FINAL

ISC/21/ANNEX/16

ANNEX 16

21st Meeting of the
International Scientific Committee for Tuna
and Tuna-Like Species in the North Pacific Ocean
Held Virtually
July 12-20, 2021

REPORT OF THE ALBACORE WORKING GROUP WORKSHOP

July 2021

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REPORT OF THE ALBACORE WORKING GROUP WORKSHOP

International Scientific Committee for Tuna and Tuna-like Species
in the North Pacific Ocean

1 – 4 and 8 Dec 2020 (Eastern Pacific)
2 – 5 and 9 Dec 2020 (Western Pacific)

1. OPENING AND INTRODUCTION

1.1 Welcome and introduction

An intersessional workshop (WS) of the Albacore Working Group (ALBWG or WG) of the International Science Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) was convened as a webinar for 1 – 4 and 8 December 2020 (Eastern Pacific time) and 2 – 5 and 9 December 2020 (Western Pacific time). Twelve participants attended the WS (**Attachment 1**). The objectives of this workshop were to review on: (1) MSE progress after the MSE WS in August 2020, (2) draft final report of 2nd round of NPALB MSE and (3) MSE WS scheduled in February or March.

1.2 Meeting protocol

The ALBWG Chair noted that the efforts of the WG at this meeting would be collegial and follow the scientific method with an emphasis on empirical testing, open debate, documentation and reproducibility, reporting uncertainty, peer review, and constructive feedback to authors and presenters.

1.3 Review and adoption of agenda

The draft agenda was circulated prior to the meeting, reviewed and adopted at the WS (**Attachment 2**).

1.4 Assignment of rapporteurs

Rapporteuring duties were assigned to Steven Teo, Yoshinori Aoki, Yuichi Tsuda and Naoto Matsubara.

1.5 Distribution of presentation file availability

Presentation files were distributed to WG members prior to the WS and author contact details was provided (**Attachment 3**).

2. Update on ALB MSE round 2nd tasks issued during September Meeting

A list of tasks were assigned to the MSE Modeler (D. Tommasi) during the previous WG workshop in August 2020 (**Table 1**). This workshop was organized by the groups of assigned tasks.

2.1 Review of Task 1.

D. Tommasi gave a presentation on the work done on **Task 1:** Compare the MSE results between the different versions of the projection software and the MLE estimate for a small subset of runs.

Summary:

Task 1

The probability of spawning stock biomass (SSB) being greater than the limit reference point (SSB_{limit}) with at least 90% probability was assessed for an example run. For a total of 550 events (55 iterations and the 10 assessment times in each simulation) the probability of SSB being greater than SSB_{limit} was calculated using: 1) the maximum likelihood error estimate around the terminal year of SSB from the Stock Synthesis (SS) estimation model, 2) the projection software used with the 2017 assessment as is currently done in the MSE, and 3) the projection software used with the 2020 assessment. The 17 events when SSB was less SSB_{limit} with 10% probability detected by the MLE method were also detected by the 2017 projection method. However, the 2017 projection method detected an additional 15 events. The projection method considers uncertainty in initial abundance (input from SS estimation model output) and recruitment and projects the albacore population forward under constant fishing mortality for a 10 year-period. As recruitment uncertainty is considered in addition to uncertainty in the initial SSB estimate, the projection software detected 47% more events of SSB being below SSB_{limit} than the MLE method. The 2017 and 2020 projection softwares detected a similar amount of events when SSB was less SSB, 32 and 27, respectively. However, the 2020 version of the projection software had to be modified to read in SS3.24 input files rather than the SS3.30 files it was developed for as the MSE framework is developed around SS3.24. It was difficult to obtain the CV of the terminal numbers at age from the SS3.24 input files, and therefore the CV was assumed to be the same as the average CV of terminal SSB over the conditioning period. While the approach to use the 2017 projection software in the MSE appears appropriate as it is more conservative than using the MLE method and resulted in a similar amount of events being detected at the 2020 version, more work is required to compare the performance of the 2017 and 2020 versions by ensuring that the same numbers of iterations and the same random seeds are used in the comparison of the two methods.

