Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Northern Committee
Tenth Regular Session

Fukuoka, Japan
1–4 September 2014

SUMMARY REPORT

USP Library Cataloguing-in-Publication Data

Commission for the Conservation and Management of Highly Migratory
Fish Stocks in the Western and Central Pacific Ocean. Northern Committee.
Regular Session (10th : 2014 : Fukuoka, Japan).
Tenth regular session, Fukuoka, Japan, 1-4 September 2014 : summary report.
-- Kolonia, Pohnpei : Western and Central Pacific Fisheries Commission, 2014.

46 p. ; 28 cm.

ISBN 978-982-9103-30-7

1. Fishery management, International--Oceania--Congresses.
2. Fishes--Conservation--Oceania--Congresses. 3. Fish stock assessment--
Oceania--Congresses. 4. Tuna fisheries--Oceania--Congresses.
5. Commission for the Conservation and Management of Highly
Migratory Fish Stocks in the Western and Central Pacific Ocean--Congresses.
I. Western and Central Pacific Fisheries Commission.

SH214.9.C78 2014 333.95609648--dc23

TABLE OF CONTENTS

Northern Committee
Tenth Regular Session

Fukuoka, Japan
1–4 September 2014

SUMMARY REPORT

AGENDA ITEM 1 — OPENING OF MEETING

1. The Tenth Regular Session of the Northern Committee (NC10) took place in Fukuoka, Japan, from 1–4 September 2014. The meeting was attended by Northern Committee (NC) members from Canada, Cook Islands, Japan, Korea, Chinese Taipei, United States of America (USA) and Vanuatu; and Observers from Fiji, Kiribati, Republic of Marshall Islands, Mexico, Nauru, Palau, Papua New Guinea, Tonga, Pacific Islands Forum Fisheries Agency (FFA), International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), American Fishermen's Research Foundation, Greenpeace, Organization for the Promotion of Responsible Tuna Fisheries (OPRT), The Pew Charitable Trusts, US-Japan Research Institute, and World Wildlife Fund (WWF). The list of meeting participants is included as Attachment A.

1.1 Welcome

2. M. Miyahara, Chair of the NC, opened the meeting and welcomed participants to Fukuoka, Japan. Fiji expressed its willingness to be an NC member because its vessels are now operating in the Convention Area north of 20°N.

1.2 Adoption of agenda

3. The provisional agenda was amended by adding "Election of officers of the Northern Committee" in Agenda Item 8, and was adopted (Attachment B). Documents supporting the meeting were made available on the Western and Central Pacific Fisheries Commission (WCPFC) website (http://www.wcpfc.int/meetings/10th-regular-session-northern-committee).

1.3 Meeting arrangements

4. Japan, as the host for NC10, briefed meeting participants on social arrangements and the meeting schedule. S. Nakatsuka (Japan) served as a rapporteur for this meeting.

AGENDA ITEM 2 — CONSERVATION AND MANAGEMENT MEASURES

2.1 Report from the Fourteenth Meeting of the International Scientific Committee (ISC14)

5. G. DiNardo, ISC chair, presented highlights of the 14th meeting of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (NC10-IP-01). The results are contained in the ISC14 meeting report, which can be found on ISC's website at: http://isc.ac.affrc.go.jp. His presentation on the ISC14 plenary meeting is summarized below:

> ISC14 was held in Taipei, Chinese Taipei, from 16–21 July 2014, and attended by members from Canada, Chinese Taipei, Japan, Korea and the USA, as well as WCPFC and PICES. The plenary reviewed results and conclusions, which were based on new data and updated analyses, of the billfish, albacore, shark, and Pacific bluefin tuna working groups. The plenary endorsed the findings that the North Pacific blue shark, albacore tuna, and swordfish stocks are not overfished nor experiencing overfishing, and reiterated that Pacific bluefin tuna are overfished and experiencing overfishing. It provided projections for managers to consider when crafting management measures for Pacific bluefin tuna, as well as North Pacific albacore tuna, swordfish, and blue shark, and updated the conservation advice from ISC13 based on these projections.
>
> The plenary reviewed the progress of the working groups and endorsed their work plans. The ISC work plan for 2014–2015 includes completing a new stock assessment for North Pacific striped marlin and shortfin mako shark in time for ISC15. A special seminar on impacts of climate change on fisheries was held. Plenary discussed formalizing ISC's structure and administration and began researching means of doing both. Plenary also noted the strides that working groups had made in incorporating best available scientific information into stock assessment work, enhanced stock assessment reports and the increased transparency in working group efforts. Observers from the Pew Charitable Trust, ISSF and WWF attended. The plenary re-elected C. Sun for a second term as ISC Vice-Chair, as well as J. Brodziak, S. Kohin, and R. Wu for a second term as chair of the BILLWG, SHARKWG and STATWG, respectively. The next plenary will be held in the USA in July 2015.
>
> Collaborations between Pacific regional fishery management organizations (RFMOs), regional fishery organizations (RFOs), and other scientific organizations are essential to advance the science in the region and provide timely scientific advice to decision-makers. The ISC conducted data exchanges with data managers of the WCPFC and IATTC, and presented stock assessments results at the scientific meetings of these RFMOs. The emergence of a new collaboration between PICES and ISC to assess the impact of climate change on pelagic species in the North Pacific Ocean was reported.

6. Canada emphasized the importance of data provision for reliable stock assessments, and expressed concern that an NC member (China) is not up to the requirement. Canada further stated that the NC should encourage China to submit required data through appropriate channels.

7. Mexico pointed out that the ISC report suggests that the current measures of both WCPFC and the Inter-American Tropical Tuna Commission (IATTC) are not sufficient for the recovery of Pacific bluefin tuna (*Thunnus orientalis*). It emphasized that the measures taken by the two organizations are linked to each other, and called for further action by the NC because the impact on the Pacific bluefin stock is far greater in the western Pacific.

8. Z. Suzuki, chair of the Pacific Bluefin Tuna Working Group (PBFWG), presented the results of the Pacific bluefin tuna stock assessment. His presentation is summarized as follows:

> The result of an updated stock assessment, projections as requested by the NC9 and management advice was briefly introduced. Current spawning stock biomass (SSB) is close to the historical low level. As for the recruitment trend, a large fluctuation was noted and the recent 5 year recruitment was significantly lower than the average level of recruitment. It was highlighted that taking too many juveniles resulted in a greater impact on the SSB than taking adults. Future projections based on the three different recruitment levels (low, average, and low followed by average) were conducted with the seven harvest scenarios as requested by NC9, and ISC's conservation advice was based on the projections. Major points of the recommended conservation advice are as follows:
>
> The current CMM if continued in to the future is not expected to increase SSB if recent low recruitment continues. In relation to the projections requested by NC9, only Scenario 6, the strictest one, results in an increase in SSB even if the current low recruitment continues. Given the result of Scenario 6, further substantial reductions in fishing mortality and juvenile catch over the whole range of juvenile ages should be considered to reduce the risk of SSB falling below its historically lowest level.

9. In response to a question, Z. Suzuki commented that at this moment there is no evidence that there is more than one stock of Pacific bluefin tuna. The ISC Chair noted that there is spatial structuring in the population, and indicated that the goal should be to move to a spatially structured population model.

10. Japan questioned why the mortality rate for adult fish decreased recently. The PBFWG chair answered that he is not certain but that it is probably because fishing effort targeting adult fish had decreased.

11. Japan further asked if the change in the definition of juvenile, which currently is less than 30 kg, will affect the result of the stock assessment. The PBFWG chair replied that he would guess that it would not change the result substantially although the PBFWG had not examined this particular question.

12. Japan then asked if the model development that is scheduled for 2016 is expected to change the stock assessment result retrospectively because even a change by several percent could have a significant management implication. The PBFWG chair replied that because the work in 2016 is just a refinement of the current model, and not a development of a new model, he does not expect a substantial change in the result. The ISC chair noted that the structure of the model will depend on input data, which will change, and will need to address comments from the independent review of the 2012 Pacific bluefin tuna stock assessment.

13. With regard to analyzing the harvesting scenarios, the USA asked whether the catch of fish less than 30 kg is assumed to be halved, or whether the catch of fishery predominantly targeting juveniles is assumed to be halved. The PBFWG chair answered that the former will be the case. It was also clarified that the effort table in the IP3 report was based on the reports by Members, Cooperating Non-Members and participating Territories (collectively known as CCMs), and not a result of the analysis.

14. Chinese Taipei stated that the provided Kobe plots are confusing because they seem to indicate that the stock has been in an overfished state throughout the evaluation period. The PBFWG chair stated that he believes that Pacific bluefin tuna has been exploited for more than 100 years, and that the stock in the beginning of the analysis period, the 1950s, was probably already not a "virgin stock".

15. Mexico cautioned about how to interpret the impact of longline fisheries in future scenarios as the model assumes no recruitment relationship with the spawning stock biomass (SSB) level. Furthermore, Mexico asked for the exact definition of juvenile in the model. The PBFWG chair replied that further research is necessary to have an exact definition of juvenile, but that currently, it is assumed that the maturity rate is 20%, 50% and 100% for ages 3, 4 and 5 respectively. Mexico further stated that it is obvious that the problem lies with the coastal fisheries in the western Pacific, and urged the NC to clearly state that the coastal fisheries and purse-seine fisheries in the western Pacific need to be further regulated.

16. Korea requested the ISC chair to provide to CCMs, as soon as possible, all catch and effort data until 2012 of juvenile and adult Pacific bluefin tuna that all relevant CCMs had transmitted in accordance with CMM 2013-09 to NC members.

17. J. Holmes, the Albacore Working Group (ALBWG) chair, presented the results of the 2014 stock assessment of North Pacific albacore (*Thunnus alalunga*) (SC10-SA-WP-12). His presentation is summarized as follows:

> The North Pacific albacore tuna stock was assessed using an age-, length-, and sex-structured Stock Synthesis (SS Version 3.24f) model fitted to time series of standardized CPUE and size composition data over a 1966 to 2012 time frame. All available catch and size composition data from 1966 through 2012 were used in the stock assessment. Standardized catch-per-unit-effort data derived from Japan pole-and-line (PL) and longline (LL) fleets were used to measure trends in relative abundance because these indices were considered to be most representative of trends in juvenile and adult albacore abundance. Sex-specific growth curves were used because there is evidence of sexually dimorphic growth, with adult male albacore attaining a larger size and greater age than female albacore. The assumed value of the steepness parameter in the Beverton-Holt stock-recruitment relationship was $h = 0.9$, based on two independent estimates. Several sensitivity analyses were conducted to evaluate changes in model performance or the range of uncertainty resulting from changes in model parameters. Stochastic stock projections were conducted externally to the base case model to evaluate the impact of various levels of fishing intensity on future female SSB for North Pacific albacore.
>
> Total stock biomass (age-1 and older) show a long term decline from the early 1970s to 1990 followed by a recovery through the 1990s and subsequent fluctuations without trend in the 2000s. Female spawning biomass (SSB) exhibits similar long-term changes, with a decline from the early 1970s to the early 1990s, a recovery in the late 1990s and a levelling off in the late 2000s. Female SSB was estimated to be approximately 110,101 mt in the terminal year of the assessment (2012) and stock depletion was estimated to be 35.8% of unfished SSB. Average historical recruitment is approximately 42.8×10^6 recruits annually, but there are periods of above and below average recruitment at the beginning of the assessment time frame followed by fluctuations around the average since the 1990s.
>
> Biological reference points were computed with the base case model. The point estimate (± SD) of maximum sustainable yield (MSY) is 105,571 ± 14,759 t and the point estimate of spawning biomass to produce MSY (SSB_{MSY}, adult female biomass) is 49,680 ± 6,739 t. The SSB-ATHL threshold (i.e., the average of the ten historically lowest SSB estimates) is estimated to be 117,835 t, which is more than twice the SSB_{MSY} level. The ratio of $F_{2010\text{-}2012}/F_{MSY}$ is estimated to be 0.52 and the ratio of $F_{2010\text{-}2012}/F_{SSB\text{-}ATHL}$ is estimated to be 0.72. $F_{2010\text{-}2012}$ (current F) is below the majority of candidate reference points except F_{MED} and $F_{50\%}$ and these ratios are lower than ratios

