NORTHERN COMMITTEE
Third Regular Session
11-13 September 2007
Tokyo, Japan

SCIENTIFIC COMMITTEE
THIRD REGULAR SESSION
13-24 August 2007
Honolulu, HI, U.S.A.

[Unofficial Summary prepared by the Secretariat from the Draft Summary Record adopted by the Scientific Committee for the purpose of briefing the Northern Committee only]

WCPFC/NC3/09
4th September 2007

1. The Chair, Dae-Yeon Moon (Korea) opened the Third Regular Session of the Scientific Committee, which took place at Honolulu, HI, U.S.A, from 13-24, August 2007.

2. The following countries attended the session as Members of the Commission and as participating territories: Australia, Canada, China, Cook Islands, European Community, Federated States of Micronesia, Fiji, French Polynesia, Guam, Japan, Kiribati, Korea, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Chinese Taipei, Tokelau, Tonga, Tuvalu, United States of America (USA), Vanuatu and Wallis and Futuna. Solomon Islands was unable to attend and Indonesia attended as a Cooperating Non-member. The Pacific Islands Forum Fisheries Agency (FFA), Secretariat of the Pacific Community (SPC), Agreement for the Conservation of Albatross and Petrels (ACAP), International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), Birdlife International, Sea Turtle Restoration Project, and World Wildlife Fund (WWF).

Agenda 2.1 Overview of the western and central Pacific Ocean (WCPO) fisheries

General overview

3. The provisional total Convention Area tuna catch for 2006 was estimated at 2,189,985 mt, the second highest annual catch recorded, and only slightly less than the record in 2005 (2,204,335 mt). During 2006, the purse seine fishery accounted for an estimated 1,573,447 mt (72% of the total catch–only 12,000 mt less than the record catch of 2005), with pole-and-line taking an estimated 211,829 mt (10%), the longline fishery an estimated 229,323 mt (10%), and the remainder (8%) taken by troll gear and a variety of artisanal gears, mostly in eastern Indonesia and the Philippines.

4. The provisional Convention Area tuna catch (2,189,985 mt) for 2006 represented 78% of the total Pacific Ocean catch of 2,800,740 mt and 51% of the global tuna catch (the provisional estimate for 2006 is just over 4.3 million mt).

5. The 2006 Convention Area catch of skipjack (1,537,524 mt – 70% of the total catch) was the highest ever, continuing the trend of consecutive record catches since 2002. The Convention Area yellowfin catch for 2006 (426,726 mt – 19%) was about 5% lower than in 2005, but still around the average catch level for the period since 2000. The Convention Area bigeye catch for 2006 (125,874 mt – 6%) was also lower than in 2005, but slightly higher than the average catch level for the period since 2000. Recent Convention Area albacore catches (98,626 mt [4%] in 2005 and 99,861 mt in 2006 [5%]) have been the lowest for nearly ten years, mainly due to low catches in the North Pacific.

6. The provisional 2006 purse-seine catch of 1,573,447 mt was the second highest on record but only 12,000 mt less than the record in 2005 (1,586,064 mt). The 2006 purse seine catch was dominated by a record catch of skipjack tuna (1,305,405 mt – 83% of the total catch), but experienced a drop in yellowfin tuna catch (243,620 mt – 15%) compared to the relatively high level taken during 2005 (258,273 mt). The estimated purse seine bigeye catch for 2006 (24,180 mt – 2%) was slightly less than the average for years since 2000. The total estimated purse-seine effort for 2006 was lower than the previous two years, even though the 2006 catch level is on par with 2005, with very good catch rates were experienced during 2006.

7. The 2006 catch estimates for the key pole-and-line fleets operating in the Convention Area have yet to be provided by key fleets, although the total catch estimate is expected to be similar to the level of recent years (i.e. 200,000–220,000 mt). Skipjack tends to account for the vast majority of the catch (typically more than 85% of the total catch in tropical areas), while albacore, taken by the Japanese coastal and offshore fleets in the temperate waters of the north Pacific, yellowfin (5–7%) and a small component of bigeye (1–4%) make up the remainder of the catch.

