

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

Northern Committee Third Regular Session

11–13 September 2007 Tokyo, Japan

SUMMARY REPORT

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Northern Committee Third Regular Session

11–13 September 2007 Tokyo, Japan

SUMMARY RECORD

AGENDA ITEM 1 — OPENING OF MEETING

1. The Third Regular Session of the Northern Committee took place in Tokyo, Japan from 11–13 September 2007. The meeting was attended by members from Canada, China, Cook Islands, Japan, Republic of Korea, Philippines, United States of America, and Chinese Taipei. Observers included the Federated States of Micronesia, Fiji, Kiribati, Niue, Palau, Papua New Guinea, Samoa, Tokelau, Tonga, and Vanuatu. The Secretariat of the Western and Central Pacific Fisheries Commission (WCPFC) also attended as did a representative of the Pacific Islands Forum Fisheries Agency (FFA). The list of meeting participants is appended to this report as Attachment A.

Welcome

- 2. Masanori Miyahara, Chair of the Northern Committee (NC), opened the meeting.
- 3. On behalf of Japan, Akira Nakamae, Deputy Director-General of the Fisheries Agency of Japan, welcomed all participants. His welcome address is appended to this report as Attachment B.

Adoption of agenda

4. The draft provisional agenda, as amended, was adopted (Attachment C). Documents supporting this meeting are posted on WCPFC's website.

Selection of Chair

5. In accordance with Rule 8 of the Commission's Rules of Procedure, Masanori Miyahara of Japan was selected as the Chair of the NC for the next two regular sessions.

Meeting arrangements

6. The Chair briefed the NC about meeting arrangements.

AGENDA ITEM 2 — CONSERVATION AND MANAGEMENT MEASURES

Report from the 7th International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean

7. Gary Sakagawa, the Chair of the International Scientific Committee (ISC), presented a report on the recent work and findings of the ISC, including the outcomes of the ISC's seventh meeting (ISC7) at Busan, Korea, from 25–30 July 2007. (The report is available at www.ISC.ac.affrc.go.jp.) The Chair noted that the ISC's responsibilities are for stocks north of the equator. Achievements included the successful convening of eight working group workshops, the completion of two full stock assessments (albacore and striped marlin), one updated stock assessment (Pacific bluefin tuna), planning for full stock assessments for Pacific bluefin tuna and swordfish by 2010, and completed administrative tasks, including a revision of the ISC charter, the ISC/WCPFC memorandum of understanding (MOU) and finalization of the ISC Operations Manual.

Conservation and management measures for northern stocks

North Pacific albacore

- 8. Max Stocker (Canada), chair of the ISC Albacore Working Group, presented an overview of the North Pacific albacore stock assessment (including ISC conservation advice) conducted in 2006 using the VPA-2BOX model and data from 1966–2005. A summary of his presentation is appended to this report as Attachment D.
- 9. The United States of America (USA) queried the relationship between catch per unit of effort (CPUE) and biomass, noting that the assessment shows that biomass is the second highest on record but that CPUE is declining for all fisheries. Max Stocker explained that the high biomass is a result of strong 2001 and 2003 year classes, and that if current high fishing mortality is maintained, biomass will decline. He also noted the difficulty in explaining the retrospective pattern (i.e. that fishing mortality was consistently underestimated and that biomass was over estimated), but hoped that the decision to use the forward projecting model stock synthesis II for future assessments should help reduce these uncertainties.

Pacific bluefin tuna

10. Yukio Takeuchi (Japan) summarized the activities of the ISC Pacific Bluefin Tuna Working Group during 2006–2007. A summary of his presentation is appended to this report as Attachment E.

North Pacific swordfish

11. Gary Sakagawa reported that no assessment is available for swordfish in 2007, but that a major assessment is planned for 2009. He reported that the Billfish Working Group is collaborating with organizers of the World Fisheries Congress, which is scheduled for Yokohama, Japan in 2008. The contribution will focus on stock structure and stock exchange.

North Pacific striped marlin

12. Before commencing his presentation, Gary Sakagawa reminded NC meeting participants

of research needs, particularly those relating to biological research, for all stocks that fall under ISC's mandate. He noted that much of the current information on biological parameters is quite old.

