

Northern Committee Fourth Regular Session

Tokyo, Japan 9–11 September 2008

SUMMARY REPORT

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NORTHERN COMMITTEE FOURTH REGULAR SESSION

Tokyo, Japan 9–11 September 2008

SUMMARY REPORT

AGENDA ITEM 1 — OPENING OF MEETING

1. The Fourth Regular Session of the Northern Committee (NC4) took place in Tokyo, Japan from 9–11 September 2008. The meeting was attended by members from Canada, China, Cook Islands, Japan, Republic of Korea, Philippines, Chinese Taipei, United States of America (USA) and Vanuatu. The list of meeting participants including observers is included in Attachment A.

1.1 Welcome

2. Masanori Miyahara, Chair of the Northern Committee, opened the meeting and welcomed participants.

1.2 Adoption of agenda

3. The provisional agenda was adopted without any amendments (Attachment B). The documents that supported the meeting are posted on the WCPFC website.

1.3 Meeting arrangements

4. Japan, as a host, briefed the meeting arrangements.

AGENDA ITEM 2 — CONSERVATION AND MANAGEMENT MEASURES

2.1 Report from the 8th International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean

5. Gary Sakagawa, Chairman of the ISC, introduced the ISC8 report to the NC4. He summarized ISC accomplishments during the 2007–2008 year and provided a status report of stock assessment works, described the new focus for ISC's bycatch research, and provided results of analysis on the geographic center of striped marlin abundance in the North Pacific Ocean. He summarized the ISC's

conservation advice as follows:

- 1) North Pacific albacore advice from ISC7 still holds. F should not be increased from the current level (F=0.75, based on 2002–2004);
- 2) Current (2002–2004) F for Pacific bluefin tuna must not be increased;
- 3) Striped marlin advice from ISC7 still holds. F should be reduced from the current level (2003 or before); and
- 4) No advice for swordfish because a full stock assessment has not yet been completed.

A summary of his presentation is in Attachment C.

2.1.1 North Pacific albacore

6. Ray Conser, chair of the ISC Albacore Working Group, reported on: i) the stock status of the North Pacific albacore (NPALB); ii) the working group's current conservation advice; iii) preparations for the next stock assessment; and iv) the status of research on biological reference points. The last NPALB stock assessment was completed in December 2006, using fisheries data through 2005. This assessment was qualitatively updated in July 2008. The next full assessment is scheduled for March 2010. Progress toward completion of the next assessment is good. However, progress on biological reference points has been hampered by outdated biological information for NPALB (i.e. growth rates and maturity schedules). The working group has completed a proposal for updating the biological information that, if funded, should considerably advance the progress on biological reference points. A summary of his presentation is in Attachment D.

2.1.2 Pacific bluefin tuna

7. Yukio Takeuchi (Japan) presented the results of the Pacific bluefin tuna stock assessment conducted in 2008 and provided conservation advice for the stock. In summary, ISC highlighted the importance of not increasing fishing mortality from the current level, based on results of the stock assessment with regard to the current F relative to potential limit and target reference points. He also presented the work plan of Pacific Bluefin Tuna Working Group between now and ISC9. A summary of his presentation is in Attachment E.

2.1.3 North Pacific swordfish

8. Gary Sakagawa reported that the ISC Billfish Working Group is making progress towards completing a swordfish stock assessment in 2009.

2.1.4 North Pacific striped marlin

9. Gary Sakagawa gave an overview of stock structure and fishery information used for stock assessment of North Pacific striped marlin. No new stock assessment was conducted in 2008, so the previous conservation advice holds. He also presented the analysis of the center of distribution of the stock biomass for the central and western North Pacific Ocean. The analysis indicated that the majority (two-thirds) of the estimated biomass of striped marlin occurs north of 20°N in the western and central North Pacific Ocean. A summary of his presentation in relation to North Pacific striped marlin is in Attachment C.

2.1.5 Other issues arising from the ISC

- 10. Naozumi Miyabe (Japan) provided a presentation on ISC data concerns, including discussion points and decisions that took place at the 7th STATWG meeting held from 19–21 July. All members were represented at the meeting except China, the Inter-American Tropical Tuna Commission (IATTC), the Food and Agriculture Organization of the United Nations (FAO), the Secretariat of the Pacific Community (SPC) and the North Pacific Marine Science Organization (PICES). The matters discussed included review of annual data submission, data flow, a review of data submission protocols, remaining data gaps, employment of permanent Database Administrator, updates of website and ISC's researcher's webpage. According to these discussions, a work plan was developed.
- 11. Another important subject introduced by Naozumi Miyabe was biological research needs in order to develop new estimates or updated estimates of life history parameters for the ISC assessment works. Although there is no WCPFC budget allocated to ISC activities, several proposals for biological research on albacore and billfish were developed for discussion. In relation to this, ISC has organized a task force to consider designing a multispecies and large-scale biological sampling programme for both age and growth, and maturity studies. A summary of his presentation is in Attachment F.

2.2 Report of the Fourth Regular Session of the Scientific Committee (SC4), 11–22 August 2008, Port Moresby, Papua New Guinea

12. The WCPFC Science Manager, SungKwon Soh, presented a summary report on the outcomes of SC4 in relation to the work of the NC. Four new stock assessments were conducted in 2008 for bigeye tuna, skipjack, South Pacific albacore, and swordfish in the southwest and south-central Pacific. The ISC provided the requested scientific information in relation to an assessment of the geographic center of stock abundance for striped marlin, and the status and conservation advice of the three northern stocks. Several recommendations and findings on various issues related to bycatch mitigation and data gaps were prepared for WCPFC5. One research project to investigate mitigation methods for North Pacific striped marlin was newly included into the 2009 work programme and given a high priority. A summary of presentation is in Attachment G.