8. The provisional Convention Area longline catch (229,323 mt) for 2006 was the lowest since 2000 and around 10% lower than the highest on record which was attained in 2004 (261,038 mt). The Convention Area albacore longline catch (78,921 mt – 34%) for 2006 was similar to the (high) catch levels experienced in recent years. The provisional bigeye catch (75,496 mt – 33%) for 2006 was the lowest for 5 years, and the yellowfin catch (70,021 mt – 31%), the lowest for 7 years.

Agenda 2.2 Overview of the eastern Pacific Ocean fisheries

9. The IATTC Secretariat presented a review of the Eastern Pacific Ocean fishery for the 2006 fishing year.

AGENDA ITEM 4 — STATUS OF THE STOCKS AND MANAGEMENT INFORMATION

Agenda 4.1 WCPO bigeye tuna

10. There was no stock assessment undertaken for bigeye tuna in 2007.The latest stock assessment for bigeye tuna is presented in SC2 SA WP-2. Thus the stock status description and management recommendations from SC2 are still current.

Agenda 4.2 WCPO yellowfin tuna

a) Status and trends

11. The 2007 stock assessment conclusions differ slightly from the 2006 assessment, particularly in relation to the $F_{current}/\tilde{F}_{MSY}$ threshold with the 2007 assessment being slightly more optimistic than the 2006 assessment. While the point estimate of $F_{current}/\tilde{F}_{MSY}$ remains slightly less than 1 (0.95), the probability distribution associated with fishing mortality based reference point indicates that there is almost an equal probability that the value of $F_{current}/\tilde{F}_{MSY}$ is less than or greater than the reference point. Therefore, the possibility of overfishing is still relatively high (47%). The reference points that predict the status of the stock under equilibrium conditions are $\tilde{B}_{F_{current}}/\tilde{B}_{MSY}$ (1.10) and $S\tilde{B}_{F_{current}}/S\tilde{B}_{MSY}$ (1.12), which indicate that the long-term average biomass would remain slightly above the level capable of producing MSY at 2002–2005 average fishing mortality. Overall, current biomass exceeds the estimated biomass at MSY ($B_{current}/\tilde{B}_{MSY}$ > 1.0) (i.e. the yellowfin stock in the WCPO is not in an overfished state – although there is a small probability (6.2%) that it is in an overfished state) (Figures. 1 and 2). The change in the estimated MSY in 2007 from that in 2006 may reflect changes in the data structure, fishery designations and levels of uncertainty in the assessment, especially in estimating absolute values, and the change in the scenarios modeled between years.

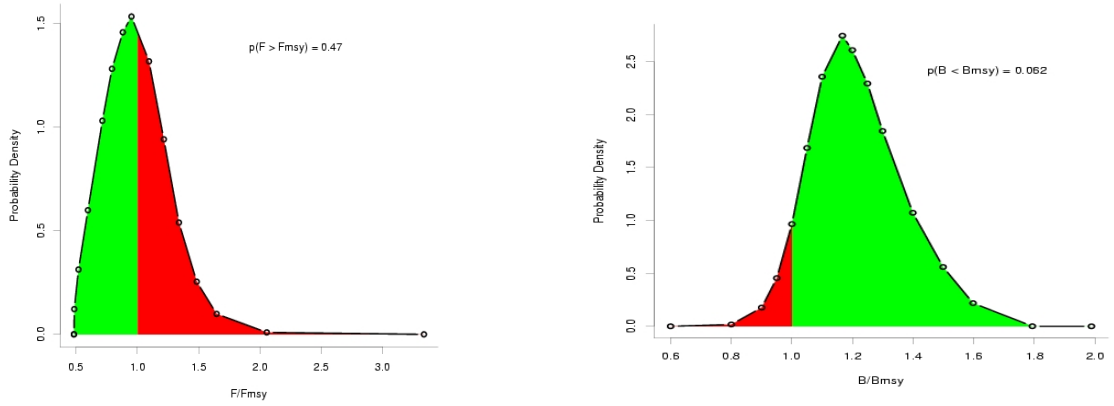

Figure 1. Probability of overfishing occurring (left panel) and the stock being overfished (right panel) for yellowfin tuna in the WCPO.