Discussion: The WG discussed the computer code and results of the analysis. The WG considered the 2020 version of the projection software to be better than the 2017 version in its handling of the estimation error. However, the WG agreed that the results of the MSE (i.e., how the probability of breaching reference points are calculated) were relatively robust to using either version of the projection software or the asymptotic uncertainty estimates from the estimation model (EM). **Therefore, the WG recommended continuing the use of the 2017 version of the projection software.** In addition, the EM was based on the 2017 assessment and is expected to evolve over time, similar to the projection software. Therefore, it would be good if the results of the MSE were robust to these changes, as it appears to be. The WG discussed whether to include the robustness of the results to these changes. WG group recommended that these analysis should be included. The WG noted that using the MLE would represent the probability of breaching the reference point in the terminal year while using the 2017 or 2020 projection software would represent the probability of breaching the reference point in the next 10 years, and that this difference should be communicated clearly to the managers and stakeholders.

2.2 Review of Task 2 and 5.

D. Tommasi gave a presentation on the work done on **Task 2:** Prepare information for the translation between fishing intensity and effort. This would include an examination of the relationship between observed catch and effort as well as the model- based effort metric (exploitation rate derived from SPR-based fishing intensity) and real-world effort**; and Task 5:** Prepare explanation for the new algorithm for generating exploitation rates and catches for the second round of MSE to avoid confusion from the 1st round of MSE.

Summary:

Task 2

A method to relate the exploitation rate from the operating models to observed effort data for the surface fleets, the eastern pacific ocean (EPO) fleet and the Japanese pole and line (JPPL) fleet was developed. For the EPO fleet, a linear model of annually averaged log-transformed effort with log-transformed exploitation rate was developed. For the JPPL fleet, which switches targets between skipjack and albacore tuna, overall effort was scaled to a measure of 'albacore' effort prior to analysis by multiplying overall effort by the ratio of albacore to skipjack catches. The JPPL model had an R^2 of 0.76 and the EPO model an R^2 of 0.52. For the EPO, model residuals showed a pattern of decreasing with fitted values, so another model was developed that allowed for a decrease in residual spread with log-transformed exploitation rate. For the EPO a model relating log-transformed effort to log-transformed catches and log-transformed vulnerable biomass was also developed and had similar skill to the model based on exploitation rate. This analysis showed that, for the surface fleets, effort scales with the model-based effort metric, exploitation rate and provides support for the use of exploitation rate as a measure of TAE for the surface fleets. However, there is high random variability around the mean EPO relationship, particularly at lower H, and implementation error for the EPO might be higher for low TAE. Furthermore, precision of TAE control for the JPPL fleet will depend on variability of target switching.

Task 5

An explanation of how exploitation rates and catches are generated for the 2nd round of MSE as compared to the 1st round of MSE is provided. A major change in the 2nd version of the MSE framework was that to ensure fleet capacity did not increase over historical levels in the simulation, F (fishing intensity, 1-SPR) was set to always be less than historical (1993-2015) fishing intensity ($F_{historical}$). The estimated $F_{historical}$ varies depending on the operating model (OM) and associated assumptions made on the growth and mortality of the population. Scenarios 4 and 6 (OMs 4 and 6) simulated a less productive stock and thus F_{target} was always below $F_{historical}$. For scenarios 1 and 3 F_{target} was greater than $F_{historical}$ and thus when SSB was greater than $SSB_{threshold}$ F was set to a random sample of $F_{historical}$ rather than F_{target}. The other change to the 2nd version of the MSE algorithm was the addition of a management module that allows for mixed control. Mixed control imposes a TAC on the longline fleets but a TAE on the surface fleets. TAC for the longline fleets is computed as in the first round of MSE TAC control. The SSB estimate from the estimation model (EM) is compared to the SSB reference points and an F is chosen according to the harvest control rule (HCR). The overall exploitation rate (H) that would produce the specified F is found using SS benchmark calculations. That H is multiplied by the terminal year total biomass from the EM to obtain an overall TAC. The

TAC is allocated to the different fleets using the pre-agreed upon allocation (mean catch ratios from 1999-2015). For the surface fleets managed by TAE the H is split by fleets using the same pre-agreed upon allocation and catch for those fleets is obtained by multiplying by the biomass from the OM, which is taken as a measure of the actual biomass. An example iteration is highlighted to showcase how the mixed control management module works.