2.3 Conservation and management measures for the northern stocks

2.3.1 Northern Pacific bluefin tuna

13. NC4 discussed a draft conservation and management measure (CMM) for Northern Pacific bluefin tuna provided by Japan. The chair invited members to participate in an informal discussion of the draft CMM because there were several concerns on the draft in terms of wording among members. After the informal discussion, the NC reached an agreement on the amended draft CMM with reservation of one member (Attachment H). The member made a statement on this matter (Attachment I). While the reservation is expected to be lifted in time for the Commission meeting in December, the NC may call a brief meeting, if necessary, in the margins of the Commission meeting to resolve the reservation. With this understanding, NC4 recommends that the Commission consider and adopt the attached draft CMM.

2.3.2 North Pacific albacore

- 14. The NC considered a proposal by the USA on the interim management objective and measures for North Pacific albacore to achieve the interim objective. With appreciation to the USA for their effort, the NC discussed the revised USA proposal in an informal discussion group, and adopted the revised proposal (Attachment J). NC4 recommends that the Commission endorse the proposal.
- 15. The USA presented amendments of CMM-2005-03 and their proposal is in Attachment K. NC4 agreed to revisit the proposal at NC5 and requested its members to report to NC5 their interpretation and implementation of fishing effort control for North Pacific albacore as required under CMM-2005-03.

2.3.3 North Pacific swordfish

16. NC4 considered no action for North Pacific swordfish at this meeting because no new scientific information and conservation advice was received from the ISC.

2.4 Conservation and management measures for other species

2.4.1 Bigeye and yellowfin tuna

17. The Chair recalled what happened with regard to the bigeye tuna CMM at the last Commission meeting. The Chair also noted that SC4 recommended a minimum 30% reduction in fishing mortality from the average levels for 2003–2006. While the NC has no jurisdiction to formulate a recommendation for bigeye tuna, the stock is important to the NC. Some members raised a concern on the plausible shift of fishing efforts to the area from south to north of 20°N. NC4 agreed to advise the Commission to note that any excessive fishing effort should not be shifted from one area to another

2.4.2 Sharks

18. NC4 noted the recommendation of SC4 regarding the application of shark measure (CMM-2006-05) to vessels less than 24 m in length.

2.4.3 Seabirds

19. NC4 noted that a discussion on seabirds would be taken up elsewhere in the Commission.

2.5 Working group on striped marlin

- 20. The progress of the NC's working group on striped marlin was reported on by the Science Manager, who served with Ziro Suzuki as co-facilitator of the group. The Commission had requested that the NC form the working group in order to take on a number of specific tasks identified by the NC at NC3, with a view towards developing a draft CMM, with SPC and FFA input, for consideration by the SC at SC4 (see paras 125–126 of the WCPFC4 Summary Report, and para 38 of the NC3 Summary Report).
- 21. In reviewing the progress of the working group, NC4 acknowledged that little progress had been made. It found, however, that the work remained important and that the tasks identified at NC3

were still relevant. The ISC provided a list of fisheries papers containing striped marlin information for use by the striped marlin working group. The NC members agreed to intensify their efforts to contribute to the work of the group, with a view to producing useful results in time to be reviewed by the Commission at WCPFC5. The USA offered to help identify a person that could serve as convener of the group.

2.6 Regional Observer Programme

- 22. NC4 considered the implementation of the Regional Observer Programme (ROP) for fishing vessels exclusively targeting fresh fish in the area north of 20°N in accordance with CMM-2007-01 adopted by Commission.
- 23. NC4 agreed to establish an intercessional email working group, as proposed by Japan, to seek an applicable measure in implementing the ROP in the area. Takumi Fukuda (Japan) was nominated as convener of the group.

AGENDA ITEM 3 — DATA

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

24. The ISC Chair highlighted that the ISC has data and information needs. Information gaps in life history, catch characteristics about size and sex, independent abundance index, catchability, etc. are crucial obstacles to stock assessment. He emphasized research investments and multi-national projects to provide upgraded stock assessment information and requested support from the NC. He also reported on the limited capacity and progress in relation to bycatch issues within the ISC. The new focus for the ISC bycatch issues is described in Attachment C.

AGENDA ITEM 4 — FUTURE WORK PROGRAMME

- 4.1 Work programme for the Northern Committee 2008–2012
- 25. NC4 revised the NC's work programme for 2008–2012 as attached in Attachment L.

AGENDA ITEM 5 — COOPERATION WITH OTHER ORGANIZATIONS

- 5.1 International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC)
- 26. NC4 noted a number of issues raised by SC4 with regard to data and coordination between the ISC and the SC. NC4 requested that the ISC develop, in consultation with the WCPFC Secretariat, a process to address the issues as follows:
 - explore the potential benefits of improving both northern and southern albacore stock assessments through the exchange of stock assessment experiences for Pacific albacore and through collaboration between scientists currently working on assessments;
 - 2) explore procedures for coordinating efforts to close data gaps and for data access to reduce uncertainties in assessments; and
 - 3) consider ways to align its data standards and processes with those adopted for the Commission.

- 27. In relation to data gaps, the ISC requested access to WCPFC's database on catches from non-ISC members that fish for tuna and tuna-like species in the Pacific Ocean north of the equator. The ISC also informed NC4 of its effort to complete a North Pacific swordfish stock assessment in July 2009, and requested the Commission's involvement. The ISC noted that further details for the date and venue of the workshop will be duly informed to the WCPFC Secretariat.
- 28. On behalf of the Commission, NC4 expressed appreciation to the ISC for the provision of valuable scientific information that assists the work of the Commission.

5.2 Inter-American Tropical Tuna Commission

29. The Secretariat noted that a Draft IATTC/WCPFC Agreement on the Exchange of Data was delivered to the IATTC for their review at the Third Consultative Meeting between WCPFC and IATTC in Panama, 27 June 2008. NC4 also appreciated the contribution of the IATTC.

