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**PREPARATORY CONFERENCE FOR THE COMMISSION FOR  
THE CONSERVATION AND MANAGEMENT OF HIGHLY  
MIGRATORY FISH STOCKS IN THE WESTERN AND  
CENTRAL PACIFIC**

Seventh session  
Pohnpei, Federated States of Micronesia  
6 - 7 December 2004

WCPFC/PrepCon/45  
7 December 2004

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**FINAL REPORT OF WORKING GROUP II**

1. The present document contains a summary of the discussions in WG.II throughout the Preparatory Conference and presents the final recommendations of the Group on each of the matters within its terms of reference. A summary of the recommendations made by WG.II to the PrepCon for transmission to the Commission appears in Annex I.

**I. TERMS OF REFERENCE**

2. Working Group II was established at the first session of the Preparatory Conference (April 2001). Its terms of reference (contained in document WCPFC/PrepCon/4, 25 April 2001) required WG.II to:

(a) Develop a method of work or work programme that will enable issues to be identified and the necessary background information or expert advice sought in order enable decisions to be made as early as possible.

(b) With respect to articles 12 and 13 of the Convention, identify the Commission's needs with respect to:

- (i) Science and in particular stock assessment and advice on stock status in the short term and ongoing;
- (ii) Data requirements, including current gaps in data coverage and standards for data collection and management;
- (iii) Research priorities, and research planning and coordination; and
- (iv) Review of assessments, analyses and other scientific work.

(c) Identify for the Preparatory Conference various options or mechanisms, including the use of existing organizations and arrangements, by which the requirements of articles 12 and 13 can be provided.

(d) Provide provisional advice on the status of the four main tuna stocks (bigeye, skipjack, South Pacific albacore and yellowfin) and determine a process by which the Preparatory Conference can receive and review information on the status of these and northern stocks in an efficient and cost effective manner, including the extent to which existing information can fulfill these needs.

## II. ORGANIZATION OF WORK

3. The first meeting of WG.II took place during the first session of the Preparatory Conference. Mr. Peter Ward (Australia) was elected Chairman of the Working Group. Subsequently, at the second session of the Preparatory Conference, Dr John Kalish (Australia) was appointed Chairman of the Working Group. WG.II held formal meetings during the first, second, third, fifth, sixth and seventh sessions of the Preparatory Conference. No formal meetings of WG.II took place during the fourth session of the Preparatory Conference but an informal meeting was held to review progress to date, and the current and future work programme for the Working Group. At the end of each formal meeting, the Chairman of WG.II submitted a summary report to the Preparatory Conference.<sup>1</sup>

4. At its first meeting, WG.II identified five principles that would guide its work:<sup>2</sup>

- The desirability of maintaining a range of options to be evaluated for the provision of scientific services and advice within the scope provided by articles 12 and 13 of the Convention.
- The importance of transparency in deliberations of the working group.
- The need to provide for participation by small island developing States in the scientific work of the Commission and also during the interim period prior to the Commission's establishment.
- To the extent possible, the need to utilize the scientific resources of existing national and regional organizations and arrangements, to avoid duplication of scientific effort and to ensure economy and efficiency.
- The need for close coordination between WG.II and WG.I (Organizational structure, budget, and financial contributions).

5. To facilitate its future work, WG.II requested that a review of the Convention be undertaken to identify science needs, data requirements, priority setting, planning and coordination of research, and the review of scientific work. In accordance with this request, for the second session of the Preparatory Conference, WG.II was provided with a discussion paper prepared for the Interim Secretariat by MRAG (Americas) Inc. entitled *Approaches to Meeting the Science and Data Needs of the Commission* (February 2002). In addition, WG.II was provided with drafts of two commissioned studies, subsequently issued as WCPFC/PrepCon/WP.9, *Review of ecosystem and bycatch issues for the Western Central Pacific* and WCPFC/PrepCon/WP.10, *Review of data standards, technical capabilities and data sharing policies for the Western Central Pacific*.

6. After consideration by the Working Group of document WCPFC/PrepCon/WP.10 during the second and third sessions, the Interim Secretariat was requested to coordinate the preparation of a revised version of the document in order to address specific issues identified by WG.II. As a result, three further working papers were issued for consideration by the Working Group at the fifth session of the Conference: WCPFC/PrepCon/15, *Review of data standards for the Western*

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<sup>1</sup> WCPFC/PrepCon/6 (first session), WCPFC/PrepCon/15 (second session), WCPFC/PrepCon/20 (third session), WCPFC/PrepCon/32 (fifth session), WCPFC/PrepCon/38 (sixth session).

<sup>2</sup> WCPFC/PrepCon/6.