estimated using $F_{2002-2004}$. Kobe plots, which depict stock status in relation to MSY-based and MSY proxy reference points from the base case model, were presented for illustrative purposes since biological reference points have not been established for the North Pacific albacore stock, with the exception of the $F_{SSB-ATHL}$ interim reference point used by NC. Three issues were noted concerning the $F_{SSB-ATHL}$ interim reference point: (1) the way $F_{SSB-ATHL}$ is calculated may differ from the interpretation of NC, (2) the time frame used to calculate the SSB-ATHL threshold was the model time frame (1966-2012), which because of changes in the spawning biomass trajectory means that there is a low SSB period in the 2000s, resulting in the use of SSBs estimated in 2007 through 2010 in the threshold calculation against which current F ($F_{2010-2012}$) is evaluated; and (3) $F_{SSB-ATHL}$ is extremely conservative if it is intended to be interpreted as a limit reference point (LRP) for the stock since the estimated SSB-ATHL threshold (117,835 t) is more than twice the estimated biomass level necessary to support MSY (49,680 t), i.e., SSB-ATHL > 2 x SSB_{MSY}.

Based on an evaluation of the estimated current F ($F_{2010-2012}$) against various F-based reference points, including $F_{SSB-ATHL}$, the North Pacific albacore stock is not currently experiencing overfishing since the ratios for most candidate reference points, except F_{MED} and $F_{50\%}$, are below 1.0. Although no biomass-based reference points have been developed for this stock, there is little evidence from this assessment that fishing has reduced SSB below reasonable candidate biomass-based reference points, so it was concluded that the stock is likely not in an overfished condition at present.

The current exploitation level ($F_{2010-2012}$) is estimated to be below that of $F_{2002-2004}$, which led to the implementation of conservation and management measures (CMMs) for the North Pacific albacore stock in both the eastern Pacific and the western and central Pacific Oceans**.** Future projections assuming average or high historical recruitment and fishing at a constant current F show that median female SSB is expected to remain either relatively stable between the 25th and median historical percentiles or increase and the probabilities that female SSB falls below the SSB-ATHL threshold during a 25-yr projection period are well below 50% (13% and 3%, respectively). The probability of median female SSB declining below the SSB-ATHL threshold is 65% assuming low recruitment. The North Pacific albacore stock is considered healthy and current productivity is believed to be sufficient to sustain recent exploitation, assuming average historical recruitment continues.

The ALBWG prepared updated responses to NC9 requests for advice on biological reference points based on the 2014 assessment results. SSB depletion level probabilities were estimated using $SSB_{F=0}$ and separate $SSB_{F=0}$ were estimated for the low, average, and high historical recruitment scenarios. Expected yield increases with recruitment and the aggressiveness of the harvest scenario. Fishing at F_{MSY} and $F_{10\%}$ were the most aggressive harvest scenarios and F_{MED} was the least aggressive scenarios. Yield decreases as $F_{SPR\%}$ increases across recruitment scenarios and there is little difference in yield at $F_{SSB-ATHL}$ for 10 or 25-yr projection periods. The probability that $SSB_{10\%}$ depletion level would be breeched was low for all harvesting scenarios, except F_{MSY} and $F_{10\%}$, which was between 0.4 and 0.5 whereas the probabilities that $SSB_{40\%}$ would be breeched was much higher for all harvest scenarios, frequently exceeding 0.5. The F_{MED} and $F_{50\%}$ reference points are exceeded when harvesting at $F_{current}$ (2010-2012). Less productive conditions associated with regime shifts could lead to reduced expected yield and increased risk (probabilities) that SSB will fall below SSB depletion levels.

18. The USA asked how B_{MSY} compares with 20% of unfished SSB; the ALBWG chair answered that they were expected to be roughly at the same level although it is not specifically calculated.

19. Canada asked the ALBWG chair how confident the ALBWG was with the steepness of 0.9. The ALBWG chair noted that the estimation of 0.9 is not based on observed data, rather it is the result of two independent analyses based on life history theory, which estimated the steepness at between 0.95 and 0.84. The ALBWG used the median value.

20. A. Yau, on behalf of the Billfish Working Group (BILLWG) chair, presented an overview of the stock assessment of swordfish (*Xiphias gladius*) in the North Pacific Ocean (WCPFC-SC10-SA-WP-13). Her presentation is summarized as follows:

> In 2014, the ISC Billfish Working Group completed the swordfish stock assessment. A Bayesian state-space production model was updated with new years of data to complete assessments for each of two stocks.
>
> Commercial catch data for the WCNPO swordfish stock has fluctuated over the history of the fishery (1951-2012), peaking at 22,000 mt in 1960 and recent catch levels are ~10,000 mt. Japan, Chinese-Taipei, and USA provided standardized CPUE series. Results indicate that compared to B_{MSY} and H_{MSY}, the WCNPO stock of swordfish is not overfished and overfishing is not occurring in 2012. A risk analysis indicated that if current catch levels persist, there will be little to no risk of overfishing or becoming overfished through 2017.
>
> In the EPO stock area, swordfish catches fluctuated over the history of the fishery and peaked in 2012 at 9,910 mt. Japan and Chinese-Taipei provided standardized CPUE series. Results indicate that compared to B_{MSY} and H_{MSY}, the EPO stock of swordfish is not overfished but there is a 55% risk of overfishing in 2012. The recent average catch of ~10,000 mt, or almost two times higher than the estimated MSY, is not likely to be sustainable in the long term. Risk analysis indicated the risk of overfishing will persist into 2017 if current catch levels continue. Retrospective analyses indicated that there was a clear retrospective pattern of underestimating exploitable biomass and overestimating harvest rate.

21. In response to a question from Japan, A. Yau answered that the BILLWG did not explore the impact of a regime shift on swordfish stocks. Also, she commented that there is no agreed on natural mortality rate for North Pacific swordfish though she believed 0.35 could be a conservative estimate.

22. K. Piner, on behalf of the Shark Working Group (SHARKWG) chair, presented the results of the blue shark stock assessment. His presentation is summarized as follows.

> The ISC Shark Working Group completed a stock assessment of North Pacific Blue Shark in 2014. Catch, CPUE and size composition data (1971-2012) were used along with life history information to conduct the stock assessment. Uncertainty in data, including the catch, was generally considered greater than for some of the targeted species. To deal with the uncertainty in data, two alternative modeling approaches were used. A Bayesian Surplus Production (BSP) model was used to account for the limited size composition data available. Key model uncertainty included the distributions on process priors and appropriate CPUE to include in the model. In contrast, a complicated length and sex based-age-structured model was used along with regionally defined fleets to evaluate the influence of the spatial patterns in size and sex ratios on

stock condition. Key model uncertainty was the shape of the low fecundity spawner-recruit curve. Results of both modelling approaches were in agreement that it is likely that the stock is not overfished ($B>B_{MSY}$) and overfishing is not occurring ($F<F_{MSY}$). Current harvest practices are forecasted to be sustainable into the future.

23. In response to a question from Cook Islands, K. Piner stated that the reason for stock improvement is probably due to the reduction of catch.

2.2 Report of the Tenth Regular Session of the Scientific Committee (SC10)

24. The WCPFC Secretariat presented the results of the tenth regular session of the Scientific Committee (NC10-IP-02). His presentation is summarized as follows:

SC10 took place in Majuro, Republic of Marshall Islands, from 6–14 August 2014, and L. Kumoru chaired the meeting. The Summary Report is posted at http://www.wcpfc.int/meetings/10th-regular-session-scientific-committee, and the following key areas of SC10 were highlighted to NC10:

- overview of tuna fisheries in the western and central Pacific Ocean with the provisional total WCPFC Statistical Area tuna catch estimates of 2,621,511 mt for 2013;
- data gaps, especially related to the provision of operational catch and effort data;
- the outcome of bigeye, yellowfin and skipjack tuna stock assessments and management advice and implications;
- management issues related to identifying the level of acceptable risk which should be applied to breaching a limited reference point for key target species;
- bycatch mitigation in relation to seabird interactions with small longline vessels; and
- administrative matters and the Scientific Committee's work programme and budget for 2015–2017.

25. Japan asked what the result was regarding the discussion to designate North Pacific blue shark as a northern species. H. Honda explained that a small group meeting was held during SC10 to discuss the matter, and that the group reported the result to the SC10 plenary, suggesting two options to move forward: short-term and medium-term plans. He further reported that the report received no comments in the plenary.

26. In response, Japan pointed out that, in accordance with the Rules of Procedure, the SC has the authority to make recommendations on the designation of the northern species, and further asked what the obstacle to do so was. The Secretariat explained that neither specific information was available for SC's consideration on the issue, nor were specific criteria established by the Commission for a species to be included in the northern stocks.

27. The USA commented that it is a matter of discussion for the Commission, and what the NC can do is to request the Commission to instruct SC to consider the issue as a matter of priority. The chair suggested that the NC should express its desire and willingness to take the initiative for managing the stock in a healthy way.

28. Japan also pointed out that although SC had evaluated the skipjack stock to be in a healthy state, Japanese coastal fishermen have a different perception about the stock because they have suffered in recent years from poor catches because of the reduced number of skipjack migrating along Japan's coastal

areas. Japan appreciated that the SC emphasized the possibility of range contraction of skipjack but it requested further study on the issue.

2.3 Conservation and management measure for northern stocks

2.3.1 Pacific bluefin tuna

Reports by CCMs

29. Canada reported that there is no fishery targeting Pacific bluefin tuna in Canada, and there is very little import of this species. In response to requests from NC members, Canada stated that it will provide actual trade data at the NC meeting next year.

30. Cook Islands reported that there were minimal catch and trade of Pacific bluefin tuna but it supports an effective management measure for the species.

31. Korea reported that there were 24 large-scale, purse-seine vessels harvesting Pacific bluefin tuna in 2013, which is within the threshold, and that the domestic notification controlling the juvenile catch is now in the process of being amended to be consistent with the conservation and management measure (CMM) for Pacific bluefin tuna, changing the criteria of juvenile from "less than 20 kg" to "less than 30 kg, or three years or younger", and prohibiting the catch when the catch limit is exceeded. In 2014, a catch limit of 1,220 mt was enforced and the catch has been prohibited since 7 July 2014, when the catch reached 1,192 mt, or 97% of the limit. Fishermen have been instructed to discard juvenile Pacific bluefin tuna catches since 8 July 2014.

32. The USA asked if the definition of juvenile applied to the catch limit for this year was 20 kg or 30 kg, and Korea replied that it is applying the 30 kg definition of juvenile to this year although the current notification defines it at 20 kg.

33. Japan pointed out that the discarded Pacific bluefin tunas are expected to be dead, which means that the catch continues as long as discards continue. In response, Korea stated that it is hard to control bycatch, and that there is no other option at this moment. It was also explained that the sale of Pacific bluefin tuna is prohibited.