5.3 Review of interim arrangements for scientific structure and functions

30. NC4 noted the Commission's consultancy on the review of the Commission's science structure and functions, and welcomed David Agnew from the Marine Resource assessment Group (MRAG) Ltd. David Agnew briefed NC4 on the progress of MRAG's work, and stated that the final report would be available in April 2009.

AGENDA ITEM 6 — OTHER MATTERS

6.1 Administrative arrangements for the Northern Committee

6.1.1. Secretariat functions and costs

- 31. NC4 deferred further consideration of this agenda item to a future session of the NC.
- 32. In order to respond the ISC's request on research proposals requested by the NC, NC4 agreed to request the Commission at WCPFC5, to establish a separate account for northern species research consisting of two items: albacore research (USD95,000) and data management (USD50,000). Subject to further consideration on the financial allocation, the NC invited any voluntary contribution from NC members to the account.

6.1.2 Rules of Procedure

33. NC4 deferred further consideration of this agenda item to a future session of the NC.

6.2 Next meeting

34. The Fifth Regular Session of the NC will meet in Japan. Tentative schedule will be 8–10 September 2009 in Japan.

6.3 Other business

35. The current chairmanship will be terminated in December and will be elected at WCPFC5 in December 2008.

6.3.1 Driftnet fishing on the high seas in the Convention Area

- 36. The USA and Japan reported that many illegal driftnet fishing activities are conducted on the high seas in the WCPFC Convention Area. The USA also mentioned that target species of the illegal fishing activity shifts from salmon to highly migratory species such as albacore. Some members noted the importance of collaboration among members and of avoidance of duplication on programmes to eliminate illegal fishing.
- 37. NC4 discussed the continued occurrence of, and potential recent increase in, illegal high seas driftnet fishing in the Convention Area. A number of members noted that these vessels appear to be shifting effort from salmon to highly migratory species, such as albacore and swordfish, which are under the jurisdiction of the Commission. National and international initiatives to eliminate high seas driftnet fishing were recognized, as were coordinated enforcement efforts among a number of WCPFC members, including the 1st tripartite meeting in Canada that brought together representatives from the North Pacific Anadromous Fish Commission, the North Pacific Coast Guard Forum, and the WCPFC.
- 38. In an effort to further deter and eliminate high seas driftnet fishing in the Convention Area, NC4 encouraged the Commission to draw attention to the prevalence of these illegal fishing activities and the potential harmful impacts of high seas drift net fishing on WCPFC fisheries resources. Further, NC4 recommended that the Commission adopt a CMM prohibiting high seas driftnet fishing in the Convention Area.
- 39. The USA intends to present a proposal regarding high seas driftnet fishing at WCPFC5 and welcomed participation from other members in the development of such a proposal.

AGENDA ITEM 7 — REPORT TO THE COMMISSION

7.1 Adoption of the report of the Third Regular Session of the Northern Committee and recommendations to the Commission

40. NC4 adopted the Summary Report of its Fourth Regular Session.

AGENDA ITEM 8 — CLOSE OF MEETING

8.1 Closing of meeting

41. The NC chair appreciated participants for the successful conclusion of this meeting. The meeting closed on Thursday, 11 September 2008.



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ATTACHMENTS

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AGENDA FOR THE FOURTH MEETING OF THE NORTHERN COMMITTEE

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 8th ISC
- 2.2 Report of the Fourth Regular Session of the Scientific Committee (SC4)
- 2.3 Conservation and management measures for the northern stocks
 - 2.3.1 Northern Pacific bluefin
 - 2.3.2 North Pacific albacore
 - 2.3.3 North Pacific swordfish
- 2.4 Conservation and management measures for other species
 - 2.4.1 Bigeye and yellowfin tuna
 - **2.4.2 Sharks**
 - 2.4.3 Seabirds
- 2.5 Working Group on Striped Marlin
- 2.6 Regional Observer Programme

AGENDA ITEM 3. DATA

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

AGENDA ITEM 4. FUTURE WORK PROGRAMME

4.1 Work Programme for 2009–2012

AGENDA ITEM 5. COOPERATION WITH OTHER ORGANIZATIONS

- 5.1 ISC
- **5.2 IATTC**
- 5.3 Review of interim arrangements for scientific structure and function

AGENDA ITEM 6. OTHER MATTERS

- 6.1 Administrative arrangements for the Committee
 - 6.1.1 Secretariat functions and costs

6.1.2 Rules of Procedure

- 6.2 Next meeting
- 6.3 Other business
 - 6.3.1 Driftnet fishing on the high seas in the Convention Area

AGENDA ITEM 7. REPORT TO THE COMMISSION

7.1 Adoption of the report of the Fourth Regular Session of the Northern Committee and recommendations to the Commission

AGENDA ITEM 8. CLOSE OF MEETING

8.1 Closing of the meeting

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REPORT OF THE ISC TO NC4

Dr Gary Sakagawa, Chairman of the ISC, introduced ISC's report to NC4, indicated that the ISC was established in 1995 to advance fishery science of North Pacific highly migratory species through partnership, cooperation and collaboration among stakeholders. The process used by the ISC involves joint work by members of working groups during periods between intercessional workshops and review of results and performing stock assessment analyses at intercessional workshops. To promote transparency and quality assurance, a series of three workshops are usually involved in completing a full stock assessment of a species. The first workshop focuses on review and compilation of data, including data for abundance indices and selection of assessment models. The second workshop concentrates on compilation of estimates for life history parameters, and agreement on starting values and assumptions for running the assessment models. Exercising the assessment models with data and multi-runs and evaluating the results, including different interpretations occurs at the third workshop.

He also summarized the accomplishments of the ISC during the year, which are contained in the Report of the Eighth Meeting of the ISC (ISC8), as follows: 1) seven intercessional meetings held, 2) full stock assessment of Pacific bluefin tuna completed, 3) analysis of geographic center of striped marlin completed, 4) "Kobe" diagrams prepared for North Pacific albacore to demonstrate value and shortcoming, 5) minimum spawning stock biomass as a biological reference point for North Pacific albacore explored, 6) progress made for full swordfish stock assessment to be completed in 2009, and 7) the 8th ISC plenary meeting held in July 2008. These accomplishments and more are contained in the ISC8 report.