*and Central Pacific Region, WCPFC/PrepCon/WP.16/Rev.1, An investigation of technical capabilities and data security and confidentiality policies for the Western and Central Pacific Region, and WCPFC/PrepCon/WP.16/Add.1, Capacity of Pacific Island Countries and Territories to meet the likely data requirements of the Western and Central Pacific Fisheries Commission.*

### III. SCIENTIFIC COORDINATING GROUP

7. At the second session of the Preparatory Conference, WG.II recommended that, in relation to the provision of interim scientific advice, a Scientific Coordinating Group (SCG) should be established to assist the WG.II and the Preparatory Conference in carrying out those parts of its terms of reference which require special scientific and technical considerations. Terms of reference for the SCG were adopted as follows:<sup>3</sup>

“The tasks of the SCG include:

Provision of interim scientific advice

1. Providing advice to PrepCon on stock condition and, when requested by PrepCon, provisional conservation and management actions. Information and related conclusions on stock condition produced by existing bodies, including, but not limited to, the SPC OFP, IATTC, SCTB and ISC, will be reviewed and assembled into a convenient format suitable for advising PrepCon on the status of the four primary tuna stocks; and
2. Prioritizing fisheries and scientific data needs in the interim period and providing recommendations to WG.II and the PrepCon on procedures to obtain such data.

Procedures for scientific functions

1. Providing recommendations to WG.II and the PrepCon on longer term data needs, requirements for data collection, verification, analysis and dissemination, and confidentiality;
2. Preparation of draft guidelines and a reporting format for WG.II and the PrepCon for determining and advising on the status of stocks and other key variables and eventually for providing advice to the Commission;
3. Undertaking a review of the available scientific and fishery management data that would include validating and analyzing these existing data in order to provide recommendations to WG.II and the PrepCon on the appropriateness and applicability of these data to the future work of the Commission; and
4. Performing other tasks that may be assigned by WG.II and the PrepCon.”

8. In accordance with those terms of reference the first meeting of the SCG took place at Honolulu, Hawaii, from 29 to 31 July 2002, immediately following the 15th session of the Standing Committee on Tuna and Billfish (SCTB15). The Chairman of WG.II, Dr John Kalish (Australia) acted as Chairman of the SCG for the first meeting.

9. The report of the first meeting of the SCG<sup>4</sup> was considered and approved by WG.II at the third session of the Preparatory Conference (November 2002). In considering the statements of stock status prepared by the SCG for the four main tuna stocks, bigeye tuna, yellowfin tuna,

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<sup>3</sup> Annex V of WCPFC/PrepCon/15.

<sup>4</sup> WCPFC/PrepCon/17.

skipjack tuna and South Pacific albacore tuna, WG.II accepted the general format for reporting to the Preparatory Conference on the status of stocks and other scientific and technical issues but made specific comments on the summary statements as set out in the report of the Chairman of WG.II to the third session of the Preparatory Conference.<sup>5</sup>

10. The second meeting of the SCG took place at Mooloolaba, Australia, from 17 to 19 July 2003 immediately following SCTB16. Dr. Yuji Uozumi (Japan) was appointed Chairman of the SCG for its second and third meetings. WG.II considered and approved the report of the second meeting of the SCG<sup>6</sup> at the fifth session of the Preparatory Conference (October 2003) and also accepted the summary statements prepared by SCG on the status of skipjack tuna, yellowfin tuna, bigeye tuna, and south Pacific albacore tuna stocks.

11. The third meeting of the SCG took place at Majuro, Marshall Islands, from 19 – 21 August 2004, immediately following SCTB17. At the seventh session of the Preparatory Conference, WG.II considered the report of the third meeting of the SCG<sup>7</sup> and accepted summary statements on the status of skipjack tuna, yellowfin tuna, bigeye tuna, and south Pacific albacore tuna stocks and other scientific and technical information pertaining to these.

### III. SCIENCE STRUCTURE FOR THE COMMISSION

12. At the outset of its discussions on the formulation of recommendations on the science structure for the Commission, WG.II noted that the essential questions it would need to consider were: the desirable structure for the scientific functions, the role of existing regional organizations within such a structure, and the procedures and work programmes for the Commission's Scientific Committee and any subsidiary bodies that might be established.

13. During the second session of the Preparatory Conference, following discussion of various alternative models contained in the discussion document *Approaches to Meeting the Science and Data Needs of the Commission* (February 2002), WG.II developed, on a provisional basis, a revised model for meeting the science and data needs of the Commission.<sup>8</sup> However, while there was some convergence of views on the overall level of scientific services to be provided to the Commission, some delegations expressed reservations about the revised alternative model and it was noted that further discussions would be required at future meetings.

14. WG.II continued its discussions on alternative models for meeting the science and data needs of the Commission at the third session of the Conference, but no agreement could be reached on the matter and discussions were deferred to the fifth session.

#### A. Provisional science structure for the transitional period

15. Following further discussions at the fifth session of the Preparatory Conference, WG.II agreed to **recommend** to the Preparatory Conference a provisional science structure for a transitional period (expected to last some 3 to 5 years and representing the period between the Convention coming into force and a fully functioning Commission). During this period the structure and functions of the science secretariat must be flexible and adaptable in order to meet changing needs. An independent review of the transitional structure and function should be carried out two years after entry into force of the Convention, or earlier if required, to determine

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<sup>5</sup> WCPFC/PrepCon/20, paragraphs 5 – 10.

<sup>6</sup> WCPFC/PrepCon/28.

<sup>7</sup> WCPFC/PrepCon/41 and Corr.1.