- 13. A summary of Gary Sakagawa's presentation relating to North Pacific striped marlin is appended to this report as Attachment F.
- 14. In response to a question from the Chair, it was explained that it would require a 30–40% decrease in current fishing effort if a reduction of the current fishing mortality of 0.72–0.44 (or an equivalent biological reference point of F20%) is the goal. In considering data gaps, the NC noted reports from the Commission's science services provider and data manager, which state that that distant-water and offshore longline fleets consistently under-report billfish because it this fish is mostly taken as bycatch and is not a target species.
- 15. The NC recognized that striped marlin has not been designated as a northern stock. However, noting the result of the scientific assessment conducted by the ISC, the NC considered it appropriate to provide comments to the Commission in relation to this species.

Report of the Third Regular Session of the Scientific Committee, 13–24 August 2007, Honolulu, Hawaii, USA

16. The NC noted the draft summary report of the Third Regular Session of the Scientific Committee (SC3) prepared by the Secretariat.

2.4 Conservation and management measures for northern stocks

Pacific bluefin tuna

- 17. Recalling the commitment from NC2 in 2006, the Chair invited CCMs to provide reports on national level actions that they had taken in response to the concerns about the stock status. Summaries of action are listed below.
 - Japan: Catches are mostly confined to the EEZ. An internal conference was
 established, with support from the government, to promote consultation between
 industry, scientists and administrators for the purpose of improving data collection
 and discussing management options.
 - Chinese Taipei: Reported that it is planning to improve data quality, in part through an increase in the number of personnel dedicated to data collection from the fishery. The number of fishing vessels catching Pacific bluefin has declined.
 - The Philippines: No Philippine flag vessels are targeting Pacific bluefin although several vessels claiming to Philippine flag ships, may be targeting bluefin, and, are currently under investigation.
 - USA: Bluefin is not currently a major fishery for US fleets. Bluefin is taken opportunistically by purse seiners that target sardines throughout the year.
 - Korea: Bluefin is not a target species for Korean fleets, although they are being caught by purse seiners that target mackerel in coastal areas in the southern part of the Korean peninsula.
- 18. The Chair noted that Mexico also supports a significant fishery for Pacific bluefin but does not participate in the NC. He suggested that the Secretariat write to the Inter-American Tropical Tuna Commission (IATTC) and ask that NC discussions about Pacific bluefin be relayed

to Mexico.

- 19. With regards to possible management options for Pacific bluefin, some participants were of the view that, as a precautionary measure, some effort at limitation was required, even as a voluntary measure as an interim arrangement. Others considered that, because a full stock assessment was scheduled for 2008, consideration of any management action could be postponed until the results of that assessment were available without adverse implications for the stock. It was also noted that the ISC had recommended no increase in fishing mortality and that some CCMs considered that the NC needed to respond to this advice.
- 20. The NC agreed to consider conservation and management measures for Pacific bluefin at its Fourth Regular Session, based on results of stock assessments, which will be conducted in 2008. Until that time, the NC advised its members to make the best effort, on a voluntary basis, *not* to increase the fishing mortality rate of Pacific bluefin (i.e. catch or effort). The NC also requested that members collect and submit scientific data to the ISC in order for it to better assess stocks.