Dr Sakagawa then introduced the chairpersons of the ISC working groups to present results for stock assessment questions for North Pacific albacore (Dr Ray Conser), Pacific bluefin tuna (Yukio Takeuchi) and Statistics (Dr Naozumi Miyabe). Because the chairpersons for the Bycatch Working Group (Dr Chris Boggs) and Billfish Working Group (Dr Gerard DiNardo) were not present, he substituted and presented information on plans for bycatch work and swordfish assessment and results of center of abundance of striped marlin.

The ISC Bycatch Working Group received instructions at ISC8 for refocusing its work plan. It will concentrate on reviewing bycatch mitigation methodologies and ongoing research by members. It will de-emphasize collection of bycatch data to estimate total bycatch or to assess population status of seabirds and sea turtles. It will collect shark information for conducting stock assessments when sufficient information is available and when necessary stock assessment skills are available to the

Working Group.

The Billfish Working Group is making progress towards completing a swordfish stock assessment in 2009. It also completed analysis to determine the geographic center of abundance of striped marlin in the North Pacific Ocean. The analysis essentially used data from the 2006 striped marlin stock assessment, particularly catch per unit of effort (CPUE) data from the Japanese distant water longline fleet. CPUE data or abundance indices were stratified by time and area then weighted by the size of the areas and different size selectivity by time and area. The results showed that about two-thirds (64–73%) of the biomass of striped marlin in the North Pacific Ocean occurs north of 20⁰ N latitude.

Dr Sakagawa concluded the ISC report with a summary of ISC conservation advice: 1) ISC7's North Pacific albacore advice still holds. With current (2002–2004) high F of 0.75, F will need to be reduced; 2) Current (2002–2004) F for Pacific bluefin tuna must not be increased; 3) ISC7's striped marlin advice still holds. F should be reduced from the current level (2003 or before); and 4) There is no advice for swordfish because a full stock assessment has not yet been completed. A summary of administrative matters included the need for investment to close information gaps, such as the need for updated life history information, complete information on catch characteristics and investment to support infrastructure needs, such as webpage development, database development and maintenance and for collection of biological data.

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ISC ALBACORE WORKING GROUP (ALBWG) REPORT

Albacore stock status and conservation advice

The last albacore stock assessment was completed in December 2006 using fishery data through 2005. Stock status and conservation advice were provided to the ISC7 plenary (July 2007) and to NC3 (September 2007). The principal conclusions from the 2006 assessment were:

- 1. Spawning stock biomass (SSB) in 2006 was estimated at about 153,000 mt; 53% above time series average.
- 2. Retrospective analysis showed noticeable trend of over-estimating abundance.
- 3. Over last 15 years, recruitment fluctuated around long-term average of roughly 28 million fish.
- 4. Presently, population is being fished ($F_{2002-2004} = 0.75 \text{ yr}^{-1}$) at roughly $F_{17\%}$; similar to "pessimistic" scenario in 2004 assessment.
- 5. Current F (2002–2004) is high relative to commonly used biological reference points.
- 6. SSB is forecasted to decline to an equilibrium level of 92,000 mt by 2015.
- 7. ISC-ALBWG expressed concern about the substantial decline in total catch over the last few years.
- 8. $F_{SSB-Min}$ analysis indicated that at the 95% probability of success all of the threshold Fs would require reductions from current F
- 9. Finally, ISC-ALBWG recommended that all countries support precautionary-based fishing practices

No formal update of the stock status has been conducted. However, at its 15–16 July 2008 meeting, the ALBWG did undertake a qualitative update using available fisheries data from 2006 and 2007. This qualitative update found:

- 1. Total catch in 2006 was slightly greater than in 2005. However, in 2007, the catch increased substantially, returning to a level more typical of the past decade.
- 2. Recent values of CPUE were either stable or higher than in 2005.
- 3. Recent information regarding the magnitude of the 2003 year-class was mixed with some data sources appearing to be consistent with a strong 2003 year-class and other sources not.
- 4. Results of the updated projections (using the now know 2006 and 2007 catch) indicated:
 - i. Estimated probabilities of the SSB remaining above the SSB reference points as calculated in the last stock assessment (2006) were modestly underestimated.
 - ii. Because the realized catch in 2007 was less than that assumed in the projections, the F in 2007 may have been less than "current F" (0.75 yr⁻¹).

The ALBWG concluded:

- 1. Data updates and limited analysis since the last stock assessment, provide a slightly more optimistic view of SSB level and the probability of exceeding F_{SSB-Min} biological reference points (BRPs), than did the 2006 assessment.
- 2. Any changes with respect to target BRPs (optimistic or pessimistic) are unknown.
- 3. However, the ALBWG suggests that that qualitative interpretation of only two years of additional data (2006 and 2007) should be viewed with caution until such time that another stock assessment can be completed to more fully understand recent stock trends.
- 4. The ALBWG offers no new conservation advice above and beyond that which was provided to ISC7 in July 2007.