<sup>8</sup> Annexes II and III of WCPFC/PrepCon/15.

the effectiveness of the science structure and to recommend changes as appropriate. For ease of reference, the provisional science structure is shown in Annex II of the present document.<sup>9</sup>

16. WG.II agreed that the Oceanic Fisheries Programme of the Secretariat for the Pacific Community (OFP-SPC) should play a key role in the scientific work of the Commission during the transitional period, including data management. It was suggested that an assessment of the costs and benefits of utilizing the capabilities of OFP-SPC for providing the data management functions of the Commission during the transitional period, and in the long-term, should be provided. The Group also agreed to **recommend** that the Commission stock assessments for the four major species (bigeye tuna, skipjack tuna, south Pacific albacore and yellowfin tuna) be undertaken by scientists from the SPC-OFP, in cooperation with other scientists as appropriate (including those from members), during the transitional period.

17. At the sixth session of the Preparatory Conference, WG.II produced an agreed science structure schematic that illustrated the flow of scientific information and advice in relation to northern stocks from the Interim Scientific Committee (ISC) and discussed the need to develop in the future a Memorandum of Understanding to clarify the relationship between the ISC and the Commission. The agreed schematic is reproduced as Annex III.<sup>10</sup>

#### B. Operation of the Scientific Committee of the Commission

18. With respect to the future operation of the Scientific Committee of the Commission, as a result of its deliberations at the sixth session of the Preparatory Conference, WG.II **recommended** that there should be a single meeting combining the work of the Scientific Committee (SC) and Specialist Working Groups (SWGs). This should be held annually at least two months prior to the annual meeting of the Commission. Some tasks may be carried out by email or other means in order to expedite the work of the SC. WG.II recommended that, in order to take advantage of the most recent stock assessment advice the most appropriate timing for Commission meetings would be in the final quarter of the year. If the stock assessments are based on a yearly cycle, the data for the most recent years become available around the end of April. Consequently, if stock assessments are undertaken from May to July and reviewed by the SWG and SC by the end of August, outcomes from the SC could be delivered to the Commission in September. This would allow time for review and development of proposals by members prior to the Commission meeting. A provisional timeline of the process was provided to illustrate the process.<sup>11</sup>

19. WG.II noted that its recommendation that a SC meeting be held in advance of the annual Commission would have financial implications. It was therefore proposed that the draft indicative budget for the Commission (considered by WG.I on the basis of WCPFC/PrepCon/WP.20) be revised to reflect funding for participation at the SC by one participant from each developing State member of the Commission and each participating territory, in addition to the costs already identified for funding participation at the Commission meeting.

20. WG.II further **recommended** that the selection of the location of SC meetings should be influenced by cost-effectiveness and efficiency. The first meeting of the SC should be in December 2004 in conjunction with the first meeting of the Commission. The purpose of this SC meeting would be to elect a Chairman and Vice-Chairman for the SC for 2005, and to make necessary recommendations for the establishment of SWGs, so that meetings for 2005 can be

<sup>9</sup> The model originally appeared as Annex III of WCPFC/PrepCon/32.

<sup>10</sup> The schematic originally appeared as Annex III of WCPFC/PrepCon/38.

<sup>11</sup> Annex II of WCPFC/PrepCon/38.

organized. With respect to the process for elections, it was noted that the draft rules of procedure for the Commission would be taken up by the Commission at its first session and that rule 31 of the draft rules provided that, pending the approval by the Commission of rules for the efficient conduct of meetings of the subsidiary bodies of the Commission and except as otherwise provided in the Convention, the rules of procedure for the Commission would apply, *mutatis mutandis*, to the proceedings of the SC.

21. WG.II also **recommended** a work plan for the Scientific Committee work plan for Year 1 (2005). This is reproduced in Annex IV of the present document.<sup>12</sup>

22. Following on the recommendations of the third meeting of the SCG, WG.II agreed that the latest structure of WGs used in SCTB17 was very effective. To minimize costs and promote effective participation of developing States and territories, it was recommended that meetings of the SWGs should be held in conjunction with SC meetings. WG.II **recommended** that the following SWGs be established as subsidiary bodies of the Scientific Committee: stock assessment; statistics; methods; fishing technology; biology; ecosystem and bycatch. A brief outline of the types of work each group might cover is given in Annex IV of the present document, acknowledging that the SC is responsible for the development of the terms of references of the SWGs.<sup>13</sup>

#### C. Role of the Standing Committee on Tuna and Billfish from 2005 onwards

23. WG.II noted that in 2005 SCTB is likely to cease to exist and therefore the tasks completed by that body will be carried out by the Scientific Committee through its Specialist Working Groups. WG.II recognised the important scientific contributions of the SCTB over the past 17 years to the development of an understanding of the fishery resources of the Western and Central Pacific Ocean, and the contribution made by the SCTB to the Preparatory Conference. WG.II identified the likely need for assistance from the OFP-SPC with the organization of the first meeting of the SWG in 2005.

### **IV. DATA REQUIREMENTS AND SPECIFICATIONS**

24. Throughout the course of its work, WG.II adopted a range of recommendations on preferred scientific approaches and processes, and the data requirements and specifications which were expected to be relevant to the ongoing scientific activities and requirements of the Commission. In particular, WG.II attempted to identify the Commission's needs with respect to data requirements, including current gaps in data coverage and standards for data collection and management as well as research priorities, and research planning and coordination.