North Pacific albacore

- 21. The NC recalled the obligation of CCMs, described in Conservation and Management Measure (CMM) 2005-03, to not increase fishing effort for North Pacific albacore. The Chair invited CCMs to provide reports on national level actions that they had taken in response to this commitment. Summaries of action included:
 - Japan: North Pacific albacore is taken by purse seine, longline and pole-and-line fleets, which are subject to strict capacity and other controls. Japan noted that the catch of these fleets is declining.
 - Chinese Taipei: Consistent with the advice of the ISC, it is constraining fishing effort to 2004 levels.
 - USA: Albacore is taken in surface troll fisheries and the Hawaiian longline fishery, both of which are closely monitored. Research effort is underway to obtain an accurate measure for current effort in these fisheries.
 - Korea: Albacore is not a target species for Korean fleets, although it is taken by longliners as bycatch.
 - Canada: Its troll fleet is 95% compliant with the logsheet reporting requirements for this fishery. Recent effort has decreased from 220 to 171 vessels.
 - Vanuatu: Less than 40 Vanuatu flagged longliners are active in this fishery and there is no intention to increase the vessel numbers.
- 22. The Chair invited CCMs to participate in an informal discussion on reference points. This was in recognition of the decision at last year's meeting (NC2) to adopt a biological reference point for North Pacific albacore at this year's meeting.
- 23. The subsequent informal discussion reflected on the ISC's statement that spawning stock biomass for North Pacific albacore is estimated to be at an historical second highest and that, in general, catches are declining. It was also noted that $F_{current}$ is high relative to commonly used F reference points. On this basis it was questioned whether immediate management action for North Pacific albacore was necessary. The discussion also recalled that Annex II of the UN Fish Stocks Agreement and Article 6 of the WCPF Convention require management action based on a determination of stock-specific reference points. In the light of concerns about the long-term status of North Pacific albacore, particularly if the assessment proved to be overly optimistic in

terms of the current status of this stock, some CCMs suggested that the ISC be requested to investigate alternative reference points for highly migratory fish stocks in the North Pacific, including management strategies that take into account possible fishery impacts by gear type and areas that might be considered by fishery managers. It was noted that the report of the ISC albacore working group in 2005 outlined data requirements and processes associated with biological reference points. This could provide a basis for a "road map" for further consideration of biological reference points and management strategies for North Pacific stocks.

- 24. Taking into account the ISC7 report, the NC agreed to maintain the existing CMM that requires CCMs to not increase fishing effort for North Pacific albacore. The NC discussed the reference points for this stock, but did not reach a conclusion. It was agreed to continue the discussion on reference points in future NC meetings.
- 25. The USA suggested introducing the concept of an interim management objective for this stock, which would, in essence, maintain the spawning stock biomass (SSB) in the range of its historical fluctuation until reference points are established. The NC welcomed this suggestion and urged concerned members to jointly elaborate the concept inter-sessionally, and to present a concrete proposal to the NC's Fourth Regular Session (NC4). The ISC is requested to present its view on this concept to NC4. It was noted that it was desirable for concerned members to complete such inter-sessional work before the ISC albacore working group meeting in February 2008 so that it can review specifics of the concept. Close cooperation is required with IATTC on this matter.
- 26. To improve stock assessment and fishery management of north Pacific albacore, the Committee further agreed to request ISC to provide information and advice on data availability and the impact of any data limitations on the stock assessment, as well as to produce a so-called "Kobe chart" for this stock.

North Pacific swordfish

27. The NC considered that no action was required at this Session with respect to North Pacific swordfish.

Conservation and management measures for other species

Bigeye and yellowfin tuna

28. The NC noted that discussion on these species would be taken up elsewhere in the Commission.

Sharks

29. The NC noted that discussion on sharks would be taken up elsewhere in the Commission and will discuss implementation of CMMs, if appropriate, at NC4.

Seabirds

30. The NC noted that discussion on seabirds would be taken up elsewhere in the Commission and will discuss implementation of CMMs, if appropriate, at NC4.

Status of striped marlin as a northern stock

31. Noting the decision of the SC to defer the consideration on the designation of striped marlin as a "northern stock" on the basis of lack of information on the distribution of the biomass of this stock the Northern Committee decided to re-new its request to the Commission for the Scientific Committee to review available information that might support the designation of striped marlin as a "northern stock".