ALBWG progress and plans for the next stock assessment

The ALBWG met twice during the past year:

- 1) Regular meeting (8 days): 28 February–6 March 2008 in La Jolla, USA
- 2) Update meeting (2 days): 15–16 July 2008 in Takamatsu, Japan

Terms of reference for both meetings were multi-objective in nature. Some ALBWG objectives continue from meeting to meeting (e.g. the ALBWG preparation for the next stock assessment; annual update of national fishery statistics; etc). Other objectives focus on requests from the ISC plenary and the WCPFC Northern Committee (NC) and are usually handled at a single meeting. Accomplishments of the ALBWG over the past year include:

- Updated national fishery statistics (through 2007).
- Assessment model development for the next assessment (SS2 model).
- Develop "Kobe" plots using results from the last (2006) stock assessment.
- Consider recent NC requests for additional projections associated with the assessment.
- Develop work plans for 2008–2010 in preparation for the next stock assessment.
- Election of new chair (R. Conser).
- Provide a qualitative update on stock status since the last assessment.
- Develop a biological research plan designed to improve albacore stock assessment.
- Review illegal, unregulated and unreported (IUU) fishing and its effects on stock assessment.
- Rescue historical fishery data pertaining to albacore.
- Consider interim management objectives for North Pacific albacore (F_{SSB-Min} reference points).
- Quantify fishery Impacts by gear type using results from the last stock assessment.

A series of ALBWG meetings will be necessary to complete the next stock assessment:

- i. Regular meeting: 24 February–3 March 2009, Shimizu, Japan
- ii. Update meeting: 8–9 July 2009, Taiwan (with ISC9 plenary)
- iii. Regular meeting: 6–13 October 2009, place to be determined
- iv. Assessment meeting: 2–9 March 2010, place to be determined

Meeting ii, above, is tentative and may only be necessary should the NC make additional management related requests of the ALBWG. All other meetings are required in order to complete the next assessment by March 2010.

Overall cooperation among ALBWG members, as well as progress on assigned tasks, has been good. However, the ALBWG would like to point out several issues that may affect future work.

- ALBWG participation by ISC members is quite variable. Some members attend all meetings, while others do not. Continuity of participation (preferably by the same scientists) is critical so that the consensus achieved from one meeting can be used as building blocks for subsequent meetings.
- 2. Competition for resources with other ISC WGs and regional fisheries management organization (RFMO) WGs (people, time, travel funds, etc.) is increasing at an unsustainable rate. Members need to provide additional scientists and funding to ensure that the ALBWG will be able to continue to meet its mandates.
- 3. NC and IATTC management requests may significantly increase the ALBWG workload and impede progress on next assessment

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REPORT OF THE ISC PACIFIC BLUEFIN TUNA WORKING GROUP

Y. Takeuchi, chair of the ISC Pacific Bluefin Tuna Working Group, presented the results of the stock assessment of the Pacific bluefin tuna conducted in May 2008 and the conservation advice made by the ISC8 in July 2008, as well as the work plan for now to the ISC9. The results of the current stock assessment are as follows.

- 1. Recruitment has fluctuated without trend over the assessment period (1952–2004), and does not appear to have been adversely affected by the relatively high rate of exploitation. Recent recruitment (2005–present) is highly uncertain making short-term forecasting difficult. In particular, the 2005 year-class strength may have been underestimated in this assessment.
- 2. Spawning stock biomass (SSB) in 2005 is near the median level over the assessment period. If the future fishing mortality rate (F) continues at the current F level, the short-term outlook (2009–2010) indicates that SSB will either decline until 2010, or remain at approximately the 2005 level. In the longer term, SSB is expected to be at a level comparable to the SSB in 2005.
- 3. No relationship between SSB and recruitment is apparent over the range of "observed" SSB from the assessment. The assessment structure tacitly assumes that at least over the SSB levels "observed", recruitment is more environmentally driven than SSB-driven.
- 4. Current F (2002–2004) is greater than commonly used biological reference points (BRP) that may serve, in principle, as potential target reference points. This includes FMAX a BRP that given the assessment structure and assumptions is theoretically equivalent to FMSY. But the magnitude by which the F_{current} exceeds the target BRPs is variable.
- 5. Conversely, current F is less than commonly used BRPs that may serve, in principle, as potential recruitment overfishing threshold BRPs (e.g. F_{MED} and $F_{SSB-min}$ probability based reference point); that is, Fs above which, the likelihood of recruitment failure is high.
- 6. Fs on recruits (age 0) and on juveniles (ages 1–3) have been generally increasing for more than a decade (1990–2005). The catch (in weight) is dominated by recruits and juveniles (ages 0–3).
- 7. Total catch has fluctuated widely in the range of 9,000–40,000 t during the assessment time period. Recent catch is near the average for the assessment period (~22,000 t). Over the entire catch history, annual catch has never attained the equilibrium catch at FMAX (45,000 t).

Based on the results of the PBF stock assessment, Y. Takeuchi presented the following conservation advice offered by the ISC.

- 1. Given the conclusions of the May–June 2008 stock assessment with regard to the current level of F relative to potential target and limit reference points, and residual uncertainties associated with key model parameters, it is important that the current level of F is not increased.
- 2. If F remains at the current level and environmental conditions remain favorable, then recruitment should be sufficient to maintain current yield well into the future.
- 3. A reduction in F, in combination with favorable environmental conditions, should lead to greater yield per recruit (Y/R) and spawning per recruit (SPR) and, after some lag, greater sustained yield.
- 4. Increases in F above the current level, and/or unfavorable changes in environmental conditions, may result in recruitment levels which are insufficient to sustain the current productivity of the stock.

Y. Takeuchi also explained the work plan between now and ISC9. Although ISC endorsed current stock assessment results, ISC noted that the modeling scenarios provide some output parameter estimates that have a low plausibility and thus the stock assessment results need to be interpreted with caution. Because of this concern, the Pacific Bluefin Tuna Working Group will revisit the analysis in order to refine the scientific advice. Work necessary to improve the basis for parameter specification, as well as model refinement, will be pursued over the coming year, starting with a December 2008 workshop. Progress on these issues will be reviewed by ISC9 next year and at that time a timetable for conducting a new stock assessment will be set.

