMs who had been trying to find a way of reflecting the adopted Skipjack Management Procedure. But they welcomed other proposals.

168. The EU hadn't seen the Korea proposal previously but could already concur with several of the elements described, particularly the point being made that the Management Procedure did not provide any guidance on the allocation of effort between EEZs and the High Seas. Another meritable point was that it strove to provide similar approach to both EEZs and high seas, which was something the EU could not find in the FFA proposal made the previous day. The proposed number itself was compatible with what the EU had been starting to consider. The EU had been looking at Tables 12, 13 and 14, and there was room for the number proposed by Korea and possibly beyond that. They didn't want to commit to any number right then but saw a lot of merit in Korea proposal. The EU also wanted to discuss overarching questions beyond the numbers – without considering any number – noting that the Commission had wanted to develop an allocation framework before defining a hard limit. The EU didn't know how it would work at the CCM level if the Commission only defined a total limit. Would it be an Olympic fishery? The EU felt that the Commission could not just define a total without also setting up a process to allocate it among CCMs.

169. Japan thanked Korea for their proposal and noted that there was a big difference between the FFA and the Korea proposal. However, Japan understood that FFA had been implementing zone-based management and that the actual fishing effort in the ZBM-controlled area had reduced since 2012. The Commission had already been separating EEZ and high seas purse-seine effort limits, and the Commission had to respect FFA members control of EEZ limits and the EEZ effort in 2012. There might however be scope to transfer some of this effort from EEZs to high seas, and that would be quite a simple discussion although perhaps difficult for coastal States to accept. Japan did not have any definite proposals but would like to see some common ground developing between the FFA and Korea proposals for a high seas days limit.

170. The Marshall Islands noted that it found Japan's ideas useful. They further noted that another element to consider, apart from the limits in EEZs was the current SIDS exemption on the high seas. The FFA proposal not only established a high seas limit for distant water CCMs but also included the SIDS. The Korean proposal would remove that exemption. The Marshall Islands pointed out that the FFA members had established rights and implemented effective purse-seine limit management within their EEZs, and the EEZ limits including the VDS would have to be respected. If not, and there was no agreement on a high seas limit including all CCMs then that SIDS exemption would have to continue. But that was not accepted by other members, so CCMs should also consider that aspect. The FFA high seas limit proposal applied to all CCMs including SIDS.

171. Korea thanked CCMs for providing comments on their proposal in DP04. They would not respond

to each because most were quite general. In relation to the purse-seine VDS, Korea recognised sovereign rights which is why that caveat was included in their paper. The figure 10,479 was not the final figure and would need to be adjusted through negotiation, and they looked forward to further discussion with interested CCMs throughout WCPFC20.

172. The EU said they did not hear any response to their point about needing a clear understanding of the path forward, and how any limit might be operationalised consistent with the practices that the Commission had.

173. The Chair appreciated the discussion and the guidance provided by CCMs towards clearer options for the drafting elements of the Chair's text. She asked for the workshop to continue with Agenda Items 4.3 and 4.4.

Allocation frameworks

174. On workshop Day 2 session 2, the Chair opened the floor for discussion on allocation frameworks following the previous discussion on Hard Limits. There were however no comments of views from the floor and this discussion was postponed to a later date.

AGENDA ITEM 6. Revisions to Tropical Tuna Measure

175. The Chair drew the attention of the meeting back to the *WP02 Table of CMM paragraphs proposed for revision, with proposals for drafting elements* as updated overnight, but this time to focus on the column of drafting elements rather than the requests for scientific analysis. She noted Delegation Papers from both the USA (DP01) and the Office of the Parties to the Nauru Agreement (PNAO) (DP02) that included proposals for drafting elements, and was looking for CCMs to signal what exactly they wanted to push forward as options to be considered at WCPFC20, via the Chair's Draft that would be prepared after this meeting. If there were any other proposals for drafting elements, she asked CCMs to please submit them to the workshop.

176. The Chair had asked the meeting to set the preambular paragraphs aside until a later stage and asked the meeting to begin by considering paragraphs 11-13 of the current tropical tuna CMM 2021-01, on objectives for the three stocks managed under this measure.

177. The USA noted that they had a proposal to add between paragraphs 4 and 5, to add the words "and Participating Territories" to the heading "Small Island Developing States". The Chair asked for this to be reflected as a proposal in the onscreen draft. The USA noted that they also had a related suggestion for amendment to paragraph 7 whereby "the special circumstances of a State" would become "the special circumstances of a SIDS".

178. Regarding paragraphs 11-13 Japan reminded the workshop that they had provided a detailed paper in TTMW1 (WCPFC-TTMW1-2021-DP03), particularly regarding the objective for the bigeye stock. But they would not propose new language here since there had been no support from other CCMs, but wanted all to please bear in mind that Japan would like to recover the bigeye stock to 2001-2004 depletion levels. They asked the meeting to note that they would be maintaining this position during any future Harvest Strategy discussions.

179. The PNAO explained DP02 and that its submission was made on behalf of PNA and Tokelau. As captured in the introductory letter from the PNAO CEO, DP02 had been provided in response to Chair's circular dated 22nd August 2023 (Circular No. 2023/66), seeking specific drafting suggestions from CCMs and Observers for revisions to the tropical tuna measure, CMM 2021-01.

180. The suggested changes were made along three tracks, the first being proposed language to implement the skipjack management procedure (CMM 2022-01), the second to provide some general comments on relating the output of the skipjack management procedure to existing limits and lastly, specific proposals to increase the monitoring and control elements of the measure.