34. Japan further stated that it is concerned that the catch still continues, and other NC members shared the concern. Japan also requested Korea to present detailed results of its research programme on the Pacific bluefin tuna fishery from 2010 to 2014. Korea responded that through the programme, biological characteristics were measured, new spawning grounds in Korean waters were searched for, one popup archival tag was attached and catch data were collected. Korea submitted relevant data to ISC as required. Japan requested further detailed data to be provided in order to improve Pacific bluefin tuna management.

35. Mexico stated that the discarded fish should be included in the catch report, and asked Korea if an observer is on board to measure the amount of discards. Korea replied that bycatch and discard data are not currently available although it is planning to collect these starting next year.

36. Japan reported on its Pacific bluefin tuna fishing activities. Various types of fisheries in Japan are catching Pacific bluefin tuna. Purse-seine vessels in western Japan are primarily targeting juveniles and a catch limit of 4,250 mt has been applied since 2011. For purse-seine vessels targeting adult fish larger than 30 kg, there is a voluntary catch limit of up to 2,000 mt. A troll fishery is conducted by very small

vessels (one to two crew members), all around the country. A registration system was started in 2011, and in 2014 a licensing system was introduced. Now, more than 20,000 vessels are licensed. Set nets also exist all around the Japanese coast and the number of licenses is fixed at around 1,800. Aquaculture of Pacific bluefin tuna is mainly conducted in western Japan and is controlled by a local government license. There are 147 aquaculture sites. Management of the catch in Japan is challenging because the catch is taken predominantly by a small number of purse-seine vessels, while there is a far greater number of small artisanal fishing vessels fishing for Pacific bluefin tuna. Japan further explained that in response to the ISC's latest recommendation, the government decided to reduce its juvenile catch by 50% from 2015. The plan is that 2,000 mt is allocated to the purse-seine fishery, and 2,007 mt to other fisheries. The purse-seine catch is allocated to an industry association, and it is a requirement that the catch be landed in designated ports, where monitoring is conducted. A coastal quota will be allocated to six areas and monitored on an area basis. More than 50 local meetings were held to explain the plan, and now there is general support to implement this measure.

37. Japan also reported its import information from Korea and Mexico. It was reported that Japan imported more than 4,000 mt of Pacific bluefin tuna from Mexico and Korea, and exported 20 mt to China and Thailand.

38. Several NC members were concerned with the increase of the number of licensed artisanal vessels from 13,000 to 24,000 this year. Japan replied that the reason for the increase is mainly a bureaucratic one that fishermen applied for a license just to retain future possibility for Pacific bluefin tuna fishing operation but the actual number of active vessels would be around 3,000. Japan also emphasized that it no longer allows further applications and intends to reduce the number of licenses in the future based on actual operation.

39. Mexico also asked whether purse-seine vessels were targeting adult Pacific bluefin tuna outside the three-month fishing season. Japan replied that the three-month season is the only migratory season that the fishery can catch Pacific bluefin tuna, and purse-sein vessels target other pelagic species (e.g. sardines and mackerels) in the remaining nine months.

40. Korea pointed out that the figures of Pacific bluefin tuna total catches from 2002 to 2004 were different: 12,897 mt and 12,676 mt — which came from Table 14.14.2 provided by the ISC's PBFWG in 2014, and the report on CMM 2013-09 (NC10-DP-01) — and looked for clarification and a correct figure. Also, it asked whether the number of purse-seine vessels fishing for Pacific bluefin tuna had increased from 55 in 2012 to 66 in 2014 as indicated in the Summery Report reviewed by the PBFWG in July 2014, and Attachment A of the Japanese report on CMM 2013-09 (NC10-DP-01).

41. Japan responded to Korea's question, stating that the number of purse-seine vessels having actually fished for Pacific bluefin tuna has changed annually. Japan also stated that they would provide the data to Korea bilaterally.

42. Chinese Taipei reported that the number of its longline vessels authorized to fish for Pacific bluefin tuna was 485 in 2014. It was explained that all of the catch consisted of adults, and a voluntary catch documentation scheme (CDS) has been implemented since 2010. Size and weight are measured at domestic landing ports and the sampling rate in 2014 was 100%. There was no export of Pacific bluefin tuna, and 4.6 mt were imported in 2013.

43. In response to questions by Japan and the NC chair, Chinese Taipei clarified that the Pacific bluefin tuna catch is landed in three ports, and that experience shows that the tuna are auctioned in those three ports, although landings in other ports is not prohibited.

44. Japan asked about the reason for the increase in catch from last year while the stock is in poor condition, and also asked for clarification about the meaning of the 100% sampling rate. Chinese Taipei replied that the reason for the increase in catch is probably because there were more vessels operating this year, in part because the area of the fishing ground had been expanded. It also clarified that Pacific bluefin tuna can have valid catch documents only when officials physically check the fish. Therefore, every Pacific bluefin tuna landed in domestic ports were well monitored.

45. The NC chair noted that according to his calculation, each vessel catches only about one fish per month and inquired how the fishery could be sustainable, given such a small catch. Chinese Taipei explained that not all of the licensed 485 vessels caught Pacific bluefin tuna, rather they applied for authorization because they needed a CDS tag in case they caught Pacific bluefin tuna. Chinese Taipei is still in the process of finalizing the statistics. Also, it was pointed out that in addition to Pacific bluefin tuna, those vessels catch other tunas such as yellowfin.

46. The USA reported that no vessel targets Pacific bluefin tuna in the WCPFC Convention Area, thus no management measure is necessary. For the occasional catch of adult Pacific bluefin tuna, there is a system to collect data in Hawaii. Trade is being monitored through CDS and 121 mt were imported from Japan and Mexico, and there was no export in 2013.

47. In response to a question, the USA clarified that in the eastern Pacific, there is a commercial purse-seine fishery that occasionally targets Pacific bluefin tuna when the fish is found within the USA's exclusive economic zone (EEZ), and sports fishing operations are occurring in the EEZs of the USA and Mexico.

48. Mexico commented that it understood that there had been no US commercial fishery targeting Pacific bluefin in the eastern Pacific; the USA responded that there has been a commercial purse-seine operation for a long time but that there was no Pacific bluefin catch for the last couple of years and that the catch is reported in accordance with international agreements.

49. Mexico also asked how the catch of sport fishing is controlled. The USA answered that the sale of Pacific bluefun tuna from sport fishing is prohibited, and a discussion by the domestic fishery management council on further restricting the bag limit is expected in the coming weeks.

50. Vanuatu reported that there are no activities related to Pacific bluefin tuna in its waters.

51. There were no comments on the report from the Philippines.

Discussion on the new conservation and management measure

2.3.1.1 Pacific bluefin tuna

52. Japan introduced its draft CMM for Pacific bluefin tuna (NC10-DP-06). Japan recalled that the tasks required of the NC by both the current CMM and the work programme are to: i) review the current CMM, including the substantial reduction of the catch, and ii) agree on a rebuilding programme, including an interim target. ISC advised that, from the seven scenarios evaluated, only the strictest scenario is expected to work in terms of substantial stock recovery with the low recruitment assumption. Japan pointed out that a precautionary approach should be taken in order to ensure stock recovery, especially given that the recent recruitment is near the historical low level. With regard to the interim

target, Japan pointed out that Annex II of United Nations Fish Stocks Agreements (UNFSA) recognizes the possibility of using a provisional reference point when information is not sufficient. Because we have firsthand experience of substantial recruitment of Pacific bluefin tuna when the stock is above SSB_{med}, that level can be used as a preliminary recovery goal to be achieved by 2024 in order to ensure sufficient recruitment. As to specific measures to be taken, Japan proposed, in addition to the current effort, to: i) a 50% reduction of juvenile catches, ii) a deduction of the catch overage from next year's limit, and iii) endeavor to take measures not to increase catches of adult Pacific bluefin.

53. The USA introduced its Pacific bluefin rebuilding programme proposal (NC10-DP-07). As the rebuilding objective, the USA proposed 20% of unfished SSB to be achieved in 10 years. The USA stated that Pacific bluefin tuna is under a very sophisticated assessment, providing substantial information, and that the UNFSA provides that B_{MSY} can be used as a rebuilding target for overfished stock; 20% of unfished SSB is considered to be a reasonable proxy of B_{MSY}. The USA emphasized that this is not a limited reference point (LRP) but a rebuilding target. The proposal also included a rebuilding strategy that allows dialogue between scientists and managers. The USA queried the fair distribution of conservation burden between east and west of the Pacific, and stated that it is flexible about the ratio between two sides of the ocean but it should be based on the impact on the Pacific bluefin stock.

54. Japan commented that the rebuilding target proposed by the USA, of 20% of unfished SSB, is too optimistic and unrealistic because the ISC projection demonstrated that the stock will not recover to that level if the current low recruitment trend persists. Also, Japan stated that the change in the definition of juvenile would cause a great deal of confusion because the current definition has been used for several years, and ISC analyses and domestic measures are based on the current definition, which is less than 30 kg.

55. The USA commented that the definition of juvenile can be maintained with the understanding that this is a matter requiring further research. With regard to the rebuilding target, the USA stated that the Japanese proposal can be used as an urgent target while the USA's proposal will be discussed again in the future as a candidate for a longer term target.

56. Chinese Taipei commented that Japan's draft CMM is consistent with the scientific advice from the ISC, and expressed its general support for the proposal.

57. Mexico emphasized the necessity of a system to prevent further decline of the stock. It pointed out that NC members so far have not achieved the CMM's aim of reducing the fishing mortality of juvenile Pacific bluefin, and that on the contrary, fishing mortality has increased. Mexico also stressed that the current definition of juvenile, less than 30kg, has no scientific basis and NC should instruct ISC to define juvenile to be included in the measure. Further, Mexico pointed out that "50% reduction" is calculated from the baseline of 2002–2004. If compared with the current catch level, it stands for only 6% reduction. At the same time, it is troubling that Japan has been increasing the number of licensed vessels from 13,000 to 24,000 in recent years.

58. The Chair pointed out that ISC reported the maturity rate to be 20%, 50% and 100% for three–year old, four-year old and five-year old, respectively. Also, he informed the plenary that all of the three-year old Pacific bluefin are matured in the captive environment in his institute, indicating that three-year-old Pacific bluefin can mature in the right environment.

59. In response to Mexico's comment, Japan stated that the reason for low catches in recent years is the combination of low recruitment and the effect of domestic management measures, and emphasized

that the establishment of an upper catch limit is important because it would be effective when there is a larger recruitment.

60. Mexico further remarked that the report should clearly state that the Japanese proposal is only for a 6% reduction from the level of recent years.

61. The chair emphasized that whatever the baseline is, the important thing is that the ISC predicts that the stock will recover at that harvest level. The USA concurred with the view of the chair, stating that a 50% reduction from the 2002–2004 level and a 6% reduction from the current level are equivalent, and ISC projects recovery at that level.

62. An intervention from WWF, the Pew Charitable Trusts, and Greenpeace highlighted the importance of putting action in place in line with Scenario 6 of the 2014 stock assessment. In particular, it noted the need for mandatory catch limits for adult mortality, in addition to the proposed cuts in juvenile mortality, in order to achieve a meaningful increase in SSB in a timely manner. Further, with respect to a rebuilding target, the intervention noted that the 20% of SSB proposed by the USA should be considered the minimum. The rebuilding target proposed by Japan leads to only 8% SSB, which is insufficient given the status of the species. Finally, it was noted that unless both regional fisheries management organizations involved in Pacific bluefin management take the full suite of necessary management measures this year, further action such as a trade ban may be necessary.