#### A. Data requirements of the Commission

25. WG.II recognized that accurate stock assessment depends on accurate data collected at an operational level i.e. long line and purse-seine sets, and pole and line and troll by day fished. Such data are a long-term data requirement of the Commission. WG.II therefore **recommended** that operational level data be collected by all fleets and be made available to the Commission for stock assessment and other scientific analyses, with appropriate arrangements for data security and confidentiality.

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<sup>12</sup> See WCPFC/PrepCon/38, paragraph 9.

<sup>13</sup> See WCPFC/PrepCon/38, paragraph 10 and WCPFC/PrepCon/41, Report of the third meeting of the SCG.

26. Estimates of annual catches are an essential element of fisheries data. WG.II **recommends** that annual catches by species, gear and fleet in the Convention area be reported by flag states and coastal states.

27. Size composition (length and/or weight frequency) data are also essential for stock assessment. WG.II **recommended** that size composition data should be collected, at the operational level (described above) where practical, according to a statistically sound sampling design to ensure that the data are representative of the fishery.

28. WG.II recognized the unique characteristics of the WCPO fisheries, that the pathways for data communication may be complex, and that coastal states play a critical role in regional data collection. WG.II **recommended** flexibility be maintained in establishing data reporting requirements for the Commission and that coastal states and flag states cooperate in ensuring that the Commission receive data in a timely fashion.

29. WG.II discussed the issues raised in document WCPFC/PrepCon/WP.10 relating to the Commission's data requirements, including current gaps in data coverage and standards for data collection and management, data security, and data confidentiality at the second and third sessions of the Conference. It was agreed however that the detailed technical work in relation to these matters should be handled by the SCG. In the meantime, the Working Group requested the Interim Secretariat to coordinate the preparation of a revised version of document WCPFC/PrepCon/WP.10 to address specific issues identified by WG.II.

30. This issue was taken up again by WG.II at the fifth session of the Conference. Continuing the work it had commenced at the third session, and taking into account the comments made by the SCG (PrepCon/28), WG.II discussed the revised working paper prepared for it by the Interim Secretariat, WCPFC/PrepCon/WP.16, *An investigation of technical capabilities and data security and confidentiality policies for the Western and Central Pacific Region*. It was noted that the collection and management of operational level data raises questions of data confidentiality and security. WG.II recommended that Preparatory Conference establish an *ad hoc* task group, composed of the Chairs of WGI, WG.II, WG.III and the SCG, and other experts to identify types of data that must be treated as confidential and to develop draft rules and procedures to govern the security and confidentiality of scientific data and other information collected and held by the future Commission.

31. WG.II also considered the question of the special requirements of developing States and territories with respect to data requirements and technical capacities in the light of document WCPFC/PrepCon/WP.15/Add.1, *Capacity of Pacific Island Countries and Territories to meet the likely data requirements of the Western and Central Pacific Fisheries Commission*. It **recommended** that the Preparatory Conference should include in its report to the Commission the development of a long term strategy for building fisheries data collection and analytical capacity in developing states and territories; the development within the Commission science and data programmes of the capacity to provide advice and assistance to FFA members in respect of data and other technical areas; and the establishment of a broader process of consultation and a programme of cooperation to build FFA member capabilities in areas related to the Convention, including data and other technical aspects. WG.II also noted the view of FFA members that the Commission requirements for data should recognise the existing patterns of strengths and weaknesses in FFA member capacities. FFA members have well-developed programmes for collecting and providing fisheries data but their analytical capacities are not yet well-developed. This means that in the earlier years of the Commission at least, data standards of the Commission

should require the provision of data in an unprocessed form, whilst maintaining high quality data standards.

32. Specific recommendations on data standards, to be addressed by the Scientific Committee of the Commission are set out in Annex IV of the present document.

#### B. Research priorities, planning and coordination

33. The question of interim, transitional and longer term research planning, priority setting and coordination was discussed. It was noted that in the transitional and longer-term the Scientific Committee, once established, would need to develop a research plan and also address cooperation issues for the Commission. A number of specific research projects were identified as priorities (WCPFC/PrepCon/32, paragraph 35), including:

(a) Better characterisation of current catch and catch composition from Indonesia, Philippines, and for Vietnam as they impact on the stocks in the Convention Area;

(b) Reconstruction of early catch history (catch, effort, size composition) for all fisheries;

(c) Further development of methods to standardise effort, including the better use of vessel operational details, environmental data and archival tagging data;

(d) Ongoing efforts to reduce uncertainty in assessments, through improved data inputs, sensitivity analysis and simulations;

(e) Evaluation of possible regime shifts/changes in productivity and development of improved/alternative estimates of recruitment where possible; and

(f) Large scale tagging experiments for the main target tuna species in the WCPO.

34. With respect to stock assessment research WG.II **recommended** (WCPFC/PrepCon/38) that stock assessments be undertaken for all tuna species in 2005. In the event that this is precluded by limited resources, the WG.II recommended the following priority for the major tuna assessments 2005: 1. Bigeye – including a Pacific wide assessment in collaboration with IATTC; 2. South Pacific Albacore and/or Yellowfin; and 3. Skipjack. WG.II also recognized that assessing the status of billfish stocks within the Pacific is an important issue for the Commission. Blue marlin is considered as a high priority to be assessed because of concerns about the stock being fully exploited and as it thought to be a single stock in the Pacific.