181. The PNAO paper contained general comments that spoke to the issue that was partially picked up in discussion the previous day, on the translation of the tropical tuna CMM into the harvest strategy framework – specifically in relation to the SKJ management procedure. PNAO noted that the SC had recommended that the Commission take into consideration the successful running of the skipjack MP as outlined in SC19-MI-WP-01 and its output. Beyond that, the SC had noted that the MP output “*sets maximum effort in the purse seine and pole-and-line fisheries and maximum catches in all other fisheries to their respective baseline levels for the period 2024-2026, when implementing CMM 2022-01*”.

182. What PNAO understood this to mean was that the SC considered the MP output needed to be applied to the MP fishery baseline levels in determining limits for 2024-2026. This was not the understanding of the PNA and Tokelau. Their understanding was that the MP output, in this case, a scalar of 1, would be applied to the existing limits in the Tropical Tuna CMM. In that direction, the PNA and Tokelau noted that the existing limits for skipjack fishing were not generally based on 2012 effort levels, and applying the approach proposed by the SC would require substantial reconsideration of the existing limits. This is reflected in the discussion of the different baselines in periods used in trying to assess the performance of the measure.

183. They would not touch on the preambular language, as the Chair had indicated that this could be dealt with at the Commission, and at a high level it was consistent with the general conversation at this workshop.

184. The second set of considerations was in relation to the proposed language to implement the skipjack management procedure. In that regard, PNAO had identified paragraphs where language could be inserted to implement the skipjack MP. These were in paragraph 12 relating to the translation of the management objective; paragraph 26 in relation to limiting the transfer of effort into areas north of 20°N and south of 20°S; and paragraph 47 on the specification of the skipjack component of those other commercial fisheries. They had assumed here that the skipjack component would be captured in terms of an effort limit to be consistent to the other fisheries managed by the MP, but PNA was not wedded to that. The bigeye and yellowfin components had been indicated as catch limits.

185. The last track of changes related to increasing the monitoring and control elements of the measure. The first paragraphs that dealt with this were paragraphs 19 and 20. These set a date for when the Commission would consider the SC advice to review research results on the use of biodegradable material in FADs, and to provide specific recommendations to the Commission in 2026 including on a definition of biodegradable FADs; a timeline for the stepwise introduction of biodegradable FADs; potential gaps/needs and any other relevant information.

186. The PNAO submission also contained a proposal for three new paragraphs that introduced additional monitoring and control measures for longline fisheries. These were specifically to introduce entry/exit reports for those vessels fishing in the high seas, the recognition of the entry into force of CMM 2022-06 for daily catch and effort reporting, and an increase in longline monitoring either by observers or electronic monitoring to a 30% coverage level.

187. The entry into force of CMM 2022-06 spoke for itself. In terms of the entry/exit reporting PNA understood that not all vessels fishing on the high seas were reporting to the Commission VMS, so this would assist in reconciling the information on the RFV. Regarding the 30% coverage level of either

observer or EM, this figure was proposed in relation to what was understood would be conditions for MSC certification for high seas longline fisheries, which would be an important consideration for some fleets.

188. PNAO pointed out that these were not new proposals and had been tabled previously at TTMW2 in 2021, except for the specification of 30% coverage regarding the proposal for increased longline fisheries monitoring.

189. The Chair then asked USA to explain their DP01.

190. The USA was happy to walk the workshop through the United States' response to the Chair's request for specific changes to the CMM. The United States had approached this as a bridging text, as the Chair had iterated in her opening statement. So, the goal of the USA here had been to provide some very surgical changes that they thought would be achievable within that framework. They had already gone through the suggestion on the preamble. The first substance, other than where they had suggested that we keep paragraphs open for discussion without specific drafting text, started in paragraph 18 and covered 19 and into 22 and 23, all pertaining to the FADs that PNAO also just discussed. Rather than read the text, they just noted that the dates proposed in paragraph 18 by the United States reflected the same dates that had been agreed at IATTC.

191. If discussion was needed on whether or not those dates were appropriate, the USA was very open to that discussion. But that was the source of those dates, and consistent with the work that this commission had been doing to move towards biodegradable and non-entangling FADs. Rather than go into detail over the floor, they referred CCMs to the specific text provided.

192. They focussed briefly on paragraph 37 and noted again that the United States would like to review the longline catch limits for bigeye tuna. And also as mentioned yesterday they wanted to make sure that they responded regarding some of the Chair's opening remarks about keeping Table 3 the same. The United States was interested in seeking an increase to their bigeye longline catch limit pending any further discussion on the science. So, they wanted to have that discussion in a very substantive way with other WCPFC members.

193. Paragraph 42 of the US submission was focussed on MCS language, and they had proposed working with the PNA to develop draft longline MCS language and would welcome that opportunity.

194. Paragraph 15 was an adjustment to the date with a proposal that until WCPFC got into a further longer-term discussion on some of the outstanding issues regarding the allocation framework, that this measure potentially not expire, but be reviewed and negotiated at any time.

195. The USA noted that one of its priorities was detailed in Attachment 1, Table 2. They asked for everyone's indulgence for a moment to focus on the footnote that the United States was proposing to this table. The USA handed the microphone over to their delegate from American Samoa for some words before they would return to finish going through the table.