63. The Chair convened a small group meeting to discuss the draft CMM on Pacific bluefin based on the proposal by Japan.

64. After several rounds of informal discussion, the Chair presented the revised proposal.

65. Korea stated that the conservation burden should be shared among CCMs in an equivalent manner, taking into account what would be the most beneficial when the stock recovers, and requested that one sentence be inserted to allow flexibility in how to achieve the required reduction when there is a bilateral agreement. Korea expressed a strong opposition to a uniform reduction, indicating that Japan caught 85% and Korea caught 15% of the juvenile Pacific bluefin tuna during the base years, and stated that these rates should be applied for allocating juvenile catch reductions. However, this suggestion was not agreed on due to the unavailability of a catch limit to be transferred from the counterpart. After more discussion, the proposal was further amended by inserting a paragraph to intensify cooperation among members for effective implementation.

66. **The NC adopted the recommendation of a CMM for the management of Pacific bluefin tuna (Attachment C) for submission to the Commission for its adoption.**

2.3.2 North Pacific albacore

67. Canada introduced its proposal to establish a harvest control rule of North Pacific albacore (NC10-DP-08). Canada explained that it is based on the information provided by ISC, and that it suggests a management objective, reference points, a decision rule, and future work. The proposed management objective is to maintain biomass that allows a recent exploitation rate. LRP is proposed as B_{MSY} or 20% of unfished SSB, which is consistent with tropical tunas. A target reference point is proposed at F=40%SPR. This is based on the ISC report, which stated that the catch at that level will give a probability of 31% to exceed the LRP (20% of unfished SSB) at least once in 10 years. Canada further explained that its decision rule included is a soft one, requiring the NC to take certain actions when the LRP or target

reference point (TRP) is breached. With regard to the USA's proposal, Canada commented that it is a more intense management strategy evaluation (MSE) process but it can be incorporated in the future work of the Canadian proposal.

68. The USA introduced its proposal to IATTC regarding an MSE of North Pacific albacore (NC10-WP-01). The USA shared Canada's view that its proposal can be incorporated when the Canadian proposal is discussed.

69. While generally supporting the establishment of a precautionary management framework for North Pacific albacore, Japan stressed that unlike tropical tunas, recruitment level can vary drastically in temperate tunas (e.g. albacore) affected by environmental changes, and stated that it supports depletion-based reference points over maximum sustainable yield (MSY)-based reference points, although whether the 20% level is appropriate or not needs to be evaluated by ISC. With regard to the TRP, Japan called for very careful consideration given the drastic change in the fishing mortality in the past. It also made a presentation to introduce the target shift of its coastal longline vessels. Due to the poor catch of tropical tunas, those vessels had to change their target to albacore.

70. Chinese Taipei expressed its general support on the proposal but highlighted the need to consider the significant effect of environmental factors on recruitment as indicated in the ISC report.

71. The USA stated that the combination of B-based LRP and F-based TRP is appealing, and MSY-based and depletion-based LRPs, including the specific point of $20\%SB_{F=0}$ level, need to be further discussed. Regarding F-target associated with decision rule, the USA's idea in the proposal could be merged to conduct MSE and establish an appropriate F-target as soon as reasonable. It suggested that the possible outcome from this meeting would be to defer the adoption of a specific F-target and agree to request ISC to start undertaking an MSE, evaluating different F-targets in association with B-LRPs. They supported the basic concept of decision rule but need to further discuss this.

72. Based on its proposal and taking into account the USA's proposal, Canada worked with NC members to revise the precautionary management framework for North Pacific albacore and presented a revised proposal.

73. During the course of the discussion, it was highlighted that there is no common understanding about the definition of MSE, which caused some confusion in the discussion. The ISC chair mentioned that ISC is planning to hold a workshop on MSE in April 2015 to which managers, stakeholders and scientists will be invited. The ISC chair further indicated that the ISC ALBWG was tasked at ISC 14 to begin the MSE process on North Pacific albacore tuna, and noted that a progress report will be presented, and input from managers will be requested at NC11. The NC endorsed the initiative of ISC on MSE for this species, and encouraged its members to promote the participation by managers as well as other stakeholders to the workshop.

74. An intervention was made on behalf of WWF, Greenpeace and the Pew Charitable Trusts, which applauded the steps taken to determine reference points for the Northern Albacore stock before it is in danger of being subject to overfishing. It then noted a couple of clear issues for consideration, including the text from the UNFSA, which indicates there should be a "very low" risk of breaching the LRP; that the text of the LRP rule as currently proposed seems to function as a harvest control rule that would generally operate with a TRP; and that a rebuilding timeline should be reduced from 10 years. Finally, it was noted that it is critical to ensure the full suite of measures is in place such that we do not see something happen to this stock such as has happened to Pacific bluefin tuna.

75. **The NC adopted a decision regarding the precautionary management framework for North Pacific albacore (Attachment D).**

2.3.3 North Pacific swordfish

76. The Chair drew the attention of the NC to the report by ISC regarding the stock status of North Pacific swordfish, which concluded that the stock is not subject to overfishing nor in an overfished state, and suggested to defer the discussion on the management framework of the species after the framework of North Pacific albacore is established, probably until next year. NC members concurred with the Chair's suggestion, and it was decided the discussion would be deferred until the management framework for the North Pacific albacore is completed and then endorsed by the Commission.

2.4 Conservation and management measures for other species

2.4.1 Bigeye, yellowfin and skipjack tunas (CMM 2013-01)

77. Japan expressed its concern regarding the continued declining trend of stocks of tropical tunas, especially bigeye, emphasizing that its SSB breached its biomass limit in 2012. Further, Japan pointed out that the bigeye catch in 2013 was a record high, while fish aggregation device (FAD) activity exceeded that of 2010, the level which SC8 recommended. In addition, the purse-seine capacity in the equatorial region continues to expand and the SC raised concern that high catches in the area could cause a range contraction of skipjack tuna. In fact, it was pointed out that Japanese coastal fishery is suffering a very poor catch of skipjack this year (only 18% of average in two prefectures). Based on this backdrop, Japan called for the NC to send a message of strong concern to the Commission that the failure of the management in the tropical area is causing management problems in the northern area, including the management of northern stocks through unavoidable target shifts from tropical tunas to northern species.

78. The USA generally supported the comment made by Japan and drew attention of the spatial component of the management. The USA pointed out that, not only skipjack, the management in the tropical area is affecting the management of bigeye and yellowfin in the northern area.

79. Chinese Taipei expressed its concern on the continued expansion of the purse-seine fleet and the increase of bigeye and yellowfin catches by the fleet, and supported sending this message to the Commission.

80. **The NC once again expressed its strong concern regarding the plight of tropical tuna stocks not only because those species are being caught in the northern area but also the status of those species could impact management of other species through target shifts.**

2.4.2 North Pacific striped marlin

81. There were no discussions on this item.

2.4.3 Sharks

82. Recalling the discussion in Agenda Item 2.2, the NC expressed its willingness to take the initiative on managing the North Pacific blue shark and **agreed to request the Commission to instruct SC11 to prioritize the work on determination of the designation of North Pacific blue shark as a northern stock, including a prompt establishment of criteria and process for the designation of**

northern stocks. In this regard, the NC requests ISC to provide relevant information for the SC's consideration of this issue at SC11.

2.4.4 Seabirds

83. The USA drew NC members' attention to the fact that, despite the decision at the Commission in 2012, the SC and Technical and Compliance Committee could not evaluate the effect of the exemption of seabird mitigation measure for small-scale vessels because relevant information was not provided by members. **The NC encouraged its members to provide the necessary information as agreed on at the Commission.**

2.4.5 Sea turtles

84. There were no discussions on this item.

AGENDA ITEM 3 — REGIONAL OBSERVER PROGRAMME

85. In order to review the implementation of the Regional Observer Programme (ROP) in the NC area, NC members were requested to report its implementation of ROP at the next NC meeting.

AGENDA ITEM 4 — VESSEL MONITORING SYSTEM

86. There were no discussions on this item.

AGENDA ITEM 5 — DATA

5.1 Review of the status of data and data gaps for northern stocks

87. Once again, the importance of required data submission was highlighted and concerns were expressed over the lack of data submission to ISC by one NC member, China. **The NC agreed to urge China to fulfill its responsibility as an NC member through required data submission and participation at the NC meetings.**

AGENDA ITEM 6 — COOPERATION WITH OTHER ORGANIZATIONS

6.1 ISC

88. The importance of the continued cooperative relationship with ISC was highlighted.

6.2 IATTC

89. In order to have effective management framework for the northern stocks, particularly Pacific bluefin tuna, it was recognized that a continued strengthened relationship with IATTC is necessary.

AGENDA ITEM 7 — FUTURE WORK PROGRAMME

7.1 NC work programme for 2015–2017

90. NC10 revised and adopted its future work programme (Attachment E).

AGENDA ITEM 8 — OTHER MATTERS

8.1 NC administrative arrangements

8.1.1 Secretariat functions and costs

91. There were no discussions on this item.

8.1.2 Rules of procedure

92. There were no discussions on this item.

8.2 Election of officers of the NC

93. M. Miyahara (Japan) and M. Tosatto were nominated as a candidate Chair and a candidate vice Chair of the NC through NC12, respectively, for the Commission's approval.

8.3 Next meeting

94. The USA offered to host NC11 in Hawaii but Japan requested to host the NC11 to enable various domestic stakeholders to observe the important meeting. The USA kindly withdrew its offer and the NC welcomed the offer by Japan. It was agreed that NC11 will be held early September 2015, with specific dates and place to be determined, taking into account the views of other members.

8.4 Other matters

8.4.1 Membership application

95. Fiji expressed its willingness to be a member of NC and advised that it had submitted an application with its catch data to the Secretariat. The NC welcomed Fiji's application. The NC requested the Commission to instruct the SC to review the catch data by SC11. The NC will welcome Fiji as a full member to NC11.

96. The NC noted the possible disclosure of meeting discussions before the conclusion of NC10 by a nongovernmental (NGO) observer to a social network service and agreed to request that NGO to explain the situation. The Chair will report this incident together with the relevant information to the next Commission meeting for its consideration.