Discussion: The WG asked how the fishing intensity (1-SPR) and exploitation rate were calculated and split by fleet. D. Tommasi responded that the fishing intensity was set by the HCR based on the SSB estimated by the EM. The fishing intensity is then translated into equivalent exploitation rate within SS. Fleet-specific exploitation rates are then obtained using the pre-agreed allocation of average 1999-2015 catch ratios. The fleet-specific exploitation rates are then converted either into a TAE or TAC, depending on the HCR scenario. The WG discussed the implementation error in the operating model (OM). It was explained that the implementation error for both the longline and surface fleets are assumed to be the same (5-20 %). An analysis of the relationship between the effort and exploitation rate of the surface fleets suggest that this assumption is reasonable. However, it was noted that this does not include potential errors from reporting and management errors. The WG also noted that it might be worth examining the performance of the HCRs under several levels of implementation error.

The WG suggested that D. Tommasi perform additional analysis on the relationship between fishing intensity, exploitation rate, and real world effort. After looking at the additional analysis, **the WG agreed with the approach but recommended that a detailed explanation of this be included in the final MSE report.** It was noted that this should be discussed with managers and stakeholders after the MSE is completed.

2.3 Review of Task 3 and 4.

D. Tommasi gave a presentation on the work done on **Task 3:** Prepare worm plots, pie charts and violin plots to show results of PIs to help illustrate the variability in the MSE results; and **Task 4:** In plots of simulated fishing intensity over time show 'current' fishing intensity from both 2017 (2012-2014) and 2020 assessments (2015-2017) in addition to average historical fishing intensity.

Summary:

Task 3 and 4

Results for the Mixed Control management option are presented across reference scenarios for each of the management objectives and associated performance metrics identified in the first round of MSE. For each performance metric, worm plots, pie charts, and violin plots are showcased in addition to mean and 5th-95th quantiles plots and barplots. For the fishing intensity worm plots by scenario lines showing 'current' fishing intensity from both the 2017 (2012-2014) and 2020 stock assessments (2015-2017) in addition to average historical fishing intensity are presented. 'Current' fishing intensity from the 2017 was 0.51, and for the 2020 assessment 0.50. Historical average F was 0.51 for scenario 1, 0.44 for scenario 3, 0.63 for scenario 4, and 0.69 for scenario 6.

Discussion: The WG noted that some of the colors and labels were mismatched or inconsistent. **However, the WG thought the plots worked well and recommended that the plots be used to explain the MSE results**. The WG suggested that using the same y-axis scales on the bar plots might make it easier to compare HCRs and PMs.

2.4 Review of Task 12 and 10.

D. Tommasi gave a presentation on the work done on **Task 12**: In a table describing the OMs, include additional columns for biological plausibility and model fit; and **Task 10**: Improve plot describing management actions for HCRS (table1) for explanation of TAC control.

Summary:

Task 12

Additional columns for biological plausibility and model fit were added to the table describing the operating models (OMs). Biological plausibility followed the rankings suggested by the ALBWG at the September webinar, with OM1 having high biological plausibility, OM3 and OM4 having medium biological plausibility, and OM6 having low biological plausibility. Model fit was reported as the log-likelihood of each of the OMs for the conditioning period.

Task 10

A figure showcasing how total allowable catch (TAC) changes in relation to changes in SSB for each of the harvest control rules (HCRs) outlined in Table 1 from the September ALBWG meeting report is presented. The plot shows that TAC decreases with biomass at a constant rate of F_{target} when SSB is greater than $SSB_{threshold}$. The decrease in TAC with biomass becomes steeper when SSB is between $SSB_{threshold}$ and SSB_{limit}. Below SSB_{limit}, TAC decreases to 0 with biomass at a rate of F_{min}.