Conservation considerations for striped marlin

- 32. Based on the recent stock assessment, there is a clear need for the Commission to pay close attention to North Pacific striped marlin and to urgently consider appropriate management action. Although striped marlin has not yet been formally designated a northern stock, it is clearly an important resource in the northern portion of the Convention Area as it is caught primarily in the northern fisheries that NC members have a special interest in.
- 33. The NC considered appropriate management strategies for striped marlin and acknowledged that because it is mostly taken incidentally, strategies aimed at reducing catches of striped marlin (in fisheries directed at other species) may be appropriate.
- 34. Taking into account the recommendation made by ISC7 to reduce the fishing mortality rate on striped marlin, the NC advises its members to make every effort, on a voluntary basis, not to increase their respective current fishing mortality rates (i.e. catch or effort) on striped marlin in the North Pacific, and to reduce them to the extent practicable. This voluntary undertaking should continue until the Commission agrees upon effective CMMs for striped marlin in the North Pacific. At future NC meetings, members will review efforts made under this voluntary programme.
- 35. NC2 recommended that the Commission designate striped marlin as a northern stock, based on the stock being mostly in the area north of 20°N.
- 36. The WCPFC Scientific Committee (SC) reviewed a paper prepared by the Secretariat, illustrating the northern distribution of the stock based on catch data. However, the SC could not reach a conclusion with respect to the designation of striped marlin as a northern stock, citing the lack of evidence that the stock biomass lies mostly north of 20°N.
- 37. The NC discussed the SC3's finding regarding striped marlin, and reaffirmed its recommendation that the Commission seek advice from the SC about designating striped marlin as a northern stock. The ISC is invited to provide relevant information to the SC in relation to this matter.
- 38. To begin the process of developing effective CMMs for striped marlin in the North Pacific, the NC recommends that the Commission task the NC with convening a working group that includes fisheries managers, gear technology experts and fishermen, as well as scientists. Among other things, this working group would be tasked with:
 - Examining the effects of fishery management measures that have been taken or are to be taken by members on catches and fishing mortality rates of striped marlin, including reductions in fishing capacity and fishing effort in fisheries that catch striped marlin.

- Examining existing fisheries data to characterize spatial and temporal patterns of striped marlin catches and catchability.
- Examining fish behavior and fishing technologies in order to identify potential strategies to reduce striped marlin catches without unduly affecting catches of target species, while minimizing adverse impacts on fishermen.
- Identifying potential research, including experimental designs, that would be useful in developing effective ways to reduce the catchability of striped marlin in various fisheries.
- Considering any possible way to further encourage fishermen to work with scientists and managers in order to develop and comply with practical measures in a cooperative and forward looking manner.
- 39. To assist the working group in performing these tasks, members of the NC and ISC should provide, for those fisheries that take striped marlin, any relevant fisheries data and research, as well as descriptive information, with a view to revealing as much detail as possible regarding gear configurations and fishing patterns and practices.
- 40. This working group is tasked with completing its work in time for presentation at the 2008 Scientific Committee and Northern Committee meetings.

AGENDA ITEM 3 — DATA

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

- 41. Gary Sakagawa reminded the NC of the need for new research effort to generate additional biological data to help reduce some of the current uncertainties associated with stock assessments.
- 42. The WCPFC Executive Director, Andrew Wright, noted information contained in the ISC7 report and the Statistics Specialist Working Group at SC3 (in August), relating to data and data gaps. ISC7 identified current gaps as:
 - reporting coverage for some domestic fleets,
 - mis-identification of species (particularly billfish species),
 - length of time some CCMs required to compile data (three years in some cases),
 - challenges posed by IUU fishing and the absence of data concerning those operations,
 - a focus on target stocks and limited data collection effort for non-target stocks, and
 - a lack of information on discards reporting.

He noted also the SC's appeal for improved collaboration with industry in research activities, particularly among offshore and distant-water longline fleets through the return of tags.

43. The NC's attention was drawn to the data coverage paper prepared by the Commission's science services provider, the Secretariat of the Pacific Community's Oceanic Fisheries Programme (SPC-OFP), which identified specific gaps in the Commission's data as discussed at the SC meeting. The paper, WCPFC-SC3-ST SWG IP3, is available on the Commission's website. Although the NC acknowledged the need to adopt a holistic and balanced approach to addressing the full range of data gaps that currently exist, it was noted that these data gaps, in one form or another, apply to northern stocks. It was noted that the SC has recommended that the WCPFC Secretariat establish a service on its website that profiles data gaps and provides a reporting

schedule to assist CCMs in meeting their data reporting obligations to the Commission.