AGENDA ITEM 9 — ADOPTION OF THE SUMMARY REPORT OF THE NINTH REGULAR SESSION OF THE NORTHERN COMMITTEE

97. NC10 adopted the Summary Report of its Tenth Regular Session.

AGENDA ITEM 10 — CLOSE OF MEETING

98. The meeting was closed on 4 September 2014.

Attachment A

The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Northern Committee
Tenth Regular Session

Fukuoka, Japan
1–4 September 2014

LIST OF PARTICIPANTS

CHAIR

Masanori Miyahara
Fisheries Agency Government of JAPAN
1-2-1, Kasumigaseki
Chiyoda-ku, Tokyo, Japan
81-3-3502-8459
masamiya@fra.affrc.go.jp

CANADA

Robert P. Jones
Assistant Director, International Fisheries
Fisheries and Oceans Canada
200 Kent Street, Ottawa, Ontario K1E 2L2
1 613 990 9387
robert.jones@dfo-mpo.gc.ca

John Holmes
Research Scientist
Fisheries and Oceans Canada
Pacific Biological Station, 3190 Hammond Bay Road, Nanaimo, BC V9T 6N7
1-250-756-7303
john.holmes@dfo-mpo.gc.ca

COOK ISLANDS

Andrew Jones
Director Offshore Division
Cook Islands Ministry of Marine Resources
Box 85, Rarotonga Cook Islands
682-28721
a.jones@mmr.gov.ck

JAPAN

Hisashi Endo
Head of Delegation (Councillor)
Fisheries Agency Government of Japan
1-2-1, Kasumigaseki, Chiyoda-ku, Tokyo
81-3-3502-8459
hisashi_endo@nm.maff.go.jp

Takashi Koya
Counsellor
Fisheries Agency Government of Japan
1-2-1, Kasumigaseki, Chiyoda-ku, Tokyo
81-3-3502-8459
takashi_koya@nm.maff.go.jp

Yujiro Akatsuka
Assistant Director
Fisheries Agency Government of Japan
1-2-1, Kasumigaseki, Chiyoda-ku, Tokyo
81-3-3502-8459
yuujirou_akatsuka@nm.maff.go.jp

Kenji Maki
Fisheries Agency Government of Japan
1-2-1, Kasumigaseki, Chiyoda-ku, Tokyo
81-3-3502-8459
kenji_maki@nm.maff.go.jp

Satoshi Kimura
Fisheries Agency Government of Japan
1-2-1, Kasumigaseki, Chiyoda-ku, Tokyo, JAPAN
81-3-3502-8459
satoshi_kimura@nm.maff.go.jp

Mako Iioka
Fisheries Agency Government of Japan
1-2-1, Kasumigaseki, Chiyoda-ku, Tokyo
81-3-3502-8459
mako_iioka@nm.maff.go.jp

Nabi TANAKA
Official
Fishery Division, Ministry of Foreign Affairs of Japan
Chiyoda-ku Kasumigaseki 2-2-1, Tokyo
81-3-5501-8000
nabi.tanaka@mofa.go.jp

Sawaoka Masaki
Director
Agricultural and Marine Products Office,
Ministry of economy, Trde and Industry
1-3-1 Kasumigaseki, Chiyoda-ku,Tokyo
81-3-3501-0532
sawaoka-masaki@meti.go.jp

Daisuke Kadowaki
Assistant director
Agricultural and Marine Products Office,
Ministry of economy, Trade and Industry
1-3-1 Kasumigaseki, Chiyoda-ku,Tokyo
81-3-3501-0532
kadowaki-daisuke@meti.go.jp

Hideaki Yokoo
Fisheries Coordination Office(Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2003

Seiji Kawaguchi
Fisheries Coordination Office (Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2003

Junji Maruoka
Fisheries Coordination Office (Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2003

Kazuhiro Kobayashi
Fisheries Coordination Office(Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2004

Hideo Sato
Fisheries Coordination Office(Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2004

Shuichi Sato
Fisheries Coordination Office (Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2004

Katsumi Tomita
Fisheries Coordination Office (Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2004

Tadakatsu Nagaoka
Fisheries Coordination Office (Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2004

Masaharu Horie
Fisheries Coordination Office (Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2004

Tadashi Okamoto
Fisheries Coordination Office (Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2004
tadashi_okamoto@gcks.maff.go.jp

Shinpei Uchino
Fisheries Coordination Office (Kyusyu)
8-1 Nakahama-chyo, Hakata-ku, Fukuoka-shi,
Fukuoka prefecture
81-92-273-2004

Kazuki Hirohata
Fukuoka Prefectural Government
7-7 Higashikouen, Hakata-ku,
Fukuoka-shi, Fukuoka prefecture
81-92-643-3556
hirohata-k5889@pref.fukuoka.lg.jp

Satoru Totsuka
Nagasaki Prefectural Government
2-13 Edo-machi, Nagasaki-shi,
Nagasaki prefecture
81-95-895-2825

Hitoshi Honda
Deputy Director-General
National Research Institute of Far Seas Fisheries
5-7-1, Orido, Shimizu,
Shizuoka 424-8633
81-54-336-6035
hhonda@affrc.go.jp

Hiroyuki Shimada
Director, Pacific Bluefin Division
National Research Institute of Far Seas Fisheries
5-7-1, Orido, Shimizu, Shizuoka 424-8633
81-54-336-6035
shimada@affrc.go.jp

Yukio Takeuchi
Chief Researcher
National Research Institute of Far Seas Fisheries
5-7-1, Orido, Shimizu, Shizuoka 424-8633
81-54-336-6035
yukiot@fra.affrc.go.jp

Shuya Nakatsuka
Research Coordinator
National Research Institute of Far Seas Fisheries
5-7-1, Orido, Shimizu, Shizuoka 424-8633
81-54-336-6035
snakatsuka@affrc.go.jp

Kazuhiro Oshima
Senior Researcher
National Research Institute of Far Seas Fisheries
5-7-1, Orido, Shimizu, Shizuoka 424-8633
81-54-336-6035
oshimaka@affrc.go.jp

Yasuhiro Horinouch
OFCF
Toranomon 30 Mori Bldg, 2-2, Toranomon 3,
Minato-ku, Tokyo
81-3-6895-5383

Yoshihiro Kitazato
Assistant Director, OFCF
Toranomon 30 Mori Bldg, 2-2, Toranomon 3,
Minato-ku, Tokyo
kita@ofcf.or.jp

Osamu Shirakawa
Corporate Adviser
Taiyo A & F Co., Ltd.
4-5 Toyomi-cho Chuo-ku,Tokyo
81-3-6220-1250
o-shirakawa@maruha-nichiro.co.jp

Meiko Kawahara
Manager
Taiyo A & F Co., Ltd.
4-5 Toyomi-cho Chuo-ku, Tokyo
81-3-6220-1263
m-kawahara@maruha-nichiro.co.jp

Go Fujikawa
Manager, Goto Office
Taiyo A & F Co., Ltd.
1475-2, Hirazo-cho, Goto-shi, Nagasaki
81-959-73-0871
tafcogoto@vc.fctv-net.jp

Kouken Tsuya
Manager, Yuya Office
Taiyo A & F Co., Ltd.
2066-70, Aota, Mukatsukushimo, Yuya
Nagato-shi, Yamaguchi
81-837-34-5858
jtf-yuya@tuba.ocn.ne.jp

Susumu Oikawa
President
Shimonoseki Fishery Co.,Ltd.
1-16-1,Yamato-Machi
Shimonoseki-shi, Yamaguchi
81-83-268-0606
shimonoseki-fishery@rose.ocn.ne.jp

Masatoshi Oyama
Manager
Shimonoseki Fishery Co., Ltd.
1-16-1,Yamato-Machi
Shimonoseki-shi, Yamaguchi
81-83-268-0606
yamaguchimaru@mirror.ocn.ne.jp

Takeshi Sato
Manager
Fukuichi Fisheries Co., Ltd
5-9-25, Nakaminato,Yaizu-shi, Shizuoka
81-54-627-1211
ta-satoh@fukuichi.gr.jp

Junichi Mizugashira
Director
Kaneibussan Co., Ltd.
9-22, Daikoku-machi, Nagasaki
81-95-828-8692
makiami@kaneko.gr.jp

Chihiro Kino
Advisor
Japan Far Seas Purse Seine Fishing Association
14-10, Ginza 1-Chome, Chuo-ku, Tokyo
81-3-3564-2315
japan@kaimaki.or.jp

Mitsunori Murata
Secretariat
National Ocean Tuna Fishiery Association
7th Floor, Co-op Bldg, 1-1-12 Uchikanda,
Chiyoda-ku, Tokyo
81-3-3294-9634
mi-murata@zengyoren.jf-net.ne.jp

Satoru Shimizu
Secretariat
National Ocean Tuna Fishiery Association
7th Floor, Co-op Bldg, 1-1-12 Uchikanda
Chiyoda-ku, Tokyo
81-3-3294-9634
s-shimizu@zengyoren.jf-net.ne.jp

Noriyuki Miki
President, National Offshore Tuna Fisheries
Association of Japan
Tohan No.3 Bldg. 1-3-1, Uchikanda
Chiyoda-Ku, Tokyo
81-3-3295-3721
zenkinjp@kinkatsukyo.or.jp

Yoshihiro Notomi
Managing Director, National Offshore Tuna
Fisheries Association of Japan
Tohan No.3 Bldg. 1-3-1, Uchikanda
Chiyoda-Ku, Tokyo
81-3-3295-3721
zenkinjp@kinkatsukyo.or.jp

Kazushige Hazama
Chief, National Offshore Tuna Fisheries
Association of Japan
Tohan No.3 Bldg. 1-3-1, Uchikanda
Chiyoda-Ku, Tokyo
81-3-3295-3721
zenkinjp@kinkatsukyo.or.jp

Eihachiro Matsuzawa
Vice President
Kochi Offshore Tuna Fisheries Association
1-6-21, Hon-Machi, Kochi-Shi, Kochi-Ken
81-88-823-1365

Eiji Yanagihara
Kochi Offshore Tuna Fisheries Association
1-6-21, Hon-Machi, Kochi-Shi
Kochi-Ken
81-88-823-1365

Katsuhide Nakata
Vice President
Kochi Offshore Tuna Fisheries Association
1-6-21, Hon-Machi, Kochi-Shi, Kochi-Ken
81-88-823-1365

Teruo Myojin
Kochi Offshore Tuna Fisheries Association
81-88-823-1365

Tadayuki Nimura
President, Hotojima Tuna Longline Association
1520-2, Oaza-Hotojima, Tsukumi-Shi, Oita-Ken
81-972-87-2059

Masahiro Kanzaki
Executive Director
Hotojima Tuna Longline Association
1520-2, Oaza-Hotojima, Tsukumi-Shi
Oita-Ken
81-972-87-2059

Masakatsu Irei
President
Okinawa Tuna Fisheries Association
1-1-18, Minato-Machi, Naha-Shi
Okinawa-Ken
81-98-951-3546

Hidefumi Kawamoto
San-In Purse Seine Fisheries Cooperative
2-23, Showamachi,Sakaiminato-shi
Tottori
81-859-42-6381
kawamoto@sannmaki.jp

Makoto Hotai
General Manager
Japan Purse Seiner's Association
81-92-711-6261
makoto-hotai@enmaki.jp

Hiroyuki Suetake
Manager
Japan Purse Seiner's Association
3-11-3 Nagahama Chuo-Ku Fukuoka
81-92-711-6261
hiroyuki-suetake@enmaki.jp

Masao Kawahara
Subsection Chief
Japan Purse Seiner's Association
3-11-3 Nagahama Chuo-Ku Fukuoka
81-92-711-6261
masao-kawahara@enmaki.jp

Toshikatsu Maeda
Adviser
Japan Purse Seiner's Association
3-11-3 Nagahama Chuo-Ku Fukuoka
81-92-711-6261
toshikatsu-maeda@enmaki.jp

Hiroshi Hashizu
Director, Kyowa Fishery Co., Ltd
81-859-44-7171
h-hashizu@kyowacom.co.jp

Tokuju Ito
Chief Executive Officer
Itoshoten Co., Ltd
3-10-1-502 Tenjin Chuo-Ku Fukuoka
81-92-751-7507
tokisaba@viola.ocn.ne.jp

Takenori Okamura
Kinnanshyogi
1-1-10 Higashiyamato-machi, Shimonoseki-shi
Yamaguchi prefecture
81-83-267-7121
kinnan@orange.ocn.ne.jp

Koji Hayashi
Sojitz Tuna-Farm Takashima Corp.
801-4 Takashimachoaouuramen, Matsuura-shi
Nagasaki prefecture
81-955-41-6038
hayashi.koji@sojitz.com

Hiroshi Nishi
Hakozaki Fisheries Cooperative
171 Ashibechos etoura, Iki-shi
Nagasaki prefecture
81-920-45-2350

Tomio Tsukamoto
Gounoura-chyo Fisheries Cooperative
122 Ashibechos etoura, Iki-shi
Nagasaki prefecture
81-920-47-1960
jfikigounoura1960@eos.ocn.ne.jp