Discussion: The WG noted that Task 12 has been completed and recommended that the table describing the OMs in Task 12 be used for the final report. There was substantial discussion on the new plot describing changes in TAC (y-axis) with respect to changes in stock status (SSB/SSB0; x-axis) for each HCR. The WG suggested that explanations on how changes in SSB will affect the TAC be included when explaining the results. It was also noted that there was a 120,000 t cap to the TAC, based on historical catch. The WG suggested that a line be included in the plot to show the cap. It was thought that the plot might be clearer if a few HCRs were selected as examples rather than including all the HCRs. However, it was important to keep examples of both the F40% and F50% lines for the target reference points because that is the most important objective of the MSE.

2.5 Review of Task 6, 7, 8, and 9.

D. Tommasi gave a presentation on the work done on **Task 6**: Prepare table of PIs with the results for each performance metric both as numbers and color-coded; **Task 7**: Prepare additional PIs such as P(management action) and P(SSB > $SSB_{7.7\%,F=0}$ from the OM); **Task 8**: Label Performance Metric 1 "odds of not breaching the LRP" rather than "conservation risk"; and **Task 9**: Compare the impact on performance metrics results of using a $SSB_{7.7\%,F=0}$ based on dynamic SSB_0 versus using equilibrium SSB_0.

Summary:

Task 6 and 8

Tables of performance indicators with the results for each performance metric both as numbers as color-coded were presented for the Mixed control and TAC control results both across all reference scenarios and for the low productivity scenario, OM6. The conservation risk metric was relabeled odds of not breaching the limit reference point. The same table but with the performance metrics calculated separately for each of the four reference scenario was presented for the mixed control results.

Task 7

Additional performance indicators (PIs) were developed as suggested at the September ALBWG meeting. The odds of no management action metric was defined as the odds of SSB being above the $SSB_{threshold}$. Results for this PI across reference scenarios for Mixed Control show that odds of no management were almost certain (>90%) for all HCRs except 1-3 and 9-11, which showed highly likely odds (between 80% and 89%). New performance metric defining the odds of SSB being above 1) the WCPFC SSB_{limit} of $SSB_{20\%,F=0}$ where unfished SSB is based on dynamic unfished SSB, 2) the IATTC SSB_{limit} of $SSB_{7.7\%,F=0}$ where unfished SSB is based on dynamic unfished SSB, and 3) the IATTC SSB_{limit} of $SSB_{7.7\%,F=0}$ where unfished SSB is based on equilibrium unfished SSB. Results from Mixed control show that, across all reference scenarios, SSB was almost certain to be above these different thresholds for all HCRs. A performance metric calculating the odds of mean medium term catch being above historical catch was also computed. Mean medium term catch was computed as the average catch for years 7-13 of the 30 year MSE simulation. Results for mixed control show that the odds of mean medium term catch being above mean historical (1981-2010) catch are even (between 40% and 59%) for HCRs with an F50 F_{target} and better than even (between 60% and 69%) for HCRs with a F_{target} of F40. The odds of mean longterm catch being above mean historical catch were also computed using years 20-30 of the MSE simulation.Under mixed control and across all reference scenarios, the odds of long term catch being greater than mean historical catch were better than even for the F50 HCRs and likely (between 70% and 79%) for F40 rules.

Task 9

Results for the new performance metrics of SSB being above $SSB_{7.7\%,F=0}$ where unfished SSB is based on dynamic unfished SSB or equilibrium unfished SSB are compared. The odds were almost certain (>90%) for both indicators under mixed control and across reference scenarios, albeit they were lower when unfished SSB was based on equilibrium SSB. Under the low productivity scenario, OM6, the odds remained almost certain for both indicators for F50 HCRs, but fell to 88-89% for F40 HCRs when unfished SSB was calculated using equilibrium conditions. Under TAC control and across reference scenarios odds of being above the reference point remained almost certain except for HCRs 8 and 16 when equilibrium unfished SSB was used, with odds dropping to 89%. Scenario 6 under TAC control showed the most contrast between the two metrics with odds remaining almost certain for F40 HCRs and highly likely (between 80 and 89%) for F50 HCRs when dynamic unfished SSB was used in the reference point calculation. For the indicator using equilibrium unfished SSB the odds were highly likely (between 80 and 89%) for all HCRs except HCR 8, which showed odds of 79%.