44. The WCPFC Executive Director provided a summary table of data received from CCMs in response to CMM-2005-03. While the table would be refined in advance of the Third Regular Session of the Technical and Compliance Committee (to ensure that information was as complete as possible), the NC considered the table to be a useful record of data submission that should be provided to the NC at its Regular Sessions in order to facilitate monitoring of the implementation of the Measure. The representative from the Cook Islands noted that it had submitted data as required, but that the Commission was still developing procedures to process data submitted in differing logbook formats.

AGENDA ITEM 4 — FUTURE WORK PROGRAMME

Work programme for 2008–2012

45. The Committee adopted the revised 2008–2012 work programme, which is appended to this report as Attachment G.

AGENDA ITEM 5 — COOPERATION WITH OTHER ORGANIZATIONS

ISC

46. The NC noted with satisfaction the conclusion of the MOU between the ISC and the WCPFC.

IATTC

47. The NC reviewed the range of issues that was discussed at the first consultation between the Secretariats of the IATTC and WCPFC, as provided for under the MOU. It was noted that there is significant potential for mutually beneficial collaboration on scientific and fisheries research and that, while information and data exchange should be promoted between the two Commissions, this could only occur once the appropriate protocols had been considered and approved by the two Commissions. The NC noted particular sensitivities in relation to monitoring, control and surveillance information and data, which would require careful consideration. The NC noted a second consultation between the Secretariats of the two organizations was scheduled to coincide with the next annual session of WCPFC in Guam in December.

Proposed review of interim arrangements for scientific structure and function

48. The NC noted the proposed revised oversight arrangements and schedule for the review that was developed by SC3, and which will be considered at the forthcoming annual session of the WCPFC in December.

AGENDA ITEM 6 — OTHER MATTERS

Administrative arrangements for the Northern Committee

Secretariat functions and costs

The proposal from Japan to establish secretariat services for the NC was deferred to the next annual session.

Rules of Procedure

49. Noting comments tabled by Japan, the NC deferred further consideration of Rules of Procedure for the NC to a future session.

Next meeting

50. The Fourth Regular Session of the NC (NC4) will meet from 9–11 September 2008 in Tokyo, Japan.

Other business

51. The NC was advised that the WCPFC received 2007 monthly catch data for Vanuatu flagged vessels on 13 September 2007 for the area north of 20°N. The Executive Director noted that the WCPFC had also received operational data in various formats in August 2007. On this basis, the NC granted provisional membership status to Vanuatu, subject to review and approval by NC members of the data received from Vanuatu.

AGENDA ITEM 7 — REPORT TO THE COMMISSION

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

52. The NC adopted the Summary Report of its Third Regular Session.

AGENDA ITEM 8 — CLOSE OF MEETING

53. The meeting closed at 11:00 on Thursday, 13 September 2007.

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

Northern Committee Third Regular Session

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

Northern Committee Third Regular Session

11–13 September 2007 Tokyo, Japan

OPENING STATEMENT by AKIRA NAKAMAE Deputy-Director General Fisheries Agency of Japan

Mr Chairman, Executive Secretary, distinguished delegates, ladies and gentlemen,

On behalf of the government of Japan, let me welcome all of you to Japan and to the third meeting of the Northern Committee of WCPFC. It is our great pleasure to host this important meeting again. This year, our welcome extends particularly to the delegation from the new member of the Committee.

As you are fully aware, the function of the Northern Committee is to make recommendations on the formulation of conservation and management measures in respect of stocks which occur mostly in the North Pacific. Therefore, sustainable management of the northern stocks will be the main topic of the discussion of this week. Since the Northern Committee consists of the coastal as well as fishing members in the region, I am convinced that the development of sound and rational recommendations balancing the establishment of a stronger stock management and the sustainable development of fisheries will further increase the value of the Committee in the WCPFC framework.

I was informed that there was a substantial discussion at the Commission last year in Samoa regarding the area of the competence of the Northern Committee. Naturally, the activities of the Northern Committee should be conducted in accordance with the Convention. Having said so, it should be well remembered that the reason why the Northern Committee is established is that the characteristics of the environment and fisheries of the Pacific Ocean north of 20 degrees north are very different from those of the rest of Pacific. Therefore, I strongly believe that the Northern Committee should make proactive inputs, following active discussions, in order for the Commission to adopt conservation and management measures taking well account into the situation of the region.