Terutaka Ookubo
Katsumoto-chyo Fisheries Cooperative
575-61, Katsumotochokatsum otoura, Iki-shi
Nagasaki prefecture
81-920-42-1180

Kazuo Urata
Ikitoubu-chyo Fisheries Cooperative
1342-14 Ashibechomoroyoshihommurafure
Iki-shi, Nagasaki prefecture
81-920-45-0385

Mitsuyuki Yasunaga
Ishida-chyo Fisheries Cooperative
176 Ishidachoindojiura, Iki-shi
Nagasaki prefecture
81-920-44-5020

Hiroshi Kaneda
Wakamatsu-chyo chuou Fisheries Cooperative
136 Shinkamigotouchowakamatsu
Minamimatsuura-gun, Ngasaki prefecture
81-920-45-0385

Tadashi Kusano
Goto Fisheries Cooperative
Goto-shi, Fukuoka-cho
Japan

Kosuke Kawata
Nagasaki Fisheries Cooperative Associations
2-27 Gotou Machi, Nagasaki-shi
Nagasaki prefecture
81-95-829-2413

Satoshi Kitagawa
Nagasaki Fisheries Cooperative Associations
2-27 Gotou Machi, Nagasaki-shi
Nagasaki prefecture
81-95-829-2413

Kojiro Azuma
Senko Boueki
1-16-27 Otake, Fukuokashihigashi-ku,
Fukuoka prefecture
81-92-292-6663
azuma@azr.co.jp

Minoru Nakamura, Kazunari Ogata, Tomokazu Tomiraga
Katsumoto-chyo Fisheries Cooperative
575-61, Katsumotochokatsumotoura
Iki-shi, Nagasaki prefecture
81-920-42-1180

Jun Machiba
Fishery Policy Dept., National Federation of Fisheries Cooperative Association
Co-Op Bldg.,1-1-12 Uchikanda,Chiyoda-Ku
Tokyo 101-8503
81-3-3294-9617
kokusai-gyosei@r6.dion.ne.jp

KOREA

Jonghwa Bang
Deputy Director
Ministry of Oceans and Fisheries
bjh125@korea.kr

SangChul Yoon
Researcher, National Fisheries Research and Development Institute
216 Gijanghaean-ro, Gijang-eup, Gijang-gun
Busan 619-705
82-51-720-2334
yoonsc75@gmail.com

Youngseok Woo
Assistant Director
Ministry of Oceans and Fisheries
yswoo@korea.kr

Jaehoon Kim
Officer, National Fishery Products Quality Management Services
Ministry of Oceans and Fisheries
106, Haneulmaeul-ro, Ilsandong-gu
Goyang-si, Gyeonggi-do
82 31 929 4662
kkimjaehoon@korea.kr

Mijeong Kim
Officer, National Fishery Products Quality Management Services Pyeongtaek Regional Office
Ministry of Oceans and Fisheries
4F Marine center, 73, Pyeongtaekhangman-gil
Poseung-eup, Pyeongtaek-si, Gyeonggi-do
82 31 8053 7711
maymi@korea.kr

Jihyun Kim
Policy Analyst, Korea Overseas Fisheries Cooperation Institute
KT&G building, Munyero 137
Seogu,Daejon
Tel: +82 42 471 6435
zeekim@ififc.org

Jeong Il Chu
Deputy General Manager
Sajo Industries Co., Ltd
107-39, Tongil-ro, Seodaemun-gu
82-2-3277-1651
mata@sajo.co.kr

CHINESE TAIPEI

Chi-Chao Liu
Section Chief
Fisheries Agency, Council of Agriculture
No.100, Sec.2, Heping W. Rd.,
Zhongzheng District,Taipei
886-2-23835882
chichao@ms1.fa.gov.tw

Shui-Kai Chang
Associate Professor
National Sun Yat-sen University
No. 70, Lienhai Rd., Kaohsiung 80424
skchang@faculty.nsysu.edu.tw

Joseph Chia-Chi Fu
Secretary, OFDC
No.19, Lane 113, Roosevelt Road, Sec.4, Taipei
Joseph@ofdc.org.tw

Joy Hsiang-Yi Yu
Officer, Fisheries Agency, Council of Agriculture
No.100, Sec.2, Heping W. Rd.,
Zhongzheng District,Taipei
886-2-23835879
hsiangyi@ms1.fa.gov.tw

Hui-San Li
Assistant to the Director General
Fukuoka Branch, Taipei Economic and Cultural Office in Osaka
hslee@mofa.gov.tw

Hsiao-Chih Wu
Junior Technical Specialist
Marine Bureau, Kaohsiung City Government
sessfan@kcg.gov.tw

Hsieh Wen Jung
President
Taiwan Tuna Association
wenjung@tuna.org.tw

Lee Kuan Ting
Secretary, Taiwan Tuna Association
simon@tuna.org.tw

UNITED STATES OF AMERICA

Michael D. Tosatto
Regional Administrator
NMFS - Pacific Islands Regional Office
1845 Wasp Blvd., Bldg 176
Honolulu, HI 96818
1-808-725-5001
michael.tosatto@noaa.gov

Christopher Dahl
Staff Officer
Pacific Fishery Management Council
7700 NE Ambassador Pl., Ste 101
Portland, OR 97220
1-503-820-2422
kit.dahl@noaa.gov

Charles Farwell
Manager for Conservation Research HMS
Monterey Bay Aquarium
886 Cannery Row
Monterey, CA 93940
1-831-648-4826/ 831-594-7824 (cell)
cfarwell@mbayaq.org

Alyson Fleming
Foreign Affairs Officer
US Department of State
flemingah@state.gov

Svein Fougner
Consultant and Policy Advisor
Hawaii Longline Association
32506 Seahill Drive
Rancho Palos Verdes, CA 90275
1-310-377-2661
sveinfougner@cox.net

Thomas Graham
Fishery Policy Analyst
NMFS - Pacific Islands Regional Office
1845 Wasp Blvd., Bldg 176
Honolulu, HI 96818
1-808-725-5032
tom.graham@noaa.gov

Mark Helvey
West Coast Region HMS
NOAA - National Marine Fisheries Service
501 W. Ocean Blvd., Ste. 4200
Long Beach, CA 90802
1-562-980-4040
mark.helvey@noaa.gov

Kevin Piner
Research Fishery Biologist
NOAA, Southwest Fisheries Science Center
8901 La Jolla Shores Dr.
La Jolla, CA 92037-1508
1-858-546-5613
kevin.piner@noaa.gov

Samuel Pooley
Science Center Director
NMFS - Pacific Islands Fisheries Science Center
1845 Wasp Boulevard, Building 176
Honolulu, HI 96818
1-808-725-5303
samuel.pooley@noaa.gov

Margaret Spring
VP of Conservation and Science and Chief Conservation Officer, Monterey Bay Aquarium
886 Cannery Row
Monterey, CA 93940
1-831-647-6862
mspring@mbayaq.org

Annie JiYih Yau
Stock Assessment Scientist
NOAA Fisheries, Pacific Islands Fisheries Science Center
1845 Wasp Boulevard, Building 176
Honolulu, HI 96818
1-808-725-5350
annie.yau@noaa.gov

VANUATU

William Naviti
Acting Director, Fisheries Department
VMB 9045
Port Vila
Ph: 678-23119; Fax: 678-23641
wnaviti@gmail.com

Yvon Basil
Acting Director, Department of Foreign Affairs
PMB 9051
Port Vila
Ph: 678-533870, Fax: 23142
ybasil@vanuatu.gov.vu

Kevin Lin
Vice General Manager
Ming Dar Fishery (Vanuatu) Co., Ltd.
Room 309 No.3, Yu Kang East 2nd Road
Chien Chen District Kaohsiung City Taiwan
886-7-8214510
kevin.mdfc@msa.hinet.net

Chu-Lung Chen
President
Ming Dar Fishery (Vanuatu) Co., Ltd.
Room 309 No.3, Yu Kang East 2nd Road
Chien Chen District Kaohsiung City Taiwan
886-7-8214510
kevin.mdfc@msa.hinet.net

OBSERVERS

FIJI

Suresh Chandra
Acting Director Fisheries, Fisheries Department
Ministry of Fisheries & Forests
PO Box 2218
Government Buildings
Suva
Phone: 679-3301011, Mobile: 679-9906913
suresh.fjf@gmail.com

KIRIBATI

Karibanang Tamuera Aram
Principal Fisheries Officer
Ministry of Fisheries and Marine Resources Development
aramkt@gmail.com

MARSHALL ISLANDS

Maria Sahib
International Fisheries Policy Analyst
Marshall Islands Marine Resource Authority
Oceanic Fisheries Division
PO Box 860, Delap Road,
Majuro, MH 96960
sahib.maria@gmail.com

MEXICO

Michel Dreyfus
Researcher
INAPESCA
Carretera Tijuana-Ensenada km 97.5
El Sauzal de Rodriguez, CP 22760
Ensenada, Baja California
dreyfus@cicese.mx

Luis Fleischer
Representative of CONAPESCA
in the Mexican Embassy Washington, DC.
1911 Pennsylvania Ave., NW, 7th Floor
Washington, DC 20006
Tel: 1-202-728-1720
lfleischer.sagarpausa@verizon.net
lfleischer21@hotmail.com

NAURU

Camalus Reiyetsi
Monitoring Control Surveillance Officer
Nauru Fisheries and Marine Resources Authority
Uaboe District
674-557-3140; 674-557-3733
camalus.reiyetsi@gmail.com

PALAU

Nannette D. Malsol
Director
Bureau of Oceanic Fishery Management
Ministry of Natural Resources, Environment and Tourism
Koror 96940
dillymalsol@gmail.com

PAPUA NEW GUINEA

Brian Kumasi
Fisheries Management Officer – Tuna
National Fisheries Authority
11th Floor, Deloitte Tower, Douglas Street
Port Moresby
675-3090444
bkumasi@fisheries.gov.pg

TONGA

Vilimo Fakalolo
Deputy Secretary, Fisheries Division
MAFFF
PO Box 871
Nuku'alofa
vilimo.fakalolo@gmail.com;
vilimof@tongafish.gov.to

PACIFIC ISLANDS FORUM FISHERIES AGENCY (FFA)

Wez Norris
Deputy Director-General, FFA
1 FFA Rd.
Honiara Solomon Islands
wez.norris@ffa.int

Ian Freeman
Fisheries Management Adviser, FFA
1 FFA Rd.
Honiara Solomon Islands
677-7525259
ian.freeman@ffa.int

Shunji Fujiwara
Tuna Industrial Advisor
Fisheries Development Division, FFA
1 FFA Road
PO Box 629
Honiara, Solomon Islands
677-21124
shunji.fujiwara@ffa.int

INTERNATIONAL SCIENTIFIC COMMITTEE FOR TUNA AND TUNA-LIKE SPECIES IN THE NORTH PACIFIC OCEAN (ISC)

Gerard DiNardo
Chair
NOAA IRC NMFS/ PIFSC
1845 Wasp Blvd., Bldg 176
Honolulu, HI 96818 USA
1-808-725-5397
Gerard.DiNardo@noaa.gov

Ziro Suzuki
Guest Researcher
National Research Institute of Far Seas Fisheries
5-7-1, Orido, Shimizu
Shizuoka 424-8633, Japan
81-54-336-6035
zsuzuki@affrc.go.jp

AMERICAN FISHERMEN'S RESEARCH FOUNDATION/AMERICAN ALBACORE FISHING ASSOCIATION (AFRF/AAFA)

Peter H. Flournoy
General Counsel
740 North Harbor Drive
San Diego, CA 92101 USA
619-232-0954
phf@international-law-offices.com