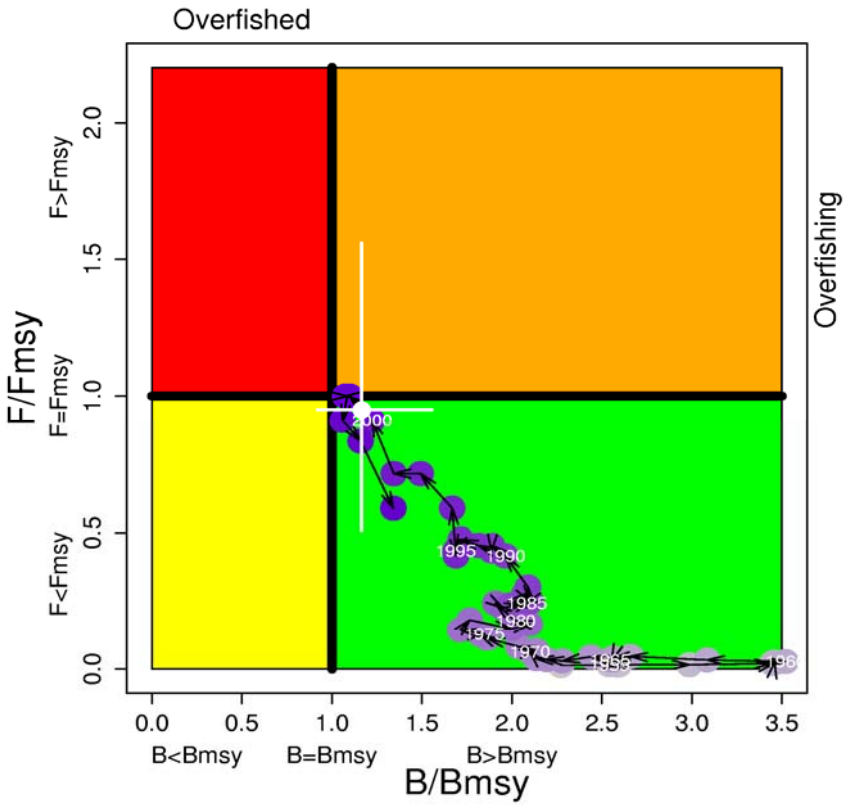

Figure 2. Temporal trend in annual stock status, relative to BMSY (x-axis) and FMSY (y-axis) reference points, for the model period (1952–2006). The colour of the points is graduated from mauve (1952) to dark purple (2006) and the points are labelled at 5-year intervals. The white point represents the reference points computed for the "current" period (2002–2005) and the white lines represent the associated 95% confidence interval.

12. The attribution of depletion to various fisheries or groups of fisheries indicates that the Indonesian and Philippines domestic fisheries have the greatest impact, particularly in its home region (3) and is contributing significantly to the impact in adjacent regions 1, 4 and 5 through fish movement. The purse seine fishery also has a high impact in regions 3 and 4 and accounts for a significant component (~40%) of the recent (2002-2005) impacts in all other regions, except region 6. It is notable that the composite longline fishery is responsible for biomass depletion of about 10% in the WCPO during recent years and generally catches larger, older size classes, while purse-seine fisheries are responsible for a larger percentage of the impacts and generally the catch is smaller and younger fish.

b) Management advice and implications

13. The point estimate of the Fcurrent/Fmsy ratio (0.95) in the 2007 assessment was lower than the point estimate (1.11) in the 2006 assessment. This change is largely due to the new configuration of the fisheries, their updated size data, and the modeling improvements. However, the possibility of overfishing is still relatively high (47%).

14. The WCPO yellowfin tuna fishery can be considered to be fully exploited. Both the 2006 and 2007 assessments indicate that there is a high probability that overfishing is occurring (73% for the base case 2006 assessment and 47% for the base case 2007 assessment). In order to

reduce the likelihood of overfishing, and if the Commission wishes to maintain average biomass at levels greater than 5% above Bmsy, reductions in the fishing mortality rate would be required (Figure 3). The various levels of fishing mortality reduction required to maintain the biomass at specified levels above BMSY (relative to the average levels for 2002–2005) are given in Figure 3.

15. Stock projections for 2007–2011 — that attempt to simulate the conservation and management measures adopted at WCPFC2 and WCPFC3 — indicate that the point estimate of $B_t / \tilde{B}_{MSY}$ remains above 1.0 throughout the projection period. However, the increasing uncertainty in the future projections is likely to result in an increased probability of the biomass declining below $\tilde{B}_{MSY}$ by the end of the projection period.