196. The representative of American Samoa said that the highest priority for American Samoa was to gain full recognition of the disproportionate burden they had borne as a SIDS / Participating Territory, and to maintain a reliable supply of tuna for processing their one remaining cannery. As a SIDS / Participating Territory, they relied on Article 30 of the Convention that spelled out, quite clearly, the need to ensure that measures *"do not result in transferring, directly or indirectly, a disproportionate burden of conservation action onto developing States Parties, and territories and possessions."* Speaking frankly, they felt that the Commission had not fulfilled its obligations to American Samoa in that regard. The representative of American Samoa said he spoke to all present as a Samoan, and a Pacific Islander from a struggling Participating Territory of the United States. He might have a US accent and carry a US passport, but he was a Samoan and an islander before anything else. Like most workshop participants, their identity

and heritage were very, very important. American Samoa strongly supported this US proposal. It was the latest effort by the US to reduce the disproportionate burden that some of this Commission's conservation and management measures had had and were continuing to have on American Samoa. They supported the proposal and sought the consideration of others as well. To refresh the workshop's memories about the importance of the tuna industry to American Samoa, their economy was almost totally dependent on that industry. It was the only industry that provided food security and economic livelihoods for the people, as well as for the region. Not too long ago, there had been two large-scale canneries operating in American Samoa. But now, there was only one remaining. The vast majority of the tuna supply for the cannery came from the locally- based US-flagged purse seiners, and they have provided that fish supply backbone for many years until the present. He also wished to remind all that this Commission had adopted mitigation measures that served the needs of other SIDS. Those measures had been successful as they had served the purpose of addressing the special requirements of certain SIDS, and as a result, the purse-seine fisheries of our Pacific Island neighbors had grown and flourished. American Samoa was extremely happy for them. Unfortunately, American Samoa had been left behind. Article 30 applies to ALL SIDS and Participating Territories, not just a select few. The proposal before the meeting was just one of the steps that needed to be taken to alleviate the disproportionate burden to the economy of American Samoa. He thanked Pacific brothers and sisters for recognizing the challenges that their fellow Pacific islanders in American Samoa were facing. Fa'afetai Tele lava mo lo outou alofa, ma le lagolagoina o lenei talosaga. Fa'afetai tele for the consideration of the meeting - the people of American Samoa thanked all participants for their support.

197. The US delegation said they supported their American Samoan colleague and that the current measure had imposed, and continued to impose, a significant burden on American Samoa. The United States emphatically stood with American Samoa in their combined effort to alleviate the existing disproportionate burden that American Samoa had clearly articulated. They reminded CCMs of the paper the United States submitted in 2021 to outline the impact of the tropical tuna measure on American Samoa. They noted that American Samoa was highly dependent on landings from US-flagged vessels. For example, in 2022, 43 out of 52 purse-seine deliveries to American Samoa had been from US-flagged vessels. Recently, a number of former US vessels had reflagged to avail themselves of the opportunities provided to other SIDS and Participating Territories to relieve their disproportionate burden. When they reflagged, the purse-seine vessels fished further from American Samoa, resulting in fewer port calls and reduced cannery landings and associated local revenues. This, then, amplified the disproportionate burden on American Samoa. As the USA had highlighted in the past, avoiding a disproportionate burden on SIDS including Territories, was a collective responsibility of the Commission. Commission members had to work together to find solutions to alleviate these impacts. This was not the responsibility of any individual SIDS or group of SIDS to resolve. The USA had underscored this in the adoption of CMM 2013-06, which stated that *"the Commission shall ensure that any conservation and management measures do not result in transferring, directly or indirectly, a disproportionate burden of conservation action onto SIDS and Territories"*. Working closely with American Samoa, the United States had developed proposed language that they thought fairly addressed the burdens borne by American Samoa, and they sincerely hoped that fellow CCMs would give this language serious consideration.

198. The USA thought that covered everything in DPO1, but they did want to note that their proposal had been focussing just now on an additional footnote. They further noted that they would be proposing to remove the existing footnote from Table 1 of Attachment 1 of the CMM.

199. Japan noted that the proposed amendment to Attachment 1 to alleviate the economic difficulties of American Samoa affected the high seas limit. This proposal should have been considered in the context of the high seas hard limit. Japan also commented on the PNAO proposal for the introduction of electronic

monitoring (EM). As had been noted many times, it was almost impossible to increase longline coverage by observers and the Commission was working towards standards for WCPFC EM. But at this stage there were no specific regional standards or rules for EM in place. So, they had difficulty going along with any requirement for 30% observation coverage. Japan noted that the Commission needed to make progress with the EM discussion.

200. Regarding Japan's comment on the proposed change to Table 2, the USA recognised there was interest in discussing hard limits, but they also recognised that this conversation could extend beyond this year. In recognition of that, they were seeking in the very near term to alleviate the disproportionate burden that American Samoa was experiencing. They could not afford to wait indefinitely to address the issues that they both, the USA and their colleague from American Samoa, had outlined, so they asked everyone to please take that into consideration. They would be happy to have the conversations about hard limits and allocations would ask for consideration in addressing the specific burden that American Samoa was experiencing very much currently and would just emphasise that this part of the conversation could not be delayed indefinitely.

201. Samoa, speaking on behalf FFA members suggested the inclusion of the definition of the term 'biodegradable' that had been agreed by WCPFC19 in the CMM text. Biodegradable referred to: *"Non-synthetic materials and/or bio-based alternatives that are consistent with international standards for materials that are biodegradable in marine environments. The components resulting from the degradation of these materials should not be damaging to the marine and coastal ecosystems or include heavy metals or plastics in their composition."* With regard to the proposal on implementing deadlines for categories IIIa, II and I, they supported the proposal to start in 2027 to allow for ongoing research to be completed and reported as per the outline of Project 110c set out by SC19. Starting in 2027 would also allow time for the implementation of the recent agreement on the ban of nets on FADs starting on 1st January 2024.

202. French Polynesia emphasised that stranded FADs were a major and growing issue in French Polynesia, and in many Pacific Islands countries, as they represented a source of marine pollution when lost, and they damaged reefs when they were stranded. There were strong recommendations from the WCPFC Scientific Committee to implement biodegradability and also to implement FAD retrieval before being lost, abandoned or stranded. Moreover, IATTC had already adopted a timeline starting in 2026 to implement biodegradability and had also adopted a new resolution about FAD retrieval. So WCPFC should no longer wait to implement biodegradability and a FAD retrieval process in the WCPFC Convention Area. French Polynesia wanted to thank the USA and to support their proposal to implement biodegradability starting 2026 consistent with IATTC. They also wanted to improve the implementation of non-binding paragraph 22 of the current tropical tuna measure, because it was not clear how it was implemented. To achieve this, French Polynesia would add to this paragraph 22 the need to report effort, but done by CCM, to implement the FAD retrieval process.