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REPORT OF THE ISC STATISTICS WORKING GROUP

- 1. N. Miyabe presented the results of the 7th STATWG meeting, which was convened 19–21 July just prior to the plenary. All members were represented except China, the Inter-American Tropical Tuna Commission (IATTC), the Food and Agriculture Organization of the United Nations (FAO), the Secretariat of the Pacific Community (SPC) and the North Pacific Marine Science Organization (PICES).
- 2. The annual ISC data submission deadline is 1 July. Data (Category I, II and III) were submitted by all members except China. Submitted data were shown in the form of summarized tables for different categories. However, the data presented in the tables did not match well with those data maintained by the species working groups. Unfortunately, these inconsistencies were not solved during the meeting since the newly submitted data were not yet verified by working group (WG) chairs as there was little time available prior to the meeting to accomplish this task.
- 3. The STATWG reviewed the current data submission protocol. Last year, the data submission protocol was changed in order to reduce duplication between the database administrator and species WG data managers. Presently, the data flow for Category II and III data is from the members' data correspondents to the species WG data managers.
- 4. K. Uosaki demonstrated how to upload and download and delete data using the ISC researchers webpage for data submission. This site was developed as a simple tool for data submission by national data correspondents. A user manual was also distributed. A new webpage update was introduced by H. Honda. This would allow ISC officers to help post documents. When an upload is made, the webmaster will automatically receive an email from the system so that the webmaster can complete posting the file on the appropriate window on the website.
- 5. Remaining data requirements or gaps were raised by the species WG chairs. Several species WG chairs pointed out that there might be some unreported catches by non ISC members held by other regional fisheries management organizations (RFMOs). It was agreed that a data request should be made by the species WG chair. If this is not successful, then STATWG chair will send a blanket request to them. As a future work plan, 14 items were identified and priorities were set. Important items are listed below:
 - Data request to other RFMOs (not covered by ISC);
 - Check metadata including coverage info;
 - Hire permanent Data Administrator;
 - Rescue historical data;

- Provide oversight for archiving input, output, metadata and software;
- Monitor data reporting;
- Incorporate bycatch data (based on input from the Bycatch WG); and
- Further development of the website and ISC database.
- 6. Employment of permanent database administrator is considered essential but that position has been difficult to be met under the current personnel system at the National Research Institute of Far Seas Fisheries (NRIFSF). Database administrator responsibilities were given to one of the NRIFSF stuff.
- 7. N. Miyabe also highlighted the biological research needs (age, growth, maturation, sex ratio) that were presented during the seminar especially by North Pacific albacore and billfish species working groups at ISC8. For albacore, biological parameters currently used were obtained about 50–60 years ago, and those for billfish require initial estimates and updates. In order to estimates these parameters, comprehensive data collection for biological samples are necessary involving various agencies and universities throughout North Pacific. For blue marlin, Pacific-wide collaboration is warranted as its distribution is continuous between the North and South Pacific.
- 8. For North Pacific albacore, two-year term research proposal was developed whose total cost was estimated to be USD95,000. For billfish, ageing and maturity studies were proposed separately, requesting 3.5–4 year term project (USD10,000 per species) and three-year term histological examination (USD15,000 per species), respectively. More detail is provided in Annex 11, Appendix 1, of the ISC8 report.
- 9. Finally, it was recommended that a task force be formed to consider designing a multispecies and large-scale biological sampling programme for both age and growth and maturity studies. Each WG will first develop its own sampling plan. Then, these plans will be subsequently brought to the task force to begin development of a single coordinated multispecies biological sampling programme. The task force is composed of WG chairs and nation representatives, led by Drs. Chang and Holmes. It was also decided that the task force chair would distribute completed WG research plans to members. Prior to ISC9, the task force will meet to devise a coordinated multispecies biological sampling proposal for the plenary's consideration.

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SUMMARY REPORT OF THE FOURTH MEETING OF THE SCIENTIFIC COMMITTEE

- 1. The provisional level of tuna catch for 2007 in the WCPO was around 2.4 million mt, where 73% was by purse seine, 10% by longline, 9% by pole-and-line, and the rest by other gear types. Skipjack was the dominant catch, comprising 72% of the total catch, followed by yellowfin (18%), bigeye (6%), and South Pacific albacore (4%).
- 2. Full stock assessments were conducted in 2008 for bigeye, skipjack, South Pacific albacore, and swordfish stocks. The following matrix shows a brief description of stock status and management implications for key tuna species in the WCPO.

Bigeye	 Overfishing is occurring in the WCPO. While the stock is not yet in an overfished state with respect to total biomass, there is a 42.8% probability that the adult biomass is in an overfished state. A minimum of 30% reduction in fishing mortality from the average levels for 2003–2006 was recommended with the goal of returning the fishing mortality rate to F_{MSY}. Additional reductions will be required in fishing mortality in the future if assessments indicate that fishing mortality is greater than F_{MSY}.
Yellowfin	• The stock status description and management recommendations from SC3 are still current.
Skipjack	 Overfishing is not occurring and the stock is not in an overfished state. The high recent catches are considered to be sustainable unless recruitment falls persistently below the long-term average.
SP albacore	 The assessment results differ substantially from results from the 2006 assessment, due to the changes in biological information. These changes reduced the biomass estimates and raised fishing mortality. The SC recommended that catches remain at current levels.
SW and	Plausible assessment results indicate that overfishing is not occurring and
south-central	that the stock is not in an overfished state.
Pacific	Due to the uncertainty in the assessment, no further increase in catch or
swordfish	effort was recommended.
SW Pacific	There was no stock assessment undertaken for striped marlin in the
striped	southwestern Pacific Ocean in 2008.

marlin	• The stock status description and management recommendations from SC2 are still current: no increase in fishing mortality (i.e. fishing effort) on striped marlin in the southwestern Pacific.
NP albacore	• Formal management advice that F should not be increased from the current level (F=0.75, based on 2002-2004) is still valid.
Pacific bluefin	 No further increase of the fishing mortality from the current level. Increases in F above the current level, and/or unfavorable changes in environmental conditions, may result in recruitment levels which are insufficient to sustain the current productivity of the stock.
NP swordfish	No stock assessment; and no management advice is offered.
NP striped marlin	• The fishing mortality rate should be reduced from the current level (to 2003 or before)