#### C. Improvements in data quality and coverage

35. At the third session of the Preparatory Conference, in response to the concerns raised by the SCG, WG.II also made a number of recommendations aimed at improving the quality and coverage of the data available for stock assessment, including strengthening of data collection from Indonesian and Philippine domestic fisheries and improved sampling of the proportion of bigeye and yellowfin tuna in purse seine catches.

36. At the fifth session of the Preparatory Conference a specific proposal relating to strengthening data collection from the domestic fisheries of the Philippines and the Pacific Ocean waters of Indonesia was considered by WG.II, taking into account the comments on this issue

made by SCTB16 and the SCG.<sup>14</sup> It was noted that this proposal stemmed from one of the recommendations aimed at improving the quality and coverage of the data available for stock assessment that had been made by WG.II during the third session. WG.II agreed that, in cooperation with Indonesia and the Philippines, the proposal be further developed and that participants in the Preparatory Conference further consider how they might assist this initiative, through services or financial support.

37. At the sixth session of the Conference, a revised draft proposal, prepared by OFP-SPC, for monitoring the catches of highly migratory species in the Philippines and the Pacific Ocean waters of Indonesia, was considered further by WG.II. To this end a Steering Group was formed that included representatives from Indonesia, the Philippines, the two current donors (Chinese Taipei, United States of America), the OFP-SPC, and the Chairman of WG.II. This group was tasked with implementing the project to the extent possible with available funds. The total funding required for two years of port sampling in each of Indonesia and the Philippines, and associated activities, is USD 292,000.<sup>15</sup>

38. At the seventh session of the Preparatory Conference, WG.II was informed that project activities in the Philippines had commenced in July 2004 with a review of the tuna fisheries and the current statistical system in the Philippines. A workshop was held in Manila from 20 to 21 October 2004 to consider the recommendations from the review and to plan port sampling, which will commence in January 2005. It was noted that Australia had funded the review of the tuna fisheries and the current statistical system in the Philippines and will also fund a similar review in the Pacific Ocean waters of Indonesia in 2005. The Project has so far been managed by OFP-SPC; however, this has been problematic. Neither Indonesia nor the Philippines are SPC members, and management of the Project is not part of the regular OFP work programme; therefore, OFP involvement has been limited.

39. With respect to the Indonesia and Philippines Data Collection Project (IPDCP), WG.II therefore **recommended** that:

(a) The Commission adopt the Project and assume responsibility for its management as soon as possible;

(b) The Commission transfer those funds from the PCOF that have been contributed for the Project to the Special Requirements Fund of the Commission ;

(c) the Commission establish the IPDCP Steering Committee to monitor project activities and developments in regard to funding, and to report thereon to the Scientific Committee; and

(d) Commission members and potential members contribute, as soon as possible, the balance of the funds required to implement the Project.<sup>16</sup>

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<sup>14</sup> The draft proposal is at Annex IV of WCPFC/PrepCon/32.

<sup>15</sup> The first meeting of the Steering Group was held after the WG.II meeting. See WCPFC/PrepCon/38, Annex IV, Report of the First Meeting of the Indonesia and Philippines Data Collection Steering Group.

<sup>16</sup> In this regard, the Chairman of WG.II also referred to the Executive Summary of SCTB17, which “strongly encouraged potential donors to contribute funds for the balance of the Project, i.e. a second year of port sampling in the Philippines and two years of port sampling in Indonesia.”

## V. OTHER SCIENTIFIC ISSUES

40. WG.II took note of the discussions that had taken place in the SCG with respect to advice on the further analyses to support the consideration by PrepCon VII and the first session of the Commission of management options and how these analyses can be carried out in a timely and effective manner. It was noted that the Commission will take up the analysis of management options as presented in WCPFC/PrepCon/WP.24 during its first session.

41. WG.II also took note of the discussions in the SCG on the use of the management strategy evaluation approach using operational models and on ecosystem and bycatch issues for the Western and Central Pacific. It was noted that consideration of these matters would be continued in the Scientific Committee.