Discussion: The WG noted that the large table of PMs was very useful for comparing HCRs, and the managers and stakeholders would likely depend on this table to a large degree. One way to help the reader with the large table of PMs is to include several additional columns explaining the HCR for each row, if space is not limiting. The WG noted that the labels for some of the PMs needed to be clarified or corrected for the final report. The WG also suggested including basic metrics used to evaluate stock status (e.g., SSB, catch).

In terms of the new PMs [i.e., $P(SSB<SSB_{20\%,current,F=0})$, $P(SSB<SSB_{7.7\%,current,F=0})$, $P(SSB<SSB_{7.7\%,F=0})$], it was considered all three have their uses and it may be better to include all three if space is permitting. Otherwise, it may be more important to include the PMs associated with the current reference points from the RFMOs [i.e., $P(SSB<SSB_{20\%,current,F=0})$, $P(SSB<SSB_{7.7\%,F=0})$].

It was important that the WG members communicate with their managers and stakeholders to see if the results (tables and figures) are understandable from their perspective. The WG noted that Task 8 was also completed, which helped to clarify the PMs.

2.6 Review of Task 11, 14, and 15.

D. Tommasi gave a presentation on the work done on **Task 11:** Extract example trajectories from set of results to be used in presentation of results using a "storytelling approach"; **Task 14**: Consider how the need for meta-rules should be communicated to managers and stakeholders, and consider some potential examples; and **Task 15**: Consider possible usage of "ShinyApp" to show MSE results in more effective manner by the 5th MSE workshop (Presented at early 2021 workshop for managers and stakeholders).

Summary:

Task 11

Iteration 60 for HCR7 is used in a storytelling approach to showcase how the MSE management module works. Time series of SSB, exploitation rate, fishing intensity (1-SPR), and catch were presented, and, during each of the simulated assessments happening every three years, the decision of setting a specific exploitation rate depending on stock status was examined. This specific iteration had a period of high recruitment followed by a period of very low recruitment. It was noted that the SSB was not falling as fast as catches for the surface fleets, controlled by TAE, were dependent on juvenile biomass and responded more quickly to changes in recruitment than SSB. Once the low recruitment year class matured SSB showed a substantial decline and SSBthreshold is breached, prompting a reduction in exploitation rates, fishing intensity, and catches. After three years the population rebounds to levels above $SSB_{threshold}$. It is also showcased how, HCR5 the same rule as HCR7 but with an F_{target} of F50 instead of F40 would have behaved. Under HCR5, because of the lower Ftarget, biomass was allowed to build higher following the high recruitment event, and hence was more robust to the later low recruitment event. SSB did not breach SSB and no management action was required, leading to overall higher biomass and higher catch stability, but lower catch for HCR5 as compared to HCR7.

Task 14

An overview of what meta rules are and what they are intended for is provided using the Pacific southern bluefin tuna management procedure as an example. The meta-rules allow managers to define some exceptional circumstances when management actions outside of what is prescribed by the adopted management procedure might be required. It is suggested that for NPALB the potential for exceptional circumstances to arise might be examined when: 1) the inputs to the management procedure (e.g. estimation model used as simulated assessment) are affected, 2) the population dynamics are potentially significantly different from those for which the management procedure was tested (e.g. outside the scope of uncertainty scenarios considered), 3) the fishery or fishing operations have changed substantially, and 4) actual total removals (or effort) is greater than what the management procedure recommended.

Discussion: The WG thought that the 'storytelling' approach was generally successful in explaining how the MSE and HCRs worked. However, the WG suggested including estimates from both the OM and EM all on the same page. It was noted that some of the labeling were inconsistent and needed to be checked for the final report. It was suggested that the story telling approach use multiple iterations and scenarios to compare and contrast how the HCRs worked under the different situations.