Needless to say, the North Pacific is *the* most important ocean for the Japanese tuna industry. Therefore, it is obvious that the Japanese government is committed to the establishment of sustainable tuna fisheries in the region through active participation for the Northern Committee. Japan believes that further vitalization of the Northern Committee is essential to do so, thus Japan has dispatched Dr Ziro Suzuki to the Secretariat to assist its activities regarding the Northern Committee, and Japan is prepared to discuss further the issues regarding the function of

Secretariat this week. I seek for your positive consideration of the Japanese proposals. Let me also confirm in this occasion that Japan is prepared to host the future Northern Committee meetings as well.

Since the area of application of the Northern Committee is rather limited, all of the issues are practical, not theoretical, to everybody here and I have no doubts that this meeting of the Northern Committee will be as lively as the previous ones. Since the recommendations of the Northern Committee can be adopted only by consensus, all participants must make their best efforts to achieve resolutions which are acceptable and implementable to all stakeholders, by understanding each other with cooperative spirits and wider perspective.

In closing, let me make my best wishes for you to have a fruitful 3-day meeting and a comfortable and enjoyable stay in Japan.

Thank you very much, Mr Chairman

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

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AGENDA

WCPFC/NC3/03 Rev.1 11 September 2007

AGENDA ITEM 1 — OPENING OF MEETING

- 1.1 Welcome
- 1.2 Adoption of agenda
- 1.3 Selection of Chair
- 1.4 Meeting arrangements

AGENDA ITEM 2 — CONSERVATION AND MANAGEMENT MEASURES

- 2.1 Report from the 7th ISC
- 2.2 Report of the Third Regular Session of the Scientific Committee (SC3)
- 2.3 Conservation and management measures for the northern stocks
 - 2.3.1 Northern Pacific Bluefin
 - 2.3.2 North Pacific Albacore (CMM-2005-03)
 - 2.3.3 North Pacific Swordfish (CMM-2006-03)
- 2.4 Conservation and management measures for other species
 - 2.4.1 Bigeve and vellowfin tuna (CMM-2006-01)
 - 2.4.2 Sharks (CMM-2006-05)
 - 2.4.3 Seabirds (CMM-2006-02)
- 2.5 Status of striped marlin as a northern stock
- 2.6 Conservation considerations for striped marlin

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 2008–2012

AGENDA ITEM 5 — COOPERATION WITH OTHER ORGANIZATIONS

- 5.1 ISC
- 5.2 IATTC
- 5.3 Proposed 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

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

AGENDA ITEM 8 — CLOSE OF MEETING

8.1 Closing of the meeting

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

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SUMMARY OF NORTH PACIFIC ALBACORE PRESENTATION

- 1. Spawning stock biomass (SSB) shows fluctuations around the modeled time series average (1966–2006) 100,000 mt. The 2006 stock assessment indicates that SSB increased from 73,500 mt in 2002, to 153,300 mt in 2006, and is projected to increase to 165,800 mt (in 2007). The increase is attributable to strong 2001 and 2003 year classes. The estimated spawning stock size in 2006 of 153,300 mt is approximately 53% above the overall time series average (1966–2005). Projections (2007–2020), using an average productivity of 27.75 million fish, and a fishing mortality rate (F) equal to 0.75 (average 2002–2004), indicate that SSB will reach equilibrium by 2015 at 92,600 mt (90% CI=62,700–129,300 mt).
- 2. The population is being fished at roughly $F_{17\%}$ (i.e. $F_{2002-2004} = 0.75$). This result is similar to the 2004 assessment. $F_{current}$ (0.75) is high relative to commonly used F reference points. The Albacore Working Group expressed concern at the decline in total albacore catch since 2002. As a result, ISC recommended:

Previous scientific advice, based on the 2004 stock assessment, recommended that current fishing mortality rate (F) should not be increased. It was noted that management objectives for the IATTC and WCPFC are based on maintaining population levels which produce maximum sustainable yield. Due to updating, and improvements and refinements in data and models used in the 2006 stock assessment, it is now recognized that $F_{current}$ (0.75) is high relative to most of the F reference points (Table 1). On the other hand, the same analysis indicates that the current estimate of the SSB is the second highest in history but that keeping the current F would gradually reduce the SSB to the long-term average by the mid 2010s. Therefore, the recommendation of not increasing F from current level ($F_{current}$ (2002–2004)=0.75) is still valid. However, with the projection based on the continued current high F the fishing mortality rate will have to be reduced. The degree to which, when and how reductions should occur will depend on which reference points are selected and the desired probability and practicability of success of attaining these reference points in a time frame to be agreed. The ISC requires additional guidance on these issues from the management authorities in a timely manner to work further on these issues.

Table 1. Results from equilibrium analysis of biological reference points (BRP) for North Pacific albacore associated with Model D1: (a) candidate target and limit reference points; (b) corresponding fishing mortality rates (F, yr^{-1}) ; (c) current F (2002-2004) relative to target F or limit F reference points; (d) MSY proxy or equilibrium catch (1,000 mt); and (e) SSBMSY proxy or equilibrium SSB (1,000 mt). The current F (0.75) reflects the fully-selected F (observed for age groups 8 and 9+) from the mean (geometric) of F-at-age estimates from 2002-2004. All catch and SSB estimates are based on the assumption of constant recruitment of 27.75 million fish per year. All SSB statistics are based on the assumption of a "May 1" reference spawning date.

Candidate Target Reference Points	Target F	Ratio of Current F To Target F	MSY Proxy (1,000 mt)	SSB _{MSY} Proxy (1,000 mt)
$F_{40\%}$	0.32	2.31	75	226
$F_{35\%}$	0.38	1.97	79	198
$F_{0.1}$	0.45	1.68	83	171
$F_{30\%}$	0.45	1.67	83	169
Candidate Limit	Limit F	Ratio of Current F	Equilibrium Catch	Equilibrium SSB
	1			
Reference Points	(yr-1)	To Limit F	(1,000 mt)	(1,000 mt)
Reference Points F _{20%}	(yr-1) 0.65	To Limit <i>F</i> 1.16	(1,000 mt)	(1,000 mt)
$F_{20\%}$	0.65	1.16	91	113
$F_{20\%} \ F_{ m Max}$	0.65 2.07	1.16 0.36	91 100	113 10

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

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SUMMARY OF PACIFIC BLUEFIN PRESENTATION

- 1. The total catch for this species indicates considerable fluctuation in the past, between 8,500 mt in 1990 and 38,000 mt in 1956. Recent catches are relatively higher and the average for the past five years was about 22,000 mt. The last assessment was conducted in January 2006. ISC plenary indicated concerns on several uncertainties of the assessment results.
- 2. In order to answer these concerns, a data preparatory meeting was held in May 2007, and comprehensive data reviews for various fisheries, mostly in the western Pacific were made. Working Group members also promoted biological studies, in particular, the growth of older fish and data review for various fisheries.
- 3. Another meeting was held in July 2007 in Korea. In this meeting, fishery information with regards to the strength of the 2001 year class (which would have consisted of the major part of adult stock) was investigated using the available size data. Consequently, the future prospect of this stock appears to be less optimistic, though it was considered premature to draw any conclusion on this point.
- 4. The ISC plenary in July 2007 kept the same management advice as last year, that is: "Noting the uncertainty in the assessments, the ISC plenary agreed with the WG recommendation that bluefin tuna fishing mortality should not be increased above recent levels as a precautionary measure."
- 5. The next full stock assessment will take place in May 2008.