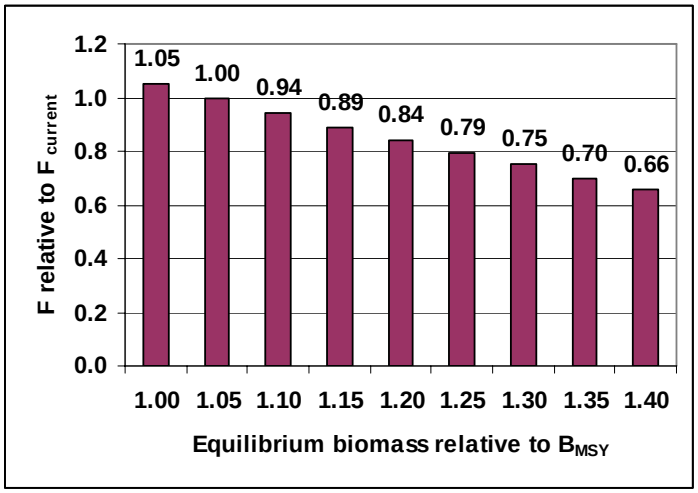

Figure 3. Estimates of the equilibrium level of fishing mortality (relative to current levels) required to sustain biomass at the indicated levels (relative to BMSY).

Agenda 4.3 WCPO skipjack tuna

16. No new assessment was conducted for skipjack in 2007. Thus the stock status description and management recommendations from SC1 are still current.

Agenda 4.7 – 4.9 Northern Stocks

17. G. Sakagawa, Chairman of the ISC, introduced the report of the seventh meeting of the ISC (WCPFC-SC3-2007/GN IP-5) by noting that the full report, including the annexes, which contain data on the fisheries and results of analyses used in stock assessments, is available on the ISC website (www.ISC.ac.affrc.go.jp). He briefed the SC3 on accomplishments for the year. His presentation was followed by briefings on ISC stock assessments for north Pacific albacore, Pacific bluefin and North Pacific striped marlin and swordfish. As these assessments will be re-presented to the Northern Committee they are not summarized here.

Inclusion of North Pacific striped marlin as a northern stock

18. The Chair introduced the issue of whether striped marlin in the North Pacific should be included among the northern stocks, noting that the Northern Committee had proposed such inclusion last year, but in accordance with the Commission's rules of procedure, the Commission had tasked the SC with providing a recommendation on the issue. The Scientific Committee considered that the information provided was limited to catch information, and the information

presented regarding the ISC's recent stock assessment did not address the spatial distribution of biomass, so it was difficult to evaluate from that information alone whether the stock biomass lies mostly north of 20N. As a result the SC could not recommend that striped marlin in the North Pacific be considered a northern stock.

Agenda 4.10 Other stock assessment and management-related matters

a. Review of reference points

19. The Chair asked R. Conser to introduce the topic of reference points. R. Conser referred to Working Paper MESWG-WP3, authored by C.C. Davies and T. Polacheck, "A brief review of the use of the precautionary approach and the role of target and limit reference points and Management Strategy Evaluation [MSE] in the management of highly migratory fish stocks," which was commissioned by the Commission, and the deliberations the previous week of the small discussion group on reference points and in the Methods Specialist Working Group.

20. The SC recommended a work plan for further consideration of reference points and management strategy evaluation to the Commission.

c. Discards of albacore, bigeye and yellowfin in the WCPO longline fishery

21. Discussion on this topic focused on the degree of detail that should be provided to the Commission on: (1) the reasons for discards, (2) the variability in discard rates among fleets and the relationship between those rates and fishing practices, and (3) the reliability of the discard estimates, particularly given their reliance on observer data and varying degrees of observer coverage among fleets.

d. Catch level of bigeye and yellowfin in other commercial fisheries

22. The average catch level (2001–2004) of bigeye in commercial fisheries other than longline and tropical purse seine is 16% of the catch in the WCPFC Statistical Area (WCPFC SC3 ST-IP4). The average catch level (2001–2004) of yellowfin in commercial fisheries other than longline and tropical purse seine is 37% of the catch in the WCPFC Statistical Area.

AGENDA ITEM 5 — BYCATCH MITIGATION

Agenda 5.1 Seabirds

23. The Scientific Committee reviewed actions required by the Commission in relation to CMM 2006-02 and decided that, at this time, there was no need to amend the suite of mitigation measures, or to make changes to the area of application listed in CMM 2006-02.