GREENPEACE

Wakao Hanaoka
Senior Oceans Campigner
Greenpeace Japan
NF Bldg. 2F, 8-13-11 Nishi-Shinjuku
Shinjuku-ku, Tokyo, Japan
81-3-5338-9800
wakao.hanaoka@greenpeace.org

Kazue Komatsubara
Oceans Campaigner
Greenpeace Japan
NF Bldg.2F, 8-13-11 Nishi-Shinjuku
Shinjuku-ku, Tokyo, Japan
81-3-5338-9800
kazue.komatsubara@greenpeace.org

ORGANIZATION FOR THE PROMOTION OF RESPONSIBLE TUNA FISHERIES (OPRT)

Daishiro Nagahata
Managing Director, Organization for the Promotion of Responsible Tuna Fisheries
9F Sankaido Bldg. 9-13
Akasaka 1-chome, Minato-ku, Tokyo, Japan
81-3-3363-6388
nagahata@oprt.or.jp

THE PEW CHARITABLE TRUSTS

Amanda Nickson
Director, Global Tuna Conservation
Pew Charitable Trusts
901 E St NW
Washington, DC 20004 USA
1-202-540-6528
anickson@pewtrusts.org

Winnie Lau
Officer, International Ocean Policy
The Pew Charitable Trusts
901 E Street NW
Washington DC 20004 USA
1-202-540-6926
wlau@pewtrusts.org

Jamie Gibbon
Senior Associate, Global Tuna Conservation Campaign
The Pew Charitable Trusts
901 E Street NW, 3rd Floor
Washington, DC 20004 USA
1-202-540-6447
jgibbon@pewtrusts.org

US–JAPAN RESEARCH INSTITUTE (USJI)

Ayako Okubo
Researcher, USJI
Tokai Univ. 3-20-1 Orido
Shimizu, Shizuoka, Japan
okubo@tokai-u.jp

Isao Sakaguchi
Professor, USJI
Gakushuin University, 1-5-1 Mejiro
Toshima-ku, Tokyo 171-8588 Japan
81-3-3983-898
isao.sakaguchi@gakushuin.ac.jp

Hiroshi Ohta
Professor, USJI
1-6-1 Nishi-Waseda, Shinjuku-ku, Tokyo, Japan
81-3-5286-1728
h-ohta@y.waseda.jp

Mari Koyano
Researcher, USJI
c/o Faculty of Law, Hokkaido University,
Nishi7, Kita 9, Kita-ku, Sapporo
81-11-706-3948
koyano@juris.hokudai.ac.jp

Atsushi Ishii
Researcher, USJI
73-2, Aza-oohara, Nagafukuro, Akiu-machi,
Taihaku-ku, Tohoku University
81-22-795-6076
ishii@cneas.tohoku.ac.jp

Takeo Horiguchi
Researcher, USJI
htakeo0729@yahoo.co.jp

Toshio Katsukawa
Associate Professor, Mie University
katukawa@gmail.com

Yasuhiro Sanada
Researcher, USJI
The Ohara Institute for Social Research
Hosei University, 4342
Aihara-Machi Machida-Shi
Tokyo, 194-0298, Japan
81-0-42-783-2307
sanappie@wd6.so-net.ne.jp

Hiroshi Kashihara
Researcher, USJI

WORLD WIDE FUND FOR NATURE (WWF)

Aiko Yamauchi
Japan - WWF
Shiba3-1-14
Minato-ku Tokyo, Japan
81-3-3769-1713
ayamauchi@wwf.or.jp

WCPFC SECRETARIAT

Charles Karnella
WCPFC Chair and International Fisheries Administrator
NMFS - Pacific Islands Regional Office
1845 Wasp Blvd., Bldg 176
Honolulu, HI 96818
1-808-725-5030
charles.karnella@noaa.gov

SungKwon Soh
Science Manager
Western and Central Pacific Fisheries Commission
Kaselehlie Street
PO Box 2356
Pohnpei, FSM 96941
691-320-1992/1993
sungkwon.soh@wcpfc.int

Attachment B

The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean
Northern Committee
Tenth Regular Session
Fukuoka, Japan
1–4 September 2014

AGENDA

WCPFC-NC10-2014/02

AGENDA ITEM 1 OPENING OF MEETING

1.1 Welcome
1.2 Adoption of agenda
1.3 Meeting arrangements

AGENDA ITEM 2 CONSERVATION AND MANAGEMENT MEASURES

2.1 Report from the Fourteenth Meeting of the International Scientific Committee
2.2 Report of the Tenth Regular Session of the Scientific Committee
2.3 Conservation and management measures for the northern stocks
  2.3.1 Pacific bluefin tuna (CMM 2013-09)
  2.3.2 North Pacific albacore (CMM 2005-03)
  2.3.3 North Pacific swordfish
2.4 Conservation and management measures for other stocks
  2.4.1 Bigeye, yellowfin and skipjack tunas (CMM 2013-01)
  2.4.2 North Pacific striped marlin (CMM 2010-01)
  2.4.3 Sharks (CMM 2010-07, CMM 2011-04, CMM 2012-04 and CMM 2013-08)
  2.4.4 Seabirds (CMM 2012-07)
  2.4.5 Sea turtles (CMM 2008-03)

AGENDA ITEM 3 REGIONAL OBSERVER PROGRAMME

AGENDA ITEM 4 VESSEL MONITORING SYSTEM

AGENDA ITEM 5 DATA

5.1 Review of the status of data and data gaps for northern stocks

AGENDA ITEM 6 COOPERATION WITH OTHER ORGANIZATIONS

6.1 ISC
6.2 IATTC

AGENDA ITEM 7 FUTURE WORK PROGRAMME

7.1 Work Programme for 2015–2017

AGENDA ITEM 8 OTHER MATTERS

8.1 Administrative arrangements for the Committee
  8.1.1 Secretariat functions and costs
  8.1.2 Rules of Procedure
8.2 Election of officers of the Northern Committee
8.3 Next meeting
8.4 Other business
  8.4.1 Membership application

AGENDA ITEM 9 ADOPTION OF THE SUMMARY REPORT OF THE TENTH REGULAR SESSION OF THE NORTHERN COMMITTEE AND RECOMMENDATIONS TO THE COMMISSION

AGENDA ITEM 10 CLOSE OF MEETING

Attachment C

The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Northern Committee
Tenth Regular Session

Fukuoka, Japan
1–4 September 2014

[DRAFT] CONSERVATION AND MANAGEMENT MEASURE TO ESTABLISH A MULTI-ANNUAL REBUILDING PLAN FOR PACIFIC BLUEFIN TUNA

The Western and Central Pacific Fisheries Commission (WCPFC):

Recognizing that WCPFC6 adopted Conservation and Management Measure for Pacific bluefin tuna (CMM2009-07) and the measure was revised three times since then (CMM2010-04, CMM2012-06 and CMM2013-09) based on the conservation advice from the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) on this stock;

Expressing grave concern for the latest stock assessment provided by ISC Intercessional Plenary Meeting in March 2014 indicating the following:

- The current (2012) Pacific bluefin tuna biomass level is near historically low levels and experiencing high exploitation rates above all biological reference points except for F_{loss};

- The average recruitment level for the last five years may have been below the historical average level;

- The recently adopted WCPFC CMM 2013-09 and IATTC resolution for 2014 (C-13-02), if continued in to the future, are not expected to increase spawning stock biomass (SSB) if recent low recruitment continues;

- If the low recruitment of recent years continues, the risk of SSB falling below its historically lowest level observed would increase;

- Further substantial reductions in fishing mortality and juvenile catch over the whole range of juvenile ages should be considered to reduce the risk SSB falling below its historically lowest level; and

- Monitoring of recruitment should be strengthened to allow the trend of recruitment to be understood in a timely manner,

Recognizing the importance of development of reference points for conservation and management of Pacific bluefin tuna in 2014; and

Further recalling that paragraph (4), Article 22 of the WCPFC Convention, which requires cooperation between the Commission and the IATTC to reach agreement to harmonize CMMs for fish stocks such as Pacific bluefin tuna that occur in the convention areas of both organizations;

Adopts, in accordance with Article 10 of the WCPFC Convention that:

General Provision

1. The Commission Members, Cooperating Non-Members and participating Territories (hereinafter referred to as CCMs) shall implement a provisional Multi-Annual Rebuilding Plan for Pacific bluefin tuna starting in 2015, with the initial goal of rebuilding the SSB to the historical median (42,592 t) within 10 years with at least 60% probability. Implementation and progress of this plan shall be reviewed based on the results of stock assessments and SSB projections to be conducted by ISC in 2016 and every three years thereafter. For this purpose, the ISC is requested to update the SSB projections for the harvest scenarios previously recommended by the WCPFC, along with any additional scenarios recommended by the Northern Committee. This CMM shall be amended if necessary upon such review.

2. The Northern Committee shall consider and develop reference points and harvest control rules for the long-term management of Pacific bluefin tuna at its meetings in 2015 and 2016. In light of the progress of this work, the provisional Multi-Annual Rebuilding plan provided in paragraph 1.shall be reviewed and, if necessary to rebuild the stock to a level consistent with the long-term management framework for the stock, amended in 2016.

Management measures

3. CCMs shall take measures necessary to ensure that:

(1) Total fishing effort by their vessel fishing for Pacific bluefin tuna in the area north of the 20° N shall stay below the 2002–2004 annual average levels.

(2) All catches of Pacific bluefin tuna less than 30 kg shall be reduced to 50% of the 2002–2004 annual average levels. Any overage of the catch limit shall be deducted from the catch limit for the following year.

4. CCMs shall take every possible measure not to increase catches of Pacific bluefin tuna 30 kg or larger from the 2002–2004 annual average levels.

5. CCMs shall report their 2002–2004 baseline fishing effort and <30 kg and >=30 kg catch levels for 2013 and 2014, by fishery, as referred to in the preceding two paragraphs, to the Executive Director by 31 July 2015. CCMs shall also report to the Executive Director by 31 July each year their fishing effort and <30 kg and >=30 kg catch levels, by fishery, for the previous year, accounting for all catches, including discards. The Executive Director will compile this information each year into an appropriate format for the use of the Northern Committee.

6. CCMs shall intensify cooperation for effective implementation of this CMM, including juvenile catch reduction.

7. CCMs, in particular those catching juvenile Pacific bluefin tuna, shall take measures to monitor and obtain prompt results of recruitment of juveniles each year.

8. Consistent with their rights and obligations under international law, and in accordance with domestic laws and regulations, CCMs shall, to the extent possible, take measures necessary to prevent commercial transaction of Pacific bluefin tuna and its products that undermine the effectiveness of this CMM, especially measures prescribed in the paragraph 3 above. CCMs shall cooperate for this purpose.

9. CCMs shall cooperate to establish a catch documentation scheme (CDS) to be applied to Pacific bluefin tuna as a matter of priority.

10. CCMs shall also take measures necessary to strengthen data collecting system for Pacific bluefin tuna fisheries in order to improve the data quality and timeliness of all the data reporting;

11. CCMs shall report to Executive Director by 31 July annually measures they used to implement paragraphs 3, 4, 5, 7, 8, 10 and 13 of this CMM. CCMs shall also monitor the international trade of the products derived from Pacific bluefin tuna and report the results to Executive Director by 31 July annually. The Northern Committee shall annually review those reports CCMs submit pursuant to this paragraph and if necessary, advise a CCM to take an action for enhancing its compliance with this CMM.