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Annex I

**SUMMARY OF MAJOR RECOMMENDATIONS FROM WG.II**

<i>Recommendation</i>	
<b>A</b>	<b>Science structure of the Commission</b>
1	That the provisional science structure for the transitional period (expected to last some 3 to 5 years and representing the period between the Convention coming into force and a fully functioning Commission) be as set out in Annex II.
<b>B</b>	<b>Organization of the Scientific Committee</b>
1	That the work plan for the Scientific Committee for Year 1 (2005) be as shown in Annex IV of the present document
2	That the following Specialist Working Groups (SWGs) be established as subsidiary bodies of the Scientific Committee: stock assessment; statistics; methods; fishing technology; biology; ecosystem and bycatch.
3	That there should be a single meeting combining the work of the Scientific Committee (SC) and SWGs. This should be held annually at least two months prior to the annual meeting of the Commission. Some tasks may be carried out by email or other means in order to expedite the work of the SC.
4	That, in order to take advantage of the most recent stock assessment advice, the most appropriate timing for Commission meetings would be in the final quarter of the year.
5	That the selection of the location of SC meetings should be influenced by cost-effectiveness and efficiency.
6	That the first meeting of the SC should be in December 2004 in conjunction with the first meeting of the Commission. The purpose of this SC meeting would be to elect a Chairman and Vice-Chairman for the SC for 2005, and to make necessary recommendations for the establishment of SWGs, so that meetings for 2005 can be organized.
<b>C</b>	<b>Stock assessments, data requirements and research</b>
1	That stock assessments be undertaken for all tuna species in 2005. In the event that this is precluded by limited resources, the WG.II recommended the following priority for the major tuna assessments 2005: 1. Bigeye – including a Pacific wide assessment in collaboration with IATTC; 2. South Pacific Albacore and/or Yellowfin; and 3. Skipjack.
2	That the Commission stock assessments for the four major species (bigeye tuna, skipjack tuna, south Pacific albacore and yellowfin tuna) be undertaken by scientists from the SPC-OFP, in cooperation with other scientists as appropriate (including those from members), during the transitional period.
3	With respect to the Indonesia and Philippines Data Collection Project (IPDCP), that: (a) the Commission adopt the Project and assume responsibility for its management as soon as possible; (b) the Commission establish a trust fund for the Project and transfer to the trust fund those funds from the PCOF that have been contributed for the Project; (c) the Commission establish the IPDCP Steering Committee to monitor project activities and developments in regard to funding, and to report thereon to the Scientific Committee; and (d) Commission members and potential members contribute, as soon as possible, the balance of the funds required to implement the Project.
4	That the data-related tasks and policies that need to be addressed by the SC are as set out in Annex IV.

## Annex II

### **STRUCTURE FOR THE SCIENTIFIC FUNCTIONS OF THE COMMISSION DURING THE TRANSITIONAL PERIOD<sup>17</sup>**

*This annex outlines key features of the structures required for the scientific functions of the Commission during the transitional period (3 to 5 years). During this period the structure and functions of the science secretariat must be flexible and adaptable in order to meet changing needs. An independent review of the transitional structure and function should be carried out two years after entry into force of the convention, or earlier if required, to determine the effectiveness of the science structure and recommend changes as appropriate.*

#### **SCIENCE DATA FUNCTIONS**

##### *Personnel*

Secretariat database and data management function

- One database manager (senior with high level qualifications in database management and information technology)
- One observer coordinator (half time as science observer coordinator and half time as monitoring, control and surveillance observer coordinator; senior level with extensive at sea experience, organizational skills, contract development and management)

##### *Science data management*

Contract data managers (Oceanic Fisheries Programme (OFP) during the transitional period) to be determined by the Commission with contractual arrangements.

Principles and procedures relating to data compilation and dissemination will be established by the Commission. These principles and procedures could be derived from the current working model used by the OFP and described in the report of the 11th meeting of the Statistics Working Group of the Standing Committee on Tuna and Billfish (1998).

The types of data to be compiled to include the following:

- annual catch estimates, by species and gear type;
- size composition;
- operational catch and effort data;
- unloadings or transshipment data;
- port sampling data;
- observer data;
- gear and vessel attribute information;
- other types of data as required for research purposes.

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<sup>17</sup> Taken from Annex III of WCPFC/PrepCon/32.

## SCIENCE FUNCTIONS

### *Personnel*

Secretariat science management function

- One science manager (senior with high level qualifications including broad experience in fisheries science and project management)

### *Contracted research (e.g. stock assessment)*

Example of primary stock assessment contracted to external provider (e.g. OFP during the transitional period).

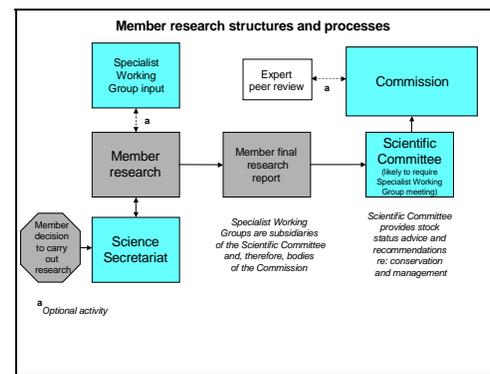
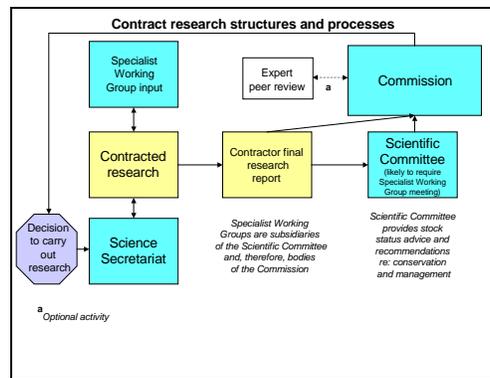
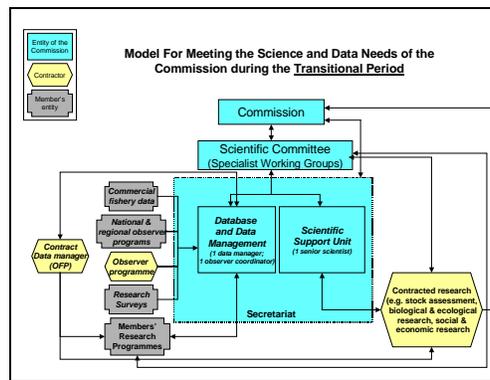
- Scientific research (including outputs and timing) to be determined and initiated by the Commission (science manager in Secretariat to facilitate)
- Data required for stock assessments to be provided by the contract data manager under direction from the Commission as per principles and procedures for data dissemination
- Research contractors will meet with the Science Secretariat and may meet with the Specialist Working Group during early phase of research to consider and collaborate on technical details of contracted research. The nature and extent of any interaction will require consultation between the contractors and the Commission (Science Secretariat to facilitate)
- Outputs from contracted scientific research to be provided to the Scientific Committee and to the Commission
- Expert peer review may be required by Commission
- Scientific research provided to the Scientific Committee will be reviewed and discussed by a Specialist Working Group of the Scientific Committee (open to member scientists, and interested parties by application or invitation)
- Specialist Working Group of the Scientific Committee to meet (e.g. one week) and prepare advice to the Scientific Committee, as required
- Scientific Committee to meet (e.g. three days) and formulate recommendations to the Commission based on advice from the Specialist Working Group
- Scientific Committee chair, contracted stock assessment scientist and external expert peer reviewer (as required) present reports to meeting of the Commission