24. With regard to the technical specifications for mitigation measures, differing views were expressed by Scientific Committee members on some specifications and complete agreement could not be reached. A list of technical specifications produced by the Scientific Committee reflects the product of these discussions, including the differing views expressed by SC members. The specifications agreed by the Scientific Committee will be available to the Northern Committee, if required.

25. The Scientific Committee noted it would review this issue at its next meeting and reminded CCMs, as they implement CMM 2006-02 next year, to provide information to the Commission on the specifications of the mitigation measures that they will require their vessels to employ, as well as any data resulting from research undertaken to further develop and refine measures to mitigate seabird bycatch as required by the CMM.

Agenda 5.2 Sharks

Review of CMM 2006-05

26. The Committee reviewed action required by the Commission in relation to CMM 2006-05 which requires the Scientific Committee to provide advice on the implementation and effectiveness of this measure, on any alternative measures applied under paragraph 11 of the measure, and the application of any additional measures for the management of shark stocks in the Convention Area, as appropriate.

Fin weight ratios

27. The SC generally considered that the average 5% fin to carcass ratio was reasonable, given the variations in species composition, size and processing methods. Issues were noted concerning how much of the shark carcass was processed at sea prior to landing and whether undressed carcasses could be processed on landing.

Identification of key shark species for annual reporting to the Commission

28. The Committee is also required to recommend to the Commission the key shark species that CCMs will be required to report on annually to the Commission, and to provide a dedicated shark research programme to support stock assessment of shark species that rank highly in the Ecological Risk Assessment, in cooperation with other RFMOs.

29. The SC3 recommended that observer programs should collect information on the catch of all species of sharks, both retained and discarded, to the lowest possible taxonomic level. This information should be provided in the annual reporting to the Commission.

30. It is noted that the WCPFC has obligations to collect data for management of the oceanic shark taxa defined in the Convention. The Convention defines highly migratory species through reference to Annex 1 of UNCLOS, but the SC noted that several of the species listed there did not occur in the WCPFC Convention Area. It is likely that the list of shark species (Table 2 of the Summary Report of the Scientific Committee and available to the Northern Committee, if required) that have been observed to be caught in WCPO longline and purse seine fisheries will increase as observer data increases across the WCP-CA.

31. SC3 was not in a position to define what constitutes a “key” shark species. CCMs shall provide details of the shark species that are caught to assist in the identification of key shark species at next year’s SC. Future consideration should include information on the known distribution of those species, e.g., tropical or temperate, coastal or pelagic.

Agenda 5.3 Juvenile bigeye and yellowfin tuna

32. The session noted that high levels of fishing mortality from three categories of small tuna captured on floating objects are of management concern in the WCPO: 1) undersize tuna that are often sorted out and discarded and have little commercial value; 2) very small skipjack, yellowfin and bigeye that enter the surface catch of the Philippines and Indonesia, and; 3) all bigeye and “small-sized” yellowfin taken by purse seine and ringnet fisheries operating on floating objects. It was suggested that these categories of small tuna be referred to as “Small Tuna on Floating Objects” (STFO), replacing the terminology of “juvenile bigeye and yellowfin tuna”. Industry-associated and FAD-related research examining acoustic selectivity, targeting and technical influences on STFO catch rates were briefly reviewed and further research, including industry associated research, identified.

Agenda 5.4 Turtles

34. The Scientific Committee reviewed effective strategies to reduce sea turtle interactions in fisheries.

Agenda 5.5 Ecological Risk Assessment

33. The meeting reviewed work undertaken since SC2 in relation to Ecological Risk Assessment (ERA) in general, and Productivity-Susceptibility Analysis (PSA) in particular. The meeting endorsed the substance of the ERA Research Plan and incorporated continued work on ERA in the draft SC Work Plan for 2008–2010.

AGENDA ITEM 6 — DATA AND INFORMATION

6.1 Regional Observer programme

34. The Scientific Committee provided recommendations on:

a) Scientific priorities and objectives of the ROP
b) Minimum fields of scientific data to be collected by the ROP

Agenda 6.2 Data confidentiality, security, and disseminations

35. The Scientific Committee provided recommendations on:

a) Procedures for the access to and dissemination of data compiled by the Commission
b) Information Security Policy

Information Security Policy

36. The Scientific Committee recommended:

a) That the Secretariat proceed immediately with the implementation of the Information Security Policy; and
b) That if CCMs wish to provide written comments on the Information Security Policy they do so before the 16th November 2007 (and preferably before TCC3).