D. Tommasi agreed that these were good ideas and subsequently presented new plots to illustrate the suggested changes. The WG agreed that the changes were useful and recommended that similar plots be used for presenting the results in the future workshops.

The WG had substantial discussions on Task 14. Overall, the WG thought meta-rules were useful but it may be premature to make decisions on meta-rules. The stock status and management system for NPALB are also quite different from the Southern bluefin tuna example. The WG agreed on the need to monitor performance of the real-world HCRs (after being established by the RFMOs) over the next few assessment cycles but would need flexibility on how to do so. Nevertheless, it would be useful for WG members to communicate the general concept of meta-rules with managers and stakeholders, but also note that the WG does not currently have good specific suggestions.

The WG noted that no work has been done on Task 15 (Shiny App) but this is of lower priority than the other tasks. After the final MSE report is completed, the WG will attempt to develop the Shiny App.

2.7 MSE report structure.

The WG discussed the structure of the upcoming MSE report and agreed that it would be similar to the previous report. It was suggested that the executive summary do not need detailed explanations of the OM and EM and readers can be directed to the main body of the report. However, the WG agreed that it would be useful to include the large table of PMs for the executive summary. Due to space limitations, it would probably be appropriate to include only the table combining all scenarios, while the reader can be directed to the appendices for the more details.

2.8 Workplan.

The WG decided on the deadline of December 21, 2020 for the first draft of the MSE report. However, this first draft would not include a description of the future projections. The deadline for the second draft of the report, including the future projections, would be January 25, 2021. Feedback on the MSE results from managers and stakeholders should be sent to the WG Chair by April 30, 2021.

Due to the current COVID-19 situation, it was likely that the WG would not be able to hold a face-to-face workshop for managers and stakeholders in Winter or Spring of 2021. Therefore, the WG decided to use a combination of web meetings and online forums to communicate MSE results with manager and stakeholders. To help the WG members explaining the results, D. Tommasi agreed to provide WG members with common presentation materials and will help answer questions on the online forum.

The IATTC volunteered the use of the Basecamp platform as the online forum. The WG thanked the IATTC for their help with this and agreed that it was a good idea. However, some work would be needed to register the managers and stakeholders on the platform.

Based on early discussions, it appears that the US and Canada will organize a joint workshop for their managers and stakeholders in March 2021. Japan and Taiwan will likely hold separate meetings due to language differences around the same time.

3. Administrative Matters

3.1 Time and place of next meeting

The WG developed a work plan for completion of the 2nd round of MSE (**Attachment 4**).

4. Clearing of the report

The WG Chair prepared a draft of the report, which was reviewed by the WG prior to adjournment of the workshop. After the workshop, the WG Chair evaluated and incorporated suggested revisions, made final decisions on content and style and distributed a second draft via email for approval by WG members.

9. Adjournment

The ALBWG meeting was adjourned on 8 and 9 December 2020 (Eastern and Western Pacific Date, respectively). The WG Chair thanked the scientists participating in the workshop for their attendance and contributions on north Pacific albacore MSE.

Table 1. List of tasks considered in August WS to update the NPALB MSE.

No.	Tasks
1	Compare the MSE results between the different versions of the projection software and the MLE estimate for a small subset of runs
2	Prepare information for the translation between fishing intensity and effort. This would include an examination of the relationship between observed catch and effort as well as the model-based effort metric (exploitation rate derived from SPR-based fishing intensity) and real-world effort.
3	Prepare worm plots, pie charts and violin plots to show results of PIs to help illustrate the variability in the MSE results.
4	In plots of simulated fishing intensity over time show 'current' fishing intensity from both the 2017 (2012-2014) and 2020 assessments (2015-2017) in addition to average historical fishing intensity.
5	Prepare explanations for the new algorithm for generating exploitation rates and catches for the 2nd round of MSE to avoid confusion from the 1st round of MSE.
6	Prepare table of PIs with the results for each performance metric both as numbers and color-coded.
7	Prepare additional PIs such as P(management action) and P(SSB > $SSB_{7.7\%,F=0}$ from the OM).
8	Label Performance Metric 1 "odds of not breaching the LRP" rather than "conservation risk".
9	Compare the impact on performance metrics results of using a $SSB_{7.7\%,F=0}$ based on dynamic SSB_0 versus using equilibrium SSB_0.
10	Improve plot describing management actions for HCRs for explanation of TAC control.
11	Extract example trajectories from set of results to be used in presentation of results using a "storytelling approach".
12	In the table describing OMs include additional columns for biological plausibility and model fit.
13	In 2nd round of MSE report include appendix tables with the performance metrics calculated across the four reference scenarios (1, 3, 4, and 6) as well as separately for each scenario.
14	Consider how the need for meta-rules should be communicated to mangers and stakeholders, and consider some potential examples.