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SUMMARY OF NORTH PACIFIC STRIPED MARLIN PRESENTATION

- 1. Gary Sakagawa commenced his presentation for North Pacific striped marlin (*Tetrapturus audax*) with reference to the following conservation advice from the ISC:
 - "While further guidance from the management authority is necessary, including guidance on reference points and the desirable degree of reduction, the fishing mortality rate of striped marlin (which can be converted into effort or catch in management) should be reduced from the current level (2003 or before), taking into consideration various factors associated with this species and its fishery. Until appropriate measures in this regard are taken, the fishing mortality rate should not be increased."
- 2. This advice was based on the work of the ISC Billfish Working Group's North Pacific striped marlin stock assessment, which was undertaken using the Stock Synthesis 2 model. He noted the movement of striped marlin between temperate and sub-tropical areas throughout its life. As a result, it is difficult to describe the biomass distribution for this stock throughout its range. Two assessment model scenarios were developed to bound the uncertainty in the steepness of the stock recruitment relationship. These were i) the maternal effect scenario in which recruitment is governed by a Beverton-Holt stock-recruitment curve (steepness h=0.7), and ii) the environmentally driven recruitment scenario in which recruitment varies about its mean (h=1.0). Yield- and spawning biomass-per recruit biological reference points and stock projections at $F_{40\%}$, $F_{20\%}$ and $F_{current}$ (2001–2003) fishing mortality rates were calculated using the YPR and AGEPRO modules of the NOAA Fisheries Toolbox (http://nft.nefsc.noaa.gov/).
- 3. It was reported that spawning biomass has declined from around 40,000 mt in the early-1970s to about 5,000 mt in the early 2000s. Spawning biomass in 2003 was estimated to be 14–15% of the 1970 level, depending upon model scenario. Recruitment estimates also exhibited a long-term decline since the 1970s. Recent average recruitment (1996–2003) is roughly one-half of the long-term average (1965–2003) under both model scenarios. Stock projections from 2004 through 2009 based on re-sampling the distribution of recent average recruitment indicate that both spawning biomass and landings will continue to decline if the current fishing mortality rate (average of $F_{2001-F2003}$) is maintained, regardless of model scenario.
- 4. Fishing mortality has increased more than three-fold, from roughly F=0.20 in the early 1970s to over F=0.6 in the early 2000s. The current fishing mortality rate exceeds the F20%

reference point by roughly 60% under both model scenarios. It was also noted that the current fishing mortality rate corresponds to maintaining only 9% of maximum spawning potential (F9%). The Billfish Working Group expressed concern that current catches are at record low levels.

Attachment G

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

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WORK PROGRAMME FOR THE NORTHERN COMMITTEE (as revised by the Third Regular Session)

Work areas	5-year objectives		1-year tasks			
	2008-2012	2008	2009	2010	2011	2012
1. Northern stocks						
a. Monitor status;consider managementaction	Review status and take action as needed for: ¹					
	North Pacific albacore	Consider interim management objectives and ISC advice.				

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.

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Work areas	5-year objectives	1-year tasks				
work areas	2008-2012	2008	2009	2010	2011	2012
		Obtain scientific advice and make recommendations for reference points for North Pacific albacore.	Obtain and review a full assessment.			
	Pacific bluefin tuna	Obtain and review the status of the stock based on provisional stock assessment from ISC.	Obtain and review available stock assessment (ISC, w/ WCPFC data) and consider management action.	Obtain and review a full assessment.		
		Review reports from CCMs on their domestic management measures, and consider management action.				
	Swordfish		Obtain and review complete assessment (ISC) and consider management action.			
	Striped marlin (if agreed by the Scientific Committee and Commission).	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)				
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.				

Work areas	5-year objectives	1-year tasks				
work areas	2008-2012	2008	2009	2010	2011	2012
		Encourage submission to Commission of PBF data from all CCMs and make available to ISC.				
	Consider systems to validate catch data.					
2. Non-target, associated, dependent 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.				
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.			
c. Sharks	Consider appropriate implementation for CMM-2006-05 in the. northern area.	Review implementation for CMM-2006-05 in the northern area.				

Work orong	5-year objectives	1-year tasks				
Work 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 North Pacific albacore measure (CMM 2005-03).	Review effectiveness of North Pacific albacore measure (CMM 2005-03).			
4. Cooperation with other organizations						
a. ISC	Develop recommendations to Commission for requests to ISC for assessments, analyses, and advice in support of conservation and management measures.					
	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.	Following paragraph 8 of CMM 2005-03, initiate consultation to maintain consistent measures for North Pacific albacore.				