- 3. Issues on bycatch mitigation include further specification of streamer lines in seabird mitigation measure; application of shark measure to vessels less than 24 m in length; further study or industry-associated work related to small tuna on floating objects; and continued research on ecological risk assessment.
- 4. On data and information issues, the SC considered data gaps remained, including the provision of operational (and other) data to the Commission; research on sampling improvements in multispecies purse-seine sampling to reduce bias in species composition; and the results of the 5th Steering Committee Meeting of the Indonesia and Philippines Data Collection Project (IPDCP) and the 1st Steering Committee Meeting on Pacific Tuna Tagging Programme (PTTP).
- 5. The SC reviewed a working paper on the assessment of purse-seine fishing effort on the high seas and in the zones of non-Parties to the Nauru Agreement (PNA) members (SC4-ST-WP-4), and requested CCMs to provide any additional changes, if they have, to the Secretariat by 15 September 2008.
- 6. In relation to the special requirements of developing states and participating territories, the SC expressed appreciation to the Federated States of Micronesia and the United States for their financial contribution to Special Requirement Fund. FFA members also expressed thanks to Japan for the Japanese Trust Fund for the capacity building in Pacific Island developing states.
- 7. For the future work programme, the SC proposed nine independent projects, including North Pacific striped marlin mitigation methods, in addition to the Commission's science services with a budget of USD795,000 for 2009. This budget includes no substantial increase from the indicative budget, except a small increase for the Commission's science services. For 2009, a full yellowfin stock assessment and a streamlined South Pacific albacore assessment were recommended.

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DRAFT CONSERVATION AND MANAGEMENT MEASURE FOR PACIFIC BLUEFIN TUNA

The Western and Central Pacific Fisheries Commission (WCPFC),

Recalling that the Northern Committee at its Third Regular Session agreed to consider conservation and management measures for northern Pacific bluefin tuna at its Fourth Regular Session in 2008, based on results of stock assessment conducted in 2008,

Recognizing that members of the Northern Committee have made effort, on a voluntary basis, not to increase the fishing mortality rate of northern Pacific bluefin tuna,

Taking account of the conservation advice from the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) meeting in 2008 on this stock which highlighted that increase in fishing mortality (F) of northern Pacific bluefin tuna may result in recruitment levels which are insufficient to sustain the current productivity of the stock and that it is important that the current level of F is not increased,

Also recognizing that the trend of spawning stock biomass has been influenced substantially by the annual level of recruitment and that to collect fisheries data in an accurate and timely manner is critically important for the proper management of this stock, and

Further recalling that paragraph (4), Article 22 of the WCPFC Convention which requires cooperation between the Commission and the IATTC for the management of fish stocks such as northern Pacific bluefin tuna that occur in the Convention Areas of both organizations,

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

- 1. The interim management objective for Pacific bluefin tuna is to ensure that the current level of fishing mortality rate is not increased in the Convention Area. Initially, control over fishing effort will be used to achieve this objective as follows:
- 2. The Commission Members, Cooperating Non-Members and participating Territories (hereinafter referred to as CCMs) shall take measures necessary to ensure that total fishing effort by their vessels for northern Pacific bluefin tuna in the area north of the 20 degrees north shall not be increased in 2009–2011;

- 3. CCMs shall also take measures necessary to strengthen data collecting system for the northern Pacific bluefin tuna fisheries in order to improve the data quality and shorten time to report;
- 4. CCMs shall report to Executive Director by 31 July 2009 measures they implement paragraphs 2 and 3 above;
- 5. The Northern Committee at its Fifth Regular session in 2009 shall review reports CCMs submit pursuant to paragraph 4 above and consider, if necessary and appropriate, further measures with particular attention to the recent trend of increasing fishing mortality rate on ages 0–3;
- 6. 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 northern Pacific bluefin tuna and request them to take similar measures in conformity with paragraphs 2 and 3 above; and
- 7. To enhance effectiveness of this resolution, CCMs are encouraged to communicate with and, if appropriate, work with the concerned IATTC contracting parties bilaterally.
- 8. The provisions of paragraph 2 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 northern 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 northern Pacific bluefin tuna in the future.
- 9. The provisions of paragraph 8 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.

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STATEMENT ON NORTHERN PACIFIC BLUEFIN TUNA BY THE KOREAN DELEGATION

Korea appreciates efforts made by ISC scientists to make a recommendation on the northern Pacific bluefin tuna and Japanese proposal based on the recommendation made by the Scientific Committee. However, Korea regrets that at this time Korea must express a reservation on the adoption of a proposed WCPFC Conservation and Management Measure on the northern Pacific bluefin tuna. Korea had no time to consult with local fishermen on the Japanese proposal and needs sufficient time to consult with local fishermen before making any formal decision on the northern Pacific bluefin tuna. Korea recognizes the important views of local fishermen, and will have a consultation with stakeholders in Korea as soon as possible. Korea intends to provide the Northern Committee Chairman with comments on the proposed WCPFC Conservation and Management Measure following this consultation.

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AN INTERIM MANAGEMENT OBJECTIVE FOR NORTH PACIFIC ALBACORE

At its third regular session, the Northern Committee (NC) considered the concept of an interim management objective for North Pacific albacore that would, in essence, maintain the spawning stock biomass in the range of its historical fluctuation until reference points are established. It is proposed that the following be adopted as an interim management objective for the stock.

For this purpose of formulating, and recommending to the Commission, conservation and management measures for the North Pacific albacore stock, the NC agrees to adopt and achieve an interim management objective for the stock, as described in the following paragraphs.