12. The WCPFC Executive Director shall communicate this Conservation Management Measure to the IATTC Secretariat and its contracting parties whose fishing vessels engage in fishing for Pacific bluefin tuna and request them to take equivalent measures in conformity with this CMM.

13. To enhance effectiveness of this measure, CCMs are encouraged to communicate with and, if appropriate, work with the concerned IATTC contracting parties bilaterally.

14. The provisions of paragraphs 3 and 4 shall not prejudice the legitimate rights and obligations under international law of those small island developing State Members and participating territories in the Convention Area whose current fishing activity for Pacific bluefin tuna is limited, but that have a real interest in fishing for the species, that may wish to develop their own fisheries for Pacific bluefin tuna in the future.

15. The provisions of paragraph 14 shall not provide a basis for an increase in fishing effort by fishing vessels owned or operated by interests outside such developing coastal State, particularly Small Island Developing State Members or participating territories, unless such fishing is conducted in support of efforts by such Members and territories to develop their own domestic fisheries

Attachment D

The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Northern Committee
Tenth Regular Session

Fukuoka, Japan
1–4 September 2014

PRECAUTIONARY MANAGEMENT FRAMEWORK FOR NORTH PACIFIC ALBACORE

Introduction

At the Sixth Regular Session of the Northern Committee, and consistent with Article VI of the WCPFC Convention, Canada submitted a paper (WCPFC-NC6-DP02) on the development of a precautionary approach based fishery management regime for the northern stocks. Building on this paper, the Seventh Regular Session of the Northern Committee agreed to a three-year work programme to develop a precautionary approach based management framework for North Pacific albacore.

The Ninth Regular Session of the Northern Committee determined that it was best to delay discussions on the framework until the completion of the 2014 North Pacific albacore stock assessment. In July 2014, the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) concluded that the North Pacific albacore stock is "healthy and that current productivity is sufficient to sustain recent exploitation levels, assuming average historical recruitment in both the short and long term". The ISC also provided further advice regarding candidate limit and target reference points.

Based on the advice from the ISC, the Northern Committee (NC) recommends the following precautionary management framework for NP albacore.

1. Management objective

The management objective for the North Pacific albacore fishery is to maintain the biomass, with reasonable variability, around its current level in order to allow recent exploitation levels to continue and with a low risk of breaching the limit reference point.

2. Biological reference points

Based on ISC's 2014 stock assessment advice and following the hierarchical approach adopted by the Commission, North Pacific albacore is to be treated as a Level 2 stock. The following is based on an average recruitment scenario:

- The limit reference point (LRP) for this stock is established at 20%SSB$_{current\ F=0}$.

  This LRP is consistent with the Annex II of the UN Fish Stocks Agreement (UNFSA) and recent WCPFC decisions on LRPs for the three tropical tuna species and South Pacific albacore, where

20%SSBcurrent $_{F=0}$ was adopted. If this point is breached, management actions will be taken to return the stock to a predetermined level as outlined in the subsequent section on Decision Rules. This LRP replaces the current interim limit which was previously established by the NC as $F_{SSB\text{-}ATHL}$.

- The target reference point (TRP) for this stock will be determined following a comprehensive analysis, if appropriate, under a management strategy evaluation (MSE) approach as outlined in section 4 on "Future Work". Historical fishing activity, anticipated fishing activity, and the source of increased fishing mortality will also be considered when evaluating a suitable TRP. Socioeconomic factors, as per UNFSA Article 6.3.c., will be further considered. The existing conservation and management measure (CMM) for the stock (WCPFC 2005-03) establishes through limits on current effort an overall management regime for the stock.

3. Decision rules

NC recommends a management strategy for the stock that ensures that the risk of the biomass decreasing below the LRP is low.

LRP rule: In the event that, based on information from ISC, the spawning stock size decreases below the LRP at any time, NC will, at its next regular session or intersessionally if warranted, adopt a reasonable timeline, but no longer than 10 years, for rebuilding the spawning stock to at least the LRP and recommend a CMM that can be expected to achieve such rebuilding within that timeline. NC will take into account historical fishing activity and the source of increased fishing mortality when developing management strategies to rebuild the stock, including in establishing effort reductions. NC will further consider socioeconomic factors, as per UNFSA Article 6.3.c., as well as which NC members, if any, contributed to exceeding the LRP.

4. Future work

This framework shall be reviewed following the 2017 ISC stock assessment of North Pacific albacore. In the interim, NC would support an MSE, if appropriate, for the stock to yield new information that would enhance the robustness of this framework. This framework shall be reviewed following the 2017 ISC stock assessment of North Pacific albacore.

Attachment E

The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Northern Committee
Tenth Regular Session

Fukuoka, Japan
1–4 September 2014

WORK PROGRAMME FOR THE NORTHERN COMMITTEE

Work areas	Objectives	1-year tasks		
	2015–2017	2015	2016	2017
1. Northern stocks		Consider other management options than the existing management measures, if appropriate.		
a. Monitor status; consider management action	Review status and take action as needed for:[1] **North Pacific albacore** Tasks (A)Review members' reports on their implementation of CMM 2005-03. (1)Estimate the proportion of the total catch of albacore in the North Pacific Ocean (in the Convention Area, and/or across the entire	Review members' report as compiled by the Secretariat and identify and rectify shortcomings.	Review the compiled members' reports and identify and rectify shortcomings. (SAME AS LEFT)	Review the compiled members' reports and identify and rectify shortcomings. (SAME AS LEFT)

[1] In the event that the Commission, in accordance with paragraph 5 of Annex I of the Commission Rules of Procedure, adds additional stocks, such as the northern stock of striped marlin, to the list of stocks understood to be "northern stocks", this work programme will be revised to include periodic status reviews and consideration of management action for such stocks.

Work areas	Objectives	1-year tasks		
	2015–2017	2015	2016	2017
	North Pacific Ocean, as appropriate) that is effectively subject to the effort limits mandated in the CMM. (2) Determine how total effort across those fisheries has changed from 2002 through a review of members' reports of annual fishing effort by their vessels "fishing for" North Pacific albacore fisheries.			
	(B)Implement the agreed precautionary approach-based management framework, including: (1)monitor if LRP is breached; (2) establish TRP following MSE; (3) recommend any changes to CMM 2005-03.	Monitor SSB against LRP. Start consideration of Task (B)(2). Support ISC MSE Workshop.	Complete Task (B)(2).	Recommend any necessary changes to CMM 2005-03 (Task(B)(3)).
	<u>Pacific bluefin tuna</u>	Review reports from CCMs on their domestic management measures and trade.	Obtain and review an assessment in accordance with the preliminary rebuilding program and consider emergency measures in case of recruitment drop and, as appropriate, CDS.	
	Establish a precautionary-approach based management	Start consideration of Task (1) and (2).	Develop the management framework and recommend	

Work areas	Objectives	1-year tasks		
	2015–2017	2015	2016	2017
	framework, including: (1) recommend appropriate reference points; (2) agreeing in advance to actions that will be taken in the event each of the particular limit reference points is breached (decision rules); (3) recommend any changes to the rebuilding program and CMM. **<u>Swordfish</u>** Establish a precautionary-approach based management framework, including: (1) recommend appropriate reference points; (2) agreeing in advance to actions that will be taken in the event each of the particular limit reference points is breached (decision rules). **<u>Striped marlin</u>** (if agreed on by the Scientific Committee and Commission).	 Finalize interim management objective and reference points in light of the ISC2014 stock assessment. Review the ISC stock assessment and implementation of applicable CMM.	any changes to the rebuilding program and CMM (Task (1) – (3)).	 Obtain and review a full assessment and consider appropriate management action.
b. Data	Achieve timely submission of complete data needed for assessments, formulation of measures, and review of Commission decisions.	CCMs participating in the NC submit complete data on fisheries for northern stocks to the Commission.	CCMs participating in the NC submit complete data on fisheries for northern stocks to the Commission.	CCMs participating in the NC submit complete data on fisheries for northern stocks to the Commission.

Work areas	Objectives	1-year tasks		
	2015–2017	2015	2016	2017
	Consider systems to validate catch data	Encourage submission to Commission of Pacific bluefin tuna, North Pacific albacore, North Pacific striped marlin, and swordfish data from all CCMs and make available to ISC.	Encourage submission to Commission of Pacific bluefin tuna, North Pacific albacore, North Pacific striped marlin and swordfish data from all CCMs and make available to ISC.	Encourage submission to Commission of Pacific bluefin tuna, North Pacific albacore, North Pacific striped marlin and swordfish data from all CCMs and make available to ISC.
c. Scientific support	Provide support for scientific studies.	Encourage voluntary contribution for NC's list of priority scientific projects.		
2. Non-target, associated, dependent species				
a. Seabirds	Consider appropriate implementation of methods to minimize catch and mortality.	Review implementation of CMM-2012-07 in the northern area.	Review implementation of CMM-2012-07 in the northern area.	Review implementation of CMM-2012-07 in the northern area.
b. Sea turtles	Consider appropriate implementation of methods to minimize catch and mortality.	Review mitigation research results and consider management action.	Review mitigation research results and consider management action.	Review mitigation research results and consider management action.
c. Sharks	Consider appropriate implementation for CMM-2010-07 in the northern area.	Review scientific advice from ISC, if any, and consider management options on two shark species (blue shark and mako shark). Encourage submission of all shark data to ISC.	Review scientific advice from ISC, if any, and consider management options on two shark species (blue shark and mako shark). Encourage submission of all shark data to ISC.	Review scientific advice from ISC, if any, and consider management options on two shark species (blue shark and mako shark). Encourage submission of all shark data to ISC.

Work areas	Objectives	1-year tasks		
	2015–2017	2015	2016	2017
3. Review effectiveness of decisions	Annually review effectiveness of conservation and management measures and resolutions applicable to fisheries for northern stocks.	Review effectiveness of North Pacific albacore measure (CMM 2005-03), including members' reports on their interpretation and implementation of fishing effort control. Review effectiveness of Pacific bluefin tuna measure.	Review effectiveness of North Pacific albacore measure (CMM 2005-03), including members' reports on their interpretation and implementation of fishing effort control. Review effectiveness of Pacific bluefin tuna measure.	Review effectiveness of North Pacific albacore measure (CMM 2005-03), including members' reports on their interpretation and implementation of fishing effort control. Review effectiveness of Pacific bluefin tuna measure.
4. ROP(Paragraph 9, Attachment C of CMM2007-01)		Review implementation of ROP for fishing vessels operating in north of 20°N.	Review implementation of ROP for fishing vessels operating in north of 20°N.	Review implementation of ROP for fishing vessels operating in north of 20°N.
5. VMS		Review implementation of VMS for fishing vessels operating in north of 20°N.	Review implementation of VMS for fishing vessels operating in north of 20°N. .	Review implementation of VMS for fishing vessels operating in north of 20°N.
6. Cooperation with other organisations				
a. ISC		Consider action to support ISC.	Consider action to support ISC.	Consider action to support ISC.
b. IATTC	Following Article 22.4, consult to facilitate consistent management measures throughout the respective ranges of the northern stocks.	Have consultation to maintain consistent measures for North Pacific albacore and Pacific bluefin tuna.	Have consultation to maintain consistent measures for North Pacific albacore and Pacific bluefin tuna.	Have consultation to maintain consistent measures for North Pacific albacore and Pacific bluefin tuna.

Table abbreviations:
CDS = catch documentation scheme
CMM= conservation and management measure
IATTC = Inter-American Tropical Tuna Commission
ISC = International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean
LRP = limited reference point
MSE = management strategy evaluation
NC = Northern Committee
ROP = Regional Observer Programme
TRP = target reference point
VMS = vessel monitoring system