15	Consider possible usage of “ShinyApp” to show MSE results in more effective manner by the 5th MSE workshop (Presented at early 2021 workshop for managers and stakeholders).

Attachment 1

List of Participants

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Attachment 2

ALBACORE WORKING GROUP (ALBWG)

INTERNATIONAL SCIENTIFIC COMMITTEE FOR TUNA AND TUNA-LIKE SPECIES

IN THE NORTH PACIFIC OCEAN

MSE UPDATE WEBINAR

1 – 4 and 8 Dec 2020 (Eastern Pacific)
2 – 5 and 9 Dec 2020 (Western Pacific)
Draft Agenda

Time:

JAPAN and KOREA:	09:00 – 13:00 (break: 10:30)
CHINESE TAIPEI:	08:00 – 12:00 (break: 09:30)
NOUMEA:	11:00 – 15:00 (break: 12:30)
CANADA, USA and MEXICO	16:00 – 20:00 (break: 17:30)

December 1 (Tue) and 2 (Wed)

1. Opening and Welcome
   1.1 Meeting Protocol
   1.2 Review and adoption of Agenda
   1.3 Assignment of Rapporteurs
2. List of tasks from MSE WS for NPALB in August 2020
3. Review Tasks 1 – 4 in Table3 of the WS reports in August 2020

December 2 (Wed) and 3 (Thu)

4. Review Tasks 5 – 8 in Table3 of the WS reports in August 2020

December 3 (Thu) and 4 (Fri)

5. Review Tasks 9 – 12 in Table3 of the WS reports in August 2020

December 4 (Fri) and 5 (Sat)

6. Review Tasks 13 – 15 in Table3 of the WS reports in August 2020
7. Review 2nd NPALB MSE report

December 8 (Tue) and 9 (Wed)

8. Clearing of Meeting Report
9. Administrative Matters
   9.1 Review MSE timeline and workplan
10. Adjournment

Attachment 3
List of Presentation

Number	Title and Authors	Availability
Presentation	Update on ISC ALB MSE Round 2 tasks issued during September ISC ALBWG Meeting D. Tommasi	Contact the author

Attachment 4
Workplan

Date	Location/Method	Task/Event
December 8 – 15, 2020	Webinar	WCPFC17
December 21, 2020		First draft report of 2nd NPALB MSE (exclude future projection section)
January 25, 2021		Complete draft report of 2nd NPALB MSE
February 1, 2021		Deadline of feedback from the WG members
February 8, 2021		Send final report to ISC chair
February 15, 2021		Deadline of presentation file
March 1, 2021		Distribute final report and presentation to managers and stakeholders
March 2021	Web meeting by respective country and online forums	Review results from 2nd MSE for NPALB. Date of online forum will be determined later.
April 30, 2021		Deadline of feedback from managers and stakeholders of each country
May 2021	Webinar	WG WS: review feedback from managers and stakeholders. (Inclusion of feedback in the report as questions and answers format)
May 2021	TBD	IATTC SAC
June 2021		Deadline of report submission for the ISC Plenary
July 11 – 19, 2021	HI, USA	ISC Plenary: Report 2nd NPALB MSE results
August 11 -19, 2021	Palau	WCPFC SC17
September 2021	TBD	NC17
December 2021	TBD	WCPFC18