203. The EU supported the FFA proposal on FADs, and particularly supported the point made by the USA about mirroring IATTC FAD measures. The EU saw advantages to compatibility and suggested that all the existing proposals could be merged ahead of WCPFC20. On alleviating the burden of one of the territories – they fully supported alleviating the hardships that had been identified but hoped that while doing this, that any decision would be really fit for that purpose and would not have implications that went beyond that purpose. So hopefully the Commission would find a way to achieve that.

204. Japan was surprised by the USA reaction to their proposal, because setting a hard limit on all high seas purse-seine fisheries was one of the main aims of this workshop and clearly the current CMM stipulated that the high seas hard limit for purse-seine would be established in 2023 at this year's Commission meeting. This was an important issue, particularly because WCPFC had adopted the skipjack

management procedure and this needed to be run with a hard limit for important areas. High seas purse-seine control was quite important and that was one of the key elements to be considered this year. In that sense, it was premature for this workshop to suggest that we postpone this discussion about high seas purse-seine effort control, and the US proposal should be considered in that context.

205. Korea was still a little unclear about the process and not sure if this was the right time for comment on Delegation Papers 1 and 2, but other CCMs had already commented so Korea wanted to do the same. Regarding the PNA paper, and the preambular paragraph (c) saying the skipjack Management Procedure produced a scalar of 1 – this was quite different from the Korean understanding which was that a scalar of 1 meant purse-seine effort at the 2012 level. They understood from the SSP's explanation yesterday that the 2012 level was 1.19 times higher than the recent level. And a 19% higher catch would be deviating from what they understood should be applied. And the longline MCS measures proposed were challenging but Korea was open to discussion, depending on other elements, and would like to talk to PNA members about this. On the USA paper, they made specific comments on para 23bis – the requirements for further information submission – and were open to this suggestion, but according to their industries the PNA was also introducing FAD reporting requirements from the beginning of 2024 and Korea would like to see harmonised reporting requirement between the USA proposal and the new PNA law. Finally, regarding the disproportionate burden challenges to American Samoa, they would like to have more information from the USA including the implications of the proposed change. How would it work in practice, and would there be implications for the purse-seine effort limit for CCMs in Table 1 etcetera?

206. China regarded PNA's suggestion, their fourth-listed longline MCS measure about high seas entry and exit reporting, to be an unnecessary reporting obligation since the Commission VMS provided for this already. It was illegal for vessels to fish on high seas without reporting to the WCPFC VMS. China also said the E-log implementation by 1st January 2024 would not be possible because the CMM would not come into force until February. And in the absence of a minimum EM standard, China would not know how to implement it. Any increase of observation coverage over 5% should only be required after the Commission agreed the minimum EM standard.

207. The European Union did not agree with the interpretation of the SKJ MP outputs by PNAO and felt that the skipjack Management Procedure should be reflected in the measure as factually as possible in the preambular part of the text, based on the scientific advice from SC and not on individual members' interpretations of the Management Procedure.

208. Chinese Taipei wanted to discuss with their colleagues how to deal with the other commercial fisheries and, regarding the longline MCS provisions, they associated themselves with the comments by China as well as Japan. They felt that these longline MCS proposals were premature for inclusion in the new measure and they needed more information about them. As for the FAD management, they supported the timeframe in the proposal. This would provide enough time for the necessary research. Regarding the US proposal, they were in agreement with the USA that there was a need to revisit Table 3 and revise the text. On the concerns raised by American Samoa, they believed that the Commission needed to address SIDS needs but would need to have a further conversation with the USA about how their proposal would be operationalised, particularly when they may need notification provisions.

209. The Marshall Islands said they had been struggling to follow the discussion. There were various good proposals, and they recognised their brother from American Samoa and his plea. The Marshall Islands wanted to support them. The Commission knew what had to be done to level the playing field and the Marshall Islands hoped that all members would support American Samoa in getting there, as they had always been requesting. And with the various proposals from PNAO and USA, the Marshall Islands just

wanted to make it clear that the longline MCS measures were a critical component of the whole package – an essential component of the entire balancing act. They felt it was ironic that Japan had pointed to region 2 as problematic data-wise, but when there was a solution to get better data on the high seas, they saw it as a challenge. The Marshall Islands wanted to be clear – human observer coverage was separate from EM. CCMs could not delay EM development as part of their fundamental obligation to provide the data required of the longline fishery, in-zone and high seas. High seas transshipment monitoring was another factor in the uncertainty. The Marshall Islands said that the point was that CCMs should not use excuses to hide from obligations that all needed to discharge. As the scientists had said, the uncertainty was still there, and it was very clear that high seas longliners needed to raise their standards. He urged CCMs to roll up their sleeves and get on with it and hoped that all the good comments could be included in the table.

210. The PNAO provided responses to some of the comments made about DP02 and noted that they had not wanted to touch the preambular text on the application of the outputs of the Management Procedure because that issue needed further discussion. On the longline MCS measures and the reaction that they were premature, he simply reminded the commenters that they have had many years to address these problems. On harmonising reporting requirements for FAD buoys, there was certainly some language that could be put forward but it would also require a conversation with one CCM about where the PNA 4th Implementing Arrangement is going and this would need to be done before Rarotonga. On high seas entry and exit, there had been enough analysis presented at TCC to make it clear that there were still reporting gaps, and this very simple change would fix that. And responding to Chinese Taipei on the other commercial fisheries, PNAO pointed out that, in order for the Management Procedure to work, there had to be tight control over all parts of the stock that are controlled by the MP and that included the other commercial fisheries that catch skipjack.