Agenda 6.3 Indonesia and Philippines Data Collections Project (IPDCP) update and review

37. The Scientific Committee noted the report of the 4th Annual Steering Committee for the IPDCP and encouraged additional funding support for the activities that have been initiated and continue to be supported under the IPDCP.

Agenda 6.4 Tagging initiatives

38. The Scientific Committee noted its strong support for the Phase 1 component of the Regional Tuna Tagging Project in PNG. The Scientific Committee recommended that:

- The Commission endorse the Phase II extension of the tagging project as a Commission-sponsored research project;
- A Steering Committee be established to plan the Phase II component of the project;
- A voluntary fund be established by the Commission to encourage CCMs to provide the necessary funding for the project.

Agenda 6.5 Other matters

39. The Scientific Committee noted the discussions that had occurred in the ST-SWG on data gaps and procedures for the provision of data to the Commission.

40. The Scientific Committee provided recommendations on:

1. Data gaps
2. Procedures for the provision of data to the Commission

Procedures for the provision of data to the Commission

41. The Scientific Committee noted that based on the experience gained in implementing procedures for the provision of scientific data to the Commission, and the changes implemented by the Commission since the procedures for the provision of data were originally adopted in 2005, the *Procedures for the provision of data to the Commission* needed to be updated. A number of editorial changes were proposed (including to the common names for fish species and logical regrouping of some fish species), and some rearrangement or rewording to improve clarity and consistency, and four substantive changes (documented in the paragraph 14 of the WCPFC-SC3/ST-SWG Report).

42. The Scientific Committee noted the need for further consideration (at Commission level) of the wording related to provision of data on fishing activities outside the Convention Area.

AGENDA ITEM 7 — COOPERATION WITH OTHER ORGANIZATIONS

Agenda 7.1 Review of existing MOUs

43. The Scientific Committee reviewed WCPFC-SC3/GN-WP11 Rev.1 relating to relations between WCPFC and other organisations.

AGENDA ITEM 8 — CONSIDERATION OF THE SPECIAL REQUIREMENTS OF DEVELOPING STATES AND PARTICIPATING TERRITORIES

Agenda 8.1 Special Requirements Fund

AGENDA ITEM 9 — FUTURE WORK PROGRAMME

Agenda 9.3 2008 Work Program & Budget and 2009-2010 Provisional Work Program & Budget

44. The SC recommends to the Commission the Work Programme and provisional budget outlined in Table 4 of the Summary Report.

45. The SC recommended that the WCPFC Secretariat, together with the Chairman, Vice-Chairman and SWG Conveners, and in consultation with CCMs and the Commission's Science Service Provider, draft guidelines outlining the process for formulating the Work Programme and budget of the SC to ensure that the process is efficient, transparent and facilitates broad participation in the scientific Work Programme. These guidelines are to be presented to SC-4 for review, adoption and implementation.

AGENDA ITEM 10 — ADMINISTRATIVE MATTERS

Agenda 10.1 Rules of Procedure

46. The Scientific Committee recommended that the Executive Director consult with CCMs regarding the issue of rules of procedure for subsidiary bodies and, taking into account the comments tabled at, or provided during, SC3 on the draft rules and procedures recommended by SC2, and any comments provided by NC3 and TCC3, provide to WCPFC4 options for progressing this issue.

Agenda 10.2 Independent review of the science structure and functions of the Commission

47. The Scientific Committee made recommendations on the proposed review's scope, steering committee, terms of reference for the steering committee, reviewer attributes, dissemination of expressions of interest, budget and indicative schedule.

Agenda 10.5 Next meeting

48. The Scientific Committee accepted Papua New Guinea's offer to host SC4 at Port Moresby from 11-22 August 2008.

AGENDA ITEM 11 — OTHER MATTERS

Agenda 11.1 Priorities for stock assessment for 2008

49. The Scientific Committee recommended that the following species be fully assessed in 2008, subject to the completeness of SPC-OFP's data holdings:

- WCPO Bigeye (with consideration given to a Pacific-wide bigeye stock assessment with IATTC);
- South Pacific Albacore; and
- WCPO Skipjack (2008/2009).