### *Members' research*

- Members to communicate to Secretariat regarding their intentions to carry out self-initiated research activity to be presented to the Scientific Committee at a future date (science manager in Secretariat to facilitate)
- Data required for research to be provided by the contract data manager under direction from the Commission as per principles and procedures for data dissemination (science manager and data manager in Secretariat to assess the request)
- Scientific research provided to the Scientific Committee to be reviewed and discussed by a Specialist Working Group of the Scientific Committee (open to member scientists, and interested parties by application or invitation)

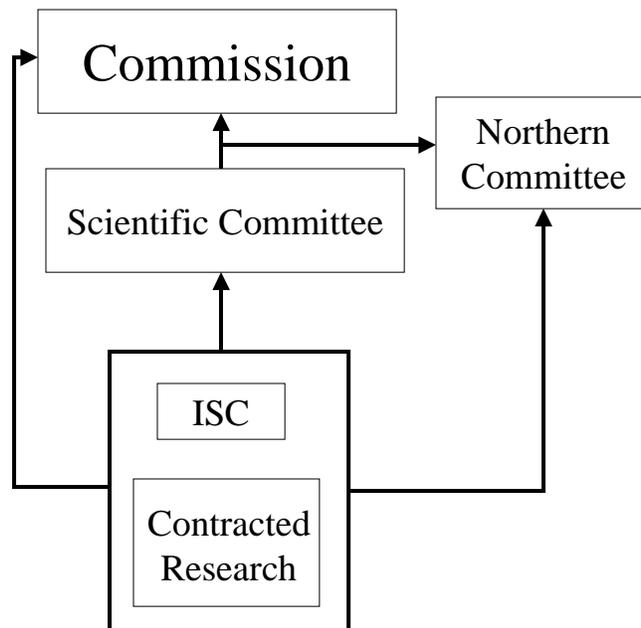
- Specialist Working Group of the Scientific Committee to meet (e.g. one week) and prepare advice to the Scientific Committee
- Scientific Committee to meet (e.g. three days) and formulate recommendations to the Commission based on advice from the Specialist Working Group
- Scientific Committee chair presents report to meeting of the Commission

Scientific Committee functions are as defined in Article 12 of the Convention. Specialist Working Groups are subsidiary bodies of the Scientific Committee. Terms of reference will be required for the Specialist Working Groups, and their functions will include in-depth review of stock assessments and identification of research needs.



Annex III

**POSSIBLE SCHEME FOR FLOW OF SCIENTIFIC INFORMATION AND ADVICE IN  
RESPECT TO THE NORTHERN STOCKS<sup>18</sup>**



<sup>18</sup> Taken from Annex III of WCPFC/PrepCon/38.

## I. SCIENTIFIC COMMITTEE WORK PLAN FOR YEAR 1 (2005)

WG.II recommended the agenda for the meeting of the SC in 2005 should, *inter alia*, include:

- (a) Provision of stock status advice to the Commission on the target stocks, notably bigeye tuna and yellowfin tuna, arising from the stock assessments covered by SC in 2005;
- (b) Other scientific matters, including the provision of advice on ecosystem and bycatch issues as required under article 12 of the Convention;
- (c) Research priorities, research planning, and coordination (standing item);
- (d) Special needs of developing States and territories relating to scientific matters (standing item).

## II. RECOMMENDED SPECIALIST WORKING GROUPS

**Stock assessment** - reviews recent developments in fisheries including trends in catch and effort, with emphasis on four major tuna species, including key attributes of the stock, trends in catches, CPUE, fish size, and information on recruitment, biomass, fishing mortality and stock status

**Statistics** - to coordinate the collection, compilation and dissemination of fishery data for all major gear types and fleets.

**Methods** - reviews statistical, analytical and modelling approaches and seeks to identify ways to improve stock assessments.

**Fishing Technology** - reviews developments with respect to fishing vessel, gear and operational procedures in order to characterize changes in fleets and gear and to provide data to inform a range of topics such as the standardization of CPUE, and evaluating changes in fishing efficiency.

**Biology** - reviews studies of basic biology (including growth, mortality, etc) of the key stocks of tuna, billfish, other highly migratory species, especially with respect to biological studies supporting stock assessment.