211. New Zealand thanked PNAO and USA for their proposals and just had one quick question for PNAO, seeking clarity on their paragraph 26 proposal.

212. PNAO explained that paragraph 26 related to the control of high seas effort limits and the expansion of those high seas limits from the tropical area to N of 20°N and S of 20°S. They were proposing that the Skipjack MP controls would apply to high seas of the whole convention area.

213. Korea wanted to respond to the Chair's invitation for any other proposals to be put before the meeting and noted that during the Compliance Monitoring Review there had been an issue around the declaration of EEZ purse-seine effort limits. Korea might submit a proposal to clarify paragraph 24 and Table 1 in this respect, and just wanted to flag this for the information of the Chair.

214. China said that they would await developments at WCPFC20, but if appropriate they might later suggest that the catch levels for each CCM in Table 3 (bigeye longline flag catch limits) be returned to their 2014 levels. China had no fixed position at this time but might ask the Commission to consider it at some point.

215. The USA said that they were still waiting for some information but thought the United States would be willing to put together a proposal with a specific number, pending some of those results. And so their wish was to keep this agenda item open, recognizing the US interest in discussing increases in that table (Table 3 of Appendix 1 of CMM 2021-01).

216. The Marshall Islands flagged their interest in working with the USA to look at those numbers in Table 3, from the point of view of the trade-offs with the FAD closure period that might be needed.

217. The meeting broke for lunch at this point.

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218. Upon resuming discussion under Agenda Item 6 after lunch, revision 2 of the Chair's table of drafting elements from WP02 had been posted, and the Chair took the participants through the proposed drafting elements on the screen, paragraph by paragraph.

219. During this editing process, some additional substantive points were made as recorded below:

220. During the discussion of paragraph 21, PNAO provided an explanation of the PNA 4th Implementing Arrangement (4IA) on FAD buoy tracking and FAD buoy registration that would be implemented from 1st January 2024, because there appeared to be some confusion about what it would actually do and how Commission and PNA arrangements might maintain compatibility, and also because it had a bearing on several different elements of the tropical tuna measure. They explained that there were 4 key elements to the 4IA. The first 2 were essentially machinery: FAD buoys would have to be registered with an owner who then would become legally responsible for them, and there would be no deployment or fishing on FAD buoys unless the buoy was registered. Leaving those aside, they described the two other elements that bore upon paragraph 21 and some of the other proposals. One of these was that all drifting buoys would have to be activated and transmitting position data. What that meant was that they could not be deactivated. This had implications for paragraph 21, which currently specified a limit of 350 FAD buoys a fleet could have per purse-seine vessel. So, 350 buoys per vessel might be reporting on any one day, but there might hypothetically be another 150 in the water, turned off because they had drifted out of the area of interest. So once the PNA requirements were applied and implemented as effectively as expected, the entire number of FADs in the water per vessel would count against that 350 limit because they would all have to be turned on and reporting. So the 4IA would make a difference to the impact of the existing paragraph 21 without changing the number. The second thing was that there were going to be additional costs. Currently, fleets were able to deactivate buoys when they drifted out of their area of interest, but that would no longer be possible. And currently, vessels could deactivate buoys during the FAD closure, and that also would no longer be possible. So this additional cost would need to be taken into account when considering the introduction of new requirements like biodegradable FADs. There would be a lot going on around FADs in 2024, including the requirement to replace netting with new materials noting that the WCPFC was implementing this non-entangling requirement ahead of IATTC. There were also the PNA FAD logsheet reporting requirements that were quite a substantial change. These rather substantial changes were now in play largely as a result of the PNA 4IA. There were other implications of the 4IA: for example, PNAO had seen a proposal that would ban abandonment. But under the 4IA, there would be no such thing as an abandoned FAD, or rather an abandoned FAD buoy, because every buoy would continue to transmit as long as it was in the water. And this obviously assisted with the problems of stranding and abandonment. With the patterns in the data they were getting now, it was usually the case that when buoys drifted away from key fishing areas and towards islands, they were deactivated. And that would no longer be allowed. Under these requirements, the buoy would be required to be transmitting. What PNA had allowed for was that once it became stranded, a buoy could be turned off only after a month, so that the national authorities would have data about the stranding. PNAO had also noted a discussion around a proposal for FAD tracking data to go to SPC. The tracking data currently had gaps in it because quite a few FADs were deactivated and turned off. So, the 4IA would also close some of the gaps in that proposal. And that was the reason why PNA + Tokelau had proposed inserting language into paragraph 21 to make sure it would be compatible with the PNA requirements that would be applying to all PNA-licensed vessels soon. That wording was simply that *"CCMs shall ensure that all drifting FAD buoys are activated and transmitting position data at least once in each 12h period when in the waters of the WCPFC Convention Area."*

221. In response to a question from the EU about technical and operational details of the new FAD measures implemented by PNA and proposed for broader compatibility in the WCPFC tropical tuna

measure, PNAO said that PNA and Tokelau would be providing an explanatory paper to WCPFC20 in the usual way, with a CMM 2013-06 assessment, but would welcome any questions from individual CCMs after the workshop.

222. Japan did not agree with the PNA proposal in paragraph 26 for a purse-seine high seas flag fishing limit covering all CCMs fishing north of 20°N and south of 20°S should not be based on 2012 levels, because 2012 was a very difficult year for Japan high seas fisheries following the great earthquake. They would prefer the baseline to be 2010.

223. China suggested that paragraph 26 should refer to “purse-seine fisheries for tropical tunas” rather than just “purse-seine fisheries” because there were other kinds of purse-seiners operating at higher latitudes.