- 1. The interim management objective for North Pacific albacore is to maintain the spawning stock biomass (SSB) above the average level of its 10 historically lowest points (hereinafter referred to as "the Level").
- 2. In the case that current fishing mortality rate would likely² cause SSB to fall below the Level, the NC shall formulate conservation and management recommendations to reduce the fishing mortality rate as needed to attain the interim objective, taking account of social and economic factors.
- 3. Achievement of the interim management objective will not preclude the NC from formulating and recommending conservation and management measures that would achieve additional objectives, particularly those stipulated in the Convention or otherwise adopted by the Commission.
- 4. The NC will develop more permanent objectives for recommendation to the Commission, specifically reference points that fulfill the provisions of Article 6 of the Convention.
- 5. The ISC is requested to conduct its assessments of the North Pacific albacore stock, and to express the results of its assessments, such that they include the information necessary to achieve this interim management objective.

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¹ Here, "historically observed SSB" means the time series of annual SSB levels from 1966 through 2005, as estimated in the latest formal stock assessment of the ISC.

² Here, "likely" means greater than 50% probability.

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THE US PROPOSAL ON THE AMENDMENT OF CMM-2005-03 (CMM FOR NP ALBACORE)

A. The Northern Committee recommends that Conservation and Management Measure 2005-03, on North Pacific albacore, be amended as follows:

Paragraph 4 is amended to read:

4. All CCMs shall report annually to the WCPF Commission all catches of albacore north of the equator and all fishing effort in fisheries directed at albacore, both north of the equator and north of the equator within the Convention Area. The reports for both catch and fishing effort shall be made by gear type. Catches shall be reported in terms of weight. Fishing effort shall be reported in terms of the most relevant measures for a given type, including at a minimum for all gear types, the number of vessel-days fished. The report for a given calendar year shall be due on April 30 of the subsequent year. Reports for each of the years 2004 through 2008 shall be due on 30 April 2009.

New paragraphs 11 and 12 are added:

- 11. For the purpose of evaluating implementation of paragraph 2, CCMs shall report to the Executive Director no later than 30 April 2009 the following information:
- a. a list of their specific fisheries or fleets they have determined to be "fishing for" North Pacific albacore in the Convention Area;
- b. a description of how they have interpreted or defined "current levels" of fishing effort in each of the fisheries or fleets identified above;
- c. a description of the particular controls they have established to ensure that fishing effort in each of the fisheries or fleets does not increase above "current levels"; and
- d. a description of the measures or mechanisms being used to monitor fishing effort and compliance with the established controls.
- 12. For the purpose of evaluating implementation of paragraphs 2-4, the Secretariat shall compile all the reports submitted under paragraphs 3 and 4 and present the compilation to the fifth regular sessions of the Northern Committee and the Technical and Compliance Committee.

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WORK PROGRAMME FOR THE NORTHERN COMMITTEE (AS REVISED BY THE FOURTH REGULAR SESSION)

Work areas	5-year objectives	1-year tasks					
	2008–2012	2008	2009	2010	2011	2012	
11. Northern stocks							
a. Monitor status; consider management action	Review status and take action as needed for: ³						
	North Pacific albacore	Consider interim management objectives and ISC advice					
		Obtain scientific advice and make recommendations for reference points for NP albacore	Obtain and review ISC advice in light of interim management objective and consider the need for management action.	Obtain and review a full assessment			

³ 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	5-year objectives	1-year tasks					
	2008–2012	2008	2009	2010	2011	2012	
	Pacific bluefin tuna	Obtain and review the status of the stock based on provisional stock assessment from ISC. Review reports from CCMs on their domestic management measures, consider advice of IC and consider management action	Review reports from CCMs on their domestic management measures, consider advice of IC and consider the need for management action		Obtain and review a full assess ment		
	Swordfish		Obtain and review complete assessment (ISC) and consider management action				
	Striped marlin (if agreed by the Scientific Committee and Commission).	WG complete tasks	Review outcomes of the WG to consider alternative management options.				
		CCMs report on voluntary constraints in relation to fishing mortality rate (i.e. catch or effort)	CCMs report on voluntary constraints in relation to fishing mortality rate (i.e. catch or effort)				
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				
		Encourage submission to Commission of PBF data from all CCMs and make available to ISC	Encourage submission to Commission of PBF data from all CCMs and make available to ISC				

Work areas	5-year objectives	1-year tasks					
work areas	2008–2012	2008	2009	2010	2011	2012	
2. Non-target, associated, dependent	Consider systems to validate catch data						
species							
a. Seabirds	Consider appropriate implementation of methods to minimize catch and mortality.	Develop recommendation for implementation of mitigation measures adopted by Commission and review implementation of CMM-2006-02 in the northern area.	Review implementation of CMM-2007-04 in the northern area				
b. Sea turtles	Consider appropriate implementation of methods to minimize catch and mortality.	NC CCMs submit mitigation research results to the Commission, for compilation by Commission	Review mitigation research results and consider management action	Review mitigation research results and consider management action			
c. Sharks	Consider appropriate implementation for CMM-2006-05 in the northern area.	Review implementation for CMM-2006-05 in the northern area.	Review implementation for CMM-2006-05 in the northern area.				

Work areas	5-year objectives 1-year tasks		1-year tasks			
vvork areas	2008–2012	2008	2009	2010	2011	2012
3. Review effectiveness of decisions	Annually review effectiveness of conservation and management measures and resolutions applicable to fisheries for northern stocks	Review effectiveness of NP albacore measure (CMM 2005-03)	Review effectiveness of NP albacore measure (CMM 2005-03), including members' reports on their interpretation and implementation of fishing effort controls			
			Review effectiveness of Pacific bluefin tuna measure.			
4. Cooperation with other organisations						
a. ISC	Develop recommendations to Commission for requests to ISC for assessments, analyses, and advice in support of conservation and management measures		Formulate request to ISC fro information needed to achieve NP albacore interim management objective			
	Facilitate provision of data needed for assessments to 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 NP albacore and northern Pacific bluefin tuna			