**Ecosystem and Bycatch** - includes ecosystem modelling and bycatch research, with particular attention to bycatch mitigation, effects of fishing on species other than the main tuna target species as well as studies of the effect of environment on highly migratory fish stocks.

## III. ADVICE ON DATA STANDARDS AND OTHER DATA RELATED ISSUES

WG.II noted the following data-related-tasks that need to be addressed by the Commission's Scientific Committee:

- Draft the terms of reference of the Statistics Working Group

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<sup>19</sup> Adapted from WCPFC/PrepCon/38, paragraphs 9 and 10 and WCPFC/PrepCon/41 (Report of the third meeting of the SCG).

- Draft a resolution on the scientific data to be provided by members of the Commission under Article 23 of the Convention
- Draft a resolution on the principles and procedures for the dissemination of scientific data by the Commission
- Advise the Commission regarding the contents of an annual report on the status of the collection, compilation and dissemination of data to be provided by the Commission's data managers
- Monitor the status of data collection in the Philippines and the Pacific Ocean waters of Indonesia
- Develop a strategy for improving the capacity of members to meet the data requirements of the Commission
- Establish standards for the collection of scientific data, including operational catch and effort data, port sampling data and observer data
- Advise the Commission regarding the scientific aspects of the regional observer programme to be developed under Article 28 of the Convention
- Establish procedures for evaluating the quality of the scientific data compiled by the Commission
- Harmonize data collection standards for the Western and Central Pacific Ocean and the Eastern Pacific Ocean in collaboration with the Inter-American Tropical Tuna Commission
- Establish an agreement on the exchange of tuna fisheries data between the Inter-American Tropical Tuna Commission and the Commission
- Harmonize the procedures for the compilation and dissemination of data by the Commission and the Interim Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean
- Recommend that the Commission become a member of the Coordinating Working Party on Fishery Statistics
- Recommend that the Commission become a partner in the Fisheries Resources Monitoring System

The major issues raised during discussions included criteria defining public domain data; confidentiality of data; the geographic area for which data should be compiled by the Commission; the need for the best scientific data; the use of data by the Commission for compliance purposes; and the need to avoid burdening developing states in regard to data.

WG.II recommended that the Commission take into consideration the following when it establishes data-related policies and develops work programmes:

- SCTB17 WP SWG-8 (legal aspects governing fisheries data);
- SCTB17 WP SWG-6 (information regarding anticipated data-related tasks for the WCPFC Scientific Committee);
- The report of the Statistics Working Group meeting to consider anticipated data related tasks for the Commissions Scientific Committee;
- This report of SCG 3.

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Annex V

**LIST OF DOCUMENTS CONSIDERED BY WORKING GROUP II**

<i>Symbol</i>	<i>Title</i>	<i>Date of issue</i>
WCPF/PrepCon/BP.5	Provision of interim scientific advice	19 April 2001
WCPFC/PrepCon/4	Terms of Reference for Working Group II: Scientific structure and provision of interim scientific advice	25 April 2001
WCPFC/PrepCon/6	Summary report by the Chairman of Working Group II to the first session of the Preparatory Conference	28 April 2001
WCPFC/PrepCon/15	Summary report by the Chairman of Working Group II at the second session of the Preparatory Conference	1 March 2002
WCPFC/PrepCon/17	Report of the Scientific Coordinating Group	6 August 2002
WCPFC/PrepCon/20	Summary report by the Chairman of Working Group II at the third session of the Preparatory Conference	22 November 2002
WCPFC/PrepCon/28	Report of the second meeting of the Scientific Coordinating Group	6 August 2003
WCPFC/PrepCon/32	Summary report by the Chairman of Working Group II at the fifth session of the Preparatory Conference	3 October 2003
WCPFC/PrepCon/34	Resolution in response to the recommendations of the second meeting of the Scientific Coordinating Group on sustainable fisheries management	3 October 2003
WCPFC/PrepCon/38	Summary report by the Chairman of Working Group III at the sixth session of the Preparatory Conference	23 April 2004
WCPFC/PrepCon/41	Report of the third meeting of the Scientific Coordinating Group	16 September 2004
NS	Approaches to meeting the science and data needs of the Commission, MRAG (Americas) Inc.	February 2002
WCPFC/PrepCon/WP.9	Review of ecosystem and bycatch issues for the Western and Central Pacific Region	13 November 2002
WCPFC/PrepCon/WP.10 and Corr. 1	Review of data standards, technical capabilities and data sharing policies for the Western and Central Pacific Region	13 November 2002
WCPFC/PrepCon/WP.15	Review of data standards for the Western and Central Pacific Region	30 June 2003
WCPFC/PrepCon/WP.16 and Rev.1	An investigation of technical capabilities and data security and confidentiality policies for the Western and Central Pacific Region,	September 2003
WCPFC/PrepCon/WP.16/Add.1	Capacity of Pacific Island Countries and Territories to meet the likely data requirements of the Western and Central Pacific Fisheries Commission.	September 2003
WCPFC/PrepCon/WP.22	Provisional agenda and discussion items for PrepCon VI	5 March 2004
WCPFC/PrepCon/DP.4	System for providing interim scientific advice (United States of America)	25 April 2001