224. Regarding Table 2, where the USA had proposed adding the following footnote to the United States Effort Limit in Table 2: “*Except for U.S. flagged vessels noticed as operating as an integral part of the American Samoa economy*”, China said there might be a legal interpretation issue with that language. For longline fisheries, the USA longliners appeared to be chartered by American Samoa, but for purse-seiners, fishing vessels had to be an integral part of the American Samoan economy. American Samoa used the same flag as the USA and the EEZ was managed by the USA, so, at WCPFC20, delegations needed to have some detailed consultation on this, otherwise for China it might be legally difficult.

225. The USA said that they had heard similar requests from others CCMs for clarification and would welcome that conversation. The United States intended to put some information down to help answer this question in advance of WCPFC20 as a starting point for this dialogue.

226. The results of this discussion on the table of new or amended text elements for inclusion in the Chair’s draft – the basis of the forthcoming draft text that would be the focus for discussion at WCPFC20 in Rarotonga – were appended to this report as [Attachment 3](#).

AGENDA ITEM 7. Possible Fifth Tropical Tuna Workshop

227. The Chair did not encourage a 5th workshop given the amount of extra scientific analysis that needed to be completed before the final discussion at WCPFC20, the busy timetable of all CCMs and the need to find funding. However, she noted this was a decision for CCMs to make.

228. China noted that tickets had been bought and hotels booked in Rarotonga for WCPFC20 and having a 5th workshop in Rarotonga just before the Commission meeting would be difficult for them. They preferred to continue the tropical tuna CMM discussion at the WCPFC Annual Session.

229. Palau, speaking on behalf of PNA + Tokelau, did not see any major areas where there would be substantial benefit from another workshop in terms of progress in revising the tropical tuna CMM. Some good progress had been made at this workshop, and there was good understanding of where there was scope for improving the text. They preferred to start preparing for the decision-making process at the Commission, and for the PNA+ Tokelau this preparatory process was a collective one which required time. So, they did not support holding a fifth workshop.

230. The Chair noted that there was no appetite among CCMs for another workshop before the Commission meeting. She noted that the Chair’s draft report on this 4th workshop would be circulated by October 20th, and asked CCMs to continue informal discussion with each other with the aim of coming to the Cook Islands in December prepared to make decisions on a revised Tropical Tuna CMM.

AGENDA ITEM 8. Other Matters

231. The Marshall Islands just wanted to note the constructive role that the RMI-USA jointly hosted longline management workshops had been playing in discussing some of these issues and helping CCMs to understand each other's positions. There had been a workshop the previous week, including government fishery managers as well as industry, and there had been real commitment to reshaping the longline elements of the tropical tuna CMM. This workshop process would continue, and its complementary role to WCPFC should eventually result in agreement on the way forward with the longline fishery. He thanked the United States Western Pacific Regional Fisheries Management Council for their support.

AGENDA ITEM 9. Workshop Outcomes

232. The key outcome from the workshop was the table of drafting elements, as updated during the course of the meeting. This table is appended as Attachment 3 below.

233. The Chair's report (this document) that explained the discussion that took place during the course of the workshop was drafted by the WCPFC Rapporteur, with reference to the audio recording where necessary, and finalised by the WCPFC Chair and Executive Director. It was scheduled for circulation on October 20th.

234. The Chair's draft of a revised Tropical Tuna CMM would be circulated as soon as possible, and in any case at least one month before the WCPFC20 meeting.

AGENDA ITEM 10. Close of Workshop

235. The Chair thanked all participants for their patience and contributions. Although there was still a lot left to discuss at WCPFC20 after the additional analyses had been completed, and after further offline discussions had taken place between CCMs, she felt that the Tropical Tuna CMM renewal process had gained a lot of traction during the last two days and that the drafting elements were beginning to provide a clear way forward. She looked forward to discussion at WCPFC20 with a view to adopting a revised measure at that meeting. She thanked the secretariat staff and Executive Director for their support, with particular reference to the Scientific Services Provider (SPC) and wished all safe travels home.

236. The European Union thanked the Chair for all the hard work, and the secretariat for their excellent support.

237. Japan echoed the EU comments and thanked the Chair for guiding the discussion in a professional manner. They look forward to seeing all WCPFC CCM representatives in Rarotonga in December.

238. The Delegation of Tonga closed the meeting with a prayer.

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ATTACHMENT 1 — CHAIR'S OPENING REMARKS

Good morning all, Fakalofa lahi atu. Members, observers, Executive Director Rhea and the Secretariat Staff, our Science Provider team led by Dr Graham Pilling, Ladies and Gentlemen, welcome to the fourth Tropical Tuna Measure workshop. To those who just joined us for the workshop, welcome to Pohnpei: the home of our Secretariat. To those who have been here a bit longer, hang in there. Two more extra days and we will leave the shores of Pohnpei. Thank you for your ongoing support.

The Conservation Management Measure for Tropical Tuna is one of the key measures of the WCPFC and this is reflected through the time and effort we have spent to date to ensure that we will have a revised Measure adopted at WCPFC20. My memory bank reminded me that the revision of this measure takes up a lot of time of the WCPFC meetings and always results in longer days especially on the last day of the meeting. We are all familiar with the process; we are also familiar with the issues and the positions of each CCM and groups of CCMs. With this familiarity, it is my hope that our work will lead us to an outcome that meets everyone's expectations.

The review process is guided by the Workplan and the decision by WCPFC19 that it is not a comprehensive or complete overhaul of the TTM. In June, we got agreement on the paragraphs to be reviewed. As communicated to you via circular and reflected in the WP02, I have set those paragraphs in a table format. The goal is to focus our discussions more on those key paragraphs. These discussions will be informed by the Science and our Science Service Provider will present the analysis based on the agreed list of requests from the June workshop.

In terms of outcomes, it is my hope that we will have some draft text and/or drafting elements that will be used to prepare the Consultative Draft CMM. So on the first day, our focus will be to discuss what needs to be included in Consultative Draft CMM. So, I expect that there will be some digesting and dissecting as we go through the information that SPC will present. I encourage you all to use this opportunity to provide positions where possible, so when we leave Pohnpei, we would have done the necessary work that will help in your preparations for WCPFC20. That you will be able to continue discussions with the view to converging or resolving areas that may be contentious. The more work you will do after the workshop and before WCPFC20, the better our chances of concluding and adopting a revised CMM.

I know we have flagged a possible workshop pre-WCPFC20 in the provisional agenda. But time is not on our side. Therefore, I would like to avoid having another workshop or TTMW5 prior to WCPFC20. We will discuss that further when we arrive at that Agenda item.

Before I conclude my remarks, I would like to acknowledge with appreciation your continued support. I would also like to thank Dr Graham Pilling and your team for the Science. To the Secretariat team led by the Executive Director staff and all who contributed, thank you and Fakaue lahi.

ATTACHMENT 2 — PARTICIPANTS

DEVELOPMENT OF A REVISED WCPFC TROPICAL TUNA MEASURE WORKSHOP 4

POHNPEI, FSM (HYBRID)

29 - 30 September 2023

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ATTACHMENT 3 — Table of CMM paragraphs proposed for revision, with proposals for drafting elements updated at TTMW4

CMM Paras proposed by the Chair for revision/review	CCM Support	Drafting Elements
Preamble PP3 re SC advice	PNA+ US EU	Return to: reference SKJ MP; update CMM references including on climate change
Para 1	EU	SKJ MP reference
Para 4	EU	Suggestion to inform the Commission about such measures if they exist to allow better informed decisions.
Between paras 4 and 5	US	Insert text in the section title: Small Island Developing States [and Participating Territories]
Para 7	US	Revise text: (b) the special circumstances of a [SIDS] [State] which is surrounded by the exclusive economic zones of other States and has a limited exclusive economic zone of its own; and
Para 11 (Interim objectives of BET)		
Para 12 (Interim objectives of SKJ)	PNA+ US EU	PNA+/US proposals on revised objective for SKJ
Para 13 (Interim objectives of YFT)		
Paras 14, 15 (FAD Closure)	AS PNA+ KR US EU	Keep balance FAD closures and bigeye LL catches (repeat below) Consider scientific advice on BET regarding fisheries that take juvenile BET
Para 17		

CMM Paras proposed by the Chair for revision/review	CCM Support	Drafting Elements
Para 18	US	<p>Replace paragraph 18:</p> <p>18 alt. To reduce the amount of synthetic marine debris:</p> <p>a) as of 1 January 2026, CCMs shall only allow vessels to deploy or redeploy drifting FADs of biodegradability categories I, II, IIIa or IIIb, as defined in Attachment 3;</p> <p>b) as of 1 January 2029, CCMs shall only allow vessels to deploy or redeploy drifting FADs of categories I or II, as defined in Attachment 3;</p> <p>At the annual meeting in 2029, the Commission shall decide whether to require by 2031 CCMs to only allow vessels to deploy or redeploy drifting FADs of Category I as defined in Attachment 3.</p>
Para 19	US	<p>The Scientific Committee shall continue to review research results on the use of biodegradable material on FADs, and shall provide specific recommendations to the Commission in [2022] [2025] including on a definition of biodegradable FADs, a timeline for the stepwise introduction of biodegradable FADs] the feasibility of Category I FADs, potential gaps/needs and any other relevant information.</p>
Para 19	FFA members	<p>Suggest to include the definition of the term ‘biodegradable’ that was agreed to by the WCPFC19 in the CMM text. Biodegradable refers to: Non-synthetic materials and/or bio-based alternatives that are consistent with international standards for materials that are biodegradable in marine environments. The components resulting from the degradation of these materials should not be damaging to the marine and coastal ecosystems or include heavy metals or plastics in their composition.</p> <p>Implementation by 1 January 2027</p>
Para 19	EU	<p>Add “at the latest” after 1 January 2027</p> <p>Implementation by 1 January 2027 [at the latest – EU]</p>
Para 19	PNA+	<p>Change 2022 to 2026</p>
Para 19	JP	<p>CCM are encouraged to communicate and disseminate information on the development of biodegradable FADs.</p>
Para 19 bis	US	<p>Add new paragraph 19:</p>

CMM Paras proposed by the Chair for revision/review	CCM Support	Drafting Elements
		19 bis. Notwithstanding paragraph 18, the use of non-biodegradable materials, in particular nylon ropes, can be used exclusively to strengthen the structure of the floating or underwater component of the FAD categories I & II, as a temporary solution and only provided no biodegradable alternative is available.
Para 20	US	Delete paragraph
Para 20	PNA +	Change 2023 to 2026; change SC19 to SC22 and TCC19 to TCC22
Paras 21	PNA+	Add before the last sentence: “CCMs shall ensure that all drifting FAD Buoys are activated and transmitting position data at least once in each 12 hour period when in the waters of the WCPFC Convention Area.”
Para 22	PF	Add the following to para 22: “e) initiate retrieval programs through cooperative/collaborative initiatives among fishing vessels or others vessels implementing programs dedicated for the recovery only of such FADs before being lost, abandoned or stranded CCM shall report annually to the commission on the effort to implement each item of this paragraph 22.”
Para 23	PNA+	23. The Commission at its [2026] 2023-meeting based on consideration of the FAD Management Options Working Group shall review the effectiveness of the limit on the number of FADs deployed as set out in paragraph 21 and whether the current limit of 350, or any limit, is appropriate and provide advice on the monitoring of FADs.
Para 23	EU	Add “at the latest” after “2026”
Para 23bis	US	Add new paragraph: 23 bis. In order to support the work of the SSP in analyzing the impact of FAD fisheries, while protecting business confidential data, CCMs shall report, or require their vessels to report, daily information on all active FADs to the SSP. The information provided shall be identical in form and content to the raw satellite buoy data provided by the buoy manufacturers to the original users (i.e., vessels and vessel administrators), as specified in Attachment 4. Reporting shall occur at monthly intervals and with a time delay of at least 60 days, but no longer than 90 days.

CMM Paras proposed by the Chair for revision/review	CCM Support	Drafting Elements
Para 24	PNA+	24. Coastal CCMs within the Convention Area shall restrict purse seine effort and/or catch of skipjack, yellowfin and bigeye tuna within their EEZs in accordance with the effort limits established and notified to the Commission and set out in Table 1 of Attachment 1. Those coastal CCMs that have yet to notify limits to the Commission shall do so by 31 December 2022 2023.
Para 24	KR	Language on PS EEZ limits and notification to come.
Table 1	US	Remove the United States’ footnote “**” from Table 1: [** The United States notified the Secretariat of the combined US EEZ and high seas effort limits on 1 July 2016 (1828 fishing days on the high seas and in the U.S. EEZ (combined)). The US EEZ limit is understood to be this notified limit minus the high seas effort limit for the United States set out in Table 2 of Attachment 1]
Paras 25 – 27	AS PNA+ PH JP US	Para 27: FFA proposed PS HS hard limit 2,300 days; Korea proposed PS HS hard limit 10,479 days
Para 26	PNA+	26. CCMs shall ensure that the effectiveness of these effort limits for the purse seine fishery are not undermined by a transfer of effort in days fished into areas within the Convention Area south of 200S and/or north of 200N. [CCMs shall ensure that purse seine fisheries within the Convention Area south of 20°S and/or north of 20°N shall restrict fishing effort to 2012 levels.]
Para 26	Japan	Bracket 2012 in PNA+ proposed text
Para 26	China	Add “fishing for tropical tuna” after “purse seine fisheries” in PNA+ proposed text
Table 2	US, AS	Add the following footnote to the United States Effort Limit in Table 2. Except for U.S. flagged vessels noticed as operating as an integral part of the American Samoa economy.
Para 35 bis	PNA +	Longline Fishery 35bis. CCMs shall ensure that longline vessels entitled to fly their flags and fishing exclusively on the high seas, on the high seas and in waters under the jurisdiction of one or more coastal States, report electronically to the Commission, upon entry/exit to the high seas or waters under the jurisdiction of a coastal state.

CMM Paras proposed by the Chair for revision/review	CCM Support	Drafting Elements
Para 35 ter	PNA+	35ter. In accordance with CMM 2022-06, each CCM shall ensure that the master of each longline vessel flying its flag in the Convention Area shall keep a complete and accurate electronic log of every day that it spends on the high seas of the Convention Area, including trips that include fishing in an EEZ under bilateral arrangements as well as high seas in one trip.
Para 35 quater	PNA+	35quater. CCMs shall ensure that longline vessels entitled to fly their flags and fishing within the area bounded by 20°N and 20°S exclusively on the high seas, on the high seas and in waters under the jurisdiction of one or more coastal States, or vessels fishing in waters under the jurisdiction of two or more coastal States, shall achieve 30% observer coverage of their trips, with observers sourced from the Commission’s Regional Observer Program or maintain and operate an electronic video monitoring system, to achieve the equivalent trip coverage level.
Para 37 Table 3		Some CCMs would like to review the LL catch limits for BET based on the outcome of the SSP data request.
Para 42	US	The U.S. proposes working with PNA to develop draft LL MCS language.
Para 47	PNA+	<p>OTHER COMMERCIAL FISHERIES</p> <p>47. CCMs shall take necessary measures to ensure that the total catch of their respective other commercial tuna fisheries for bigeye, yellowfin or skipjack tuna, but excluding those fisheries taking less than 2,000 tonnes of tropical tunas (bigeye, yellowfin and skipjack), shall not exceed either the average level for the period 2001-2004 or the level of 2004. CCMs with other commercial tuna fisheries, but excluding those fisheries taking less than 2,000 tonnes of tropical tunas (bigeye, yellowfin and skipjack), shall ensure the catch of bigeye, yellowfin or skipjack tuna, shall not exceed either the average level for the period 2001-2004 or the level of 2004, which equates to X,XXX tonnes, X,XXX tonnes and X,XXX days respectively,.</p>
Para 47	JP	Change “catch” to “catch and/or effort”; change “X,XXX tonnes, X,XXX tonnes and X,XXX days respectively” to “X,XXX tonnes and/or X,XXX days”
Para 47	ID	Baselines for para 47 may need revision to reflect available data
Para 52	PNA+	52. This measure replaces CMM 2020 2021-01. This measure shall come into effect on 16 February 2022 2024 and remain in effect until 15 February 2026 2024-unless earlier replaced or amended by the Commission.
Para 52	CN	Change “15 February 2026” (in PNA+ proposal) to “15 February 2027”

CMM Paras proposed by the Chair for revision/review	CCM Support	Drafting Elements
Para 52	US	Revise the text such that CMM 2023-01 does not expire but can be renegotiated at any time: <i>'This measure replaces CMM 2021-01. This measure shall come into effect on 16 XX February XXXX and remain in effect until XXXX15 February 2024 unless earlier replaced or amended by the Commission.'</i>
Attachment 2	PH	Change “fresh/ice chilled” to “...traditional fishing vessels”
New Attachment	US	Add CMM 2023-01 Attachment 3 [See US proposal]
New Attachment	US	Add CMM 2023-01 Attachment 4 [See US proposal]